

Sensory Concept Map of Iași City Brand

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Abstract

Developing associations according with a brand can be done also by using Sensory Maps, which is basically a brand concept map showing graphical representation with links based on the five senses. We have conducted our research for the Iasi City brand.

We have conducted a research in order to quantify and analyze the associations provided by both students born in Iasi and in other cities in connection with Iasi brand.

The main objective is collecting associations determined by the five basic human sense (auditory, visual, olfactory, gustatory and somatic) made by the impulse of the subconscious (top of mind) and by the conscious (rationalized answer).

We consider that knowing and using the associations created with a city brand can be useful in order to increase the tourism, the number of students that come studying in it or the activities that can be developed.

Key words: Brand Concept Map, Sensory Map, subconscious associations, conscious associations

J.E.L. classification: M30, R59, Z18

1. Introduction

Senses can be defined as responses to diverse phenomenon that act upon sensory cells. These cells have neuronal connections with specific brain areas where the signals are received and interpreted. Humans have five traditional, basic senses: visual sense, olfactory sense, auditory sense, gustatory sense and somatic sense. Brain interpretation is considered as a fundamental instrument of data in developing perceptions.

Sensory maps are neuronal computations or representations in a topographic manner developed based on stimulation of the senses. Primary sensory cortex is widely validated as phenomenon used as an instrument for gathering data in neuroscience experiments. However, its functional significance has an important impact in the marketing field. Sensory mapping is the process of developing a framework according to human perceptions in relation with the senses.

Marketing and advertising, in particular, has been in continuous changing trying to intensify and facilitate the communication with consumers, but the outcomes are less and less valuable (Lindstrom, 2005, p. 37). In this context of need for innovation, Berry et al. (2002, p. 87) consider that the way for evolution is the creation of valuable experiences. The marketers with traditional thinking believe that consumers are motivated by rational and pragmatic characteristics.

On the other hand, experimental marketing asses consumers according to both rational and emotional features, believing that they need pleasurable experiences (Schmitt, 1999, p. 61). Schmitt (1999, p. 61) studied the process of creating experiences for consumers according to their needs: cognitive experiences (thinking), physical experiences, behaviors and lifestyles (acting), social-identity experiences resulting from relating to a reference or cultural group (relating), affective experiences (feeling) and, lastly, sensory experiences (sensing).

Sensory marketing refers to the “marketing that engages the consumers’ senses and affects their perception, judgment and behavior” (Krishna, 2012, p. 340). He considers that sensory marketing affects perceptions in order to help consumers to develop experiences related to abstract features of product (for example the quality). Regardless of the usefulness of understanding the sensory marketing, there is little research conducted on this topic.

Developing concept maps implies a technique that emphasizes visually the relation between concepts, idea, theories. It is designed as a framework or a diagram that presents those relations in a logical manner, with connections individually labelled for transmitting clear messages. The structure is hierarchical, facilitated by using specialized terminology: gives rise to", "results in", "is required by," or "contributes to".

Concept maps are similar with mind maps, but they are special because it is designed on human psychology and philosophy and it "makes concepts and propositions composed of concepts, the central elements in the structure of knowledge and construction of meaning” (Novak, 1990, p. 945).

Concept maps are graphical instruments used for defining relationships between concepts. Concept is designed by a label and it is considered a regularity in objects and events. The label is a word, group of words or a symbol (+; %) that helps prepositions to define logical statements about relations between concepts.

Another representative characteristic of concept maps is the appearance of cross-links. They highlight the relations between the concepts that create the concept map. Cross-links are useful in developing knowledge and logical relationships between the stated notions: they can be both creative and rationalized, according to the innovation of the concept map. As an incentive for creative thinking, the concept maps often have the possibility to rearrange the cross links and it is presented with a hierarchical structure.

2. Literature review

Joiner (1998, p. 320) is the one who developed Concept Maps in marketing according to brand associations. The results prove the importance of concept maps in analyzing the impact of a brand on consumer behavior. They also show the differences and similarities in brand associations in dependency on brand knowledge and awareness of the consumer.

Many other researchers followed the path described by Joiner: Low and Lamb (2000, p. 361), John et al. (2006, p. 553), Brandt and de Mortanges (2011, p. 59), Till et al. (2011, p. 97), Schnittka et al. (2012, p. 270), Agapito et al. (2012, p. 15), Sevin (2014, p. 51) or McLean (2017, pp. 92-93).

The main results are synthetized in the following table:

Table no. 1 Literature review based on Brand Associations, Brand Concept Maps and Sensory Maps

No	Researchers	Year	Main results
1.	Joiner, C.	1998	The author is the one that defines the idea of Concept Maps as a tool in marketing. He conducted a research on 72 students that had to write associations with a brand, according to individual criteria. The results show that brand associations are useful in understanding the perception upon a certain brand, being direct dependent with the brand knowledge of the consumer.
2.	Low, G. S. Lamb, C. W.	2000	The authors analyze brand associations by conducting three studies. The first one had 533 respondents that tested the measurable branding image according to a developed product category; the second one had 100 respondents that tested the brand associations’ dimensionality in relation with brand knowledge; the third one had 105 respondents that tested the importance of perceived quality and brand image in the buying process. The results show that the brand associations are related with brand knowledge and differ from product to product.
3.	John, D. R. Loken, B. Kim, K. Monga, A. B	2006	The authors provide a clear and fast methodology for developing Brand Concept Maps. The study had 165 respondents that ranked a list of given associations according to the strength of the relation between brand and association. The article offers a method for developing Brand Concept Maps with clear instructions.

4.	Brandt, C. De Mortanges, C.P.	2011	The authors extend the utility of Brand Concept Maps from analyzing products or services to analyzing cities. The research had a sample of 130 students, native and foreign inhabitants, from a university town in Belgium. The results show that a City Brand is perceived differently by locals and foreigners. The method is useful for developing cities from a marketing and branding perspective.
5.	Till, B. D. Baack, D. Waterman, B.	2011	The authors aimed to offer an easier method for managers in order to analyze and understand the brand associations. For research they had analyzed 500 firms. The results were useful for managers to assess the value of their firm's brand and the strong or weak points of the competitors.
6.	Schnittka, O. Sattler, H. Zenker, S.	2012	The authors developed a new method, Brand Association Network Value, for analyzing how brand associations influence the consumer buying behavior. The research is based on two studies of 111 and 123 respondents and the results validate the new measurement method as being useful in evaluating the value of a brand.
7.	Agapito, D. Pinto, P. Mendes, J	2012	The authors' intention was to provide valid evidence for usefulness of sensory marketing in human perception. In order to test this, they interviewed 195 tourist and the results showed that the stimulus collided through the five basic senses was influencing the tourist experience.
8.	Sevin, H. E.	2014	The author developed a new method for evaluating city brand: Define-Measure-Visualize. This method has been applied on an experimental research for New York City and Boston and the results have proved the validity of the analysis. The author considers this research a good fundament for marketing campaigns that target city branding.
9.	McLean, K.	2017	The author aimed to develop a Sensory Map in relation with a city. The research was based on local people and their associations with Amsterdam. The results show that the experience of a living in a city is highly influenced by sensorial stimuli.

Source: Selection created by the authors

All the presented studies in Table no 1. are relevant for creating the research context. The analysis presents the necessity of developing Sensory Concept Maps for brand in order to understand the pursued associations in customers' minds.

3. Research methodology

Based on the instructions offered by the BCM method (Brand Concept Map), we have conducted our research for Iasi City brand. We have chosen Iasi according to the perspective that branding cities is a strategy for attracting investments, developing tourism and for creating a good reputation and an image that gives value to what a city can offer. Paliaga et al. (2010, p. 108) considers that branding a city must cover all levels from emotional, rational and psychological perspective and that will have successful outcomes only if the target market is truly developing synergy emotions with the city.

Iasi City is our analysis choice of brand due to its constant and needed development. Trueman et al (2004, p. 323) consider that is a vital necessity for branding a city as it is a valuable method for attracting national and international attention. Another reason is that Iasi City is a university center of Romania, being a good representation for culture and education development.

The main purpose of the research is to create a sensory concept map by analyzing the associations provided by native and non-native inhabitants of Iasi brand and to test the intensity of the most frequent associations that developed the sensory concept map

The research has one main objective, divided in sub-objectives according to the conscious and the subconscious parts of the brain based on the senses. So, this objective states that we want to collect associations with Iasi brand provided by native and non-native students:

O1: To find out the associations with the brand based on the visual sense: one association made by the impulse of the subconscious (top of mind) and one association made by the conscious (rationalized answer).

O2: To find out the associations with the brand based on the olfactory sense: one association made by the impulse of the subconscious (top of mind) and one association made by the conscious (rationalized answer).

O3: To find out the associations with the brand based on the auditory sense: one association made by the impulse of the subconscious (top of mind) and one association made by the conscious (rationalized answer).

O4: To find out the associations with the brand based on the gustatory sense: one association made by the impulse of the subconscious (top of mind) and one association made by the conscious (rationalized answer).

O5: To find out the associations with the brand based on the somatic sense: one association made by the impulse of the subconscious (top of mind) and one association made by the conscious (rationalized answer).

The method we chose for our research is an exploratory one and it is based on the Brand Concept Maps model developed by John et al (2006, p. 553) and we followed the steps provided by the authors. We will develop this concept by connecting it with the five basic senses and how human's perception is influenced by sensorial stimuli.

In the first stage, we have conducted interviews as an instrumental research on 12 students in order to test the interview guide. The interview guide had two parts divided by the way associations are developed in the mind of consumers: the first part was based on the Top of Mind method, which implied that the respondent has to provide the first association that comes in his/hers mind when they think of a brand; the second part was developed for providing rationalized answers, the associations being the most representative in respondents' perception. According to the results of this instrumental research, we have decided to move to the next step in order to gain reliable results.

The second-stage of the research was a qualitative one with a semi-structured interview.

For the second-stage, we have chosen 60 respondents, all students. In order to gain balanced results, we have interviewed 30 women and 30 men. Because the research wants to analyze the differences and similarities in native and non-native inhabitants' perception, we have chosen 15 women that were born in Iasi and 15 women that moved to Iasi. The same analogy was applied to men.

4. Findings

From then -stage of the research, we have chosen the top two associations per each sense from all the answers provided by the students. These associations will further be the fundament of developing a Sensory Concept Map of the brand Iasi City:

- For the Olfactory sense: Linden and Flowers
- For the Auditory sense: Tram and Horn
- For the Visual sense: Palace of culture and Palas
- For the Gustatory sense: Sweet and Bagels
- For the Somatic sense: Smooth and Paper

Second-stage results

The second stage of our research is an interview that has the aim to create a Sensory Concept Map for Iasi Brand. As presented before, we have selected the top frequent associations for each sense and we have asked our respondents to respect the instructions, respectively to connect the brand with the association by using linking lines (John et al, 2006, 553). The associations selected are the most chosen two for each sense: top answer at Top of mind questions and top rationalized answer.

The first in analyzing the data is to quantify the linking lines according to the corresponding intensity (one line shows a weak connection, two lines show a medium connection and three lines shows a strong connection).

Table no. 2. The data from individual sensory concept maps

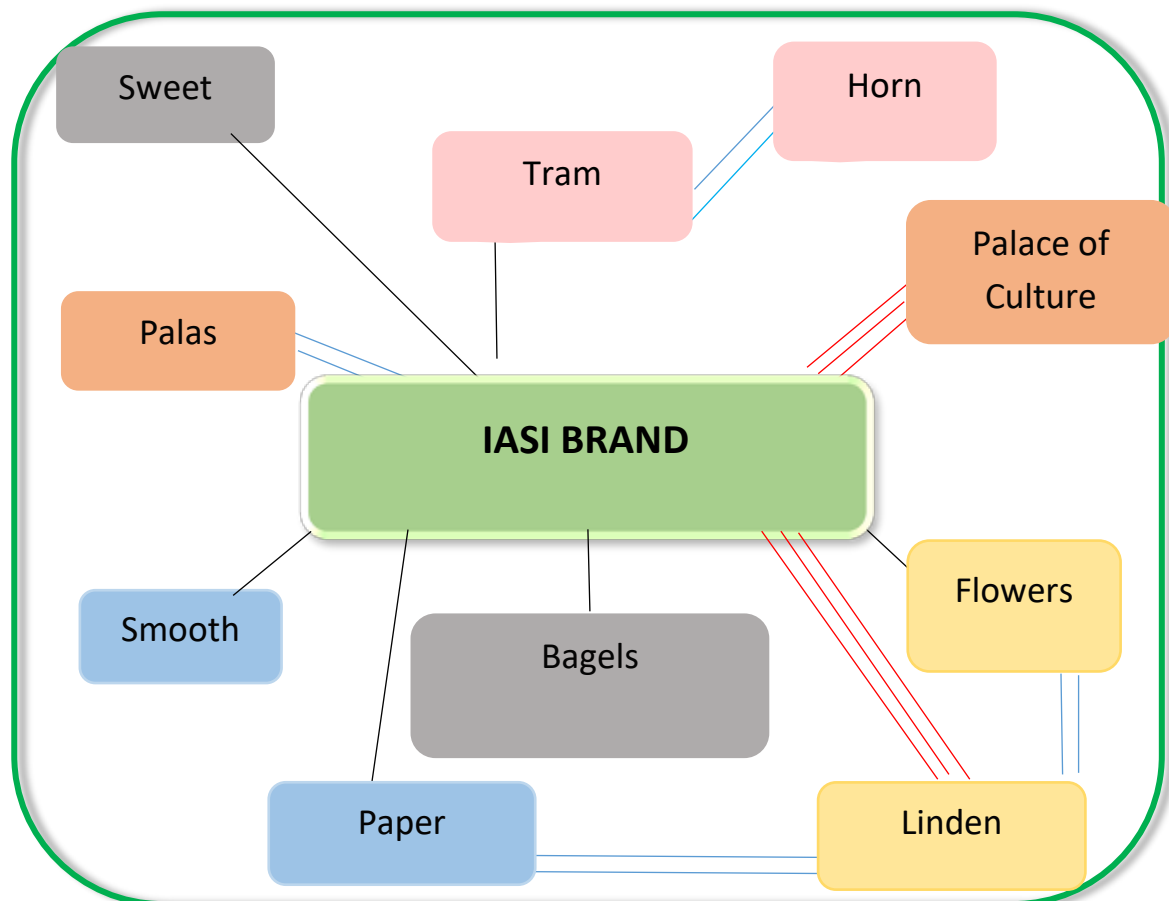
Sense	Association	One linking line	Two linking lines	Three linking lines	First order association	Second order association
Olfactory	Linden	14	32	74	63	57
Olfactory	Flowers	50	39	31	114	6
Visual	Palace of Culture	5	22	93	120	0
Visual	Palas	35	65	20	118	2
Auditory	Tram	52	41	27	101	19
Auditory	Horn	19	63	38	22	98
Gustatory	Sweet	71	25	24	104	16
Gustatory	Bagels	66	37	17	110	10
Olfactory	Linden	14	32	74	63	57
Olfactory	Flowers	50	39	31	114	6

*we have calculated the number of students that chose each of the existing possibilities

Source: Authors' elaboration based on research findings

Table no. 2 presents the data collected from each of our respondents from the interview.

Figure no 1. Sensory Concept Map of Iasi Brand



Source: Authors' elaboration based on research findings

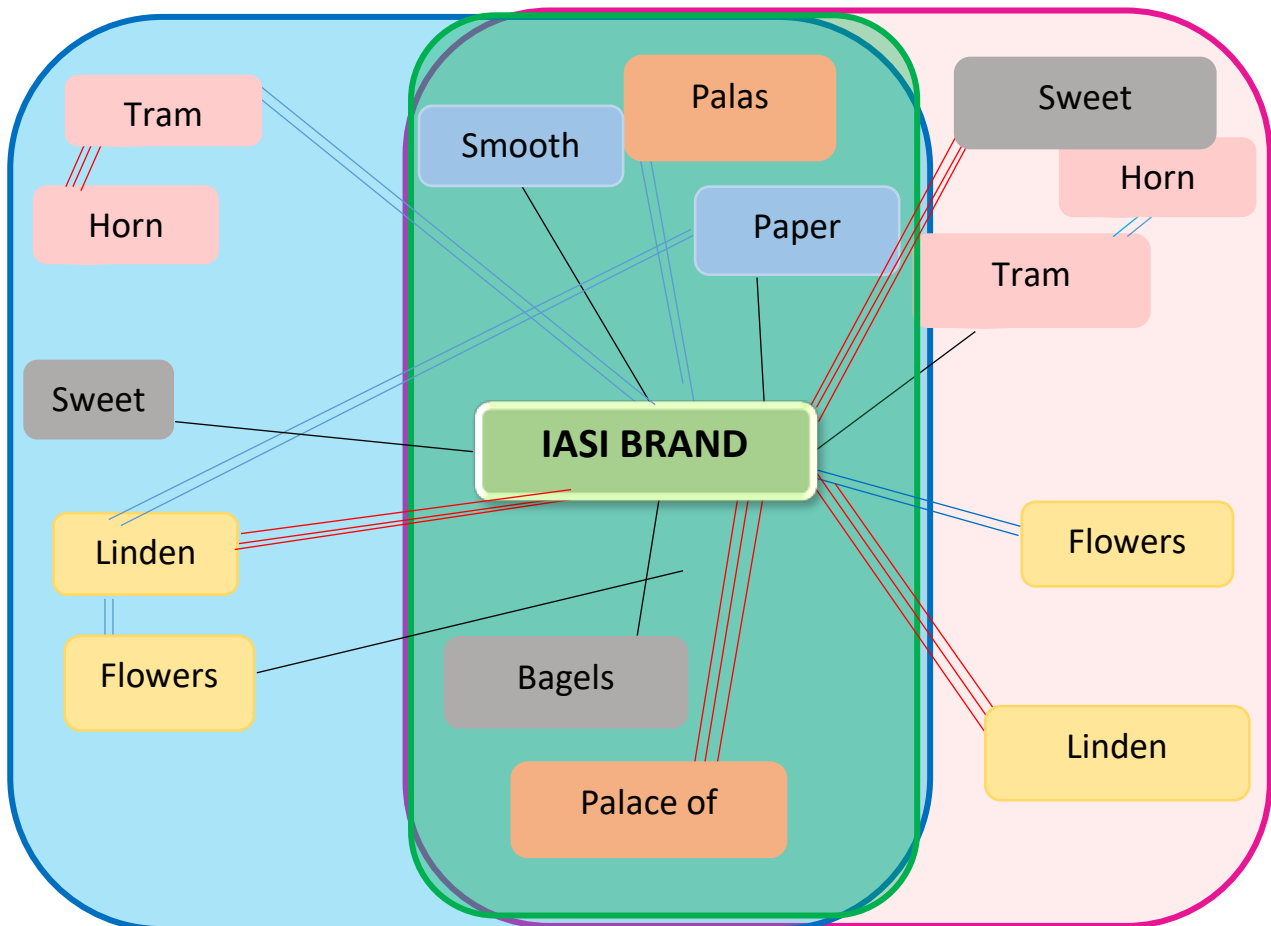
In our data analysis we will take in consideration if the associations are first order associations or second order associations. First order associations are the ones direct connected with the brand and the second order associations are the ones indirect connected, by using another association as a link.

Also, we have taken into consideration how many students perceived an association as a first order association or a second order association. None of the respondents classified an association as being at the third level of connection. In order to classify an association being first order, the answers must represent more than 50% (more than 60 students) and to classify it as a second order association, the answer must represent more than 40% (more than 48 students).

For developing the Sensory Concept Map of Iasi Brand, we have chosen the majority of answers according to preferences, intensity and type of association. For example, the word "Linden" has been linked with three line by 74 students, with two lines by 32 students and with one line by 14 students. So, we have decided that "Linden" has a strong connection with a brand so we have included it in the map with three link lines. We have applied this strategy to all of the listed association.

Figure 2 presents the similarities and differences between men and women in developing a Sensory Concept Map for Iasi Brand. As we can observe, majority of men (blue area) and women (pink area) consider that the words "Bagels", "Paper" and "Smooth" have low intensity connection with the brand. "Palace of Culture" has been linked with three lines by the majority of both criteria groups and the word "Palas" has a medium intensity connection in the women and men perception.

Figure no 2. Sensory Concept Map of Iasi Brand according to gender similarities and differences



Source: Authors' elaboration based on research findings

"Flowers" is perceived by men as a word with low intensity connection but women consider it has a medium intensity connection as the majority linked the word with two lines. A reverse discrepancy can be observed with the word "Tram", the majority of men linking it with the brand with two lines but the majority of women consider that it has low intensity connection with Iasi Brand.

Both gender groups consider that "Horn" is only a second order association related with the word "Tram" but men perceive that has a high intensity connection and women linked it with only two lines representing a medium intensity connection.

The word "Sweet" highlights more the differences in perception: the majority of men connected it with only one line but the majority of women linked it with three lines, considering it has a strong intensity connection with the brand.

The strongest discrepancy between men and women perception is observed at the word "Linden". The majority of women consider it has a high intensity connection with Iasi Brand. The same perception is observed at the majority of men as well, but they also believe "Linden" is an important second order association. They connected it with two lines with the words "Paper" and "Flowers" showing that there exists a medium intensity connection between associations, not only focusing on the relations with the brand.

As a conclusion to the data presented above, we can observe that there are numerous similarities and differences between men and women associations with Iasi Brand. Any marketing activity regarding this brand should consider these preferences and should carefully adapt the actions according to their target.

As our research proposal states, we analysed the differences and similarities in individual sensory concept maps of Iasi Brand between students born in Iasi and students born in other cities. Iasi is a university city and it focuses on both keeping students to study and live here, as well on attracting students from other cities. The differences and similarities may be used in marketing campaigns, in choosing the right publicity and in emphasizing the strongest associations according to the goal and the target.

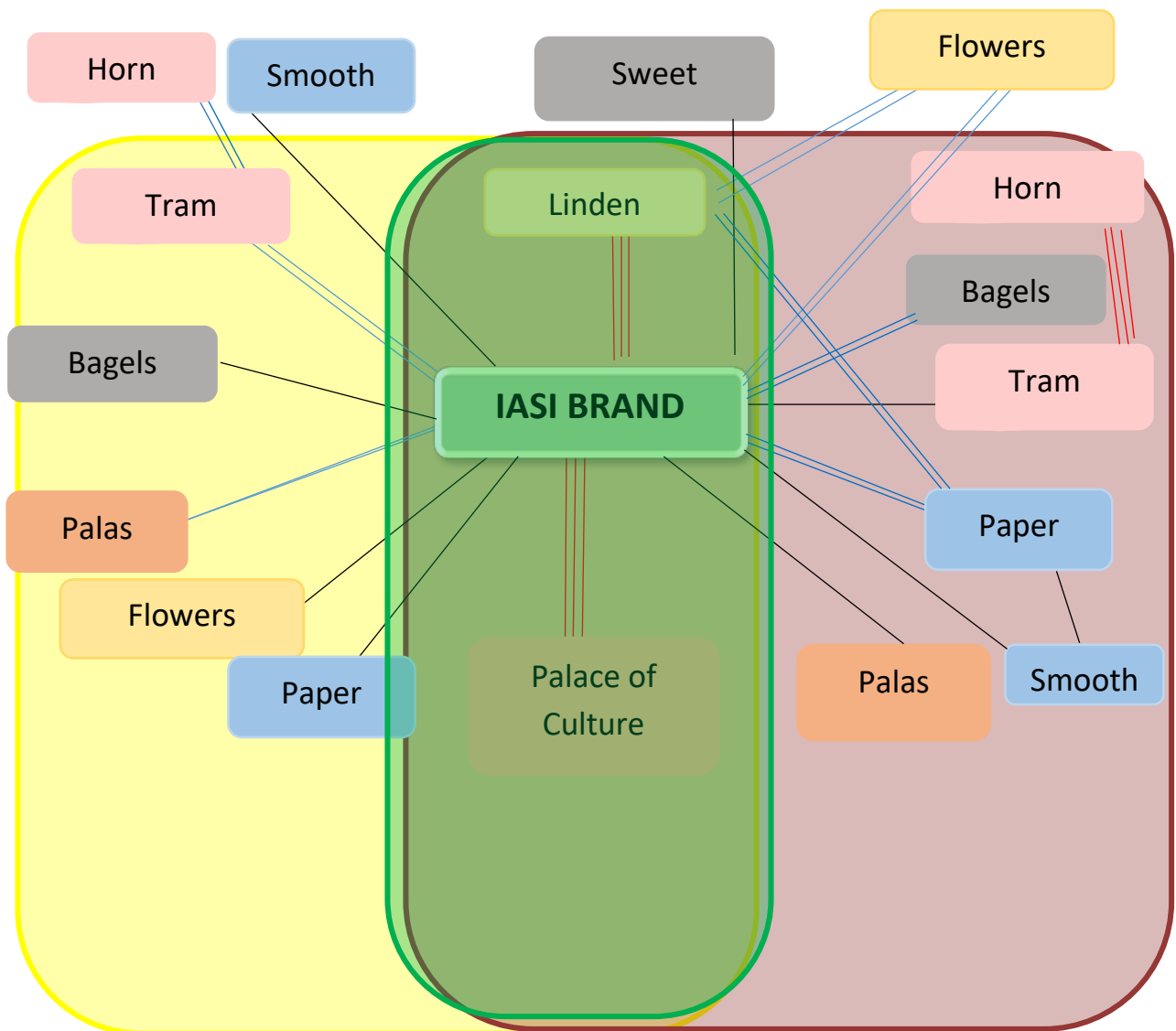
The green, central area from the figure no. 3, shows the similarities found by analysing the individual maps. The yellow area presents the choices of students born in Iași and the orange one the results of students from other towns and cities. It shows that the majority of students, born or not in Iasi City, consider that there is a strong connection between the visual association, "Palace of Culture", and the brand. The same perception can be observed at the word "Linden" which is also connected with the brand with three linking lines. The gustatory association "Sweet" is perceived by both analysed group as having a low intensity connection with Iasi Brand.

Students born in Iasi linked the following association with only one line, which shows a low intensity connection between them and the analysed brand: "Paper", "Flowers", "Smooth" and "Bagels". They also connected "Palas" and "Tram" with two linking lines that show there is a medium intensity relationship. The majority of students born in Iasi consider that there is only a second order association, "Horn", which has a medium intensity connection with the word "Tram".

By analysing the figure no. 14, we can observe that the students born in other cities have distinct opinions than the ones born in Iasi. Words "Palas", "Smooth" and "Tram" are connected with only one line, which highlights that there is a low connection with the brand. Both associations, "Paper" and "Flowers" are connected with Iasi Brand and with the olfactory association "Linden" with two lines. It is important to mention that the word "Smooth" is connected with one line with the somatic association "Paper". The gustatory association, "Bagels", is connected with two lines with the brand.

Even though there is a weak intensity connection between "Tram" and Iasi Brand, students born in other cities consider that there is a high intensity connection between the two auditory associations: "Tram" and "Horn", the last one being only a second order association.

Figure no 3. Sensory Concept Map of Iasi Brand according to students born in Iasi and students born in other cities similarities and differences



Source: Authors' elaboration based on research findings

To conclude the interview results, we can observe that the associations have been varied connected by the 120 respondents. As we analysed the gender preferences, we observed that there are a few differences according to gender perspective. The majority of men and women have similar and equilibrated answers. On the other side, we analysed the differences between students born in Iasi and students born in other cities. According to this criteria, there are many differences in perception, having only a two identical opinions.

5. Research limitations

A first limitation that may have appeared during the research process was the weak expertise in applying the Brand Concept Maps instrument. Even though the instructions provided by the specialized literature are clear and easily applicable, the lack of experience can interfere in the validity of the answers.

Also, the students' honesty cannot be verified; this can be a limitation as we cannot guarantee the data is totally accurate. Considering the distinctiveness of the research, some students may have been overwhelmed by the fact they have pursued associations with the five basic sense. In addition, we have inquired top of mind answers which are difficult to validate them as being really spontaneous because it is delicate to quantify logical or rationalized links in the human brain.

6. Conclusion

According to the mentioned theoretical concepts, we have decided to conduct a research in order to quantify and analyse the associations provided by both students born in Iasi and in other cities in connection with Iasi brand. The main objective is collecting associations determined by the five basic human sense (auditory, visual, olfactory, gustatory and somatic) made by the impulse of the subconscious (top of mind) and by the conscious (rationalized answer). We have chosen this brand due to the complexity and originality in analysing a city; in addition, we consider that a city can be branded in order to increase the tourism, the students that come studying in it or the activities that can be developed.

For the the second stage, we have inquired all the associations provided by the 60 respondents and concluded that there are 10 answers that appeared the most frequent. We have selected the top two association on each of the five sense: Linden and Flowers (olfactory sense), Palace of Culture and Palas (visual sense), Tram and Horn (auditory sense), Sweet and Bagels (gustatory sense) and Smooth and Paper (somatic sense).

These association were used in the second stage for developing a Sensory Concept Map of Iasi. The results of the interview provided the intensity of each association in relation with the brand Iasi. For defining these association, we have used linking lines, similar with the instructions provided by the specialized literature. The Sensory Concept Map of Iasi has the following format: Linden and Palace of Culture are linked with three lines which shows a strong intensity with the brand Iasi; Horn and Palas are linked with two lines which shows a medium intensity with the brand Iasi; Sweet, Flowers, Paper, Smooth and Bagels are connected with one line which shows a weak intensity with the brand Iasi. In addition, the association Horn was not linked directly, by the majority of the students, with the brand Iasi but has medium intensity connection with the word Tram; also, the words Flowers and Linden have medium intensity connection with the word Linden.

Applying Sensory Concept Maps in marketing research and analysis can be useful for measuring the associations that individuals make when getting in contact with a certain brand.

Considering marketing and consumer behavior as a general field, managers can apply Sensory Concept Maps in order to measure the relationship brand-customer. This tool can be used in increasing the competitive advantage, the loyalty of the clients or the customer base. The studies have proven that companies develop more if the brands are easily relatable and if they transmit meaningful messages.

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