

Book Review of Leon Zurawicki, *Neuromarketing: Exploring the Brain of the Consumer*, Springer-Verlag Berlin Heidelberg 2010.

During the past 100 years, there have been major advances in marketing coming from other scientific literatures like economics, psychology, social psychology and anthropology. Today, the major leap forward in marketing is coming from the new field of neuromarketing, which is why this new book is more than welcome as it will help researchers get acquainted with new knowledge coming now from the medical field.

The following quote from Wikipedia explains well what neuromarketing is: “Neuromarketing is a new field of marketing which uses medical technologies such as functional Magnetic Resonance Imaging (fMRI), and Electroencephalography (EEG) to study the brain's responses to marketing stimuli. Researchers use the fMRI to measure changes in activity in parts of the brain, or EEG to measure activity in specific regional spectra of the brain response, to learn why consumers make the decisions they do, and what part of the brain is telling them to do it. Marketing researchers use neuromarketing to better measure a consumer's preference, as the verbal response given to the question "Do you like this product?" may not always be the true answer. This knowledge will help marketers create products and services designed more effectively and marketing campaigns focused more on the brain's response. Neuromarketing will tell the marketer what the consumer reacts to, whether it was the color of the packaging, the sound the box makes when shaken, or the idea that they will have something their co-consumers do not.”

Why is neuromarketing important for marketing researchers? When marketing researchers understand more about how the human brain works, and when they understand more about how consumer's brain works, then one can more effectively map the decision-making process of the brain. Neuroscience is learning that there is more than one part of the brain that influences feelings, while another influences thought and that both parts can work at cross purposes while making a decision. Neuromarketing can be used to decode these processes and converting advertising messages into a language that appeals to the different parts of the brain and motivates brand choices and other decisions.

Neuromarketing: Exploring the Brain of the Consumer is the first academic book to document the state of the art of neural research as it pertains to consumer behavior. The author has combed through an impressive list of the most recent publications—the bibliography has approximately 700 entries—from not just the marketing literature but from fields like cognition, decision sciences, neuropsychology and neurophysiology to name just a few relevant areas. This is a fruitful approach since researchers in business and academia have only started considering some of the discoveries coming out from neuroscience. Broadening the sources of the relevant information provides a much better platform to review how people buy, consume and evaluate their experiences based upon what their neural and emotional reactions reveal. Whereas neuroscience seems to confirm certain long established concepts and theories, Zurawicki shows how in addition (and more importantly) new explanations emerge regarding such phenomena as risk taking, impulsivity, conformity and persuasion, or regret from decisions made. Of interest is the evidence that the rational cognitive processing of information is not devoid of emotional influences and that deciding emotionally need not be bad for the consumer as a useful heuristics.

Thus neuroscience teaches us that the juxtaposition of cognitions and emotions is not necessarily the accurate perspective on behavior and through mutual influence together they represent complementing facets of mental accounting.

The book starts with a comprehensive description of the major neural systems in the brain involved in sensory perception and responses to cognitive and emotional information. In that part, the author describes complex mental processes related to information processing, learning and memory and their respective brain architecture. To a lay person these are challenging topics, yet Zurawicki manages to be concise and focuses primarily on those issues which have implications for buying behavior and consumption. Chapter 1 ends with an overview of various neuroimaging and biometric research techniques and the evaluation of their suitability—including the cost element—to marketing studies.

The subsequent two chapters discuss in-depth the relevant and extensively detailed research experiments garnered from the broad field of neuroscience as they relate to consumer behavior. Each topic in both chapters is addressed from the overview perspective illustrated with the corresponding specific studies and their implications. Zurawicki's discourse provides an opportunity to compare the marketing textbook interpretation of consumer behavior with the results of the carefully crafted lab experiments with the use of brain scanning and related methodology. Chapter 2 is devoted to sensory reactions and the emotions corresponding with the external stimuli. It starts with a very interesting discussion of the notion of pleasure as seen through the lens of neuroscience. This helps grasp why the concept of reward proves so critical as a guiding force in human behavior. Other topics covered include brain reactions to food and beverage consumption which not only represent an important part of our life but also for practical reasons is amenable to lab studies. How eating and drinking constitutes a source of pleasure and affects moods as well as physical and mental performance is probably a far more important issue than the extant marketing literature might suggest. The section on human interpretation of beauty (in visual, acoustic, or aromatic terms) is particularly interesting in view of the marketers' efforts to differentiate their offerings through design. These challenges become even more pertinent based upon what the author has to say about the coordinated role of senses in creating holistic impressions. The chapter ends with the discussion of moods, emotions and cognition and their interaction in moderating consumers' desires and actions.

Chapter 3 centers on neural conditionings of selection and decision-making. The reader is presented with a variety of paradoxes in human behavior which defy the normative logic prescribed by some marketing scholars. The author shows that adopting a far less attitude than following a simplified mathematics devised by the analysts makes consumers markedly more human. The studies he refers to demonstrate the prevalence of the neuropsychological mechanisms biased towards a positive rather than negative framing of the problem at stake, the penchant for the immediate rather than delayed rewards, the preservation of the status quo and even a difficulty to determine which of the alternatives—buy or not to buy—is better. Incidentally, some of the research work quoted in Chapter 3 comes from the behavioral economists who have broken away from the traditional economic theory based upon the presumption of calculable utility and rationality of its maximization. In adopting a far more nuanced and realistic perspective, the prominent representatives of the new school come very close to what marketers have been practicing for a long time in successfully persuading

customers. Hence, a possible convergence of the two disciplines resorting to neuroscience offers a great promise for the advancement of knowledge of the actual consumer behavior. In view of the limited predictability of the choices made and of the actual degree of satisfaction to be derived, the analysis of the post-decision regret looms much more importantly than traditionally believed and has been discussed towards the end of the chapter. Zurawicki's coverage points to the learning aspect of regret as well as its emotional effect. Finally, in the context of brand personality the author turns his attention to the fascinating issue of what it means to befriend a brand or devote to it one's total affection (or hate). The knowledge of the neural underpinnings of such powerful feelings certainly can help understand a passionate attachment some consumers seem to display towards certain brands on the one hand and the long-term loyalty on the other. And as the neuroscience sheds more light on the phenomenon of intuition as a reasonable and knowledge-based heuristic, covering this topic adds to our appreciation of the vagaries of the consumer's mind.

Chapter 4 is devoted to the role of personality traits in the context of consumer behavior and customer relationship management. Armed with the new results derived from neurophysiology, the reader is presented with a validation of the gender, youth and elderly segments of the population. Further, when the personality traits are linked with genetics, climate and natural environment, then the geographic and ethnic subdivisions seem to be justified on the grounds different from merely the cultural factors (to which they are related, by the way). Next, the author reviews distinct shopping patterns as a function of people's emotional differences and syndromes. To date, various manifestations of unusual purchasing behavior were typically relegated to the realm of clinical psychology. Yet, Zurawicki argues that in view of the commonness of the "irregular" behaviors (for example, the obsessive compulsive shoppers account for almost 10% of the total) they cannot be ignored as pure aberrations. To the contrary, as such traits are linked to the personality characteristics they form a basis for a different type of segmentation—one based on buying styles. Among the corresponding juxtapositions suggested by the author it is worth mentioning the contrast between the methodical versus cursory evaluations, analytical versus holistic approach, independent as opposed to peer-influenced judgments, or ludic versus playless attitudes. And such a discussion shows in a new light not only the purpose of segmentation but also the challenges of positioning addressed at the chapter's conclusion.

Finally Chapter 5 reports on the practical use of brain scanning and biometrics as applied to video games, retail and on-line shopping environments, and measuring the mental energy expended in decision making.

Two valuable features of this book stand out. First, the author connects the neural underpinnings of personality to segmentation bases suggesting a new criterion: a buying style hypothesized to be consistent for specific clusters across different buying situations. This is a totally new idea which in view of the recent criticism of traditional segmentation and positioning can reveal stimulating for both theory development and practical applications. Second, by emphasizing the neural mechanisms behind consumer's self-control and self-monitoring, the author illustrates how people can resist temptations and choose more wisely.

While academic in nature, this book quotes a number of actual studies executed by business firms using the new science to learn more about consumers' implicit preferences and improve their product or advertising strategies. As firms do not necessarily report on their proprietary research, this part of the book is particularly valuable as it illustrates practical applications.

In sum, *Neuromarketing: Exploring the Brain of the Consumer* is definitely worth reading and studying by marketing researchers and business students but also by the managers interested in this new methodology for a better understanding of their markets.

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