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NEUROMARKETING POTENTIAL FOR TOURIST DESTINATION BRAND POSITIONING
Abstract

Throughout the last ten years, neuromarketing has been developing as a completely new branch of marketing. Considering the characteristics of tourism as a complex social construct, an assumption stands that a neuromarketing research can have a significant potential for optimizing the destination offer to match the desired perception of potential guests. The appliance of neuromarketing tourism market research thus assumes a novel conceptual approach, one that quite differs from the standard. The secondary data on the application of numerous neuromarketing techniques was gathered from articles, monographs and other relevant sources. Also, descriptive, comparative and compiling research methods were used. Primary research consisted of an in-depth interview with a group of tourism board representatives and a non-random, purposive sample of expert tourism workers, who filled a survey on their attitudes toward suitability and applicability of the neuromarketing research techniques. Neuromarketing techniques should be used, by only in tandem with the standard research methodology, primarily conducted by marketing staff, with physicians assisting in MRI imaging interpretation and technology support. These projects should be conducted on a national level, for the research is capital intensive and its results have a wide area of repercussions. When consulting available databases, no research has been found dealing with the application of neuromarketing in destination’s brand management. The contribution thus consists of the comparison carried out, between neuromarketing techniques and the neuromarketing potential, and the standard research methods, valued and contrasted to the emerging discipline of neuromarketing.

Key words: neuromarketing, positioning, tourism, brand, destination
1. INTRODUCTION

During the last fifteen years neuromarketing represents a new area of marketing implementation in order to reach strategic decisions (Wilson, Gaines and Hill, 2008, 398). The usual neuromarketing research techniques facilitate the human brain imaging technologies and the responses to various auditory, visual and other stimuli. These researches enable one to collect various neurological feedback data (Ohme, Reykowska, Weiner and Choromanska, 2009, 785). The evaluation of an individual’s perception is thus based on the neuroimaging technique. It ensures the image output of a subject’s neurological processes (Haynes and Rees, 2006, 523). Neuroimaging technique provides a visual output, an image of morphological structures and functional processes that take place inside the human brain. These neuromarketing researches are still quite rare, because the technological equipment is quite expensive (Javor, Koller, Lee, Chamberlain and Ransmayr 2013). When current scientific research is considered, the implementation of neuromarketing is regarded as being exceptionally useful for the demand analysis (Cook, Warren, Pajot, Schairer and Leuchter, 2011; Hubert, Sommer and Kenning, 2009; et al.). Other available research methods fall short when reaching conclusions concerning the demand reactions. Neuromarketing methods, however, contribute to form a more realistic model, one which has been hinted at with classic research on attitudes and opinions (Bermeintiger, Goelz, Johr, Neumann, Ecker and Doerr, 2009). Some researchers consider neuromarketing techniques to be experimental (Markgraf, Scheffer and Pulkenat 2012, 79). When all of the standard research methods have already been used, implementing the neuromarketing techniques can prove out to be quite an incentive (Šerić and Jurišić, 2014). Tourism is a complex social construct, so it is assumed that neuromarketing research could be used to manage the tourism offer. Neuromarketing findings can ensure the foundational basis for future research and the brand destination positioning on the global tourism market (Lindstrom, 2008).

The selection of a particular tourism destination is in itself a consequence of tourist perception regarding its amenities (Anholt, 2010, 103). Tourism competitiveness increase incentives a more creative management of the destination’s brand (Kavaratzis and Ashworth, 2005, 506; Kerr, 2006, 276; Morgan, Pritchard and Pride, 2005 et al.). This fact served as a basis for the research problem – to explore and estimate the viability of neuromarketing application to the brand management, especially when considering the brand destination positioning. The neuromarketing research findings can ensure useful guidelines for implementing the components of destination demand, so that they form a successful brand.
When contrasting classic tourism market research methods with neuromarketing, the focus of the latter is primarily on the tourist’s sub consciousness. Neuromarketing research implies the understanding of anatomy, biological psychology and the practice of using sophisticated technological equipment (Javor, Koller, Lee, Chamberlain and Ransmayr 2013). Haynes and Rees (2006, 523) have pointed out that the media and public often overestimate the generalised research findings that are published by companies specialised in neuromarketing research for commercial purposes. Their explanations are based on limitations that are inherently connected to the possibility of decoding specific mental states of the individual.

The recent research results point to the usability of tourism customer’s perception on the decision making process concerning the destination’s brand management (Conrady and Buck, 2011; Anholt, 2010; Hosany, Ekinci and Uysal, 2007; et al.). The neuromarketing research provides an insight into the subject’s sub consciousness, during the exact moment of perceiving certain multimedia stimuli. Tourism destination’s brand, identity and image undoubtedly have an influence on the prospective tourist’s perception. Considering that the destination’s brand is perceived through its associations, it can be presumed that neuromarketing tools may prove out to be quite useful. However, it is curious to find out what the opinion of the tourism experts is on this particular matter. The results provided by infrequent research indicates that the neuromarketing tools are useful when defining the guidelines for differentiation and enhanced competitiveness (Markgraf, Scheffer and Pulkabet 2012, 79). Due to the specificities of tourism, the extent of the application of those findings presented a dilemma that served as a basis for the formation of the following research questions:

1. Does the neuromarketing research results provide the basis for an efficient destination’s brand positioning?
   1.1. Is it possible to explain the viable guest’s perception of sensing the tourism destination based on the triune brain theory?
   1.2. Could the research findings of the neuroimaging techniques be useful for reaching decisions concerning the effective positioning of the destination’s brand?
2. Is it advisable to use the neuromarketing tools and their results indiscriminately, concerning the positioning of the destination’s brand?
   2.1. Is it indiscriminate application of the MRI techniques inadequate for making strategic decisions regarding the positioning of the destination’s brand?
   2.2. Could the incomplete scientific understanding of the human brain functioning result with erroneous conclusions regarding the positioning of the destination’s brand?
Testing the research questions was carried through desk research and a primary research, with an in-depth interview and a survey. The secondary data used in forming the primary research was collected using actual and relevant sources set forth in the literature.

2. LITERATURE REVIEW

2.1. Tourism brand destination positioning

The brand destination positioning is based on the premise of managing in a manner that aims to clearly differentiate it from the competition (Swystun, 2007). The selected niche should have associative connections to the uniqueness of the destination’s offer (Šerić, 2014, 8). The basic goal of positioning the brand destination consists of strengthening the associative connections to the attractiveness feats. An adequately positioned brand destination provides a more favourable perception of attractiveness of the destination offer, the growth in tourist loyalty, an increased competitive advantage, higher profits, lower price elasticity, increased interest in tourism investment, better effectiveness of marketing communications, etc. (Šerić and Luković, 2011). The brand represents a fulfilled promise, an experience, as well as the simplicity of choice and a guarantee of an expected level of quality (Kerr, 2006, 276). Based on these variables, it is recommended to define guidelines for the destination brand positioning. However, while the brand is essentially a mean of identification, numerous sub conscious associations, with both positive and negative repercussions, are a possibility (Kavaratzis and Ashworth, 2005, 506). They also affect the ultimate tourist decision; whether or not to choose that particular destination.

The destination brand has up to six levels of meaning: destination characteristic, an expected benefit, customer value, specific cultural destination milieu, symbolic personality and customer segment (Anholt, 2010). The standardised qualitative and quantitative tourism market research methods at times provide conflicting and puzzling data (Conrady and Buck, 2011). Based on these perspective customer’s attitudes, it is possible to enhance the market positioning of the destination brand. Promoting limited exclusively to the brand characteristics represents a weak and insufficient manner of influencing the prospective guests’ destination choosing process (Kavaratzis and Ashworth, 2005, 506). The destination brand value is formed on the basis of both functional and psychological characteristics of the integrated destination offer. The lasting destination brand characteristics are personality, value and culture. The value of destination brand is measured through relative associative advantages when compared to other, competing brands. Considering that the concept of image is
significantly formed through brand influence, the research dealing with sub
consciousness of target tourists is quite welcome and useful. By positioning the
destination brand correctly, it is possible to prompt a first visit of a prospective guest
and also strengthen the loyalty of existing customers.

2.2. Neuromarketing and tourism

Neuromarketing is an innovative field of tourism market research (Markgraf,
Scheffer and Pulkenat 2012, 79). The neuromarketing research yields images of brain
reactions to stimuli, so it is possible to present relevant media and then analyse the
neurological feedback to the perceived brand (Cook, Warren, Pajot, Schairer and
Leuchter, 2011, 147). The data obtained through neuromarketing research is reliable
and unbiased, for it is obtained not through a verbal examination of subjects, but trough
neurological feedback to stimuli (Karremans, Stroebe and Claus, 2006, 792). The
neuroimaging technique enables a researcher to view an image a certain stimuli has on
the neurological structures. However, in order to use the neuroimaging technique, the
researcher making conclusions must also know the triune brain theory (Cook, Warren,
Pajot, Schairer and Leuchter, 2011, 147). Although the viability of determining mental
states through the use of neuroimaging techniques remains limited, they influenced the
formation of commercial neurological research companies, which have invested
significant resources in order to acquire the technical equipment; however, they rarely
publish their research findings (Haynes and Rees, 2006). Considering this, it would not
be proper to direct the focus of research at the technical equipment involved
(Logothetis, 2008, 869).

Triune brain theory is based on the research on brain evolution and vertebrate
behaviour, conducted by physician and neuroscientist, Paul D. MacLean, formulated
during the sixties of the 20th century and based on a comparative neuroanatomical
works of Ludwig Edinger, Elizabeth Crosby and C. J. Herrick. He envisioned three
separate evolutionary layers of the human brain – the reptilian brain, the limbic system
and the neocortex. Since then, the term “triune brain” is used, meant to signify that all
the tree parts function in cooperation. Although they operate independently none of
them is capable of autonomous functioning.

Figure 1: Triune brain model
The primitive, reptilian brain controls the instinctive drives (fear, anger, basic sexuality) and it, to a degree, influences emotions and logic. The limbic system is situated above the reptilian brain. It is necessary in order to experience the primary emotions, such as happiness, sadness and disgust. The emotion itself is formed when this part of the brain detects a certain phenomenon, triggering a physical and psychological change. The limbic system and the reptilian brain are able to influence one another. Both of these brain parts are essentially preverbal in nature and much of their influence is subconscious. The limbic system enables the process of learning, through associating emotions with experiences, which are categorised and stored in the memory. The resulting effect is the formation of an individual’s specific, social consciousness. The neocortex is the learning brain, one that suggests and creates problem-solving and cognition, controls instinctive behaviour and contributes to the abstract thought and attitude formation. Along with the limbic system, it creates the moral principles (Holmquist, 2010). With regard to the triune brain theory, a potential for neuromarketing research contribution to the formation of decisions regarding the positioning of destination brand is evident. Further contribution can be also found in the practice of a child psychiatrist Rapaille (2007). His findings have proven that most of autistic and mute children are quite intelligent and they also experience emotional difficulties. He formulated the concept of imprinting as primal emotional association, one that lasts for a lifetime. Rapaille formulated this phenomenon as an unconscious code inherent to the brain and determined that emotional association is essentially connected to the individual’s culture. Rapaille contributed to the triune brain model with findings that emotions are frequently filled with contradictions. It has also been shown that, in a struggle between logic and emotions, individuals frequently make up decisions based purely on emotion. In this particular context, the results of neuromarketing research have a potential to be useful for the positioning of a destination brand. Rapaille also proved the existence of the “reptilian hot button” and its usefulness when communicating the offer to the target client. Otherwise, an
individual could be persuaded into using a product only by influencing the cortex, for instance, by offering price discounts. However, appealing to the reason and logic does not necessarily attract loyal guests, so therefore it is more important to offer a brand identity that corresponds to the code. According to this reasoning, the reactions to a particular destination brand are never random, for there always is a factor that connects it to the code in question. Finally, Martin Lindstrom also uses the triune brain model in his own research (Lindstrom, 2008).

*Magnetic Resonance Imaging* (MRI) is a diagnostic, medical imaging technique. It uses a strong magnetic field in order to excite hydrogen atoms in tissues containing water molecules and creates a signal that is processed to form an image of the body. By introducing digital and computer technology, it is possible to process a vast amount of data and create an image presented on the monitor of an MRI system (Logothetis, 2008, 869). The neurological reaction is monitored with and without presented stimuli. The difference in images is the reaction to the stimuli itself (symbols, colours, brand graphic design solutions, etc.). Through the analysis of neurological changes, one can grasp the guidelines needed to create, manage and position the tourism brand. The limits of implementing the MRI technique is primarily linked to the amount of noise the equipment generates (as high as 120 dB), people with medical implants are forbidden to undergo an MRI scan, as are pregnant women. A whole different group of difficulties with research using MRI stems from an insufficient knowledge regarding the human brain functioning, which may result in utterly wrong conclusions. These difficulties could partially be remedied by using shorter recording sequences and/or using equipment which creates a more powerful magnetic field.

Recently, the media and public bias toward results obtained through the neuroimaging techniques is abundant (Haynes and Rees, 2006, 532). The neuromarketing approach provides research results which are, compared to the standard research methods, better at determining causal relationships (Wilson, Gaines and Hill, 2008). With regard to the complexity of tourism as a social concept, one must not disregard the importance of cultural impact on behavioural preferences, which are linked to biological variables, (Hosany, Ekinci and Uysal, 2007, 62) influencing individual’s initial preferences (Murphy, Illes and Reiner, 2008, 293). Considering the aforementioned, the usability of neuromarketing techniques for management brand destination is evident. Just as the cultural influence is crucial when determining what one eats or drinks, so the associations result in the attractiveness or the dislike of a certain destination brand. Medical research (Hubert, Sommer and Kenning, 2009; Javor, Koller, Lee, Chamberlain and Ransmayr 2013) shows that, when a prospective tourist understands the characteristics of the brand’s destination offer, lateral prefrontal cortex is activated. This influences memory, for the brain’s reaction is based on all of the information known regarding the destination. This complexity is responsible for the
often irrational process of destination selection. It is primarily based on the person’s own experiences, memories and associations relating to the destination brand. The medical practice confirms that associativeness of the brand can be measured using an MRI technique. Based on the results of such research, guidelines for efficient destination branding is quite feasible.

3. EMPIRICAL RESEARCH

The empirical research carried out consisted of two parts: an in-depth interview with representatives of 5 tourist boards, and surveyed tourism employees (from 5 successful tourist destinations). The goal of the empirical research was to find out what are the attitudes and reasoning of neuromarketing techniques in positioning brand destination.

3.1. In-depth interview

The representatives of 5 tourism boards were experienced people in tourism. Between June and October of 2014, the interviews were conducted in the subject’s offices. Each interview began with general questions regarding the assessment of implementing neuromarketing in tourism and lasted for 30 minutes. A funnelling technique was used, so additional, more complex questions were gradually presented as the interview progressed. Subjects have been encouraged to freely express the attitudes and thoughts regarding the applicability of neuromarketing techniques.

3.2. The questionnaire

The survey was conducted during the August and September of 2014 on a non-random, purposive sample of expert tourism employees. Also, a pre-test was used. A very short, informative video clip was provided along with the survey (http://www.youtube.com/watch?v=ssBY18EPh6U 1.8.2014.). The survey itself consisted of two parts, each with a theme of its own. The first consisted of obtaining demographic data, and the second referred to the neuromarketing tools. Also, the latter part used a Likert scale, with 13 statements, to which the subjects reported various degrees (1-5) of accordance or discordance. The research was conducted over the Internet, by using Google Drive to create and analyse the surveys, which were distributed via e-mail. The surveys were done by 56 individuals, 48% male, 52% female. The majority of subjects (54%) were between 18 and 25 years of age, 39%
between 26 and 35 years of age and 7% between 36 and 50 years of age. Most of the people surveyed (59%) had higher education, while 41% had secondary education.

3.3. Research results

The in-depth interview results confirm the applicability of neuromarketing techniques for determining the guidelines of brand destination positioning. Based on the perceptions of the targeted constituency, the destination brand should be positioned inside a differentiated niche. Neuromarketing research results determine various possible reactions of the targeted segment on the destination brand. This would represent a research priority for the neuromarketing research, for it could potentially point to the positive and negative associations that exist and form a current destination brand perception. They think that neuromarketing research could yield useful understanding regarding the efficiency of promotional activities and marketing destination brand communications. The subjects agree that implementing neuromarketing techniques would be an innovative step toward a better destination brand management. The neuromarketing research enables a proactive formation of adequate brand destination creation, one that supports the targeted audience’s perceptions. These results represent vital, relevant data regarding the perceptive imprint of a certain destination brand. Considering the cost and the timeframe needed to conduct a neurological research, it is advisable to precisely define criteria for measuring the satisfaction of the research subjects. All the interviewed persons agree that it is imperative to focus on the research goal, because the neuromarketing research is quite costly and time consuming. Therefore, they suggested that research should be used to also explore the level of the guest’s satisfaction with the destination. Also, considering that the experiences of managing the destination brand are quite diverse, both positively and negatively, all the interviewed subjects agree that using neuromarketing techniques could yield innovative, valuable and useful knowledge regarding the destination brand management. Neuromarketing research could also provide a much better insight into both the conscious and sub conscious processes concerning the perception of logos, colours, trademarks, slogans and associations of the destination brand. When such insight is gained, enhanced and better brand positioning are a possibility.

The survey of a non-random, purposive sample of expert tourism employees was carried in order to find out whether or not tourists would be willing to participate in neuromarketing research. The result of this particular part of primary research points that tourism employees are insufficiently informed about neuromarketing, therefore, similar results can be expected when surveying tourists. The lack of knowledge concerning this particular type of research makes tourists unwilling to participate in
such research attempts. Based on the information provided by tourism employees, the usability of neuromarketing research information is significant. According to them, the tourists would be more willing to participate in neuromarketing research that is conducted by marketers, as opposed to one conducted by physicians. Most surveyed individuals also agree that neuromarketing techniques can be used to obtain data on current and potential tourist reactions to certain audio visual stimuli. They also agree that neuromarketing research yields a more complete understanding of customer’s needs, with the neuroscience as the innovative step in the future marketing development. Most hold that neuromarketing is an imperative when reaching new and important business decisions. Also, the subjects think that, by using neuromarketing, one can manipulate the customers’ minds and that they will generally be sceptical about neuromarketing techniques. Most people surveyed don’t think that implementing neuromarketing tools violates the subject’s privacy. Finally, 29% of people completely agree (48% are indecisive) that neuromarketing should be used in order to increase profits, not to improve on a more adequate satisfaction of the customer’s needs. These findings point to the need for a wide neuromarketing promotion, so it could be eventually used to increase customer satisfaction.

The neuromarketing research results can provide valuable data for an efficient destination’s brand positioning. It is possible to explain the viable guest’s perception of sensing the destination based on the triune brain theory. The research findings of the neuroimaging techniques are useful for reaching decisions concerning the effective positioning of the destination’s brand. However, it isn’t advisable to use the neuromarketing results indiscriminately. Also, indiscriminate application of the MRI techniques is inadequate for making strategic decisions in tourism. Finally, the incomplete scientific understanding of the human brain functioning could result with erroneous conclusions regarding the positioning of the destination’s brand. Finally, limitations of the research carried out should also be discussed. Both the tourists, as well as the tourism employees have limited knowledge regarding the field of neuromarketing. Therefore, it is advisable to utilise purposive, expert sampling. Before pretesting, it would also be useful to present a video showcasing neuromarketing tools. Subjects regarding neuromarketing use as unethical, as well as those that are unwilling or unable to undergo the research procedure. In case the neuromarketing research equipment is secured (MRI), it is advisable that only marketers communicate with the research subjects. Both the medical and technical staff should be responsible for the maintenance of the equipment and the interpretation of the MRI results. Tourism neuromarketing research may provide valuable insights, however, strategic decision process making should be formed with the use of standardized marketing research methods.
4. CONCLUSION

The research points to the usefulness of neuromarketing at positioning the destination brand. Both the desk research, as well as primary data obtained corroborates this. Also, the research showed how an insufficient degree of tourist familiarity with neuromarketing techniques could have adverse influence on the willingness to participate in such a research. The experience of the primary research results show that the subjects would be more willing to participate in a research conducted by marketers, rather than medical officials. The shortcoming of such research, conducted by medical officials consists of intense focus on the subject’s reactions. The result of conducted primary and secondary research confirms the existence of a certain code inside the brain, one which can be modified through marketing efforts. All of the mentioned results are quite useful when positioning a destination brand. In order to incentivise positive perception attitudes, the brand’s colours and slogans can prove to be extremely useful. The research results also point that implementing a certain code in the consciousness of a targeted tourist segment is a necessity. With regard to the positioning of the destination brand, focus should be on the act of achieving differentiation of the symbolism of content and the specific destination offer it represents. Integrated neuromarketing research is advisable for tourism, for the complexity of the concept makes causal relationships that exist that much harder to grasp. Based on the conducted research, it is reasonable to conclude that neuromarketing tools are usable for obtaining data useful for efficient positioning of the brand destination. Thus, the first research question has been corroborated. Additionally, the complexity of neuromarketing research perception means that it is inadvisable to use the obtained data in isolation. The integrated approach is called for, one that encompasses both standard and neuromarketing research methods. Only such an approach ensures relevant and full knowledge that one can use to reach efficient decisions concerning the positioning of the destination brand.

The auxiliary research questions are also corroborated based on the experiences from presented, generic benchmarking researches. Although each person’s brain is somewhat specific, the reaction to stimuli is quite similar, so neuromarketing results can serve to anticipate various tourist reactions to particular stimuli. Information obtained can be used for reaching various strategic decisions concerning the management of tourism destination development, so it is recommended that they are not carried out in isolation, or for an isolated research problem. Neuromarketing research methods should complement the standard tourism research methods, because motivations and trends governing the global tourism market are constantly shifting. Finally, considering the high cost of neurological research, they should be organised on
the higher, national level, for data obtained is indeed usable for all destinations. Furthermore, because of the complex nature of the neuromarketing research, physicians should also be included, but with an important caveat. As the research results have pointed out, the communication with the subjects should be carried out by marketers, while the medical staff should be responsible for the functioning of the equipment and image analysis. Lastly, the interviewed people, tourism experts, agree that neuromarketing research is insufficient when presented with current tourism problems, for it should be used along with the standard tourism market research.

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