

Elke Schwarz

Neuro-Advertising

Brain-friendly advertising for more success
in your market



Springer

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Success in Your Market



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Elke Schwarz
Pharma-LOT
Gäufelden, Germany

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Contents

| | | |
|----------|---|-----------|
| 1 | The Subconscious Decision Marketing Index© (SDMI) | 1 |
| 1.1 | What Are the Benefits of the SDMI for Companies? | 1 |
| 1.2 | What Are the Advantages of the SDMI for Advertising Agencies?. | 3 |
| 1.3 | How Is the SDMI Determined? | 3 |
| 1.3.1 | Step 1: Breakdown of Advertising into Its Levels | 4 |
| 1.3.2 | Step 2: Structured Analysis and Evaluation. | 5 |
| 1.3.3 | Step 3: Calculation of Results | 8 |
| 1.3.4 | Target Group-Specific Assessment and More | 10 |
| 1.4 | Comparison of Advertising Effectiveness Measurements | 14 |
| 1.4.1 | fMRI. | 14 |
| 1.4.2 | Surveys. | 15 |
| 1.4.3 | Other Advertising Impact Measurements and Analyses | 17 |
| | References. | 19 |
| 2 | Central Brain Functions and Their Significance for Advertising | 21 |
| 2.1 | Can Advertising Influence Purchase Decisions by Triggering Brain Activity?. | 22 |
| 2.2 | Brain Regions in Detail | 23 |
| 2.2.1 | Amygdala. | 23 |
| 2.2.2 | Hypothalamus | 24 |
| 2.2.3 | Hippocampus | 24 |
| 2.2.4 | Insula | 24 |
| 2.2.5 | Cortex. | 25 |
| 2.2.6 | Nucleus Accumbens. | 26 |
| 2.2.7 | Thalamus | 27 |
| 2.2.8 | Ventral Striatum | 27 |
| | References. | 28 |
| 3 | Emotion Index: When Do Emotions Trigger Buying Impulses? | 29 |
| 3.1 | Gut Feeling or Emotional Conditioning | 30 |
| 3.2 | How Is the Emotion Index Calculated? | 32 |

| | | |
|----------|--|-----------|
| 3.3 | Master Model of Emotions | 32 |
| 3.3.1 | Emotion: Value..... | 34 |
| 3.3.2 | Emotion: Master..... | 36 |
| 3.3.3 | Emotion: Reduced Value | 39 |
| 3.3.4 | Emotion: Powerlessness..... | 41 |
| 3.4 | Emotional Evaluation of Texts..... | 44 |
| 3.5 | Emotional Evaluation of Acoustic Signals..... | 47 |
| 3.5.1 | Noises..... | 47 |
| 3.5.2 | Music | 48 |
| 3.6 | Emotional Evaluation of Visuals and the Importance of Colors | 54 |
| 3.6.1 | Colors: How They Support Brands and What They Say | 57 |
| 3.6.2 | What Else Can Colors Do? How Do They Influence Decisions?.... | 58 |
| 3.6.3 | What Must Be Considered When Choosing a Color? | 60 |
| 3.7 | Emotional Evaluation of Selected Phases of the Customer Journey | 62 |
| 3.7.1 | The Transition from the Advertising World to the Interactive Online World | 62 |
| 3.7.2 | The Transition from the Real to the Online World | 63 |
| 3.7.3 | The Transition from Individual to Customer Number | 63 |
| 3.7.4 | Online Advertising: The Groundhog Says Hello Everyday..... | 64 |
| | References..... | 64 |
| 4 | Benefit Index: When Are Benefits Convincing? | 67 |
| 4.1 | The Influence of the Unconscious and Conscious Relevant Set | 68 |
| 4.1.1 | Embodiment..... | 69 |
| 4.1.2 | The Explicit and Implicit Motive System of Customers | 71 |
| 4.1.3 | BMW Versus Audi: Comparison of the Corporate Claims | 73 |
| 4.2 | Implicit Benefit Index (IBI)..... | 76 |
| 4.2.1 | Category 1: Negative Emotionalization – Degree of Purchase Motivation Very Low | 76 |
| 4.2.2 | Category 2: Facts, Figures, Data – Degree of Purchase Motivation Low | 77 |
| 4.2.3 | Category 3: General Characteristics and Benefits – Degree of Purchase Motivation Medium | 78 |
| 4.2.4 | Category 4: Customer-Centric and Emotional Benefits – Degree of Purchase Motivation High..... | 79 |
| 4.3 | Neural and Psychological Effects of Prices..... | 80 |
| 4.3.1 | Cheap or Good Value?..... | 80 |
| 4.3.2 | The Reward Mechanism of High Prices | 84 |
| 4.3.3 | How Emotional Stories Determine Prices | 85 |
| 4.4 | Other Benefits | 86 |
| 4.4.1 | Brand as a Benefit | 86 |
| 4.4.2 | Trust as a Benefit | 88 |

- 4.4.3 Reward as a Benefit 89
 - 4.4.4 Heuristics as a Benefit 91
 - References. 92
- 5 Hormone Index: How Do Neurotransmitters Influence Decisions? 95**
 - 5.1 How Is the Hormone Index Collected? 97
 - 5.1.1 Category 1: Advertisements That Motivate Purchase via Negative Emotions. 97
 - 5.1.2 Category 2: Advertisements That Motivate Purchase by Means of Positive and Confidence-Building Emotions. 102
 - 5.1.3 Category 3: Advertisements That Motivate People to Buy by Means of Strong Positive Emotions 104
 - 5.2 Dior Versus Chanel: Comparison of Two TV Spots for Men’s Fragrances 106
 - References. 107
- 6 Memory Index: When Are Stimuli Stored and How? 109**
 - 6.1 How Is the Memory Index Calculated? 109
 - 6.2 Thinking and Deciding 110
 - 6.3 Perception and Attention 111
 - 6.3.1 The Battle of the Stimuli 112
 - 6.3.2 Eroticism 114
 - 6.4 Learning and Storage. 118
 - 6.4.1 Explicit and Implicit Memory 118
 - 6.4.2 Implicit Learning 120
 - 6.4.3 What Effect Does Subliminal Priming Have? 122
 - 6.4.4 Learning Enhancers 123
 - 6.4.5 Coding 133
 - References. 140
- 7 SDMI in Particular: Applications and Examples 143**
 - 7.1 Storytelling. 143
 - 7.1.1 KPIs of Advertising Storytelling 146
 - 7.1.2 A Picture Can Have a Story Too 156
 - 7.1.3 Content Marketing Masterpieces. 158
 - 7.2 How Good Are Two of the Most Expensive Advertising Campaigns in the World? 161
 - 7.3 Quality Criteria for Online and Mobile Advertising 163
 - 7.4 Testimonials 167
 - 7.4.1 Testimonial Fitting: Analysis Tool for More Certainty in the Selection Process 168
 - 7.4.2 The Right Use of the Testimonial 170
 - 7.4.3 Animated Testimonials 171

| | | |
|----------|---|------------|
| 7.5 | Brand Extension..... | 171 |
| | References..... | 176 |
| 8 | Advertising Efficiency in a Nutshell | 179 |
| 8.1 | Quick Wins for the Best Advertising Impact..... | 179 |
| 8.2 | FAQ About the SDMI | 182 |
| | References..... | 183 |
| | Your Bonus as a Buyer of This Book | 185 |

About the Author



Elke Schwarz studied economics in Essen. At the same time, she was a business partner at Point Consulting for 18 years, starting in 1994. Already at that time she was concerned with the question: How does the brain work and how can sales and marketing communicate with customers in such a way that it is possible to convince them better and more easily? Through the possibility of cooperation with universities and companies, the Subconscious Decision Marketing Index© (SDMI) could be developed.

Ms. Schwarz holds workshops as well as training courses and lectures, and advises on the development of sales strategies and marketing campaigns from the point of view of neurocommunication and Emotion Selling©. The book *Emotion Selling: Messbar mehr verkaufen durch neue Erkenntnisse der Neurokommunikation* (*Emotion Selling: Measurably Selling More Through New Insights into Neurocommunication*) was published in 2015 in its second edition by Springer Gabler.

Contact:

es@pharma-lot.de

www.pharma-lot.de

Introduction

Never before have there been so many insights into the decision-making behavior of customers as there are today. It is no longer conjectured how customers decide, but we know. This makes it possible to use fMRI (functional magnetic resonance imaging) to observe customers shopping and even predict their decisions before the customers themselves know how they will consciously decide seconds later. Due to many findings of neuroscience, customers can be understood much better, and marketing and advertising strategies can be designed much more effectively and efficiently. Furthermore, today it is possible to combine creativity with findings from brain research. The result is advertising that stays in the mind better, is attractive for customers and potential customers, and presses the “will I buy” button in the brain.

Advertising is increasingly perceived “out of the corner of our eye,” that is, unconsciously, due to today’s lifestyle, which is often characterized by a hectic pace and information overload. Likewise, advertising is increasingly viewed online. Therefore, extended and partly different mechanisms of action apply to good advertisements than years ago. These must be taken into account in concepts. Likewise, the effect of these advertisements can often only be measured using methods of unconscious advertising impact measurement. Creative advertising must be oriented towards this today and in the future in order to continue to generate economic success.

In addition, marketing campaigns and the associated brand communication are increasingly coming under pressure from profitability. Questions such as whether the ROI (return on investment) of a marketing campaign (in the short, medium, and long term) is high enough and how this can be increased are being asked more and more consistently. What is the return on the billions invested every year in advertising and thus in potential and existing customers? To what extent are the right levers of impact being operated?

So the crucial question is: When does advertising work and how can the effect best be determined in advance? How can the unconscious but very decision-relevant processes in the brain of customers be more strongly integrated into the development of new campaigns and thus make advertising more economical and at the same time creative? In order to find answers to these questions, we have developed a new, practical, and, at the same time,

scientifically sound index for assessing the subconscious impact of advertising: the Subconscious Decision Marketing Index (SDMI).

The scientific basis of the SDMI is a systemic and interdisciplinary approach that combines principles and models of neurology, information theory, communication science, psychology, and medicine. In addition to the implicit motives of different target groups, the SDMI particularly takes into account the functioning of the brain and meta-principles of decision-making. This means that the SDMI – as an unconscious advertising impact analysis – is a useful supplement to conscious advertising impact measurement and tracking, and marketing strategies can thus be developed more efficiently and in a more customer-oriented manner.

We now know that over 95% of all decisions (Zaltmann, 2003) are made unconsciously, and that 70–99% (Ott, 2015) of purchasing decisions are determined by the unconscious. And so it was only a logical consequence that there must be a structured possibility that focuses on the unconscious decision-making processes of people and not the conscious ones, as in surveys, for example, in order to be able to make more accurate predictions regarding purchasing behavior or brand perception. Conscious decisions are made in the subconscious, whereby the preparatory processes do not become conscious because the conscious is blind to the subconscious (Behrens & Neumaier, 2004). And this is exactly where a great lever of impact lies for brands. A change in thinking is taking place in companies as a result of these findings.

Example

In 2014, the market research institute “Best for Planning” released a survey with the result that the Banjo candy bar, which has not been on the market since 2009, receives very good market data and has 2 million loyal customers. Here, it became clear that *respondents* made a clear error in answering questions by remembering and even claiming to have eaten the candy bar that has been out of existence for 5 years. Further, this shows how difficult it is for people to answer questions correctly. They answer questions to the best of their knowledge, but the filter of consciousness, the memory capacity of the brain, and, for example, moods often throw a spanner in the works (Best for Planning 2014).

With the methods of neuroscience, decision-making, evaluation, and purchasing processes in the brain of customers can be recognized much better and even predicted in parts. This means that distortions, for example, due to socially desirable answers or inaccurate articulation by the respondents, can be avoided. For example, it has been shown time and again that people use a wide variety of vocabulary for one and the same emotional state, which naturally has a significant influence on the quality of the response. Research further shows that consciously given responses differ from actual purchase behavior and representation in the brain. For example, Aharon et al. (2001) showed in a study that test persons express themselves differently regarding the attractiveness of persons than the reward system in the brain of the test persons signals this. As a result, it turned out that the prediction

by the scientists was better. It is therefore possible to use the more precise findings in the development of advertising strategies in order to increase their effectiveness.

Furthermore, specific areas of the brain could be linked to the willingness to pay and the preference for goods. Plassmann et al. (2008) showed that the more the subjects were willing to pay for a certain good, the more active the orbitofrontal cortex was. This means that there is a structure in the brain that assigns meaning to products. This is therefore relevant to decision-making and purchasing. Closely related to this is the perceived benefit that the target group attributes to a product or brand. The better the implicit benefit, the greater the desire to own this product.

These and many other findings from studies we have evaluated are incorporated into the SDMI. Of course, all the principles mentioned in this book apply to TV, online, print, billboard, and radio advertising.

What can you expect in this book? In this book, you will find a combination of practice, science, and clear recommendations. We have divided the SDMI into the four areas “Emotion,” “Benefit,” “Hormone,” and “Memory.” For each of these areas you will find background and examples.

The SDMI answers questions such as:

- Which brain areas should be activated in the customer’s head so that they buy?
- How can sales- and image-promoting emotions be created among recipients and inhibiting ones be avoided?
- How can stimuli and information be anchored in the minds of potential and existing customers in this day and age?
- What influence do neurotransmitters have on purchasing decisions?

All in all, we place the focus of this book on the buying processes and decisions that are *unconsciously* triggered in the customer’s brain. Because these are decisive and influence customers the most.

References

- Aharon, I., Etcoff, N., Ariely, D., Chabris, C. F., O’Connor, E., & Breiter, H. C. (2001). Beautiful faces have variable reward value – fMRI and behavioral evidence. *Neuron*, 32(3), 537–551.
- Behrens, G., & Neumaier, M. (2004). Der Einfluss des Unbewussten auf das Konsumentenverhalten. In A. Gröppel-Klein (Hrsg.), *Konsumentenverhaltensforschung im 21. Jahrhundert* (S. 3–27). Gabler.
- Best for Planning. (2014). <http://meedia.de/2014/09/19/der-fall-banjo-warum-man-studien-wie-best-for-planning-ma-co-nur-bedingt-glauben-sollte/>. Zugegriffen: 28. Apr. 2018.
- Ott, C. S. (2015). Zukunftsperspektiven der Shopper-Marktforschung: Wie Internet und Smartphones das Kaufverhalten und damit auch die Forschung verändern. In B. Keller,

H. -W. Klein, & S. Tuschl (Hrsg.), *Zukunft der Marktforschung. Entwicklungschancen in Zeiten von Social Media und Big Data* (S. 253–267). Springer.

Plassmann, H., O’Doherty, J., Shiv, B., & Rangel, A. (2008). Marketing actions can modulate neural representations of experienced pleasantness. *Proceedings of the National Academy of Sciences*, 105(3), 1050–1054.

Zaltmann, G. (2003). *How customers think*. Harvard Business School Press.



The Subconscious Decision Marketing Index© (SDMI)

1

Abstract

The Subconscious Decision Marketing Index© (SDMI) bundles the most important findings of neuroscientific and economic studies on advertising impact and decision-making and combines them for the first time in an index. The analysis, evaluation, and calculation are software-supported and carried out by specially trained experts. The result is an expert report with clear key figures and practical recommendations for action.

1.1 What Are the Benefits of the SDMI for Companies?

Companies are under increasing pressure to come up with a successful advertising concept. The economic success of a company clearly depends on the marketing strategy. It is therefore right that companies look more closely and seek certainty regarding the effect of the advertising concept. Our definition of advertising success clearly means advertising profitability. That means that the advertisement for the service and/or the product is perceived as sales and image-promoting that thus an attitude reinforcement or an attitude change is reached toward a better image and a higher purchase desire. Furthermore, it means a behavioral reinforcement or behavioral change toward purchase. It should be emphasized that advertising recall plays only a minor role in triggering positive purchase behavior (Feldwick, 1996; Mayer de Groot et al., 2001, 2002). In summary, advertising success means generating the best possible image reinforcement and purchase motivation among recipients with as little cost and time as possible.

Classic channel advertising – television, radio, print – is now massively supplemented or even already overtaken by online marketing measures. According to the IAB AdEx benchmark study (Interactive Advertising Bureau Europe, 2015), the European online advertising market grew from €37.2 bn in 2015 to €41.9 bn in 2016. This is an increase of +12.3%. Germany ranks second behind the United Kingdom with €14.18 bn as the largest

market for online advertising with €5.95 bn. The television advertising market, on the other hand, “only” turned over €4.56 billion in 2016 (Statista, 2018). The key factors here are not only the increased use of mobile devices by consumers but also the increasing connection of TV sets to the Internet.

Companies are taking potential customers on much more of a journey around the product and involving them more and more in marketing campaigns. Social media marketing, viral marketing, cross-media, and cross-channel projects as well as search engine optimization or advertising make it possible through platforms such as Facebook, Twitter, Pinterest, etc., that a campaign is perceived, disseminated, and – what is even more important – evaluated by significantly more people. Whereas in the past thousands to tens of thousands of people were reached through classic advertising measures, today and in the future, it will be hundreds of thousands to millions.

As evidenced on social media platforms, people like to engage – i.e., show themselves, show what they like, what they don't like, what they believe in, and share good and bad. They want to interact with the brand. Companies can control and influence these activities to a large extent themselves – depending on what kind of traditional advertising, what online advertising, what content they distribute, and which bloggers they involve. This means that companies also have an enormous responsibility for the brand as triggers of social media activities.

Currently, about 8–10% of a marketing budget is spent on analytics. Due to the high speed at which advertising spreads and the new, much greater reach, it is assumed to date that this proportion will continue to increase. This would be true if the way advertising effectiveness is measured remained at its current level. However, a *reduction* in the marketing budget is conceivable and feasible. The reduction results from the economic consideration of the analytical tools. Today's way of measuring advertising effectiveness refers to a large extent to the measurement of the conscious advertising effect or the collection of key figures *after* an advertisement or an advertising campaign has been broadcast or put online (tracking). The trend, and this is already visible today, will shift more and more toward the analysis of the *unconscious* effect of advertising, as very relevant solutions can be found here. The budget will be invested more efficiently.

When companies invite tenders for a pitch, various advertising agencies present their concepts. How can a company make an informed assessment of which of the concepts will be well received by customers, strengthen the brand image, and increase sales success? Agencies are increasingly using the SDMI to demonstrate the creative value of their work in economic terms. This makes it easier for a company to distinguish commercially viable ideas from less commercially viable ideas. At the same time, an agency signals that it can combine creativity and economics. Here, the SDMI opens a window into the future and thus provides a glimpse into the effectiveness of a campaign. Even if the ideas are developed by the agency or within the company itself, the SDMI is becoming increasingly popular. Because through the clear indications, a creative idea can be developed in a short time so that it has the best possible impact on customers and new customers.

1.2 What Are the Advantages of the SDMI for Advertising Agencies?

There are over 10,000 advertising agencies in Germany. The competition is fierce, and the competition for budgets is tough. On the one hand, agencies live from the fact that they continually inspire their clients and, even more importantly, the end customers with successful advertising concepts and thus with effective advertising. On the other hand, it is equally important to find new clients in order to expand the business. To do this, agencies have to win pitches year after year. This is highly demanding. To get a contract, you first have to be invited to pitch. Once this is done, a hectic period begins where a lot of heart and soul goes into ideas for the potential client. An enormous investment of time and money is the result. A pitch can quickly cost between €10,000 and €50,000. The probability of winning a pitch can be significantly increased if the idea or concept has been analyzed in advance for its impact.

The SDMI is an excellent way to provide clients with a metric that reflects the unconscious effectiveness of the advertising concept. As an independent institute, we can provide agencies with a sound rationale as to why this idea should be used. Furthermore, clients, that is, the companies, receive a more valid argument for their internal communication through the SDMI key figure, why they have chosen this agency and thus this advertising campaign.

In addition to the evaluation of current projects, agencies also have the option of having their existing concepts evaluated retrospectively. This helps to underpin or improve the quality of their work, making it more visible and thus more tangible for current and potential clients. An SDMI analysis, which includes several campaigns over a number of years, can demonstrate to clients that the work they do is consistently excellent and provide positive confirmation of their collaboration. It also increases the chance that good, creative ideas will be heard more and more.

1.3 How Is the SDMI Determined?

The determination of the SDMI is software-supported and consists of the following steps:

- Splitting advertising into its levels
- Structured analysis and evaluation
- Result calculation (Fig. 1.1)

Concrete recommendations for action can be derived from the result with clear key figures.

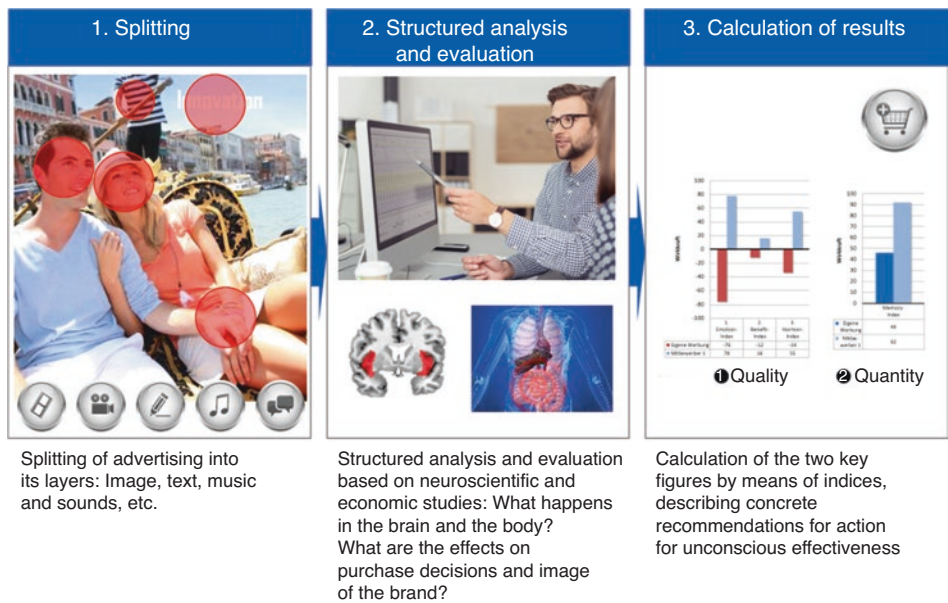


Fig. 1.1 How is the SDMI determined?. (Source: image left © goodluz/[Fotolia.com](#); image middle top © contrastwerkstatt/[Fotolia.com](#); image right © Sebastian Kaulitzki/[Fotolia.com](#); buttons © Do Ra/[Fotolia.com](#))

1.3.1 Step 1: Breakdown of Advertising into Its Levels

The aim is to predict the effect of the levels and their building blocks on image and buying behavior. To do this, each advertisement is first broken down into its components. In this way, the individual stimuli can be better analyzed. Nevertheless, the overall picture is always considered as well. In classic TV advertising, there are two levels: the visual and the auditory. The visual components are pictures or moving images and their cutouts, graphics, drawings, and writing. In the auditory level, spoken words, music, and sounds are analyzed.

Visual Stimuli

Here, we conduct an eye tracking¹ study or create a focus profile based on eye tracking study data. This depends on whether it is a draft of an advertisement or a finished advertisement and whether the use of an eye tracking procedure makes sense. For advertisements with relatively few visual stimuli (a maximum of five elements) or with clearly dominant information (such as faces) or a proven eye tracking structure (e.g., woman/man looks at product), a focus profile is less expensive and equally accurate. A focus profile

¹ Eye tracking means gaze registration. Eye tracking is a procedure in which the gaze behavior of test subjects is registered while viewing images or texts.

results from the thousands of studies that have already been conducted using eye tracking. It is well known that the brain processes what it perceives in two different ways: One is an innate process, as with intense colors or anything perceived as life-threatening. The other is learned mechanisms, such as gaze paths in reading.

Furthermore, it has been proven that faces and negative stimuli receive the greatest attention and that the strongest information processing takes place in the brain when the recipient fixates a section of an image for at least 0.2 s (Yarbus, 1967). This time is necessary for a sharp image to emerge. A prerequisite for this fixation is that what is perceived is interesting for the recipient. The central visual area, that is, the sharp visual area, has a diameter of about 2–3 cm for subjects or texts in front of us. It does not matter whether we are holding a magazine in our hand or looking at a computer screen. Studies have shown that perception in the peripheral vision area also has an effect on purchase and non-purchase (Shapiro et al., 1997).

This data is used to create a focus profile, which consists of the most important fixation points and the overall composition of the advertisement. In the case of print, poster, or display advertising, there are on average five to ten fixation points, whereas in the case of TV or online spots, there are between 30 and 100 individual visual stimuli.

If only eye tracking were carried out, nothing could be said about the quality of the individual stimuli and their influence on the recipient. An eye tracking study only records what is fixed and how the saccade, that is, the course of the gaze, is. A more extensive and well-founded analysis of the effect of these stimuli is therefore very useful. Companies often try to do this qualitative recording with surveys. Surveys belong to the category of advertising impact measurements that focus on the conscious. However, since 70–99% of all purchasing decisions are made unconsciously, the quality of such an evaluation must be viewed critically. A comparison of individual methods can be found in Sect. 1.4.

With text modules, which can be written or spoken, each individual word, the meaning of each sentence, and the meaning of the overall text are considered. It is known that each spoken word is perceived by the brain and triggers neuroassociative processes, as do the tone of voice and the overall meaning. Likewise, how easily written material can be grasped is also assessed.

Auditory Stimuli

Music and sounds are auditory building blocks that are of particular importance. Here – as far as it makes sense and is possible – individual sequences are determined for a later analysis, as well as the respective overall concept is considered.

1.3.2 Step 2: Structured Analysis and Evaluation

Now that advertising has been broken down into its individual levels and building blocks, the analysis is based on current neuroscientific and neuroeconomic studies.

Words and Texts

For some areas, such as the analysis of words, software could be developed. The so-called emotional word value analysis gives – as the name suggests – the emotional value of a word. In this way, the most positive and negative words can be filtered out, and at the same time, a value for the entire text can be determined. The text is entered, and each word receives a word value from -100% to $+100\%$. For example, words such as hate, death, war, or accident receive -100% . Words that have a more neutral effect and are given a score of 0 are filler words such as and, or, a. Extremely positive words, such as love, receive $+100\%$. The emotion value can be determined well with written words. With spoken words, the same word can have a different meaning just by the tone of voice. Thus, the word “good” as a statement emphasizes expresses affirmation, ironic emphasizes irony, and when phrased as a question expresses doubt. Consequently, in addition to analyzing each word, the meaning is also recorded and evaluated. Thus, the word “good” emphasized ironically receives a negative value, whereas the word “good” as a positive affirmation receives a positive value.

Different areas of the brain are activated when processing words and texts. A group of researchers led by Daniela Sammler from the Max Planck Institute for Human Cognitive and Brain Sciences (Max-Planck-Institut für Kognitions- und Neurowissenschaften) in Leipzig (Sammler et al., 2015) has found by means of fMRI studies that brain areas are particularly active in the right hemisphere. Two areas are particularly noticeable: the inferior frontal lobe, which supports the evaluation of tone, and the premotor cortex, which controls the movements of the larynx. This is interesting because the subjects only heard the stimuli and did not speak themselves. So what is heard is also translated into movement commands in the brain.

Another part of the SDMI software analyzes the associations of each word and creates an association profile. This profile provides information about which associations are associated with this word and whether these fit with the brand values conveyed by the company, whether the target group responds to these associations and whether these then have a sales- and image-promoting or sales- and image-inhibiting effect.

Language strategies, as a building block of the overall text, are classified, for example, with the master model of emotions, into sales- and image-promoting or sales- and image-inhibiting. Here, too, the evaluation lies between -100% and $+100\%$. In summary, this means for text analysis that individual words and the entire text are evaluated, since each individual word and the entire text are evaluated in their meaning by the brain and the recipient, respectively. Calculation and evaluation examples can be found in Chap. 3.

Sounds

Sounds are entered into a database and rated by software and an expert. A rating scale of -100% to $+100\%$ also applies. The value indicates how positively or negatively the sound is emotionally assessed by people. A threatening, dark dog growl and a bomb explosion receive a very negative emotional rating, as do screams of fear. In contrast, a kissing sound, a hearty laugh, a friendly babble of a stream, or a pleasant sound of waves crashing