This study aims to conceptualize the phenomenon of mimicry from a biology context into a marketing context. In fact, there are numerous observed similarities and parallels between nature and marketing. As such, based on the research gaps, a research framework is proposed and conceptualized to examine the influence of Vavilovian mimicry on consumer perception of luxury and product evaluations towards mimic brand. Findings from the study and managerial implications are drawn.

Background

Evolution of the human race, the animal kingdom and our ecosystem can be traced as far back as 3.8 billion years ago (Bar-Cohen, 2005). While Darwin has discovered and theorized natural selection as part of evolution, the success of the theory of natural selection lies in the discovery of mimicry (Sheppard, 1959). While mimicry in nature has been widely observed and classified (Pasteur, 1982), there has also been observed parallels and similarities between the “wild” and marketing which to date has received little to no attention (Sherratt, 2008). In other disciplines such as Psychology, Biomimetics, Aerotechnology, the theory of mimicry has been adopted by drawing inspiration from nature (i.e. invention of the aero plane is an inspiration from the birds).

In the past, researches have often studied imitation and counterfeiting and has often been from a negative perspective when they investigate the phenomenon of “copying”. However, Levitt (1966) commented for many decade, the innovations in our modern day are only “imitative innovations”. This is due to the fact that the new product introductions do not change consumption patterns (Gatignon & Robertson, 1985). Therefore, this suggests that many “new” products are either only a copy to some degree or a mimic of an existing product with slight or moderate improvements.

Mimicry Defined

Mimicry is broadly defined as a system that involves three living organisms, model, mimic and signal-receiver (dupe) in which the mimic gains in fitness or is advantaged by the signal-receiver perceiving and identifying the mimic as the model (Pasteur, 1972; Vane-Wright, 1980). There have been a number of identified reasons for why organisms mimic, the common three are: 1) predation (i.e. to attract their prey) 2) protection (i.e. to survive and sustain within the environment) 3) reproduction (i.e. to reproduce and sustain) (Pasteur, 1972; 1982).

Through the adaptation of the definition of mimicry, it is defined that brand mimicry is the act or art of copying or close imitation of a brand (usually a well known brand) in terms of packaging, design and concept, and brand name in order to generalize similar brand origin, company origin and attributes. This is usually with the intention to survive in the market, enter the market and to compete within the industry. In most cases, deception or confusion occurs.

It has been noted that mimicry in the marketplace extends beyond convenience goods, and is also prevalent in the luxury brand and fashion industry. In actual fact, the industry thrives on mimicry as it allows new entrants into the marketplace, therefore spurung healthy competition. Due to the perception that there is monopoly amongst the major corporations, mimic brands could well be the motivation to spur growth and innovation (Hilton et al., 2004). Raustiala and Sprigman (2006) commented that even though copying is rampant, competition, innovation and investment are still un-ending. The response to copying from the major designers is to change designs from season to season so that it is harder for the mimic brands to keep up, and to limit distribution and production (i.e. special edition). Although the IPR struggle is a constant tug-of-war for fashion firms (Hilton et al., 2004), they have accepted design copying as a fact of life. In some cases, design copying is treated as a form of homage rather than piracy. For example, companies such as H&M thrived on copying of fashions that are “fresh” off the catwalk, yet to this day they have opened 1000 stores globally and ever expanding, marking a definite sign of success (Raustiala & Sprigman, 2006).

Classification of Mimicry Systems

Based on literature from areas of Biology and the observed parallels in Marketing, three different types of mimicry have been identified. The three types of mimicry are deemed to be close parallels between Marketing and
Biology. The three forms of mimicry are also more commonly observed in nature. Their individual characteristics are delineated below alongside the marketing parallel.

**Wicklerian-Eisnerian Mimicry**

Wicklerian-Eisnerian Mimicry is considered as a form of aggressive mimicry. The scenario is when the mimic resembles a harmless model, which allows them to approach and prey on the model itself and or on unsuspecting third parties (Eisner et al., 1978). An example of Wicklerian-Eisnerian Mimicry would be when the Sabre-tooth Blenny takes advantage of its extremely close resemblance with a cleaner fish to approach the ‘clients’ (Yellow Tang) and bite off lumps of their flesh. In this situation, the Sabre-tooth Blenny is the mimic and the cleaner fish would be the model and the Yellow Tang, the dupe (Pasteur, 1982; Wickler, 1968).

**Vavilovian Mimicry**

Vavilovian Mimicry is that of weeds that mimicked the first crops of man, such as rye in barley fields. Rye was inevitably harvested and inadvertently submitted to the selection practiced on barley for big seeds, rigid panicles, and other useful traits (Pasteur, 1982). Vavilov called those cereals or domestic oats that originated from mimetic weeds, secondary crops. In this situation, rye is the mimic, barley is the model and lastly man would be the dupe. It is an unintentional selection by human beings due to the close similarity between mimic and model (Barrett, 1983).

**Bakerian Mimicry**

Bakerian Mimicry is a form of reproductive bipolar automimicry. The example of such phenomenon would be the Bee Orchid whereby the female flowers (which offer no nectar) attract pollinators by mimicking the female bee. This is done through copying the shape of the female bee in order to attract the male bee to “mate” with it. Mimic and model are considered indistinguishable to the bee. The male bee then helps the Bee Orchid by pollinating the pollen that is attached to its body when it “mated” with the mimic (Schaefer & Ruxton, 2009; Dafni, 1984; Schiestl, 2005). In this situation, the model is the female bee, the mimic would be the Bee Orchid and the male bee would be the dupe.

However, for the purpose of this paper only Vavilovian Mimicry will be addressed.

**Gaps and Research Objectives**

The presence of mimicry is in every facet of the consumer marketplace. However, no study has examined this phenomenon by incorporating established theories. Based on extant literature, there are a number of research gaps identified. It is found that although the theory of mimicry has been widely adopted and applied in many disciplines, there is little evidence of its use in Marketing, specifically branding. A number of parallels between the market place and nature have been observed and this study will apply the theory of mimicry to real life marketing examples (Bar-Cohen, 2006; Blume & Easley, 2002; Sherratt, 2008).

Furthermore, to date there are no models that are used to explain the mimicry phenomenon in marketing (Sheratt, 2008). Even though various forms of mimicry have been explained and studied (i.e. imitation, counterfeiting, look-alikes, etc), they have all been studied independently. These studies have not utilized a model that holistically explains these aspects of mimicry that belong under the same umbrella (Kapferer & Thoenig, 1992; d’Astous & Gargouri, 2001). As such a unified model explaining the mimicry in marketing will be developed.

Convenience goods have been studied widely in terms of inter-competitor mimicry (imitation, look alikes, me-too products, etc), but luxury brands have received lesser attention (d’Astous & Gargouri, 2001; Zaichkowsky, 1999). Furthermore, while past studies have always addressed copying and imitation from the point of view of original brands, it has often been overlooked that mimic brands play a huge and important role in the marketplace. Hence, little implications have been drawn for mimic brand owners or managers (Warlop & Alba, 2004; Nia & Zaichkowsky, 1999). Past studies have often studied consumption of counterfeits from the point of view of consumers’ inclination towards status consumption, whereas studies examining the relationship between consumers’ need for uniqueness and its influence towards counterfeits or imitation products have been minimal. Therefore, little to no studies have investigated the relationship between consumers’ need for uniqueness and mimicry of luxury brands (Tian et al., 2001; Wilcox et al., 2009).

Based on the above research gaps, the proposed research objectives are proposed:

1. To conceptualize the theory of mimicry and apply the theory into Marketing, more specifically into the area of luxury brands.
2. To investigate the influence of mimicry on perception of luxury and product evaluations.

**Relevant Theory and Hypotheses Development**

Vavilovian mimicry is when crops that are considered weeds mimic the crops of man (those that are grown primarily for consumption) (Pasteur, 1982). Because of the close resemblance due to mimicry they are also harvested at the same time as farmers are unable to differentiate between them and that it takes too much time to filter. In the marketing scenario, numerous brands have executed similar strategies. For example, the brand “Crocodile” which is a
mimic brand of “Lacoste”, was confused or thought to be of same origin as Lacoste and in some cases thought to be the “extension” of Lacoste. Initially, Crocodile bear close similarities between the brand, products and down to the logo, which is also in the shape of a crocodile. Although there have been lawsuits, none have been able to bring Crocodile out of the market (Clotheirs wrestle over use of Crocodile logo, 2004). However, today Crocodile is an international brand with its flagship stores littering many parts of the world, as well as a product range and fashion show that extends to Paris. It is observed that through time Crocodile has established itself as a brand with its own right.

Theory of mimicry is defined as the superficial resemblance of one organism to another in order to gain fitness or advantage for reasons such as predation, survival, or reproduction, to name a few. There are often three protagonists involved which is 1) the model, 2) the mimic and 3) the signal-receiver (or dupe) (Pasteur, 1972; 1982; Vane-Wright, 1980). The theory of mimicry serves as the overarching theory underpinning the study.

Classical conditioning or stimulus generalization refers to the degree to which a response conditioned to a particular stimulus is also evoked by similar stimuli (Till & Priluck, 2000; Zaichkowski & Simpson, 1996). The theory explains the transferability and generalization of negative reactions or past experiences that share similar physical attributes (Miaoulis & D’Amato, 1978; Rozin et al., 1986). Commonly mimic brands imitate through style and design using colours and shapes, thereby affecting the evaluation of attributes of products (Zaichkowski & Simpson, 1996). In addition, the use of similar brand names generalize similar brand origin (i.e. Model brand = Diesel; Mimic brand = Diesel Exchange) (Kerby, 1967).

Past studies have suggested that it is not necessary to copy the established product’s presentation, but merely to ensure that the cue pattern the consumer perceives when glancing along the aisle is similar enough to evoke the imagery created by the mimic (Davies, 1998). Mimic brand often imitate through evaluative (descriptive elements i.e. themes) or descriptive (i.e. colours) attributes. It is more commonly seen that mimic brands copy visual appearances that relates to favourable consumer associations and positive evaluations as a form of association to the original brand (Dodd & Zaichkowski, 1999).

Based on the Categorization theory, it is explained that beliefs about an object or attitudes can vary based on how the object is categorized (Sujan & Bettman, 1989; Rajagopal & Burnkrant, 2009). For example, a mimic brand with a similar brand name as the original brand name will be categorized to be from the same family of brands (Boush et al., 1987). In the case of mimicry, brands with names like Diesel Exchange (which is a mimic brand) will be associated to Diesel, which is fact untrue.

Signalling theory explains that people often diverge/converge to ensure that others form desired identity inferences about them (Berger & Heath, 2007). Products, attitudes, brands, and preferences (tastes) act as signals of identity (Wernerfelt, 1990). The signalling theory postulates that brands connects and communicates identity to groups who share similar tastes or use similar products.

Other secondary theories are used to support the above theories in explaining the mimicry phenomenon. Spillover effects theorize that key properties of a product will spill over to the product in which it is perceived to be associated (Hagtvedt & Patrick, 2008). More commonly, the spillover effects concerns specific content (physical attributes, designs, concepts, brand) of the product or general connotations (what it represents and the symbolic value). In addition, rarity principle explains that the “scarcer” the brand, the more valuable it is based on rarity principle (Dubois & Paternault, 1995; Mason 1981; Phau & Prendergast, 2000). In the luxury brand industry, rarity expresses exclusivity and self-image. Furthermore, Giacalone (2006) noted that volume of production and rarity of the product are in conflict. Lastly, the theory of social representations is defined as the influence of a social group on the opinions and values of its members through the collective elaborations of a social object (i.e. subject of common interest) (Moscovici, 1963; 1984). Brands (original/counterfeit) are sought for what they represent in social environment (Cordell et al., 1996; Cova, 1997; Elliott & Wattanasuwan, 1998; Phau & Teah, 2009) and these beliefs and values which are developed within the social environment and are expressed by shared common-sense representations (Stewart & Lacassagne, 2005).

Research Framework

Based on the concept of Vavilovian mimicry, the model and the hypotheses are specifically developed to measure the effects of Vavilovian mimicry on consumers. Gaps identified in the literature posed a number of unanswered questions and posit previously untested relationships between the different constructs. Due to the dearth of research in this area, a model based on studies within the area of imitation and counterfeiting. The research therefore proposes a framework as depicted in Figure 1, to investigate the perception of luxury and product evaluation of the mimic brand when Vavilovian mimicry is present. Specifically, it proposes the following primary hypotheses to be empirically tested:

H1: There is a positive relationship between presence of mimicry (Vavilovian) and perception of luxury towards mimic brand.

H2: There is a positive relationship between perception of luxury towards mimic brand and product evaluation of mimic brand.

H3: There is a positive relationship between presence of mimicry (Vavilovian) and product evaluation of mimic brand.
**Methods**

**Stimuli**

In order to accurately measure the difference and similarities between the two brands, a adaptation of Hagtvedt and Patrick’s (2008) method is used. In line with the objectives of the experiment, all respondents are required to respond to a stimulus consisting of luxury brands befitting to the concept of Vavilovian mimicry.

**Survey instrument**

A self-administered questionnaire is used for this study. There are two parts to the questionnaire. Part A consists of questions from the scale presence of mimicry. The scale for presence of mimicry is a scale developed for this study in order to measure the similarities between the two brands in order to test for the presence of mimicry. Part B consists of questions measuring perception towards luxury and product evaluation of mimic brands. The perception and product evaluation scales are both adapted from Hagtvedt and Patrick (2008) and the reliabilities are above 0.8, which are deemed appropriate for further analysis (Nunally, 1978).

**Results and Findings**

**Procedure and sample**

Data was collected via classroom setting in a large University in Western Australia. Trained interviewers were assigned to collect the data in the classroom setting. The students are advised that there is credit awarded for the participation of the study. The participants are given approximately 10 seconds to watch each stimulus and the procedure is repeated 3 times in order for the participants to observe the differences and similarities between the brands. A total of 195 usable responses were collected. Out of which 5 incomplete responses were discarded. The remainder were then analysed using SPSS 18. 45.6% of the sample is males.

**Factor Analysis**

An exploratory factor analysis was conducted on the original 29-item presence of mimicry scale. Through varimax rotation, six factors emerged and were named “conceptual”, “beneficial”, “physical”, “intangible”, “symbolic” and “brand” characteristics. In total, they were reduced to 22 items with an acceptable range of reliabilities as reflected in Table 3. The scale of presence of mimicry is clearly six-dimensional. As such, these six factors were used independently for all subsequent regression analysis.

**Influence of presence of mimicry on perception of luxury towards mimic brand**

Stepwise regression was conducted between “presence of mimicry” and “perception of luxury towards mimic brand” to test for H1. The results in Table 2 show that there is a positive relationship between the beneficial characteristics (R²= .092, p<.000, β=.328) and perception of luxury towards mimic brand. Symbolic characteristics (p<.007, β=.220) also showed a positive relationship towards perception of luxury, whereas conceptual characteristics (p<.003, β=.249) showed a negative relationship. As such, H1 is only partially supported.

<table>
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<th>B-Values</th>
<th>Std Error</th>
<th>Beta</th>
<th>t-value</th>
<th>Sig.</th>
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</thead>
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<tr>
<td>Beneficial</td>
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<td>.103</td>
<td>.328</td>
<td>4.260</td>
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<tr>
<td>Conceptual</td>
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<td>.126</td>
<td>-.249</td>
<td>-3.063</td>
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<tr>
<td>Symbolic</td>
<td>.263</td>
<td>.096</td>
<td>.220</td>
<td>2.731</td>
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</table>

Cumulative R²=.139
Influence of Perception of Luxury towards Mimic Brand and Product Evaluation of Mimic Brand

Regression is conducted between perception of luxury towards mimic brands and product evaluation of mimic brand. It is found that there is a positive relationship between perception of luxury towards mimic brand and product evaluation of mimic brand ($R^2=.346$, $p<.000$, $\beta=.591$). As such, H2 is supported.

Influence of Presence of Mimicry and Product Evaluation of Mimic Brand

Stepwise regression was conducted between “presence of mimicry” and “product evaluation of mimic brand” to test for H3. The results in Table 3 show that there is a positive relationship between the beneficial characteristics ($R^2=.121, p<.000, \beta=.351$) and product evaluation of mimic brand. Symbolic characteristics ($p<.003, \beta=.240$) also showed a positive relationship towards product evaluation of mimic brand, whereas conceptual characteristics ($p<.006, \beta=-.223$) showed a negative relationship. As such, H3 is only partially supported.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>B</th>
<th>Std Error</th>
<th>Beta</th>
<th>t-value</th>
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</thead>
<tbody>
<tr>
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<td>4.645</td>
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<td>Symbolic</td>
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<td>.240</td>
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<td>.003</td>
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<tr>
<td>Conceptual</td>
<td>-.321</td>
<td>.114</td>
<td>-.223</td>
<td>-2.801</td>
<td>.006</td>
</tr>
</tbody>
</table>

Cumulative $R^2=.166$

Discussion

Based on the results, it is observed that beneficial, conceptual and symbolic characteristics are important factors that influence perception towards luxury of mimic brands and product evaluation of mimic brands. It can be suggested that similarities between whether the product looks reliable, durable and effective are important aspects in how consumers will evaluate the mimic brand. If the similarity between the mimic and the original brand is close, there will be positive perceptions of luxury. Similarly, for symbolic characteristics such as if the mimic brand exudes an image of success or sophistication, consumers will better perceive the luxury of mimic brands. However, it is noticed that when conceptual characteristics are similar in terms of the level of creativity and novelty, there will be negative perceptions of luxury towards mimic brand. As such, it is important for mimic brand managers to note that when mimicking original brands, it is important to provide similar beneficial characteristics such as providing the same function. The mimic brand will have to adapt and create points of difference in order to be considered luxuriously. As such, they will have to evolve over time to be independently creative and offer alternatives to consumers.

It is also noted that positive perception of luxury towards mimic brands will also lead to positive product evaluations of mimic brands. Hence, in order to communicate a sense of luxury to consumers, mimic brand managers will have to enhance the symbolic and beneficial characteristics of their products even when they mimic. It is important to note that when consumer perceives mimic brands to be similarly luxurious, prestigious and high-class there will be positive product evaluations.

Lastly, beneficial, symbolic and conceptual characteristics are important factors affecting product evaluation of mimic brands. Therefore, for mimic brand managers it is important to capitalize on the functional and utilitarian similarities when mimicking original brands. Whereas if consumers perceive the mimic brand to be unoriginal, and a direct mimic, consumers will have negative product evaluation as they are only seen as a copycat without any token of originality. As such, mimic brands can consider parody tactics or even giving the product a “twist” to differentiate from the original brand.

Concluding Comments

There are a number of limitations anticipated for this study. Firstly, this study is only a snapshot of a larger study. This study is only looking at the luxury brand industry, as such future studies can apply the theory of mimicry into other categories such as convenience goods. This study has only examined one form of mimicry, and there are many other types of mimicry and parallels in marketing that have not been categorized. Furthermore, although real life marketing examples are used, Australian consumers may have less exposure and knowledge towards certain brands. Collectivism and individualism is not examined in this study, although it can be postulated that they would play a role in influencing consumers’ product evaluation towards mimic brand. Therefore, cross-national studies will provide improved value. This scope of this study is as a first step and a stepping-stone to building and extending the theory of mimicry into the area of marketing. As such, many other variables such as brand familiarity, country of origin, brand credibility should be studied in future.

References


Blume, L. and Easley, D. (2002). Optimality and


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