# PLAGIARISM, TRADE-DRESS AND THE VALUE OF DESIGN 

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#### Abstract

The distinctive identity of a brand has enormous commercial importance. When a competitor copies that identity with a cheaper inferior product, it can jeopardize the heavy investment in creating and designing products. The identification of the original versus a plagiarized knock-off is a critical issue in the marketplace. However, even when the identity is clear, a remaining issue is whether consumers are willing to pay a premium price for the original product. We use conjoint analysis to investigate the identification and valuation of an original vs. a copy. The willingness to pay for the original depends on the competence or knowledge of the consumer. We suggest ways of identifying "trade dress" by distinguishing among the utilitarian, systemic or symbolic aspects of a product.


## Introduction

Most people seem to care about the products they buy. Branding, in particular, is an indication that people generally are willing to distinguish and form preferences to evaluate and purchase the right products for themselves. The core of branding is recognition of the product and the image (Keller 1993). For the producer, branding helps improve quality beyond average because recognition and image can facilitate a premium price for premium quality. This can also be the case when the product as such is not branded by a well-established brand name, but is rather identified by the name of the inventor, creator or designer and its distinctive form, color, symbols, tags and other visually distinguishing characteristics. For example, a Picasso painting is only a Picasso if painted by Picasso himself. Many others have copied his style, but only originals command
premium prices because people want to own originals, not copies. Many luxury products, for instance furniture, interior and household items, fashion clothes, perfumes can fall into this category.

We also know that plagiarism is a big problem for companies who have invested heavily in branding, innovation and design (Yatsko 2000; Zaichkowsky 1995). We distinguish here between products that are almost alike vs. outright counterfeiting. The first category comes into being by inspiration and imitation in a broad accepted sense. People have always leamed by following those with good ideas and solutions to practical problems.

We may dress like somebody we have seen, not by copying but taking some aspects we like and think these will make us look good. This is a natural way that taste is diffused in any society without any problems (Van Paris 1981). The second category, counterfeiting, is clearly
illegal because products are deliberately disguised as originals. It is a 100 percent direct copy. An imitation is not necessarily a direct copy and is more difficult to define, identify, label as illegal and hence prevent. The purpose is to take advantage of the original work invested by somebody else.

Zaichkowsky (1995) has shown that it can be difficult to decide what is original, and often courts use expert witnesses to obtain evidence. Often, it is not easy to prove that an illegal action has taken place, and the lookalike product could in fact come about with no intended offence. In many cases an average consumer may prefer the copy because the price is usually much lower, and the quality can be satisfactory (Wilke and Zaichkowsky 1999).

One way to deal with these issues is "trade dress." Companies can make their designs as distinct as possible in order to avoid the easy exchange by mistake. By using particular strong shapes (the "beetle" and the "Mac"); colors ("Coke"); texture ("Oxo Good Grips"); symbols "Toyota"); sound, "Harley-Davidson"; and smell "Shiseido perfumes") a particular identity is sought.

This identity is distinguishable from close copies in ways that pre-cludes closeness with similar forms. This is probably due to our senses, which identify particular impressions as particular appealing, sensual, disgusting or scary (Ackerman 1990). In other situations, the visual image is well balanced (Chevreul 1838), expressive (Gombrich 1972), or close to an ideal type (Zeki 1999).

In order to realize such a strategy, the company (or rather the designer) must assess whether people (essentially its target group) is able to identify the product based on its visual appearance. This is no easy task, and it requires considerable skills and time to achieve. The company is also interested in knowing how
much people care for the original. How much are they willing to sacrifice in monetary terms to buy the original vs. a copy. If there is ambiguity or uncertainty about the recognition, this issue also includes the perceived risk involved.

The risk of buying an original to later discover it is a fake is a dreaded experience. It seems fair to assume, that for a price that does not differ very much, anyone would want the original, but if the price is much higher, there could be many people who are no longer willing to pay a premium price. The issue depends on the type of product as well. If it is a luxury product or item of art, the customer may be more willing than if it is a pure utilitarian product.

They simply do not see so much value in it. Finally, it seems reasonable to investigate the differences in willingness to pay. There can be many different reasons as spending power, taste, and cultural belonging could be important factors. Earlier studies in this domain did not look into "trade dress", as we defined it above. Davczyk (2000) discusses the role of trade dress as a way to strengthen the ability of people to identify originals and its implication for litigation. This has been an urgent issue because the courts have sometimes found the issue challenging. Also, in arbitration, plagiarism and trade dress has caused serious issues (Bosworth 1999).

The purpose of this paper is to test people's ability to identify the original in a common product category. The category is rice paper lamps, a market dominated by cheap products that many people buy to use in "back-rooms", storage rooms, children's rooms, or nurseries. Many consumers are unaware that these lamps are particular instances of products of art and high-class design. The famous Japanese sculptor and designer Nagoochi designed some of these lamps. Needless to say, the Nagoochi
product is distinct and it is expensive. This lamp is sold in prestige design shops. We have chosen to investigate design, identification and willingness to pay for this lamp by comparing it with two cheaper rice paper lamps, which were designed by anonymous designers and sold in shops with a more average assortment. These products are not "cheapish" or bad quality.

Yet it makes a considerable difference whether you pay 12 dollars or 85 dollars, which is the span between the cheapest and most expensive version. Our questions were whether people were able to tell which one is the original and if they could, how much were they willing to pay for the original. If we have that information in addition to the market structure, we may be able to calculate loss of "brand equity" due to plagiarism.

## Methodology

An experimental design was used to test whether people are able to recognize an original when compared with two copies. We do this by paired ranking of the alternatives. We also test how much the respondents are willing to pay in a paired comparison. The experiment took place at an exhibition in a design museum. There was a table with three lamps made of rice paper. The lamps were presented physically and people could both see and touch the lamps. Beside the lamps there was a computer with a self-managed program. The program presents very briefly a choice scenario about the lamps and asks the person reading the computer screen to participate in an experiment. In the first part of the experiment, the lamps are compared in pairs. There are three paired comparisons where the respondent is asked to position the cursor on a continuous scale. The respondent is asked to move the cursor with the mouse closer to the end position of the scale, the higher this particular lamp is rated.

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A-B \quad B-C \quad C \longrightarrow A
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The lamps were marked with the letters A, B and C and the scales also referred to these letters. The lamp designed by Nagoochi was labeled B, but the respondents were not informed of this. In the second part of the experiment, additional price information was given. Three prices were quoted, $\$ 12,18$ and 85 respectively, but they were not fixed to any particular design. Rather, all of the three prices were assigned to each lamp such that all of the nine possible combinations (3 prices by 3 lamps) were applied - giving nine objects to be compared. In the paired comparisons each letter (indicating a particular design, $\mathrm{A}, \mathrm{B}, \mathrm{C}$ ) was given a price tag. Then they were also compared so that the following comparisons were performed:

A with price \$ 12 was compared to $B$ with price \$ 18.
B with price $\$ 18$ was compared to C with price \$ 85.
C with price $\$ 85$ was compared to $B$ with price \$ 12.
B with price $\$ 12$ was compared to $A$ with price \$ 85.
A with price $\$ 85$ was compared to $C$ with price \$ 12.
C with price $\$ 12$ was compared to $A$ with price \$ 18.
A with price $\$ 18$ was compared to $B$ with price \$ 85 .
B with price $\$ 85$ was compared to C with price \$ 18.
C with price $\$ 18$ was compared to A with price \$ 12.

The comparisons were chosen such that each pair of lamps and each pair of prices were compared the same number of times, giving a randomized experiment (Gliner and Morgan 2000). In the last part of the experiment people was given the information that Nagoochi has desig-
ned one of the lamps and people were asked to select which one. This information was compared to how much design competence the respondents rated themselves as having. To substantiate the competency, we also asked whether the respondents were professionally engaged with design.

Data were analyzed as paired comparison with continuous ratings (Gabrielsen 2000). In the first part of the experiment a preference scale for the lamps was estimated. In the second part a conjoint analysis for paired comparison measurements was performed, which gives separate preference scales for lamps and prices.

## The Findings

A total of 107 respondents participated in the experiment. In the first part of the experiment, in which only lamps were compared, the preference scale was estimated to

As there is no point of zero in the scale estimated from paired comparisons the preferences are represented with the sum being zero. It is seen that lamp B is the most preferred when no information is given about prices or origin.

Furthermore, the difference between C and $A$ is smaller than the difference from $A$ to $B$. Although the scale goes from a low of -25.0 to a high of 25.0 the estimated common preferences only reach from -4.7 to 5.4 reflecting a high degree of heterogeneity among the participants.

*Scalc gocs from a low of -25.0 to a high of 25.0
Figure 1. Preference Scale of Lamps

The conjoint analysis separates the effect of lamps and the effect of prices into two separate scales shown in table two.

The preferences concerning the prices are as expected, such that the preference decreases as the price increases. The preferences for the prices $\$ 18$ and $\$ 12$ are almost the same, whereas the preference for the price $\$ 85$ is very much lower. This is a simple negative ranking of prices, which shows, not surprisingly, that people in general prefer a cheaper to a more expensive price, not taking the product into consideration.

The preference scale for the lamps shows the same ordering of the lamps as in Figure 1 and also the same relative distance between the lamps, however, the preference scale for the lamps in Figure 2 is more compressed compared to Figure 1. The interpretation of this is that the difference between the preferences seems to diminish. When the prices are attached, the comparisons are expressed by the willingness to pay for each individual lamp. What we see is not the immediate ranking of product. We get the more consequential type of ranking from asking the respondents how much is they willing to sacrifice to acquire each of the lamps. This is the side of the price that concerns the perceived value in monetary terms.


Figure 2. Estimated Contributions to Preferences from Lamps and Prices Respectively


Figure 3. Estimated Contribution to Preferences from Prices According to Design Competence

The participants were asked to rate their design competence (high / low). In the analysis data was divided according to whether the persons claimed themselves as having low or high design competence ( 46 and 61 persons respectively). There were no significant difference of the preference scales for the lamps in the two segment and, furthermore, the common scale was identical to the scale shown in Figure 2, however, the preference scales for the prices were significantly different, Figure 3 . The preference scale for prices in the segment with low design competence was highly compressed compared to the segment with high design competence. This means, that the higher, the competence, the more weight is attached to the price. The competent respondent is more willing to pay a high price for the original and less willing to pay for a copycat.

The addition of another variable also changes the result. The respondents were both asked whether they thought of having a low or high design competence and whether they were working professionally with design. There is likely to be a selective bias in sampling. Since the localization of the data collection took place at a design museum, we expected the respondents to be more than average competent in design. The results were, that the higher, the competence, the more clearly the respondents discriminated between the options.

## Discussion and conclusion

The present study is an application of a wellknown method in marketing, although the statistical method differs. Our purpose has been to address the issue of plagiarism. The problem is urgent for many producers who experience that products they have devoted considerable resources and efforts to create and design is devoured by cheap copies that look like the original but clearly costs much less.

The cases we have analyzed are not cases where deceptions have been used, but such situations where an original and the copies differ in ways that can be detected by the trained eye. While most people will respond positively to a statement that they prefer originals, the matter is different when this means sacrificing a premium price. As we see in the study this means a ratio of 10 between the cheapest version and the original. When seen in such perspective, the preference for the original is no longer absolute, but it depends on consumer's competence or knowledge of design. Only those most competent are really willing to pay such a high price. This raises the issue of consumer education and also of trade dress. The issue is recognition of the products.

Improved ways to identify the original may persuade more consumers that they can confidently buy the premium priced product. Further research may take advantage of the developments in sensorics and senso-metrics. These disciplines have been dealing with recognition and characterization of food, fragrances and drinks for many years.

There is an existing body of knowledge that can lead into manageable testing procedures that we expect may be applicable for other product categories as well. While there exists a well-defined set of characterizing terms for fragrances, food and drinks, such terms may
have to be invented for other products. Also here, there are insights to be leamed from the recent developments in vision research and cognitive science.

Another issue is creating trade dress by means of other senses than the visual. We will assume that the product category is an important issue here. We may distinguish between pure utilitarian, systemic (technical and social) products and symbolic products. A pure utilitarian product, we assume, does not really lend itself to much trade-dress, although we are aware that it happens quite frequently. For instance if you buy a screw or other replacement (original) to an automobile, it is usually physically branded, like Ford or DaimlerChrysler. If we assume, that a screw is a screw, the producer faces a real problem.

Knowing, that the plagiarist market is highly lucrative, the producer claims, that the warranty is no longer valid if a copycat, however trivial, has replaced an original item. In the case of products that require a system in order to operate, like a cellular phone the issue is one of compatibility. In this sense, the situation is equal to the utilitarian product; only the focus is now in the interface with a system.

A symbolic or a social product that marks the user as a member of an "in-group" is one where the issue is urgent. Here the likelihood is high, that the social risk of erring leads more people to buy the original, paying the premium price. This is exactly what our experiment has shown. We might have expected a different outcome; that there was a "snob-effects" involved, and people with limited design competence actually were more willing to pay a premium price. As it happened that was not the case as interesting in this situation, there was no significant difference in the ability to
identify the original, depending on the competence.

In total 54 ( $50 \%$ ) of the participants was able to identify that lamp $B$ was the original lamp. So the general finding is that the more competent people seem to be, the more they appreciate the original and avoid the copy. People who are less competent are more likely to accept a copy. This is hardly surprising. Further studies should corroborate this.

We also face some degree of "self-selection" of respondents, since this happened in a design museum. People who enter such places are more likely to appreciate and to be competent about design that the "average consumer". So an interesting follow up will be to repeat the experiment with other audiences, and also with other products.

An interesting category could be fashion clothes for children. This may be a situation where, parents and children's conflict reach a peak. Teenagers are vulnerable to the judgments of their peers and they feel safe when they wear right clothing. On the other hand, when the parents have to pay, they see little point of spending on high-class fashion that they know will be worn down or as it happens stolen very soon.

If we have the data for a particular product category, which we have in this case, it should also be possible to calculate the expected loss in "brand equity". To do so, we would need to know how the market is composed. If we know how the distribution of competent vs. less competent consumers, we should be able to estimate the number of people who will buy the original and how many we risk losing because they are not willing to pay the price. This is another perspective, that needs further attention, and if possible a real market experiment.

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# PLAGIATAS, PREKYBINĖS IŠRAIŠKOS IR VERTĖS KOMPOZICIJA 

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Santrauka

Straipsnyje nagrinėjama aktuali firminio išskirtinumo problema. Aptariami firminio jvaizdžio imitavimo ir tiesioginio falsifikavimo atvejai, plagiato ir originalumo turinys, taip pat praktinès išraiškos reikšmé ir padariniai rinkai. Pasitelkdami Conjoint analizés metodą autoriai tiria originalumo ir kopijavimo atvejus.

Iškeltas tciginys, kad pirkċjo nusitcikimas mokèti už originalumą priklauso nuo kompetencijos ir žiniụ lygio. Išskiriant gaminio praktinius, sisteminius ar simbolinius aspektus, siūloma prekybinès išraiškos idèjos igyvendinimo būdu.

