



# Handelshøyskolen BI

## GRA 19703 Master Thesis

Thesis Master of Science 100% - W

### Predefinert informasjon

**Startdato:** 09-01-2023 09:00 CET  
**Termin:** 202310  
**Sluttdato:** 03-07-2023 12:00 CEST  
**Vurderingsform:** Norsk 6-trinns skala (A-F)  
**Eksamensform:** T  
**Flowkode:** 202310||11184||IN00||W||T  
**Intern sensor:** (Anonymisert)

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### Informasjon fra deltaker

Tittel \*: An investigation on perceived firm innovativeness: how firms can gain it, and how it affects them

Navn på veileder \*: Tarje Gaustad

Inneholder besvarelsen konfidensielt materiale?: Nei  
Kan besvarelsen offentliggjøres?: Ja

### Gruppe

Gruppenavn: (Anonymisert)  
Gruppenummer: 28  
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# **An investigation on perceived firm innovativeness: how firms can gain it, and how it affects them**

## **Master thesis report**

Hand-in date:

03.07.2022

Campus:

BI Oslo

Examination code and name:

GRA 19703 Master Thesis

Programme:

Master of Science in Strategic Marketing Management

Name of supervisor:

Tarje Gaustad

## **Abstract**

Following the recognition of consumer perceptions as an important component of firm success, a growing interest is observed surrounding the topic of perceived firm innovativeness (PFI). Although existing literature recognizes PFI as an important intangible asset for firms, there is an existing knowledge gap in regards to firm communication on PFI, and mapping potential effects of PFI on consumer responses. In aims of filling these gaps, this thesis objective is to first examine how different levels of linguistic abstraction (concrete vs. abstract) can affect PFI. Second, we examine the possible moderating role of firm type (niche vs. mass-market) on the effect of linguistic abstraction on PFI. Our third objective is to measure the effect of PFI on consumer responses, specifically brand credibility and brand attitude. To investigate these effects, we conducted an experiment with manipulations adjusting the linguistic level of abstraction (abstract vs. concrete) in firm message framing. Additionally, we manipulated firm type by adjusting company descriptions in accordance to firm type characteristics (niche vs. mass-market). Our study did not reveal any significant results for the effect of linguistic abstraction on PFI, nor the moderating role of firm type. However, our findings show a significant and positive effect of PFI on both brand credibility and brand attitude.

*Keywords: Perceived Firm Innovativeness, Linguistic Abstraction, Construal Level Theory, Firm type, Firm perceptions, Consumer Responses, Brand Credibility, Brand Attitude*

## **Acknowledgements**

This master thesis represents the end of a five year long academic journey. We would like to express our gratitude to BI Norwegian Business School for facilitating a journey of both personal and academic growth. We have had the privilege to learn from many outstanding professors, who have inspired and motivated us. They have made this journey both exciting and challenging, for which we are grateful.

The last two years of our MSc in Strategic Marketing Management have provided us with valuable insights in numerous fields, that we will strive to utilize both personally and academically. Writing this thesis has provided us with unique understandings and experiences that have helped us grow as academics.

We would like to especially thank our supervisor Tarje Gaustad, who has guided and engaged us throughout this journey. It has been a privilege to receive feedback and guidance from such an experienced and insightful academic within this field. We are extremely grateful for his generosity with his time.

We want to extend our gratitude to friends, family, and peers for their encouragement throughout this journey. We are also extremely thankful for all the friendships and memories created throughout our MSc journey at BI.

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## 1.0 Introduction

Over the last decades, consumers' perceptions of firms have earned much recognition, and is deemed highly important for firm performance. Firm reputation is able to influence strong performance indicators, such as customer satisfaction and customer loyalty (Chun, 2005). In fact, research suggests that as much as 20.7 percent of all shareholder value is explained by firm reputation (Cole et al, 2016; as cited in Staum & Linghui, 2017). Both economists and game theorists acknowledge firm reputation as perceptions of firms held by external observers (Fombrun & van Riel, 1997). Consequently, the realization that consumers' perceptions are important considerations is now visible in many areas of business. In efforts to shed light on the importance of consumer perceptions, new customer-centered terms are being introduced as supplements to old product-centered terms.

The term "innovation", which refers to the outcome of firm activities (i.e. goods and services) (Kunz et al., 2011), is argued by researchers (e.g. Kunz et al., 2011; Ghanbarpour & Gustafsson, 2022; Hubert et al., 2017) to ignore the important factor of consumers. While innovation is crucial for businesses to thrive and outperform their competitors (Baregheh et al., 2009), Hubert et al. (2017) argue that it is difficult for consumers to create a true picture of all the innovative effort put in by a firm. As such, Ghanbarpour & Gustafsson (2022) claim that the market reactions to the firm's innovative efforts is what matters. Consequently, firms need to embody a customer-centric perspective, keeping in mind that consumers hold the power to ultimately determine the success of an innovation (Kunz et al., 2011). Therefore, while introducing new offerings to the marketplace is essential for firms' competitive capabilities, this is not necessarily sufficient to exploit the benefits of being an innovative firm.

In aims of filling this gap, researchers have introduced alternative broad-based, customer-centered terms. For instance, Shams et al. (2015) refer to the way consumers perceive innovativeness at the brand level as consumer perceived brand innovativeness (CPBI), and Kunz et al. (2011) introduced the term perceived firm innovativeness (PFI), referring to "the consumer's perception of an enduring firm capability that results in novel, creative, and impactful ideas and solutions" (p. 817). Both terms emphasize the role of consumer perceptions as

critical. To exemplify the importance of this perspective, Shams et al. (2015) refers to the well-known battle between Android and Apple. Whereas Android came out on top from a purely technological and product focused innovativeness perspective (Raphael, 2010; as cited in Shams et al. 2015), Apple was a clear winner in the eyes of consumers and was still rated among the top worldwide innovations. As a brand, Apple has managed to achieve a powerful advantage in terms of perceived innovativeness, which was able to battle, and even overcome, the technological win that Android had.

Moreover, the role of PFI has been researched by many since its introduction, providing strong evidence for its important influences on firms and brands. For instance, Kunz et al. (2011) argues that PFI is a significant contributor in generating positive consumer emotions, which as a result enhances customer loyalty. Pappu & Quester (2016) have also presented convincing evidence that PFI can increase perceived quality, which in turn have positive effects on intended brand loyalty. Additionally, Bairrada et al. (2018) suggests that PFI has a direct positive effect on both perceived uniqueness and prestige. However, many aspects of PFI are yet to be researched, and Kunz et al. (2011) specifically call for more research regarding the role of firm communication on PFI.

Moreover, marketing literature has established many benefits linked to PFI, but *how* can firms successfully communicate this attribute to consumers? For firms to communicate specific qualities or characteristics in general, they need to provide believable signs of inhabiting such features. Steigenberger & Wilhelm (2018) posit that signaling theory offers a framework explaining how firms can use isolated substantive signals to create a certain impression, and reduce information asymmetry. Examples of such substantive signals could be to have graduated from a prestigious school, receiving rewards, or donating to a given charity. However, Steigenberger & Wilhelm (2018) posits that while signaling theory has become well established within economic theory, it does provide some opposing assessments from the management research field. That is, researchers suggest that signaling theory downplay the importance of rhetorics, which refers to the language based dissemination of information (Steigenberger & Wilhelm, 2018). In fact, rhetoric theory has throughout many years been given a central position in brand message strategies. Using rhetoric to communicate brand



promises and support of these is suggested to help form consumers' perceptions of brand attributes, benefits, insights, and personality (Tevi & Koslow, 2018).

More so, firms' linguistic approach in their communication efforts could be influential for how consumers perceive the brand and firm. The separation between linguistic abstraction and concreteness is theoretically covered in, among others, the linguistic category model (LCM) (Semin & Fiedler, 1988, 1991). The LCM advocates for a concreteness-abstractness dimension, where different word classes are categorized as either being more concrete or more abstract (Semin & Fiedler, 1991; Hansen & Wänke, 2010). Yin et al., (2022) explains that concrete communication often refers to direct experience, observable action and objects. These are often verifiable and offer contextual specificity. Yin et al. (2022) further elaborate that abstract communication, on the other hand, often describes enduring states, concepts and ideas that could be applied in a variety of contexts. Additionally, these are often more situationally invariant. Moreover, choosing to communicate either abstractly or concretely can affect the way audiences perceive both the message communicator, and the message communicated. Research suggests that where concrete communication is seen as more trustworthy (Toma & Hancock, 2012), abstract communication signals power (Reyt & Wiesenfeld, 2015; Wakslak et al., 2014) and expertise (Wakslak et al., 2014).

Another significant separation between abstraction and concreteness is covered in construal level theory (CLT). Specifically, CLT is a theory on the level of abstraction in describing experiences, events, or objects (Trope & Liberman, 2010). Köhler et al. (2011) explain that consumers focus on various types of information depending on their psychological distance to the object which they are evaluating. While "here and now" experiences are connected with low-level construal and a more concrete approach, more distant events are connected with high-level construal and a more abstract approach (Trope & Liberman, 2010). In association with the research by Yin et al. (2022), suggesting that concrete communication is seen as more trustworthy, Hansen & Wänke (2010) emphasizes that according to CLT there is a relationship between the perceived probability of an event and the level of construal concreteness. Previous research elaborates that likely events are often rich in detail and associated to direct experiences, thus represented on a more concrete level, while unlikely events often lack information

and detail, thus represented on a more abstract level (e.g. Todorov et al., 2007; Wakslak & Trope, 2009). As such, low-level construals are argued to be perceived as more likely and thus believable.

Furthermore, previous research suggests that it is possible to change consumers' construal levels by simply modifying the message framing either abstractly or concretely (White et al., 2011). Consequently, firms should strategically make linguistic choices that undermines their intention behind the communication effort. For instance, if the audience is skeptical, it could be beneficial to use more concrete words in the message framing for consumers to believe the message is in fact true (Yin et al., 2022).

However, strategic communication decisions should not be considered in isolation, but rather align with the firm's positioning. As such, choosing a communication strategy in accordance to firm type could affect the outcome on PFI. Vock (2022) argues that firm type is one of the elements that make up the brand image of a company. As such, a message communicated by a firm will have different effects depending on how well the attribute communicated fits the company image (Vock, 2022). For example, Vock (2022) found that while engaging in embedded CSR elicit positive consumer responses for mass-market firms, luxury firms might experience disadvantages from communicating this to consumers. Vock (2022) explains that consumers have certain expectations from a firm, and that embedded CSR engagement by luxury firms might lower perceptions of image fit. Notably, Vock (2022) also found evidence of a consumer perceived CSR-corporate ability trade-off for mass-market firms. Consequently, it is evident that firm type, and thus brand image, have the ability to determine firm effort outcomes in certain situations.

Taking a closer look at the distinction between niche- and mass-market firms, there are many differences in firm characteristics, expectancies and ultimately communication outcomes. Niche firms generally focus their marketing efforts toward a more limited part of a market, consisting of few customers and competitors, where they emphasize attributes such as specialization and product differentiation, and focus more on customers and relationship marketing (Toften & Hammervoll, 2010). As such, Toften & Hammervoll (2010) argue that niche firms have more to gain by establishing trust, reliability, honesty, alliance and

commitment with their customers. In contrast, larger firms, who choose to target a broader group of customers with standardized products, are often referred to as mass-market firms (Hammervoll et al., 2014). Accordingly, Hammervoll et al. (2014) specify that niche- and mass-market firms are inclined to operate with different marketing strategies, specifically when it comes to market and differentiation, product, price, marketing channels, and nevertheless communication with consumers.

More so, Motsi (2023) argues that firm type, personality, and age have different effects on consumers' reactions to brand transgressions, because consumers have different expectations from firms. Motsi (2023) claim that for smaller firms such as niche (vs. mass-market), consumers have a higher expectation of agency (i.e. competence and skill) and communality (i.e. friendliness, warmth, and sincerity), because it is commonly expected that such firms offer better customization than larger mass-market firms. To exemplify this, Hemonnet-Goujot et al. (2022) draw attention to luxury firms taking sustainability actions through sustainable innovations (reuse of exhausted or outdated material), thus compromising on the expected excellence, prestige, uniqueness, and scarcity from the firm. Hemonnet-Goujot et al. (2022) argue that this type of action could even be perceived as an act of brand transgression.

Moreover, there are arguably many aspects to consider in regards to *how* firms can gain PFI, presumably including the elements of linguistic abstraction and firm type. Yet, it is still important to consider *why* firms should put efforts into gaining this perception. PFI is, as previously established, suggested to bring a variety of firm benefits. However, there is still a research gap in mapping additional potential effects of PFI (Pappu & Quester, 2016). As such, taking a closer look on how PFI affects important consumer responses, which have not previously been examined, would provide important insights to the actual role of PFI.

Berger & Mitchell (1989) point out that the brand attitude construct has received a lot of attention in the marketing literature, and that earlier research has made the explicit assumption that attitudes are reliable indicators of consumer behavior. Furthermore, Liu et al. (2012) suggest that brand attitude plays a critical part in valuing brand equity. Faircloth et al. (2001) also found that brand attitude

significantly influences brand image, and that brand equity is significantly influenced by brand image (i.e. there is an indirect effect of brand attitude on brand equity). This implies that consumers' attitude towards a brand is mostly determined by their own views of the brand, which are considered to be a trustworthy indicator of how consumers will behave towards brands (Shimp 2010, as cited in Liu et al., 2012). Moreover, Liu et al. (2012) reveal that brand attitude positively and significantly affects brand loyalty.

Another important consumer response is brand credibility. Brand credibility offers numerous benefits for firms, among others, it is suggested to impact consumers' future brand considerations (Erdem et al., 2002; Erdem and Swait, 2004), which ultimately increases the likelihood of purchase (Erdem & Swait, 1998). Additionally, brand credibility is argued by Erdem & Swait (1998) to decrease perceived risk associated with the firm.

### **1.1 Purpose of the study**

Gaining insights on how to successfully communicate in aims of gaining PFI would be highly beneficial for firms on several levels. Innovativeness is one of the eight key attributes of firm reputation used in Fortune's Annual America's the Most Admired Company (AMAC), which is deemed one of the most established measures of firm reputation (Chun, 2005). Furthermore, firm reputation affects several stakeholders beyond customers, influencing for example employee retention (Chun, 2005) and shareholder investments (Markham, 1972; as cited in Chun, 2005). As previously established, PFI has several positive effects on, among others, customer loyalty (Kunz et al., 2011; Pappu & Quester, 2016), perceived quality (Pappu & Quester, 2016), perceived uniqueness and perceived prestige (Bairrada et al., 2018).

For marketers to know what linguistic communication technique (i.e. abstract vs. concrete) that works most efficiently in gaining PFI, would enable them to construct their message framing in a manner that works more efficiently in obtaining this firm perception, and consequently the benefits associated with it. Additionally, by gaining insight into the moderating role of firm type (niche vs. mass-market) on PFI, firms would be able to adjust their message framing in accordance with consumer expectations connected to their brand image. More so,

since niche- and mass-market firms have different consumer expectations (Motsi, 2023) and perceived risk (Wang et al., 2022), firms would be able to signal differently (e.g. trustworthiness, power, expertise) (Toma & Hancock, 2012; Reyt & Wiesenfeld, 2015; Waksalak et al., 2014) based on their message framing approach (White et al., 2011). As such, they could mitigate certain barriers for persuasion, or simply add value to their already inhabited firm attributes. Consequently, gaining insight on the effect of message framing and firm type on PFI would be favorable for firms in terms of strengthening determinants of success such as customer loyalty (Kunz et al., 2011; Pappu & Quester, 2016), perceived quality (Pappu & Quester, 2016), perceived uniqueness and perceived prestige (Bairrada et al., 2018). Accordingly, firms would be able to optimize their marketing communication strategies to fit the message communicated with the particular positioning of the firm.

Nevertheless, although there has been conducted research on the topic of PFI, there are still gaps in the literature. Strong evidence has been presented for a variety of benefits linked to PFI. However, there is still an existing research gap in regards to exploring all the effects of PFI, and nevertheless getting a deeper understanding of these effects (Pappu & Quester, 2016). Furthermore, Kunz et al. (2011) specifically calls for more insight on firm communication on PFI, which to this day still requires more research. Investigating how different linguistic approaches (abstract vs. concrete) could have different outcomes on PFI have not previously been done. Additionally, no existing research has considered firm type's possible moderating role on PFI. More so, research has yet to be conducted on PFI's effect on some consumer responses, such as brand credibility and attitude.

The objective of this thesis is to investigate the effect of different linguistic communication approaches on PFI, and the moderating role of firm type. In addition, this thesis aims to provide insight on PFI's direct effect on consumer responses, more specifically brand credibility and brand attitude. As such, this thesis will answer the three following research questions: (1) How does the level of linguistic abstraction in a brand's/firm's message framing impact perceived firm innovativeness? (2) How does firm type moderate the effect of linguistic abstraction on perceived firm innovativeness?(3) How does perceived firm

innovativeness impact brand credibility and brand attitude? This study focuses on consumers in the United Kingdom and the United States.

## **2.0 Literature Review & Hypotheses Development**

This following section will provide an overview on existing literature, mainly within the fields of consumer psychology, innovation management, marketing management, marketing communication, and brand management. Specifically, this section will present a thorough background scope on topics surrounding PFI, consumer responses, concrete vs. abstract communication, CLT, and niche vs. mass market firms.

### **2.1 Perceived firm innovativeness**

#### **2.1.1 Innovation vs. Consumer perceptions of innovativeness**

Consumers and experts are expected to view innovations differently. Consumers may find it important whether the firm's offers match their lifestyles and generate new experiences for them, while experts may view innovations solely from a technical and functional perspective (Danneels and Kleinschmidt, 2001; Schmitt, 1999, as cited in Kunz et al., 2011). In fact, Rogers (1962, as cited in Shams et al. 2015, p. 1592) stated the following: "It is the characteristic of a new product not as seen by experts but as perceived by the potential adopter that really matters" (p. 123). As such, distinguishing between actual innovative efforts made by firms and perceptions of innovativeness by consumers is essential. Where "innovation" focuses on the outcome of the firm activity (i.e., goods and services), "innovativeness" involves the capability of the firm to be open to new ideas and focus on generating new solutions (Crawford and Di Benedetto, 2003, as cited in Kunz et al., 2011). More so, the success of an innovation introduced to the market is never guaranteed, and many fail within the first few years of their introduction (Wilke & Sorvillo, 2005, as cited in Kunz et al., 2011). Shams et al. (2015) therefore propose that the success of a firm largely depends on how consumers perceive the firm as someone who offers innovations, as opposed to simply the product attributes of their innovation.

Although distinguished, both innovation and perceived innovativeness are important assets for firms. In fact, innovation and perceived innovativeness are

both suggested to contribute to firms' sustainable competitive advantage on several levels (Danneels & Kleinschmidt, 2001). As such, there are aspects of focusing solely on innovation, rather than considering perceived innovativeness, which might limit the firm. That is, despite consumers often being familiar with firms' brands, many have trouble identifying products with the companies that actually own them (Shams et al. 2015). Additionally, Hubert et al. (2017) argue that it is difficult for consumers to create a true picture of all the innovative effort put in by a firm, and Shams et al. (2015) emphasize that a firm's brands may not be perceived at the same innovativeness level in all their product categories. Thus, Shams et al. (2015) argue that perceived innovativeness therefore serves as a more precise source of information within and between product categories.

### **2.1.2 Conceptualizing innovativeness**

Many efforts have been made in conceptualizing innovativeness. Even more so, there are many different aspects of innovativeness. For instance, Pappu & Quester (2016) use the term "brand innovativeness", and refer to it as consumers' perceptions of the brand's ability to introduce innovations to the market. Brand innovativeness differs from other similar firm-level concepts such as innovation orientation (Hurley & Hult, 1998) and innovation capability (McDermott & O'Connor, 2002; Calantone et al., 2002). Pappu & Quester (2016) posits that both innovation orientation and innovation capabilities are crucial for firms, although their ability to create the perception of brand innovativeness is dependent on whether the firm is able to successfully and persuasively communicate these aspects of its brand to its target customers. More so, Shams et al. (2015) refer to the way consumers perceive innovativeness at the brand level as consumer perceived brand innovativeness (CPBI). Shams et al (2015) note that CPBI may stem from technological and/or symbolic innovations, being a result of, among other, new product features, new marketing communications, and truly novel offerings. In addition, Kunz et al. (2011) conceptualize perceived firm innovativeness (PFI) as the "consumer's perception of an enduring firm capability which results in novel, creative, and impactful ideas and solutions" (p. 817). PFI is the term that will be used in this thesis.

### **2.1.3 Perceived firm innovativeness (PFI)**

The several aspects of PFI are highly interrelated and none of them in isolation are sufficient in generating an overall perception of firm innovativeness. The term novelty has long been seen as a critical aspect of innovativeness (Kunz et al., 2011), which refers to the capability of a firm to develop new product solutions at a fast rate within a specific period of time (Roehrich, 2004). Wells et al. (2010) considers perceived novelty to be the degree to which a user perceives an innovation to be one that is a new and exciting alternative to an existing product. However, novelty alone does not make a firm innovative (Kunz et al., 2011). Another important aspect of PFI is creativity (Kunz et al., 2011). Creativity is highly associated with surprise and the unexpected, and includes several firm efforts which are viewed as unique from the competition and meaningful to the consumer (Im & Workman, 2004). As such, Kunz et al. (2011) find that if the firm's novel and creative efforts generate market impact, there is a higher likelihood that consumers will view a firm as innovative.

In efforts to measure PFI, Kunz et al. (2011) constructed a PFI scale comprised of the following items: "The company is dynamic," "The company is very creative," "The company launches new products and creates market trends all the time," "The company is a pioneer in its category," "The company constantly generates new ideas," "The company has changed the market with its offers," and "The company is an advanced, forward-looking firm" (p. 818).

Moreover, Kunz et al. (2011) posit that PFI affects consumer behavior and therefore ultimately determines the success of a firm. Kunz et al. (2011) argues that PFI contributes to generating positive consumer emotions, which as a result increases customer loyalty. More so, their findings suggest that PFI impacts loyalty through two routes, an affective-experiential and a functional-cognitive route. Additionally, Kunz et al (2011) found that PFI had a stronger effect on loyalty for goods rather than services, due to the tangibility of goods as opposed to services, and the greater ability of communicating their comparative advantage. They also suggest that PFI has a greater effect on loyalty for more than less innovative consumers, mainly due to the affective-experiential route. Other research has also provided evidence of several firm benefits linked to PFI, such as perceived uniqueness and prestige (Bairrada et al., 2018) and perceived quality,



which in turn have positive effects on intended brand loyalty (Pappu & Quester, 2016).

More so, research emphasizes the critical role that firm innovativeness plays in increasing consumer trust (Kunz et al., 2011; O’Cass & Carlson, 2012; Shams et al., 2017). Shams et al. (2017) suggests that a firm which cultivates a reputation for being innovative and forward-thinking can create a sense of trust and reliability among consumers. Furthermore, PFI has the ability to reduce consumer uncertainty, since innovative firms are frequently viewed as industry leaders, knowledgeable, and competent in their field, suggesting that their products or services are reliable and of high quality (Shams et al. 2015; Srinivasan et al. 2002; Pappu & Quester, 2016). Additionally, PFI is found to have a positive effect on functional competence (Kunz et al., 2011), which in turn lowers the relationship risk for the consumers (Laroche et al., 2004; Zinkhan et al., 2001). Even more so, Aaker (2007) argues that an organization with an innovative brand image may increase its credibility and reliability.

## **2.2 Consumer responses: brand attitude and brand credibility**

As previously established, PFI is linked to many firm benefits, however there is still a research gap in mapping potential effects of PFI (Pappu & Quester, 2016). Both brand attitude and brand credibility are argued to be important determinants of a firm's success (e.g. Rossiter, 2014; Erdem & Swait, 1998, 2004).

### **2.2.1 Brand attitude**

Brand attitude is one of the constructs most widely examined in consumer behavior (Berger & Mitchell, 1989), and amongst the most popular cognitive predictors of consumers’ behavior toward a brand (Mitchell & Olson, 1981). Brand attitude is an association suggested to have a direct effect on brand image, which involves the consumers' perceptions of all associations (Keller, 1993; Aaker, 1991). In fact, Faircloth et al (2011) suggests that managing brand attitude, in addition to brand image, may enhance brand equity. More so, Keller (1993) posits that brand attitude is a vital component in valuing a brand’s equity, and that brand attitude may be a function of the associated components and benefits that are salient for the brand. That is, brand attitude (Oliver, 1999) and brand trust

(Morgan & Hunt, 1994) are amongst the important determinants keys to brand loyalty.

Keller & Swaminathan (2020) have defined brand attitude as the consumers' overall evaluation of a brand, and posits that brand attitude is often the basis for brand choice. Mitchell & Olson (1981) add that attitude is the individual's internal evaluation of the brand. Keller & Swaminathan (2020) additionally highlight that consumers may hold several attitudes towards a brand, but that the most important ones are tied to perceived value and customer satisfaction. This definition incorporates two attitude characteristics which have stayed constant. The first is that attitude is centered or directed at an object, or in this case a brand (Spears & Singh, 2004), and the second is argued by Eagly & Chaiken (1993) to involve that "The responses that are regarded as attitudinal are evaluative in nature, where evaluation is defined as the imputation of some degree of goodness or badness to an entity" (p. 3). Brand attitude may also be defined as the buyer's evaluation of the brand with respect to its expected capacity to deliver on a currently relevant buying motive (Rossiter & Percy, 1987, 1997, as cited in Rossiter, 2014), and is argued by Bettman (1979; as cited in Faircloth et al., 2001) to be formed due to limited cognitive processing capabilities.

Accordingly, consumer's attitude towards a brand is mostly determined by their own views of the brand, which are considered to be a trustworthy indicator of how consumers will behave toward brands (Shimp, 2010, as cited in Liu et al., 2012). Mustafa (1999) posits that when firms create innovations, they must consider consumers' perceptions and attitudes. It may for instance be that consumers do not approve of the firm's new products or ideas. Additionally, Mustafa (1999) notes that brand loyalty is a function of both behaviors and attitudes. That is, brand loyalty is influenced by both a brand's image and the attitude of its consumers (Faircloth et al., 2001). More so, Keller (1993) views brand loyalty as an outcome of successfully managing knowledge about the image and attitude of a brand.

### **2.2.2 Brand credibility**

Wang & Yang (2010) find that a crucial characteristic that determines brand positioning is the brand's credibility. They note that brand credibility largely originates from "source credibility" literature. Therefore, when we discuss or relate this to brands, or when one refers to brands as our sources, this concept of

credibility denotes brand credibility. Brand credibility plays an important role in that it represents the total effects of a company's past marketing activities and may impact future brand considerations of consumers (Erdem et al., 2002). More so, Erdem and Swait (2004) note that brand credibility may raise the likelihood that consumers will hold the brand in their consideration set. They further propose that trustworthiness and expertise are the two key components of credibility, which is broadly defined as the believability of an entity's intentions at a specific time. Brand credibility is therefore referred to as the believability of the product information embodied in a brand, which necessitates that consumers perceive the brand as having the ability (i.e. expertise) and willingness (i.e. trustworthiness) to consistently deliver what has been promised (Erdem and Swait, 2004). Additional research (e.g. Keller & Aaker, 1998; Goldsmith et al., 2000) agree that trustworthiness and expertise are two critical components which make up brand credibility.

More so, brand signaling theory suggests that brand credibility increases the probability of brands being purchased (Erdem & Swait, 1998). Highly credible brands are expected to increase expected benefits (Erdem & Swait, 1998, 2006), a result, in part, due to the higher perceived value and lower perceived risk that are results of brand credibility. Furthermore, research suggests that the lower information costs associated with credible brands are likely to decrease expected costs (Erdem & Swait, 1998, 2006; Shams et al., 2017). In addition, the brand's credibility decreases perceived risk due to increased consumer confidence in a firm's product claims (Erdem & Swait, 1998, 2006; Shams et al., 2017). That is, credibility leads to decreased information costs because consumers often use credible brands as a source of knowledge that saves both information gathering and processing costs (Erdem et al., 2002).

### **2.3 Message framing**

Research suggests that marketing communications can be used as a tool to generate perceived innovativeness (Shams et al., 2015). More so, a key component of message content is how abstract or concrete a message is, which includes the extent to which the message is focused on an abstract idea or broad purpose, as opposed to concrete actions or specific details about a given situation (Yin et al., 2022). Linguistic abstraction has been viewed as a critical subject by

many scholars (e.g. Semin & Fiedler, 1988; Bechlvani et al., 2017; Wampole, 2019) over the years, focusing on how abstraction shapes persuasiveness and what it is that leads individuals to speak more abstractly. Interestingly, much attention has been placed on the results and implications of abstraction for message effectiveness. For instance, previous research on abstract and concrete communication found that in the domain of organic food, consumers view concrete messages as more credible than abstractly framed messages (Jaeger & Weber, 2020). Additionally, research by Chang et al. (2019) revealed that communicating specific, as opposed to generic, product claims resulted in greater purchase intention. As such, manipulating the abstraction level at which a specific topic is communicated can be an effective way to affect consumers' decision making and perceptions (Jaeger & Weber, 2020; Chang et al., 2019; Taufik et al., 2023).

### **2.3.1 Linguistic abstraction vs. concreteness**

The separation between linguistic abstraction and concreteness is well known, and theoretically covered, among others in the linguistic category model (LCM) (Semin & Fiedler, 1988, 1991). The LCM advocates for a concreteness-abstractness dimension (Semin & Fiedler, 1991; Hansen & Wänke, 2010). In this model, verbs are considered more concrete, while adjectives is considered the most abstract word class (Semin & Fiedler, 1991) Accordingly, Semin & Fiedler (1991) elaborates that descriptive action verbs with little room for interpretation are categorized as typical concrete words (e.g., to meet, to call). More so, both interpretive action verbs (e.g., to help, to cheat) and state verbs (e.g., to hate, to admire) are seen as more abstract than descriptive action verbs in accordance with the LCM. That is because they leave more room for interpretation, or are unobservable for others (Semin & Fiedler, 1991; Hansen & Wänke, 2010). Adjectives are considered the most abstract word class, and describe characteristics (e.g., helpful, honest) (Semin & Fiedler, 1991; Hansen & Wänke, 2010).

However, there has been some controversy with this model, where nouns were initially excluded. Massara et al. (2020) summarizes a new alternative framework where nouns are the most concrete word class, followed by verbs, and adjectives being the most abstract. Yet, Carnaghi et al. (2008) argues that nouns is

an important word class as both a concrete and abstract linguistic marker. That is, while nouns which describe people are highly abstract (Carnaghi et al., 2008), Gentner & Kurtz (2005; as cited in Burgoon et al., 2013) suggest that nouns which describe specific properties are highly concrete. This controversy also applies for usage of verbs, where Gentner & Kurtz (2005; as cited in Burgoon et al., 2013) disagree with the LCM and argue that verbs used as category labels for external relationships among things can be categorized as abstract (e.g. visit, give).

Moreover, Yin et al (2022) note that abstract words are more situationally invariant, including adjectives and verbs which describe an ongoing enduring state, and nouns which represent a concept or notion that is applicable in a variety of contexts. Furthermore, Yin et al. (2022) propose that abstractions, which help to transcend and connect across an array of varying experiences, are more likely to be expressed from a collective perspective that emphasizes what is shared across individuals. Work on linguistic abstraction by Semin and Fiedler (1988) has argued that abstract words make the communication content appear more temporally stable, however at the same time harder to verify and less informative regarding a particular situation (Semin & Fiedler, 1988).

More so, research suggests that abstract communication can signal traits of both power (Reyt & Wiesenfeld, 2015; Wakslak et al., 2014) and expertise (Wakslak et al., 2014). That is, people associate linguistic approaches which embrace the broader meaning of a subject with leadership potential, and a greater degree of power. As such, perceivers typically expect greater power individuals to speak in a more abstract manner and hence will infer that speakers who use abstract language also have a greater degree of power. Wakslak et al. (2014) argue that abstraction is a power cue, among others because it signals willingness to judge and a broader style of thinking. Additionally, Beukeboom et al. (2013) have found that personality characteristics, for instance extraversion, is also associated with linguistic abstraction. They found that individuals who score high on extraversion traits speak more abstractly compared to those with low trait extraversion. Demographic factors have also been linked with a tendency to speak abstractly, where men typically speak more abstractly than women (Joshi et al., 2020).

Furthermore, existing research suggests that there are potential benefits linked to readers having an abstract mindset (e.g. Fernández et al., 2020), and that evoking such a mindset can be done by framing messages abstractly (vs. concretely) (White et al., 2011). In fact, Fernández et al. (2020) found that abstraction has a stronger influence on positive feelings compared to negative feelings. Also, they suggest that abstraction can increase positive reactions, and a tendency to evaluate reality as a whole and account for more global and long-term aspects. Furthermore, Ledgerwood & Callahan (2012) argue that within the arena of social influence, abstraction appears to promote openness to persuasion by enhancing the effect of more cross-situational information on individuals beliefs. However, Ledgerwood et al. (2010) suggests that abstraction can also lead to resistance to persuasion by diminishing the effect of contextual information on individuals beliefs. Additionally, increased stereotyping (McCrea et al., 2012) and dispositional attributions of others (Kozak et al., 2006) are linked to higher abstraction levels. Moreover, Burgoon et al. (2013) emphasizes that abstraction affects a range of central judgements, decisions and behaviors, because it enables people to widen their mental horizons.

In comparison, Yin et al. (2022) propose that concrete words are those that can be experienced directly, such as nouns which characterize an observable object, and verbs which illustrate observable action. They also posit that a single perspective which highlights the particular viewpoint of an individual is more likely to convey concrete experiences than multiple perspectives.

Additionally, concrete words are recognized faster by the reader than abstract words, which also enables the reader to more easily process and understand the statements made by the communicator (Bleasdale, 1987; de Groot, 1989; Kroll & Merves, 1986). Concrete words are also suggested to provide more imageability for the reader than abstract words (Paivio, 1969; de Groot, 1989; Semin & Fiedler, 1991). More so, imageability and concreteness is linked to recall (Paivio, 1969), and concrete words are argued to be more easily remembered than abstract words (Doest & Semin, 2005; David, 1998). Furthermore, as a result of the association between concreteness and memory, Hansen & Wänke (2010) argue that concrete words may cause a subjective impression of familiarity as the readers could have an impression of having encountered the same message before.

Even more so, previous research suggests that concrete communication is seen as more trustworthy (Toma & Hancock, 2012). Hansen & Wänke (2010)

highlights extensive research suggesting that the fluency of cognitive processing of information has an effect on the reader's judgment of truth. As such, more detailed descriptions are perceived as more real (Johnson & Raye, 1981). Consequently, Larrimore et al. (2011) suggests that concrete communication may be beneficial in situations where an audience is skeptical, as it contributes to effectively reducing uncertainty, and Pan et al. (2018) posit that concrete communication is beneficial in situations where uncertainty is present.

### **2.3.2 Level of abstraction & construal level theory (CLT)**

Earlier research (e.g. Brysbaert et al., 2014; Paivio, 2013; Paivio et al., 1968) has emphasized linguistic abstraction, which surrounds the degree to which one uses abstract versus concrete words. Yin et al. (2022) suggests that this includes the degree to which the message is composed of abstract words, which are broad and generic and not easily translated into a clear image, as opposed to concrete words, which are specific and contextualized and are therefore simpler to picture and experience.

Between abstract and concrete words, there are constraints that are intuitive. Barsalou & Wiemer-Hastings (2005) posit that the absence of physical or spatial grounding is what distinguishes abstract terms from other types of words in the literature. Zdrzilova et al. (2018) suggests that the use of abstract words expands our ability to communicate ideas beyond the temporal reality of the here and now, and enables us to communicate fundamental human notions like scientific (e.g., theory, calculus) and social (e.g., justice) ideas.

As such, construal level theory (CLT) is an important aspect in relevance to the level of abstraction vs. concreteness. Trope & Liberman (2010) posit that according to CLT, individuals travel over various psychological distances by employing comparable mental construal processes. Trope & Liberman (2010) suggest that psychological distance is egocentric, that its point of reference is the present moment self, and the various ways an item might be separated from that point constitutes differing distance dimensions. They elaborate that transcending the self in the present requires mental construal, and the greater (more abstract) the level of construal an item requires, the more distant it is from the direct experience. Trope & Liberman (2010) highlight that high level (abstract) construals embody events that are psychologically distant, while it is the opposite for low level construals (concrete). Additionally, they suggest that high-level

construals are, compared to low level construals, viewed as mental representations that are highly abstract, coherent, and superior. Moreover, they reveal that in order to move from a concrete representation of an item to a more abstract representation, the key aspect must be kept and features that are incidental to abstraction must be removed. In reference to the findings by Wakslak et al. (2014) and Reyt & Wiesenfeld (2015) describing abstraction as a power cue, abstract language reflects a more removed, “outside” perspective that is highly tied to psychological distance, reflecting the way people often see those more powerful (Trope & Liberman, 2010).

Furthermore, Köhler et al. (2011) highlights that consumers pay attention to various forms of information depending on their psychological proximity to the subject of interest, which is in line with earlier studies on CLT (e.g. Kardes et al., 2006; Liberman et al., 2007; Trope & Liberman, 2003; Trope et al., 2007). Köhler et al. (2011) additionally suggest, on the basis of this theory, that an individual's attention to various types of information is influenced by the psychological distance to the target of evaluation. Moreover, it has also been suggested that improved evaluations (Reber et al., 1998) and greater processing fluency (Lee et al., 2010) are evident when the temporal distance and the construal level of a decision problem are congruent.

More precisely, Trope & Liberman (2003) posits that people concentrate on low-level construals, which are concrete, feature-based aspects, when the psychological distance is low (as in the near future), while they tend to concentrate on high-level construals, which involve abstract, needs-based aspects, when the psychological distance is high (as in the distant future). They further elaborate that CLT therefore helps explain that when consumers face decisions which have immediate effects, they tend to have a primarily concrete mental representation and place greater emphasis on the low-level aspects of the choice, leading to abstract information being less used or even completely ignored. In comparison, Trope & Liberman (2003) posits that when consumers face a decision problem which involves distant alternatives, they tend to have an abstract mental representation, which leads to concrete information being less used or even completely ignored. Moreover, researchers (e.g. Trope & Liberman, 2003; Trope et al., 2007) suggest that low-level construals highlight the “how” aspects of an object or event, and reflect information which is specific and subordinate. Individual’s mental representations, on the other hand, tend to be more abstract



and concentrated on the high-level aspects of a decision when they make a choice which will have greater long-term effects. These high-level construals highlight the “why” elements of an object or activity and convey abstract or subordinate knowledge (Trope & Liberman, 2003; Trope et al., 2007).

### **2.3.3 Level of abstraction stimuli**

Prior research has been conducted on how linguistic abstraction in communication may be operationalized. In research conducted by Kim et al. (2018), the construal level of an ad message was manipulated through their distinct headlines and body copy. The body copy of the abstract message read: “The Latest Model of Processor, Larger Screen Size, Huge Hard Drive Size, and Clear and Vivid Graphics.”, while the concrete message read: “Genuine Windows 7 Home Premium (64b), 14.0” Screen size, 750GB Hard Drive Capacity and AMD Radeon HD 6490M” (p. 738). An additional study by Kim & Bae (2016) created two versions of a print ad promoting a company’s CSR activity. They also created a fictitious telecommunications company, to avert priming any existing attitude towards the firm or business-specific stereotypes. They conceptualized the concrete (vs. abstract) condition based on the amount of specific information presented in the message, much like the study by Kim et al. (2018). According to previous research on the topic, abstract communication often involve adjectives and verbs which describe an ongoing enduring state, nouns which represent a concept or notion that is applicable in a variety of contexts (Yin et al., 2022), and nouns that describe people (Carnaghi et al., 2008). Additionally, abstract communication is less informative (Semin & Fiedler, 1988). In comparison, concrete communication often involves nouns which characterize an observable object, verbs which illustrate observable action (Yin et al., 2022), and nouns that describe specific properties (Gentner & Kurtz, 2005, as cited in Burgoon et al., 2013). Moreover, research suggests that construal levels can be induced by manipulating different elements, such as pictures (Rim et al., 2015; Kim et al., 2016), sounds (Hansen & Melzner, 2014), and/or language (Hansen & Wänke, 2010). This enables marketing practices to use these cues in efforts to induce consumers' construal levels accordingly.

## 2.4 Firm type

### 2.4.1 Niche- vs. mass-market firms

The distinction between niche- and mass-market firms are well established. Dalgic & Leeuw (1994) argue that niche marketing refers to firms “positioning into small, profitable, homogeneous market segments which have been ignored or neglected by others” (p. 42). Toften & Hammervoll (2010) provide an overview of previous research on the topic, arguing that there is a consensus of core attributes related to niche marketing. That is, niche firms often have a smaller customer group and fewer competitors. Additionally, they operate with a higher degree of specialization, product differentiation, customer centralization, and relationship marketing (Toften & Hammervoll, 2010).

Furthermore, Dalgic & Leeuw (1994) emphasizes that a common determinant for many niche firms is their successful ability to demand premium prices for their offerings. Additionally, Toften & Hammervoll (2010) point out that niche firms often have a focused strategy, including geographic uniqueness, specific product usage, and/or particular product attributes which only appeal to those niche members. Dalgic & Leeuw (1994) states that a key component to niche marketing is to offer a distinctive product to a specific customer group. This is in line with the findings by Toften & Hammervoll (2010), determining that niche firms may be described as product and customer specialists.

Hammervoll et al. (2014) suggests that, in comparison, mass-market firms may be described as large, often appealing to large supermarket chains, and that they offer standardized, mass-produced products which can be adapted to many different global markets. Vilasanti da Luz et al. (2020) point out that mass-market firms focus less on exclusivity of items and instead prioritize mass production and more fleeting strategies with short term cycles. In addition, they highlight that mass market firms position their offerings as more accessible, inclusive, inexpensive, and plentiful. Carrigan et al. (2013) further elaborate that mass-market firms often involve low costs, global operations and a large number of customers. Accordingly, Wang et al. (2022) argues that well established characteristics of mass-market firms are a large number of customers, and high market shares.

More so, previous research suggests that characteristics possessed by niche firms and mass-market firms differ in a manner that attract different types of

consumers. Wang et al. (2022) argue that since mass-market firms typically have a larger market share than niche firms, consumers perceive them as less risky to purchase from. They further elaborate that risk averse consumers are more inclined to choose mass-market firms, as these products are widely purchased by the population at large, and have thus already been “tried and tested”, giving mass-market firms stronger brand equity and credibility (Wang et al., 2022).

Furthermore, Wang et al. (2022) propose that power distance belief (PDB) also influences preference for either mass-market or niche firms. Wang et al. (2022) explains PDB as “the extent to which people accept and endorse hierarchy in society” (p. 804-805). Beyond being a societal phenomenon, they propose that distinct differences in levels of PDB are found on an individual level. In terms of firm type, Wang et al. (2022) argues that people with low PDB are more inclined to prefer niche firms, while people with high PDB tend to prefer mass-market firms. They explain that this is due to the connection between PDB and risk aversion. This implies that high PDB consumers are more risk averse (and vice versa for low PDB consumers), and that higher risk is associated with niche firms than for mass-market firms (Wang et al., 2022). However, Wang et al. (2022) emphasize that firm actions can alter these preferences, for instance if niche firms make efforts to mitigate the risk for consumers.

## **2.5 Hypothesis Development**

According to research on linguistic abstraction and message framing, it seems plausible that both concrete and abstract linguistic message framing signals firm attributes which could positively impact PFI. One element of this study is to investigate whether concrete or abstract linguistic message framing is more effective at generating PFI overall.

As previously established, research suggests that concrete language signals familiarity (Hansen & Wänke, 2010) and trustworthiness (Toma & Hancock, 2012), enabling consumers to believe the communicated message to be more true (Hansen & Wänke, 2010; Johnson & Raye, 1981). Additionally, Shams et al. (2017) highlight that a firm cultivating a reputation for being innovative and forward-thinking can create a sense of trust and reliability among consumers. More so, a strong relationship between perceived innovativeness and trustworthiness has been well established in the literature (Shams et al. 2017; Komang et al., 2022, Geng et al., 2021; O’Cass & Carlson, 2012). The extensive

research conducted on trustworthiness in combination with perceived innovativeness, and the considerable literature on the ability of concrete language to reduce perceived risk and uncertainty through, amongst others, trustworthiness (e.g. Toma & Hancock, 2012; Hansen & Wanke, 2010), motivates the suggestion that using a concrete approach in a firm's message framing would contribute to the higher likelihood of consumers believing the message communicated (i.e. that the firm is innovative).

Additionally, a trust-creativity relationship has been established, where trust positively impacts creativity (Chen et al., 2021). Creativity is one of the important attributes which make up PFI (Kunz et al., 2011). Therefore, the ability of concrete language to build trust, the link between trust and creativity, and subsequently PFI, allows us to suggest that concrete communication should positively impact PFI.

Given the evident link between concrete communication and trustworthiness (Hansen & Wänke, 2010; Johnson & Raye, 1981; Toma & Hancock, 2012), the link between trustworthiness and PFI (Shams et al., 2017; Komang et al., 2022, Geng et al., 2021; O'Cass & Carlson, 2012;), and the positive relationship between trust and creativity (Chen et al., 2021), we propose the following hypothesis:

*H1: Using concrete language in a firm's message framing has a stronger positive effect on Perceived Firm Innovativeness, compared to abstract language.*

The second objective of our study is to investigate the moderating role of firm type (niche vs. mass market) on the effect of linguistic abstraction on PFI. Here, it is crucial to account for the specific characteristics connected to niche- and mass-market firms. Previous research emphasizes, among others, that due to niche firms' smaller customer group (Toften & Hammervoll, 2010; Wang et al., 2022) and lower market share, they generally have lower brand equity and credibility (compared to mass-market firms), and are perceived as more risky by consumers (Wang et al., 2022). As previously established, there is a strong relationship between perceived innovativeness and trustworthiness (e.g. Shams et al., 2017; Komang et al., 2022, Geng et al., 2021; O'Cass & Carlson, 2012). As such, due to

the general perception of risk and lower brand credibility associated with niche firms, it could be beneficial for niche firms to mitigate these impressions in order to gain PFI. As already established, previous research suggests that concrete communication signals trustworthiness (Toma & Hancock, 2012), and is beneficial to use when consumers are skeptical or in the presence of uncertain environments (Larrimore et al., 2011; Pan et al., 2018), which arguably is the case for niche firms, more so than for mass-market firms. Therefore, we find it plausible that concrete communication has a stronger likelihood of generating PFI for niche firms, than abstract communication. Thus, we propose the following hypothesis:

*H2<sub>a</sub> : Niche firms gain a greater positive effect on Perceived Firm Innovativeness when using concrete language in message framing, compared to abstract language.*

In contrast, mass-market firms are likely to already inhabit characteristics which enable them to be perceived as less risky to purchase from (Wang et al., 2022). That is, mass-market firms generally have stronger brand equity and credibility than niche firms (Wang et al., 2022). As such, where niche firms might have to persuade the readers more for their message to be perceived as truthful (i.e. that the firm is innovative), mass-market firms might have more to gain from looking beyond this aspect when framing their message.

Previous research suggests that abstraction works as a cue for several firm characteristics (e.g. power and expertise) (Reyt & Wiesenfeld, 2015; Wakslak et al., 2014). Building on this, we raise the possibility of abstraction also working as a creativity cue. That is, a link has been established between creativity and abstraction. For instance, Tateo (2013) argues that generalization should be considered as a conceptual abstraction, which represents both a creative and reflective act of thought, as it requires creating a new conceptual elaboration based on knowledge that the individual already inhabits. Furthermore, previous research suggests that one of the domains improved by abstraction is creativity (Förster et al., 2004; Liberman et al., 2012). Specifically, if abstraction is strongly enough associated with creativity in the minds of consumers, it is possible that

abstract message framing could be a creativity cue leading consumers to perceive the firm as more creative. This would be an important contributor in gaining PFI, as creativity is one of the main indicators of PFI (Kunz et al., 2011).

Furthermore, Wakslak et al. (2014) proclaims that abstraction signals expertise. In reference to firm communication aimed at gaining PFI, where offering novel solutions is one of the main indicators (Kunz et al., 2011), expertise could be a firm association indicating that the firm is capable of creating novel ideas and solutions, thus increasing PFI.

As such, we propose that mass-market firms have a better chance of gaining PFI when framing their message in an abstract manner, providing more added value to their communication efforts to gain PFI. Therefore, we propose the following hypothesis:

*H<sub>2b</sub>: Mass-market firms gain a greater positive effect on Perceived Firm Innovativeness when using abstract language in message framing, compared to concrete language.*

Our third objective in this thesis is to further investigate potential consumer responses of PFI. Specifically, we want to gain insight on the effect of PFI on brand credibility and brand attitude.

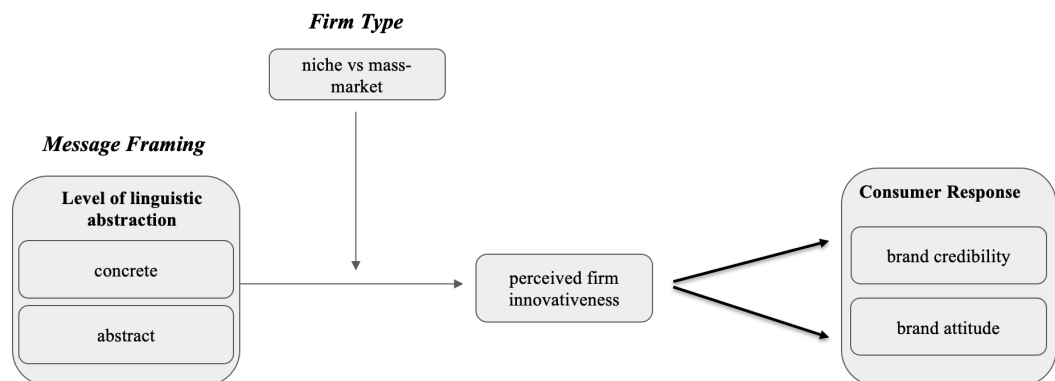
Previous research on perceived innovativeness has found evidence that it can positively affect both excitement about the firm, and its overall image (Henard & Dacin, 2010). Since innovative firms often have a history of successful and meaningful solutions over a period of time, consumers can infer that the firm can effectively carry out all tasks (Kunz et al., 2011). This becomes important in reference to brand credibility as the brand credibility scale by Erdem & Swait (2004) mainly revolves around a firm's expertise and trustworthiness. The link is therefore made that PFI is capable of increasing expertise (Kunz et al., 2011) and trustworthiness (Shams et al., 2017; Komang et al., 2022, Geng et al., 2022; O'Cass & Carlson, 2012), hence it should in turn positively affect brand credibility. Additionally, existing research on the topic of perceived innovativeness (not to be confused with PFI specifically) and its effect on brand

credibility, provides evidence of a positive relationship between these brand and firm attributes (Shams et al., 2017).

In reference, no research has yet been done on the direct effect of PFI on brand attitude. As such, we draw linkages between existing research on similar, relevant topics. Kunz et al. (2011) found that PFI has a positive influence on functional competence, and that in turn functional competence has a positive influence on cognitive satisfaction. Additionally, Kunz et al. (2011) found a significant influence of PFI on positive affect, and that positive affect influences emotional consumer satisfaction. In accordance with Batra & Ray’s (1986) brand attitude scale, high levels of positive brand attitude arise when consumers evaluate brands highly on the following attributes: “useful”, “important”, “pleasant”, “nice”, and “good”. Since PFI includes perceptions of a firm’s creativity, and creativity surprises and stimulates consumer interest, this excitement suggests that consumers will feel good about the firm and derive hedonic value from this feeling (Kunz et al., 2011). As such, we propose a link between the positive feelings of excitement that is generated by PFI, and the positive feelings and beliefs forming brand attitude (Batra & Ray, 1986). As such, we propose the following hypothesis:

*H3: Perceived Firm Innovativeness has a positive effect on brand credibility and brand attitude.*

We present an overview of our hypotheses in this conceptual framework:



**Figure 1:** Conceptual Framework

### **3.0 Research Methodology**

In this section, we illustrate the methodological procedures employed in this study. The following subsections provide detail on the research design, participant selection, data collection methods, data analysis procedures, and ethical considerations which collectively contribute to the robustness and validity of our findings.

#### **3.1 Research Design**

The aim of this study is to assess the impact of message framing (concrete vs. abstract) and firm type (niche vs. mass-market) on PFI, and additionally, PFI's effect on brand credibility and brand attitude.

In the first part of the study, a 2 (niche firm vs. mass-market firm)  $\times$  2 (concrete message framing vs. abstract message framing) between-subjects experiment was employed. This helped isolate the specific effects of each condition, thereby reducing the risk of bias and confounding effects. Each participant was randomly assigned to one of the four possible combinations, to ensure equal distribution and avoid any potential assignment bias. Participants were exposed to the text reflecting their allocated firm type and message framing. After reading each text, participants responded to survey items measuring PFI, brand credibility, and brand attitude. PFI and brand credibility were measured using a 7 point likert scale, whereas brand attitude was measured on a 7 point semantic differential scale.

A set of two different firm descriptions (niche vs. mass-market), and a homepage of a fictitious brand/firm (NextWave) with the same visuals, but with two different linguistic message framing types (concrete vs. abstract) were employed as stimuli in our study. To test for the effects of concrete versus abstract linguistic message framing, all else but rhetoric was held constant in our design. A fictitious brand/firm was created to ensure minimal confounding effects of existing brands/firms, which participants may have existing predispositions to.



## **3.2 Stimuli development**

Central to our experiment was the design of two stimuli for each independent variable in H1 and H2 (abstract vs. concrete message framing and niche vs. mass-market firm type).

### **3.2.1 Abstract vs. concrete message framing**

Our experiment involved the design of a homepage for a fictional brand/firm, containing two manipulated texts. Both texts provided a description of a product (RunHalo) offered by a fictional brand/firm (NextWave), where the distinction appeared in the linguistic abstraction level of the message framing. The stimuli text was presented across three slides, where both texts shared identical visual design elements. The simplistic and consistent design of these two homepages (see Appendix A) ensured that any differences observed in our results (PFI) could solely be attributed to the linguistic variations in the texts, thereby eliminating potential confounding effects from other elements (e.g. visuals). Manipulation checks were conducted on both stimuli prior to the experiment, strengthening the internal validity of our study.

We leaned heavily on the LCM (e.g. Semin & Fielder, 1988, 1991; Hansen & Wänke, 2010), earlier research on levels of abstraction (e.g. Hansen & Wänke, 2010; Yin et al., 2022; Trope & Liberman, 2010; Köhler et al., 2011; Hitchon et al., 1994), and operationalizations and earlier experiments (e.g. Kim & Bae, 2016; Kim et al., 2018; Yin et al., 2022; Massara et al., 2020) of abstract vs. concrete language when creating these two stimuli for the experiment. The LCM and the adjective-to-noun ratio (Massara et al., 2020) were used when manipulating the level of abstraction across our experimental conditions. However we also accounted for other research suggesting a more nuanced view of nouns' positioning as both abstract and concrete depending on the context (Carnaghi et al., 2008).

As the stimuli will show, we included several adjectives in our abstract condition, while eliminating adjectives altogether in our concrete condition to help emphasize the linguistic differences. The concrete stimuli also included more nouns than the abstract stimuli, while the number of verbs was relatively equal between the two. The concrete stimuli included specific, detailed information (e.g. Kim et al., 2018; Hitchon et al., 1994), while the abstract stimuli avoided specifics

and was presented using more descriptors to communicate the product and value in a more general sense (e.g. Yin et al., 2022; Semin & Fiedler, 1988, 1991). Once again, the visual design and actual message across both versions was kept constant to ensure that any observed differences in PFI were attributed solely to the linguistic variations in the message framing. Below are our two stimuli texts used in the experiment (abstract vs. concrete). Note that we have not marked words corresponding to word classes besides from verbs, nouns and adjectives (e.g. adverbs, prepositions etc.) Adjectives are highlighted in yellow, verbs in red, and nouns in green.

### **Abstract text:**

#### *About NextWave*

“At NextWave, we **look** beyond **traditional** ways - **sculpting** the **modern fitness** landscape into a **new way** to **live** and **breathe wellness**. We **embrace self-realizing innovations** **born** from **newly blossomed technology**. Our **customers** **are** always at the **heart** of our **journey**.

**Live** the NextWave **difference** - **innovative**, **fresh** and **powerful!**”

#### *Introducing RunHalo*

“**Born** from **new sprung technology**, RunHalo **illuminates** your **path** to **greatness**. This **ambitious concept** was **manifested** into **existence** through the **realms** of **knowledge**, **fueled** by **modern innovation**.”

#### *Why RunHalo?*

“RunHalo's **fundamental nature** **embodies** the **purest expression** of **fluidity** and **movement**. It **harmonizes** with your **distinct rhythm**, **opening** the **door** to a **new universe** of **motion**. This **faithful companion** **is** the **perfect marriage** of **innovation** and **technology**, **transcending** the **boundaries** and **opening new horizons** for your **future** you. RunHalo **is** more than just a **shoe** – it **embodies** your **ambitious spirit**, your **driven nature**, and your **unwavering dedication** to **excellence**.”

### Concrete text:

#### *About NextWave*

“At NextWave, we **bring** innovations to the **forefront** of the **fitness industry**. By **investing** in **technology**, we **aim** to **deliver solutions** that **meet** the **needs** of our **customers**. NextWave's **contribution** to the **fitness industry** **stems** from our **commitment to innovation**”.

#### *Introducing RunHalo*

“**Created** from **technology** and **innovation**, RunHalo **presents** a **running shoe** **focused** on **enhancing performance** and **providing comfort**. RunHalo **merges** **technology** and **innovation**, **making** it a **running shoe** that **delivers** on all **fronts** – **comfort, performance and style**.”

#### *Why RunHalo?*

“RunHalo's **materials** **provide** **lightness** and **durability** with every **stride**. Its **innovation** **lies** in the **sole**, **made** with **foam technology**. The **shoe's traction system** **provides** **grip** and **stability**, **enabling** you to **improve** the **longitude** and **pace** of your **runs**. RunHalo's **technology** **turns** every **step** into a **forward momentum**, **giving** you a **boost** of **speed** and **power**.”

### 3.2.2 Niche vs. mass-market firm descriptions

The second stimulus in our experiment was creating two distinct firm descriptions, each clearly aligning with one level of our independent variable “firm type”: a niche and a mass-market firm. The distinction between the two descriptions lies solely in the characterisation of the firm as either niche or mass-market. We were diligent in maintaining parity in both content and length, thus minimizing potential confounds that could arise from discrepancies in these respects. Manipulation checks were conducted on both texts prior to the experiment, strengthening the internal validity of our study.

For the niche firm condition, the description was framed to underscore the firm's specialized focus, targeting a specific consumer segment with unique needs and preferences. This description also highlighted the firm's deep understanding of this market segment and its commitment to delivering products tailored to their consumers' needs (e.g. Dalgic & Leeuw, 1994; Toften & Hammervoll, 2010).

*NextWave is a niche company, founded in 2015. They specialize in sports equipment, targeting a small customer group with defined needs. These customers are highly dedicated to continuously improving their health. NextWave focuses their efforts towards bringing their specific customer group products that fits their needs, desires and preferences. This also implies that their products do not necessarily target people outside this specific customer group. NextWave is a small firm with a team of experts with cutting-edge experience in the field. Their high quality, small scale production leads to higher costs which reflects in the product price. Their products are sold directly to their customers, without any other distributors, leading to close contact between NextWave and their customer base. This also makes their product less accessible. NextWave is in continuous dialogue with their customers to receive feedback for future improvement.*

In contrast, our description of the mass-market firm was designed to emphasize the firm's broad appeal, catering to a large, diverse consumer base. The firm's ability to cater to a wide array of consumer needs, being readily available and accessible, and its commitment to delivering products for the mainstream market were highlighted in this description (e.g. Toften & Hammervoll, 2010; Wood et al. 2018; Kim & Phua, 2020).

*NextWave is a mass-market company, founded in 2015. They are involved in many industries around the world, including the sports equipment industry. Through their wide range of fitness products, NextWave wishes to provide as many people as possible with the opportunity to improve their health. NextWave is a large firm with many resources and competences across the board. Their experienced team consists of several diverse employees from different fields and backgrounds. They operate with mass production making their products more affordable. They have successfully served a large group of customers over the years, providing products and experiences that meet the general needs of many. This also implies that their product does not necessarily fit all individual and specific needs. In aims of reaching their customers, NextWave focuses on accessibility through many distributors globally.*

### **3.3 Participants & sample**

The target population of interest in this study is adults whose nationality is American (US) or British (UK). The data was collected using Prolific, a well-established online research platform that provides access to a global pool of participants. The sampling technique used in this study was convenience sampling, where we recruited participants online through Prolific. Convenience sampling is less costly and less time consuming compared to other sampling techniques, in addition to being convenient in obtaining large samples (Malhotra, 2019). As a platform, Prolific predominantly uses convenience sampling, meaning that their study places are filled on a first-come, first-serve basis (Prolific, 2023). To maintain data quality and relevancy, we implemented some selection criteria for the participants that would be included in our sample. Participants were limited to those whose nationality was that of the United States or the United Kingdom, those who had English as a first language, and who had an approval rate of at least 95% on the prolific platform. The geographical cap also helped us control for large cultural variations that could influence responses and skew our results, providing a more homogeneous cultural context.

The stipulation that participants have English as their first language helped mitigate potential comprehension issues with the stimuli, especially since the message framing manipulation (concrete vs. abstract) could be sensitive to language proficiency. This criteria reduced the risk of misinterpretation or miscommunication, and increased the likelihood that all participants were equally able to understand and engage with the content of the experiment.

Selecting participants with an approval rate of at least 95% or more on Prolific made it more likely that we had respondents who had a track record of reliable and thoughtful participation in online research. This high approval threshold enhanced the quality of our data by ensuring we included participants who are more likely to take the survey seriously, reducing the chances of careless or rushed responses.

A sample size of 200 was considered adequate, given our model, in achieving an acceptable level of statistical power that allowed our results to be generalisable and representative (Guadagnoli & Velicer, 1988; Malhotra, 2019). A minimum sample size (n) of 100 to 200 observations is often recommended (Comrey, 1978; Guadagnoli & Velicer, 1988). The idea is that a correlation

coefficient becomes a sufficient estimator of the population coefficient when sample sizes reach this level (Guadagnoli & Velicer, 1988). Additionally, Malhotra (2019) posits that for problem-solving research, product tests, and test-marketing studies, a minimum sample size of 200 is adequate.

### **3.4 Data collection**

We developed a web-based experiment using Qualtrics, in a survey format. Data was collected through the online research platform Prolific. In addition to randomizing participants' experimental conditions and asking them to rate our variables and measures on their respective scales, we also included some demographic questions in order to be able to differentiate between segments (see Appendix C), allowing us to discuss the results in more detail and ensure greater generalisability. These included age, gender, and nationality. We omitted questions of sensitive and personal nature, as to reduce the risk of alienating respondents (Malhotra, 2019). Responses obtained from Qualtrics were imported into IBM SPSS 29. Data was analyzed after being reviewed for suspicious response patterns, failed attention checks, incompleteness, missing values etc.

### **3.5 Measures**

In the first part of the experiment, our two independent variables were level of linguistic abstraction in message framing (concrete vs. abstract) and firm type (niche vs. mass-market). The dependent variable in this part of the study was PFI. The independent variable of message framing was operationalized as either linguistically concrete or abstract. We developed two different sets of stimuli reflecting these two conditions (see Appendix A). Our second independent variable, firm type, was manipulated as either a niche firm or mass-market firm description.

In the second part of our study we first examined the effect of PFI (as our independent variable) on brand credibility (dependent variable), and secondly on brand attitude (dependent variable). Verified and existing scales from the literature were used to measure PFI, brand credibility and brand attitude. PFI was measured on a 7 point likert scale developed by Kunz et al. (2011) (see Table 1). This scale included 7 items, where respondents were asked to agree/disagree with statements about the brand/firm. Questions probed aspects such as the firm's ability to launch

new products and generate new ideas, to its ability to think creatively and dynamically.

Brand credibility was assessed using the brand credibility scale developed by Erdem & Swait (2004), and examined the brand's trustworthiness and expertise (see Table 2). The brand credibility scale (Erdem & Swait, 2004) was slightly modified in order to fit our study design. That is, participants had no prior history with the brand/firm. Therefore it would not be suitable to ask participants questions which required prior exposure or history with the brand/firm. Specifically, questions three and five were modified so that they read "I believe that this brand delivers what it promises" and "I expect this brand to keep its promises, no more and no less" (see Appendix C).

Brand Attitude was measured based on a 7 point semantic differential scale developed by Batra & Ray (1986), which included measures of overall positive and negative evaluations of the brand (see Table 3).

In order to yield valid results, we used likert scales with endpoint labels only, ensuring the options are equally spaced. This ensures that we can treat it as interval data, enabling us to capture reliable parametric statistics, and use parametric statistical methods (e.g. regression).

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Perceived Firm Innovativeness Scale (Kunz et al. 2011)

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The company is dynamic

The company is very creative

The company launches new products and creates market trends all the time

The company is a pioneer in its category

The company constantly generates new ideas

The company has changed the market with its offers

The company is an advanced, forward-looking firm

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*note: all dimensions rated on a likert scale from Disagree (1) to Agree (7)*

**Table 1:** Perceived Firm Innovativeness Scale (Kunz et al. 2011)





respondents, we obtained a final sample size of 205 participants ( $n_{females}=141$ ,  $n_{males}=63$ ), a failure rate of 18.65%. We used forced responses in the survey, therefore there were no missing values present in the final data set.

The attention check involved respondents having to recognise a three digit validation code presented on the homepage, which they were asked to provide after the exposure. The attention check helped tackle the issue of response accuracy (Abbey & Meloy, 2017). It was designed explicitly to recognise responses that were inattentive, which could have caused our data to be less representative. Participants were relatively equally distributed between the four experimental conditions (concrete message framing,  $n=102$ ; abstract message framing,  $n=103$ ; niche firm type,  $n=98$ ; mass-market firm type,  $n=107$ ).

### **3.7 Data analysis**

All data was analyzed using IBM SPSS software. We used a two-way Analysis of Variance (ANOVA) to investigate the main effects of linguistic abstraction in message framing and firm type, and their interaction, on PFI. Following this, we performed a linear regression to test the effects of PFI on brand credibility and brand attitude. All tests were two tailed, and a significance level of 0.05 was employed. Effect sizes were reported to provide an indication of the magnitude of the observed effects, in addition to the statistical significance. Moreover, we conducted factorial ANOVA and a Tukey Post-Hoc test to control for pre-treatment characteristics, and explore potential additional findings.

### **3.8 Ethical considerations**

The research was conducted in line with the ethical guidelines stipulated by BI Norwegian Business School. No personally identifiable data was collected from the respondents. We ensured anonymity throughout our experiment by sending the same link to all participants and not asking respondents for any information that alone or in combination could be used to identify an individual (Handelshøyskolen BI, 2022). No data was shared or will be used outside of this research.

This research was conducted in strict adherence to the ethical guidelines stipulated by the National Research Ethics Committee (2020) and the legal provisions outlined in the Norwegian Personal Data Act. All participants engaged

in the research voluntarily. Before engaging in the study, participants were given a clear explanation of the purpose, methods, and intended uses of the research, as well as assurance of anonymity and confidentiality. In line with General Data Protection Regulation (GDPR) requirements, we only collected data that was necessary and relevant to the objectives of our study.

All data will be securely stored and eventually deleted after a period, in line with legal and institutional requirements, ensuring ongoing compliance with data protection legislation. Access of data was limited to the immediate researchers for the sole purpose of this study. Moreover, the findings from this study will be reported in a manner that continues to preserve the anonymity of participants, in keeping with ethical best practices

## **4.0 Analysis and Results**

### **4.1 Pre-Test**

A pre-test was conducted to validate the operational effectiveness of our manipulated stimuli in eliciting the intended differences in the two levels of our two independent variables. This entailed that the niche and mass-market firm descriptions were significantly different and understood by participants respectively. The same applied for the stimuli which were manipulated to be either linguistically concrete or abstract. It was critical to the success of the study, that the end results were not wrongly influenced by the experiment manipulations not being representative of what the study was testing. It was crucial that respondents understood what the study was trying to convey with the descriptions, i.e. that the description of the niche firm was truly understood by respondents as the firm being niche, and vice versa for the mass-market firm description. Likewise, that the abstract and concrete texts were significantly understood as their respective abstraction levels. In the first pretest, 30 respondents from the US and UK were recruited from the online panel, Prolific.

The results of the firm type pretest demonstrate that the niche firm description text is understood by respondents as being significantly niche ( $M_{niche} = 1.6$ ), and that the mass-market firm description significantly comes across as being mass-market ( $M_{mass-market} = 5.0$ ). The differences between the two are statistically significant ( $t=-8.035, p<0.001$ ).

The pretest also ensures that there are no significant differences in firm impressions (positive/negative) based on the two manipulated stimuli (niche vs. mass-market). The results of the firm type stimuli revealed that firm impressions were not significantly different ( $t=0.587, p=0.562$ ), nor was the linguistic phrasing (positive/negative) of the firm description ( $t=0.156, p=0.877$ ). This is important as differences may have caused bias and unrepresentative results in our study. In the first attempt to pre-test the condition regarding level of abstraction (concrete vs. abstract texts), no significant differences were found ( $M_{abstract} = 4.74, M_{concrete} = 5.13, t=0.867, p=0.393$ ).

	n	Mean	t value	Sig. (2-tailed)
niche	15	1.60	-8.035	<0.001
mass-market	15	5.00		
concrete	15	5.13	0.867	0.393
abstract	15	4.73		
impressions (positive/negative)				
<i>firm impression</i> <sub>niche</sub>	15	5.00	0.587	0.562
<i>firm impression</i> <sub>mass-market</sub>	15	4.80		
<i>linguistic phrasing</i> <sub>niche</sub>	15	4.87	0.156	0.877
<i>linguistic phrasing</i> <sub>mass-market</sub>	15	4.80		

**Table 4:** Results of first pre-test

The results of this preliminary pretest indicated that the concretely communicated stimuli was understood as concrete by respondents, but that the abstract stimuli was not understood as abstract enough. It is unclear whether this was a result of the text not having a high enough level of abstraction, or whether it may have been hard for respondents to fully comprehend the question.

As a result, a follow-up pretest was carried out, where the language in the abstract stimuli was altered to make it more abstract. The final results of the pretest indicated a significant ( $p<0.001$ ) difference, and that the two stimuli

(abstract vs concrete) were understood in accordance to their respective abstraction level.

	n	Mean	t	Sig. (2-tailed)
concrete	15	5.13	4.596	<0.001
abstract	15	2.80		

**Table 5:** Results second pre-test

All four stimuli of our two independent variables were therefore significantly different and in line with their levels, and we moved on to conducting the final experiment.

## 4.2 Testing the validity and reliability of the constructs

The three scales used in this experiment (PFI, brand credibility, brand attitude) are well-established in the marketing literature. The authors of each scale conducted reliability and validity checks to ensure that they measure the constructs of interest accordingly. As such, we can assume a similar high degree of internal reliability and validity to when we measure the same constructs in our experiment.

### 4.2.1 Reliability

We calculated Cronbach's alpha as a test of internal consistency reliability. This measure of internal consistency allowed us to be sure that each item on each of our scales (PFI, brand credibility, brand attitude) measured the same construct. Cronbach's alpha for the PFI scale was 0.890, indicating a high level of internal consistency of this scale. Cronbach's alpha for our brand credibility scale was 0.993, indicating a very high level of internal consistency for this scale. The Cronbach's alpha for the brand attitude scale was 0.993, indicating once again a very high level of internal consistency for this scale. Removal of any of the items on any of these three scales would not result in a higher cronbach's alpha (except Q2 on the brand attitude scale, but only by an increase of 0.001). The two latter scales reveal a very high cronbach's alpha, indicating that there may be some redundancy in the items testing the same question but in different ways. Nonetheless, they measured the same construct, which was what we were looking to find.

Scale Variables	Number of items	Cronbach's Alpha (from our sample)	Cronbach's Alpha (original authors)
PFI (Kunz et al., 2011)	7	0.890	0.92
Brand Credibility (Erdem & Swait, 2004)	7	0.993	expertise (0.77), trustworthiness (0.89)
Brand Attitude (Batra & Ray, 1986)	5	0.993	0.80

**Table 6:** Internal consistency reliability check

These results provide us with an overall insight that we have high internal consistency of all three scales, suggesting that all the items on the scales measure the same underlying construct, improving the reliability of the scales.

Batra & Ray (1986) reported a Cronbach's alpha of 0.80 with all 5 measures of brand attitude, but excluded the fifth in their study in order to reduce subject irritation by limiting the time it took to administer their interviews. We chose to include all 5 measures since we concluded that the time and effort taken to answer one more measure on this scale was minimal. The high internal consistency of all 3 scales contributes to the reliability of the measurements within our sample and increases the internal validity of our experiment.

#### 4.2.2 Validity

Reliability is necessary, however not a sufficient condition for validity (Malhotra, 2019). Validity of a scale may be defined as the degree to which disparities in observed scale scores reflect the actual differences among the objects of evaluation, as opposed to being a result of systematic or random errors (Malhotra, 2020). The pre-established and acknowledged scales used in this study, have been validated by their respective authors, and we therefore are able to assume internal validity for all the scales used in this study.

Kunz et al. (2011) analyzed the validity of their PFI scale, both convergent and discriminant, with related constructs. Marketing program creativity, marketing program meaningfulness, and customer based corporate reputation were the related constructs included. The authors concluded that all the constructs fulfilled the Fornell–Larcker test for discriminant validity. They were therefore able to

conclude that their PFI scale differed from existing scales (discriminant validity), but were also similar to related scales (convergent validity).

Erdem & Swait (1998) validated their brand credibility scale, which they employed in their updated version of the brand credibility scale in 2004, which was the scale used in this study (Erdem & Swait, 2004).

In relation to the brand attitude scale, Batra & Ray (1986) were not able to test discriminant validity in their study because only one measure was used per construct. Regardless, this scale is widely recognised in the marketing literature field allowing us to assume a high degree of internal validity.

### **4.3 Analysis and Results of final experiment**

The proposed hypotheses were tested using two-way analysis of variance (ANOVA) and standard linear regression. The prior method of analysis was used to test  $H1$ ,  $H2_a$ , and  $H2_b$ , while the latter was used to test  $H3$ . Pre-treatment characteristics were controlled for (age, gender and nationality) to assess the robustness of the analysis, and the generalizability of the results. This also allowed us to find potential additional findings. The control variables were analyzed using factorial ANOVA, followed by a Tukey post hoc test for age (as this was the only variable which met the post hoc criteria). The significance of the overall model was assessed, both indirect and main effects, through a bootstrapping approach with 5000 re-samples (Hayes, 2013).

#### **4.3.1 Two-Way ANOVA: testing $H1$ , $H2_a$ , $H2_b$**

After removing incomplete responses and those who failed the attention check, the final sample size was 205 participants. Participants were relatively equally distributed between the experimental conditions (concrete message framing,  $n=102$ ; abstract message framing,  $n=103$ ; niche firm type,  $n=98$ ; mass-market firm type,  $n=107$ ).

*H1: Using concrete language in a firm's message framing has a stronger positive effect on Perceived Firm Innovativeness, compared to abstract language.*

The two-way ANOVA reveals no statistically significant differences of message framing type (concrete vs. abstract) on PFI ( $p=0.264$ ,  $F=1.255$ ). We observed

$M_{concrete} = 33.89$ ,  $M_{abstract} = 32.85$ , indicating that PFI was favorable in the concrete condition (i.e. the direction was as we hypothesized), but not significantly greater ( $p=0.264$ ). As such, we were not able to accept the proposed hypothesis H1.

	n	Mean	F Statistic	Sig.
concrete	102	33.89	1.255	0.264
abstract	103	32.85		

**Table 7:** Descriptive statistics and main effect (message framing on PFI)

$H2_a$ : Niche firms gain a greater positive effect on Perceived Firm Innovativeness when using concrete language in message framing, compared to abstract language.

$H2_b$ : Mass-market firms gain a greater positive effect on Perceived Firm Innovativeness when using abstract language in message framing, compared to concrete language.

We observed no statistically significant interaction effect between message framing and firm type on PFI ( $p=0.240$ ,  $F=1.387$ ) This tells us that the effect of one factor (message framing) did not depend on the level of the other factor (firm type), i.e. no moderator effect of firm type on PFI. The partial eta squared of message framing (0.006) and firm type (0.001) on PFI, and the interaction of message framing and firm type (0.007) on PFI, signifies that there is a small to medium effect size (Richardson, 2011). The results did not provide sufficient evidence to support  $H2_a$  and  $H2_b$ , therefore the proposed hypotheses were not accepted.

	F	Sig.	Partial Eta Squared
Message framing	1.255	0.264	0.006
Firm type	0.102	0.750	0.001
Message framing*Firm type	1.387	0.240	0.007

**Table 8:** Results of main- and interaction effects (message framing and firm type on PFI)

Message Framing	Firm Type	n	Mean	F statistic	Sig.
concrete	niche	52	33.23	1.387	0.240
concrete	mass-market	50	34.58		
abstract	niche	46	33.28		
abstract	mass-market	57	32.51		

**Table 9:** Results and descriptives of interaction effects (message framing and firm type on PFI)

### 4.3.2 Linear Regression: testing H3

To test H3, we conducted two separate linear regression analyses. This analysis allowed us to test PFI's effect on brand credibility and brand attitude.

*H3: Perceived Firm Innovativeness has a positive effect on **brand credibility** and **brand attitude**.*

First, the effects of PFI (independent variable) on brand credibility (dependent variable) were tested. The mean brand credibility score across all respondents was 34.49 (of maximum score=49), and the mean PFI score was 33.37 (of maximum score=49).

The  $R^2$  value of this regression is 0.488, therefore 48.8% of the total variation in brand credibility can be explained by PFI, a decent explanatory power. The  $R$  value of 0.698, representing the simple correlation, indicates a relatively strong degree of correlation. The value of Pearson Correlation ( $r$ ) is also 0.698 (see Appendix E). This indicates a relatively strong positive correlation between brand credibility and PFI. The higher the respondent rates the brand/firm on PFI, the higher they rate them on brand credibility.

The regression model significantly predicts brand credibility ( $p < 0.001$ ) (i.e. a good fit for the data). A 1% increase in PFI leads to an increase in brand credibility of 0.698. As we predicted, the effect of PFI on brand credibility is both



significant *and* positive. The following formula provides the regression equation for the effect of PFI on brand credibility:

$$\text{Brand Credibility} = 7.163 + 0.819(\text{PFI})$$

	Mean	Std. Deviation	n
Brand Credibility	34.49	7.54	205
PFI	33.37	6.43	205

**Table 10:** Descriptive statistics (PFI on brand credibility)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F change	df1	df2	Sig. F Change
1	.698	.488	.485	5.4086	.488	193.31	1	203	<.001

**Table 11:** Model summary (PFI on brand credibility)

*H3: Perceived Firm Innovativeness has a positive effect on brand credibility and brand attitude.*

The effects of PFI (independent variable) on brand attitude (dependent variable) were then tested. The mean brand attitude score across all respondents is 25.72 (of maximum score=35), and the mean PFI score is 33.37 (of maximum score=49).

The  $R^2$  value of this regression is 0.485, therefore 48.5% of the total variation in brand attitude may be explained by PFI. The  $R$  value 0.696 represents the simple correlation, indicating a relatively high degree of correlation. The Pearson Correlation ( $r$ ) value of 0.696 indicates a relatively strong positive correlation between brand attitude and PFI (see Appendix F). The higher the respondent rates the brand/firm on PFI, the higher they rate them on brand attitude. The regression model predicts brand attitude significantly well ( $p < 0.001$ ). A 1% increase in PFI leads to an increase in brand attitude of 0.696. As we predicted, this effect of PFI on brand attitude is both significant and positive. The following formula shows how brand attitude can be predicted from PFI alone:

$$\text{Brand Attitude} = 8.756 + 0.508(\text{PFI})$$

	Mean	Std.Deviation	n
Brand Attitude	25.72	4.69	205
PFI	33.37	6.43	205

**Table 12:** Descriptive statistics (PFI on brand attitude)

Model	R	R square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F change	df1	df2	Sig. F Change
1	.696	.485	.482	3.376	.485	191.344	1	203	<.001

**Table 13:** Model summary (PFI on brand attitude)

Based on the results of these two linear regressions, we accept  $H3$ , that PFI has a positive and significant effect on brand credibility and brand attitude.

## 4.4 Additional Findings

### 4.4.1 Gender

An univariate ANOVA was performed to check for additional findings we could extract from our experiment, in addition to obtaining an indication of the sensitivity of our analysis. First, we looked for any significant differences in results based on gender. Only one respondent rated themselves as the third group: “non binary/third gender”. Due to too small of a sample in this group ( $n=1$ ), this participant was excluded and we were left with the remaining 204 respondents. There are more females ( $n=141$ ) than males ( $n=63$ ), where females rate PFI more highly ( $M_{females} = 33.94$  and  $M_{males} = 32.27$ ), but significantly only at the 10% level ( $p=0.085$ ). A partial eta squared of 0.015 indicates a small effect size. The results are interpreted with caution due to the differences in group sizes. The interaction between gender and message framing ( $p=0.461$ ), gender and firm type ( $p=0.915$ ), and the interaction between gender, message framing, and firm type ( $p=0.456$ ) does not show any significant effect on PFI. Partial eta squared is below 0.01 for all these interactions, indicating very small effect sizes (Richardson, 2011).

	n	Mean	F	Sig.
Females	141	33.94	2.99	0.085
Males	63	32.27		

**Table 14:** Descriptive statistics and main effect (gender on PFI)

	F	Sig.	Partial Eta Squared
Gender	2.99	0.085	0.015
Gender*Firm type	0.11	0.915	0.000
Gender*Message framing	0.545	0.461	0.003
Gender*Message framing*Firm type	0.789	0.456	0.008

**Table 15:** Results of main- and interaction effects (gender, message framing and firm type on PFI)

#### 4.4.2 Age

Respondents were asked to provide their age from a range of options, which were classified based on generational differences (Figueroa & Timilsina, 2021).

Age	Generation	n	Mean	F	Sig.
1995-2008	Gen Z	41	31.73	2.808	0.041
1980-1994	Gen Y	97	33.18		
1965-1979	Gen X	54	34.93		
1944-1964	Baby boomers	13	33.54		

**Table 16:** Descriptive statistics and main effect (age on PFI)

Once again, these results should also be considered with caution as the age groups differ in sizes. Interestingly, the results show that age has a significant effect on PFI ( $p=0.041$ ). The partial eta squared of 0.043 indicates a small to medium effect size (Richardson, 2011). The interactions between firm type and age ( $p=0.070$ ) on PFI, are significantly different at the 10 percent level. Message

framing and age ( $p=0.525$ ), and age, firm type, and message framing ( $p=0.494$ ) are not statistically significant.

	F	Sig.	Partial Eta Squared
Age	2.808	0.041	0.043
Age*Firm type	2.388	0.070	0.037
Age*Message framing	0.748	0.525	0.012
Age*Firm type*Message framing	0.852	0.494	0.018

**Table 17:** Main and interaction effects (age, message framing and firm type on PFI)

The Tukey HSD post hoc multiple comparisons test reveals that no groups were statistically significant from each other on a five percent level. However, age groups Gen Z and Gen X were significantly different at the 10% level ( $p=0.075$ ) (see Appendix G).

#### 4.4.3 Nationality

After testing for any significant differences in PFI based on the respondents nationality, we observe a significant interaction effect of firm type and nationality on PFI ( $p=0.003$ ). However, over 96% of respondents were from the UK ( $n=198$ ) and the remaining from the US ( $n=7$ ). Only one US respondent was allocated to the niche-concrete condition, and only one to the niche-abstract condition. Given these extremely uneven group sizes, we cannot confidently generalize these results (i.e. say there are significant differences within these two groups). No other interaction was significant ( $p=0.978$ ,  $p=0.838$ ,  $p=0.715$ ).

Nationality	n	Mean	F	Sig.
UK	198	33.41	0.708	0.401
US	7	32.29		

**Table 18:** Descriptive statistics and main effect (nationality on PFI)

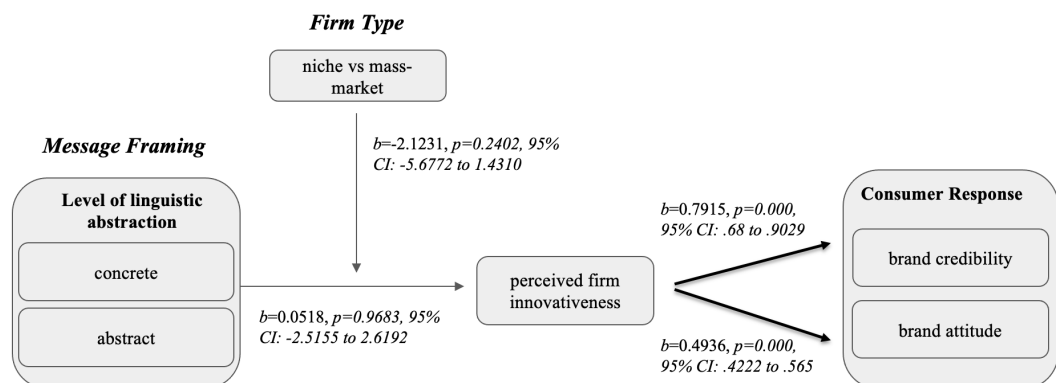
	F	Sig.	Partial Eta Squared
Nationality	0.708	0.401	0.004
Nationality*Firm type	9.11	0.003	0.044
Nationality*Message framing	0.042	0.838	0.000
Nationality*Message framing*Firm type	0.134	0.715	0.001

**Table 19:** Main and interaction effects (nationality, message framing and firm type on PFI)

#### 4.5 Bootstrapping

Hayes's (2013) bootstrapping with 5,000 resamples was used for a moderated mediation analysis. Hayes (2013) Model 8 was the most similar to our framework. We ran the model two times, once with brand credibility as the dependent variable ( $Y$ ) and once with brand attitude as the dependent variable ( $Y$ ). We were interested in the interaction effects between message framing ( $X$ ) and firm type ( $W$ ) on PFI ( $M$ ), the effect of message framing ( $X$ ) on PFI ( $M$ ), and the effect PFI has on brand credibility ( $Y_1$ ) and brand attitude ( $Y_2$ ).

The analysis shows that linguistic abstraction in message framing does not have a significant impact on PFI ( $p=0.9683$ ). The effect of linguistic abstraction in message framing on PFI is not being moderated by firm type ( $p=0.2402$ ). The bootstrap analysis finds that PFI does have a significant effect on both brand credibility ( $p=0.0000$ ), and on brand attitude ( $p=0.0000$ ).



**Figure 2:** Main findings summarized

## 5.0 General Discussion

This study was not able to find any statistically significant effect of linguistic abstraction of message framing on PFI. As such, we were not able to provide evidence of an effect of level of abstraction in message framing and on the degree to which consumers perceive the firm as innovative. As previously presented, prior research on this topic suggests that simply framing messages abstractly or concretely will alter the level of abstraction in the readers mindset (White et al., 2011), and that different levels of abstraction can have different effects on communication outcomes (Yin et al., 2022). Yet, it may be the case that level of abstraction does not signal, or alternatively signal strong enough, attributes of innovativeness in particular.

We initially hypothesized that concrete communication would have a stronger positive effect on PFI, however our analysis was not able to support this. Existing literature on linguistic abstraction suggests that concrete language, among others, signals familiarity (Hansen & Wänke, 2010) and trustworthiness (Toma & Hancock, 2012). H1 strongly relied on these factors, hypothesizing that trustworthiness and familiarity would increase the likelihood of consumers believing the message communicated (i.e. that the firm is innovative) to be true. It could be that since our study operated with a fictional brand/firm, in addition to the participants only being exposed to this once, made the communication effect minimalistic and could possibly have been overpowered by other factors. Alternatively, since we observed that the direction of the results was in line with our hypothesized outcome, it could be that longer and more frequent exposure of the given message framing would provide stronger effects on PFI. It could however also be that the positive signaling effects of concrete communication on PFI were simply not stronger than the positive signaling effects of abstract communication on PFI, which would level out the results between the two linguistic styles.

Furthermore, our study did not find any significant interaction effect between message framing and firm type on PFI. This indicates that firm type did not moderate the results of linguistic abstraction in message framing on PFI in any significant manner. Previous research has provided evidence for differences in communication outcomes based on firm type, arguably due to different inhabited characteristics and subsequently brand fit (Vock, 2022), in addition to different

consumer expectations (Motsi, 2023) connected to firm type. Our lack of significant results could be explained if neither abstract or concrete language is deemed inappropriate for neither niche- nor mass-market firms, enabling them to avoid particularly negative communication outcomes either way.

Another explanation could be that our study did not account for target groups. That is, previous research distinguishes between consumers of niche vs. mass-market firms (e.g. Wang et al., 2022). This implies that consumers inclined to prefer niche firms might have different preferences for communication style of niche firms' message framing, and vice versa for consumers inclined to prefer mass-market firms. As such, since our study disregarded these target group preferences, we were only able to measure a moderation effect of firm type among the general population.

Consequently, neither  $H2_a$ , hypothesizing that concrete communication would have a greater positive effect on PFI for niche firms compared to abstract communication, nor  $H2_b$ , hypothesizing that abstract communication would have a greater positive effect on PFI for mass-market firms compared to concrete communication, was supported.

In reference to  $H2_a$ , our hypothesis mainly depended on prior research suggesting that niche firms lack brand equity and credibility compared to mass-market firms (Wang et al., 2022). Since research claims that concrete communication is more trustworthy (Toma & Hancock, 2012), we initially presumed that concrete language could be used to lower the risk associated with niche firms, ultimately making the communication of innovative firm attributes more believable in the eyes of the consumers. In our study, the respondents were informed that the manipulated homepage either belonged to a niche- or mass-market firm. However, the brand/firm itself (NextWave) was fictional, and thus none of the respondents had previously been exposed to it. As such, it could be a possible explanation for our lack of significant results in  $H2_a$ , that the argued lower brand equity and credibility inhabited by niche firms (Wang et al., 2022) did not translate into this setting.

In terms of  $H2_b$ , our hypothesis was mainly based on previous research findings suggesting that mass-market firms naturally inhabit greater brand equity and credibility (Wang et al., 2022), which would make additional efforts in

gaining trustworthiness and familiarity through concrete communication less of a priority in aims of obtaining PFI. As such, the brand equity and credibility arguably inhabited by mass-market firms may have not translated into this setting, which could explain the lack of support for this hypothesis. Additionally, as previous research suggests that abstract communication signals expertise (Wakslak et al., 2014), we hypothesized that abstract communication would positively influence PFI through perceptions of the firm being able to create novel ideas and solutions, which is one of the main indicators of PFI (Kunz et al., 2011). Also, we found it possible that abstract communication could work as a creativity cue, based on previous research suggesting a strong link between abstraction and creativity (Förster et al., 2004; Liberman et al., 2012; Tateo, 2013). A possible explanation for our result could be that these signals were not strong enough to create a significant difference, or that the exposure period and intensity to the firm and their communication were too short or simply too weak. Additionally, our proposal that abstract language works as a cue for creativity might not be the case, or it could rely on other signals than simply rhetoric abstraction.

Our study did find a positive, significant effect of PFI on brand credibility, and on brand attitude. As such *H3* was accepted, suggesting that perceived firm innovativeness has a positive effect on brand credibility and brand attitude. Previous research on perceived innovativeness, and PFI in particular, present strong evidence for a range of brand and firm benefits connected to PFI (e.g. Kunz et al., 2011; Pappu & Quester, 2016; Bairrada et al., 2018). Additionally, previous research has been conducted on perceived innovativeness, not to mistake for PFI specifically, on brand credibility, suggesting a positive effect (Shams et al., 2015). As such, our results for PFI on brand credibility were expected, but regardless fill a gap in the research regarding firm and brand effects of PFI.

In terms of brand attitude, previous research provides strong evidence of how innovativeness generates numerous positive effects on brands, such as positive emotions towards the brand (Kunz et al., 2011), brand uniqueness and prestige (Bairrada et al., 2018), perceived quality (Pappu & Quester (2016), and ultimately loyalty (Pappu & Quester; 2016; Kunz et al., 2011). Additionally, Kunz et al. (2011) advocates for PFI providing hedonic value to consumers. The reasoning behind this is that creativity, which is one of the main indicators of PFI, generates excitement and interest, which translates into pleasant feelings for consumers (Kunz et al., 2011). As such, we drew a link between the positive



feelings of excitement that PFI helps form, and the positive beliefs that make up brand attitudes (Batra & Ray, 1986). In reference to our findings, it seems that the positive effects of PFI and the positive attitudes making up brand attitudes are correlated. Consequently, our findings suggesting a positive effect of PFI on both brand attitude and credibility contributes positively to the marketing literature on PFI, strengthening the existing evidence of PFI as an important consideration in marketing efforts.

Additionally, we used respondents' age and gender as sources for additional findings, as well as control variables for pre-treatments characteristics. The results suggested significant differences of age on PFI. However, no significant differences were observed between age groups in regards to message framing on PFI. Additionally, we only observed significant differences of the interaction between age and firm type on PFI on a 10 percent level. This suggests that there may be some generational differences in regards to how innovative people perceive firms in general. That is, while the youngest age group (Gen Z) revealed a low overall PFI score (mean: 31.73), the relatively older age group (Gen X) revealed a higher overall PFI score (mean: 34.93). Also, the results could argue for firm type characteristics having a certain influence on particular age groups' perception of firm innovativeness. However, since the age groups were of uneven sizes, we choose to consider these findings with caution. Furthermore, the results suggested a weak significant difference of gender on PFI, on a 10 percent level. This could point out that gender, to some degree, is a determinant of how inclined people are to consider firms as innovative. However, since the gender groups were of rather unequal sizes (females: n=141, males: n=63), and the significant differences were only visible on a 10 percent level, we consider these results unreliable to use as base for further explanation of the results. Based on these results, it seems that the analysis could be somewhat sensitive to external influences (pre-treatment characteristics), however not to a degree that we expect would alter the main findings.

## **6.0 Implications**

### **6.1 Managerial implications**

This study has provided insights into the importance of PFI, and its significant effect on important consumer responses, specifically brand credibility and brand attitude. These are two highly valuable consumer responses, which are proven to have strong positive influence on firm and brand success (e.g. Rossiter, 2014; Erdem & Swait, 1998, 2004). Specifically, brand credibility increases, among others, the probability of brands being purchased (Erdem & Swait, 1998), perceived value, and lowers the perceived risk of the brand (Erdem et al., 2006). Brand attitude is a critical component used to evaluate consumers perceived brand value (Keller & Swaminathan, 2020), and it is closely connected to brand equity (Keller, 1993) and brand loyalty (Oliver, 1999). The results of this study found that there is a highly significant and positive effect of PFI on both brand credibility and brand attitude. This implies that firms would strongly benefit from allocating resources towards achieving PFI, as this would subsequently give the firm stronger brand credibility and brand attitude. This insight is beneficial for marketers and managers, as it enables them to make more strategic choices in their communication efforts in accordance to the perceptions (e.g. PFI) they aim to achieve.

The study also investigated the effect of linguistic abstraction in a firm's message framing on PFI. This topic is relevant for both marketers and managers as communication is critical to brands and firms, acting as a powerful tool to generate desired consumer perceptions (Keller & Swaminathan, 2020). Our study was not able to provide significant suggestions as to how different levels of linguistic abstraction in message framing can improve PFI. As such, this could suggest that linguistic abstraction should not be the main focus when aiming to achieve PFI.

Another objective of this study was to examine the moderating role of firm type on the effect of linguistic abstraction in a firm's message framing on PFI. As niche- and mass-market firms are clearly distinguished in terms of characteristics (e.g. Toften & Hammervoll, 2010; Vock, 2022; Wang et al., 2022) and consumer expectancies (Motsi, 2023), it would be highly beneficial for marketers and managers to adjust their linguistic approach to be appropriate to their specific

positioning and brand image. However, the results of this study did not show any significant moderating effect of firm type. This insight suggests that marketers and managers of niche- and mass-market firms might not need to account for their specific positioning when selecting a linguistic approach in aims of gaining PFI. This enables marketers and managers of niche- and mass-market firms to place greater focus on other, more effective efforts to obtain PFI.

## **6.2 Theoretical implications**

This study has managed to provide insights to an existing research gap. Specifically, researchers have asked for a greater focus on the potential effects of PFI on firms and brands, and a deeper understanding of these effects (Pappu & Quester, 2016). The findings of this research show a significant and positive effect of PFI on consumer responses, namely brand credibility and brand attitude. As such, our study has contributed to fill the research gap that asked for more research on the effects of PFI on firms and brands, measuring two consumer responses that are highly valuable determinants of firm and brand success (Keller & Swaminathan, 2020; Wang & Yang, 2011).

Additionally, although our hypothesis regarding the effect of message framing (concrete vs. abstract) and firm type (niche vs. mass-market) on PFI was not significant, these findings still contribute to an under-examined field of research (Kunz et al., 2011). That is, Kunz et al. (2011) have previously asked for more research on firm communication on PFI. This study has been the first to investigate whether linguistic message framing has an impact on PFI. Our hypotheses for possible outcomes were backed by a wide range of existing research which have investigated each individual topic in isolation (i.e. linguistic abstraction, firm type, PFI), but never together. Our results may not have been able to demonstrate any significant effect of linguistic abstraction and firm type on PFI, but can nevertheless be used as a starting point for future research on this topic.

## **7.0 Limitations and Future Research**

This study was carefully developed to diminish bias and measure the intended constructs. However, in efforts to explain the results, particularly those which did not support our hypothesis, there are factors which our study did not account for.

To start with, this study did not account for target group differences. That is, in *H2* the hypotheses suggested that firm type (niche vs. mass-market) would moderate the effect of linguistic abstraction on PFI. Accordingly, as established in previous literature, niche- and mass-market firms are bound to different firm characteristics (e.g. Toften & Hammervoll, 2010; Vock, 2022; Wang et al., 2022), expectancies (Motsi, 2023), and to different target group psychographics (Wang et al., 2022). For instance, preference for different firm types relies, among other, on consumer PDB and risk aversion (Wang et al., 2022). As such, this study was not able to investigate or explain how the firms respective target customers would evaluate the effect of message framing (abstract vs. concrete) on PFI. This may be an avenue for future research, where a similar study that accounts for target group differences, could provide strong managerial implications for firms.

Additionally, several previous studies (e.g. Vock, 2022; Hemonnet-Goujot, 2022) have distinguished between firm types using luxury firms (as a type of niche), and compared it to mass-market firms. In reference, this study did not make the same distinction, and used more generic niche firm characteristics as a base for manipulation. As these prior studies managed to find meaningful results, it could be pointed out as a possible limitation that our selection of generic niche characteristics were not extreme enough to make a strong impression of the differences. Here it should be noted that our pre-test confirmed that participants were able to significantly distinguish the two firm types (niche vs. mass-market) in our manipulation. However, the pre-test did not account for whether or not the participant perceived the two firm types to have distinctly different brand images. As such, it would be interesting for future research to investigate how even more distinctly separated firm types (e.g. luxury niche, technology niche vs. mass-market) may provide different results.

Additionally, in this study we operated with a fictional brand/firm in order for participants not to be biased by previous exposure, and predetermined attitudes and beliefs they would have about a familiar brand/firm. However, the possible issue with using a fictional brand/firm is that the brand equity and credibility naturally inhabited by mass-market firms may not have transferred to this study setting. As such, it would be insightful for future research to investigate if firm type has a moderating effect, despite our study suggesting otherwise, by using real and familiar brands/firms.

More so, participants of this study were only exposed to the message framing manipulation for a short period of time. Specifically, participants were only asked to read through a constructed homepage of a company, which took approximately one minute on average. Consequently, the longitude of the exposure could have been a determining factor for the strength of signaling effects of linguistic abstraction, and ultimately the results of the study. As such, investigating how abstract vs. concrete message framing affects PFI after longer and more frequent exposure periods would provide insightful information to managers and marketers to comprehend how to successfully communicate desired attributes.

Furthermore, this study only manipulated the level of abstraction using rhetorics, keeping everything else constant. However, it is possible to use other signaling elements to manipulate abstraction and concreteness, for instance pictures, language, and sounds (Hansen & Wänke, 2010; Hansen & Melzner, 2014; Rim et al., 2015; Kim et al., 2016). As such, it would be interesting for future research to investigate how different elements and/or combinations of these work differently in signaling abstraction and concreteness, and subsequently the degree to which these different methods affect PFI. It would be highly valuable for managers to understand which signaling element works best at conveying different levels of abstraction, and their effect on PFI.

It may also be of interest to conduct more research on how the content of firm messages affects PFI. That is, should firms focus on message content which emphasizes technological advancements, awards, unique products, or something else. As such, combined with research on how different *communication approaches* (e.g. level of abstraction) can enhance PFI, a deeper study into *what* should be communicated in order to enhance PFI would be a highly valuable contribution to the field.

Furthermore, this study demonstrated the significant effect PFI has on brand credibility and brand attitude - two important consumer responses that are critical to the success of brands and firms (Keller & Swaminathan, 2020; Wang & Yang, 2011). It would, however, be valuable to investigate the effect of PFI on other consumers' responses. That is, although we have contributed to the literature with our findings, there is still an existing research gap on additional potential effects of PFI (Pappu & Quester, 2016). Therefore, we extend the request by Pappu & Quester (2016) to further map the effects of PFI.

Additionally, Kunz et al. (2011) called for more research on firm communication on PFI. Our aim with this study was to contribute to fill this existing research gap, however there are many areas of communication still untouched on this topic. As such, we extend this call for future research on firm communication on PFI.

More so, it could be relevant to consider the sampling method used in this study. This study used convenience sampling, which is a non-probability sampling method that may sometimes lead to limited validity, volunteer bias, and under or over representation of the population (Malhotra, 2019). Relevant to our study was specifically the uneven group sizes in terms of gender, age and nationality (i.e. more females than males, and a greater representation of some age groups than others, more participants from the UK than the US). An alternative could be to use simple random sampling in order to achieve a larger and more representative sample of the population. However, this would involve far more resources (e.g. time, money, network), whereas convenience sampling allowed us to conveniently reach respondents who were part of our population of interest (Malhotra, 2020). Although we were able to control important criteria (e.g. nationality and first language), we recognise that future research may attempt to use varying sampling techniques in their studies.

Furthermore, it is necessary to evaluate the generalisability of this study. We restricted the study to UK and US participants. This was preferred in order for us to limit external effects from different cultural variables that could affect preferences (e.g. PDB) and also English proficiency. The UK and US were chosen because they share many cultural similarities including PDB, masculinity, individualism, and indulgence (Hofstede Insights, 2023). However, our final study obtained a sample of predominantly UK participants. Consequently, this study has limitations in terms of external validity, due to generalisability challenges for our target population (as US respondents were underrepresented), and on a global scale. That is, countries differ on many aspects, for instance power distance, individualism, masculinity, and uncertainty avoidance (Hofstede, 1984), which could alter the results. As such, future research could conduct similar studies on different countries, with different cultures, and further examine the effect of cultural dimensions on linguistic abstraction, firm type and PFI.

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# Appendix

## Appendix A: Experiment Stimuli (Message framing)

### Concrete condition:

## About NextWave

At NextWave, we bring innovations to the forefront of the fitness industry. By investing in technology, we aim to deliver solutions that meet the needs of our customers. NextWave's contribution to the fitness industry stems from our commitment to innovation.







## Introducing RunHalo

### Running Shoe

Created from technology and innovation, RunHalo presents a running shoe focused on enhancing performance and providing comfort. RunHalo merges technology and innovation, making it a running shoe that delivers on all fronts – comfort, performance and style.







# Why RunHalo?

RunHalo's materials provide lightness and durability with every stride. Its innovation lies in the sole, made with foam technology. The shoe's traction system provides grip and stability, enabling you to improve the longitude and pace of your runs. RunHalo's technology turns every step into a forward momentum, giving you a boost of speed and power.

**Validation code: 777**



**Abstract condition:**

## About NextWave

At NextWave, we look beyond traditional ways - sculpting the modern fitness landscape into a new way to live and breathe wellness. We embrace self-realizing innovations born from newly blossomed technology. Our customers are always at the heart of our journey.

Live the NextWave difference - innovative, fresh and powerful!





## Introducing RunHalo Running Shoe

Born from new sprung technology, RunHalo illuminates your path to greatness. This ambitious concept was manifested into existence through the realms of knowledge, fueled by modern innovation. RunHalo transports you to new dimensions of living.



## Why RunHalo?

RunHalo's fundamental nature embodies the purest expression of fluidity and movement. It harmonizes with your distinct rhythm, opening the door to a new universe of motion. This faithful companion is the perfect marriage of innovation and technology, transcending the boundaries and opening new horizons for your future you. RunHalo is more than just a shoe – it embodies your ambitious spirit, your driven nature, and your unwavering dedication to excellence.



Validation code: 777

## Appendix B: Final pre-test

*(The respondents were presented with one of the two manipulations: niche- or mass-mass market firm type)*

### Niche firm type condition:

Please read the following company description:

NextWave is a niche company, founded in 2015. They specialize in sports equipment, targeting a small customer group with defined needs. These customers are highly dedicated to continuously improving their health. NextWave focuses their efforts towards bringing their specific customer group products that fits their needs, desires and preferences. This also implies that their products do not necessarily target people outside this specific customer group. NextWave is a small firm with a team of experts with cutting-edge experience in the field. Their high quality, small scale production leads to higher costs which reflects in the product price. Their products are sold directly to their customers, without any other distributors, leading to close contact between NextWave and their customer base. This also makes their product less accessible. NextWave is in continuous dialogue with their customers to receive feedback for future improvement.

Based on the company description you just read, please answer the following questions below.

---

Where would you place NextWave in terms of being a niche vs. mass-market firm?	Niche (1)	2	3	4	5	6	Mass-Market (7)
How is your impression of NextWave?	Negative (1)	2	3	4	5	6	Positive (7)
How positive/negative do you find the phrasing of this company description?	Negative (1)	2	3	4	5	6	Positive (7)

---

**Mass-market firm type condition:**

Please read the following company description:

NextWave is a mass-market company, founded in 2015. They are involved in many industries around the world, including the sports equipment industry. Through their wide range of fitness products, NextWave wishes to provide as many people as possible with the opportunity to improve their health. NextWave is a large firm with many resources and competences across the board. Their experienced team consists of several diverse employees from different fields and backgrounds. They operate with mass production making their products more affordable. They have successfully served a large group of customers over the years, providing products and experiences that meet the general needs of many. This also implies that their product does not necessarily fit all individual and specific needs. In aims of reaching their customers, NextWave focuses on accessibility through many distributors globally.

Based on the company description you just read, please answer the following questions below.

---

Where would you place NextWave in terms of being a niche vs. mass-market firm?	Niche (1)	2	3	4	5	6	Mass- Market (7)
How is your impression of NextWave?	Negative (1)	2	3	4	5	6	Positive (7)
How positive/negative do you find the phrasing of this company description?	Negative (1)	2	3	4	5	6	Positive (7)

---

*(The respondents were then presented with one of the two manipulations: abstract or concrete message framing)*



## Abstract message framing condition:

### About NextWave

At NextWave, we look beyond traditional ways - sculpting the modern fitness landscape into a new way to live and breathe wellness. We embrace self-realizing innovations born from newly blossomed technology. Our customers are always at the heart of our journey.

Live the NextWave difference - innovative, fresh and powerful!



### Introducing RunHalo Running Shoe

Born from new sprung technology, RunHalo illuminates your path to greatness. This ambitious concept was manifested into existence through the realms of knowledge, fueled by modern innovation. RunHalo transports you to new dimensions of living.



### Why RunHalo?

RunHalo's fundamental nature embodies the purest expression of fluidity and movement. It harmonizes with your distinct rhythm, opening the door to a new universe of motion. This faithful companion is the perfect marriage of innovation and technology, transcending the boundaries and opening new horizons for your future you. RunHalo is more than just a shoe - it embodies your ambitious spirit, your driven nature, and your unwavering dedication to excellence.



Validation code: 777

Please enter the validation code:

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How would you describe the texts used on NextWave's homepage, in terms of being abstract vs. concrete?	Concrete (1)	2	3	4	5	6	Abstract (7)
--	-----------------	---	---	---	---	---	-----------------

---

**Concrete message framing condition:**

## About NextWave

At NextWave, we bring innovations to the forefront of the fitness industry. By investing in technology, we aim to deliver solutions that meet the needs of our customers. NextWave's contribution to the fitness industry stems from our commitment to innovation.





## Introducing RunHalo Running Shoe

Created from technology and innovation, RunHalo presents a running shoe focused on enhancing performance and providing comfort. RunHalo merges technology and innovation, making it a running shoe that delivers on all fronts – comfort, performance and style.



# Why RunHalo?

RunHalo's materials provide lightness and durability with every stride. Its innovation lies in the sole, made with foam technology. The shoe's traction system provides grip and stability, enabling you to improve the longitude and pace of your runs. RunHalo's technology turns every step into a forward momentum, giving you a boost of speed and power.

**Validation code: 777**

 NEXT WAVE

Please enter the validation code:

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How would you describe the texts used on NextWave's homepage, in terms of being abstract vs. concrete?	Concrete	2	3	4	5	6	Abstract
	(1)						(7)

---

## **Appendix C: Final experiment**

*(The respondents were presented with one of the two manipulations: niche- or mass-mass market firm type)*

### **Niche firm type condition:**

You will now be presented with a company description, followed by an extract of the company's homepage. Please read these thoroughly.

Please read the following company description:

NextWave is a niche company, founded in 2015. They specialize in sports equipment, targeting a small customer group with defined needs. These customers are highly dedicated to continuously improving their health. NextWave focuses their efforts towards bringing their specific customer group products that fits their needs, desires and preferences. This also implies that their products do not necessarily target people outside this specific customer group. NextWave is a small firm with a team of experts with cutting-edge experience in the field. Their high quality, small scale production leads to higher costs which reflects in the product price. Their products are sold directly to their customers, without any other distributors, leading to close contact between NextWave and their customer base. This also makes their product less accessible. NextWave is in continuous dialogue with their customers to receive feedback for future improvement.

### **Mass-market firm type condition:**

You will now be presented with a company description, followed by an extract of the company's homepage. Please read these thoroughly.

Please read the following company description:

NextWave is a mass-market company, founded in 2015. They are involved in many industries around the world, including the sports equipment industry.

Through their wide range of fitness products, NextWave wishes to provide as many people as possible with the opportunity to improve their health. NextWave is a large firm with many resources and competences across the board. Their experienced team consists of several diverse employees from different fields and backgrounds. They operate with mass production making their products more affordable. They have successfully served a large group of customers over the years, providing products and experiences that meet the general needs of many. This also implies that their product does not necessarily fit all individual and specific needs. In aims of reaching their customers, NextWave focuses on accessibility through many distributors globally.

*(The respondents were then presented with one of the two manipulations: abstract or concrete message framing)*

#### **Abstract message framing condition:**



**About  
NextWave**

At NextWave, we look beyond traditional ways - sculpting the modern fitness landscape into a new way to live and breathe wellness. We embrace self-realizing innovations born from newly blossomed technology. Our customers are always at the heart of our journey.

Live the NextWave difference - innovative, fresh and powerful!

 NEXTWAVE

## Introducing RunHalo Running Shoe

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## Why RunHalo?

RunHalo's fundamental nature embodies the purest expression of fluidity and movement. It harmonizes with your distinct rhythm, opening the door to a new universe of motion. This faithful companion is the perfect marriage of innovation and technology, transcending the boundaries and opening new horizons for your future you. RunHalo is more than just a shoe – it embodies your ambitious spirit, your driven nature, and your unwavering dedication to excellence.

**Validation code: 777**



## Concrete message framing condition:

### About NextWave

At NextWave, we bring innovations to the forefront of the fitness industry. By investing in technology, we aim to deliver solutions that meet the needs of our customers. NextWave's contribution to the fitness industry stems from our commitment to innovation.



### Introducing RunHalo Running Shoe

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### Why RunHalo?

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Validation code: 777

*(Preceding exposure of any given combination of the stimuli, all respondents were presented with the same set of questions as presented below)*

Please enter the validation code:

Based on the information you have just been exposed to, please answer the following questions.

You are not expected to have any prior knowledge of “NextWave”, simply answer based on your initial impression.

On a 7 point scale, to what extent do you agree/disagree with these statements about “NextWave”:

	Disagree						Agree
The company is dynamic	1	2	3	4	5	6	7
The company is very creative	1	2	3	4	5	6	7
The company launches new products and creates market trends all the time	1	2	3	4	5	6	7
The company is a pioneer in its category	1	2	3	4	5	6	7
The company constantly generates new ideas	1	2	3	4	5	6	7
The company has changed the market with its offers	1	2	3	4	5	6	7
The company is an advanced, forward-looking firm	1	2	3	4	5	6	7

On a 7 point scale, to what extent do you agree/disagree with these statements about “NextWave”:



	Disagree						Agree
This brand reminds me of someone who's competent and knows what they are doing	1	2	3	4	5	6	7
This brand has the ability to deliver what it promises	1	2	3	4	5	6	7
I believe that this brand delivers what is promises	1	2	3	4	5	6	7
This brand's product claims are believable	1	2	3	4	5	6	7
I expect this brand to keep its promises, no more and no less	1	2	3	4	5	6	7
This brand has a name you can trust	1	2	3	4	5	6	7
This brand doesn't pretend to be something it isn't	1	2	3	4	5	6	7

On a 7 point scale, evaluate your impression "NextWave" on these following dimensions:

Nextwave is:	Useless (1)	2	3	4	5	6	Useful(7)
Nextwave is:	Unimportant (1)	2	3	4	5	6	Important (7)
Nextwave is:	Unpleasant (1)	2	3	4	5	6	Pleasant (7)
Nextwave is:	Awful (1)	2	3	4	5	6	Nice (7)
Nextwave is:	Bad (1)	2	3	4	5	6	Good (7)

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Gender:

---

Male

Female

non-binary/third gender

prefer not to say

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---

Birth year:

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1995-2005

1980-1994

1965-1979

1944-1964

1910-1943

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Nationality:

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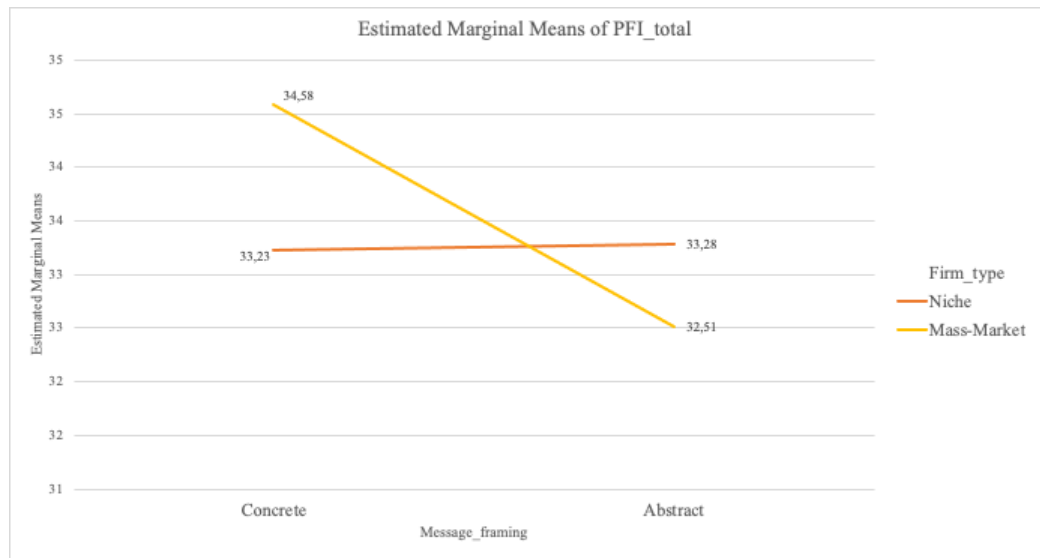
United Kingdom

United States

Other

---

## Appendix D: ANOVA interaction effects on PFI



**Figure:** Interaction effects (message framing and firm type on PFI)

**Appendix E: Regression (PFI on brand credibility)**

		Brand Credibility	PFI
Pearson Correlation	Brand Credibility	1	.698
	PFI	.698	1
Sig. (1-tailed)	Brand Credibility		<.001
	PFI	.000	
N	Brand Credibility	205	205
	PFI	205	205

**Table:** Correlations (PFI on brand credibility)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	7.163	2.001		2.3597	<.001
	PFI	.819	.059	.698	13.903	<.001

**Table:** Coefficients (PFI on brand credibility)

Model	Sum of Squares	df	Mean square	F	Sig.
Regression	5654.828	1	5654.828	193.307	<.001 <sup>b</sup>
Residual	5938.392	203	29.253		
Total	11593.220	204			

**Table:** Regression (PFI on brand credibility)

**Appendix F: Regression (PFI on brand attitude)**

Model	Sum of Squares	df	Mean square	F	Sig.
Regression	2178.621	1	2178.621	191.044	<.001 <sup>b</sup>
Residual	2314.970	203	11.404		
Total	4493.590	204			

**Table: Regression (PFI on brand attitude)**

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	8.756	1.250		7.008	<.001
	PFI	.508	.037	.696	13.822	<.001

**Table: Coefficients (PFI on brand attitude)**

	Brand Attitude	PFI
Pearson Correlation	Brand Attitude	1
	PFI	.696
Sig. (1-tailed)	Brand Attitude	<.001
	PFI	.000
N	Brand Attitude	205
	PFI	205

**Table: Correlations (PFI on brand attitude)**

## Appendix G: Post Hoc test

Age (I)	Age (J)	Mean Difference (I-J)			95% Confidence Levels	
		Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Gen Z	Gen Y	-1.4436	1.18261	.615	-4.5089	1.621
	Gen X	-3.1942	1.31509	.075	-6.6030	.2145
	Baby Boomers	-1.8068	2.02076	.808	-7.0446	3.4311
Gen Y	Gen Z	1.4436	1.18261	.615	-1.6218	4.5089
	Gen X	-1.7507	1.07792	.368	-4.5447	1.0433
	Baby Boomers	-.3632	1.87508	.997	-5.2235	4.4971
Gen X	Gen Z	3.1942	1.13509	.075	-.2145	6.6030
	Gen Y	-1.7507	1.07792	.368	-1.0433	4.5447
	Baby Boomers	1.3875	1.96133	.894	-3.6964	6.4713
Baby Boomers	Gen Z	1.8068	2.02076	.808	-3.4311	7.0446
Boomers	Gen Y	.3632	1.87508	.997	-4.4971	5.2235
	Gen X	-1.3875	1.96133	.894	-6.4713	3.6964

**Table:** Tukey post hoc test of multiple comparisons (Age on PFI)