

# **CUSTOMER PERCEPTION ANALYSIS OF STORES WITHIN THE FRAMEWORK OF EMPATHIC MIND**

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Lately, behavioral sciences have emphasized cognitive aspects with the increased interest on brain research, since all human functions are managed by brain, reality is perceived and internalized by brain as a consequence. Neurons are the functional units through which information transfer is conveyed between and among brain and human body. That is why, understanding brain means comprehending neurons as well as the linkages between them.

Mirror neurons are the most important neurons in determining consumer behavior, for these neurons are activated when people observe and imitate others' buying behavior. For instance, imitating the way a person is dressed up, acting as if dancing with a music that is playing on, desiring or wanting to buy the chocolate that is advertised are all triggered by mirror neurons. In sum, human beings visualize and imagine similar and common dreams through these mirror neurons.

This exploratory study is based on experimental research that is based on forming imaginary and cognitive perceptions. Our research question is about the influence of mirror neurons on consumer behavior. We have aimed at measuring the effect of consumer perception of stores on their buying behavior. By using convenience sampling, we have chosen 100 students of Firat University as our sample. The ages are between 18 to 26, that is, Y Generation, comprised of both genders from different faculties and departments of this university.

In our experimental design, we have first made the students imagine a store without any manipulation. Then, we made them describe the store that they have visualized in their minds.

We have anticipated that habits of buying behavior will be in alignment with both consumer perceptions and expectations; and we have found out as we had expected. As a concluding remark, we may state that the findings were limited within the confines of conventional behavioral patterns; no divergent result has been found. In sum, mirror neurons have made consumer behavior coverage into an uniform pattern.

Although our experiment along with our research are conducted in Elazığ, most of the students in the sample are from different provinces and cities; still we may only generalize the findings of this research for Y Generation in Turkey. The limitation of this study is its generalizability, which can be improved with respect to broader demographic features such as social status, age groups, other emergent markets, etc.

**Key words:** Mirror Neurons, Consumer Behavior, Experimental Research, Y Generation.

## **CUSTOMER PERCEPTION ANALYSIS OF STORES WITHIN THE FRAMEWORK OF EMPATHIC MIND**

### **1. Neurons and Mirror Neurons**

Brain is the physical management center which is responsible for all electrochemical neuronal actions in our head. It is a small organ that weighs 6 kg and that has 1500 cc volume. Brain is composed of more than 100 million live cells and neurons. It has about 1-million-kilometer fiber link. This small organ is considered as a manager of the body due to its complex structure. Even the smallest details affecting life and decision-making are directly related to the things that brain does and the functions that brain adopts. Brain is a crucial organ and composed of many neurons. (Renvoise ve Morin,2010;32). The long cells which have the capacity to be stimulated are called neurons, and they function as the fundamental components of processing information. (Churchland, 2012:202).

Neurons are the cell community which has the capacity to accumulate and transfer electrical current. Each neuron creates a communication system with the other neurons by realizing thousands of connections. (Topbaş, 2013:25-33). Neurons in the brain are small units which run the processes working on a function chain, through which they get information as an input and then send this knowledge, which becomes an output to the neurons coming after them. (Keysers, 2011:12).

A great number of neurons exist simultaneously in an active state. Neurons make up the language of the brain. Brain is shaped by the connections which are formed between neurons and they function according to these connections between them. (Topbaş, 2013:25-33). Neurons are the functional units through which information transfer is conveyed between and among brain and human body then making a decision after analyzing the information. (Topbaş, 2013:169).

It is vital to comprehend how neurons function and how the brain uses neurons to serve the demands of certain functions. Therefore, it will be very easy to make sense of neurons. Now that neurons undertake particular tasks, brain can function its numerous tasks. Brain serve for some other processes which cannot be observed easily such as hearing a particular sound, seeing a certain person's face and moving a part of the body. (Aamodt and Wang, 2013:50). When neurons are examined, one may come across a great number of neurons that each carry various functions. One group of these neurons are defined as 'Mirror Neurons'. In the region which is called F5, mirror neurons can be observed. Mirror neurons get the stimulating visual entries from the parts of the brain that views the actions of others visually. (Keysers, 2011:16).

A group of researchers from the University of Parma in Italy on macaque monkeys have made the discovery of mirror neurons during an experiment. Mirror neurons experienced a feeling of activity or cause to happen again in the mirror in reflective manner. Mirror neurons are the ones which made the monkeys visualize and imagine similar behavior. Mirror neurons are charged with the imitation of the behavior of others. (Cubuk, 2012;50-55 as cited in Altınbaş, *et. al*, 2010).

The material by mirror neurons that trigger and strengthen emotions and feelings more is referred as the "dopamine". This material gives pleasure to the person when secreted in the brain. When a cell-phone in a shiny package in shop windows or an amazing cake plate catches the eye of a person, dopamine is secreted. The feelings formed by the release of dopamine direct the person to that product. Brain gathers the data through the senses, and they make sense in this way. Sense of sight, hearing, sense of touch, sense of smell to detect elements in the surrounding impose a human to a certain brand (Altınbaş, *et al*, 2010).

Additionally, mirror neurons are responsible for the creation of a sense of empathy. Therefore, you tend to smile when you see a happy person; likewise, you have tendency to feel sad when you observe that a person is either bored or sad. Businesses use in commercials which present happy people through this aspect of brain's mirror neurons; that way the particular product is expected to make the users happy when used in the same sense of happiness as those in the advertisements. Businesses often benefit from mirror neurons in advertising of products using this feature.

Mirror neurons enable us to dream about a similar or common matters after connecting the things that we have seen due to our imitative nature. In our experimental design, we have first made the students imagine a store without any manipulation. Then, we made them describe the store that they have visualized in their minds. We have tested their habits of buying behavior in regards to the possibility of the idea that people act in line with the way the others act through imitation via "groupthink" as if they follow a their "herd instinct".

## **2. RESEARCH**

### **2.1.The aim, limit and choosing samples of research**

The investigation questionnaire consists of two parts. In the first part of this form; subjects are asked to imagine 3 sales representatives (1.one with a smiling face, 2.one with a pale and cheerless face, 3. on with sad looking) then describe their ages, the color of their clothes, hair, eyes, and skin with other information about them. In the second part, the subjects are requested to imagine a newly-launched store in order to get the ideas and perceptions of the subjects. Then, they are asked to provide information about the venue and the store that they have imagined.

The aim of the research is to aim at measuring the effect of consumer perception of stores on their buying behavior, at defining the similarities between the expectations and perceptions associated with store, and at measuring the efficiency level of the mirror neurons. The data about the sales representatives in the first part of the questionnaire will not be taken into consideration in this study.

Descriptive statistics and frequency distributions in the analysis have been examined by using SPSS 16.0 statistical software package. The findings are tested by evaluating the data through Reliability, Validity analyses as below.

## 2.2. Reliability and Validity Analysis

In order to determine the construct validity of the questionnaire, Factor Analysis is applied and Varimax Rotation (Rotation) method is used. According to the results of Factor Analysis employed in the research, Kaiser-Meyer-Olkin (KMO) value was found 0.56. Bartlett's test result was determined to be 61,260. Bartlett's test is significant at the .000 level. By Bartlett's test, there is a correlation between variables, and these variables are applied to factor analysis. However, in order to determine the reliability of the data, the model Alpha is conducted through Cronbach's Alpha, that is reliability co-efficient. At the end of the analysis in order to be able to say that the scale is reliable, Cronbach's alpha value is expected to be more than 0.80 (Bryman and Cramer, 1997: 78). In this case, reliability of the scale used in the study is analyzed and the corresponding coefficients are calculated as 0.89. Hence, the numbers and values were considered to be valid and reliable.

## 2.3. Summary of the Findings

In Table 1, demographic characteristics of respondents (e.g., gender) are indicated. In Table 2, there are signs for the perception of the store. These findings; are the characteristics of the physical surroundings of the store which are color of the wall, furniture, colors, the background music and the number of the customers. Perception in the minds of consumers for the shop is evaluated in light of these data. The demographic characteristics of the study, when evaluated in terms of gender; 66% female, 34% of the men have been identified.

**Chart 1:** Demographic Features of Participants/ respondents

Sex	n	%
Female	66	66
Male	34	34
<b>Total</b>	<b>100</b>	<b>100.0</b>

Table 2 the subjects are requested to describe the store's wall color, furniture color, the background music genres and customers according to the data which they get after having a dream about the newly opened store. In their responses to the color of the walls of the store: 43 as the color of the walls of the subjects answered that the cream is the very color; 22 subjects describe wall color as white color. Based on this information; 100 people in the group of subjects give their results; 43 subjects and 22 subjects answering the cream color similar to the color white in response to a total of 65 subjects in a similar tone down the wall color . Generally the store is located in the province of Elazığ, and it can be said that the subjects are affected by the store which they have previously seen because the color tones of the walls are close to the tone that subjects described. In other words, as a result of the interaction of subjects mirror neurons, the subjects are observed to give similar colors which they have seen before for the wall color.

When asked about the colors used in furniture stores this situation does not vary. When we look at the answers of the respondents have given; 36% of the subjects replies parallel with the color which most stores in Elazığ

use which is brown with classic furniture colors. Generally, stores frequently use classic colors like white and black and cream as preferred by the people in Elazığ and the number of the people are close to the others in respect to the answers. Subjects were asked about the music playing in the store. Considering the responses of the subjects; 67% of the people defined the type of the music as faster, while 33% of respondents have imagined the type of music as slow. As shown in Table 2; These data are given in detail.

**Chart 2:** Senses Related To Perceptions of Store

<b>Wall colors</b>	<b>n</b>	<b>%</b>	<b>Furniture colors</b>	<b>n</b>	<b>%</b>
Cream color	43	43	Brown	36	36
White	22	22	Cream color	13	13
Yellow	10	10	White	13	13
Blue	10	10	Black	12	12
Pink	4	4	Red	10	10
Red	4	4	Other	16	16
Green	3	3	<b>Total</b>	<b>100</b>	<b>100.0</b>
Purple	2	2	<b>Footfall</b>	<b>n</b>	<b>%</b>
Black	2	2	Crowded	60	60
<b>Total</b>	<b>100</b>	<b>100.0</b>	Middle	33	33
<b>Music of the phon</b>	<b>n</b>	<b>%</b>	Little	7	7
Fast	67	67	<b>Total</b>	<b>100</b>	<b>100.0</b>
Slow	33	33			
<b>Total</b>	<b>100</b>	<b>100.0</b>			

**Chart 3** Perceptions with respect to the sense of music and store

<b>Music Emotions</b>	<b>n</b>	<b>%</b>	<b>Liking Store</b>	<b>n</b>	<b>%</b>
Likes	86	86	Store	73	73
Knows	10	10	Salesman	16	16
Makes up	4	4	Other	11	11
<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>Total</b>	<b>100</b>	<b>100.0</b>

It was observed that the respondents were affected by stores they liked when they described purchasing and 60% imagined the stores as being crowded. Further, it was observed that the subjects who have similar perception of crowdedness of the store chose to act with the effect of the mirror neuron. In Chart 3, the sense of music, whether they liked or not, had an impact regarding their liking of the store: 86 % of the subjects chose the store because they liked the music. 10 % said the tune was familiar with them. Responding to the question why they go to store ; 73 % said they bought something just because they liked the store, 16% sent there just because they liked the sales representative. The answers of the subjects are almost the same. Brain makes decisions by being affected by the former information, the neurons have an immense effect on our preference, purchasing. As a result of we may state the fact that mirror neurons are effective

## CONCLUSION

It is difficult to understand brain which is such a complex organ. Most of the questions were brought to light within the framework of our empirical findings; however, there are many left unanswered. The aim of our experimental inquiry is to measure the perception of the respondents' purchasing, and to indicate the similarities between those perceptions and behaviors. This study was conducted in Elazığ and most of the sample group are made up of the students growing up outside of this province. Our findings may be generalized only for group Y. In future, the research can be broadened and generalizations may be made for young Turkish population as the target group of an emergent market.

## REFERENCES

AAMODT Sandra and WANG, Sam, **Welcome To Your Brain**, NTV press , Istanbul, 2013.

ALTINBAŞ, Kürşat, S GÜLÖKSÜZ, Sinan, ÖZÇETİNKAYA, Serap & E. Timuçin ORAL, **Empatinin Biyolojik Yönleri, Psikiyatride güncel yaklaşımlar**, 2010, EISSN 1309-0674.

BRYMAN, A., and DUNCAN C., (1997). **Quantitative Data Analysis with SPSS for Windows**, Routledge, NewYork.

CHURCLAND Paul M, **Matter and Consciousness**, Alfa Press, Istanbul, 2012

CUBUK, Fatma, "**A New Applied And Scientific Approach: Neuromarketing**, master's thesis , Kadir Has Universty, Istanbul, 2012.

KEYSERS Christian, **The Empathic Brain** , Alfa Press, Istanbul, 2011

RENVOISE, Patrick and MORIN, Christophe, **Neuromarketing**, 2. press, MediaCat, Istanbul, 2010

TOPBAŞ, Eriman, **Brain with the formation of walnut** , Ankara, 2013.

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