

İSTANBUL TECHNICAL UNIVERSITY ★ INSTITUTE OF SCIENCE AND TECHNOLOGY

**THE EFFECT OF PERCEIVED RISK ON AESTHETIC RESPONSES TO
TYPICALITY AND NOVELTY**

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**TİPİKLİK VE YENİLİK KAPSAMINDA ALGILANAN RİSK VE ESTETİK
BEĞENİYE ETKİSİ**

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FOREWORD

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Industrial Product Design

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THE EFFECT OF PERCEIVED RISK ON AESTHETIC RESPONSES TO TYPICALITY AND NOVELTY

SUMMARY

While previous research has shown that typicality and novelty are jointly and equally effective in explaining the aesthetic preference, it is unclear whether humans always seek an optimum between typicality and novelty or does one of the two prevail in people's affective responses. The main objective of this study is to analyze this relationship and to see if perceived risk has an impact on relative preference for typicality or novelty. In an attempt to examine this relationship we measured consumers' preferences under several conditions varying in risk levels. Hypotheses were tested with respect to consumer products. High-heel women shoes were selected as the product category on which to gather information.

Mainly, three extrinsic cues namely price, brand and country of origin were used to signal risk differences between conditions. Manipulations were partially successful. Three levels of perceived risk manipulations (low risk, moderate risk, and high risk) were designed, however, the risk perception difference between the high and moderate level was not significant.

The findings of the bivariate correlation analyses demonstrate that the typicality and novelty are jointly effective in explaining the aesthetic preference of consumer products. However, in the selected product category, typicality is more successful in explaining aesthetic preference than novelty.

In addition, the typicality preference did not increase with the increased perceived risk. On the other hand, the high heel shoe category is generally perceived as a high risk product category and because of this, the correlations between typicality and preference were high in all categories forcing participants choose the safest option possible, hence, people would appreciate novelty less in riskier situations.

In sum, the results of this study provide evidence for the effects of perceived risk on our aesthetic preference. It seems that the results provide an empirical basis for explaining why people like to perceive things in the world around them the way they do from an evolutionary point of view. The findings of this study aims to clear the path for academicians and the product designer while explaining the perceptions of the consumers.

TİPİKLİK VE YENİLİK KAPSAMINDA ALGILANAN RİSK VE ESTETİK BEĞENİYE ETKİSİ

ÖZET

Yapılan literatür araştırmaları tipiklik ve yeniliğin estetik beğeniyi etkili olarak beraber etkilediğini göstermektedir. Fakat insanlar tercih yaptıklarında tipiklik ve yeniliğin optimum olduğu bir durumu mu yoksa tipiklik ya da yenilikten herhangi birinin daha baskın olduğu bir durmu mu tercih ettikleri tam netlik kazanmamıştır. Bu araştırmanın ana hedefi tipiklik ve yeniliğin estetik beğeniyi oluşturmadaki ilişkisini araştırarak, risk algısının tipiklik ve yenilik tercihlerine etkisini incelemektir. Bu ilişkiyi araştırmak için çeşitli risk seviyeleri yaratılarak tüketicilerin tercih mekanizmaları incelenmiştir. Topuklu kadın ayakkabılarının kullanıldığı araştırma, hipotezlerle sınanmıştır.

Fiyat, marka ve ürünün üretildiği ülke risk algısını değiştiren etkenler olarak durumlar arası farklı risk seviyeleri yaratmak için kullanılmıştır. Risk algısı üç seviyede manipüle edilmiştir (düşük risk, orta derecede risk ve yüksek risk). Fakat sonuçlara bakıldığında yüksek risk ve orta derece risk seviyeleri arasında anlamlı bir farkın olmadığı görülmektedir.

İki değişkenli korelasyon uygulanarak analiz edilen anket sonuçları tipiklik ve yeniliğin tüketicinin estetik beğenisini birlikte etkilediğini göstermiştir. Fakat seçilen ürün kategorisinde tipikliğin estetik beğeniyi açıklamada yeniliğe nazaran daha etkili ve başarılı olduğu görülmektedir. Tipiklik ise artan risk algısına rağmen sabit kalmıştır. Bunun muhtemel sebebi ise topuklu ayakkabı kategorisinin tüketiciler tarafından hali hazırda oldukça riskli bir kategori olarak algılanması gösterilebilir. Risk algısının yüksek olduğu durumlarda ise yenilik tüketiciler tarafından daha az tercih görülmektedir.

Sonuç olarak yapılan araştırma risk algısının estetik beğeni üzerindeki etkisini ürünlerin tipiklik ve yenilik özelliklerini de göz önüne alarak belirlemiştir. Yapılan araştırma deneysel baz oluşturarak insanların tercihlerinin değişen risk seviyelerini de göz önüne alarak neden tipikliği ya da yeniliği tercih ettiğini ortaya koymuştur. Bulguların hem akademisyenleri hem de günümüz marka tasarımcılarını müşterilerin algıları konusunda bir sonraki noktaya taşıyacağı ümit edilmektedir.

1. INTRODUCTION

This study is an attempt to develop a comprehensive model of aesthetics explaining why people like to perceive things in the world around them the way they do. In line with the original Greek meaning of the concept, “aesthetics” is defined as the pleasure attained from sensory-motor understanding (Hekkert, 2006; Hekkert & Leder, 2008). Through the sensory-motor system and brain, people understand the world around them. This understanding is guided by aesthetic qualities (e.g. Dewey, 1934; Johnson, 2007). People feel the quality of things or situations, and immediately know if they are to their liking.

Historically, much research has been conducted into formal determinants of aesthetic pleasure: harmony, proportion, balance, symmetry, etc. Only recently, with the advent of evolutionary psychology, has the question been posted as to why we have an aesthetic sense at all (see e.g. Thornhill, 2003; Whitfield, 2005). The perceptual theory of aesthetics goes back to the roots of aesthetics: sensory-motor understanding (Hekkert, 2006; Hekkert & Leder, 2008). Over millions of years of evolution, sensory systems have evolved to aid survival; they have enabled our ancestors to perceive and recognize (and avoid) predatory animals, to identify edible berries, and safely navigate through savannahs. In the modern world, people have few natural enemies, the grocer tells them which berries are safe, and maps, way finding, and car navigation systems help people find their way. Importantly, however, the sensory systems that were originally ‘designed’ for these purposes have hardly changed. The functional architecture of the mind has been formed as a result of problems our ancestors had to solve under the conditions of our ancestral environment, not by the kind of problems modern humans are dealing with today (e.g. Kanazawa, 2004; Tooby & Cosmides, 2005).

Underlying our aesthetic attraction to things are two evolutionary pressures that operate simultaneously. Following most evolutionary claims, the primary tasks for any organism are the preservation of life and the furtherance of conditions for growth (e.g. Damasio, 1994). On one hand, humans seek that which is safe to approach,

offers security, and makes little demand on their limited processing capacity. On the other, humans are motivated to take risk and engage in exploratory behavior, to extend their capabilities, and promote learning. This dichotomy of motivational pressures can be observed in many theories of motivation and development (e.g. Bowlby, 1969; Gray, 1987) sharing the “general assumption that individuals seek both safety and accomplishment” (Shah et al., p. 286).

The model proposed here begins with the claim that these two opposing forces affect people’s aesthetic preference on the cognitive level. In brief, at this level, aesthetic choices are based on a trade-off – a ‘battle ’ – between safety needs and accomplishment needs, and people seek for an optimum between the two forces. Indeed, Hekkert et al. (2003) have shown that both typicality, defined as “goodness of example”, and novelty predict people’s aesthetic preference for a number of consumer products, such as cars and sanders. Although the two variables are clearly negatively correlated, it is possible to optimize novelty while preserving typicality: people like things that are most advanced, yet acceptable (Hekkert et al., 2003).

While previous research has shown that typicality and novelty are jointly and equally effective in explaining the aesthetic preference, it is unclear whether humans always seek an optimum between typicality and novelty or does one of the two prevail in people’s affective responses. The main objective of this study is to analyze this relationship and to see if perceived risk has an impact on relative preference for typicality or novelty. In an attempt to examine this relationship we measured consumers’ preferences under several conditions varying in risk levels. Mainly, three extrinsic cues namely price, brand and country of origin were used to signal risk differences between conditions.

The rest of the paper is organized as follows. First, a review of the relevant literature is presented on the perceived risk, extrinsic cues, and typicality and novelty. Then, the causal model is proposed and the hypotheses derived from it are described. Thereafter, the research design and measures are described. In the following section, the results of data analysis are presented. Finally, the study’s main conclusions and implications are commented on, the limitations of the study are described and directions for future research are discussed.

2. LITERATURE REVIEW

2.1 Typicality & Novelty

There is a growing body of evidence that so-called ‘higher’ cognitive process, such as categorization, reasoning, and concept formation, are intrinsically sensory-motor based, or “embodied” (e.g. Barsalou, 1999; Gibbs, 2003; Johnson, 2007). In order to form categories, we need repeated experiences with the objects of categorization, and these experiences are inherently embodied and multimodal. Each time we see or interact with a cat or car, we do this through most/all of our senses. Our image schemas or categories of car-ness (a typical car) or cat-ness (a typical cat) are thus also embodied. When we encounter a new object, we do not compare it to a mental representation to assess its typicality. Rather we re-enact previous experiences, a process that is mediated by these image schemas, recurring structures and patterns of sensorimotor experience (e.g. Barsalou et al., 2003; Gallese & Lakoff, 2005). For this reason, preferences based on meaningful qualities (e.g. typicality) are as much aesthetic judgments as preferences based on formal/perceptual properties.

Several studies have demonstrated that people prefer typical or familiar instances of a category, such as furniture (Whitfield & Slatter, 1979), colour patches (Martindale & Moore, 1988), paintings (Hekkert & van Wieringen, 1990), music (Gaver & Mandler, 1989; Repp, 1997), odours (Distel et al. , 1999), houses (Purcell, 1984), interior designs (Pedersen, 1986) and consumer products (Veryzer & Hutchinson, 1998). This relationship is consistent with the “mere exposure” hypothesis that repeated unreinforced exposure increases positive affect (Zajonc, 1968) Mere-exposure effect is often explained by the fact that something typical/familiar is safe to approach (Bornstein, 1989) and easy to process (Reber et al., 2004). Simultaneously, however, we are also drawn towards the new (Martindale, 1990): something novel is interesting and offers the promise of discovery and learning (e.g. Bornstein, 1989). Therefore, it is both adaptive to seek out familiar and novel stimuli.

Moreover, the mere exposure effect could not be demonstrated for fine arts, where originality is highly valued. An explanation for that can be the dominance of a preference for novel instances over a preference for familiar instances in case of these ‘aesthetic’ stimuli (Hekkert et al., 2003). Whatever their functions are, aesthetic sensibilities are relevant to all products (Holbrook, 1980; Holbrook & Anand, 1992; Holbrook & Zirlin, 1985; Bloch, 1995). Thus consumer products are not only bought for their functional and utilitarian properties, but also aesthetic properties. Therefore, both typicality (in terms of ‘goodness of example’) and novelty can explain aesthetic appreciation of consumer products.

In spite of the fact that novelty and typicality often highly correlated negatively, they are not exactly opposite constructs (Hekkert et al., 2003). Moreover, familiarity cannot explain typicality alone (Barsalou L., 1985; Loken & Ward, 1990), even though they tend to be correlated substantially.

2.2 Perceived Risk

The concept of “risk” became a controversial issue in the field of economics, in 1920s (see, e.g., Knight, 1921). Since then, it has been attracting attention from the scholars from the fields of finance, decision sciences, psychology, and consumer behavior. However, the risk construct is conceived and used differently in each discipline (Stone & Grønhaug, 1993).

Considering consumers are not only motivated to maximize utility, but also, often avoid mistakes, the concept of “perceived risk” is more powerful at explaining how consumers make choices (Mitchell, 1999). For this reason, it has been used as an explanatory variable in empirical research on consumer behavior in a wide range of areas (e.g., intercultural comparisons (Alden et al., 1994), food technology (Frewer et al., 1994), dental services (Coleman et al., 1994), banking (Ho & Victor, 1994), apparel catalogue shopping (Jasper & Ouellette, 1994), communicators (Sääksjärvi & Lampinen, 2005) and store brands (Mieres et al., 2006; Zielke & Dobbelsstein, 2007).

In most cases an accurate calculation of the risk involved in a purchase is almost impossible, since the average consumer has narrow information, limited trials to consider and an imperfect memory. Even if the risk involved could be calculated

accurately, it is the consumer's subjective impressions about the purchase, not this objective risk (Mitchell, 1999). Consequently, in the field of consumer research, perceived (subjective) risk is the only concern, not actual (objective) risk. In this research, perceived risk measures were used for hypotheses testing.

The risk concept was conceived and used differently not only among other disciplines but also within the consumer behavior field. While, there is no widely accepted definition of perceived risk within the consumer behavior field, it is commonly conceptualized as involving two elements: uncertainty and consequences (Cox, 1967; Cunningham, 1967; Dowling & Staelin, 1994; Jacoby & Kaplan, 1972). In time, adverse consequences became more of an issue (Conchar et al., 2004) and conceptualizations of risk focused on the losses. In this research, perceived risk is defined as "the consumer's perceptions of the uncertainty and the adverse consequences of the appearance of a product".

Our definition of risk is similar to the conceptualizations in consumer research. However, there are two main distinctions. The main difference is there is no purchase situation in this study, which directly eliminates the financial risk dimension. In this research, the effect of perceived risk on aesthetic preference is the matter of subject. Therefore, the other distinction is that our definition of risk is related to a product's appearance.

Different types of losses (e.g., financial, performance, physical, psychological, and social (Jacoby & Kaplan, 1972); time or convenience risk (Chaudhuri, 2000); linked-decision risk (Berkman et al., 1996) have been identified related to consumer behavior. Among them, functional risk, physical risk, and social risk can be considered as the dimensions of risk linked to the appearance of an object. Indeed, Creusen and Schoormans (2005) emphasize the several roles of the appearance of a product on consumer's product evaluation, such as symbolic value, functional and ergonomic information.

Functional risk is defined as the possible loss or reduced benefit from the substandard performance (Zielke & Dobbelsstein, 2007; Grewal et al., 1994). On the other hand, physical risk can be defined as the potential physical damage because of an inadequate product quality (Conchar et al., 2004). Lastly, social risk refers to a possible loss of image or prestige resulting from purchase or use of a specific product (Zielke & Dobbelsstein, 2007).

The risk of purchasing a particular product is composed of the risk associated with purchasing any product in the category and the risk associated with the particular product being considered in the product class (Dowling & Staelin, 1994). Bettman (1973) have referred to these two components of overall perceived risk as “inherent risk” and “handled risk”, whereas, Dowling and Staelin (1994) have referred these constructs as “product category risk” and “product-specific risk”, simultaneously. For example, buying a purse may be perceived as relatively risky while a favorite brand may reduce the perceived risk. In this study, product-specific risk estimations for each given situation (described in e.g. price, brand) are used for hypotheses testing.

2.3 Extrinsic Cues

Consumers rely on various cues in their evaluations of a product (Peter & Olson, 1987; Richardson et al., 1994; Schellinck, 1983; Lee & Lou, 1996). These cues can be dichotomized as either intrinsic or extrinsic (Olson & Jacoby, 1972; Szybillo & Jacoby, 1974; Olson, 1977). Extrinsic attributes are the cues that are not part of the physical product itself and can be changed without changing the product, such as price, brand name and country of origin, whereas intrinsic cues are the physical feature of a product such as color or style of a bag.

It is believed that consumers tend to rely more heavily on extrinsic than intrinsic cues in their evaluation of products because, extrinsic cues are more general and applicable to a broader range of products and similarly, consumers are usually more familiar with them (Lee & Lou, 1996). Moreover, it is often not possible to observe intrinsic cues (e.g. taste of beef) prior to purchase. Furthermore, without certain extrinsic cues (e.g. brand), consumers are not informed about the credence attributes such as durability, even they may not be completely certain of the experience attributes (Steenkamp, 1990). For example, the perception of the beauty (quality attribute) of a painting may not only be based on the actual consumption experience but also on the reputation of the painter (quality cue).

The results of previous research have suggested that consumers often count on the product’s brand name (e.g., Dodds et al., 1991; Jacoby et al., 1977; Peterson & Jolibert, 1976), price (e.g., Dodds et al., 1991; Wheatley et al., 1981; Woodside, 1974), or country of origin (e.g., Han & Terpstra, 1988; Chao, 1989a; Chao, 1989b).

One specific use of these extrinsic cues is mitigating risk perceptions (Agarwal & Teas, 2001; Bearden & Shimp, 1982; Shimp & Bearden, 1982; Aqueveque, 2006). Especially in cases of a product's intrinsic cues are considered as low in confidence and predictive values, for example when consumers are not sure about the performance, safety or how socially acceptable it might be, etc., extrinsic cues are particularly valuable (Bearden & Shimp, 1982). Because, one can infer beliefs about quality attributes depending on the available extrinsic cues. For example, a consumer may perceive a "Sony" headphone as "good sound quality" based on his/her prior belief that "Sony headphones have good sound quality". Former knowledge about the product category and general rules originated from the cultural environment, and/or on stereotypes form the prior beliefs (Fiske & Taylor, 1984; Nisbett & Ross, 1980; Steenkamp, 1990). With or without much conscious analytic thinking, consumers often engage in this kind of inference processes (Steenkamp, 1990).

However, past studies have emphasized the individual differences in the extrinsic cues effects, which suggests that the effects of extrinsic cues are not universal (Lee & Lou, 1996). Involvement and knowledge about product category are examples of the important personal variables moderating the extrinsic cue effects (Steenkamp, 1990; Lee & Lou, 1996).

3. RESEARCH QUESTIONS AND HYPOTHESES

Main research questions of the thesis are:

- o At the cognitive level of aesthetic processing, are people's preferences driven by needs related to safety and accomplishment, and do they strive for an optimum between these two impulses?
- o Do conditions involving 'risk' drive people towards the safe side and, correspondingly, do 'safe' situations make people prefer more challenging alternatives?

Present study aims to reveal the motivations behind our aesthetic appreciation. Safety and accomplishment have been observed in many theories of motivation, therefore it is tested if these two evolutionary pressures also motivate our aesthetic sense at the cognitive level. Regarding product appearance, cognitive responses include categorization and product-related beliefs (Bloch, 1995).

One of the most important roles of appearance of a product is its ability to communicate information to consumers (Nussbaum, 1993; Bloch, 1995). Consumers gain the first impression and generate beliefs about the other attributes of the product from the product's appearance in the same manner they do from other cues, such as price (Berkowitz, 1987; Bloch, 1995). Generally, product form communicates the symbolic, functional and ergonomic value as well as its aesthetic value to consumers (Creusen & Schoormans, 2005). For example, a simple form of a product can communicate its ease of use to the consumer (Bloch, 1995).

Categorization is another type of response to product appearance in the cognitive level. A product's typicality may provide consumers with expectations about certain product attributes and thereby about the functional, ergonomic, aesthetic, and/or symbolic value of the product (Creusen & Schoormans, 2005). Thus, it is suggested that typicality provides safety for consumers. Similarly, novelty in a product's appearance holds risk in functional, physical and social dimensions. However, novelty may promote learning and corresponds to accomplishment needs. Indeed,

novelty increases the attention-drawing ability of a product (Creusen & Schoormans, 2005). Based on the above considerations it was hypothesized that:

H1: Both novelty and typicality are positively related to aesthetic preference

Furthermore, we expect consumers to aesthetically prefer typical examples of the category when they perceive high risk, in an attempt to satisfy their safety needs. High risk is defined as high uncertainty of the quality of the product and high expectation of the social loss. High uncertainty about the quality of the product increases both functional and physical risk of the product.

H2: The higher the overall perceived risk, the higher the preference for typicality

Adversely, it is expected from consumers to aesthetically prefer novel examples of the category when they perceive low risk, in an attempt to satisfy their accomplishment needs. In low risk situation people are more confident of the overall quality of the product. Therefore, functional and physical risks of the product are low. Moreover, people are more confident about their social image in a low risk situation thus, social risk is minimized.

H3: The lower the overall perceived risk, the higher the preference for novelty

4. ASSUMPTIONS

To test the hypotheses, three virtual web-shops were created: one is representing a high-risk, another one is representing a moderate-risk and the last is representing a low-risk situation for the participants. To manipulate risk in high, moderate and low levels, different website templates were created. The aim was to obtain different confidence levels for the websites. Moreover, for the same purpose, three extrinsic cues, namely, price, brand name and country of origin were used. The assumptions that are used in the manipulation and the literature they are based on is given below:

4.1 Price

ASSUMPTION 1. Price level is negatively related to functional, physical and social risk.

The empirical research indicates that there might be a positive relationship between price and quality but a positive price-perceived quality relationship cannot be generalized and isn't robust. In several studies weak positive relationships have found (Friedman, 1967; Lichtenstein & Burton, 1989; Swan, 1974) whereas other studies have found a moderately strong relationship (Rao & Monroe, 1989) or no relationship when controlling for other factors such as brand (Szybillo & Jacoby, 1974). Also, the perception of the relationship varied across individuals (Shapiro, 1973), or across products being judged (Gardner, 1971; Lichtenstein & Burton, 1989) in several studies. Several explanations such as experimental design, price of the product, size of the price range, and cue availability have been proposed to what determines the boundaries of when or under what conditions consumers relate price to the quality (Monroe & Krishnan, 1985; Olson, 1977; Rao & Monroe, 1989; Brucks et al., 2000).

The supply and demand dynamics of the market also is critical to the product price but regardless it is evident that consumers tend to use price as the indicator of quality. This is due to the competing products on the same price scale and the cognitive trade-offs of monetary sacrifice (Dodds et al., 1991). On the other hand, the

cognitive trade-off between the perceived quality and the price creates a paradoxical situation as the consumers hesitate to purchase the products when the price is too high or get suspicious of the product quality when the price is too low (Scitovsky, 1945). Nonetheless, price can be utilized as an indicator of level of quality by the consumers (Dodds et al., 1991).

The effect of price on perceived risk is two-folded. In a sense, higher levels of price increase the financial risk. But, in a sense, higher levels of price can also increase the perceived quality (Dodds & Monroe, 1985; Dodds, 1995), and decrease the perceived performance risk. However, in this research, risk is not defined in a purchase context thus, financial risk is irrelevant. Consequently, price has only positive effect on mitigating perceived risk in our study.

4.2 Brand

ASSUMPTION 2. Favorability of the brand name is negatively related to functional, physical and social risk

Another distinction for creating high-risk and low-risk conditions can be made through brand name. While a well known, reputable brand name stands for the quality of the product and also prestige; it gives important cues that can reduce the perceived risk. Therefore, we expect that people strive for novelty for a well-known brand and typicality for an unknown brand.

Previous research claims that the brand and store name can positively affect the perceptions of product quality and increase the willingness to purchase. However, there are some conflicting information about the effects of brand/store name and price. Some studies claims that the price can create a stronger influence on quality than the brand/store name and the majority of studies claims that the consumers are relying on the brand name rather than using the price as indicator of quality (Dodds et al., 1991; Dodds, 2002). On the other hand, consumers tend to reduce the product risk by choosing the brands that are known by their quality products (Bearden & Shimp, 1982). In addition, when judging quality consumers are more curious about the brand name more than the other available information (Brucks et al., 2000).

Prestige corresponds to fulfilling the consumers' social and psychological expectations about the superiority of the product (Brucks et al., 2000). Consumers

evaluate the appearance of a product or the brand's image, if they are in consistency with the image they want for themselves. However, prestige originating from brand image not only satisfies a symbolic need, but also assures consumers about the overall quality of the product by creating a "halo effect" (Garvin, 1984). Consumers can make inferences about the dimensions that they can hardly assess in reality (e.g. durability); or a brand extension they haven't experience depending on their previous experience with or beliefs about the company (Garvin, 1987).

4.3 Country of origin

ASSUMPTION 3. Favorability of the country-of-origin image is negatively related to functional, physical and social risk

Consumer's perception of country of origin can directly impact the quality according to the previous research. If a country has the reputation of producing high (low) quality products, the consumers are inclined to believe that the products produced in this country are generally high (low) quality. This may not always be true considering the vast variety of product categories but regardless country of origin of a product influences the quality perception greatly (Teas & Agarwal, 2000).

5. METHODOLOGY

5.1 Stimuli

The hypotheses were tested with respect to consumer products. The selection of a product category/class to serve as the arena of the study was carried out according to the following criteria:

- (1) The proposed product class should contain a wide range of typicality and novelty (Hekkert et al., 2003).
- (2) Different types of risks should be identified relevant to the product category (Zielke & Dobbelsstein, 2007).
- (3) The category should be able to provide reasonable variation to its products (i.e. varying price, brand and country of origin) (Sethuraman & Cole, 1999).
- (4) Both high quality and low quality product examples should already be present in the market
- (5) The products of such category could be able to use publicly without any legal or social restriction (i.e. feminine products)

These criteria limit the possible product categories, however it is critical to pick the relevant product category that can be carried out to the public, as the project is dependent on the feedback of product users. As a result, high-heel women shoes were selected as the product category on which to gather information. Women shoes were narrowed down to high-heel shoes in order to avoid one's aesthetic appreciation towards a specific type of shoes. A pretest was performed to select a series of shoes that vary according to novelty and typicality. Twenty high-heel women's shoes were selected as stimulus material (Figure 5.1). Same stimuli set was used in all scenarios, because visual appearance is also a quality cue (Bloch, 1995). Using different stimuli sets may alter the results.



Figure 5.1 : Selected shoes

5.2 Participants

A convenience sample of 279 female participants was randomly assigned to one of the four experimental groups (including the control group). Only female respondents were recruited because of the selected product category, high-heel women's shoes. Participants were reached by Facebook or e-mail and participation was voluntary. The number of the participants that were assigned to Group A, Group B, Group C, and Group D is presented in Table 5.1.

Table 5.1: The number of the participants according to groups

	Frequency	Valid Percent
Group A	66	23.66
Group B	61	21.86
Group C	73	26.16
Group D	79	28.32
Total	279	100.00

The participants' ages varied from 17 to 55, with a mean age of 24.4 years. Table 5.2 shows the mean and standard deviation of the ages of the participants according to groups. More information about the participants is presented in Table 5.3.

Table 5.2: Age

	N	Minimum	Maximum	Mean	Std. Deviation
Group A	66	18	51	24.6	4.6
Group B	61	19	50	24.6	4.7
Group C	73	17	55	24.2	5.4
Group D	79	18	50	24.3	4.6
Total	279	17	55	24.4	4.8

Table 5.3: Occupation

Occupation	Frequency	Percent
Student	168	60.2
Housewife	4	1.4
Employee	67	24.0
Employer	36	12.9
Retired	2	0.7
Unemployed	2	0.7
Total	279	100.0

5.3 Experimental Design

Using a between-subject design, all the participants were randomly assigned to one of the four experimental groups. The experimental design is developed based on three levels of risk manipulation (high-risk, moderate-risk and low risk) and a control group. The experimental manipulations, namely, low-risk, moderate-risk, and high-risk involve three price levels (high price, moderate price and low price), three brand levels (luxury brands, well-known brands and unknown brands), country of origin (Chinese and unknown), and website designs (see Appendix A) as shown in Table 1. All the experimental groups were named by capitals as shown in the table below.

Table 5.4: Experimental design

		Risk Manipulations			Control Group (Group D)
		High Risk (Group A)	Moderate Risk (Group B)	Low Risk (Group C)	
Manipulation Variables	Price	Low Price	Moderate Price	High Price	-
	Brand	Unknown Brands	Well-known Brands	Luxury Brands	-
	Country of Origin	China	-	-	-
	Website Design	A	B	C	-

5.3.1 Website design:

Not the real websites but the images that look like a website that sell women's shoes were created. For each risk manipulation group different website templates were designed. Then, two webpage images which belong to the same website were created. One of the webpage images was designed as the homepage and does not include the images of the shoes. Homepage of the websites include only the brand names, price and other information (see Appendix A for website image designs used in the research). Moreover, for group B and group C the place where the name of website should be, was covered with a coloured stripe. It was stated that "The name of the website is kept anonymous not to influence your assessment" to enhance the reality of the website images.

The pictures of shoes were displayed in the second page of each website (see Appendix A for website image designs used in the research). In all cases the participants received the same set of shoes. So any differences in the final liking score were due to the perceived risk generated by the displayed website designs including the brand, price and country of origin information.

5.3.2 Price:

For high-risk group (group A), prices of the shoes were determined as to make the respondents be suspicious of the quality of the products. For this reason, two price levels were displayed in the website: "Under \$10" and "Over \$10".

On the other hand, the prices for the low-risk group (group C) were determined as covering high price levels and displayed in the website at three price levels: "Under \$500", "Under \$1000", and "\$1000-15000". High prices were used to mitigate the respondents' perceived risk referring products' quality being sold in that website.

The prices for the moderate-risk group (group B) were determined as to be between the groups A and C. Therefore, two price levels were displayed in the website: "\$50-\$100", and "\$100-\$150".

5.3.3 Brand name and country of origin:

For group A, "Aiko Shoes Co., Ltd." brand name with a logo of "China suppliers" was used in the website. The brand name was selected "Aiko Shoes Co., Ltd." because it is not a familiar brand name in the shoes market. Moreover, the logo of

“China suppliers” was displayed to increase the uncertainty about the quality of the products being sold in the website, therefore it was designed to increase the perceived risk.

For group B, “Hotiç”, “Divarese”, “Inci”, “Aldo”, and “Nine West” brands were selected as they are well-known brand names and they are not luxury brands in the shoes market.

For group C, some of the luxury brands and some of the world famous shoe designer names were selected. “Yves Saint Laurent”, “Givenchy”, “Gucci”, “Cacharel”, “Chloé”, “Jimmy Choo”, “Dior”, “Nicholas Kirkwood”, “Alexander Wang” and “Lanvin” were the brand and designer names used in the website design as they are well-known by their exclusive fame.

5.4 Data Collection

An online survey-based procedure was used to collect data. The survey was prepared in two languages: Turkish and English (Appendix B). For each of the survey one web link was obtained. The web links were provided to the participants by e-mail groups and on facebook. An event was created on facebook, stating the need for their help for taking the survey and it was about shoe designs. Nothing else was mentioned in that event. Almost all the participation was from facebook event. Participants also shared their comments on the wall of the event, some of them stating how they fell into the shoes and some of them not like the shoes but the survey design etc. The comments were also controlled during the process to make sure anybody give any clue about what the experiment is about.

In order to eliminate the male respondents from taking the survey, a gender question was asked at the beginning of the survey. If the respondent clicked on the male gender option, the survey ended immediately thanking the respondent for the participation. If the respondent confirms the female gender, then the female respondent was randomly assigned to one of the four groups: group A, B, C, and D.

The respondents in group A, B, and C were shown the home page of the virtual shoe web shop that belong to their group. After examining the website image, they completed the perceived risk measure, as a manipulation check. Perceived risk was operationalized in two dimensions, performance risk and social risk. The first

dimension was measured by rating how confident they are about the overall quality of the shoes being sold under that website (1= not confident at all/ 7= very confident¹), and the latter was measured by rating how certain they are that their friends and their family would also like the shoes being sold under that website (1= not certain at all/ 7= very certain²). For both of the perceived risk measures, seven-point bipolar rating scales were used.

After the manipulation check, participants in group A, B and C were demonstrated the second page of the website which includes the overview of the 20 shoes as they were on sale in the website. On the other hand, participants in the group D were directly shown the overview of the stimuli set on one blank page without any other information, such as brand or price. This was to verify the actual quality of the shoes without any manipulation. Then the overview of the stimuli set was displayed in order to familiarize the participants with the stimulus set.

Next, participants were asked to rate each of the twenty shoes on typicality, novelty and aesthetic preference by using bipolar 9-point rating scales anchored by: poor example/ good example of the category (operationalizing typicality), not original/ original (operationalizing novelty), and ugly/ beautiful (operationalizing aesthetic preference) as in the study of Hekkert et al. (2003).

Just before ratings, participants were informed about how the ratings should be made:

“There would be two opposite adjectives and nine points between them that you can rate on each scale. The closer the point to an adjective means that you feel the picture is closer to that quality. Your ratings should reflect your personal tastes; there are no right or wrong answers.”

However, since the concept of goodness of example is not a commonplace concept, the response criteria were explained in more detail to clarify the concept to the participants as it was in the study of Veryzer and Hutchinson (1998, p. 381). The explanation for goodness-of-example ratings was as follows:

“Your task is to rate these designs in terms of how representative, or typical, the design is of the product category as a whole. For example, some birds, such as robins and sparrows, are very good examples of the category ‘birds’ while other birds, such as penguins and ostriches,

¹ Reverse coded

² Reverse coded

are very poor examples of the category. Your rankings should reflect your personal knowledge of the category; there are no right or wrong answers. Notice also that there is no necessary relationship between this judgment of goodness of example and your personal preferences. For example, your favorite bird may be either a penguin or a robin.”

For better understanding of the typicality rating, the explanations were supported with the mentioned bird photos as in the example. For novelty rating, participants were told, “Your task is to rate these designs in terms of how interesting, new, and different, the design is from other shoes that you've seen before”. Similarly, participants were told “Your task is to rate these designs in terms of how visually attractive you find them to be ” for the aesthetic preference rating.

Finally, demographic information, such as working status and age was obtained about the participants (see Appendix B for whole survey).

6. RESULTS

6.1 Typicality and Novelty Variety Across Shoes

In order to test the hypotheses, twenty high-heel women shoes were selected. The selected shoes should vary according to their typicality and novelty as a prerequisite for the hypotheses testing. Therefore, repeated measure analyses were conducted in order to check whether this condition was satisfied.

6.1.1 Typicality of the shoes

To check if the selected set of shoes were seen as including varying degrees of typicality, a repeated measures one way anova was conducted. Typicality was identified as the variable of the analysis and shoes were identified as the factor of the analysis. Therefore the analysis includes 20 levels, each one of them representing one of the twenty shoes.

Mauchly's test indicates that the assumption of sphericity has been violated for shoes, $\chi^2(189) = 1351.10$, $p < .05$ (see Appendix C). Therefore, degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\epsilon = .507$). The results of the Tests of Within-Subjects Effects show that generally typicality ratings were differed across shoes., $F(9.63, 2677.49) = 71.50$, $p < .001$ (Appendix C). The mean values are included in Table 6.1. The results of pairwise comparisons were given in Appendix C. Pairwise comparisons show the significant typicality differences between shoes.

Also, a graph of mean typicality ratings of shoes from least typical one to most typical one was obtained (Figure 6.1). According to the results, the shoe labeled as "shoe no 8" was seen as the least typical example of the category from the given set of shoes, whereas the shoe labeled as "shoe no 19" was seen as the most typical of the category among the given set of shoes. As can be seen from Table 6.1, the mean typicality ratings varies from 3.40 to 7.10. Still, every shoe had different ratings from

different participants. Therefore, detailed analysis of typicality and novelty ratings of each shoe was given in Appendix D.

Table 6.1: Mean typicality ratings of the shoes according to groups

	All Cases	Group A	Group B	Group C	Group D
Shoe no 1	5.70	6.03	6.07	5.93	4.91
Shoe no 2	5.48	5.61	5.30	5.62	5.41
Shoe no 3	3.54	3.52	3.34	4.08	3.23
Shoe no 4	6.48	6.52	6.48	6.59	6.35
Shoe no 5	5.54	5.71	5.49	5.63	5.37
Shoe no 6	5.78	5.55	5.66	6.21	5.67
Shoe no 7	6.05	5.76	5.77	6.21	6.35
Shoe no 8	3.40	3.74	3.15	3.41	3.29
Shoe no 9	5.71	5.65	5.74	6.25	5.25
Shoe no 10	6.37	6.27	6.33	6.48	6.39
Shoe no 11	6.97	7.20	6.95	6.75	7.01
Shoe no 12	4.59	4.80	4.44	4.56	4.57
Shoe no 13	4.83	4.79	4.85	4.96	4.72
Shoe no 14	4.08	4.30	4.13	4.00	3.92
Shoe no 15	4.08	4.32	3.98	4.18	3.86
Shoe no 16	4.35	4.65	4.28	4.47	4.04
Shoe no 17	4.66	4.95	4.79	4.70	4.28
Shoe no 18	4.29	4.50	4.39	4.18	4.14
Shoe no 19	7.10	7.14	6.93	7.27	7.03
Shoe no 20	4.64	4.74	4.82	4.47	4.57

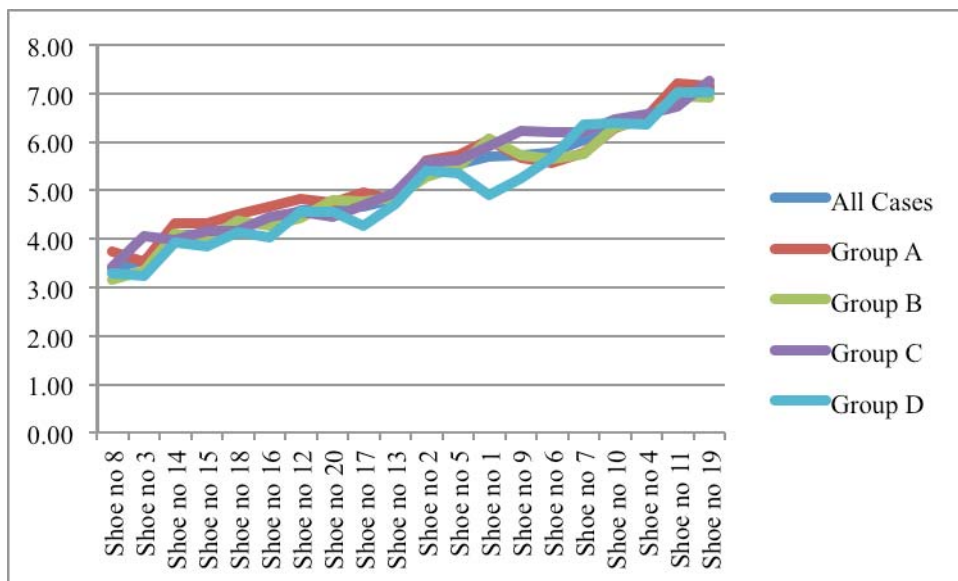


Figure 6.1 : Mean typicality ratings of the shoes according to groups

6.1.2 Novelty of the shoes

To check if the selected set of shoes were seen as including varying degrees of novelty, a repeated measures one way anova was conducted. Novelty was identified as the variable of the analysis and shoes were identified as the factor of the analysis. Therefore the analysis include 20 levels, each one of them representing one of the twenty shoes.

Mauchly's test indicates that the assumption of sphericity has been violated for shoes, $\chi^2(189) = 1676.79$, $p < .05$ (see Appendix C). Therefore, degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\epsilon = .412$). The results of the Tests of Within-Subjects Effects show that generally novelty ratings were differed across shoes., $F(7.84, 2178.25) = 73.10$, $p < .001$ (Appendix C). The mean values are included in Table 6.2. The results of pairwise comparisons were given in Appendix C. This table shows the significant novelty differences between shoes.

Table 6.2: Mean novelty ratings of the shoes according to groups

	All Cases	Group A	Group B	Group C	Group D
Shoe no 1	3.87	3.79	4.16	4.05	3.53
Shoe no 2	5.69	5.47	6.05	5.84	5.47
Shoe no 3	5.37	4.97	5.39	5.82	5.28
Shoe no 4	5.51	5.64	5.48	5.58	5.38
Shoe no 5	3.84	4.00	3.54	4.05	3.72
Shoe no 6	5.05	4.77	4.75	5.55	5.05
Shoe no 7	6.21	5.56	6.34	6.64	6.24
Shoe no 8	6.57	6.24	6.69	6.84	6.51
Shoe no 9	6.25	5.95	6.44	6.64	5.99
Shoe no 10	4.74	4.70	4.51	5.01	4.70
Shoe no 11	4.29	4.47	4.38	4.21	4.16
Shoe no 12	6.57	6.41	6.85	6.51	6.54
Shoe no 13	4.74	4.65	4.66	4.77	4.85
Shoe no 14	7.22	7.14	7.26	7.10	7.35
Shoe no 15	6.84	6.59	6.84	6.77	7.11
Shoe no 16	6.13	6.24	6.33	5.99	6.03
Shoe no 17	3.77	3.86	3.95	3.75	3.56
Shoe no 18	6.82	6.62	7.26	6.62	6.85
Shoe no 19	5.13	5.18	5.02	5.15	5.15
Shoe no 20	3.75	3.89	3.89	3.58	3.67

Also, a graph of mean novelty ratings of shoes from least novel one to most novel one was obtained (Figure 6.2). According to the results, the shoe labeled as “shoe no 20” was seen as the least novel example of the category from the given set of shoes, whereas the shoe labeled as “shoe no 14” was seen as the most novel of the category among the given set of shoes. As can be seen from Table 6.2, the mean novelty ratings varies from 3.75 to 7.22. Still, every shoe had different ratings from different participants. Therefore, detailed analysis of typicality and novelty ratings of each shoe was given in Appendix D.

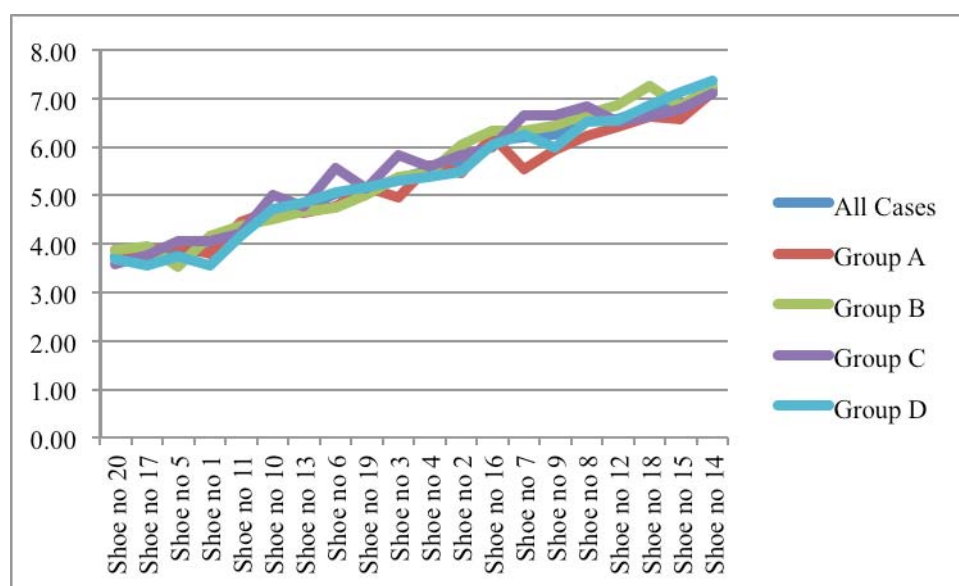


Figure 6.2 : Mean novelty ratings of the shoes according to groups

6.2 Manipulation Tests

Participants were exposed to different website images selling the same set of shoes in order to manipulate the perceived risk of each group. Since control group was not exposed to any manipulations, no data was obtained for perceived risk measure in this group.

To test the manipulations, independent samples t tests were performed between each pair of groups using SPSS 17. Means for each measure according to groups are provided in Table 6.3.

Both the mean value of performance risk and social risk was significantly greater in group A than group B ($p < 0.0001$) and group C ($p < 0.0001$). The output of the independent t tests is provided at the Appendix E. However, there were no significant

differences between the mean values of performance risk and social risk between group B and group C. Therefore, the risk manipulations among the groups were realized as shown in Table 6.4.

Table 6.3: Perceived risk means

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
Performance Risk	Group A	66	6.03	1.11	0.14
	Group B	61	3.07	1.66	0.21
	Group C	73	3.52	1.78	0.21
Social Risk	Group A	66	5.45	1.30	0.16
	Group B	61	2.82	1.52	0.19
	Group C	73	3.30	1.75	0.20

Table 6.4: Risk manipulation

High Performance Risk	Low Performance Risk	
High Social Risk	Low Social Risk	Control Group
Group A	Group B, Group C	Group D

6.3 Hypotheses Testing

To provide tests of the hypotheses, correlations between typicality, novelty and preference ratings were gathered for each group. For each participant, twenty observations, each one of them related to one of the twenty shoes, were gathered. In this manner, for each group N (participant number) * 20 observations were obtained.

6.3.1 Bivariate correlations

As was to be expected, both the typicality and preference ratings, and the novelty and preference ratings showed a significant positive correlation for each of the four groups (see Appendix F for all the outputs of correlation analyses). Therefore, support for Hypothesis 1 was found: Both the typicality and the novelty had a significant positive linear effect on aesthetic preference for product designs.

The Pearson product-moment correlations between typicality and preference were 0.67 for group A, 0.71 for group B, 0.73 for group C, and 0.74 for group D, all p 's < 0.01. Although the correlations between typicality and aesthetic preference were positive and supporting the hypothesis 1, the correlations were stronger in group B,

group C and group D than in group A. Therefore, these findings are insufficient to support Hypothesis 2.

On the other hand, the Pearson product-moment correlations between novelty and preference were 0.26 for group A, 0.29 for group B, 0.32 for group C, and 0.24 for group D, all p 's < 0.01 . These findings provide support for Hypothesis 3, since the correlations between novelty and preference were stronger in group C and group B, than in group A.

Lastly, the typicality and novelty ratings showed a significant positive correlation for each of the groups, the Pearson product-moment correlations were 0.36 for group A, 0.32 for group B, 0.39 for group C, and 0.34 for group D (all p 's < 0.01).

6.3.2 Partial correlations

The bivariate correlation analysis showed a significant positive relationship between typicality and novelty. Therefore, either of these variables may have functioned as a confounding variable with respect to the relation between the other one and aesthetic preference.

In order to avoid this kind of a false relationship, partial correlations were calculated. Either typicality or novelty was determined as the control variable and the correlation between the other one and aesthetic preference was calculated (see Appendix F for all the outputs of correlation analyses). Control variable is not allowed to vary, therefore, whatever relation occurs cannot be due to effects of the control variable (Agresti & Franklin, 2007, p. 470).

In control group, only typicality was in a significant positive relationship with aesthetic preference when controlling for novelty ($r = 0.72$, $p < 0.01$). No significant relationship was found in control group when controlling for typicality ($r = -0.01$, $p > 0.05$). Similarly, in group A, the group in high risk manipulation, preference was only related to typicality positively ($r = 0.63$, $p < 0.01$). The partial correlation between novelty and aesthetic preference was not significant at 0.05 level.

After partialing out their common variance with typicality, the novelty scores showed significant positive relationships with the preference scores in group B and group C (Group B: $r = 0.09$, $p < 0.001$; Group C: $r = 0.05$, $p < 0.05$). Although the correlation was not strong, an association occurred between novelty and aesthetic

preference only in group B and group C, where participants were exposed to a low risk manipulation. This finding also supports Hypothesis 3.

The correlations between typicality scores and aesthetic preference were decreased slightly when controlling for the influence of novelty in group B and group C: 0.68 and 0.70 respectively (all p 's < 0.01). Since the ranking of the correlations between typicality and preference according to groups are $r_A < r_B < r_C < r_D$, still there is not enough evidence to support Hypothesis 2. Table 6.5 summarizes the bivariate and partial correlations between typicality and preference ratings, and novelty and preference ratings.

Table 6.5: Correlations according to groups

	Typicality - Aesthetic Preference		Novelty - Aesthetic Preference	
	Bivariate Correlation	Partial Correlation	Bivariate Correlation	Partial Correlation
Group A	0.67**	0.63**	0.26**	0.03
Group B	0.71**	0.68**	0.29**	0.09**
Group C	0.73**	0.70**	0.32**	0.05*
Group D	0.74**	0.72**	0.24**	-0.01

**Correlations are significant at 0.01 level.

*Correlations are significant at 0.05 level.

7. DISCUSSION

This research contributes to the existing literature in several ways. First of all, the hypotheses were tested using consumer products on the contrary to the use of polygons, musical melodies, or art as it was in the most of the past research on aesthetic preference (Evans & Day, 1971). The women's high heel shoes were chosen to construct the study since they have been attracting the attention of women consumers over decades and making this study more interesting for the participants.

Second, this research contributes by investigating the combined effect of typicality and novelty on the aesthetic preference of product designs. The findings of the bivariate correlation analyses demonstrate that the typicality and novelty are jointly effective in explaining the aesthetic preference of consumer products. However, in the selected product category, typicality is more successful in explaining aesthetic preference than novelty.

The findings of previous research by Hekkert et al. (2003) claims that typicality and novelty were correlated negatively, however, the results of this study shows that the typicality and novelty are positively correlated in the high heel shoe category. Nevertheless, Hekkert et al. (2003) asserts that it is logically possible that an instance of a category will be rated as more novel (or less familiar) than another one without being judged as a less good example of the category in question. Supporting the findings of our study, Hekkert et al. (2003) further explains that typicality and novelty may be positively correlated depending on the objects features being judged. For example, a product can be perceived as novel because of its material but at the same time, it can be perceived as a typical instance of the category because of its overall form. Hence, typicality and novelty are not necessarily act as opposite poles of one and the same continuum.

Even though typicality and novelty are jointly effective in explaining the aesthetic preference of consumer products, when the effect of the other predictor is statistically controlled for, i.e. held constant, typicality is positively and linearly related to aesthetic preference in all groups. However the power of novelty in explaining

aesthetic preference decreases in some groups and disappear in the rest of groups. This finding suggests that typicality is a more rigorous predictor of the aesthetic preference in the selected product category. In addition, novelty explains a significant amount of variance in aesthetic preference, not in all cases but in some cases, when the effect of the other variable held constant.

Third, this research contributes by investigating the influence of perceived risk on the combined effect of typicality and novelty on the aesthetic preference of product designs. The effect of perceived risk on the preference for typicality and novelty was investigated by manipulating the participants' perception of the risk by using different website designs, brands and price ranges. Manipulations were partially successful. Three levels of perceived risk manipulations (low risk, moderate risk, and high risk) were designed, however, the risk perception difference between the high and moderate level was not significant. One explanation for the insignificance of this matter can be the manipulation variables, such as brand names and price ranges. In moderate level the brand names and the price ranges were enough to mitigate the concerns about the performance of the product and how socially it can be perceived significantly.

Under each manipulation and control group, typicality showed a significant positive relationship with aesthetic preference. The correlations among groups differ slightly, but typicality was appreciated most in the control group, where novelty was appreciated the least in bivariate correlation. Partial correlation between novelty and preference was even not significant in that group. This may be due to the lack of information about the brand names/designer names in the control group (Group D). Since the groups A, B, and C had brand names, price ranges and designer names available to confirm the participants doubts, the control group (Group D) may be perceived as the riskiest situation. This lack of quality confirmation (mentioning the brand names would decrease the doubts of the participants since it is fairly difficult to judge consumer product from a picture without the feeling of it) can cause the participants perceive the products differently, mostly risky.

The second hypothesis of this study was investigating the effect of perceived risk on the relationship between typicality and preference. The assumption was that the people would be inclined to choose the typical products when the perceived risk is high. Three groups were generated manipulating the perceived risk of the

participants, however, the typicality preference did not increase with the increased perceived risk. Therefore, there is not enough evidence to support the second hypothesis. On the other hand, the high heel shoe category is generally perceived as a high risk product category and because of this, the correlations between typicality and preference were high in all categories forcing participants choose the safest option possible. This is, however, a supporting evidence for Hypothesis 2.

The third hypothesis of this study was investigating the effect of perceived risk on the relationship between novelty and preference. It was hypothesized that people would appreciate novelty less in riskier situations. The results of the partial correlation analyses provided evidence to support this hypothesis. A weak but a positive and significant relationship was found in group B and group C, where perceived risk was manipulated as low. In groups B, and C people appreciated novelty with regard to the well known brand names/designer names and high prices standing for the quality and the symbolic value of the product. However, in group A, where people were exposed to an unknown brand name with a “made in China” logo and low prices, no meaningful relation was found between novelty and aesthetic preference.

In sum, the results of this study provide evidence for the effects of perceived risk on our aesthetic preference. It seems that the results provide an empirical basis for explaining why people like to perceive things in the world around them the way they do from an evolutionary point of view.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1 Limitations and Future Research

Even though this study managed to reveal the effects of typicality and novelty on aesthetic preference, and the effect of perceived risk on these relationships, there were several limitations to the study. In this section, these limitations will be explained and implications for future research will be suggested.

First of all, only one product category, namely high-heel women shoes was selected to gather data because of time constraints. However, in order to generalize the findings to other consumer products, replicating the results with stimuli from other product categories would be valuable. Another contribution of conducting this research with another product category would be testing the hypotheses between the product categories. As discussed earlier, high-heel women shoe category hold significant performance and social risk. A product category, which is less riskier than high-heel women shoe in social and performance risk dimensions, can be selected to replicate the study. In this manner, the typicality and novelty preferences can be compared among product categories.

Another limitation of the study was the sample of the study. Because of the product category being investigated, only female participants were selected. This is another obstacle to generalize the findings. Gender differences may affect the relationships under investigation.

Finally, personal factors may affect the results. It has been clearly demonstrated that infants and young children prefer exploring and inspecting novel stimuli to familiar ones (e.g. Fantz, 1964; Hunter et al., 1983; Uehara, 2000). Another personal factor that should be considered for future research is consumer self-confidence. Schaninger (1976) showed a negative relationship between self-confidence and the perceived risk.

8.2 Implications

As discussed, findings provide important implications for the theory on consumer psychology and mainly for aesthetic preference of consumer products. Summarizing, the results show that for product designs typicality has a strong linear effect on aesthetic preference. Additionally, novelty can influence aesthetic preference under low risk conditions. In this study, among the extrinsic cues brand name, price, and country of origin were used together in consistence. They were succesful at mitigating performance and social risks of the products being evaluated. This findings provide important implications for practice: novelty is appreciated more when people are less concerned about how the product will perform or look on him/her etc.. In practice, from the point of companies, when they want to introduce new products to the market, they should also invest in their brand values in order to mitigate the perception of risk of their customers.

REFERENCES

- Agarwal, S., and Teas, R.,** 2001: Perceived value: mediating role of perceived risk. *Journal of Marketing Theory and Practice*. Vol. **9**, no. 4, pp. 1-14.
- Agresti, A., and Franklin, C.,** 2007: *Statistics: The Art and Science of Learning from Data*. New Jersey: Pearson Education.
- Alden, D. L., Stayman, D. M., and Hoyer, W. D.,** 1994: *Psychology and Marketing*. Vol. **11**, no. 2, pp. 145-161.
- Aqueveque, C.,** 2006: Extrinsic cues and perceived risk: the influence of consumption situation. *Journal of Consumer Marketing*. Vol. **23**, no. 5, pp. 237-247.
- Baek, T. H., Kim, J., and Yu, J. H.,** 2010: The Differential Roles of Brand Credibility and Brand Prestige in Consumer Brand Choice. *Psychology and Marketing*. Vol. **27**, no. 7, pp. 662-678.
- Barsalou, L. W.,** 1999: Perceptual symbol systems. *Behavioral and Brain Sciences*. Vol. **22**, pp. 577-609.
- Barsalou, L. W., Simmons, W. K., Barbey, A. K., and Wilson, C. D.,** 2003: Grounding conceptual knowledge in modality-specific systems. *TRENDS in Cognitive Science*. Vol. **7**, pp. 84-91.
- Barsalou, L.,** 1985: Ideals, central tendency, and the frequency of instantiation as determinants of graded structure in categories. *Journal of Experimental Psychology: Learning, Memory, and Cognition*. Vol. **11**, pp. 629-654.
- Bauer, R. A.,** 1960. Consumer Behavior as Risk Taking, in *Dynamic Marketing for a Changing World*, p. 389-398, Ed. Hancock, R. S., American Marketing Association, Chicago.
- Bearden, W. O., and Shimp, T. A.,** 1982: The use of extrinsic cues to facilitate product adoption. *Journal of Marketing Research*. Vol. **19**, no. 2, pp. 229-239.
- Belk, R. W.,** 1974: An Exploratory Assessment of Situational Effects in Buyer Behavior. *Journal of Marketing Research*. Vol. **11**, no. 2, pp. 156-163.
- Belk, R. W.,** 1975: Situational Variables and Consumer Behavior. *Journal of Consumer Research*. Vol. **2**, no. 1, pp. 57-167.
- Berkman, H. W., Lindquist, J. D., and Sirgy, J. M.,** 1996: *Consumer Behavior*. Chicago, NTC.
- Berkowitz, M.,** 1987: Product Shape as a Design Innovation Strategy. *Journal Of Product Innovation Management*. Vol. **4**, pp. 274-283.
- Bettman, J. R.,** 1973: Perceived risk and its components: A model and empirical test. *Journal of Marketing Research*. Vol. **10**, no. 2, pp. 184-190.

- Bettman, J. R.**, 1979: An Information Processing Theory of Consumer Choice. Reading. Addison- Wesley, MA.
- Bloch, P. H.**, 1995: Seeking the ideal form: Product design and consumer response. *Journal of Marketing*. Vol. **59**, no. 3, pp. 16-29.
- Bornstein, R. F.**, 1989: Exposure and affect: Overview and meta-analysis of research, 1968-1987. *Psychological Bulletin*. Vol. **106**, pp. 265-289.
- Bowlby, J.**, 1969: Attachment and loss: Attachment. Basic Books, New York.
- Brucks, M., Zeithaml, V. A., and Naylor, G.**, 2000: Price and Brand Name as Indicators of Quality Dimensions for Consumer Durables. *Journal of the Academy of Marketing Science*. Vol. **28**, no. 3, pp. 359-374.
- Chao, P.**, 1989a: Export and Reverse Investment: Strategic Implications for Newly Industrialized Countries. *Journal of International Business Studies*. Spring, pp. 75-91.
- Chao, P.**, 1989b: The Impact of Country Affiliation on the Credibility of Product Attribute Claims. *Journal of Advertising Research*. April/May, pp. 35-41.
- Chaudhuri, A.**, 2000: A macro analysis of the relationship of product involvement and information search: The Role of Risk. *Journal of Marketing*. Vol. **38**, pp. 1-14.
- Coleman, W., Warren, W. E., and Huston, R.**, 1994: Factors influencing the choice of a new dental service. (p. 1.-6. ol. 11 No. 3/4, Ed.) *Health Marketing Quarterly*. Vol. **11**, no. 3/4, pp. 145-160.
- Conchar, M. P., Zinkhan, G. M., Peters, C., and Olavarrieta, S.**, 2004: An integrated framework for the conceptualization of consumers' perceived-risk processing. *Journal of the Academy of Marketing Science*. Vol. **32**, no. 4, pp. 418-436.
- Cordell, V. V.**, 1997: Consumer knowledge measures as predictors in product evaluation. *Psychology and Marketing*. Vol. **14**, no. 3, pp. 241-260.
- Cox, D. E.**, 1967: Risk Taking and Information Handling: An overview, in *Consumer Behavior*, p. 1-22, 604-639, Eds. Cox, E. D., Harvard University Press, Boston.
- Creusen, M. E., and Schoormans, J. P.**, 2005: The Different Roles of Product Appearance in Consumer Choice. *Journal of Product Innovation Management*. Vol. **22**, pp. 63-81.
- Cunningham, S. M.**, 1967: The Major Dimensions of Perceived Risk: *Risk Taking and Information Handling in Consumer Behavior*, p. 82-108, Eds. COX, E.D., Harvard University Press, Boston.
- Damasio, A.**, 1994: Descartes' error: Emotion, reason, and the human brain: G.P. Putnam's Sons, New York.
- Darke, P. R., and Chung, C. M.**, 2005: Effects of pricing and promotion on consumer perceptions: it depends on how you frame it. *Journal of Retailing*. Vol. **81**, pp. 35-47.
- Dewey, J.**, 1934: Art as experience: Berkley Publishing Group, New York.

- Dholakia, U. M.**, 2001: A motivational process model of product involvement and consumer risk perception. *European Journal of Marketing*. Vol. **35**, no. 11/12, pp. 1340-1360.
- Distel, H., Ayabe-Kanamura, S., Martínez-Gómez, M., Schicker, I., Kobayakawa, T. S., and Hudson, R.**, 1999: Perception of Everyday Odors-Correlation between Intensity, Familiarity and Strength of Hedonic Judgement. *Chemical Senses*. Vol. **4**, pp. 191-199.
- Dodds, W. B.**, 1995: How market cues affect product evaluations. *Journal of Marketing: Theory and Practice*. Spring, pp. 50-63.
- Dodds, W. B.**, 2002: The effects of perceived and objective market cues on consumers' product evaluations. *Marketing Bulletin*. Vol. **13**, pp.1-15.
- Dodds, W. B., and Monroe, K. B.**, 1985: The Effect of Brand and Price Information on Subjective Product Evaluations: In *Advances in Consumer Research*, Eds. Hirshman, E., and Holbrook, M., p. 85-90, Association for Consumer Research, Utah.
- Dodds, W. B., Monroe, K. B., and Grewal, D.**, 1991: Effects of Price, Brand, and Store Information on Buyers' Product Evaluations. *Journal of Marketing Research*. Vol. **28**, no. 3, pp. 307-319.
- Dowling, G. R., and Staelin, R.**, 1994: A model of perceived risk and intended risk-handling activity. *Journal of Consumer Research*. Vol. **21**, no. 1, pp. 119-134.
- Evans, D. R., and Day, H. I.**, 1971: The factorial structure of responses to perceptual complexity. *Psychonomic Science*. Vol. **27**, pp. 357-359.
- Fantz, R. L.**, 1964: Visual experience in infants: Decreased attention to familiar patterns relative to novel ones. *Science*. Vol. **146**, pp. 668-670.
- Fiske, S. T., and Taylor, S. E.**, 1984: Social Cognition. Random House, New York.
- Frewer, L. J., Shepherd, R., and Sparks, P.**, 1994: Biotechnology and food production: knowledge and perceived risk. *British Food Journal*. Vol. **96**, no. 9, pp. 26-32.
- Friedman, L.**, 1967: Psychological Pricing in the Food Industry: In *Prices: Issues in Theory, Practice, and Public Policy*, p. 71-83, Eds. Phillips, A., Williamson, O., University of Pennsylvania Press, Philadelphia.
- Gallese, V., and Lakoff, G.**, 2005: The brain's concepts: The role of the sensory motor system in conceptual knowledge. *Cognitive Neuropsychology*. Vol. **22**, pp. 455-479.
- Gardner, D. M.**, 1971: Is There a Generalized Price-Quality Relationship? . *Journal of Marketing Research*. Vol. **8**, pp. 241-243.
- Garvin, D. A.**, 1984, March-April: Product quality: an important strategic weapon. *Business Horizons* , pp. 40-43.
- Garvin, D. A.**, 1987: Competing on the eight dimensions of quality. *Harvard Business Review*. Vol. **65**, pp. 101-109.
- Gaver, W. W., and Mandler, G.**, 1989: Play it again Sam: On liking music. *Cognition and Emotion* , pp. 259-282.

- Gibbs, R.**, 2003: Embodied experience and linguistic meaning. *Brain and Language*. Vol. **84**, pp.1-15.
- Gray, J. A.**, 1987: *The psychology of fear and stress*. New York: Cambridge University Press.
- Grewal, D., Gotlieb, J., and Marmorstein, H.**, 1994: The moderating effects of message framing and source credibility on the price-perceived risk relationship. *Journal of Consumer Research*. Vol. **21**, no. 1, pp. 145-153.
- Han, C. M., and Terpstra, V.**, 1988, Summer: Country-of-Origin Effects for Uni-National and Bi- National Products. *Journal of International Business Studies* , pp. 235-255.
- Hekkert, P.**, 2006: Design aesthetics: principles of pleasure in design. *Psychology Science*. Vol. **48**, no. 2, pp. 157-172.
- Hekkert, P., and Leder, H.**, 2008: Product aesthetics: In *Product experience*, p. 125-142, Eds. Schifferstein, H. N. J., Hekkert, P., Elsevier Science Publishers, Amsterdam.
- Hekkert, P., and van Wieringen, P. C.**, 1990: Complexity and prototypicality as determinants of the appraisal of Cubist paintings. *British Journal of Psychology* , . Vol. **81**, pp. 483-495.
- Hekkert, P., Snelders, D., and van Wieringen, P. C.**, 2003: ‘Most advanced, yet acceptable’: Typicality and novelty as joint predictors of aesthetic preference in industrial design. *British Journal of Psychology*. Vol. **94** , pp. 111-124.
- Ho, S. S., and Victor, T. F.**, 1994: Customers’ risk perceptions of electronic payment systems. *International Journal of Bank Marketing*. Vol. **12**, no. 8, pp. 26-38.
- Holbrook, M. B.**, 1980: Some preliminary Notes on Research in Consumer Esthetics: In *Advances in Consumer Research*, p. 104-108, Eds. Olson, J. C., Association for Consumer Research, Ann Harbor.
- Holbrook, M. B.**, 1984: Situation-specific Ideal Points and Usage of Multiple Dissimilar Brands. In *Research in Marketing*, p. 93-131, Eds. Sheth, J. N., JAI Press, CT.
- Holbrook, M. B., and Anand, P.**, 1992: The effects of situation, sequence, and features on perceptual and affective responses to product designs: The case of aesthetic consumption. *Empirical Studies of the Arts*. Vol. **10**, no. 1, pp. 19-31.
- Holbrook, M. B., and Zirlin, R. B.**, 1985: Artistic creation, artworks, and aesthetic appreciation. *Advances in Non-Profit Marketing*. Vol. **23**, pp. 1-54.
- Hunter, M. A., Ames, E. W., and Koopman, R.**, 1983: Effects of stimulus complexity and familiarization time on infant preferences for novel and familiar stimuli. *Developmental Psychology*. Vol. **19**, pp. 338-352.

- Jacoby, J., and Kaplan, L. B.,** 1972: The Components of Perceived Risk: In *Advances in Consumer Research*, p. 382-393, Eds. Venkatesan, M., Association for Consumer Research, Chicago.
- Jacoby, J., Szybillo, G. J., and Busato-Schach, J.,** 1977: Information Acquisition Behavior in Brand Choice Situations. *Journal of Consumer Research*. Vol. 3, pp. 209-215.
- Jasper, C. R., and Ouellette, S. J.,** 1994: Consumers' perception of risk and the purchase of apparel from catalogs. *Journal of Direct Marketing*. Vol. 8, no. 2, pp. 23-36.
- Johnson, M.,** 2007: The meaning of the body: Aesthetics of human understanding. The University of Chicago Press, Chicago.
- Kanazawa, S.,** 2004: General intelligence as a domain-specific adaption. *Psychological Review*. Vol. 23, pp. 512-523.
- Knight, F.,** 1921: Risk, Uncertainty and Profit, Harper and Row, New York.
- Lai, A. W.,** 1991: Consumption situation and product knowledge in the adoption of a new product. *European Journal of Marketing*. Vol. 25, no. 10, pp. 55-67.
- Lee, M., and Lou, Y.-C.,** 1996: Consumer reliance on intrinsic and extrinsic cues in product evaluations: A conjoint approach. *Journal of Applied Business Research*. Vol. 12, no. 1, pp. 21-28.
- Lichtenstein, D. R., and Burton, S.,** 1989: The Relationship Between Perceived and Objective Price-Quality. *Journal of Marketing Research*. Vol. 26, pp. 429-443.
- Loken, B., and Ward, J.,** 1990: Alternative approaches to understanding the determinants of typicality. *Journal of Consumer Research*. Vol. 17, pp. 111-126.
- Martindale, C.,** 1990: The clockwork muse: The predictability of artistic change. Basic Books, New York.
- Martindale, C., and Moore, K.,** 1988: Priming, prototypicality, and preference. *Journal of Experimental Psychology: Human Perception and Performance*. Vol. 14, pp. 661-670.
- Meyers-Levy, J., and Tybout, A. M.,** 1989: Schema Congruity as a Basis for Product Evaluation. *Journal of Consumer Research*. Vol. 16, no. 1, pp. 39-54.
- Mieres, C. G., Martín, A. M., and Gutiérrez, J. A.,** 2006: Antecedents of the difference in perceived risk between store brands and national brands. *European Journal of Marketing*. Vol. 40, no. 1/2, pp. 61-82.
- Miller, K. E., and Ginter, J. L.,** 1979: An Investigation of Situational Variation in Brand Choice Behavior and Attitude. *Journal of Marketing Research*. Vol. 16, pp. 111-123.
- Mitchell, V.-W.,** 1999: Consumer perceived risk: conceptualisations and models. *European Journal of Marketing*. Vol. 33, no. 1/2, pp. 163-195.

- Monroe, K. B., and Krishnan, R.,** 1985: The Effect of Price on Subjective Product Evaluations. In *Perceived Quality*, p. 209-232, Eds. Jacoby, J., Olson, J., Lexington Books, Lexington, MA.
- Nisbett, R. E., and Ross, L.,** 1980: Human Inference: Strategies and Shortcomings of Social Judgment. Prentice-Hall, Englewood Cliffs, NJ.
- Nussbaum, B.,** 1993: Hot products. *Business Week*, June 7, pp. 104-108.
- Olson, J. C. and Jacoby, J.,** 1972: Cue Utilization in the Quality Perception Process. In *Advances in Consumer Research*, p. 167-179, Ed. Venkatesan, M., Association for Consumer Research, Iowa City, Iowa.
- Olson, J. C.,** 1977: Price as an Informational Cue: Effects in Product Evaluation. In *Consumer and Industrial Buying Behavior*, p. 267-286, Eds. Woodside, A. G., Sheth, J. N., and P. D. Bennet, North Holland, New York.
- Pedersen, D. M.,** 1986: Perception of interior designs. *Perceptual and Motor Skills*. Vol. **63**, pp. 671-677.
- Peter, J. P., and Olson, J. C.,** 1987: Consumer Behavior: Marketing Strategy Perspective. Irwin, Illinois.
- Peterson, R. A., and Jolibert, A.,** 1976: A Cross-National Investigation of Price Brand Determinants of Perceived Product Quality. *Journal of Applied Psychology*. Vol. **61**, pp. 533-536.
- Purcell, A. T.,** 1984: The aesthetic experience and mundane reality. In *Cognitive processes in the perception of art*, p. 189-210, Eds. Crozier, W. R., Chapman, A. J., North-Holland, Amsterdam.
- Quester, P. G., and Smart, J.,** 1998: The influence of consumption situation and product involvement over consumers' use of product attribute. *Journal of Consumer Marketing*. Vol. **15**, no. 3, pp. 220-238.
- Rao, A. R., and Monroe, K. B.,** 1989: The Effect of Price, Brand Name, and Store Name on Buyers' Perceptions of Product Quality: An Integrative Review. *Journal of Marketing Research*. Vol. **26**, no. 3, pp. 351-357.
- Reber, R., Schwarz, N., and Winkielman, P.,** 2004: Processing fluency and aesthetic pleasure: Is beauty in the perceiver's processing experience? *Personality and Social Psychology Review*. Vol. **8**, pp. 364-382.
- Repp, B. H.,** 1997: The aesthetic quality of a quantitatively average music performance: Two preliminary experiments. *Music Perception*. Vol. **14**, pp. 419-444.
- Richardson, P. S., Dick, A. S., and Jain, A. K.,** 1994: Extrinsic and Intrinsic Cue Effects on Perceptions of Store Brand Quality. *The Journal of Marketing*. Vol. **58**, no. 4, pp. 28-36.
- Sääksjärvi, M., and Lampinen, M.,** 2005: Consumer perceived risk in successive product generations. *European Journal of Innovation Management*. Vol. **8**, no. 2, pp. 145-156.
- Schaninger, C. M.,** 1976: Perceived risk and personality. *Journal of Consumer Research*. Vol. **3**, pp. 95-100.

- Schellinck, D. A.**, 1983: Cue choice as a function of time pressure and perceived risk . In *Advances in Consumer Research*, p. 470-475, Eds. Tybout R. P., Association for Consumer Research, Ann Arbor, Michigan.
- Schoormans, J. P., and Robben, H. S.**, 1997: The effect of new package design on product attention, categorization and evaluation. *Journal of Economic Psycholog.* Vol. **18**, pp. 271-287.
- Scitovsky, T.**, 1945: Some Consequences of the Habit of Judging Quality by Price. *Review of Economic Studies.* Vol. **12**, no. 32, pp. 100-105.
- Sethuraman, R., and Cole, C.**, 1999: Factors influencing the price premiums that consumers pay for national brands over store brands. *Journal of Product and Brand Management.* Vol. **23**, no. 5, pp. 237-247. , 8 (4), 340-351.
- Shah, J., Higgins, E. T., and Friedman, R. S.**, 1998: Performance Incentives and Means: How Regulatory Focus Influences Goal Attainment. *Journal of Personality and Social Psychology.* Vol. **74**, no. 2, pp. 285-293.
- Shapiro, B. P.**, 1973: Price Reliance: Existence and Sources. *Journal of Marketing Research.* Vol. **10**, pp. 286-294.
- Shimp, T. A., and Bearden, W. O.**, 1982: Warranty and Other Extrinsic Cue Effects on Consumers' Risk Perceptions. *The Journal of Consumer Research.* Vol. **9**, no. 1, pp. 38-46.
- Steenkamp, J.-B. E.**, 1990: Conceptual Model of the Quality Perception Process. *Journal of Business Research.* Vol. **21**, pp. 309-333.
- Stone, R. N., and Grønhaug, K.**, 1993: Perceived Risk: Further Considerations for the Marketing Discipline. *European Journal of Marketing.* Vol. **27**, no. 3, pp. 39-50.
- Swan, J.**, 1974: Price-Product Performance Competition Between Retailer and Manufacturer Brands . *Journal of Marketing.* Vol. **38**, pp. 52-59.
- Szybillo, G. J., and Jacoby, J.**, 1974: Intrinsic versus extrinsic cues as determinants of perceived product quality. *Journal of Applied Psychology.* Vol. **59**, no. 1, pp. 74-78.
- Teas, R. K., and Agarwal, S.**, 2000: The Effects of Extrinsic Product Cues on Consumers' Perceptions of Quality, Sacrifice, and Value. *Journal of the Academy of Marketing Science.* Vol. **28**, no. 2, pp. 278-290.
- Thornhill, R.**, 2003: Darwinian aesthetics informs traditional aesthetics. Springer, Berlin.
- Tooby, J., and Cosmides, L.**, 2005: Conceptual foundations of evolutionary psychology: In *The handbook of evolutionary psychology*, p. 5-67, Eds. Buss, D. M., Wiley, Hoboken, NJ.
- Uehara, I.**, 2000: Transition from novelty to familiarity preference depending on recognition performance by 4-yr.-olds. *Psychological Reports.* Vol. **87**, pp. 837-848.
- Veryzer, R. W., and Hutchinson, J. J.**, 1998: The Influence of Unity and Prototypicality on Aesthetic Responses to New Product Designs. *Journal Of Consumer Research.* Vol. **24**, pp. 374-394.

- Wheatley, J. J., Chiu, J. S., and Goldman, A.,** 1981: Physical Quality, Price and Perceptions of Product Quality: Implications for Retailers. *Journal of Retailing*. Vol. **57**, pp. 100-116.
- Whitfield, T. W.,** 2005: Aesthetics as pre-linguistic knowledge. *Design Issues*. Vol. **21**, pp. 3-17.
- Whitfield, T. W., and Slatter, P. E.,** 1979: The effects of categorization and prototypicality on aesthetic choice in a furniture selection task. *British Journal of Psychology*. Vol. **70**, pp. 65-75.
- Woodside, A. G.,** 1974: Relation of Price to Perception of Quality of New Products. *Journal of Applied Psychology*. Vol. **59**, pp. 116-118.
- Zajonc, R. B.,** 1968: Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology Monograph Supplement*. Vol. **9**, pp. 1-27.
- Zielke, S., and Dobbelsstein, T.,** 2007: Customers' willingness to purchase new store brands. *Journal of Product and Brand Management*. Vol. **6**, no. 2, pp. 112-121.

APPENDICES

APPENDIX A: Website Images for Group A, Group B and Group C

APPENDIX B: Survey

APPENDIX C: Repeated Measures Anova Analyses

APPENDIX D: Shoe by Shoe Typicality and Novelty Ratings

APPENDIX E: Independent Samples T Tests

APPENDIX F: Correlation Analyses

APPENDIX A

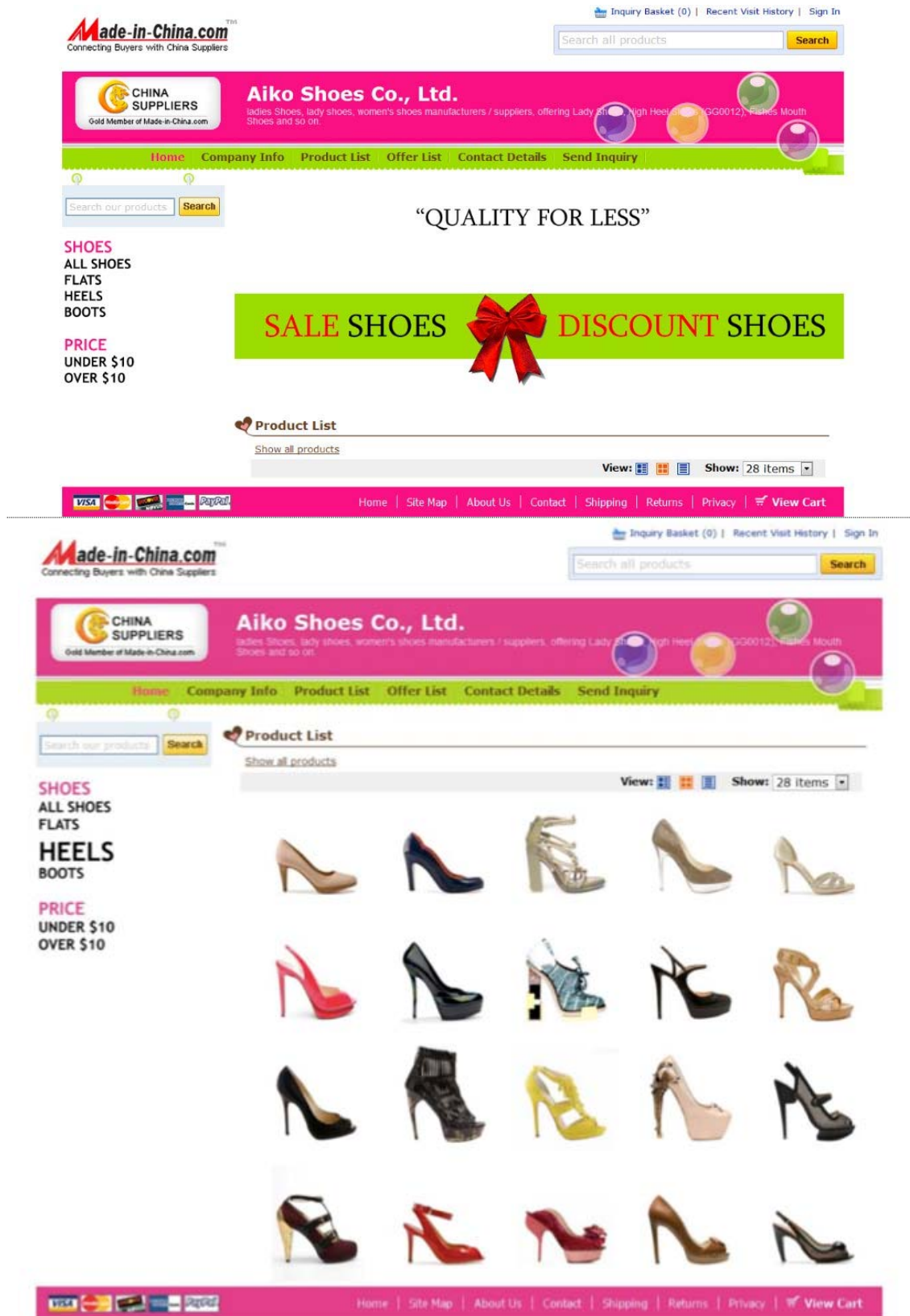


Figure A.1 : Website images for group A

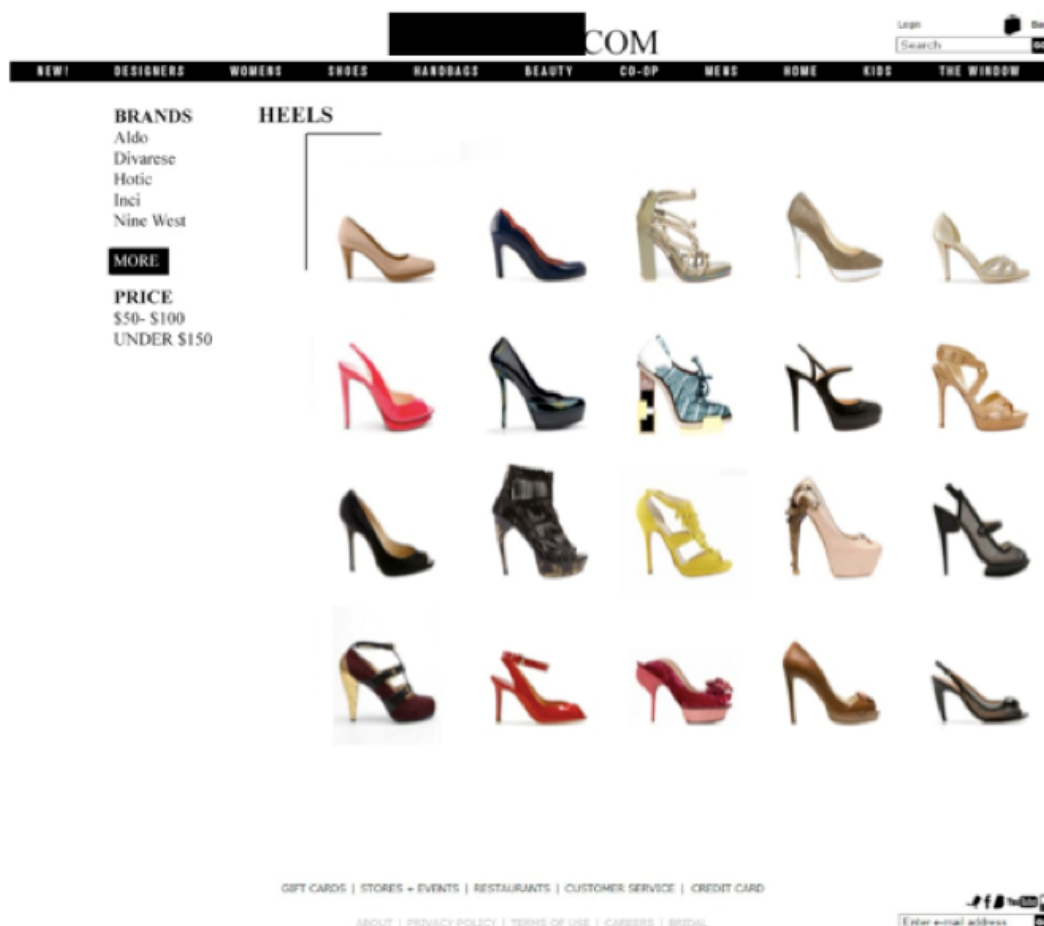
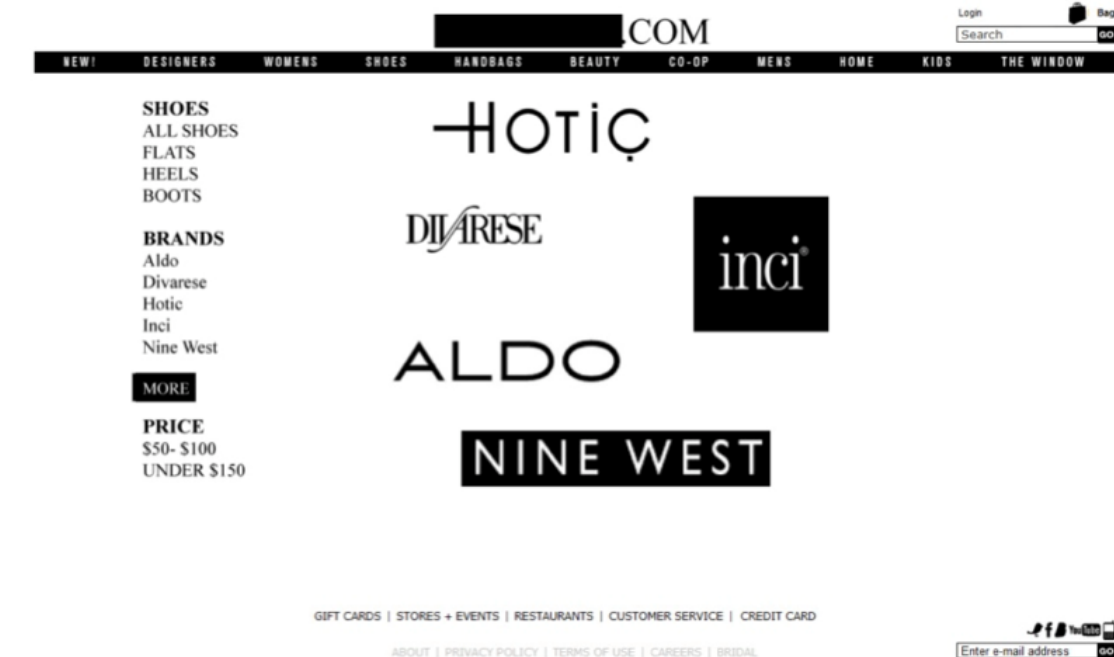


Figure A.2 : Website images for group B

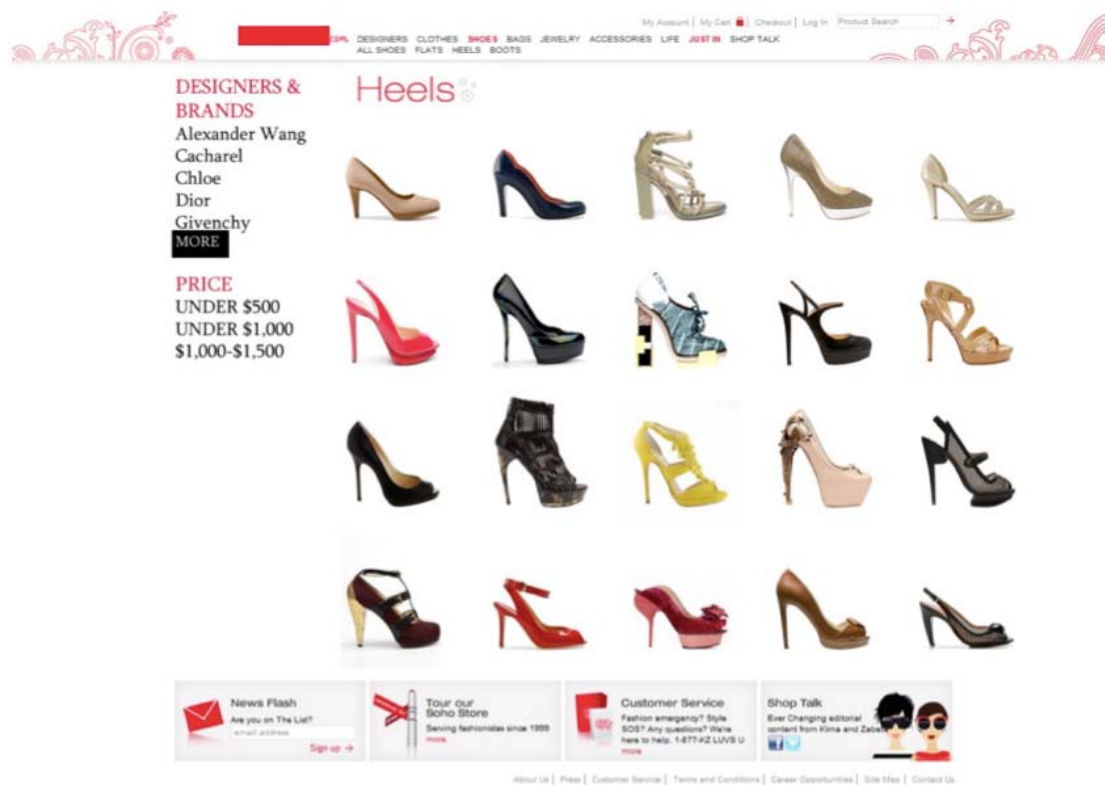


Figure A.3 : Website images for group C

APPENDIX B

Bu anket İTÜ Endüstri Ürünleri Tasarımı yüksek lisans öğrencilerinin tezi için uygulanmaktadır. Anket uygulamasının sonuçları sadece akademik amaçlı kullanılacaktır. Bayan ayakkabıları hakkındaki anketimize zaman ayırdığınız için teşekkür ederiz.

Başlamadan önce birkaç nokta ...

1. Soruların bir doğru cevabı yoktur. Ancak cevaplarınızın dürüst ve özenli olması çok önemli.
2. Katılımınız tamamen isteğe bağlıdır.
3. Cevaplarınız kesinlikle gizli kalacaktır.

Bu anketi tamamlamak için gerekli toplam süre yaklaşık olarak 5 dakikadır.

Bu çalışmayla ilgili herhangi bir sorunuz olduğunda Yüksek Lisans öğrencisi Reyhan Öztürk ile irtibata geçebilirsiniz. e-mail reyozturk@yahoo.com

Cinsiyetiniz

- ☐ Kadın
☐ Erkek

Aşağıda ait olduğunuz grup yer almaktadır. Ankete geçmek için lütfen onaylayınız.

☐ Grup D

Lütfen aşağıdaki websitesini dikkatle inceleyiniz ve soruları cevaplayınız.



Lütfen bu websitesinde satılan ayakkabıların kalitesinden ne kadar emin olduğunuzu aşağıdaki ölçeği kullanarak belirtiniz.

Hiç emin değilim



Kesinlikle eminim

Lütfen bu websitesinde satılan ayakkabıların çevrenizdekiler tarafından beğenileceğinden ne kadar emin olduğunuzu aşağıdaki ölçeği kullanarak belirtiniz.

Hiç emin değilim



Kesinlikle eminim

Aşağıda websitesinde satılan yüksek topuklu ayakkabılara ait sayfa yer almaktadır. Ayakkabılara göz attıktan sonra lütfen diğer sayfaya geçiniz.

Figure B.1 : Turkish version of the survey



Aiko Shoes Co., Ltd.

Ladies Shoes, lady shoes, women's shoes manufacturers / suppliers, offering Lady Shoes, High Heels, GG0012, Ladies Mouth Shoes and so on.

[Home](#) | [Company Info](#) | [Product List](#) | [Offer List](#) | [Contact Details](#) | [Send Inquiry](#)

Search our products

Search

Product List

[Show all products](#)

View: [List](#) | [Grid](#) | [Image](#) | Show: 28 items

SHOES
ALL SHOES
FLATS
HEELS
BOOTS

PRICE
UNDER \$10
OVER \$10



[Home](#) | [Site Map](#) | [About Us](#) | [Contact](#) | [Shipping](#) | [Returns](#) | [Privacy](#) | [View Cart](#)

Lütfen aşağıdaki websitesini dikkatle inceleyiniz ve soruları cevaplayınız.

(Değerlendirmelerinizin etkilenmemesi amacıyla websitesinin ismi gizli tutulmuştur.)

NEW!

DESIGNERS

WOMENS

SHOES

HANDBAGS

BEAUTY

CO-OP

MENS

HOME

KIDS

THE WINDOW

SHOES

ALL SHOES

FLATS

HEELS

BOOTS

BRANDS

Aldo

Divarese

Hotic

Inci

Nine West

MORE

PRICE

\$50- \$100

UNDER \$150

COM

Hotic

DIVARESE

ALDO

inci

NINE WEST

Login

Search

Bag

GO

[GIFT CARDS](#) | [STORES + EVENTS](#) | [RESTAURANTS](#) | [CUSTOMER SERVICE](#) | [CREDIT CARD](#)

[ABOUT](#) | [PRIVACY POLICY](#) | [TERMS OF USE](#) | [CAREERS](#) | [BRIDAL](#)



Enter e-mail address



Figure B.1 : (Continued) Turkish version of the survey

Lütfen bu websitesinde satılan ayakkabıların kalitesinden ne kadar emin olduğunuzu aşağıdaki ölçeği kullanarak belirtiniz.

Hiç emin değilim



Kesinlikle eminim

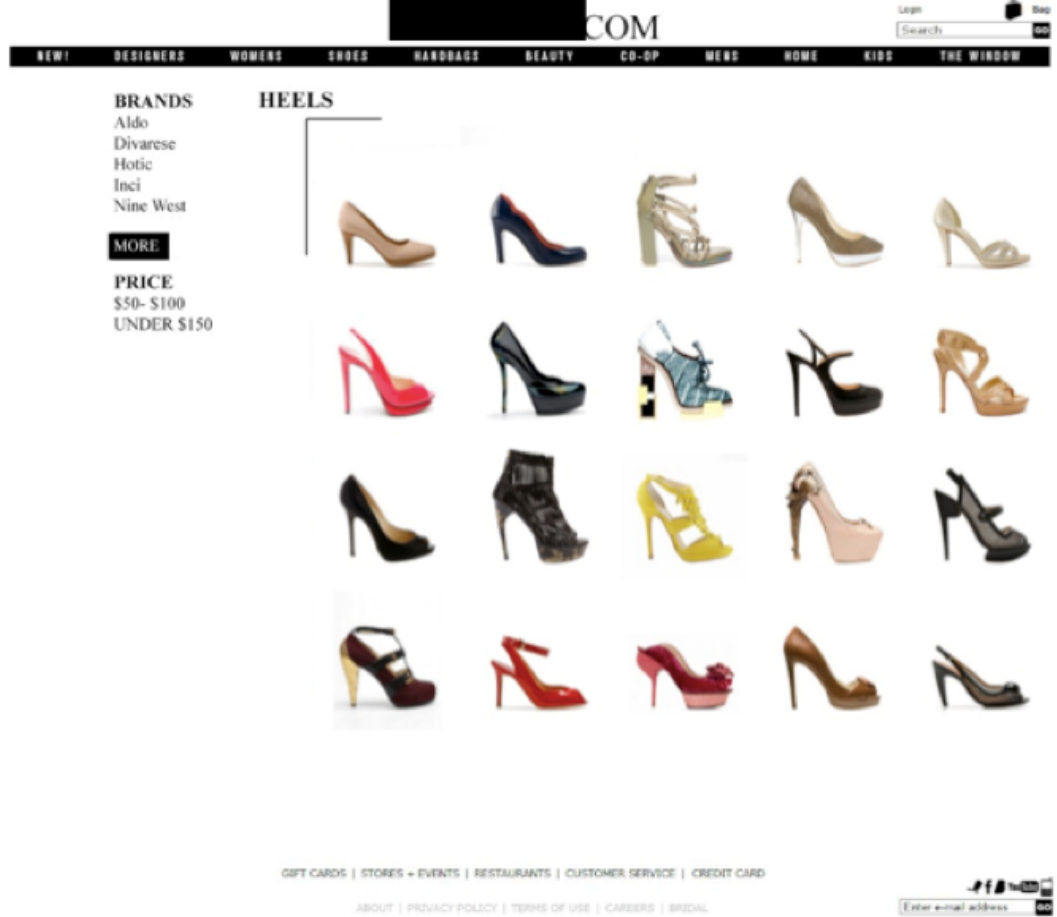
Lütfen bu websitesinde satılan ayakkabıların çevrenizdekiler tarafından beğenileceğinden ne kadar emin olduğunuzu aşağıdaki ölçeği kullanarak belirtiniz.

Hiç emin değilim



Kesinlikle eminim

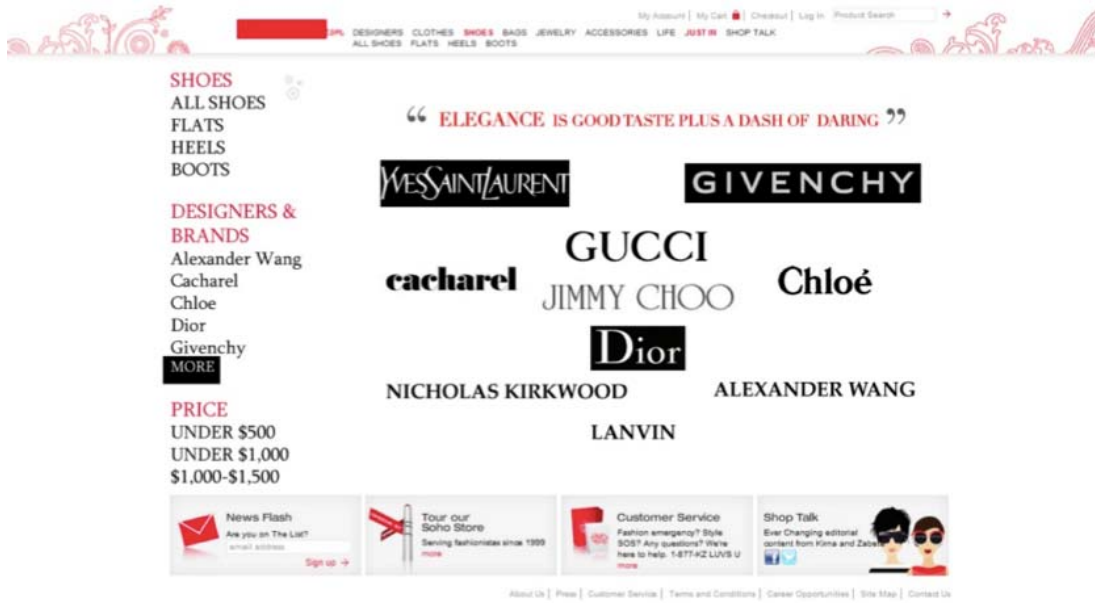
Aşağıda websitesinde satılan yüksek topuklu ayakkabılara ait sayfa yer almaktadır. Ayakkabılara göz attıktan sonra lütfen diğer sayfaya geçiniz.



Lütfen aşağıdaki websitesini dikkatle inceleyiniz ve soruları cevaplayınız.

(Değerlendirmelerinizin etkilenmemesi amacıyla websitesinin ismi gizli tutulmuştur.)

Figure B.1 : (Continued) Turkish version of the survey



Lütfen bu websitesinde satılan ayakkabıların kalitesinden ne kadar emin olduğunuzu aşağıdaki ölçeği kullanarak belirtiniz.

Hiç emin değilim

Kesinlikle eminim



Lütfen bu websitesinde satılan ayakkabıların çevrenizdekiler tarafından beğenileceğinden ne kadar emin olduğunuzu aşağıdaki ölçeği kullanarak belirtiniz.

Hiç emin değilim

Kesinlikle eminim



Aşağıda websitesinde satılan yüksek topuklu ayakkabalara ait sayfa yer almaktadır. Ayakkabalara göz attıktan sonra lütfen diğer sayfaya geçiniz.

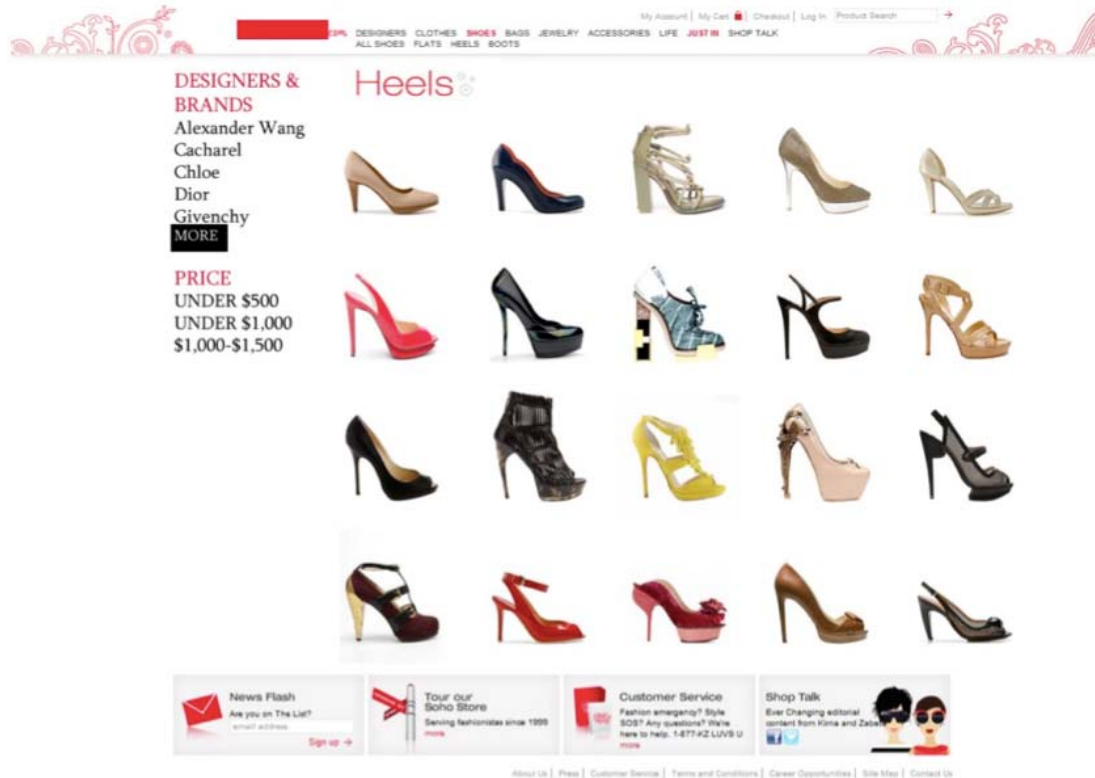


Figure B.1 : (Continued) Turkish version of the survey

A 4x5 grid of 20 different high-heeled shoes. The shoes vary in style, including pumps, sandals, and platform shoes, and come in a wide range of colors such as black, red, gold, silver, and various shades of brown and pink. Some shoes have unique features like bows, buckles, or multiple straps. The heels also vary in height and style, from stiletto to platform.

Yapmanız gereken, her bir ayakkabı tasarımını görsel olarak ne kadar çekici bulduğunuza göre değerlendirmektir.



□



Kategorinin zayıf bir örneği		Kategorinin iyi bir örneği
Orjinal değil		Orjinal
Çirkin		Güzel

55



Lütfen yukarıdaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Figure B.1 : (Continued) Turkish version of the survey



Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Kategorinin zayıf bir örneği	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Kategorinin iyi bir örneği
Orjinal değil	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Orjinal
Çirkin	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Güzel



Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

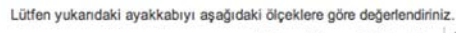
Kategorinin zayıf bir örneği	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Kategorinin iyi bir örneği
Orjinal değil	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Orjinal
Çirkin	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Güzel



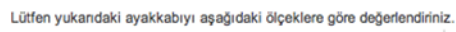
Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Kategorinin zayıf bir örneği	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Kategorinin iyi bir örneği
Orjinal değil	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Orjinal
Çirkin	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Güzel

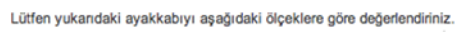
Figure B.1 : (Continued) Turkish version of the survey



Çirkin

Güzel

Çirkin

Güzel

Çirkin

Güzel

58



Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Kategorinin zayıf bir örneği	☐	☐	☐	☐	☐	☐	☐	☐	☐	Kategorinin iyi bir örneği
Orjinal değil	☐	☐	☐	☐	☐	☐	☐	☐	☐	Orjinal
Çirkin	☐	☐	☐	☐	☐	☐	☐	☐	☐	Güzel



Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Kategorinin zayıf bir örneği	☐	☐	☐	☐	☐	☐	☐	☐	☐	Kategorinin iyi bir örneği
Orjinal değil	☐	☐	☐	☐	☐	☐	☐	☐	☐	Orjinal
Çirkin	☐	☐	☐	☐	☐	☐	☐	☐	☐	Güzel



Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Kategorinin zayıf bir örneği	☐	☐	☐	☐	☐	☐	☐	☐	☐	Kategorinin iyi bir örneği
Orjinal değil	☐	☐	☐	☐	☐	☐	☐	☐	☐	Orjinal
Çirkin	☐	☐	☐	☐	☐	☐	☐	☐	☐	Güzel

Figure B.1 : (Continued) Turkish version of the survey



Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Kategorinin zayıf bir örneği	☐	☐	☐	☐	☐	☐	☐	☐	☐	Kategorinin iyi bir örneği
Orjinal değil	☐	☐	☐	☐	☐	☐	☐	☐	☐	Orjinal
Çirkin	☐	☐	☐	☐	☐	☐	☐	☐	☐	Güzel



Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Kategorinin zayıf bir örneği	☐	☐	☐	☐	☐	☐	☐	☐	☐	Kategorinin iyi bir örneği
Orjinal değil	☐	☐	☐	☐	☐	☐	☐	☐	☐	Orjinal
Çirkin	☐	☐	☐	☐	☐	☐	☐	☐	☐	Güzel



Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Kategorinin zayıf bir örneği	☐	☐	☐	☐	☐	☐	☐	☐	☐	Kategorinin iyi bir örneği
Orjinal değil	☐	☐	☐	☐	☐	☐	☐	☐	☐	Orjinal
Çirkin	☐	☐	☐	☐	☐	☐	☐	☐	☐	Güzel



Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Kategorinin zayıf bir örneği	☐	☐	☐	☐	☐	☐	☐	☐	☐	Kategorinin iyi bir örneği
Orjinal değil	☐	☐	☐	☐	☐	☐	☐	☐	☐	Orjinal
Çirkin	☐	☐	☐	☐	☐	☐	☐	☐	☐	Güzel

Figure B.1 : (Continued) Turkish version of the survey



Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Kategorinin zayıf bir örneği	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Kategorinin iyi bir örneği
Orjinal değil	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Orjinal
Çirkin	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Güzel



Lütfen yukandaki ayakkabıyı aşağıdaki ölçeklere göre değerlendiriniz.

Kategorinin zayıf bir örneği	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Kategorinin iyi bir örneği
Orjinal değil	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Orjinal
Çirkin	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Güzel

Yaşınız

Mesleğiniz

Öğrenci

Üst veya orta düzey yönetici

Büyük veya orta ölçekli işletme sahibi

Serbest meslek sahibi (avukat, dişi, mimar vb.)

İşçi

Memur

Esnaf veya zanaatkar

Ev hanımı

Emekli

İşsiz

Uyruğunuz/ What is your nationality?

Türk / Turkish

American

Dutch

Australian

Austrian

Belgium

Brazilian

British

Canadian

Chinese

Figure B.1 : (Continued) Turkish version of the survey

A few points before you start ...

1. We will be asking you a number of questions about several websites selling lady shoes.
2. There are no right or wrong answers. We ask that you respond in an honest and conscientious way.
3. Your responses are absolutely confidential.

The total time to complete this questionnaire is approximately 5 minutes.

If you have any questions about this study, contact the master student Reyhan Ozturk in the Industrial Design Department of Istanbul Technical University by e-mail: reyozturk@yahoo.com

PLEASE READ QUESTIONS CAREFULLY AND COMPLETELY before you answer them.

Gender

- ☐ Male
- ☐ Female

Your survey group is stated below. Please click to start.

- ☐ Group D

Please examine the website given below carefully and then answer the questions.



How confident are you about the overall quality of the shoes being sold in this website?

- Not confident at all
- ☐ ☐ ☐ ☐ ☐ ☐ ☐
- Very confident

How certain are you that your friends and your family would also like the shoes being sold in this website?

- Not certain at all
- ☐ ☐ ☐ ☐ ☐ ☐ ☐
- Very certain

The web page below demonstrates some of the high heel shoes available. Please go through the shoes and move to the next page.

Figure B.2 : English version of the survey



How confident are you about the overall quality of the shoes being sold in this website?

Not confident at all



Very confident

How certain are you that your friends and your family would also like the shoes being sold in this website?

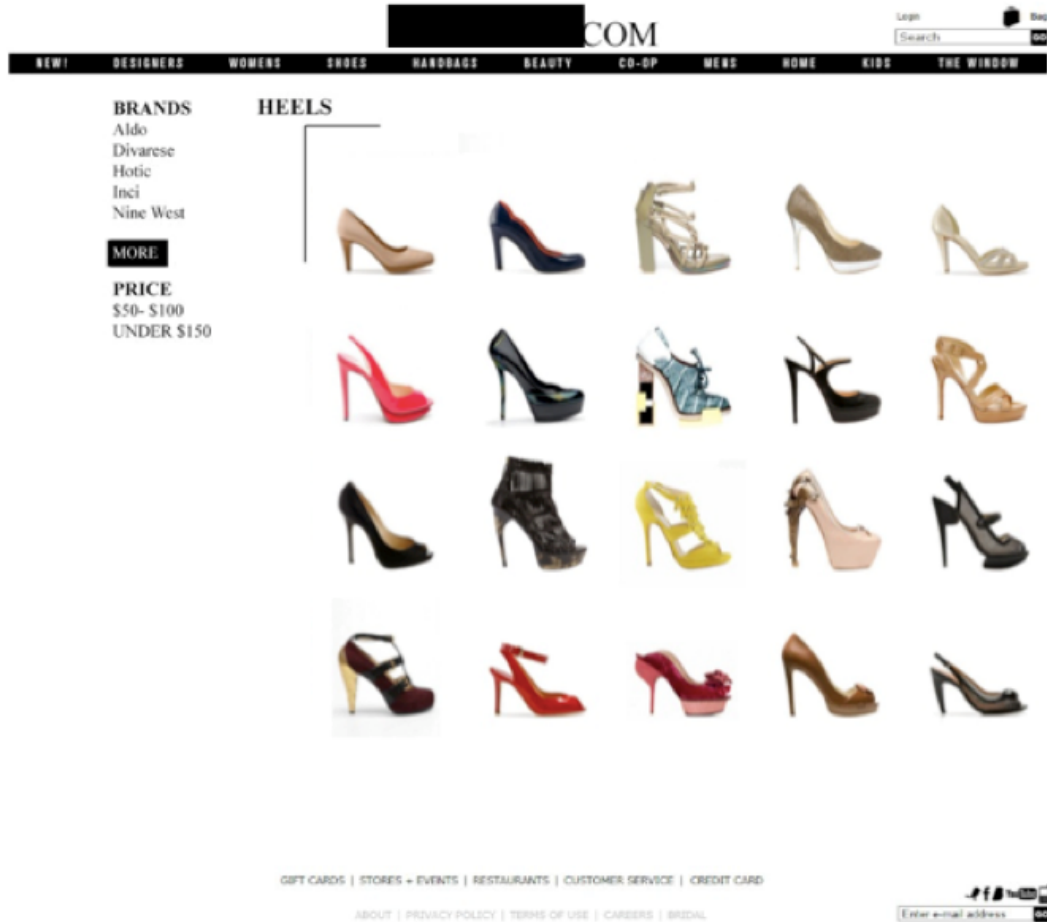
Not certain at all



Very certain

The web page below demonstrates some of the high heel shoes available. Please go through the shoes and move to the next page.

(The name of the website is kept anonymous not to influence your assessment)



Please examine the website given below carefully and then answer the questions.

(The name of the website is kept anonymous not to influence your assessment)

Figure B.2 : (Continued) English version of the survey



How confident are you about the overall quality of the shoes being sold in this website?

Not confident at all

Very confident

How certain are you that your friends and your family would also like the shoes being sold in this website?

Not certain at all

Very certain

The web page below demonstrates some of the high heel shoes available. Please go through the shoes and move to the next page.

(The name of the website is kept anonymous not to influence your assessment)

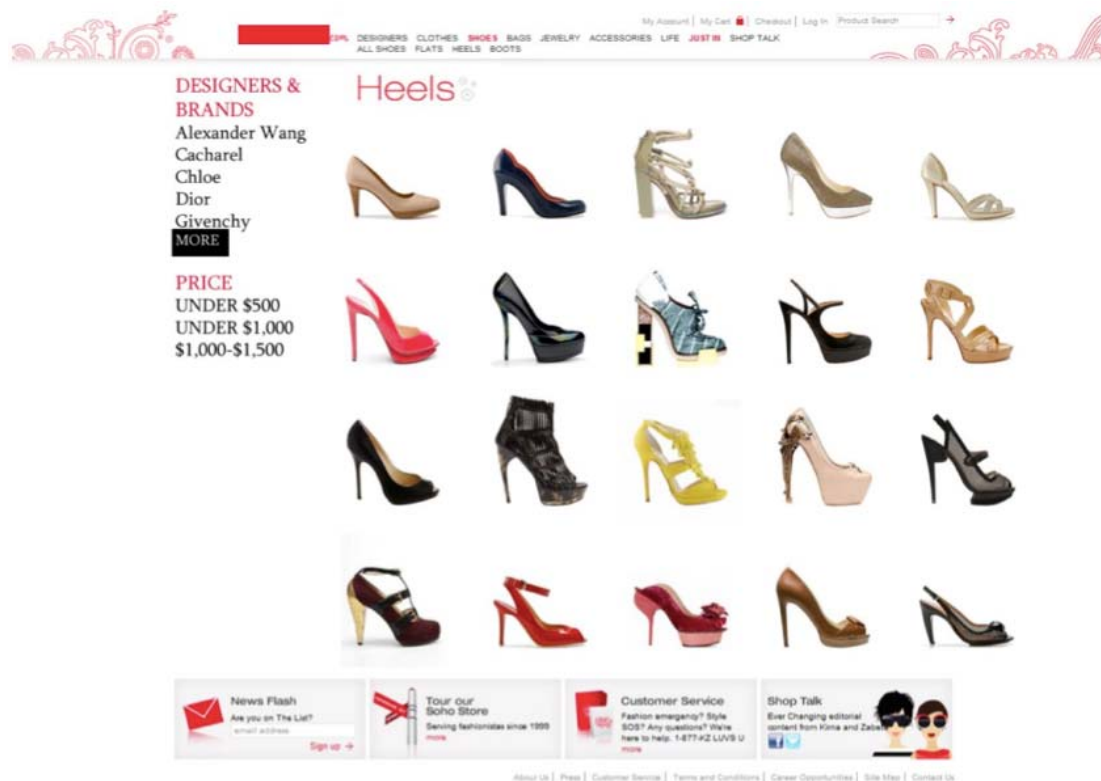


Figure B.2 : (Continued) English version of the survey

Please examine the shoes given below carefully and move to the next page.



In this section you will be rating the shoes you've seen on the previous page on several criteria. There would be two opposite adjectives and nine points between them that you can rate on each scale. The closer the point to an adjective means that you feel the picture is closer to that quality. **Your ratings should reflect your personal tastes; there are no right or wrong answers.** Your assessment criteria are explained below.

- 1. **Goodness of example;** (poor example of the category / good example of the category)
Your task is to rate these designs in terms of how representative, or typical, the design is of the product category as a whole. For example, some birds, such as robins and sparrows, are very good examples of the category 'birds' while other birds, such as penguins and ostriches, are very poor examples of the category. Your ratings should reflect your personal knowledge of the category; there are no right or wrong answers. Notice also that there is no necessary relationship between this judgment of goodness of example and your personal preferences. For example, your favorite bird may be either a penguin or a robin.
- 2. **Originality;** (not original / original)
Your task is to rate these designs in terms of how interesting, new, and different, the design is from other shoes that you've seen before.
- 3. **Visual Attractiveness;** (ugly / beautiful)
Your task is to rate these designs in terms of how visually attractive you find them to be.



Poor examples of the "birds" category



Good examples of the "birds" category



Poor example of the category	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Good example of the category
Not original	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Original
Ugly	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Beautiful

Figure B.2 : (Continued) English version of the survey



Figure B.2 : (Continued) English version of the survey



Poor example of the category	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Good example of the category
Not original	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Original
Ugly	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Beautiful



Poor example of the category	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Good example of the category
Not original	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Original
Ugly	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Beautiful



Poor example of the category	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Good example of the category
Not original	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Original
Ugly	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Beautiful

Figure B.2 : (Continued) English version of the survey



69



Poor example of the category	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Good example of the category
Not original	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Original
Ugly	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Beautiful



Poor example of the category	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Good example of the category
Not original	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Original
Ugly	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Beautiful



Poor example of the category	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Good example of the category
Not original	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Original
Ugly	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Beautiful

Figure B.2 : (Continued) English version of the survey



Poor example of the category	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Good example of the category
Not original	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Original
Ugly	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Beautiful



Poor example of the category	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Good example of the category
Not original	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Original
Ugly	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Beautiful



Poor example of the category	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Good example of the category
Not original	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Original
Ugly	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Beautiful



Poor example of the category	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Good example of the category
Not original	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Original
Ugly	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Beautiful

Figure B.2 : (Continued) English version of the survey



Poor example of the category	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Good example of the category
Not original	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Original
Ugly	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Beautiful



Poor example of the category	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Good example of the category
Not original	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Original
Ugly	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Beautiful

Age

Occupation

Student

Housewife

Retired

Unemployed

Employee

Employer

Other

What is your nationality?

Türk / Turkish

American

Dutch

Australian

Austrian

Belgium

Brazilian

British

Canadian

Chinese

Figure B.2 : (Continued) English version of the survey

APPENDIX C

Table C.1 : Typicality Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^a		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
shoes	,007	1351,100	189	,000	,507	,527	,053

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

b. Design: Intercept

Within Subjects Design: shoes

Table C.2 : Typicality Tests of Within-Subjects Effects

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
shoes	Sphericity Assumed	6328,525	19	333,080	71,501	,000	,205
	Greenhouse-Geisser	6328,525	9,631	657,081	71,501	,000	,205
	Huynh-Feldt	6328,525	10,005	632,514	71,501	,000	,205
	Lower-bound	6328,525	1,000	6328,525	71,501	,000	,205
Error(shoes)	Sphericity Assumed	24605,825	5282	4,658			
	Greenhouse-Geisser	24605,825	2677,493	9,190			
	Huynh-Feldt	24605,825	2781,489	8,846			
	Lower-bound	24605,825	278,000	88,510			

Table C.3 : Typicality Pairwise Comparisons

(I) shoes	(J) shoes	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	,211	,166	1,000	-,402	,825
	3	2,151*	,195	,000	1,429	2,872
	4	-,785*	,174	,002	-1,428	-,142
	5	,151	,165	1,000	-,458	,759
	6	-,082	,194	1,000	-,800	,635
	7	-,351	,213	1,000	-1,140	,438
	8	2,297*	,212	,000	1,515	3,080
	9	-,018	,182	1,000	-,692	,656
	10	-,677*	,171	,018	-1,311	-,044
	11	-1,280*	,162	,000	-1,877	-,682
	12	1,100*	,215	,000	,306	1,895
	13	,867*	,193	,002	,154	1,580
	14	1,616*	,223	,000	,792	2,441
	15	1,616*	,211	,000	,836	2,397
	16	1,348*	,202	,000	,600	2,095
	17	1,036*	,177	,000	,382	1,690
	18	1,405*	,226	,000	,571	2,239
	19	-1,401*	,163	,000	-2,002	-,801
	20	1,057*	,170	,000	,428	1,687
2	1	-,211	,166	1,000	-,825	,402
	3	1,939*	,184	,000	1,258	2,621
	4	-,996*	,184	,000	-1,677	-,316
	5	-,061	,184	1,000	-,741	,619
	6	-,294	,193	1,000	-1,006	,419
	7	-,563	,207	1,000	-1,329	,203
	8	2,086*	,210	,000	1,309	2,863
	9	-,229	,171	1,000	-,860	,401
	10	-,889*	,178	,000	-1,548	-,230
	11	-1,491*	,173	,000	-2,130	-,852
	12	,889*	,204	,004	,134	1,644
	13	,656	,191	,127	-,049	1,361
	14	1,405*	,209	,000	,632	2,178
	15	1,405*	,199	,000	,668	2,142
	16	1,136*	,189	,000	,437	1,835
	17	,824*	,178	,001	,168	1,481
	18	1,194*	,210	,000	,419	1,968
	19	-1,613*	,164	,000	-2,220	-1,005
	20	,846*	,170	,000	,218	1,473

Table C.3: (Continued) Typicality Pairwise Comparisons

3	1	-2,151*	,195	,000	-2,872	-1,429
	2	-1,939*	,184	,000	-2,621	-1,258
	4	-2,935*	,175	,000	-3,583	-2,288
	5	-2,000*	,197	,000	-2,729	-1,271
	6	-2,233*	,183	,000	-2,908	-1,558
	7	-2,502*	,182	,000	-3,174	-1,829
	8	,147	,160	1,000	-,446	,740
	9	-2,168*	,166	,000	-2,782	-1,555
	10	-2,828*	,180	,000	-3,493	-2,162
	11	-3,430*	,197	,000	-4,157	-2,703
	12	-1,050*	,176	,000	-1,700	-,400
	13	-1,283*	,183	,000	-1,959	-,608
	14	-,534	,183	,731	-1,211	,143
	15	-,534	,169	,333	-1,159	,091
	16	-,803*	,164	,000	-1,409	-,197
	17	-1,115*	,193	,000	-1,828	-,401
	18	-,746*	,187	,016	-1,435	-,056
	19	-3,552*	,179	,000	-4,215	-2,889
	20	-1,093*	,191	,000	-1,800	-,386
4	1	,785*	,174	,002	,142	1,428
	2	,996*	,184	,000	,316	1,677
	3	2,935*	,175	,000	2,288	3,583
	5	,935*	,157	,000	,355	1,516
	6	,703*	,139	,000	,190	1,215
	7	,434	,160	1,000	-,156	1,024
	8	3,082*	,199	,000	2,347	3,818
	9	,767*	,167	,001	,151	1,383
	10	,108	,139	1,000	-,406	,621
	11	-,495	,151	,234	-1,055	,065
	12	1,885*	,189	,000	1,187	2,584
	13	1,652*	,160	,000	1,063	2,242
	14	2,401*	,202	,000	1,654	3,149
	15	2,401*	,197	,000	1,671	3,131
	16	2,133*	,194	,000	1,415	2,851
	17	1,821*	,180	,000	1,156	2,486
	18	2,190*	,202	,000	1,442	2,938
	19	-,616*	,141	,003	-1,137	-,096
	20	1,842*	,181	,000	1,175	2,510

Table C.3: (Continued) Typicality Pairwise Comparisons

5	1	-151,165	1,000	-759,458	
	2	,061,184	1,000	-619,741	
	3	2,000*,197	,000	1,271	2,729
	4	-,935*,157	,000	-1,516	-,355
	6	-,233,185	1,000	-,915,449	
	7	-,502,198	1,000	-1,236,232	
	8	2,147*,222	,000	1,327	2,967
	9	-,168,191	1,000	-,876,539	
	10	-,828*,148	,000	-1,373	-,283
	11	-1,430*,152	,000	-1,993	-,867
	12	,950*,214	,003	,158	1,742
	13	,717*,176	,012	,066	1,367
	14	1,466*,234	,000	,601	2,331
	15	1,466*,221	,000	,648	2,284
	16	1,197*,219	,000	,388	2,006
	17	,885*,161	,000	,290	1,480
	18	1,254*,230	,000	,404	2,105
	19	-1,552*,152	,000	-2,112	-,992
	20	,907*,162	,000	,309	1,504
6	1	,082,194	1,000	-,635,800	
	2	,294,193	1,000	-,419	1,006
	3	2,233*,183	,000	1,558	2,908
	4	-,703*,139	,000	-1,215	-,190
	5	,233,185	1,000	-,449,915	
	7	-,269,148	1,000	-,816,279	
	8	2,380*,201	,000	1,636	3,124
	9	,065,159	1,000	-,521,650	
	10	-,595*,155	,029	-1,168	-,022
	11	-1,197*,173	,000	-1,836	-,559
	12	1,183*,188	,000	,490	1,876
	13	,950*,162	,000	,352	1,547
	14	1,699*,189	,000	1,001	2,397
	15	1,699*,192	,000	,990	2,408
	16	1,430*,196	,000	,707	2,153
	17	1,118*,186	,000	,432	1,805
	18	1,487*,196	,000	,763	2,212
	19	-1,319*,160	,000	-1,909	-,729
	20	1,140*,197	,000	,412	1,867

Table C.3: (Continued) Typicality Pairwise Comparisons

7	1	,351	,213	1,000	-438	1,140
	2	,563	,207	1,000	-203	1,329
	3	2,502*	,182	,000	1,829	3,174
	4	-434	,160	1,000	-1,024	,156
	5	,502	,198	1,000	-232	1,236
	6	,269	,148	1,000	-279	,816
	8	2,649*	,194	,000	1,931	3,366
	9	,333	,158	1,000	-249	,916
	10	-326	,165	1,000	-938	,285
	11	-928*	,179	,000	-1,591	-265
	12	1,452*	,168	,000	,830	2,073
	13	1,219*	,181	,000	,549	1,889
	14	1,968*	,181	,000	1,300	2,636
	15	1,968*	,181	,000	1,300	2,636
	16	1,699*	,192	,000	,990	2,407
	17	1,387*	,208	,000	,619	2,156
	18	1,756*	,188	,000	1,063	2,450
	19	-1,050*	,172	,000	-1,686	-415
	20	1,409*	,215	,000	,613	2,204
8	1	-2,297*	,212	,000	-3,080	-1,515
	2	-2,086*	,210	,000	-2,863	-1,309
	3	-147	,160	1,000	-740	,446
	4	-3,082*	,199	,000	-3,818	-2,347
	5	-2,147*	,222	,000	-2,967	-1,327
	6	-2,380*	,201	,000	-3,124	-1,636
	7	-2,649*	,194	,000	-3,366	-1,931
	9	-2,315*	,177	,000	-2,969	-1,662
	10	-2,975*	,205	,000	-3,733	-2,216
	11	-3,577*	,227	,000	-4,415	-2,739
	12	-1,197*	,154	,000	-1,766	-628
	13	-1,430*	,196	,000	-2,155	-705
	14	-681*	,161	,006	-1,277	-085
	15	-681*	,148	,001	-1,227	-135
	16	-950*	,166	,000	-1,565	-334
	17	-1,262*	,206	,000	-2,023	-501
	18	-892*	,171	,000	-1,526	-259
	19	-3,699*	,194	,000	-4,417	-2,981
	20	-1,240*	,212	,000	-2,023	-457

Table C.3: (Continued) Typicality Pairwise Comparisons

9	1	,018	,182	1,000	-,656	,692
	2	,229	,171	1,000	-,401	,860
	3	2,168*	,166	,000	1,555	2,782
	4	-,767*	,167	,001	-1,383	-,151
	5	,168	,191	1,000	-,539	,876
	6	-,065	,159	1,000	-,650	,521
	7	-,333	,158	1,000	-,916	,249
	8	2,315*	,177	,000	1,662	2,969
	10	-,659*	,156	,006	-1,235	-,084
	11	-1,262*	,169	,000	-1,887	-,637
	12	1,118*	,170	,000	,489	1,748
	13	,885*	,179	,000	,224	1,547
	14	1,634*	,177	,000	,979	2,290
	15	1,634*	,166	,000	1,019	2,249
	16	1,366*	,173	,000	,725	2,006
	17	1,054*	,178	,000	,395	1,713
	18	1,423*	,183	,000	,748	2,098
	19	-1,384*	,149	,000	-1,933	-,834
	20	1,075*	,181	,000	,405	1,746
10	1	,677*	,171	,018	,044	1,311
	2	,889*	,178	,000	,230	1,548
	3	2,828*	,180	,000	2,162	3,493
	4	-,108	,139	1,000	-,621	,406
	5	,828*	,148	,000	,283	1,373
	6	,595*	,155	,029	,022	1,168
	7	,326	,165	1,000	-,285	,938
	8	2,975*	,205	,000	2,216	3,733
	9	,659*	,156	,006	,084	1,235
	11	-,602*	,140	,004	-1,120	-,085
	12	1,778*	,196	,000	1,053	2,502
	13	1,545*	,151	,000	,987	2,103
	14	2,294*	,209	,000	1,520	3,068
	15	2,294*	,199	,000	1,559	3,029
	16	2,025*	,198	,000	1,292	2,758
	17	1,713*	,170	,000	1,084	2,342
	18	2,082*	,205	,000	1,324	2,840
	19	-,724*	,126	,000	-1,189	-,259
	20	1,735*	,169	,000	1,110	2,359

Table C.3: (Continued) Typicality Pairwise Comparisons

11	1	1,280*	,162	,000	,682	1,877
	2	1,491*	,173	,000	,852	2,130
	3	3,430*	,197	,000	2,703	4,157
	4	,495	,151	,234	-,065	1,055
	5	1,430*	,152	,000	,867	1,993
	6	1,197*	,173	,000	,559	1,836
	7	,928*	,179	,000	,265	1,591
	8	3,577*	,227	,000	2,739	4,415
	9	1,262*	,169	,000	,637	1,887
	10	,602*	,140	,004	,085	1,120
	12	2,380*	,200	,000	1,642	3,118
	13	2,147*	,171	,000	1,515	2,779
	14	2,896*	,222	,000	2,077	3,715
	15	2,896*	,206	,000	2,133	3,659
	16	2,627*	,206	,000	1,866	3,388
	17	2,315*	,174	,000	1,671	2,960
	18	2,685*	,220	,000	1,870	3,499
	19	-,122	,122	1,000	-,571	,327
	20	2,337*	,161	,000	1,744	2,930
12	1	-1,100*	,215	,000	-1,895	-,306
	2	-,889*	,204	,004	-1,644	-,134
	3	1,050*	,176	,000	,400	1,700
	4	-1,885*	,189	,000	-2,584	-1,187
	5	-,950*	,214	,003	-1,742	-,158
	6	-1,183*	,188	,000	-1,876	-,490
	7	-1,452*	,168	,000	-2,073	-,830
	8	1,197*	,154	,000	,628	1,766
	9	-1,118*	,170	,000	-1,748	-,489
	10	-1,778*	,196	,000	-2,502	-1,053
	11	-2,380*	,200	,000	-3,118	-1,642
	13	-,233	,184	1,000	-,915	,449
	14	,516	,148	,110	-,032	1,064
	15	,516*	,135	,031	,017	1,016
	16	,247	,166	1,000	-,365	,860
	17	-,065	,205	1,000	-,824	,695
	18	,305	,181	1,000	-,365	,975
	19	-2,502*	,183	,000	-3,178	-1,826
	20	-,043	,213	1,000	-,829	,743

Table C.3: (Continued) Typicality Pairwise Comparisons

13	1	-867*	,193	,002	-1,580	-1,154
	2	-656	,191	,127	-1,361	,049
	3	1,283*	,183	,000	,608	1,959
	4	-1,652*	,160	,000	-2,242	-1,063
	5	-717*	,176	,012	-1,367	-,066
	6	-950*	,162	,000	-1,547	-,352
	7	-1,219*	,181	,000	-1,889	-,549
	8	1,430*	,196	,000	,705	2,155
	9	-,885*	,179	,000	-1,547	-,224
	10	-1,545*	,151	,000	-2,103	-,987
	11	-2,147*	,171	,000	-2,779	-1,515
	12	,233	,184	1,000	-,449	,915
	14	,749*	,199	,038	,015	1,484
	15	,749*	,184	,012	,067	1,431
	16	,480	,180	1,000	-,184	1,145
	17	,168	,169	1,000	-,457	,794
	18	,538	,198	1,000	-,194	1,270
	19	-2,269*	,156	,000	-2,845	-1,693
	20	,190	,166	1,000	-,425	,805
14	1	-1,616*	,223	,000	-2,441	-,792
	2	-1,405*	,209	,000	-2,178	-,632
	3	,534	,183	,731	-,143	1,211
	4	-2,401*	,202	,000	-3,149	-1,654
	5	-1,466*	,234	,000	-2,331	-,601
	6	-1,699*	,189	,000	-2,397	-1,001
	7	-1,968*	,181	,000	-2,636	-1,300
	8	,681*	,161	,006	,085	1,277
	9	-1,634*	,177	,000	-2,290	-,979
	10	-2,294*	,209	,000	-3,068	-1,520
	11	-2,896*	,222	,000	-3,715	-2,077
	12	-,516	,148	,110	-1,064	,032
	13	-,749*	,199	,038	-1,484	-,015
	15	,000	,118	1,000	-,437	,437
	16	-,269	,155	1,000	-,843	,305
	17	-,581	,208	1,000	-1,349	,188
	18	-,211	,160	1,000	-,802	,379
	19	-3,018*	,193	,000	-3,732	-2,304
	20	-,559	,217	1,000	-1,362	,244

Table C.3: (Continued) Typicality Pairwise Comparisons

15	1	-1,616*	,211	,000	-2,397	-,836
	2	-1,405*	,199	,000	-2,142	-,668
	3	,534	,169	,333	-,091	1,159
	4	-2,401*	,197	,000	-3,131	-1,671
	5	-1,466*	,221	,000	-2,284	-,648
	6	-1,699*	,192	,000	-2,408	-,990
	7	-1,968*	,181	,000	-2,636	-1,300
	8	,681*	,148	,001	,135	1,227
	9	-1,634*	,166	,000	-2,249	-1,019
	10	-2,294*	,199	,000	-3,029	-1,559
	11	-2,896*	,206	,000	-3,659	-2,133
	12	-,516*	,135	,031	-1,016	-,017
	13	-,749*	,184	,012	-1,431	-,067
	14	,000	,118	1,000	-,437	,437
	16	-,269	,137	1,000	-,776	,239
	17	-,581	,193	,533	-1,292	,131
	18	-,211	,146	1,000	-,753	,330
	19	-3,018*	,184	,000	-3,697	-2,339
	20	-,559	,201	1,000	-1,300	,182
16	1	-1,348*	,202	,000	-2,095	-,600
	2	-1,136*	,189	,000	-1,835	-,437
	3	,803*	,164	,000	,197	1,409
	4	-2,133*	,194	,000	-2,851	-1,415
	5	-1,197*	,219	,000	-2,006	-,388
	6	-1,430*	,196	,000	-2,153	-,707
	7	-1,699*	,192	,000	-2,407	-,990
	8	,950*	,166	,000	,334	1,565
	9	-1,366*	,173	,000	-2,006	-,725
	10	-2,025*	,198	,000	-2,758	-1,292
	11	-2,627*	,206	,000	-3,388	-1,866
	12	-,247	,166	1,000	-,860	,365
	13	-,480	,180	1,000	-1,145	,184
	14	,269	,155	1,000	-,305	,843
	15	,269	,137	1,000	-,239	,776
	17	-,312	,176	1,000	-,961	,338
	18	,057	,165	1,000	-,554	,669
	19	-2,749*	,178	,000	-3,406	-2,092
	20	-,290	,179	1,000	-,953	,372

Table C.3: (Continued) Typicality Pairwise Comparisons

17	1	-1,036*	,177	,000	-1,690	-,382
	2	-,824*	,178	,001	-1,481	-,168
	3	1,115*	,193	,000	,401	1,828
	4	-1,821*	,180	,000	-2,486	-1,156
	5	-,885*	,161	,000	-1,480	-,290
	6	-1,118*	,186	,000	-1,805	-,432
	7	-1,387*	,208	,000	-2,156	-,619
	8	1,262*	,206	,000	,501	2,023
	9	-1,054*	,178	,000	-1,713	-,395
	10	-1,713*	,170	,000	-2,342	-1,084
	11	-2,315*	,174	,000	-2,960	-1,671
	12	,065	,205	1,000	-,695	,824
	13	-,168	,169	1,000	-,794	,457
	14	,581	,208	1,000	-,188	1,349
	15	,581	,193	,533	-,131	1,292
	16	,312	,176	1,000	-,338	,961
	18	,369	,208	1,000	-,401	1,140
	19	-2,437*	,148	,000	-2,984	-1,891
	20	,022	,139	1,000	-,494	,537
18	1	-1,405*	,226	,000	-2,239	-,571
	2	-1,194*	,210	,000	-1,968	-,419
	3	,746*	,187	,016	,056	1,435
	4	-2,190*	,202	,000	-2,938	-1,442
	5	-1,254*	,230	,000	-2,105	-,404
	6	-1,487*	,196	,000	-2,212	-,763
	7	-1,756*	,188	,000	-2,450	-1,063
	8	,892*	,171	,000	,259	1,526
	9	-1,423*	,183	,000	-2,098	-,748
	10	-2,082*	,205	,000	-2,840	-1,324
	11	-2,685*	,220	,000	-3,499	-1,870
	12	-,305	,181	1,000	-,975	,365
	13	-,538	,198	1,000	-1,270	,194
	14	,211	,160	1,000	-,379	,802
	15	,211	,146	1,000	-,330	,753
	16	-,057	,165	1,000	-,669	,554
	17	-,369	,208	1,000	-1,140	,401
	19	-2,806*	,196	,000	-3,530	-2,083
	20	-,348	,209	1,000	-1,120	,425

Table C.3: (Continued) Typicality Pairwise Comparisons

19	1	1,401*	,163	,000	,801	2,002
	2	1,613*	,164	,000	1,005	2,220
	3	3,552*	,179	,000	2,889	4,215
	4	,616*	,141	,003	,096	1,137
	5	1,552*	,152	,000	,992	2,112
	6	1,319*	,160	,000	,729	1,909
	7	1,050*	,172	,000	,415	1,686
	8	3,699*	,194	,000	2,981	4,417
	9	1,384*	,149	,000	,834	1,933
	10	,724*	,126	,000	,259	1,189
	11	,122	,122	1,000	-,327	,571
	12	2,502*	,183	,000	1,826	3,178
	13	2,269*	,156	,000	1,693	2,845
	14	3,018*	,193	,000	2,304	3,732
	15	3,018*	,184	,000	2,339	3,697
	16	2,749*	,178	,000	2,092	3,406
	17	2,437*	,148	,000	1,891	2,984
	18	2,806*	,196	,000	2,083	3,530
	20	2,459*	,145	,000	1,924	2,994
20	1	-1,057*	,170	,000	-1,687	-,428
	2	-,846*	,170	,000	-1,473	-,218
	3	1,093*	,191	,000	,386	1,800
	4	-1,842*	,181	,000	-2,510	-1,175
	5	-,907*	,162	,000	-1,504	-,309
	6	-1,140*	,197	,000	-1,867	-,412
	7	-1,409*	,215	,000	-2,204	-,613
	8	1,240*	,212	,000	,457	2,023
	9	-1,075*	,181	,000	-1,746	-,405
	10	-1,735*	,169	,000	-2,359	-1,110
	11	-2,337*	,161	,000	-2,930	-1,744
	12	,043	,213	1,000	-,743	,829
	13	-,190	,166	1,000	-,805	,425
	14	,559	,217	1,000	-,244	1,362
	15	,559	,201	1,000	-,182	1,300
	16	,290	,179	1,000	-,372	,953
	17	-,022	,139	1,000	-,537	,494
	18	,348	,209	1,000	-,425	1,120
	19	-2,459*	,145	,000	-2,994	-1,924

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

*. The mean difference is significant at the ,05 level.

Table C.4 : Novelty Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^a		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
shoes	,002	1676,791	189	,000	,412	,425	,053

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

b. Design: Intercept

Within Subjects Design: shoes

Table C.5 : Novelty Tests of Within-Subjects Effects

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
shoes	Sphericity Assumed	6872,520	19	361,712	73,097	,000	,208
	Greenhouse-Geisser	6872,520	7,835	877,107	73,097	,000	,208
	Huynh-Feldt	6872,520	8,084	850,109	73,097	,000	,208
	Lower-bound	6872,520	1,000	6872,520	73,097	,000	,208
Error(shoes)	Sphericity Assumed	26137,480	5282	4,948			
	Greenhouse-Geisser	26137,480	2178,252	11,999			
	Huynh-Feldt	26137,480	2247,431	11,630			
	Lower-bound	26137,480	278,000	94,020			

Table C.6 : Novelty Pairwise Comparisons

(I) shoes	(J) shoes	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	-1,824 [*]	,171	,000	-2,455	-1,194
	3	-1,505 [*]	,217	,000	-2,306	-,705
	4	-1,645 [*]	,167	,000	-2,263	-1,027
	5	,032	,168	1,000	-,588	,652
	6	-1,183 [*]	,184	,000	-1,864	-,502
	7	-2,341 [*]	,185	,000	-3,023	-1,658
	8	-2,703 [*]	,244	,000	-3,604	-1,801
	9	-2,384 [*]	,184	,000	-3,065	-1,702
	10	-,871 [*]	,161	,000	-1,466	-,276
	11	-,427	,166	1,000	-1,039	,186
	12	-2,703 [*]	,223	,000	-3,526	-1,879
	13	-,871 [*]	,198	,003	-1,604	-,138
	14	-3,348 [*]	,222	,000	-4,170	-2,525
	15	-2,971 [*]	,218	,000	-3,775	-2,167
	16	-2,265 [*]	,212	,000	-3,050	-1,481
	17	,100	,177	1,000	-,553	,754
	18	-2,957 [*]	,216	,000	-3,756	-2,158
	19	-1,262 [*]	,165	,000	-1,870	-,653
	20	,122	,180	1,000	-,544	,788
2	1	1,824 [*]	,171	,000	1,194	2,455
	3	,319	,206	1,000	-,442	1,080
	4	,179	,182	1,000	-,495	,854
	5	1,857 [*]	,191	,000	1,151	2,562
	6	,642	,194	,206	-,077	1,360
	7	-,516	,197	1,000	-1,246	,214
	8	-,878 [*]	,219	,015	-1,687	-,069
	9	-,559	,169	,202	-1,184	,066
	10	,953 [*]	,188	,000	,260	1,647
	11	1,398 [*]	,195	,000	,676	2,120
	12	-,878 [*]	,193	,001	-1,591	-,165
	13	,953 [*]	,195	,000	,232	1,675
	14	-1,523 [*]	,196	,000	-2,250	-,797
	15	-1,147 [*]	,195	,000	-1,869	-,425
	16	-,441	,199	1,000	-1,178	,296
	17	1,925 [*]	,174	,000	1,282	2,568
	18	-1,133 [*]	,198	,000	-1,864	-,401
	19	,563	,185	,490	-,121	1,247
	20	1,946 [*]	,178	,000	1,290	2,602

Table C.6: (Continued) Novelty Pairwise Comparisons

3	1	1,505*	,217	,000	,705	2,306
	2	-,319	,206	1,000	-1,080	,442
	4	-,140	,199	1,000	-,874	,594
	5	1,538*	,216	,000	,738	2,337
	6	,323	,195	1,000	-,399	1,044
	7	-,835*	,192	,004	-1,546	-,124
	8	-1,197*	,180	,000	-1,862	-,532
	9	-,878*	,179	,000	-1,541	-,215
	10	,634	,211	,544	-,145	1,414
	11	1,079*	,241	,002	,190	1,968
	12	-1,197*	,181	,000	-1,866	-,529
	13	,634	,191	,192	-,071	1,340
	14	-1,842*	,182	,000	-2,517	-1,168
	15	-1,466*	,173	,000	-2,107	-,825
	16	-,760*	,179	,006	-1,423	-,097
	17	1,606*	,211	,000	,826	2,385
	18	-1,452*	,191	,000	-2,159	-,744
	19	,244	,230	1,000	-,605	1,093
	20	1,627*	,206	,000	,867	2,388
4	1	1,645*	,167	,000	1,027	2,263
	2	-,179	,182	1,000	-,854	,495
	3	,140	,199	1,000	-,594	,874
	5	1,677*	,159	,000	1,090	2,265
	6	,462	,159	,731	-,124	1,049
	7	-,695*	,173	,014	-1,333	-,058
	8	-1,057*	,238	,002	-1,937	-,177
	9	-,738*	,177	,008	-1,394	-,082
	10	,774*	,147	,000	,230	1,319
	11	1,219*	,159	,000	,632	1,805
	12	-1,057*	,204	,000	-1,810	-,305
	13	,774*	,164	,001	,167	1,381
	14	-1,703*	,220	,000	-2,515	-,890
	15	-1,326*	,218	,000	-2,132	-,520
	16	-,620	,203	,459	-1,369	,129
	17	1,746*	,182	,000	1,074	2,417
	18	-1,312*	,216	,000	-2,109	-,515
	19	,384	,158	1,000	-,200	,967
	20	1,767*	,176	,000	1,118	2,416

Table C.6: (Continued) Novelty Pairwise Comparisons

5	1	- ,032	,168	1,000	- ,652	,588
	2	-1,857*	,191	,000	-2,562	-1,151
	3	-1,538*	,216	,000	-2,337	- ,738
	4	-1,677*	,159	,000	-2,265	-1,090
	6	-1,215*	,162	,000	-1,815	- ,615
	7	-2,373*	,182	,000	-3,046	-1,699
	8	-2,735*	,242	,000	-3,629	-1,841
	9	-2,416*	,185	,000	-3,099	-1,732
	10	- ,903*	,150	,000	-1,458	- ,349
	11	- ,459	,153	,573	-1,026	,108
	12	-2,735*	,207	,000	-3,502	-1,968
	13	- ,903*	,180	,000	-1,567	- ,239
	14	-3,380*	,226	,000	-4,217	-2,543
	15	-3,004*	,225	,000	-3,837	-2,170
	16	-2,297*	,219	,000	-3,108	-1,487
	17	,068	,170	1,000	- ,561	,697
	18	-2,989*	,221	,000	-3,808	-2,171
	19	-1,294*	,154	,000	-1,862	- ,725
	20	,090	,153	1,000	- ,475	,654
6	1	1,183*	,184	,000	,502	1,864
	2	- ,642	,194	,206	-1,360	,077
	3	- ,323	,195	1,000	-1,044	,399
	4	- ,462	,159	,731	-1,049	,124
	5	1,215*	,162	,000	,615	1,815
	7	-1,158*	,150	,000	-1,711	- ,604
	8	-1,520*	,236	,000	-2,391	- ,649
	9	-1,201*	,162	,000	-1,798	- ,603
	10	,312	,153	1,000	- ,254	,878
	11	,756*	,171	,003	,125	1,387
	12	-1,520*	,192	,000	-2,231	- ,808
	13	,312	,172	1,000	- ,322	,946
	14	-2,165*	,208	,000	-2,932	-1,397
	15	-1,789*	,199	,000	-2,526	-1,051
	16	-1,082*	,202	,000	-1,828	- ,337
	17	1,283*	,175	,000	,635	1,931
	18	-1,774*	,208	,000	-2,543	-1,005
	19	- ,079	,170	1,000	- ,707	,549
	20	1,305*	,172	,000	,669	1,940

Table C.6: (Continued) Novelty Pairwise Comparisons

7	1	2,341*	,185	,000	1,658	3,023
	2	,516	,197	1,000	-,214	1,246
	3	,835*	,192	,004	,124	1,546
	4	,695*	,173	,014	,058	1,333
	5	2,373*	,182	,000	1,699	3,046
	6	1,158*	,150	,000	,604	1,711
	8	-,362	,213	1,000	-1,149	,425
	9	-,043	,150	1,000	-,597	,511
	10	1,470*	,175	,000	,823	2,116
	11	1,914*	,190	,000	1,213	2,615
	12	-,362	,182	1,000	-1,033	,309
	13	1,470*	,188	,000	,775	2,164
	14	-1,007*	,189	,000	-1,707	-,307
	15	-,631	,183	,125	-1,308	,046
	16	,075	,184	1,000	-,607	,757
	17	2,441*	,186	,000	1,752	3,130
	18	-,616	,193	,294	-1,329	,096
	19	1,079*	,181	,000	,409	1,749
	20	2,462*	,192	,000	1,751	3,174
8	1	2,703*	,244	,000	1,801	3,604
	2	,878*	,219	,015	,069	1,687
	3	1,197*	,180	,000	,532	1,862
	4	1,057*	,238	,002	,177	1,937
	5	2,735*	,242	,000	1,841	3,629
	6	1,520*	,236	,000	,649	2,391
	7	,362	,213	1,000	-,425	1,149
	9	,319	,185	1,000	-,367	1,005
	10	1,832*	,241	,000	,940	2,723
	11	2,276*	,271	,000	1,273	3,279
	12	,000	,159	1,000	-,589	,589
	13	1,832*	,231	,000	,977	2,686
	14	-,645*	,156	,009	-1,222	-,069
	15	-,269	,154	1,000	-,839	,301
	16	,437	,163	1,000	-,164	1,039
	17	2,803*	,211	,000	2,023	3,583
	18	-,254	,174	1,000	-,898	,389
	19	1,441*	,247	,000	,529	2,353
	20	2,824*	,222	,000	2,004	3,644

Table C.6: (Continued) Novelty Pairwise Comparisons

9	1	2,384*	,184	,000	1,702	3,065
	2	,559	,169	,202	-,066	1,184
	3	,878*	,179	,000	,215	1,541
	4	,738*	,177	,008	,082	1,394
	5	2,416*	,185	,000	1,732	3,099
	6	1,201*	,162	,000	,603	1,798
	7	,043	,150	1,000	-,511	,597
	8	-,319	,185	1,000	-1,005	,367
	10	1,513*	,165	,000	,902	2,123
	11	1,957*	,186	,000	1,270	2,644
	12	-,319	,171	1,000	-,953	,315
	13	1,513*	,173	,000	,873	2,152
	14	-,964*	,168	,000	-1,584	-,344
	15	-,588	,163	,070	-1,190	,015
	16	,118	,167	1,000	-,500	,737
	17	2,484*	,162	,000	1,886	3,082
	18	-,573	,175	,220	-1,219	,072
	19	1,122*	,174	,000	,478	1,766
	20	2,505*	,163	,000	1,902	3,109
10	1	,871*	,161	,000	,276	1,466
	2	-,953*	,188	,000	-1,647	-,260
	3	-,634	,211	,544	-1,414	,145
	4	-,774*	,147	,000	-1,319	-,230
	5	,903*	,150	,000	,349	1,458
	6	-,312	,153	1,000	-,878	,254
	7	-1,470*	,175	,000	-2,116	-,823
	8	-1,832*	,241	,000	-2,723	-,940
	9	-1,513*	,165	,000	-2,123	-,902
	11	,444	,132	,170	-,045	,934
	12	-1,832*	,212	,000	-2,614	-1,049
	13	,000	,151	1,000	-,557	,557
	14	-2,477*	,216	,000	-3,275	-1,678
	15	-2,100*	,212	,000	-2,885	-1,316
	16	-1,394*	,202	,000	-2,140	-,648
	17	,971*	,174	,000	,329	1,614
	18	-2,086*	,216	,000	-2,884	-1,288
	19	-,391	,132	,651	-,880	,099
	20	,993*	,162	,000	,392	1,594

Table C.6: (Continued) Novelty Pairwise Comparisons

11	1	,427	,166	1,000	- ,186	1,039
	2	-1,398*	,195	,000	-2,120	-,676
	3	-1,079*	,241	,002	-1,968	-,190
	4	-1,219*	,159	,000	-1,805	-,632
	5	,459	,153	,573	- ,108	1,026
	6	-,756*	,171	,003	-1,387	-,125
	7	-1,914*	,190	,000	-2,615	-1,213
	8	-2,276*	,271	,000	-3,279	-1,273
	9	-1,957*	,186	,000	-2,644	-1,270
	10	-,444	,132	,170	-,934	,045
	12	-2,276*	,226	,000	-3,110	-1,442
	13	-,444	,179	1,000	-1,107	,219
	14	-2,921*	,236	,000	-3,794	-2,048
	15	-2,545*	,235	,000	-3,412	-1,678
	16	-1,839*	,228	,000	-2,682	-,996
	17	,527	,178	,645	- ,132	1,186
	18	-2,530*	,233	,000	-3,391	-1,670
	19	-,835*	,138	,000	-1,345	-,325
	20	,548	,174	,346	-,095	1,192
12	1	2,703*	,223	,000	1,879	3,526
	2	,878*	,193	,001	,165	1,591
	3	1,197*	,181	,000	,529	1,866
	4	1,057*	,204	,000	,305	1,810
	5	2,735*	,207	,000	1,968	3,502
	6	1,520*	,192	,000	,808	2,231
	7	,362	,182	1,000	-,309	1,033
	8	,000	,159	1,000	-,589	,589
	9	,319	,171	1,000	-,315	,953
	10	1,832*	,212	,000	1,049	2,614
	11	2,276*	,226	,000	1,442	3,110
	13	1,832*	,197	,000	1,105	2,558
	14	-,645*	,126	,000	-1,110	-,181
	15	-,269	,127	1,000	-,740	,202
	16	,437	,148	,656	-,111	,985
	17	2,803*	,184	,000	2,122	3,484
	18	-,254	,156	1,000	-,830	,321
	19	1,441*	,210	,000	,666	2,216
	20	2,824*	,184	,000	2,143	3,506

Table C.6: (Continued) Novelty Pairwise Comparisons

13	1	,871*	,198	,003	,138	1,604
	2	-,953*	,195	,000	-1,675	-,232
	3	-,634	,191	,192	-1,340	,071
	4	-,774*	,164	,001	-1,381	-,167
	5	,903*	,180	,000	,239	1,567
	6	-,312	,172	1,000	-,946	,322
	7	-1,470*	,188	,000	-2,164	-,775
	8	-1,832*	,231	,000	-2,686	-,977
	9	-1,513*	,173	,000	-2,152	-,873
	10	,000	,151	1,000	-,557	,557
	11	,444	,179	1,000	-,219	1,107
	12	-1,832*	,197	,000	-2,558	-1,105
	14	-2,477*	,207	,000	-3,240	-1,713
	15	-2,100*	,201	,000	-2,842	-1,359
	16	-1,394*	,190	,000	-2,097	-,691
	17	,971*	,176	,000	,322	1,620
	18	-2,086*	,198	,000	-2,819	-1,353
	19	-,391	,170	1,000	-1,020	,238
	20	,993*	,180	,000	,327	1,659
14	1	3,348*	,222	,000	2,525	4,170
	2	1,523*	,196	,000	,797	2,250
	3	1,842*	,182	,000	1,168	2,517
	4	1,703*	,220	,000	,890	2,515
	5	3,380*	,226	,000	2,543	4,217
	6	2,165*	,208	,000	1,397	2,932
	7	1,007*	,189	,000	,307	1,707
	8	,645*	,156	,009	,069	1,222
	9	,964*	,168	,000	,344	1,584
	10	2,477*	,216	,000	1,678	3,275
	11	2,921*	,236	,000	2,048	3,794
	12	,645*	,126	,000	,181	1,110
	13	2,477*	,207	,000	1,713	3,240
	15	,376	,104	,065	-,007	,760
	16	1,082*	,136	,000	,580	1,585
	17	3,448*	,193	,000	2,736	4,160
	18	,391	,127	,451	-,080	,862
	19	2,086*	,215	,000	1,293	2,879
	20	3,470*	,194	,000	2,754	4,185

Table C.6: (Continued) Novelty Pairwise Comparisons

15	1	2,971*	,218	,000	2,167	3,775
	2	1,147*	,195	,000	,425	1,869
	3	1,466*	,173	,000	,825	2,107
	4	1,326*	,218	,000	,520	2,132
	5	3,004*	,225	,000	2,170	3,837
	6	1,789*	,199	,000	1,051	2,526
	7	,631	,183	,125	-,046	1,308
	8	,269	,154	1,000	-,301	,839
	9	,588	,163	,070	-,015	1,190
	10	2,100*	,212	,000	1,316	2,885
	11	2,545*	,235	,000	1,678	3,412
	12	,269	,127	1,000	-,202	,740
	13	2,100*	,201	,000	1,359	2,842
	14	-,376	,104	,065	-,760	,007
	16	,706*	,120	,000	,263	1,149
	17	3,072*	,185	,000	2,387	3,757
	18	,014	,136	1,000	-,487	,516
	19	1,710*	,212	,000	,926	2,494
	20	3,093*	,187	,000	2,401	3,785
16	1	2,265*	,212	,000	1,481	3,050
	2	,441	,199	1,000	-,296	1,178
	3	,760*	,179	,006	,097	1,423
	4	,620	,203	,459	-,129	1,369
	5	2,297*	,219	,000	1,487	3,108
	6	1,082*	,202	,000	,337	1,828
	7	-,075	,184	1,000	-,757	,607
	8	-,437	,163	1,000	-1,039	,164
	9	-,118	,167	1,000	-,737	,500
	10	1,394*	,202	,000	,648	2,140
	11	1,839*	,228	,000	,996	2,682
	12	-,437	,148	,656	-,985	,111
	13	1,394*	,190	,000	,691	2,097
	14	-1,082*	,136	,000	-1,585	-,580
	15	-,706*	,120	,000	-1,149	-,263
	17	2,366*	,179	,000	1,703	3,028
	18	-,692*	,146	,001	-1,233	-,151
	19	1,004*	,204	,000	,250	1,758
	20	2,387*	,190	,000	1,684	3,090

Table C.6: (Continued) Novelty Pairwise Comparisons

17	1	-100	,177	1,000	-754	,553
	2	-1,925*	,174	,000	-2,568	-1,282
	3	-1,606*	,211	,000	-2,385	-826
	4	-1,746*	,182	,000	-2,417	-1,074
	5	-068	,170	1,000	-697	,561
	6	-1,283*	,175	,000	-1,931	-635
	7	-2,441*	,186	,000	-3,130	-1,752
	8	-2,803*	,211	,000	-3,583	-2,023
	9	-2,484*	,162	,000	-3,082	-1,886
	10	-971*	,174	,000	-1,614	-329
	11	-527	,178	,645	-1,186	,132
	12	-2,803*	,184	,000	-3,484	-2,122
	13	-971*	,176	,000	-1,620	-322
	14	-3,448*	,193	,000	-4,160	-2,736
	15	-3,072*	,185	,000	-3,757	-2,387
	16	-2,366*	,179	,000	-3,028	-1,703
	18	-3,057*	,201	,000	-3,800	-2,315
	19	-1,362*	,169	,000	-1,985	-739
	20	,022	,136	1,000	-480	,523
18	1	2,957*	,216	,000	2,158	3,756
	2	1,133*	,198	,000	,401	1,864
	3	1,452*	,191	,000	,744	2,159
	4	1,312*	,216	,000	,515	2,109
	5	2,989*	,221	,000	2,171	3,808
	6	1,774*	,208	,000	1,005	2,543
	7	,616	,193	,294	-096	1,329
	8	,254	,174	1,000	-389	,898
	9	,573	,175	,220	-072	1,219
	10	2,086*	,216	,000	1,288	2,884
	11	2,530*	,233	,000	1,670	3,391
	12	,254	,156	1,000	-321	,830
	13	2,086*	,198	,000	1,353	2,819
	14	-,391	,127	,451	-,862	,080
	15	-,014	,136	1,000	-,516	,487
	16	,692*	,146	,001	,151	1,233
	17	3,057*	,201	,000	2,315	3,800
	19	1,695*	,211	,000	,914	2,477
	20	3,079*	,195	,000	2,358	3,800

Table C.6: (Continued) Novelty Pairwise Comparisons

19	1	1,262*	,165	,000	,653	1,870
	2	-,563	,185	,490	-1,247	,121
	3	-,244	,230	1,000	-1,093	,605
	4	-,384	,158	1,000	-,967	,200
	5	1,294*	,154	,000	,725	1,862
	6	,079	,170	1,000	-,549	,707
	7	-1,079*	,181	,000	-1,749	-,409
	8	-1,441*	,247	,000	-2,353	-,529
	9	-1,122*	,174	,000	-1,766	-,478
	10	,391	,132	,651	-,099	,880
	11	,835*	,138	,000	,325	1,345
	12	-1,441*	,210	,000	-2,216	-,666
	13	,391	,170	1,000	-,238	1,020
	14	-2,086*	,215	,000	-2,879	-1,293
	15	-1,710*	,212	,000	-2,494	-,926
	16	-1,004*	,204	,000	-1,758	-,250
	17	1,362*	,169	,000	,739	1,985
	18	-1,695*	,211	,000	-2,477	-,914
	20	1,384*	,152	,000	,821	1,946
20	1	-,122	,180	1,000	-,788	,544
	2	-1,946*	,178	,000	-2,602	-1,290
	3	-1,627*	,206	,000	-2,388	-,867
	4	-1,767*	,176	,000	-2,416	-1,118
	5	-,090	,153	1,000	-,654	,475
	6	-1,305*	,172	,000	-1,940	-,669
	7	-2,462*	,192	,000	-3,174	-1,751
	8	-2,824*	,222	,000	-3,644	-2,004
	9	-2,505*	,163	,000	-3,109	-1,902
	10	-,993*	,162	,000	-1,594	-,392
	11	-,548	,174	,346	-1,192	,095
	12	-2,824*	,184	,000	-3,506	-2,143
	13	-,993*	,180	,000	-1,659	-,327
	14	-3,470*	,194	,000	-4,185	-2,754
	15	-3,093*	,187	,000	-3,785	-2,401
	16	-2,387*	,190	,000	-3,090	-1,684
	17	-,022	,136	1,000	-,523	,480
	18	-3,079*	,195	,000	-3,800	-2,358
	19	-1,384*	,152	,000	-1,946	-,821

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

a. Adjustment for multiple comparisons: Bonferroni.

APPENDIX D

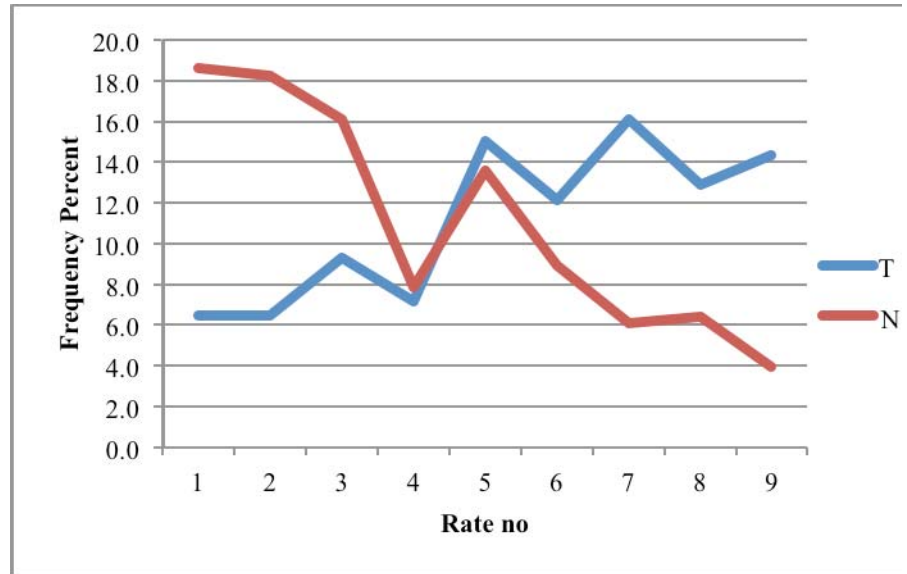


Figure D.1: Shoe 1

Table D.1: Shoe 1

All Cases									
	1	2	3	4	5	6	7	8	9
T	6.5	6.5	9.3	7.2	15.1	12.2	16.1	12.9	14.3
N	18.6	18.3	16.1	7.9	13.6	9.0	6.1	6.5	3.9
P	7.5	4.3	6.1	11.8	16.5	11.5	15.8	11.8	14.7
Group A									
	1	2	3	4	5	6	7	8	9
T	3.0	3.0	15.2	6.1	9.1	10.6	22.7	16.7	13.6
N	19.7	21.2	13.6	12.1	9.1	6.1	4.5	9.1	4.5
P	4.5	4.5	4.5	12.1	12.1	12.1	22.7	12.1	15.2
Group B									
	1	2	3	4	5	6	7	8	9
T	4.9	1.6	8.2	13.1	14.8	4.9	16.4	21.3	14.8
N	9.8	16.4	21.3	9.8	11.5	13.1	11.5	4.9	1.6
P	6.6	3.3	1.6	11.5	18.0	9.8	14.8	16.4	18.0
Group C									
	1	2	3	4	5	6	7	8	9
T	4.1	6.8	9.6	2.7	17.8	12.3	17.8	11.0	17.8
N	19.2	17.8	13.7	4.1	17.8	6.8	5.5	11.0	4.1
P	8.2	6.8	8.2	6.8	12.3	13.7	17.8	11.0	15.1
Group D									
	1	2	3	4	5	6	7	8	9
T	12.7	12.7	5.1	7.6	17.7	19.0	8.9	5.1	11.4
N	24.1	17.7	16.5	6.3	15.2	10.1	3.8	1.3	5.1
P	10.1	2.5	8.9	16.5	22.8	10.1	8.9	8.9	11.4

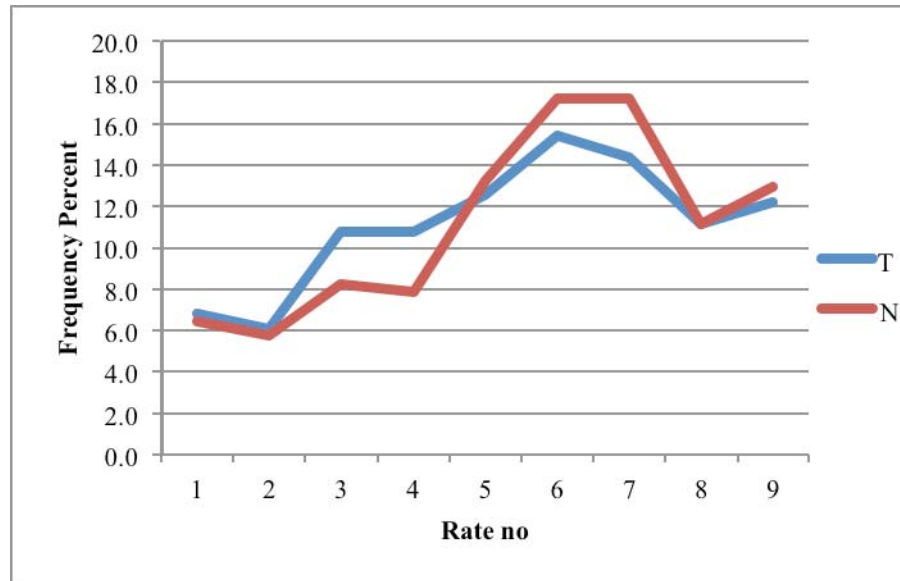


Figure D.2: Shoe 2

Table D.2: Shoe 2

All Cases									
	1	2	3	4	5	6	7	8	9
T	6.8	6.1	10.8	10.8	12.5	15.4	14.3	11.1	12.2
N	6.5	5.7	8.2	7.9	13.3	17.2	17.2	11.1	12.9
P	11.5	13.6	8.6	12.2	14.3	11.1	9.7	10.0	9.0
Group A									
	1	2	3	4	5	6	7	8	9
T	7.6	4.5	7.6	13.6	7.6	16.7	19.7	13.6	9.1
N	6.1	4.5	9.1	9.1	18.2	22.7	12.1	7.6	10.6
P	10.6	7.6	10.6	16.7	10.6	16.7	12.1	6.1	9.1
Group B									
	1	2	3	4	5	6	7	8	9
T	11.5	4.9	8.2	11.5	9.8	21.3	11.5	11.5	9.8
N	6.6	3.3	6.6	9.8	6.6	14.8	21.3	18.0	13.1
P	8.2	13.1	9.8	14.8	8.2	13.1	8.2	14.8	9.8
Group C									
	1	2	3	4	5	6	7	8	9
T	4.1	5.5	9.6	13.7	17.8	13.7	9.6	9.6	16.4
N	5.5	5.5	6.8	9.6	12.3	16.4	17.8	11.0	15.1
P	11.0	17.8	6.8	13.7	15.1	8.2	6.8	11.0	9.6
Group D									
	1	2	3	4	5	6	7	8	9
T	5.1	8.9	16.5	5.1	13.9	11.4	16.5	10.1	12.7
N	7.6	8.9	10.1	3.8	15.2	15.2	17.7	8.9	12.7
P	15.2	15.2	7.6	5.1	21.5	7.6	11.4	8.9	7.6

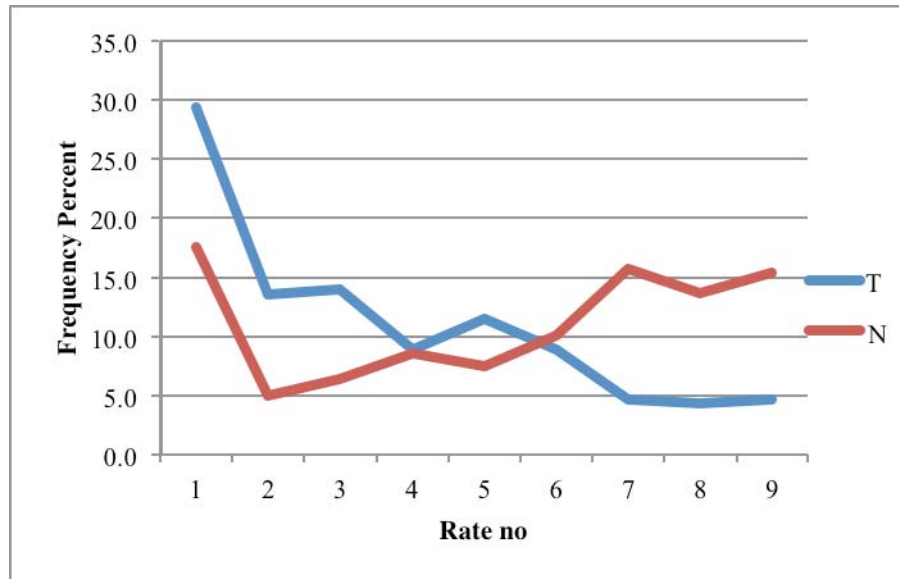


Figure D.3: Shoe 3

Table D.3: Shoe 3

All Cases									
	1	2	3	4	5	6	7	8	9
T	29.4	13.6	14.0	9.0	11.5	9.0	4.7	4.3	4.7
N	17.6	5.0	6.5	8.6	7.5	10.0	15.8	13.6	15.4
P	47.0	22.6	10.4	6.1	5.0	4.7	1.4	1.4	1.4

Group A									
	1	2	3	4	5	6	7	8	9
T	31.8	12.1	10.6	10.6	15.2	7.6	1.5	6.1	4.5
N	21.2	7.6	3.0	12.1	10.6	9.1	13.6	4.5	18.2
P	54.5	16.7	13.6	6.1	6.1	1.5	0.0	0.0	1.5

Group B									
	1	2	3	4	5	6	7	8	9
T	32.8	13.1	13.1	9.8	9.8	9.8	6.6	1.6	3.3
N	18.0	3.3	6.6	8.2	6.6	11.5	18.0	16.4	11.5
P	42.6	24.6	11.5	4.9	3.3	6.6	3.3	3.3	0.0

Group C									
	1	2	3	4	5	6	7	8	9
T	20.5	16.4	13.7	9.6	8.2	11.0	4.1	8.2	8.2
N	12.3	5.5	5.5	11.0	4.1	8.2	16.4	19.2	17.8
P	41.1	23.3	6.8	8.2	6.8	6.8	2.7	2.7	1.4

Group D									
	1	2	3	4	5	6	7	8	9
T	32.9	12.7	17.7	6.3	12.7	7.6	6.3	1.3	2.5
N	19.0	3.8	10.1	3.8	8.9	11.4	15.2	13.9	13.9
P	49.4	25.3	10.1	5.1	3.8	3.8	0.0	0.0	2.5

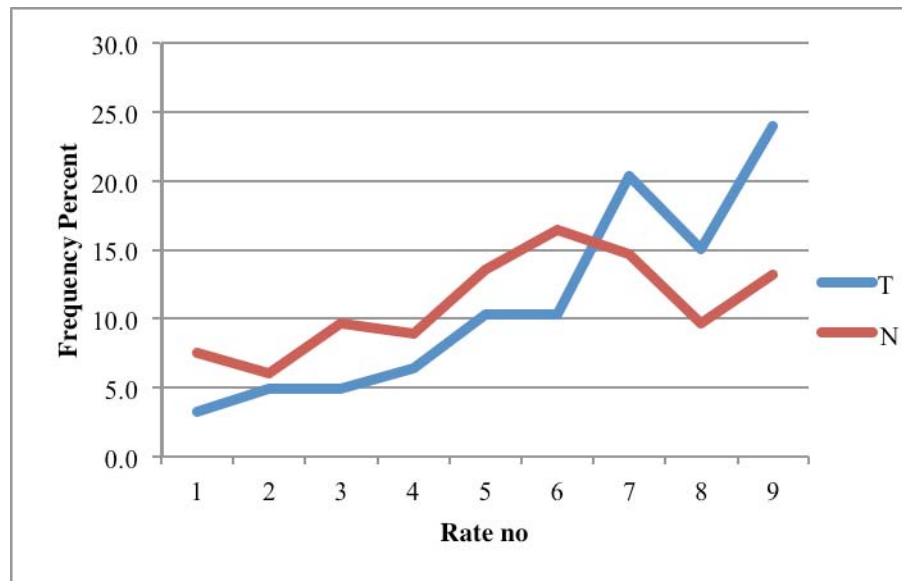


Figure D.4: Shoe 4

Table D.4: Shoe 4

All Cases									
	1	2	3	4	5	6	7	8	9
T	3.2	5.0	5.0	6.5	10.4	10.4	20.4	15.1	24.0
N	7.5	6.1	9.7	9.0	13.6	16.5	14.7	9.7	13.3
P	8.6	3.6	7.2	8.2	11.5	13.6	15.8	12.9	18.6
Group A									
	1	2	3	4	5	6	7	8	9
T	0.0	4.5	6.1	12.1	10.6	7.6	19.7	15.2	24.2
N	4.5	7.6	9.1	9.1	12.1	16.7	21.2	6.1	13.6
P	9.1	6.1	9.1	6.1	16.7	6.1	18.2	7.6	21.2
Group B									
	1	2	3	4	5	6	7	8	9
T	1.6	6.6	8.2	4.9	9.8	8.2	19.7	16.4	24.6
N	9.8	8.2	6.6	9.8	6.6	19.7	13.1	16.4	9.8
P	9.8	3.3	8.2	11.5	6.6	14.8	9.8	18.0	18.0
Group C									
	1	2	3	4	5	6	7	8	9
T	5.5	2.7	2.7	4.1	12.3	13.7	17.8	15.1	26.0
N	9.6	2.7	12.3	6.8	15.1	12.3	13.7	13.7	13.7
P	11.0	1.4	6.8	9.6	8.2	12.3	15.1	16.4	19.2
Group D									
	1	2	3	4	5	6	7	8	9
T	5.1	6.3	3.8	5.1	8.9	11.4	24.1	13.9	21.5
N	6.3	6.3	10.1	10.1	19.0	17.7	11.4	3.8	15.2
P	5.1	3.8	5.1	6.3	13.9	20.3	19.0	10.1	16.5

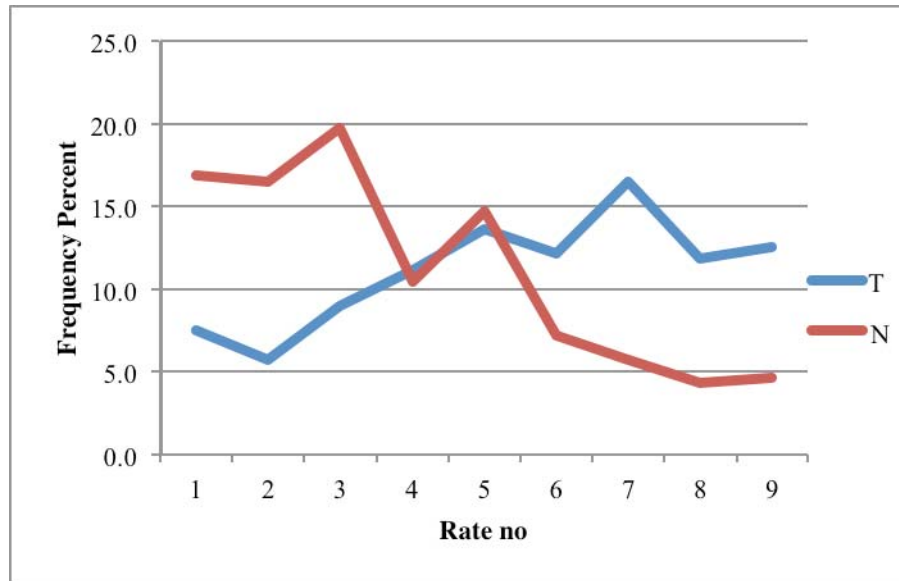


Figure D.5: Shoe 5

Table D.5: Shoe 5

All Cases									
	1	2	3	4	5	6	7	8	9
T	7.5	5.7	9.0	11.1	13.6	12.2	16.5	11.8	12.5
N	16.8	16.5	19.7	10.4	14.7	7.2	5.7	4.3	4.7
P	6.8	6.8	10.8	12.9	19.0	10.8	11.5	10.8	10.8
Group A									
	1	2	3	4	5	6	7	8	9
T	6.1	6.1	9.1	10.6	12.1	10.6	16.7	16.7	12.1
N	12.1	16.7	21.2	7.6	19.7	10.6	3.0	4.5	4.5
P	6.1	6.1	7.6	13.6	22.7	10.6	10.6	12.1	10.6
Group B									
	1	2	3	4	5	6	7	8	9
T	4.9	6.6	13.1	13.1	8.2	18.0	11.5	11.5	13.1
N	19.7	18.0	21.3	11.5	11.5	4.9	6.6	3.3	3.3
P	3.3	9.8	9.8	11.5	19.7	11.5	14.8	11.5	8.2
Group C									
	1	2	3	4	5	6	7	8	9
T	9.6	4.1	5.5	11.0	16.4	8.2	21.9	9.6	13.7
N	17.8	15.1	15.1	12.3	13.7	6.8	6.8	5.5	6.8
P	5.5	6.8	16.4	9.6	15.1	11.0	9.6	12.3	13.7
Group D									
	1	2	3	4	5	6	7	8	9
T	8.9	6.3	8.9	10.1	16.5	12.7	15.2	10.1	11.4
N	17.7	16.5	21.5	10.1	13.9	6.3	6.3	3.8	3.8
P	11.4	5.1	8.9	16.5	19.0	10.1	11.4	7.6	10.1

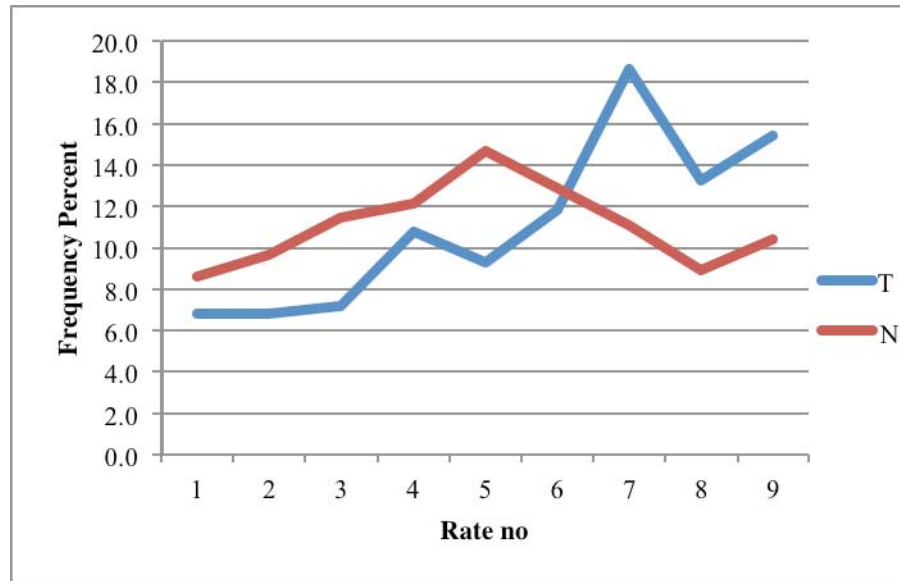


Figure D.6: Shoe 6

Table D.6: Shoe 6

All Cases									
	1	2	3	4	5	6	7	8	9
T	6.8	6.8	7.2	10.8	9.3	11.8	18.6	13.3	15.4
N	8.6	9.7	11.5	12.2	14.7	12.9	11.1	9.0	10.4
P	11.1	8.2	8.6	10.8	13.6	12.2	13.3	11.1	11.1
Group A									
	1	2	3	4	5	6	7	8	9
T	9.1	4.5	12.1	12.1	6.1	9.1	22.7	10.6	13.6
N	9.1	13.6	13.6	9.1	16.7	9.1	12.1	9.1	7.6
P	13.6	10.6	9.1	15.2	15.2	12.1	7.6	10.6	6.1
Group B									
	1	2	3	4	5	6	7	8	9
T	4.9	8.2	3.3	14.8	14.8	14.8	13.1	14.8	11.5
N	8.2	11.5	13.1	19.7	8.2	13.1	11.5	6.6	8.2
P	11.5	11.5	3.3	11.5	16.4	11.5	16.4	9.8	8.2
Group C									
	1	2	3	4	5	6	7	8	9
T	2.7	9.6	5.5	8.2	8.2	9.6	20.5	13.7	21.9
N	5.5	6.8	12.3	11.0	9.6	16.4	13.7	9.6	15.1
P	4.1	6.8	8.2	13.7	8.2	15.1	16.4	9.6	17.8
Group D									
	1	2	3	4	5	6	7	8	9
T	10.1	5.1	7.6	8.9	8.9	13.9	17.7	13.9	13.9
N	11.4	7.6	7.6	10.1	22.8	12.7	7.6	10.1	10.1
P	15.2	5.1	12.7	3.8	15.2	10.1	12.7	13.9	11.4

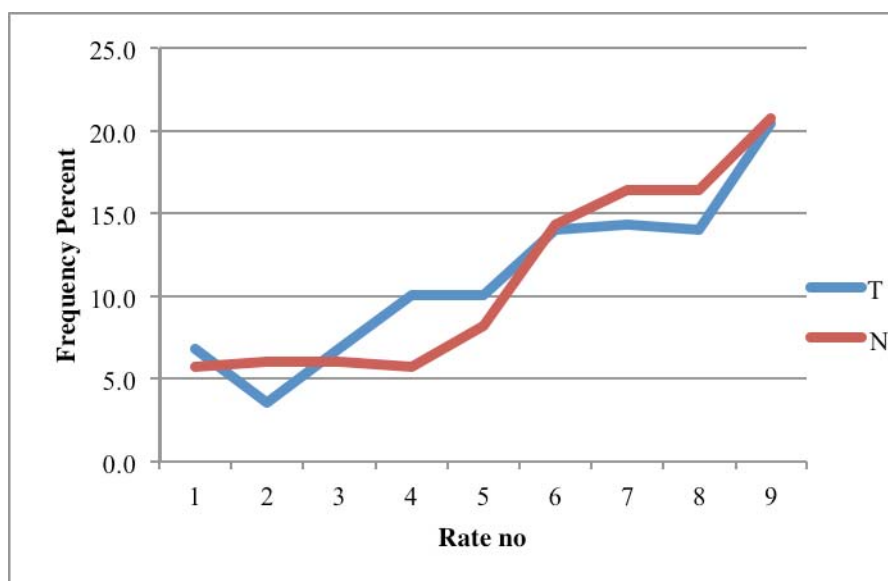


Figure D.7: Shoe 7

Table D.7: Shoe 7

All Cases									
	1	2	3	4	5	6	7	8	9
T	6.8	3.6	6.8	10.0	10.0	14.0	14.3	14.0	20.4
N	5.7	6.1	6.1	5.7	8.2	14.3	16.5	16.5	20.8
P	13.3	6.5	8.2	9.3	10.0	10.8	12.9	13.6	15.4

Group A									
	1	2	3	4	5	6	7	8	9
T	9.1	6.1	7.6	9.1	4.5	21.2	13.6	9.1	19.7
N	9.1	9.1	9.1	7.6	10.6	9.1	18.2	9.1	18.2
P	18.2	13.6	9.1	9.1	7.6	9.1	10.6	9.1	13.6

Group B									
	1	2	3	4	5	6	7	8	9
T	6.6	1.6	9.8	14.8	11.5	13.1	14.8	11.5	16.4
N	3.3	4.9	9.8	6.6	11.5	8.2	9.8	23.0	23.0
P	11.5	3.3	11.5	13.1	11.5	9.8	11.5	16.4	11.5

Group C									
	1	2	3	4	5	6	7	8	9
T	6.8	2.7	1.4	12.3	9.6	17.8	15.1	13.7	20.5
N	5.5	1.4	2.7	5.5	4.1	20.5	20.5	19.2	20.5
P	12.3	4.1	6.8	11.0	9.6	11.0	12.3	16.4	16.4

Group D									
	1	2	3	4	5	6	7	8	9
T	5.1	3.8	8.9	5.1	13.9	5.1	13.9	20.3	24.1
N	5.1	8.9	3.8	3.8	7.6	17.7	16.5	15.2	21.5
P	11.4	5.1	6.3	5.1	11.4	12.7	16.5	12.7	19.0

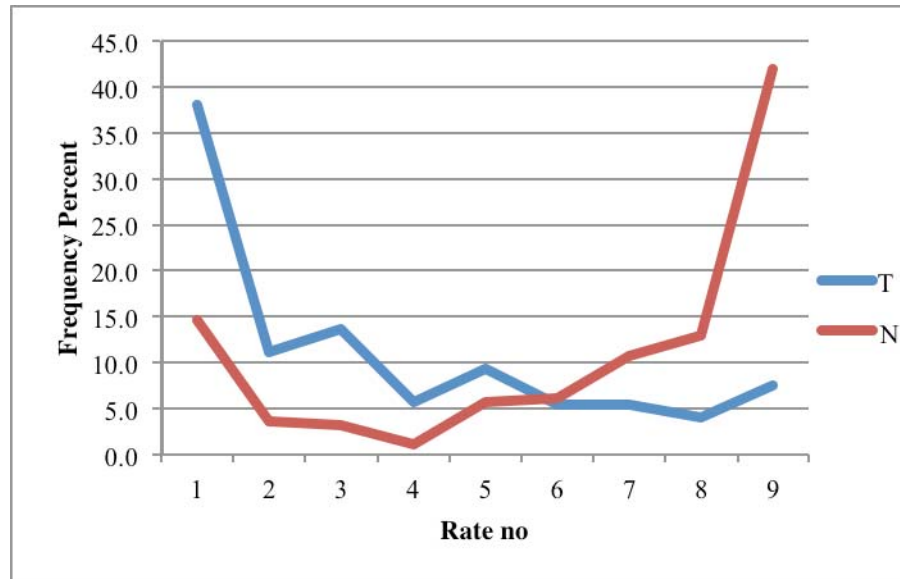


Figure D.8: Shoe 8

Table D.8: Shoe 8

All Cases									
	1	2	3	4	5	6	7	8	9
T	38.0	11.1	13.6	5.7	9.3	5.4	5.4	3.9	7.5
N	14.7	3.6	3.2	1.1	5.7	6.1	10.8	12.9	41.9
P	64.5	11.8	10.4	5.0	2.5	2.2	1.4	1.1	1.1

Group A									
	1	2	3	4	5	6	7	8	9
T	34.8	13.6	12.1	0.0	10.6	6.1	7.6	3.0	12.1
N	10.6	7.6	4.5	0.0	9.1	10.6	15.2	12.1	30.3
P	66.7	10.6	12.1	4.5	1.5	1.5	0.0	1.5	1.5

Group B									
	1	2	3	4	5	6	7	8	9
T	42.6	11.5	11.5	6.6	9.8	4.9	1.6	4.9	6.6
N	16.4	1.6	1.6	1.6	9.8	1.6	8.2	9.8	49.2
P	62.3	14.8	3.3	9.8	3.3	1.6	3.3	1.6	0.0

Group C									
	1	2	3	4	5	6	7	8	9
T	39.7	5.5	16.4	6.8	11.0	2.7	6.8	4.1	6.8
N	15.1	2.7	1.4	1.4	2.7	5.5	9.6	15.1	46.6
P	63.0	8.2	13.7	5.5	4.1	2.7	1.4	0.0	1.4

Group D									
	1	2	3	4	5	6	7	8	9
T	35.4	13.9	13.9	8.9	6.3	7.6	5.1	3.8	5.1
N	16.5	2.5	5.1	1.3	2.5	6.3	10.1	13.9	41.8
P	65.8	13.9	11.4	1.3	1.3	2.5	1.3	1.3	1.3

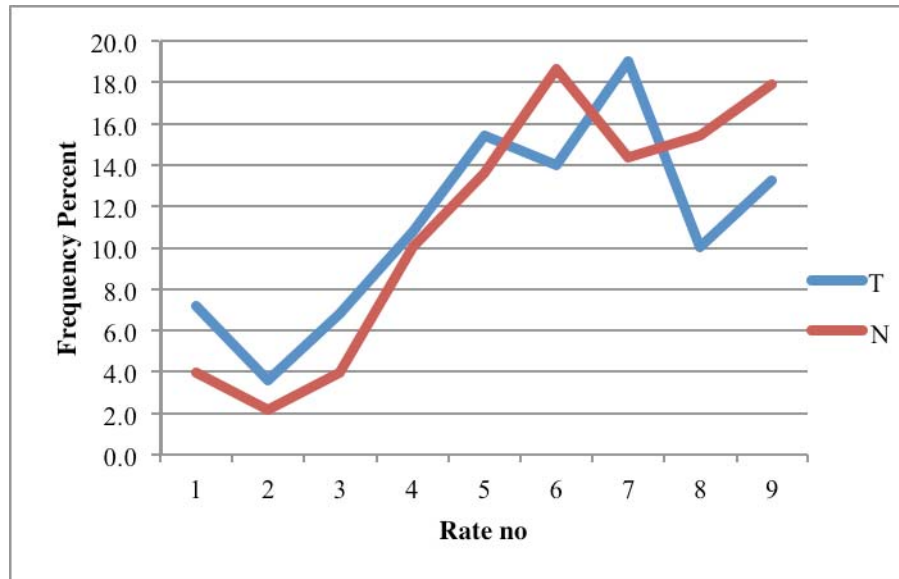


Figure D.9: Shoe 9

Table D.9: Shoe 9

All Cases									
	1	2	3	4	5	6	7	8	9
T	7.2	3.6	6.8	10.8	15.4	14.0	19.0	10.0	13.3
N	3.9	2.2	3.9	10.0	13.6	18.6	14.3	15.4	17.9
P	12.5	10.8	10.8	13.3	14.3	11.1	9.3	8.2	9.7
Group A									
	1	2	3	4	5	6	7	8	9
T	9.1	3.0	6.1	10.6	16.7	12.1	19.7	9.1	13.6
N	6.1	1.5	4.5	12.1	15.2	21.2	13.6	6.1	19.7
P	18.2	6.1	9.1	22.7	13.6	7.6	9.1	4.5	9.1
Group B									
	1	2	3	4	5	6	7	8	9
T	4.9	4.9	9.8	8.2	18.0	11.5	16.4	13.1	13.1
N	1.6	0.0	6.6	8.2	16.4	14.8	18.0	16.4	18.0
P	8.2	9.8	11.5	11.5	19.7	8.2	4.9	16.4	9.8
Group C									
	1	2	3	4	5	6	7	8	9
T	4.1	1.4	2.7	11.0	16.4	15.1	17.8	15.1	16.4
N	0.0	1.4	5.5	12.3	11.0	15.1	9.6	23.3	21.9
P	4.1	11.0	15.1	12.3	8.2	15.1	12.3	9.6	12.3
Group D									
	1	2	3	4	5	6	7	8	9
T	10.1	5.1	8.9	12.7	11.4	16.5	21.5	3.8	10.1
N	7.6	5.1	0.0	7.6	12.7	22.8	16.5	15.2	12.7
P	19.0	15.2	7.6	7.6	16.5	12.7	10.1	3.8	7.6

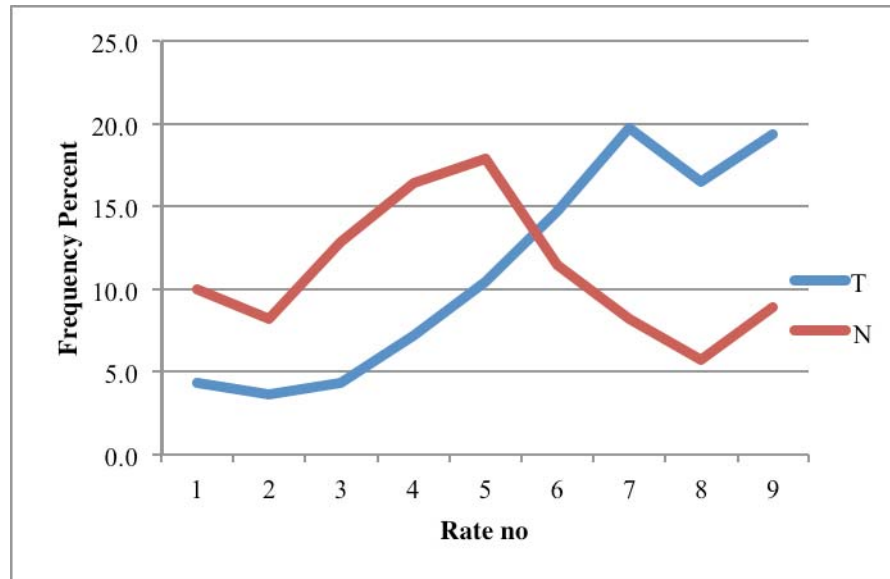


Figure D.10: Shoe 10

Table D.10: Shoe 10

All Cases									
	1	2	3	4	5	6	7	8	9
T	4.3	3.6	4.3	7.2	10.4	14.7	19.7	16.5	19.4
N	10.0	8.2	12.9	16.5	17.9	11.5	8.2	5.7	9.0
P	4.7	3.9	6.5	8.6	11.8	13.6	16.5	16.1	18.3
Group A									
	1	2	3	4	5	6	7	8	9
T	6.1	0.0	6.1	7.6	9.1	16.7	22.7	18.2	13.6
N	12.1	3.0	13.6	18.2	21.2	10.6	6.1	10.6	4.5
P	6.1	3.0	6.1	9.1	12.1	10.6	21.2	19.7	12.1
Group B									
	1	2	3	4	5	6	7	8	9
T	3.3	8.2	3.3	4.9	8.2	14.8	23.0	16.4	18.0
N	8.2	16.4	16.4	8.2	18.0	8.2	13.1	6.6	4.9
P	1.6	8.2	6.6	3.3	21.3	11.5	18.0	14.8	14.8
Group C									
	1	2	3	4	5	6	7	8	9
T	5.5	2.7	1.4	8.2	11.0	16.4	16.4	13.7	24.7
N	8.2	8.2	9.6	20.5	12.3	16.4	8.2	0.0	16.4
P	4.1	1.4	5.5	12.3	9.6	12.3	15.1	13.7	26.0
Group D									
	1	2	3	4	5	6	7	8	9
T	2.5	3.8	6.3	7.6	12.7	11.4	17.7	17.7	20.3
N	11.4	6.3	12.7	17.7	20.3	10.1	6.3	6.3	8.9
P	6.3	3.8	7.6	8.9	6.3	19.0	12.7	16.5	19.0

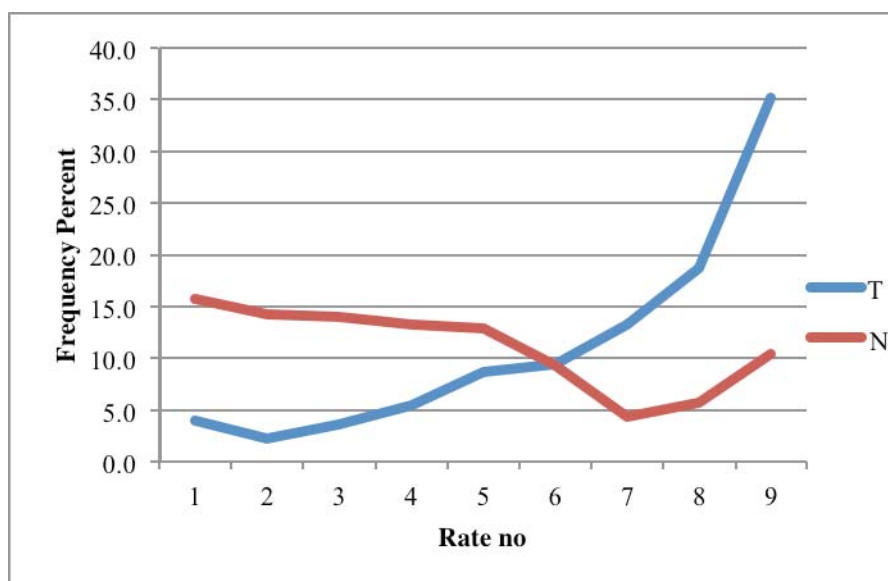


Figure D.11: Shoe 11

Table D.11: Shoe 11

All Cases									
	1	2	3	4	5	6	7	8	9
T	3.9	2.2	3.6	5.4	8.6	9.3	13.3	18.6	35.1
N	15.8	14.3	14.0	13.3	12.9	9.3	4.3	5.7	10.4
P	1.4	1.8	3.6	5.4	11.5	7.2	17.6	19.4	32.3
Group A									
	1	2	3	4	5	6	7	8	9
T	6.1	0.0	1.5	6.1	4.5	12.1	12.1	13.6	43.9
N	13.6	9.1	13.6	19.7	10.6	13.6	6.1	4.5	9.1
P	3.0	0.0	6.1	3.0	7.6	9.1	15.2	15.2	40.9
Group B									
	1	2	3	4	5	6	7	8	9
T	1.6	3.3	4.9	9.8	6.6	6.6	13.1	18.0	36.1
N	16.4	13.1	14.8	11.5	13.1	8.2	3.3	9.8	9.8
P	0.0	4.9	1.6	6.6	11.5	1.6	27.9	18.0	27.9
Group C									
	1	2	3	4	5	6	7	8	9
T	5.5	1.4	4.1	4.1	16.4	8.2	8.2	19.2	32.9
N	11.0	24.7	15.1	11.0	12.3	4.1	4.1	4.1	13.7
P	2.7	1.4	4.1	6.8	20.5	6.8	12.3	15.1	30.1
Group D									
	1	2	3	4	5	6	7	8	9
T	2.5	3.8	3.8	2.5	6.3	10.1	19.0	22.8	29.1
N	21.5	10.1	12.7	11.4	15.2	11.4	3.8	5.1	8.9
P	0.0	1.3	2.5	5.1	6.3	10.1	16.5	27.8	30.4

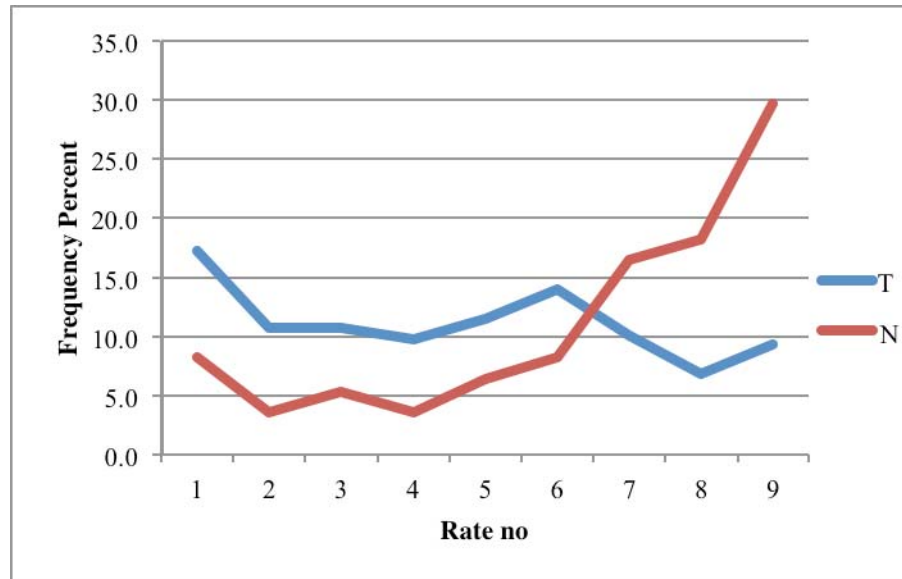


Figure D.12: Shoe 12

Table D.12: Shoe 12

All Cases									
	1	2	3	4	5	6	7	8	9
T	17.2	10.8	10.8	9.7	11.5	14.0	10.0	6.8	9.3
N	8.2	3.6	5.4	3.6	6.5	8.2	16.5	18.3	29.7
P	36.6	11.8	10.8	10.4	9.3	6.1	5.7	4.3	5.0

Group A									
	1	2	3	4	5	6	7	8	9
T	16.7	6.1	13.6	6.1	13.6	15.2	13.6	4.5	10.6
N	7.6	6.1	3.0	7.6	6.1	9.1	15.2	18.2	27.3
P	34.8	18.2	13.6	9.1	10.6	7.6	1.5	3.0	1.5

Group B									
	1	2	3	4	5	6	7	8	9
T	18.0	9.8	14.8	8.2	14.8	13.1	3.3	8.2	9.8
N	8.2	3.3	6.6	1.6	4.9	4.9	11.5	21.3	37.7
P	36.1	9.8	4.9	16.4	9.8	6.6	4.9	4.9	6.6

Group C									
	1	2	3	4	5	6	7	8	9
T	19.2	11.0	11.0	9.6	8.2	16.4	5.5	6.8	12.3
N	11.0	1.4	6.8	2.7	4.1	9.6	17.8	16.4	30.1
P	37.0	8.2	12.3	11.0	5.5	5.5	5.5	6.8	8.2

Group D									
	1	2	3	4	5	6	7	8	9
T	15.2	15.2	5.1	13.9	10.1	11.4	16.5	7.6	5.1
N	6.3	3.8	5.1	2.5	10.1	8.9	20.3	17.7	25.3
P	38.0	11.4	11.4	6.3	11.4	5.1	10.1	2.5	3.8

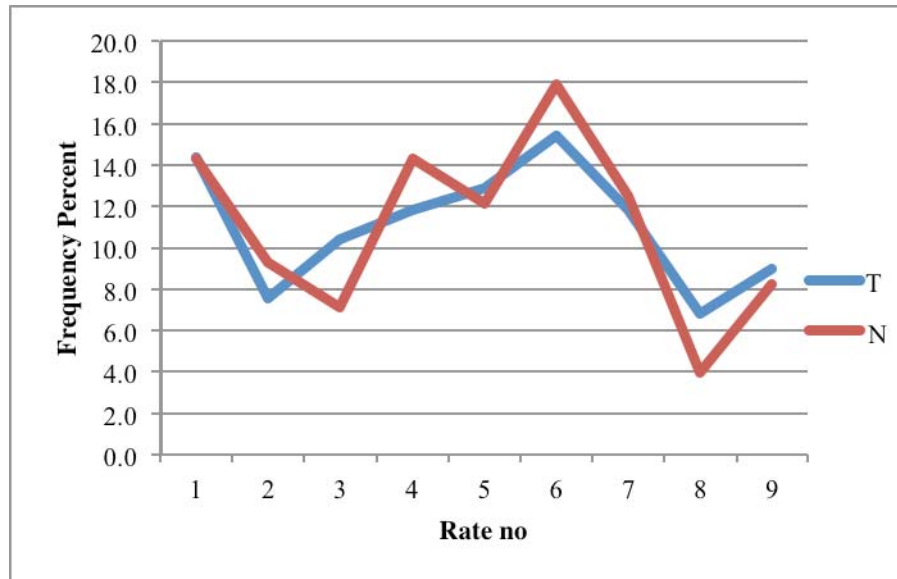


Figure D.13: Shoe 13

Table D.13: Shoe 13

All Cases									
	1	2	3	4	5	6	7	8	9
T	14.3	7.5	10.4	11.8	12.9	15.4	11.8	6.8	9.0
N	14.3	9.3	7.2	14.3	12.2	17.9	12.5	3.9	8.2
P	26.9	11.5	13.6	14.0	9.0	9.0	4.7	5.7	5.7

Group A									
	1	2	3	4	5	6	7	8	9
T	10.6	13.6	6.1	15.2	12.1	16.7	13.6	3.0	9.1
N	10.6	15.2	6.1	15.2	12.1	19.7	10.6	3.0	7.6
P	22.7	16.7	15.2	16.7	4.5	9.1	6.1	4.5	4.5

Group B									
	1	2	3	4	5	6	7	8	9
T	11.5	8.2	13.1	13.1	9.8	18.0	11.5	4.9	9.8
N	13.1	9.8	9.8	18.0	8.2	19.7	8.2	3.3	9.8
P	27.9	8.2	13.1	18.0	13.1	3.3	4.9	6.6	4.9

Group C									
	1	2	3	4	5	6	7	8	9
T	20.5	2.7	5.5	11.0	13.7	17.8	6.8	11.0	11.0
N	17.8	6.8	6.8	9.6	15.1	16.4	15.1	4.1	8.2
P	28.8	8.2	13.7	11.0	8.2	12.3	4.1	5.5	8.2

Group D									
	1	2	3	4	5	6	7	8	9
T	13.9	6.3	16.5	8.9	15.2	10.1	15.2	7.6	6.3
N	15.2	6.3	6.3	15.2	12.7	16.5	15.2	5.1	7.6
P	27.8	12.7	12.7	11.4	10.1	10.1	3.8	6.3	5.1

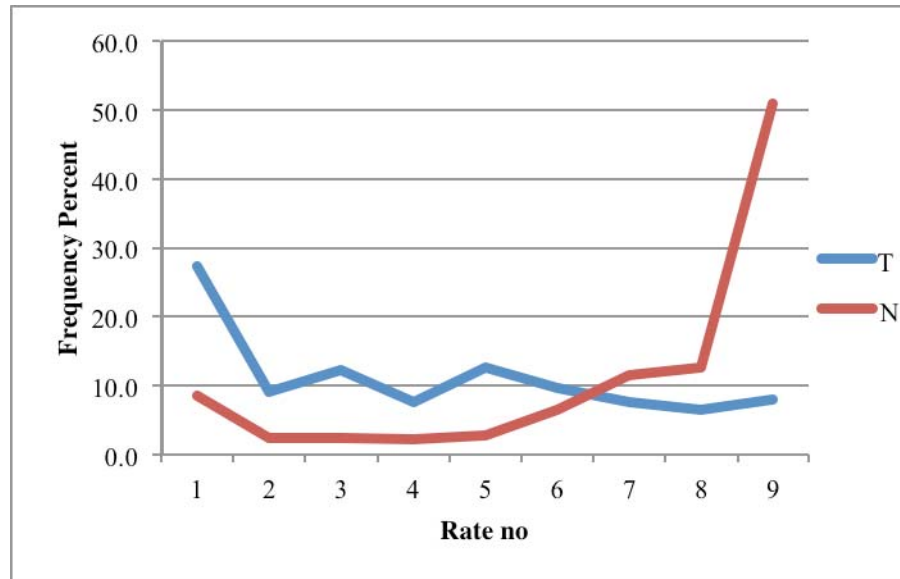


Figure D.14: Shoe 14

Table D.14: Shoe 14

All Cases									
	1	2	3	4	5	6	7	8	9
T	27.2	9.0	12.2	7.5	12.5	9.7	7.5	6.5	7.9
N	8.6	2.5	2.5	2.2	2.9	6.5	11.5	12.5	50.9
P	47.3	9.3	12.5	4.3	7.5	6.8	5.4	2.2	4.7
Group A									
	1	2	3	4	5	6	7	8	9
T	25.8	7.6	12.1	6.1	12.1	12.1	6.1	10.6	7.6
N	6.1	1.5	1.5	7.6	1.5	13.6	10.6	12.1	45.5
P	47.0	9.1	22.7	6.1	4.5	1.5	4.5	0.0	4.5
Group B									
	1	2	3	4	5	6	7	8	9
T	31.1	6.6	13.1	3.3	8.2	9.8	14.8	4.9	8.2
N	8.2	1.6	4.9	1.6	6.6	4.9	3.3	11.5	57.4
P	47.5	6.6	4.9	3.3	9.8	9.8	11.5	1.6	4.9
Group C									
	1	2	3	4	5	6	7	8	9
T	26.0	11.0	13.7	9.6	12.3	8.2	4.1	2.7	12.3
N	12.3	4.1	1.4	0.0	1.4	2.7	15.1	11.0	52.1
P	45.2	11.0	11.0	8.2	5.5	4.1	6.8	1.4	6.8
Group D									
	1	2	3	4	5	6	7	8	9
T	26.6	10.1	10.1	10.1	16.5	8.9	6.3	7.6	3.8
N	7.6	2.5	2.5	0.0	2.5	5.1	15.2	15.2	49.4
P	49.4	10.1	11.4	0.0	10.1	11.4	0.0	5.1	2.5

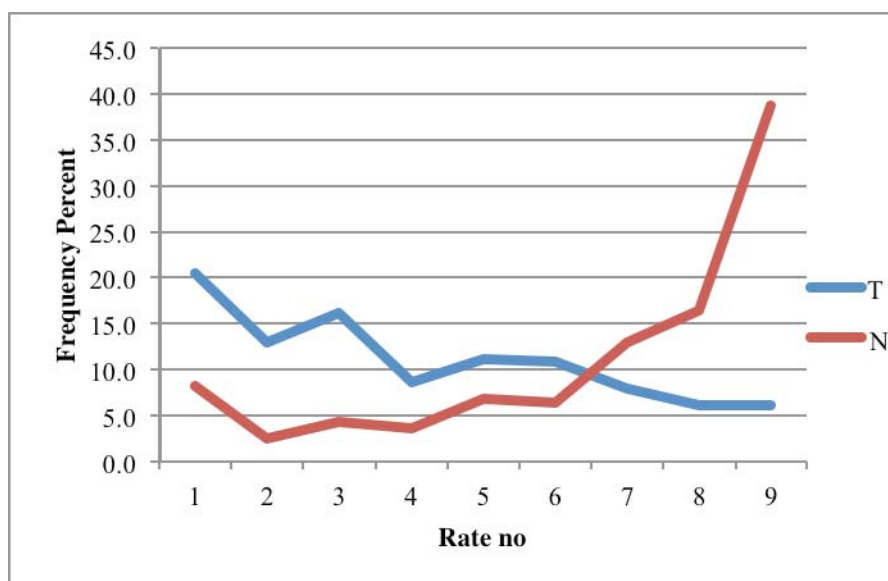


Figure D.15: Shoe 15

Table D.15: Shoe 15

All Cases									
	1	2	3	4	5	6	7	8	9
T	20.4	12.9	16.1	8.6	11.1	10.8	7.9	6.1	6.1
N	8.2	2.5	4.3	3.6	6.8	6.5	12.9	16.5	38.7
P	41.2	12.5	11.1	7.5	9.3	8.2	3.6	3.9	2.5
Group A									
	1	2	3	4	5	6	7	8	9
T	19.7	12.1	10.6	13.6	9.1	12.1	6.1	9.1	7.6
N	4.5	4.5	7.6	4.5	12.1	7.6	7.6	18.2	33.3
P	40.9	10.6	12.1	13.6	10.6	1.5	4.5	3.0	3.0
Group B									
	1	2	3	4	5	6	7	8	9
T	23.0	9.8	21.3	6.6	6.6	11.5	11.5	4.9	4.9
N	11.5	3.3	3.3	0.0	3.3	6.6	16.4	16.4	39.3
P	34.4	14.8	14.8	3.3	13.1	13.1	0.0	6.6	0.0
Group C									
	1	2	3	4	5	6	7	8	9
T	21.9	6.8	19.2	8.2	11.0	12.3	8.2	5.5	6.8
N	11.0	1.4	5.5	4.1	2.7	6.8	15.1	11.0	42.5
P	42.5	9.6	12.3	6.8	8.2	5.5	4.1	6.8	4.1
Group D									
	1	2	3	4	5	6	7	8	9
T	17.7	21.5	13.9	6.3	16.5	7.6	6.3	5.1	5.1
N	6.3	1.3	1.3	5.1	8.9	5.1	12.7	20.3	39.2
P	45.6	15.2	6.3	6.3	6.3	12.7	5.1	0.0	2.5

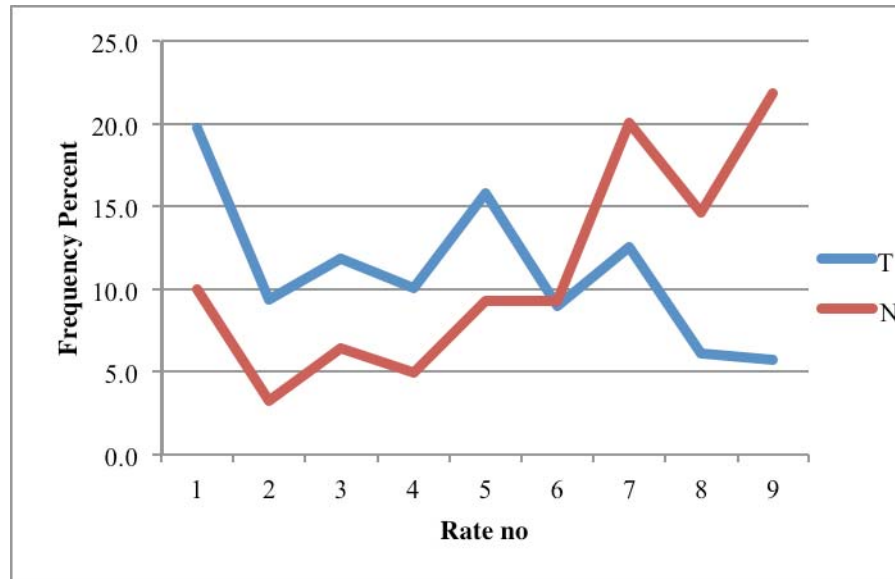


Figure D.16: Shoe 16

Table D.16: Shoe 16

All Cases									
	1	2	3	4	5	6	7	8	9
T	19.7	9.3	11.8	10.0	15.8	9.0	12.5	6.1	5.7
N	10.0	3.2	6.5	5.0	9.3	9.3	20.1	14.7	21.9
P	36.9	11.8	13.3	7.9	10.8	6.5	4.3	4.3	4.3
Group A									
	1	2	3	4	5	6	7	8	9
T	12.1	15.2	13.6	9.1	12.1	4.5	15.2	12.1	6.1
N	6.1	3.0	7.6	4.5	15.2	9.1	15.2	19.7	19.7
P	36.4	15.2	16.7	7.6	4.5	1.5	7.6	3.0	7.6
Group B									
	1	2	3	4	5	6	7	8	9
T	19.7	4.9	14.8	9.8	21.3	11.5	9.8	3.3	4.9
N	13.1	1.6	4.9	1.6	6.6	6.6	26.2	14.8	24.6
P	32.8	9.8	16.4	3.3	13.1	14.8	6.6	1.6	1.6
Group C									
	1	2	3	4	5	6	7	8	9
T	17.8	6.8	15.1	12.3	13.7	8.2	12.3	6.8	6.8
N	11.0	5.5	8.2	4.1	6.8	11.0	15.1	15.1	23.3
P	34.2	11.0	12.3	11.0	6.8	5.5	4.1	11.0	4.1
Group D									
	1	2	3	4	5	6	7	8	9
T	27.8	10.1	5.1	8.9	16.5	11.4	12.7	2.5	5.1
N	10.1	2.5	5.1	8.9	8.9	10.1	24.1	10.1	20.3
P	43.0	11.4	8.9	8.9	17.7	5.1	0.0	1.3	3.8

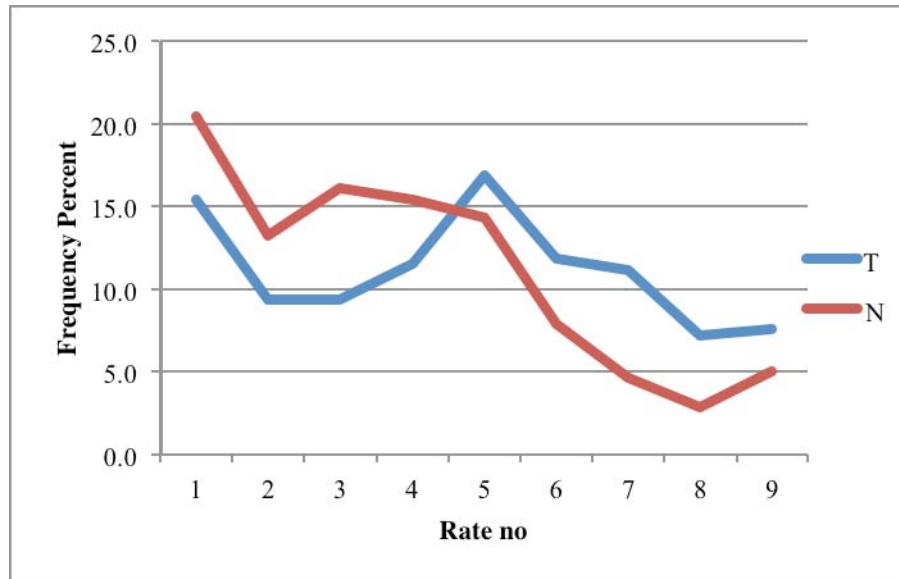


Figure D.17: Shoe 17

Table D.17: Shoe 17

All Cases									
	1	2	3	4	5	6	7	8	9
T	15.4	9.3	9.3	11.5	16.8	11.8	11.1	7.2	7.5
N	20.4	13.3	16.1	15.4	14.3	7.9	4.7	2.9	5.0
P	20.8	11.8	16.5	14.3	12.2	8.6	7.9	2.2	5.7
Group A									
	1	2	3	4	5	6	7	8	9
T	13.6	6.1	12.1	12.1	15.2	4.5	15.2	15.2	6.1
N	19.7	16.7	7.6	16.7	16.7	10.6	4.5	3.0	4.5
P	18.2	13.6	24.2	12.1	10.6	9.1	6.1	1.5	4.5
Group B									
	1	2	3	4	5	6	7	8	9
T	13.1	8.2	8.2	13.1	18.0	13.1	14.8	3.3	8.2
N	13.1	16.4	18.0	21.3	11.5	3.3	4.9	4.9	6.6
P	18.0	4.9	11.5	19.7	11.5	16.4	9.8	1.6	6.6
Group C									
	1	2	3	4	5	6	7	8	9
T	16.4	11.0	6.8	5.5	16.4	19.2	12.3	5.5	6.8
N	21.9	11.0	17.8	11.0	17.8	8.2	6.8	1.4	4.1
P	21.9	8.2	15.1	15.1	9.6	8.2	12.3	1.4	8.2
Group D									
	1	2	3	4	5	6	7	8	9
T	17.7	11.4	10.1	15.2	17.7	10.1	3.8	5.1	8.9
N	25.3	10.1	20.3	13.9	11.4	8.9	2.5	2.5	5.1
P	24.1	19.0	15.2	11.4	16.5	2.5	3.8	3.8	3.8

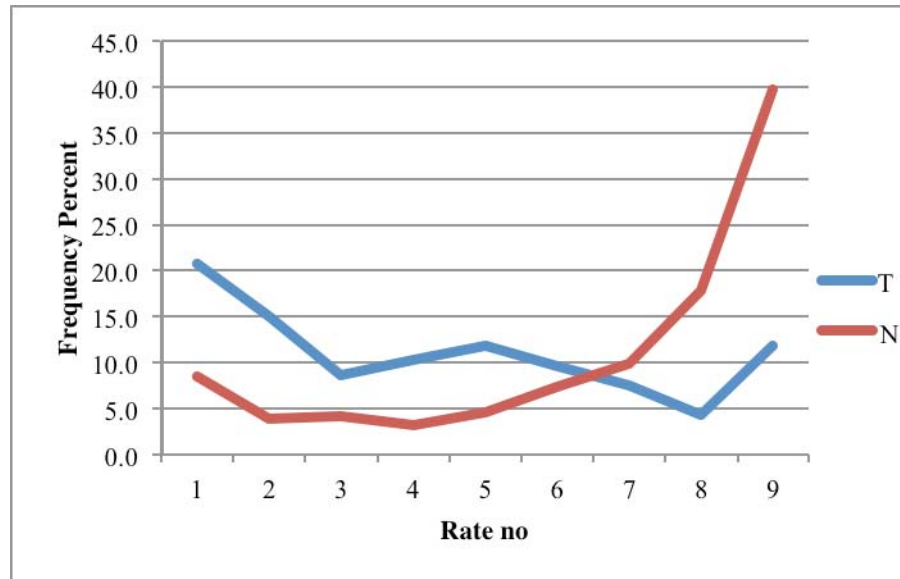


Figure D.18: Shoe 18

Table D.18: Shoe 18

All Cases									
	1	2	3	4	5	6	7	8	9
T	20.8	15.1	8.6	10.4	11.8	9.7	7.5	4.3	11.8
N	8.6	3.9	4.3	3.2	4.7	7.5	10.0	17.9	39.8
P	35.5	11.5	12.9	6.5	7.5	5.4	6.8	3.2	10.8

Group A									
	1	2	3	4	5	6	7	8	9
T	10.6	22.7	10.6	9.1	12.1	9.1	7.6	6.1	12.1
N	4.5	9.1	4.5	4.5	3.0	13.6	9.1	16.7	34.8
P	43.9	13.6	9.1	10.6	4.5	4.5	4.5	4.5	4.5

Group B									
	1	2	3	4	5	6	7	8	9
T	19.7	13.1	8.2	8.2	16.4	9.8	11.5	3.3	9.8
N	6.6	0.0	3.3	3.3	8.2	3.3	11.5	19.7	44.3
P	21.3	11.5	21.3	8.2	8.2	6.6	6.6	3.3	13.1

Group C									
	1	2	3	4	5	6	7	8	9
T	21.9	16.4	9.6	12.3	8.2	8.2	5.5	4.1	13.7
N	12.3	4.1	4.1	2.7	4.1	9.6	6.8	13.7	42.5
P	34.2	9.6	8.2	6.8	9.6	5.5	8.2	5.5	12.3

Group D									
	1	2	3	4	5	6	7	8	9
T	29.1	8.9	6.3	11.4	11.4	11.4	6.3	3.8	11.4
N	10.1	2.5	5.1	2.5	3.8	3.8	12.7	21.5	38.0
P	40.5	11.4	13.9	1.3	7.6	5.1	7.6	0.0	12.7

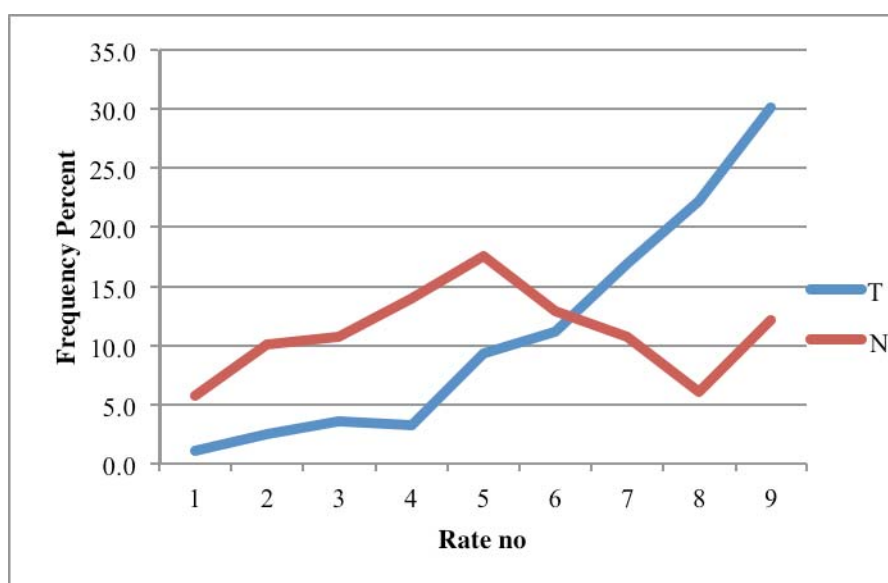


Figure D.19: Shoe 19

Table D.19: Shoe 19

All Cases									
	1	2	3	4	5	6	7	8	9
T	1.1	2.5	3.6	3.2	9.3	11.1	16.8	22.2	30.1
N	5.7	10.0	10.8	14.0	17.6	12.9	10.8	6.1	12.2
P	1.4	2.2	3.9	7.2	10.0	6.8	16.8	25.8	25.8
Group A									
	1	2	3	4	5	6	7	8	9
T	0.0	3.0	4.5	1.5	7.6	15.2	15.2	24.2	28.8
N	6.1	7.6	13.6	10.6	16.7	18.2	7.6	9.1	10.6
P	0.0	3.0	4.5	6.1	9.1	6.1	16.7	28.8	25.8
Group B									
	1	2	3	4	5	6	7	8	9
T	3.3	4.9	3.3	3.3	8.2	4.9	16.4	29.5	26.2
N	6.6	14.8	9.8	8.2	21.3	9.8	9.8	8.2	11.5
P	3.3	3.3	4.9	6.6	3.3	4.9	13.1	31.1	29.5
Group C									
	1	2	3	4	5	6	7	8	9
T	1.4	1.4	1.4	2.7	8.2	12.3	20.5	19.2	32.9
N	5.5	12.3	6.8	15.1	16.4	13.7	13.7	4.1	12.3
P	0.0	1.4	4.1	5.5	12.3	8.2	20.5	23.3	24.7
Group D									
	1	2	3	4	5	6	7	8	9
T	0.0	1.3	5.1	5.1	12.7	11.4	15.2	17.7	31.6
N	5.1	6.3	12.7	20.3	16.5	10.1	11.4	3.8	13.9
P	2.5	1.3	2.5	10.1	13.9	7.6	16.5	21.5	24.1

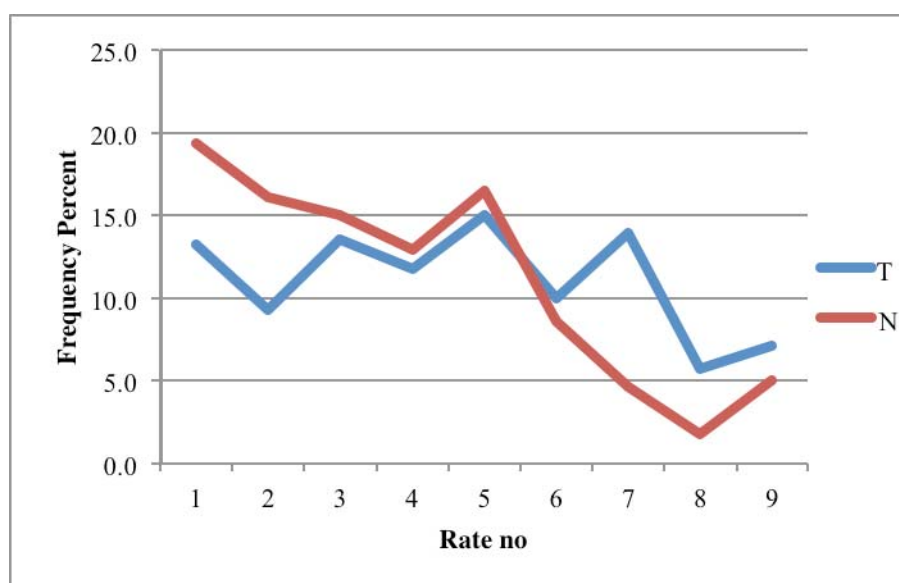


Figure D.20: Shoe 20

Table D.20: Shoe 20

All Cases									
	1	2	3	4	5	6	7	8	9
T	13.3	9.3	13.6	11.8	15.1	10.0	14.0	5.7	7.2
N	19.4	16.1	15.1	12.9	16.5	8.6	4.7	1.8	5.0
P	22.9	15.1	19.0	11.8	7.5	10.4	6.1	2.9	4.3
Group A									
	1	2	3	4	5	6	7	8	9
T	9.1	13.6	13.6	6.1	16.7	15.2	15.2	3.0	7.6
N	12.1	19.7	16.7	10.6	19.7	10.6	6.1	0.0	4.5
P	16.7	16.7	21.2	10.6	9.1	13.6	6.1	1.5	4.5
Group B									
	1	2	3	4	5	6	7	8	9
T	14.8	6.6	9.8	14.8	14.8	9.8	13.1	6.6	9.8
N	21.3	9.8	14.8	16.4	18.0	6.6	3.3	3.3	6.6
P	24.6	18.0	14.8	13.1	6.6	6.6	4.9	4.9	6.6
Group C									
	1	2	3	4	5	6	7	8	9
T	16.4	5.5	17.8	15.1	12.3	6.8	12.3	6.8	6.8
N	24.7	19.2	13.7	8.2	11.0	12.3	2.7	1.4	6.8
P	23.3	8.2	24.7	8.2	9.6	13.7	5.5	1.4	5.5
Group D									
	1	2	3	4	5	6	7	8	9
T	12.7	11.4	12.7	11.4	16.5	8.9	15.2	6.3	5.1
N	19.0	15.2	15.2	16.5	17.7	5.1	6.3	2.5	2.5
P	26.6	17.7	15.2	15.2	5.1	7.6	7.6	3.8	1.3

APPENDIX E

Table E.1: Between group A and B

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Performance Risk	Equal variances assumed	5.815	0.017	11.907	125	0.000	2.965	0.249	2.472	3.458
	Equal variances not assumed			11.727	103.380	0.000	2.965	0.253	2.463	3.466
Social Risk	Equal variances assumed	0.095	0.759	10.503	125	0.000	2.635	0.251	2.138	3.131
	Equal variances not assumed			10.439	118.586	0.000	2.635	0.252	2.135	3.135

Table E.2: Between group A and C

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Performance Risk	Equal variances assumed	20.986	0.000	9.852	137	0.000	2.510	0.255	2.006	3.013
	Equal variances not assumed			10.075	122.141	0.000	2.510	0.249	2.017	3.003
Social Risk	Equal variances assumed	4.463	0.036	8.171	137	0.000	2.153	0.264	1.632	2.674
	Equal variances not assumed			8.290	132.396	0.000	2.153	0.260	1.639	2.667

Table E.3: Between group B and group C

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Performance Risk	Equal variances assumed	2.191	0.141	1.518	132	0.131	-0.455	0.300	-1.048	0.138
	Equal variances not assumed			1.528	130.354	0.129	-0.455	0.298	-1.044	0.134
Social Risk	Equal variances assumed	2.307	0.131	1.685	132	0.094	-0.482	0.286	-1.047	0.084
	Equal variances not assumed			1.706	131.745	0.090	-0.482	0.282	-1.040	0.077

APPENDIX F

Table F.1: Bivariate correlations for group A

		T	N	P
T	Pearson Correlation	1	0.361**	0.67**
	Sig. (2-tailed)		0.000	0.000
	N	1320	1320	1320
N	Pearson Correlation	0.361**	1	0.26**
	Sig. (2-tailed)	0.000		0.000
	N	1320	1320	1320
P	Pearson Correlation	0.67**	0.26**	1
	Sig. (2-tailed)	0.000	0.000	
	N	1320	1320	1320

**. Correlation is significant at the 0.01 level (2-tailed).

Table F.2: Bivariate correlations for group B

		T	N	P
T	Pearson Correlation	1	0.324**	0.71**
	Sig. (2-tailed)		0.000	0.000
	N	1220	1220	1220
N	Pearson Correlation	0.324**	1	0.29**
	Sig. (2-tailed)	0.000		0.000
	N	1220	1220	1220
P	Pearson Correlation	0.71**	0.29**	1
	Sig. (2-tailed)	0.000	0.000	
	N	1220	1220	1220

**. Correlation is significant at the 0.01 level (2-tailed).

Table F.3: Bivariate correlations for group C

		T	N	P
T	Pearson Correlation	1	0.39**	0.73**
	Sig. (2-tailed)		0.000	0.000
	N	1460	1460	1460
N	Pearson Correlation	0.39**	1	0.32**
	Sig. (2-tailed)	0.000		0.000
	N	1460	1460	1460
P	Pearson Correlation	0.73**	0.32**	1
	Sig. (2-tailed)	0.000	0.000	
	N	1460	1460	1460

**. Correlation is significant at the 0.01 level (2-tailed).

Table F.4: Bivariate correlations for group D

		T	N	P
T	Pearson Correlation	1	0.34**	0.74**
	Sig. (2-tailed)		0.000	0.000
	N	1580	1580	1580
N	Pearson Correlation	0.34**	1	0.24**
	Sig. (2-tailed)	0.000		0.000
	N	1580	1580	1580
P	Pearson Correlation	0.74**	0.24**	1
	Sig. (2-tailed)	0.000	0.000	
	N	1580	1580	1580

** . Correlation is significant at the 0.01 level (2-tailed).

Table F.5: Partial correlations for group A

Control Variables		P
N	T	Correlation 0.63**
		Significance (2-tailed) 0.000
		df 1317
T	N	Correlation 0.03
		Significance (2-tailed) 0.242
		df 1317

Table F.6: Partial correlations for group B

Control Variables		P
N	T	Correlation 0.68**
		Significance (2-tailed) 0.000
		df 1217
T	N	Correlation 0.09**
		Significance (2-tailed) 0.001
		df 1217

Table F.7: Partial correlations for group C

Control Variables		P
N	T	Correlation 0.70**
		Significance (2-tailed) 0.000
		df 1457
T	N	Correlation 0.05*
		Significance (2-tailed) 0.038
		df 1457

Table F.8: Partial correlations for group D

Control Variables	P		
N	T	Correlation	0.72**
		Significance (2-tailed)	0.000
		df	1577
T	N	Correlation	-0.01
		Significance (2-tailed)	0.728
		df	1577

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