

A DEEP DIVE INTO THE MIND

EXPLORING THE SUBCONSCIOUS WITH GUIDED RELAXATION

Ralph Poldervaart

INTRODUCTION

Eighty to ninety percent of our behaviour is determined by our subconscious mind. The problem market researchers face is that they communicate with the conscious mind of consumers. Hence, gaining answers that reflect a mere 10 to 20% percent of what drives consumer behaviour. That does not make market research necessarily unreliable, but it stresses its limitation to predict consumer behaviour.

Consumers are often unaware of the drivers that determine their decisions. When asking them, they may give a detailed report, but this is based on what they *think* influences their choices, which is often not how they *act* in real life. Especially with more complex decisions we tend to use algorithms that are stored in our subconscious mind to make a decision. These decisions are not irrational, we are just not fully aware of the underlying decision criteria. 'It just felt good'. Anybody who has ever bought a house will recognise that it's hard to pinpoint why you fell for this particular house, but you just pictured yourself living there.

In research we ask people to answer 'why they bought the house'. In a research setting respondents tend to rationalise their behaviour and make it sound logical. They tell us that the price was reasonable, it was in a great neighbourhood and had a high-tech kitchen – when in fact, that the house reminded them of the house they grew up in and made them feel secure may have played a larger role. Consumers just are unaware and do not tell us these things.

If we really want to gain deeper understanding of consumer behaviour, we need new research techniques that are able to access the subconscious mind.

THE POWER OF THE SUBCONSCIOUS MIND

Timothy Wilson, professor of psychology at the University of Virginia, claims that the vast majority of the choices we make are a result of subconscious 'thought' and emotional drivers.

His definition of the subconscious is "anything that is in your mind that you are not consciously aware of at a particular point in time ... mental processes that are inaccessible to consciousness but that influence judgments, feelings, or behaviour". This definition implies that behaviour driven by the subconscious is not irrational, it is just something we are not aware of. The 'mental processes' are defined by what we experience and are highly linked to our emotions.

In his book "Strangers to Ourselves - Discovering the Adaptive Unconscious" Wilson shows: "... it is now clear that feelings are functional, not excess baggage that impede decision making." Feelings are a key part of humans' evolutionary progress. Feelings, Wilson indicates, are our "Psychological Immune System." They protect us from things that might make us feel bad, and promote things that make us feel good. The unconscious mind "select(s), interpret(s), and evaluate(s) information in ways that make me feel good."

Wilson points out that the most powerful memory imprints in our subconscious mind are usually tagged

THE EVOLVING HUMAN. THE GRAND BAZAAR

with a high level of emotional content. It is these emotions that are the drivers of our behaviour, even more so than our analytical conscious thinking.

Professor Joseph LeDoux, professor of neuroscience and psychology from New York University, shows how our experiences form memories, which in their part influence our decision making.

Beliefs are constructs of associations in the brain. They are built by what we have experienced in the past. The human brain is a powerful tool that records many things, both conscious and subconscious. This 'data' is usually not recorded in words, but often in images, sounds, feelings and even taste and smell. Information is taken in by our senses (eyesight, sound, feel, smell and taste) and are stored in the brain as memory. Memory is a process of retrieving earlier conscious experiences. LeDoux states that "emotional (...) memories are stored and retrieved in parallel, and their activities are joined seamlessly in our conscious experience. That does not mean that we have direct conscious access to our emotional memory; it means instead that we have access to the consequences, such as the way we behave".

The above shows that it is the earlier experiences that are stored in our subconscious mind that are strong drivers in how we act as a consumer and in the choices we make. The challenge for marketers is to influence these experiences and for market researchers to find out what these experiences are like.

Seven seconds between conscious and unconscious decision making

A study conducted by scientists from the Max Planck Institute for Human Cognitive and Brain Sciences in Leipzig in April 2008 proved through an experiment that decision making is a process handled to a large extent by unconscious mental activity.

The researchers used a brain scanner to investigate what happens in the human brain just before a decision is made. "Many processes in the brain occur automatically and without involvement of our consciousness. This prevents our mind from being overloaded by simple

routine tasks. But when it comes to decisions we tend to assume they are made by our conscious mind. This is questioned by our current findings."

In the study, published in *Nature Neuroscience*, participants could freely decide if they wanted to press a button with their left or right hand. They were free to make this decision whenever they wanted, but had to remember at which time they felt they had made up their mind. The aim of the experiment was to find out what happens in the brain in the period just before the person felt the decision was made. The researchers found that it was possible to predict from brain signals which option participants would take up to seven seconds before they consciously made their decision. The fact that decisions can be predicted so long before they are made is an astonishing finding.

This unprecedented prediction of decision was made possible by sophisticated computer programs that were trained to recognize typical brain activity patterns preceding each of the two choices. Micropatterns of activity in the frontopolar cortex were predictive of the choices even before participants knew which option they were going to choose.

Picking pantyhose: how the consciousness can fool us

In addition to the many examples concerning our lack of conscious knowledge of our own decision making, Wilson reported a number of examples from the market research field. In one example, Wilson did a test with women and pantyhose. He arranged four pairs of pantyhose on a table, from left to right, and asked women to choose which pair they preferred. The test results indicated an order bias with the preferences for the pairs increasing from left to right on the table. However, all four pairs of pantyhose were identical. When the respondents were asked to give reasons for their choices, they had no difficulty in doing so. They talked knowledgeably about the superior texture and strength of their chosen pair. They were better finished, sheerer, etc. The respondents did not agree even that there was an "order effect" once it was finally pointed out to them. Wilson concluded that

THE EVOLVING HUMAN. THE GRAND BAZAAR

“People do not (always consciously) know (the) reasons for their feelings, judgments and actions.”

Now that we have stated that consciousness is poor in predicting our behaviour and that consumer behaviour is largely dependent of emotional drivers that are present in the subconscious mind, let's take a look at ways to tap into this area of the brain.

ALL IS BEING RECORDED, BUT WE DO NOT ALWAYS HAVE ACCESS

The mind is like a VCR, recording everything around us whether we pay attention or not. How great would it be if we could rewind the tape and watch a scene? For obvious reasons this is not possible in real life. However, what if we could help a respondent rewind the tape, relive the memory and let them report what's happening? We could access brand memories or moments that are critical in making a certain decision – memories that consumers are not aware of when we ask them, but that do play an important role in their decision making.

Access to memories and deeper emotions are almost constantly blocked or overruled by 'noise' in our heads: thoughts, worries, making plans, etc. Our conscious mind is a busy place. We try to remember things, it might be 'on the tip of our tongue', but temporarily we have no access. But when the mind relaxes, remarkable things happen. Taking a shower or just before falling asleep, we often have the best ideas and remember things that didn't cross our mind for a long time. We solve a problem at work or remember we should send someone a birthday card. This information was all stored in our mind, however we just did not give it enough space to access the conscious part of our mind.

The same happens if we are looking for our car keys. Trying really hard to consciously remember where they are often does not work. Giving the mind a rest and moving off the problem for a moment will help in remembering. Even, if you close our eyes for a moment, you can picture them lying on the table.

The principle that 'a relaxed state' leads to insight has been common knowledge for many centuries. Great thinkers of the past have discovered their groundbreaking ideas on moments when they were not working hard to find the solution. Instead, their minds were at a relaxed state. To illustrate: When Archimedes had his 'Eureka'-moment, he was not consciously trying hard to solve a problem. The insight just hit him when he was relaxing in the bathtub. Einstein is famous for using deep relaxation to allow his mind to wander into new territory for new insights. It was on a rowboat, relaxing on a starry night, that his mind leapt to the insights later known as $E=mc^2$.

THE 'ALPHA' STATE AS A KEY TO THE SUBCONSCIOUS

The 'relaxed' state of consciousness between sleep and awake, in which we are able to access thoughts and feelings that are on a subconscious level, is called 'alpha-state'. We are in an alpha-state many times a day. When we are driving the car on the highway and our mind is far, far away – so far, that we do not remember driving certain parts when we get home. However, when the car in front of us hits the brake, we are fully aware and awake. That means we are always in control, no matter how far we are consumed with our thoughts.

The alpha-state is different from the beta-state that we are usually in. It is a more relaxed state in which we have easier access to our subconscious. "Alpha" relates to the type of brain waves that we produce in that state.

Different kinds of brain activity

There are four categories of these brainwaves, ranging from the most activity to the least activity. When the brain is aroused and actively engaged in mental activities, it generates beta waves. These beta waves are of relatively low amplitude, and are the fastest of the four different brainwaves. The frequency of beta waves ranges from 14 to 40 cycles a second. Beta waves are characteristics of a strongly engaged mind. A person in active conversation would be in beta. A debater would be in high beta.

THE EVOLVING HUMAN. THE GRAND BAZAAR

The next brainwave category in order of frequency is alpha. The brain waves called "Alpha" were the first to be discovered (around 1908, by an Austrian psychiatrist named Hans Berger). Where beta represented arousal, alpha represents non-arousal. Alpha brainwaves are slower, and higher in amplitude. Their frequency ranges from 8 to 14 cycles per second. A person who has completed a task and sits down to rest is often in an alpha state. A person who takes time out to reflect or meditate is usually in an alpha state. A person who takes a break from a conference and walks in the garden is often in an alpha state.

Theta brain waves are seen in light sleep and drowsiness, with a frequency of brain waves ranges from 4 to 8 cycles a second. Delta brain waves are seen only in the deepest stages of sleep with the lowest frequency (0 - 4 cycles per second). (See figure 1.)

Alpha brain waves are seen in wakefulness where there is a relaxed and effortless alertness and are present in the state between beta (high arousal) and theta (light sleep). Scientists have spent a lot of time studying these brain waves of the EEG, so there is a lot of basic knowledge about what alpha brain waves are and what makes them appear and disappear in our brains. Alpha brain waves are not always present. For example, in deep sleep there are no alpha brain waves, and if someone is very highly aroused as in fear or anger, again there are virtually no alpha brain waves.

Creativity is an activity for which alpha brain waves are helpful. Scientists have shown that highly creative people have different brain waves from normal and non-creative people. In order to have a creative inspiration, your brain needs to be able to generate a big burst of alpha brain waves, mostly on the left side of the brain. The brains of

FIGURE 1
FOUR CATEGORIES OF BRAIN WAVE PATTERNS



Beta (14-30 Hz)

Concentration, arousal, alertness, cognition
Higher levels associated with anxiety, disease, feelings of separation, fight or flight



Alpha (8-13.9 Hz)

Relaxation, superlearning, relaxed focus, light trance, increased serotonin production
Pre-sleep, pre-waking drowsiness, meditation, beginning of access to unconscious mind



Theta (4-7.9 Hz)

Dreaming sleep (REM sleep)
Increased production of catecholamines (vital for learning and memory), increased creativity
Integrative, emotional experiences, potential change in behavior, increased retention of learned material
Hypnagogic imagery, trance, deep meditation, access to unconscious mind



Delta (.1-3.9 Hz)

Dreamless sleep
Human growth hormone released
Deep, trance-like, non-physical state, loss of body awareness
Access to unconscious and "collective unconscious" mind, greatest "push" to brain when induced with Holosync®

THE EVOLVING HUMAN. THE GRAND BAZAAR

creative people can generate these big alpha brain wave bursts, and do so when they are faced with problems to solve.

Alpha-state as a bridge between the conscious and the subconscious

The British psychobiologist and biophysicist C. Maxwell Cade made the link between brain waves and the transfer of information between the conscious and the subconscious mind. Cade measured the brain wave patterns of advanced meditators as well as 300 of his own students. He found a pattern that he identified as 'the awakened mind', related to the alpha brain wave pattern.

He defined that alpha is the bridge between the conscious and the subconscious mind. Without alpha the individual will not be able to remember with his or her beta brain waves what occurred in the theta (subconscious) state, whether it is dreaming or retrieving a lost memory. In the beta state our mind is too active to access the subconscious. In theta state the processes in the mind are unconscious (as in REM sleep) and thus we are not able to remember and report. Alpha state is right in the middle of these two states and makes it possible to tap into the unconscious, while being still fully aware and in control of what's happening. You are conscious, yet you have access to your subconscious.

What if we were able to put respondents in an alpha state and then conduct market research?

MARKET RESEARCH IN AN ALPHA STATE

After years of research, scientists came to the conclusion that brainwaves (and especially alpha waves) can be altered. But how can we do that? Experiments and studies of people practicing yoga showed that these people have increased alpha activities. Other studies have showed that by listening to certain sounds we can trigger the source of alpha brainwaves. Other methods to trigger alpha brain waves are visualisation (shutting your eyes to imaging or picture things), deep breathing, hypnosis and sauna visits.

One of the first that has used the principle of conducting market research with consumers in an alpha state

is Hal Goldberg. He is based in California and has a background in marketing and research, as well as in hypnosis. As a certified hypnotist he is a specialist in understanding how the subconscious mind works and can be accessed. His first experiments with the cross-over between market research and different mind states began in the 70s.

Professor William McDonald of Hofstra University in New York has studied the effect of interviewing in alpha state in his article "Consumer Decision Making and Altered States of Consciousness: A Study of Dualities". His conclusions are that respondents use significantly more emotional and sensual language to describe their purchasing behaviour in this state.

Kinds of research issues

As we have learned, guided relaxation uncovers areas that are connected to the subconscious mind, such as emotional drivers in decision making, brand imprints, latent unmet desires and emotional connections with a campaign. All of these research issues are highly explorative. This is exactly what market research in alpha state is good at: finding new grounds, new insights, which are hard to find using regular research. In practise, guided relaxation is often used in combination with other research methods as focus groups to get a full picture of choice drivers, both conscious and subconscious, rational and emotional. It is a powerful additional technique, rather than a substitute.

Guided relaxation in perspective

So, how do we place this method within the field of existing methods and research areas? Guided visualisation 'competes' with other forms of research that are aimed at getting to a deeper level in understanding consumer behaviour. It does not make all the other forms of research obsolete, but is definitely more effective *and* efficient in understanding the subconscious.

There are many interviewing techniques that try to uncover the subconscious. These include qualitative methods such as projective techniques and observation research, but also research of brain activity (in fMRI scanners) and quantitative implicit association tests (IAT).

THE EVOLVING HUMAN. THE GRAND BAZAAR

Projective techniques, such as sentence completion, personification, metaphor elicitation and story telling, try to tap into the subconscious indirectly. These techniques produce better and deeper insight than an interview merely based on Q&A. However these projective techniques are all still conducted and directed toward the conscious mind. As discussed earlier, this fails in getting access to subconscious drivers and associations, since the conscious mind cannot access the subconscious mind in the beta state in which consumers usually are during an interview.

Another qualitative way of finding out what consumers can not tell you is observing their behaviour. So-called 'consumer safaris' and 'adopt a consumer' programmes gained much popularity in the beginning of the 1990s. It is more reliable to observe consumer behaviour and find out how products and services are used, instead of consumers telling you how they use it. However, learnings are often on a more superficial level and are fully depending on the interpretation of the researcher. Also, the setting can be a bit artificial and the method is quite cost and time consuming.

A scientific way to research the processes in our brain is by getting consumers in an fMRI scan, show them stimuli and register areas of activity. Martin Lindstrom, a Danish marketing consultant, has conducted one of the largest studies so far for marketing purposes, using an fMRI scanner. He shares his findings in his bestseller

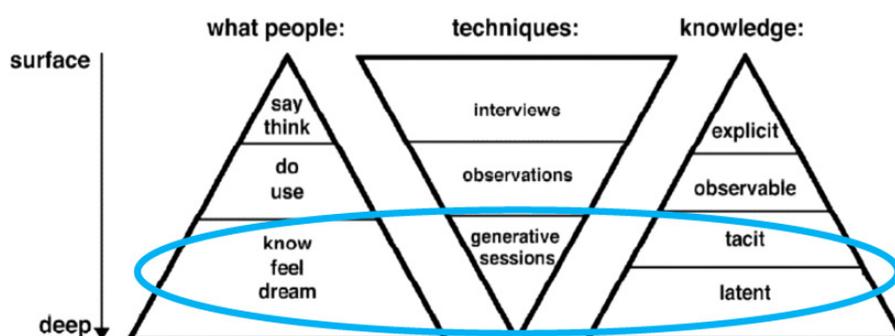
'Buyology'. Although the scale of the research is impressive, his conclusions are very dependent on the interpretation of the findings. Lindstrom's interpretation has been the subject of much discussion since his book came out. Moreover, the method is very costly and the medical environment and amount of noise the fMRI scanner produces can be quite unpleasant for respondents.

A method used in quantitative market research is implicit association tests (IAT). This technique is used to measure the (subconscious) strength of certain associations (for instance brands with brand values). The technique does especially well uncovering prejudices that people are not willing to admit. It is based on the principle that we react quicker when an association is stronger and these associations are measured through response times (often in an online test). The method is dependent of the stimuli used and is less explorative by nature than guided relaxation.

GUIDED RELAXATION IN PRACTISE

We can evoke the alpha state by using specific techniques to give the mind a rest and trigger memories. For research purposes we use deep breathing, closed eye visualisation and guided relaxation. These techniques may sound a bit 'off the map' for a market researcher, but it's no more than getting people relaxed and helping them reconstruct their memories.

FIGURE 2
QUALITATIVE TECHNIQUES ON VARIOUS LEVELS



THE EVOLVING HUMAN. THE GRAND BAZAAR

Interviewing people in an alpha state makes the life of a market researcher much easier. Responses are most honest, social desirability does not exist and respondents have much better access to their memories and feelings. Too good to be true? There may be some minor drawbacks, but the results are quite spectacular. But let's first take a closer look to how this technique works in market research.

The role of the moderator

The key in using this research technique is getting respondents in a relaxed, alpha state. Getting them in a relaxed state will generally take 20 minutes. During this period, respondents will get a feel of the kind of exercises that we will be working with and experience that all is safe and pleasant. The moderator will then lead the respondents to a state of deep relaxation.

This demands extensive training of the moderator in the principles of guided relaxation. When in a relaxed state, the moderator needs to connect with the respondents even more than in a traditional focus group or single interview. Respondents have to feel safe and need to be assured that all they are experiencing is perfectly okay. As respondents are reacting more from their emotional brain and can relive memories vividly, both positive and negative, it can put respondents in a vulnerable position. That is why this technique cannot be used without extensive training, including training to cover abreactions.

Once in alpha state the moderator will ask a few basic questions and help the respondents create an image in their mind based on their memories and associations. The moderator will stimulate the respondents to access their memory and association network by open, supporting, non-leading questions. Questions of the moderator are focused on helping create the image and subsequently getting an understanding of what's going on in the consumer's mind.

Examples of questions are:

- What does insurance mean to you?
- What was the most crucial moment in choosing your energy supplier?

- What does a drink make premium to you?
- What does the brand Volvo mean to you?
- What would your ideal petrol station look like?

As you can see, these are all very basic, elementary questions. The art is not in finding intelligent ways of posing the question. The way of questioning in alpha state is different from regular qualitative research. In regular interviews it is often hard to find deeper meanings and convictions and moderators need techniques to help respondents getting to a deeper level. This results in a need for lateral techniques, an indirect way of questioning, for instance by use of projective techniques, laddering or sentence completion. This indirect way of questioning is not needed when using guided relaxation. The respondents are able to 'dive up' deeper truths on their own and share them without a sense of social acceptability. The images and stories that respondents come up with are very vivid and detailed, always with a profound emotional meaning.

Setup of the interviews

Although the method allows respondents to share highly individual opinions and experiences, guided relaxation sessions are with small groups. This is a matter of efficiency. As 20-minute preparation is needed, it would be quite time inefficient to repeat this procedure for every single respondent. Experience both in the United States and the Netherlands has found that the optimal group size is 4-6 respondents. With this number there's enough time for every respondent to share their thoughts, without the waiting time being too long when other respondents are talking.

Surprisingly, in the alpha state, there's no group dynamics. Respondents do hear each other, but have no tendency to react to other stories, not are they influenced by each other. This is a result of the inner focused state that respondents are in. Another effect of the lack of group dynamics is that dominant respondents do not exist in guided relaxation sessions. All respondents have an equal share in the interview. This really becomes explicit once we bring respondents back in a 'daily' state of consciousness.

THE EVOLVING HUMAN. THE GRAND BAZAAR

In the last 15 minutes or so, respondents can reflect on the process and the learnings. Two things happen when the respondents are brought back from their relaxed state. Firstly, group dynamics are back: there's a difference in level of participation (dominant and shy respondents). Also, rationalisation makes its entry again. In some cases respondents start to minimise the opinions and experiences they shared. This is the effect of the conscious mind taking over again from the subconscious.

So how do respondents experience this method?

Generally, respondents are open for this type of research and even find it enjoyable. An online survey by research agency Motivaction showed that for the Dutch market around 75% of people are willing to participate in qualitative research, also are open for participating in this technique. Respondents do need to be prepared to be in a session with relaxation exercises and closed eyes. On the whole, respondents are positive towards this type of research, as they will be totally relaxed when the session is over and they usually learn something about themselves ('I didn't realize how important this was for me, up till now'). Respondents have often thanked us on their way out for a deeply relaxing and personally relevant experience.

CASE STUDY: DUTCH ENERGY MARKET

The power of guided visualisation is specifically visible in categories that are perceived as 'low interest', like insurance, banking and energy. In these categories consumers generally claim their decisions are fully conscious and rational, more than in any other category – a good starting point to put guided relaxation to the test.

The following case study shows that energy is not as low interest as expected and has important emotional and subconscious drivers and connotations. Research in the Dutch market for energy (electricity and gas) exploring drivers of choice using conventional qualitative techniques often resulted in obvious drivers like: reliability ('It just needs to work' and 'The bill should be correct'), corporate responsibility and price, all being quite instrumental values. A study by research agency

Motivaction using guided relaxation revealed that there are other drivers that are more emotional and on a more subconscious level that have not been found so explicitly using regular qualitative research.

Groups with guided relaxation pointed out that one of the most important drivers of choice is what we call 'emotional proximity'. The research showed that the values connected to the category 'energy and gas' are very positive and emotional. Energy is associated with cold days where families bond in the living room and spend quality time together. Energy may not be a direct enabler, but it is definitely present and important. Most respondents associated energy with the most elementary form of energy known by humans: fire, with all its associations of warmth, bonding and secureness. When asked of a moment on which energy was important to them, a respondent responded:

"I'm in my parents' house. It has an old-fashioned heating. The warmth feels great. Everything happens in this room. I feel secure with my roommates. Fine and secure. I can watch those flames for hours. We are sitting at a fire, in complete relaxation. The fire creates a bond."

The responses of other respondents were mostly in the same line, different memories, but boiling down to the same emotional connotations. (See figure 3.)

When we asked them what kind of feeling their energy supplier evoked, we were shocked. It was 180 degrees off from the warm and secure place that the category stands for. (See figure 4.) The following quotes illustrate this:

"I am on a large square, it looks Orwellian. Everything is black and white. I am surrounded by men in black coats and dark hats. They ignore me. I am dressed in jeans and trainers. I feel very small. This world is introverted and stands on its own. I can not relate to this world."

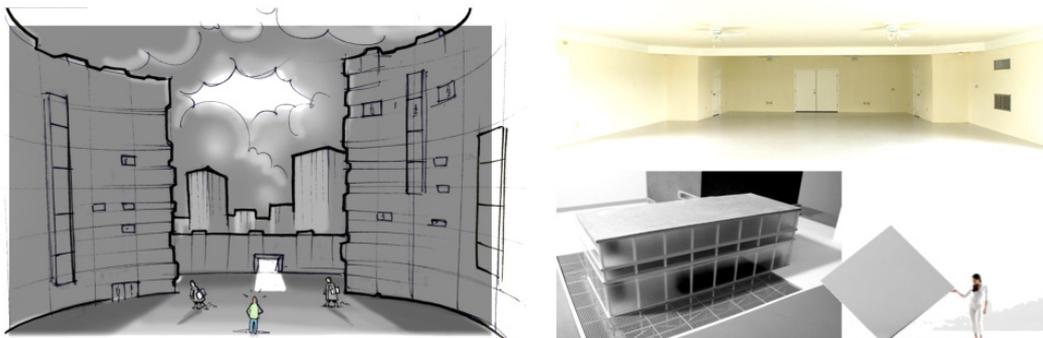
"I'm in a room, white, sleek and empty. In the centre there's a high-gloss white cube. It's the only thing there. Hard and cold. There are no people around, it is very unpleasant. The cube is strange. It's too big to sit on. It's kind of a designer item, beautifully embellished, but

THE EVOLVING HUMAN. THE GRAND BAZAAR

FIGURE 3
EMOTIONAL MEANING OF THE CATEGORY



FIGURE 4
MENTAL PICTURE OF ENERGY SUPPLIER



without any function. It doesn't feel real. It's too tidy. As if I am the first person ever in this space. They are hiding something from me. That's how it makes me feel."

In a market where all energy suppliers are mainly focussing on reliability, corporate responsibility and price in their marketing, because research told them to do, the priorities are way off. Consumers have a desperate need for a sincere, personal and small-scale approach. This is once more reflected when we asked consumers to create a mental picture of their ideal energy company:

"The energy supplier is located in a shopping street next to the butcher and the baker's. The employees know me and they know what I need. Energy can be complicated, but I get good and relevant information here and employees pay attention to my needs."

This doesn't necessarily mean that energy suppliers should actually build physical 'energy stores', but it stresses the need for a small-scale and personal approach – a strong driver when it comes to choosing an energy supplier that is underexposed when applying traditional research methods. The energy supplier that will successfully translate this insight into its proposition in a credible way will definitely gain market share.

HOW DO CLIENTS REACT?

According to a client in the Dutch insurance market *"guided visualisation leads to many powerful quotes. With only three groups, we gathered the amount of quotes with impact that would normally take twenty focus groups. And even then, I doubt if we would have such explicit material. It is such a powerful method. The responses of*

THE EVOLVING HUMAN. THE GRAND BAZAAR

consumers really have impact. You do not feel a need to talk with your colleagues in the viewing room, as you are totally absorbed by what is being told."

Market research usually is a rational and conscious domain and insights usually travel from the mind of the consumer to the mind of the client. Using guided relaxation, insights travel from heart to heart. There's no rationalisation on both sides, consumers react purely and in accordance, as do clients. Clients can sometimes ridicule the opinion of respondents, yet this rarely happens using guided relaxation. As one client said "you can feel it in your gut". Isn't that what market research is all about anyway? Making a translation from the experience domain of the consumer to the experience domain of the marketer and inspiring the latter to really act based on what they hear? Guided relaxation is definitely one of the most powerful methods around in establishing this connection.

References

- Cade, Maxwell C. and Coxhead, Nona (1991), The Awakened Mind: Biofeedback and the Development of Higher States of Awareness, Element Books*
- Gladwell, Malcolm (2005), Blink. The power of thinking without thinking, Little, Brown and Company*
- Goldberg, Hal (2004) Hypnosis in focus groups; QRCA's Views Magazine (QRCA Annual Conference)*
- Haynes, John-Dylan (2008), Brain makes decisions before you even know it, Nature Neuroscience*
- LeDoux, J.E. (1992), Brain mechanisms of emotion and emotional learning. Current Opinion in Neurobiology, 2, 191-198.*
- Lindstrom, Martin (2008), Buyology – How everything we believe about why we buy is wrong, Random house business books*
- McDonald, William J (1998), Consumer decision making and altered states of consciousness: a study of dualities, Journal of business research, 42, 287-294*
- Sanders, E. (2001) Virtuosos of the experience domain, proceedings of the IDSA Education conference*
- Walvis, Tjaco (2008), Three laws of branding: Neuroscientific foundations of effective brand building, Journal of Brand Management, 16, 176-194*
- Wilson, Timothy (2002), Strangers to Ourselves - Discovering the Adaptive Unconscious. Belknap Harvard Press*
- Wise, Anna (1997), The High Performance Mind, Tarcher*
- Zaltman, Gerald (2003), How Customers Think: Essential Insights into the Mind of the Market, Harvard Business School Press*

The Author

Ralph Poldervaart is Senior Qualitative Researcher, Motivaction, Netherlands