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The Influence of Framing, Ownership and Naïve Theories

The Perceived Quality of Premium Tech Products

Gonçalo Simões da Costa

Dissertation presented as partial requirement for obtaining
the Master's degree in Information Management

NOVA Information Management School
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**The influence of Framing, Ownership and Naive Theories: The Perceived Quality of
Premium Tech Products**

by

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Dissertation presented as a partial requirement for obtaining the Master's degree in Information Management, with a specialization in Marketing Intelligence

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ABSTRACT

Research shows that what happens in our minds is usually different when compared what actually happens in reality, we may not be as knowledgeable as we think we are and how frames affect us. To find a solution, we designed two experiments. The first experiment was designed to understand how bias, previously created inferences and ownership affects the way we see the photographs taken by a smartphone. The second experiment, based on the first one, was designed to understand how the perception can be changed by adding an additional naïve theory, in specific, popularity and exclusivity. Both studies support the argument that brand ownership impacts how consumers perceive tech products, like smartphones, and has an influence that leads to new bias and quality perceptions. The findings have important contributions for branding and naïve beliefs literature, having implications for marketing practice.

KEYWORDS

Brand ownership, perceived quality and naïve beliefs.

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1. INTRODUCTION

Today, premium brands invest billions of dollars in R&D and advertisements, more specifically smartphone brands spending upwards of one hundred and forty billion US dollars (Fobes, 2017), with the hope of improving consumers' brand perceived quality and purchasing intentions (e.g., Bian & Forsythe, 2012). For instance, A CNBC report indicates that premium smart phones brands are increasingly growing, generating a multi-billion-dollar earnings with different circulating devices in consumers' pockets everyday (CNBC, 2017).

Although customers evaluation, perceptions and reactions to premium brands have been examined in the context of willingness to pay (e.g., Steenkamp, Van Heerde, & Geyskens, 2010; Anselmsson, Bondesson, & Johansson, 2014), purchase intentions (Bian & Forsythe, 2012), cross cultural comparison (Bian & Forsythe, 2012), and ethical practices by luxury brands (e.g., Pinto, Herter, Gonçalves, & Sayin, 2019), in this research we turn the focus on perceived quality, and because little is known on customers naïve beliefs towards premium brand ownership and how the perceptions of technology brands are dependent on consumers' biases.

To fill this gap, this research offers two primary contributions, first, in this article, we examine how ownership status may influence customers quality perceptions. Recent literature suggests that customers often evaluate, judge and make assumptions about the brands in a biased manner their "naïve beliefs" (e.g., "myside bias" - Stanovich, West & Toplak, 2013; Deval, Mantel, Kardes, & Posavac, 2013). A recurring issue in the critical thinking literature, that turned out to be a striking cognitive difficulty, is that critical thinkers should be capable of decoupling their prior, yet present, opinions, and beliefs from the evaluation of evidence and arguments (Stanovich, West, & Toplak, 2013). Thus, we extend this research by

documenting how naïve theories' affect customers' quality perceptions and what the interplay between multiple naïve theories.

Second, it is important to understand how framing tech products (popular vs. exclusive) affects the way people react, depending on market segment the product in question is positioned (premium vs. non premium), expanding on current research (e.g., Deval, Mantel, Kordes & Posavac, 2013).

In two experimental studies, we reveal that the naïve theory of ownership affects quality perception when exposed to a technology brand (Study 1), and how this same perception is affected by the activation of a naïve theory (*popularity vs. exclusivity*) on Study 2. By doing so, we contribute to theory by expanding on current knowledge with a multi-layered approach to naïve theories.

2. LITERATURE REVIEW

2.1 Naïve Theories

This seemingly conflicting examples are what is called of naive theories, informal common-sense explanations, not always completely rational, that people use in their ordinary lives to make some sense of their environment and often diverge from formal, scientific explanations of what actually happens (Furnham 1988) since they are not usually explained explicitly (Vosniadou 1994) and lack the formal systematic/experimental testing (Kuhn 2001). Leading to inference creation, naiveté looks like the primary candidate to be the cause of most irrationality most of the time, especially in most marketplace aspects, consumers may hold multiple likely contradictory naive theories that may have adverse evaluative implications, driving different inferences as a function of which theory is active at the time of judgment (Deval, Mantel, Kordes, & Posavac 2013)

This research focuses on naive theories related to technology, it explores how the perceived segment (premium vs. non-premium) and inferences based on brand ownership affect the way consumers evaluate what they see and how two factors (popularity vs. exclusivity) affect our perception in relationship with the perceived segment and brand ownership pre-existing bias. There is a vast catalog of research on both quality and naive theories alone, in this research, we are testing how previous biases are affected by the introduction of new information in the form of naive theories, in two studies.

Consumers frequently make interpretations and make conclusions based on very limited information and knowledge (Kardes, Posavac, & Cronley, 2004). Using or hearing about a product (e.g., from commercials, advertising and other means of promotion) provides information about some characteristics and attributes for example, but the remaining properties, when a value is to be given, must be judged by going past the information

presented (Kardes, Posavac & Cronley 2004). Inference generation involves the creation of several if-then linkages between information, like ideas, heuristics, thoughts, knowledge, and conclusions (Kardes, 1993; Kruglanski & Webster, 1996).

It is possible to have two basic inference processes like induction and deduction at the same time, induction being generalization from specific information to general conclusions (e.g. Tom has tattoo of a car, therefore, Tom probably likes cars) and deduction being the generation of specific conclusions from general principles or assumptions (e.g. All humans are mammals. Susan is a human. Susan is a mammal.) (Beike & Sherman, 1994; Mass, Colombo, Sherman, & Colombo, 2001) “The information used as a basis for these inferences can either be situationally available (stimulus-based or data-based processing) or retrieved from memory (memory-based or theory-based processing)” (Lynch & Srull, 1982; Wyer & Srull, 1989). One of the primary reasons why this happens is that consumers rarely have even close to something we can call complete information, regarding products about which they form judgments (Deval, Mantel, Kordes, & Posavac, 2013). To offset this uncertainty, consumers can use a variety of inferential strategies in order to fill the gaps in their product knowledge, and they do this prior to the making of judgments and choices (Gunasti & Ross, 2009; Kardes, Posavac, & Cronley, 2004) brand ownership is especially dependent of this choices, given the difficulty to buy something we consciously do not like and objectively do not need, which is different from buying something based on self-created inferences that in turn, can lead to a level of buying regret, because consumers will often infer a product’s overall quality (Kardes, Posavac, & Cronley 2004), the level of a lacking attribute (Dick, Chakravarti, & Biehal 1990), or the social signaling potential of a product or brand (Berger & Heath, 2007) and use these inferences for decision making with incomplete information (Deval, Mantel, Kordes & Posavac, 2013).

2.2. Brand Ownership and Perceived Quality of Tech Products

From research looking at thousands of pieces, we were presented with a big amount of deceiving information and often straight up wrong information, yet, with no surprised given the financial incentive structure of online media, where access or clicks are prioritized, creating the clickbait phenomenon, clickbait being a kind of false advertisement which uses a title or a thumbnail (mostly on YouTube) specifically designed to draw attention and entice users to click and read, watch, or listen to that piece of online content, defined for being deceptive, usually sensationalized or misleading to steer controversy and making for highly shareable content (O'Donovan, 2018) on the era of “fake news” this type of behavior is essential for the survival of online media make their money by renting advertising spaces (mainly to Google, through the AdWords service) and get by impression and clicks on those advertisements.

Being considered the most valuable brand by Forbes (2019) at \$205.5 Billion US, Apple is by far one of the most talked-about smartphone vendors and one with traffic-generating power to media platforms, we also verified that videos on YouTube with negative connotations for the brand have in general substantially higher views than normal which can and sometimes lead content creators to make it a career path, creating a following based on hate and leading the creation of highly sharable toxic environments, opposed to any sort of reasonable or worthwhile discussion, where any reasonable try to dialogue is met with hostility (Murthy & Sharma, 2019), when opinion makers are viewed by their following base as an authority, future ownership selection and brand perception can be affected (Cialdini 2009), similar treatment can be given to other technology companies, like Tesla Motors innovating and leading on the premium electric car segment, but positioning itself as a technology company instead of a car manufacturer, it's a novel polarizing subject that the media and consumers take great advantage of.

During our research, we observed that most hate and aggressive comments were mean spirited and biased, not proving any value other than spreading the hate, with strong social echo chambers and the creation close to what we can call tribes “with a low degree of neutral stance” (Sindoni 2014).

Smartphones are a platform for communication, content consumption, content creation, and an ever-growing number of other use cases. With added complexity, we found that it makes it harder for the consumer to fully understand the extent of the technology and the nuance that these same technologies bring. To better understand we will present the eight categories we found most relevant, four product-based categories: Hardware, Software, Ecosystem, and Support/Privacy; and four consumer-based categories: Budget, Brand Loyalty, Social Influence and Inferences. Different consumers have different wants, different needs, different priorities, and different budgets, there’s no perfect smartphone, but there is always the best available smartphone for different people and different use cases, each consumer just has to find the best compromise.

Consider the following examples of the compromise consumers face when choosing a smartphone: “Consumer A likes the Hardware of smartphone Z but prefers the Software experience on Smartphone X (Hardware vs. Software)” attesting to the importance of user experience beyond looks, “Consumer B prefers Smartphone Z but want to use wearables exclusive to Smartphone X (Hardware vs. Ecosystem)” attesting to the importance for some users of the experience and utility beyond the smartphone itself, and thus prioritizing satellite technologies (e.g. wearables like smartwatches and headphones, smart home appliances and technologies), “Consumer C prefers the Software on Smartphone Z but wants to keep a Smartphone for long and values regular updates and privacy offered by Smartphone X (Software vs. Support/Privacy)” attesting to the importance some consumers give to longevity

and support, like constant software updates bringing new features, improving the experience overtime and security updates.

Bias and naive theories are commonly shown online expressed by opinions and discussions, so, consider the following examples showing commonly found types of misunderstanding consumers have between themselves on online social platforms regarding technology ownership selection: “Consumer A has a 200€ non-premium smartphone, A uses the smartphone for web browsing, social media, and basic communication, A doesn’t understand how can consumer B spend 600€ on another non-premium smartphone. What A doesn’t know is that B may use the smartphone for work and take advantage of some advanced features, is used to brand and happy with it.”, “Both consumers A and B don’t understand how consumer C would spend 1000€ for a Premium smartphone with an on paper feature parity with less expensive non-premium smartphones, what A and B didn’t consider is that C may value the integration it has with other same brand devices, software support, and other intangible user experience and external perception.”, “Consumers B and C having a non-premium yet mid-tier and premium smartphones don’t understand why A spent any money on a smartphone without any future support, limited user experience and weak performance, when A just simply didn’t have the money to buy something better or just didn’t have the need to.”, unconstructive and outright offensive online interactions, seems to come from a consumer's need to control the frame about the naive theories they believe in and make choices by, leading to both internal and external validation seeking behaviours.

H₁: Brand ownership (premium vs. non-premium) impacts perceived quality.

H_{1a}: For premium brand ownership, premium (vs. non-premium) products will have a higher perceived quality.

H_{1b}: For non-premium brands ownership, premium and non-premium products will similar impact on perceived quality.

2.3. The Moderating Role of Customer's Naiveté

Brands regularly rely on influence techniques to increase the effectiveness of their persuasive efforts (Cialdini 2009; Cialdini & Goldstein 2004). taking advantage of people's preconceived notions, heuristics, and bias, to increase the perception of quality and capability that surrounds the product or brand they want to lift.

Providing evidence that many people believe, or choose, in accordance with a marketer's intentions, that we call thanks to Cialdini, "social validation" or "social proof", which is in turn very powerful because people tend to think "if it's true for some many people, and I'm like so many people, it's probably true for me either"(an example of deduction bias), this is one of the techniques that show how powerful social influence really is, and how strongly affects brand perception and buying intentions.

Scarcity (and a major example of cognitive bias) is another technique used convey that a certain desirable product or service (influenced by the naive theories of exclusivity vs. popularity) has limited availability. Because of the scarcity, a type inherent exclusivity, the product has a higher perceived value, this happen when the perceived rarity is played, such that highlighting the scarcity of a product can also enhance its desirability (Lynn 1992; Worchel, Lee, & Adewole, 1975) and its social signalling that a product is desirable (Berger & Heath, 2007; Snyder & Fromkin, 1980). The opposite can have a positive impact on the

bottom line as well; showing that a product, especially in specific sets of groups, is popular can be an effective means to increase its perceived value (Bearden & Etzel, 1982; Childers & Rao, 1992; Witt, 1969).

Though these techniques are not mutually exclusive (e.g., High-end iPhones that can command enormous lines at release day or updated Rolex mechanical watches that put most customers in years-long waiting lists), different mechanisms may be driving each (Deval, Mantel, Kordes & Posavac, 2013). In a case of social validation appeals, the fact that a large proportion of people prefers, or has bought the product, implies that said product must be good, in the other end regarding scarcity, perceived value is increased precisely by the fact that only a limited number of people have access to the product (Deval, Mantel, Kordes, & Posavac, 2013). Consequently, knowing that a said product is widely available may serve both as a reminder of its popularity and high utility or as an indication that the product is very common, lacks exclusivity, and therefore is of low worth (Deval, Mantel, Kordes, & Posavac, 2013), potentially leading to the banalization and undervaluation of said product. This makes choosing a tactic especially sensitive issue, because consumers may take one of two divergent inferential paths as a function of which naive theory is active, opening a path to facing naive theories and unpredictable inferences.

H₂: Naive beliefs (exclusivity vs. popularity) moderates the effects of brand attachment on perceived quality.

H_{2a}: For premium brands, exclusivity (vs. popularity) beliefs will have a higher impact on perceived quality.

H_{2b}: For "non-premium" brands, exclusivity and popularity beliefs will have similar impact on perceived quality.

3. OVERVIEW OF STUDIES

The current research consists of one pretest and two experimental studies. The pretest was performed to establish the two technology brands to be used on the following experimental studies, brands opposed to each other regarding consumer perception of photographic capability. Study 1 demonstrates the moderating role of ownership and attachment biases on perceived quality when previously exposed to either a premium or non-premium brand. In particular, it establishes that perceptions of brands are highly dependent on consumers' biases. Study 2 further refines our theory and builds upon Study 1 by exploring how consumers react when further exposed to an additional naive theory (popularity vs. exclusivity). Specifically, this study demonstrates that consumers' quality perceptions are changed when the naive theory used is introduced.

4. PRETEST

Prior to study 1, and in order to better choose the most adequate brands in our main studies. We conducted a pretest to evaluate customers perceptions of the quality of photographs of different smartphones. We also aimed to find the opposites regarding perceived photographic capabilities, the highest-rated vs. lowest-rated.

Twenty-five participants participated in this pretest ($n = 25$). Participants were randomly assigned to rate the level of association they have with different smartphone brands regarding photographic capabilities from 1 (being no association) to 9 (complete association with photographic capabilities), the brands shown were ($M_{Apple} = 7.84$), ($M_{Samsung} = 7.28$), ($M_{Huawei} = 6.56$), ($M_{Alcatel} = 3.56$), ($M_{Google} = 5.92$) and ($M_{Xiaomi} = 4.68$). Based on these results, we decided to choose, was ($M_{Apple} = 7.84$), and ($M_{Alcatel} = 3.56$) as these brands with the most substantial difference in between ($M_{diff} = 4.28$), thus, we selected these brands for the following experiments.

5. STUDY 1

The objective of study 1 was to test our prediction that brand ownership (premium vs. non-premium) moderated the impact on perceived quality (H_1). We tested our hypotheses that when premium brand owners evaluate premium (vs. non-premium) products, they will have higher perceived quality (H_{1a}), while for non-premium brand owners, premium and non-premium products will be similarly evaluated on perceived quality (H_{1b}). This study also helps to understand the brand influence on consumers infer quality (e.g., photography quality), and how naiveté leads consumers to create inferences and biases.

5.1 Design

In this single factorial design, one hundred and twenty-two undergraduate students (48% females, $M_{age} = 23.7$, $SD = 4.48$). Participated in this study for class credit. They were randomly visually exposed to a technology brand logo of either Alcatel ($n = 60$) or Apple ($n = 62$). Participants were asked to evaluate different photos under a previous exposure to one of two technology brands tested, Alcatel ($n = 60$) or Apple ($n = 62$). We controlled for the participants smartphone ownership Apple's iPhone users ($n = 31$) and other brands ($n = 91$).

5.2 Procedure and Measures

The participants were exposed to a collection of five photos, one photo was taken on a professional-grade Sony A7R mirrorless camera, two photos were taken on Alcatel Idol 4s and two photos were taken on Apple's iPhone. All participants evaluated all the same five pictures (one from a Sony mirrorless camera, two from an Alcatel smartphone and another two from an Apple iPhone). All the pictures were presented as being taken by either an Alcatel smartphone ($N = 60$) or Apple's iPhone ($N = 62$) and rated on a scale from 1 to 9 (1 = Low Quality and 9 = High Quality).

Further, participants rated their level of perceived quality on a scale from 1 (Low Quality) to 9 (High Quality) adapted from (Richardson, Dick, & Jain, 1994; $\alpha = .94$).

To measure and compare consumers quality perception of premium vs. non-premium brands, participants were randomly assigned one of the two conditions. The participants randomly exposed to Apple brand by showing the brand logo on the photo and stating that “*The following photographs were taken on iPhone*”. Participants then rated the photos from 1 (one) being poor quality to 9 being very high quality; the participants randomly exposed to Alcatel brand by showing the brand logo on the photo and stating that: “*The following photographs were taken on an Alcatel Smartphone*”. Participants then rated the photos from 1 (one) being poor quality to 9 being very high quality. After the rating was complete, we asked the participants of both conditions two questions in the following order: “Which smartphone brand do you feel more attached to?” and “What is the brand of your current smartphone?” to which they had to choose one of four possible options: Samsung; Apple; Huawei; Other.

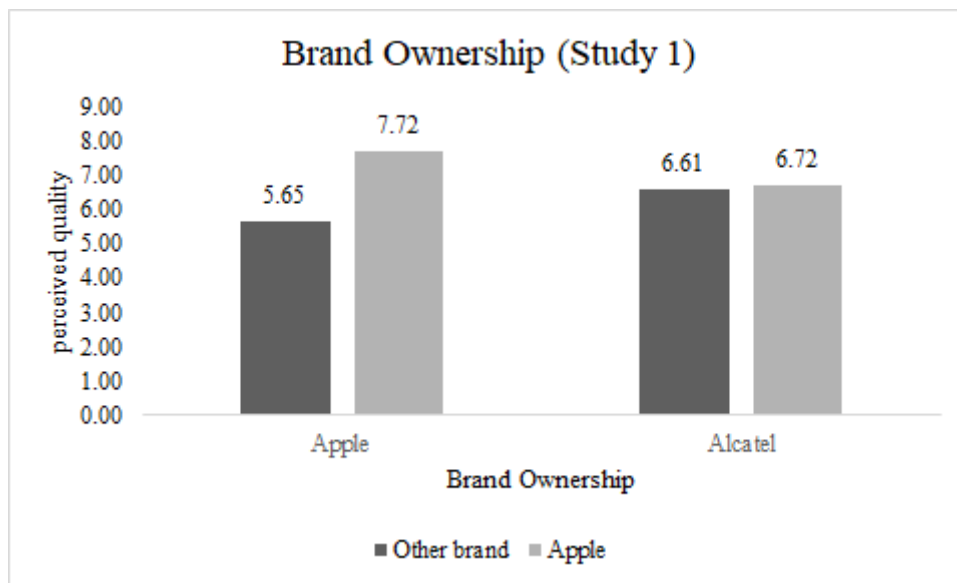
5.3 Findings

Brand Ownership Effects.

A 2 x 2 ANOVA on brand ownership (premium vs. none) x brand exposure (Apple vs. Alcatel) on quality perceptions revealed a statistically significant effect of brand ownership on perceived quality ($F_{(1, 118)} = 11.039$; $p < .001$, $\eta^2 = .086$) and a nonsignificant effect of the brand participants were exposed to ($F_{(1, 118)} = .006$; $p < .940$, $\eta^2 = .001$). The same 2 x 2 ANOVA also revealed a significant interaction between brand exposure and ownership ($F_{(1, 118)} = 8.889$; $p = .003$, $\eta^2 = .070$). These results provided support for H₁.

In addition, results showed that for premium brand owners, premium (vs. non-premium) perceived higher in quality ($M = 7.22$; $SE = .288$, $p < 0.001$) compared to non-premium brand owners ($M = 6.13$; $SE = .158$, $p < 0.001$). For non-premium brands, perceived

quality will have a similar evaluation by both premium product owners ($M = 6.72$; $SE = .474$, $p = 0.003$) and non-premium products owners ($M = 6.61$; $SE = .212$, $p = 0.003$), while for premium brands, perceived quality will have a more distinct evaluation by both premium product owners ($M = 7.72$; $SE = .327$, $p = 0.003$) and non-premium products owners ($M = 5.65$; $SE = .212$, $p = 0.003$). Fig 1. illustrates the results of brand ownership (premium vs. non-premium) impact on perceived quality.



Graphic 1: 2x2 ANOVA Exposure (Apple vs. Alcatel) x Ownership (Other vs. Apple)

Brand Attachment Effects.

We found a significant main effect of brand attachment on quality perception ($F_{(1, 118)} = 48.871$, $p < .001$, $\eta^2 = .293$) indicating a significant difference between the perceived quality ratings given by participants attached to Apple ($M = 7.29$, $SE = .172$) and participants attached to other technology brands ($M = 5.67$, $SE = .155$). To expand on these findings, and using the same design as used to report the findings of brand ownership effects, we performed a 2x2 ANOVA where we found that exposure to Apple while attached to other technology

brand ($M = 4.83$, $SE = .230$), exposure to Apple while attached to Apple ($M = 7.79$, $SE = .223$), exposure to Alcatel while attached to Apple ($M = 6.80$, $SE = .263$) and exposure to Alcatel while attached to other technology brand ($M = 6.52$, $SE = .207$).

5.4 Discussion

Study 1 provides initial evidence of our predications that brand ownership (premium vs. non-premium) impacts perceived quality. We expected that Apple to have a significantly higher evaluation than Alcatel on both exposures. These findings may be the result of related to the halo effect of cognitive bias, which is the tendency for positive impressions (in this particular case, a technology brand) leading to the above-average results Apple's iPhone got when evaluated by consumers attached to the brand (Lachman and Bass, 1985). Adding to this effect we can attribute influence to confirmation bias, consumers buying a premium product believe in the higher quality of the product (in this case, an Apple-branded smartphone), thus evaluating the premium smartphone presented more favorably. Related to the Halo effect but on a more negative side, we have the Horn effect (i.e., Negative Halo) which causes the consumers' perception to be negatively influenced by a single negative trait (e.g. high price of premium smartphones) (Sundar, Kardes, Noseworthy, Clarkson 2014) and thus deflating the evaluation of Apple's smartphone when evaluated by people not attached to the brand.

6. STUDY 2

Extending upon study 1, study 2 added a new naive theory (popularity vs. exclusivity) to test our prediction that, naive beliefs (exclusivity vs. popularity) further moderates the effects of brand ownership on perceived quality (H₂). We tested our hypotheses that for premium brands, exclusivity (vs. popularity) beliefs will have a higher impact on perceived quality (H_{2a}), while for non-premium brands, exclusivity and popularity beliefs will have similar impact on perceived quality (H_{2b}). This contributes to the literature by understanding the not only the influence a brand has on the way consumers see things but also the naive associations to the brands (popularity vs. exclusivity).

6.1 Procedure and Measures

In this 3-way ANOVA of brand ownership (other vs. Apple) x 2 brand exposure (Alcatel vs. Apple) x Naive theory bias (Popularity vs. Exclusivity) randomly assigned experiment, we recruited mobile consumers at a major European University ($n = 123$) to voluntarily become participants in this experiment. To answer the survey, the participants had to evaluate different photos under a specific randomized brand of smartphones and attributes they were exposed to: Popular Apple ($n = 30$); Popular Alcatel ($n = 24$); Exclusive Apple ($n = 36$); Exclusive Alcatel ($n = 33$); Regardless of brand 44% were exposed to a Popular option ($n = 54$) and 56% were exposed to an exclusive one ($n = 69$); with a $M_{age} = 21,3$ ($Median = 21$ and $std(X) = 3,2$) where the participants were 50% male ($n = 61$) and 50% female ($n = 62$). The participants ($n = 123$) were 33% Apple's iPhone users ($n = 41$) and 67% of the participants ($n = 82$) relied on other brands for their smartphone.

The survey had participants exposed to the same collection of five photos found on study 1, one taken on a professional-grade Sony A7R mirrorless camera, two photos taken on Alcatel idol 4s and two photos taken on Apple's iPhone. All participants evaluated all the same five

pictures in the same order (Sony, Alcatel 1, Apple 1, Alcatel 2, and Apple 2). All the pictures were presented as being taken by either a Popular Apple ($n = 30$), Popular Alcatel ($n = 24$), Exclusive Apple ($n = 36$) or Exclusive Alcatel ($n = 33$).

We used the same measures of Study 1, perceived quality after exposure to a technology brand on a scale from 1 (low quality) to 9 (high quality) adapted from (Richardson, Dick, & Jain, 1994) where participants were shown and asked to rate 5 photographs individually ($\alpha = .94$).

6.2 Findings

Interaction effect.

Results from the three way ANOVA indicate a significant main effect when consumers are not only exposed to just either Apple or Alcatel on their own, but now, also exposed to the naive theory of exclusivity vs. popularity and marginal interaction with ownership ($F_{(1, 115)} = 2.990, p = .086$) showing results when participants who owned a non-Apple smartphone were exposed to photos taken from a popular Apple smartphone ($M = 5.14, SE = .178$), when participants who owned an Apple smartphone were exposed to photos taken from a popular Apple smartphone ($M = 6.93, SE = .295$), when participants who owned a non-Apple smartphone were exposed to photos taken from an exclusive Apple smartphone ($M = 7.09, SE = .182$), when participants who owned an Apple smartphone were exposed to photos taken from an exclusive Apple smartphone ($M = 7.96, SE = .215$), when participants who owned a non-Apple smartphone were exposed to photos taken from a popular Alcatel smartphone ($M = 6.37, SE = .197$), when participants who owned an Apple smartphone were exposed to photos taken from a popular Alcatel smartphone ($M = 6.80, SE = .341$), when participants who owned a non-Apple smartphone were exposed to photos taken from an exclusive Alcatel smartphone ($M = 6.70, SE = .182$), when participants who owned an Apple

smartphone were exposed to photos taken from an exclusive Alcatel smartphone ($M = 7.37$, $SE = .241$).

<i>Ownership</i>	<i>Exposure</i>							
	<i>Apple</i>				<i>Alcatel</i>			
	<i>Popular</i>		<i>Exclusive</i>		<i>Popular</i>		<i>Exclusive</i>	
	M	SE	M	SE	M	SE	M	SE
<i>Other</i>	5.14	.178	7.09	.182	6.37	.197	6.70	.182
<i>Apple</i>	6.93	.295	7.96	.215	6.80	.341	7.37	.241

Table 1: 3-way ANOVA results in Study 2

6.3 Discussion

The findings of this study replicated and extended the results of Study 1. Like Study 1, Study 2 demonstrated that brand ownership (and attachment) affects the way we react to technology brands on a different market segment (premium). However, in Study 2 we expanded with the introduction of naive theories of exclusivity vs. popularity, a new variable that significantly influenced the results, the exposure to a tech product perceived as exclusive is perceived as significantly higher quality when compared with a popular framing of the same product. Specifically, this shows the importance of framing with naive theories to better guide consumers' perception and decision making.

7. GENERAL DISCUSSION

The present research demonstrates a link between the naive theories of ownership and perceived quality in tech products (Studies 1 & 2). That is, when the premium tech brand is exposed to a premium brand owner, it's perceived as higher quality, while non-premium tech brands don't show a significant difference to both exposures to both premium and non-premium tech brand owners. We additionally found that premium tech brands have a more adverse evaluation regarding perceived quality from non-premium tech brand owners (Studies 1 & 2) and even more adverse when it's framed as popular (Study 2).

The present research also demonstrates the importance of framing with a link between the naive theories of exclusivity vs. popularity and perceived quality in tech products (Study 2). That is, exposing consumers to premium tech products framed as exclusive significantly boost its perceived quality on the eyes of consumers when comparing the same premium product on a popularity frame. Whereas exposing consumers to a non-premium tech product framed as exclusive is not so significantly higher than a popularity frame, showing the importance of perceived exclusivity to premium tech products.

Extensive research has shown consumers to be flexible, making use of strategies and heuristics to guide their decision-making behaviour, like the consumer's' ability to induce inferences about all kinds of products, services, and marketing communications like advertising, this, with limited information. The naive theories that consumers use to make decisions are varied and help consumers evaluate and select among different options, usually without great expenditure of energy with cognitive functions.

8. THEORETICAL IMPLICATIONS

Our research contributes to the literature by showing how consumers use naive theories to evaluate the quality of a product based on how its framed, with the usage of compounding naive theories (Study 2).

This research expands on the knowledge of how naive theories drive quality inferences (Deval, Mantes, Kardes, Posavac & 2013) by showing how consumers' use of different naive theories affects the judgment of the same product and how ownership bias influence quality perception on tech products (Studies 1 & 2), It also expands on current literature with use naive theories of popularity vs. exclusivity (Deval, Mantes, Kardes, Posavac 2013; Steinhart, Kamins, Mazursky, Noy 2014) compounded with the naive theory of ownership (Study 2).

On study 2 from a theoretical perspective, the current research extends the consideration set of the factors that drive the impact of two of Cialdini's (2009) core persuasive heuristics, social validation, and consistency, differently affect product quality perception on technological products as a function of whether popularity or exclusivity is contextually primed. When exclusivity (not scarcity) was activated, participants perceived the premium products as higher quality, the reverse was true when popularity was activated, as if people expect quality premium products to be exclusive.

9. MANAGERIAL IMPLICATIONS

This research presents managerial implications, as the results present significant insights into the importance of current ownership, brand attachment and framing of tech products. The managerial implications of our findings are shown relevant for premium technology brands and can serve of insight into other areas to further experiment, with this knowledge they can

better frame their products and more effectively target consumers. Premium tech products are seen as higher quality when presented as exclusive, this framing is important, not only because it lifts the quality perception overall but it also as less negative extreme when compared with a popularity framing, avoiding the resentment of consumers who see something they can't afford as popular (e.g. everyone seems to have it, but I can't).

Study 2 also shows that for non-premium technology brands, framing with the introduction of a naive theory of popularity or exclusivity appears to be inconsequential, however, ownership bias is important for both premium and non-premium products and should be taken into account by tech companies during the marketing strategy development phase.

It's important to understand how bias affects the way consumers see and process information, and the process they use to do it. Companies can account for bias by making the transition to a better experimental design testing of their products, position, and campaigns. The more companies get to know how the naïve biases affect consumer perception, the more effective marketing strategies can be used to improve product quality perception.

10. LIMITATIONS AND FUTURE RESEARCH

This research has focused on technology consumer brands. By using a brand segmentation framework (premium vs. non-premium), we expect results to generalize to other technology product categories that have similar brand personalities to the smartphone industry. Future studies could, for instance, test additional brands in the technological sector.

In addition, as with any research, our limitations may stimulate future research. Future research in this context could explore halo effects, the tendency for positive impressions may influence results when evaluated by consumers attached to a certain brand (Lachman & Bass, 1985), as an effect to influence consumers' naïve biases.

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13. ANNEX



Fig. 1: Alcatel logo shown to participants



Fig. 2: Apple logo shown to participants



Fig. 3: Photo taken by Sony camera



Fig. 4: Photo taken by an Alcatel Smartphone



Fig. 5: Photo taken by an Alcatel Smartphone



Fig. 6: Photo taken by an Apple iPhone



Fig. 7: Photo taken by an Apple iPhone