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# THE IMPACT OF IMPLICIT MOTIVES ON THE BUSINESS TO BUSINESS DECISION MAKING PROCESS

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**THE IMPACT OF IMPLICIT MOTIVES ON THE BUSINESS TO  
BUSINESS DECISION MAKING PROCESS**

by

**Christian Chlupsa**

A thesis submitted to the University of Plymouth  
in partial fulfilment for the degree of

**DOCTOR OF PHILOSOPHY**

Plymouth Business School

Faculty of Business

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**Abstract**

**THE IMPACT OF IMPLICIT MOTIVES ON THE BUSINESS TO BUSINESS DECISION MAKING PROCESS**

**Christian Chlupsa**

The purpose of this thesis is to understand how implicit processes determine individual and organisational behaviour in the context of business to business (B2B) decision making. A broad literature review suggests that implicit cognition has a significantly more powerful influence than therefore assumed. The author calls for further research into the motivations driving professional behaviour in B2B situations as new study challenges the classical economic theory of the homo economicus, and focuses on the role of implicit motives as a possible driver. As a first objective, the study attempts to reveal a typical structure of implicit motives based on hierarchy and gender. The second objective is to delineate the interplay between the implicit motives and the decision making process in B2B. The third objective is to examine the consequences and implications for business to business marketing.

The methodology is based on an interdisciplinary mixed method approach. To address the gaps in existing knowledge, an experiment and a survey (n=175) in different sectors were conducted. For the analysis, a variety of techniques such as operant motive tests, cluster- and multivariate analysis were employed to analyse the empirical response. Semi-structured qualitative in-depth interviews (n=8) were carried out to detect the consequences and the implications of the new findings for practice.

The findings of the research indicate that marketing is much more a selective communication as assumed. The impact of marketing communication is not always consciously perceived by customers and the most part is implicit.

In conclusion, there seems to be an interplay between implicit motives and the B2B decision making process. Hypotheses about the interplay of implicit motives and business to business decision making were confirmed in personal, management and group decision experiments. As a contribution to existing theory on the subject, it can be postulated that rational choice in B2B decision making may play a limited role. In addition marketing experts from various industry sectors emphasise the importance and the potential impacts for future B2B marketing. Experts stress the need to reveal the real motivational drivers in marketing communication.

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## Declaration

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Graduate Committee.

This study was financed with my own private funding.

A programme of advanced study was undertaken, which included a postgraduate course of intercultural training, neurological didactics, language support and scientific paper writing.

Relevant scientific seminars and conferences were regularly attended and the work was often presented to the Munich Node. Additionally, external institutions were visited for consultation purposes and several papers prepared for publication.

Details of publications and presentations carried out during the research programme can be found in the appendices.

### **Presentation and Conferences attended:**

NeuroPsychoEconomic Conference 2012, 2013  
Postgraduate Symposium University of Plymouth 2011, 2012  
Postgraduate Symposium University of Applied Science Munich 2010, 2011, 2012  
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Signed



Christian Chlupsa

Date 12 February 2014

## 1. Introduction and Overview

This chapter introduces the importance of implicit processes in business to business (B2B) decision making. It outlines the concept of the research, presents the background of the study, provides the justification for the thesis and defines its aims and objectives. The outline of the structure of the thesis is discussed to introduce the reader to the various aspects of the study.

### 1.1 *Background and Justification of the Study*

To have a choice means to make a decision. Decision making is a central problem in business and management (Gutenberg, 1958; Zerfaß, 2010).

The share of industrial companies' purchasing as a proportion of total turnover typically ranges between 50-90 per cent (De Boer, Labro, & Morlacchi, 2001). Thus, indirect and direct impacts of poor decision making in business might be crucial for the economic survival of companies (Giunipero, 1999). Companies undertake substantial efforts to ensure efficiency and rationality in decision making. Various approaches are applied to avoid the influence of emotions on the decision making process.

Taking the example of company cars, purchasing decisions amounting to more than 20 Billion Euros were made by German companies in 2010. Nearly two-thirds of all newly registered cars were company cars for both business and private use with an increasing share of premium and luxury cars in 2011 (Dudenhoeffer, 2010; Happel, 2011). Automotive experts emphasise that they are not selling cars but emotions and the capability to detect and satisfy customer's emotions is regarded as an important factor in the automotive business (Renz, 2012). The automotive industry places considerable importance on emotions and the entire range of activities has to focus on an 'enthusiastic' consumer (Engelmann, 1993; Ries & Ries, 1999; Ries & Trout, 1999; Kapferer & Kotler, 2008; Kapferer, 1998).

It appears that there is a significant contradiction which leads to the key question of this thesis: is it really possible that an individual makes purchasing decisions emotionally in her or his private life whereas she or he acts rationally, following the concept of the rational agent, when business decisions are to be made in a professional environment? The following section introduces some fundamental concepts relevant to decision making in a business to business context.

### 1.1.1 Contradicting Concepts of Human Behaviour

The rational agent is still one of the most important theories in economic science. The basic assumption is: humans are egoistic, striving for their own benefit with never changing preferences. Economists and psychologists have diverging conceptions of the world. The concept of the rational agent preferred by economists is one of the homo economicus, or 'Econs', pursuing explicit targets. In contrast, psychologists follow the concept of ordinary mortals, in general addressed as homo sapiens, or 'Humans', driven by implicit motives (Kahneman, 2011; Kast, 2009). A pioneering figure in the 'rational choice theory', George Homans (1961), postulates that people calculate costs and benefits before making a decision, thus all actions should have a fundamentally 'rational' character. During the 1960s and 1970s, Blau (1964), Coleman (1973) and Cook (1977) extended this framework based on more formal and mathematical models of rational decisions (Coleman & Feraro, 1992; Scott, 2000). All of these concepts are based on the assumption that people are searching full and rational information (Shapiro & Krishnan, 2001).

From a psychological perspective, it is considered unlikely that people are really able to process the entire range of information needed for decision making (Simon, 1979). Kahneman and Tversky (1981) postulate that in contrast to the formal theories of judgement and decision psychological analyses of response to uncertainty reveal a wide variety of processes which may follow different rules (Kahneman & Tversky, 1981).

Previous to this study, Kahneman and Tversky revealed that people rely on a limited number of heuristic principles which reduce complex tasks to mental shortcuts. In general these heuristics work well, but in particular cases systematic errors occur (Kahneman & Tversky, 1974). Metaphorically speaking, sand is thrown into the rational choice machinery (Muramatsu & Hanoch, 2005). Earlier still, Freud postulated that physicians and philosophers could only agree if both would recognise that unconscious processes are a useful and necessary fact (Freud, 1900).

### **1.1.2 Business and Decision Making**

It is no surprise that marketing activities in business to customer (B2C) and business to business (B2B) markets are mainly targeted to influence the process of decision making (Doehl, 2011). Emotions are regarded and accepted as powerful drivers for decisions made by consumers. Nevertheless, companies try to keep them apart from the decision making process in business. Whilst consumer decisions might be emotional, it is considered that business decisions need to be rational (Haehnel, 2010). Besides the use of scoring models and investment appraisal, the most sophisticated approach to eliminate emotion or personal motivation from decision making in companies is the 'buying-centre' approach frequently applied in modern organisations (Meffert, Burmann, & Kirchgeorg, 2012; Pepels, 2004).

Following the homo economicus principle, business professionals often automatically refer to price and quality when asked what matters in decision making in business. However, due to the information overflow generated by the 'World Wide Web', prices and product quality can no longer be compared entirely (Scheier & Held, 2006; Otto, 2011). In addition, decision makers in industry are confronted with an almost unlimited number of suppliers and partners from all over the world. The differentiation of products is becoming increasingly difficult and crucial (Scheier & Held, 2006). In this context, Hanoch and Vitouch (2004) postulate that the restriction of information is not a fundamental disadvantage at all; sometimes 'less can be more'. Furthermore, Gigerenzer has been able to demonstrate that less information can lead to better performance (Gigerenzer, 2007; Hanoch & Vitouch, 2004), bringing in to doubt the traditional assumption that more information is always preferable (Hanoch & Vitouch, 2004). Supporting this evidence, Simon has raised the question as to whether people really have sufficient cognitive abilities to make effective choices in an environment full of information (Ariely, 2009; Ariely, 2010; Hanoch & Rice, 2012; Newell, Shaw, & Simon, 1958; Simon, 1956; Simon, 1959; Simon, 1978; Simon, 1979; Simon, 1980).

Following Simon, both economists and psychologists have mainly focused on cognitive constraints, neglecting to integrate the growing body of research on emotion. The role of emotions as a source of bounded rationality has largely been ignored in business and management literature (Hanoch, 2002; Simon, 1978). Nevertheless, recent findings indicate rationality, non-rationality and emotion are interconnected. Establishing a link between the two domains might reveal that emotions and rational thinking are working

closely together (Hanoch, 2002). Haehnel (2010) posits that there is no way to eliminate emotion and individual motivation from decision making in business. This seems to indicate that beyond rationality representing the explicit aspect of decisions, there is an additional driver in B2B decision making as well. This is the background from which the thesis derives.

### **1.1.3 Implicit Motivation**

The theoretical justification of the thesis is the neglected impact of emotions in business decisions as little is known about implicit processes determining both individual and organisational behaviour. There is a need to research the way that business people really act in a B2B context and to understand the business process and the goals of economical behaviour (Ariely, 2009; Ariely, 2010; Barsade, Ramarajan, & Westen, 2009). People assume that when it comes to financial decisions, rationality is the major driver. In contrast, Elger and Schwarz posit that non-rationality is frequently involved. This seems to be demonstrated by an analysis of the recent financial crisis where it appears that implicit processes play an important role even in financial decision making (Elger & Schwarz, 2009).

As implicit processes seem to be much more important in decision making than assumed, the focus of interest cannot be limited to the level of emotions and has to penetrate deeper in to the area of the implicit motivation and implicit motives. Kuhl posits that implicit motives act as powerful but hidden drivers (Kuhl, 2011). The implicit commander in our brain examines our environment, analysing attributes of products which match our unconscious needs (Scheier, Linke, & Schneider, 2010). Recent research reveals that the intuitive system in our brain is more powerful than we believe it is. Some argue that it is initiating most decisions we make (Snyder 1, 2013).

Kahneman (2011) established two different systems of thinking. The “automatic system” (system 1) which works automatically, quickly, effortlessly and without a deliberate control and the “deliberate system” (system 2) which works on demand, slowly and under consistent control. In the idea of the two system approach, the terms implicit or unconscious is used for system 1. The term explicit or conscious is used for system 2 and the respective connected brain and memory effects. In fact the terminology of system 1 and system 2 points back via Stanovich and Richard (Kahneman, 2011) to Freud. Following Freud, everything in our internal perception is virtual and not accessible for our cognition. The implicit system works in a similar way to a lense in a telescope which creates a picture of the scenery (Freud, 1900).

Meffert et al (2012) also provide a precise distinction between explicit and implicit motives. They posit that implicit motives can be differentiated from explicit motives

because, unlike explicit motives, the impact of the implicit motives is not detectable by the customer. In addition, this concept promotes attention as a vital factor in the communication process and stresses the importance of the background of information overload (Meffert, Burmann, & Kirchgeorg, Marketing, 2012 ; Trommsdorff, 1998; Boehm, 2008). Kotler et al (2011) propose the 'AIDA' concept (*Attention - Interest - Desire - Action*) as the base for classical marketing communication and representing the most crucial issues to generate a reaction from target groups. The 'AIDA' concept goes back to E. St. Elmo Lewis (1872 - 1948) and was introduced in 1898 (Lewis E. E., 1903; Luerssen, 2004; Fehse, 2009). The idea of the concept is to activate various mechanisms such as emotional, cognitive and physically stimuli. According to Kotler there are three options to activate the reaction of customers: rational, emotional and moral (Kotler, Armstrong, Wong & Saunders, 2011). Traditional marketers stress that there is no activation without cognition and that there is no clear evidence for the so called 'subliminal cognition' nowadays addressed as implicit cognition (Kotler, Armstrong, Wong & Saunders, 2011). In contrast, Zaltman criticises this perspective and suggests that marketing is stuck in the past. The world has changed but the understanding of the customers has not (Zaltman, 2003).

There seems to be evidence that customers have developed a more implicit sense concerning brands and appropriate pricing. Plassmann et al (2008) found that marketing actions, such as changing the price of a product, affect neural representations of experienced pleasantness. An increase in the price of wine enhanced the subjective feeling of flavour and pleasantness although the wine was the same. At the Munich

University of Applied Sciences, a study combining an electroencephalography (EEG) and reaction time measurement, provided evidence to support the assumption that there is an implicit sense for brands and appropriate pricing (Plassmann, O'Doherty, Baba & Rangel, 2008; Chlupsa & Mueller, 2013; Chlupsa, 2013).

According to Mueller (2012) our reality is an incredible volume of physical energy such as photons and pressure waves which are decoded in our brain to colours, smells and sounds. The real world differs a lot from our perception (Mueller 2, 2012; Macknik, 2013). Reality is subjectively interpreted and decoded to a personal meaningful and coherent environment. It is argued that this individually designed reality determines our daily life (Berger & Luckmann, 1966). Nevertheless, researches from neuroscience evidence that cognition of human beings is suggestible and a significant difference in the perception of B2C and B2B customers does not exist (Otto, 2011).

It appears that we have to accept reality to be a very personal construct. Evidence also suggests that both explicit and implicit drivers have an impact on how decisions are made. It follows that if implicit drivers have an impact on B2C decisions then the same is likely to be true of decisions in a B2B context. Yet research to date has failed to examine this proposition. This study attempts to address this gap in our current understanding.

## 1.2 Aims and Objectives of the Research

The purpose of this study is to examine the impact of implicit drivers on decision making in a B2B context. This leads to three major objectives as illustrated in Figure 1.



Figure 1: Integration of Research Objectives

### **1.2.1 Objective 1 – Typical Structure of Implicit Motives**

As a first objective, the study seeks to identify the structure of implicit motives and how this might vary between groups of employees. Due to the hierarchical position of an employee in the organisation, a difference in the individual implicit motives of different categories of employee might be detectable. In addition, it might be possible to assign an identical structure of implicit motives to particular formal groups such as administration or management staff in the hierarchy of an organisation. A further sub-objective is to explore any variation in the structure of the implicit motives with regard to gender.

### **1.2.2 Objective 2 – Interplay between Implicit Motives and Decision Making**

The second objective is related to the interplay between the implicit motives of individuals and the decision making process in B2B. This is predicated upon the assumption that people may have different needs generated by their implicit motives. That leads to the proposition that there might be a relationship between the non-verbal implicit motives of individuals and the products that they choose to purchase in a B2B context.

### **1.2.3 Objective 3 – Impacts on the Business to Business Marketing**

Following an evaluation of the impact of implicit motives on B2B decision making, the third objective is to examine the consequences and implications for business to business marketing. In addition to drawing on the findings of the first and second research objectives, experts from different industrial sectors are interviewed to disclose more detailed information on business communication related to implicit motives

### **1.3 *Outline and Structure of the Thesis***

This thesis investigates the interplay between the business to business decision making process and the implicit motives deeply embedded in every human being. Thus, the structure of the thesis follows the theories emerging from two primary areas. The first one is concerned with implicit motives (McClelland, 1985; McClelland, 1987; Kuhl, 2001; Kuhl, 2011; Scheffer, 2009). Implicit motives are motivational dispositions operating outside a person's conscious awareness (Schultheiss, 2008). The second issue is related to the domain of the decision making i.e. the field of B2B (Kenning, 2013; Otto, 2011). This thesis aims to examine the impact of implicit motives in the business to business decision making process.

It is important to understand the boundary conditions and to explore gaps in existing knowledge pertaining to fields under investigation. Literature findings will be synthesised against a range of theories and a set of objectives will be constructed. Considering the factors determining the decision making process and the objectives, the thesis will generate a set of main hypotheses. Linked to the methodology, an experiment and a survey (n = 175) will be conducted. Results will be presented to experts followed by semi-structured in-depth interviews (n=8) to identify future applications in industry. Finally, this work will highlight the impact of the findings on the business to business decision making process and the implications for marketing. An overview of the structure of the thesis is provided in Figure 2 below.

Outline and Structure of the Thesis



Figure 2: Outline and Structure of the Thesis

In Chapter 1, the area of research is introduced and the aims and objectives are outlined. The second chapter examines literature concerned with implicit motives, business to business and the human decision making process. Chapter 3 presents the research methodology including the research philosophy, research approach, the research strategy and the main hypotheses. In Chapter 4 the empirical research, the pilot test, the data collection and the results are presented. Chapter 5 covers an in-depth discussion of the results linked to the theoretical findings of the critical literature research. In Chapter 6 the conclusion of the theoretical and practical results and the contribution to knowledge are discussed. An outlook on future research and a discussion of remaining research gaps are presented in Chapter 7.

## 1.4 Chapter Summary

This chapter has presented the justification for the study and the overall objectives of the research (see Figure 3). The justification for the study is built upon the apparent importance of implicit motives in decision making established through previous research coupled with the lack of existing understanding of their impact in the specific context of B2B decision making. The three major objectives of the study are: (1) to examine the structure of implicit motives amongst those operating in a B2B context; (2) to examine the interplay between implicit motives and B2B decision making and; (3) to understand the impact of the study findings on business to business marketing. The first objective emerges from the psychological field of implicit motives and leads to the question of the impact of these motives on the business to business decision making. The final objective concerns what can be derived from the resulting understanding of the business to business decision making process in relation to communication in business and marketing.

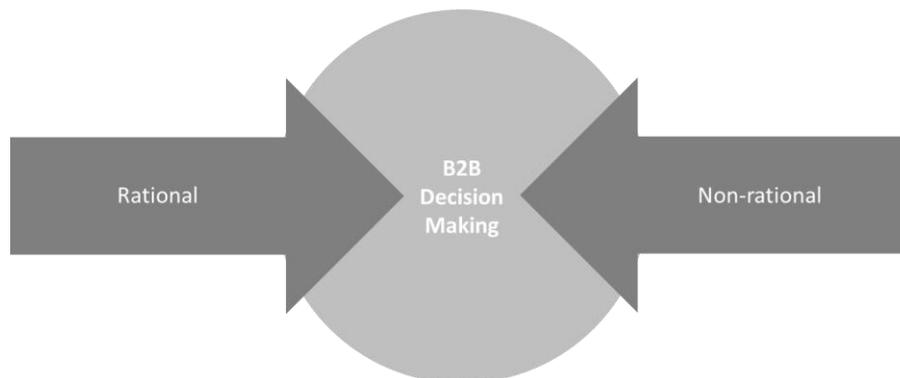


Figure 3: Rational and Non-rational Aspects of B2B Decision Making

The research focus on the question, if it is possible that the same person who is wearing Adidas sport shoes, Levis jeans, a Polo Ralph Lauren shirt, and Ray Ban sunglasses changes his mind at the door to his office and makes decisions purely based on the facts (Chlupsa, 2013). The easy answer the last 20 years as a consultant in an advertising agency was just 'no'. Because I developed my own communication model and made a lot of projects with this idea. But in the last years of working as a lecturer at the Munich University of Applied Sciences I realised that the world is not just black or white even not in the world of marketing. After a long time in the communication industry I focus now on my academic career. And I think there is a difference in a statement between selling a project to a company and lecturing students at University. So I am very interested at the end of my PhD Thesis if the projects we run in the communication industry were successful by the idea of the implicit motives or despite. And so seems the postulation of Herbert A. Simon today more actually then before:

*'As the complexity of the environment increases, or its speed of change, we need to know more and more about the mechanisms and processes that economic man uses to relate himself to that environment and achieve his goals.'*

(Simon, 1959, p. 279)

## 2. Critical Literature Review

This chapter considers the interplay of the connected interdisciplinary fields of knowledge and their relevance to particular areas of the research programme. There are various different approaches concerning decision making with different objectives (see Figure 4). The most important opinions will be introduced and analysed for their contribution to the scientific interdisciplinary interplay. A review of the existing literature reveals that a large number of studies from various perspectives and multiple fields of science have examined questions of motives and implicit motives as well as the process of decision making in general. In addition, the process of decision making in business to business in particular. The critical literature review can be structured as presented in the figure below.

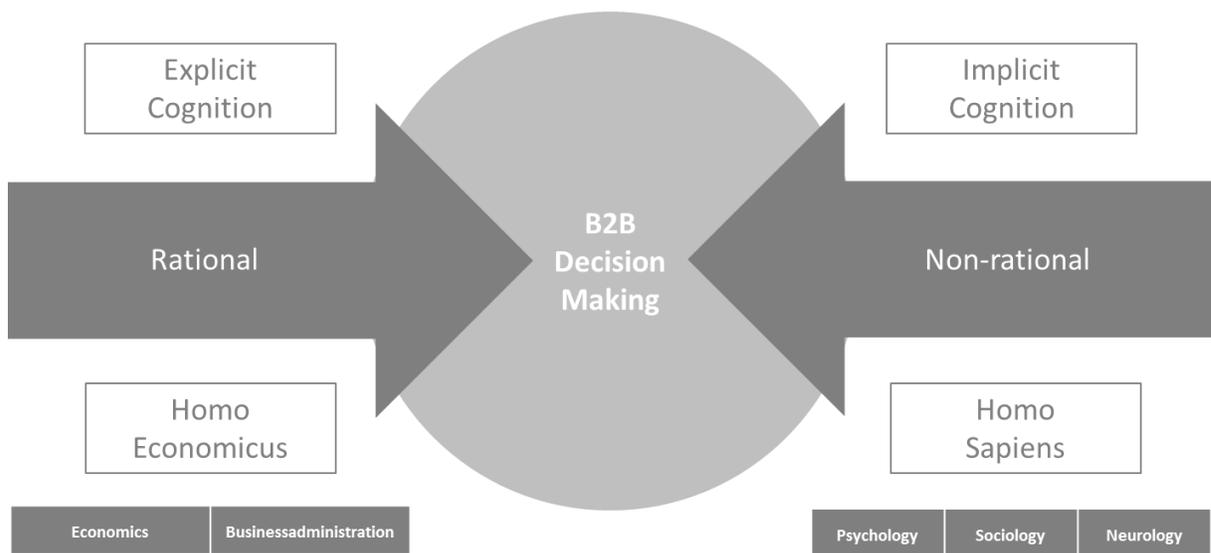


Figure 4: Structure of Literature Research

## **2.1 Critical Literature Review in Terms**

### **2.1.1 Definitions and Differentiations in the terms of the thesis**

Prior to an examination of the different theories pertinent to this study, it is important to address some definitional issues. First of all, the definition of a decision making process particular in business will be introduced followed by the definition of implicit motives.

#### **2.1.1.1 Business to Business Decision Making**

Politically economics and business administration are dominated by the idea of the homo economicus (Deelmann, 2013; Samuelson & Nordhaus, 1987). The homo economicus decides and acts according to rational principles. A defined outcome has to be achieved with a minimum of resources. A classical business to business decision maker reflects this concept of a cool, calculating, rational person striving to maximise his own profit (Fesel & Wander, 2013).

A typical situation of business to business decision making is the purchasing process in a company. Conventionally it is a choice between two or more options (Cohen, 2011). The share of purchasing in industrial countries typically ranges between 50-90% in the total turnover (De Boer, Labro, & Morlacchi, 2001). This is why organisations are highly

dependent on suppliers and the direct and indirect impact of wrong decision making is crucial for economic survival. The intensity and speed in the process of decision making requires specific technical knowledge on purchasing decisions in business (Giunipero, 1999). In addition, globalisation (Bausback, 2007) and the internet increases complexity in the process of the decision making (De Boer, Labro, & Morlacchi, 2001), assuming more information necessarily leads to better decision making.

Scholars and marketing managers have increased attention and investments on buyer-seller relationships in business to business markets (Cannon & William, 1999; w&v, 2012). In general the decision making process is well-structured, subject to defined procedures and supervised by hierarchical levels and focused on specific solutions. The dominant perspective of the organisational buying behaviour suggests that buyers tend to rely on objective criteria when making product choice decisions (Brown, Zablah, Bellenger & Wesley, 2011; Doehl, 2011). Due to the theory of marginal benefit, an enterprise will invest if the benefit can be increased by the investment (Doehl, 2011). The decision making process in companies is more or less standardised as a step-by-step method based on quantitative data. Frequently, mathematical or statistical analysis tools are applied.

The term 'business to business' defines an offer provided by one corporation to another (Kirchgeorg, 2011). Business to business in its extreme can be a one to one situation e.g. a supplier is producing a highly specialised solution for a particular client. In

contrast, the business to customer relationship is the other extreme, a mass product on a mass market (Anderson, 2008; Wessling, 2011). The nature of organisational decision making is that in general, decisions are made against the background of various limitations such as financial budgets or timescales (Doehl, 2011). B2B decision making processes are often supervised by consultants such as architects, lawyers and financial advisers (Jaakkola, 2007).

The term 'business to customer' (B2C) is used to separate this market from others in order to identify particular parameters of decision making (Kollmann, 2011; Eckhardt, 2010). In this process, consumers identify their needs, gather information, evaluate alternatives and finally make a purchase decision. The individual decision is determined by psychological, economic and environmental factors such as cultural environment, peer group and social values. In the business to consumer market, an offer is provided by a corporation to a broad range of customers. For instance, in a regular supermarket the customer is able to select from approximately 40,000 brands (Ries & Ries, 2004; Huellemann, 2007).

Both the B2C and the B2B economy are based on choices and to have a choice means to make a decision (Zerfaß, 2010). Decision making is a central problem in business and management (Gutenberg, 1958).

Every decision making process is characterised by a limited number of alternatives which can be pursued at the same time. The idea of the concept is that for every option, the customer receives a prognosis of the consequences to be expected. The homo economicus has to evaluate the future outcomes of his choice without complete and reliable information. Due to the uncertain future, the homo economicus has to make a decision under uncertainty (Heinen, 1986). The complexity of the economy and the economic principle are based on the general principle of rationality. Even pioneers in business and management science admit that the economic principle is just a formal one and objectives and motives of the economic actors are ignored completely (Woehe, 1971).

The first step in the literature review is a broad critical view of the terms of the thesis and the different approaches and theories about motives and decision making.

### 2.1.1.2 Different Levels of Motives

First of all, it has to be stated that motives are merely constructs. There is nothing to show or to touch in the form of physical objects. Motive structures are useful concepts to understand which conditions cause positive emotions and drive people to pursue their goals. There are various concepts covering different numbers of motives. Reiss offers a structure of 16 motives; whereas Kuhl and Scheffer provide a four motive approach. For this thesis, the approach of Murray (1938) and McClelland (1961) which identifies three motives (affiliation, power and achievement) as most researched as ‘the big three’ (Kehr, 2004; McClelland, 1985) will be applied (Reiss, 2009; Kuhl, 2010; Scheffer, 2009). Motives reflect the willingness to react to classified conditions with a typical effect pattern. As humans have particular motives in common with other kinds of primates, it has been argued that motives are biologically based but subsequently modified by life experience (Langens, Schmalt, & Sokolowski, 2005).

Therefore, it seems appropriate to analyse explicit and implicit motives separately. After contrasting explicit and implicit motives it is useful to review the distinction between ‘implicit motives’ versus ‘emotions’ and ‘emotions’ versus ‘feelings’ to create a greater level of understanding. A precise distinction between the terms is crucial for this thesis. A clear distinction has already been made and accepted between explicit and implicit motives. Following Meffert (2012), implicit motives can be differentiated from explicit motives because the impact of the implicit motives is not detectable by the customer

(Meffert et al, 2012). This is an obvious contradiction to the fundamental idea of the thesis.

Motives focus on potential stimuli in a particular situation. Perception blinds out parts of our neutral and open environment creating a scenario exactly designed for our needs. The most dominant motive generates a selective information process directed by the goal of the motive. As a result an information process is started which automatically gathers information focused on the activities necessary to achieve the target (Langens, Schmalt, & Sokolowski, 2005; Amicia, Hoefler, & Roetschenhaus 2, 2013). The dual system approach of explicit and implicit motives is a central proposition in motivation theories. Spangler's (1992) meta-analysis indicates that explicit and implicit motives are empirically uncorrelated (Spangler, 1992). It seems to indicate that explicit and implicit motives are independent concepts (Kehr, 2004; Scheier, 2007). Explicit motivation is consciously representing external goals. In contrast, implicit motivation is outlined as intuition (Ion & Brand, 2012). In the metaphor of Berlew (1986) implicit motives 'push', whereas explicit motives 'pull' the individual (Kehr, 2004; McClelland, Koestner, & Weinberger, 1989). Present findings confirm the theoretical models which distinguish two independent behaviour-guiding-systems. The first one is an automatic, non-verbal, hedonically oriented implicit motivation system. Whereas the second one is effortful, language-based, socially orientated and explicitly focused on targets (Schultheiss, Jones, Davis & Kley, 2008; Scheier, 2007). The interest of this thesis is to detect the impacts of the unconscious implicit motives for the business to business communication and decision making process.

*2.1.1.2.1 Explicit Motives*

Explicit motives are connected to the speech-based self-concept of an individual. They are located in the evolutionary younger parts of the brain. Explicit motives provide conscious and focussed attention (Heckhausen & Heckhausen, 2010; Scheffer, 2009). Explicit motives are the reason why hard working people attribute themselves as individuals striving for achievement (McClelland, 1985; McClelland, Koestner, & Weinberger, 1989). Motives of this kind are conscious and can be detected by self-ascription questionnaires (Kehr, 2004). The motivational needs and values that people claim and attribute in questionnaires or to themselves are stable language based beliefs about themselves (Brunstein, 2010; Schultheiss & Strasser, 2011). Explicit motives are strongly influenced by social demands and normative pressures. Particularly, explicit motives influence cognitive choices e.g. which task to work on. Thus, the explicit motives are closely related to goal attainment (Kehr, 2004). As explicit motives are linked to conscious goals and expectations, individuals with a strong explicit need for achievement have a conscious desire to improve. More generally, explicit motives respond to social-extrinsic incentives (Langens, 2011). Explicit motivation responds most to verbal incentives such as suggestions and praise (Schultheiss & Strasser, 2011). An incongruence of explicit and implicit motives could be associated with impaired emotional well-being (Brunstein, 2010; Langens & McClelland, 1997; Heckhausen & Heckhausen, 2010). Motives are the driving force for what we do. Emotions are the result of the fulfilment or non-fulfilment of motive dispositions (Scheier & Held, 2006).

2.1.1.2.2 *Implicit Motives*

Implicit with the origin of 'covered' or 'wrapped' derived from the Latin word 'implicere' tries to explain what basically is not visible (Kuhl, 2010). The concept of implicit motives was independently developed by different researchers. The most important researchers on this topic are, McClelland (1917-1998), Panksepp with his work on affective neuroscience and Bischof with his approach of the 'Zurcher Model of Social Motivation' (Bischof, 1985; Bischof, 1993; Bischof & Bischof-Koehler, 2012; Bischof-Koehler, 2011; Kuhl, 2010; Panksepp, 1998; Scheier & Held, 2006).

New research on implicit effects deals with non-reflected processes in the brain which determine human behaviour. In contrast to the traditional understanding of implicit processes, instincts are not the main interest. The area of interest covers cognition, memory and decision making (Scheier & Held, 2006).

An useful concept is the model of the implicit motives. In general, a motive is a driving force selecting direct cognition and indirect behaviour. A motive is orientating and energising (McClelland, Human motivation, 1987). Lot of research reveals that self-assessment does not match with the implicit motive categories. Explicit and implicit motives are independent constructs (Scheffer, 2009). Implicit motives are neither speech-based nor connected to the self-concepts of an individual. Located in the

evolutionary older parts of the brain they have an affective core (McClelland, 1987; Scheffer, 2009). The very nature of implicit motives is to work beyond the level of consciousness (Langens, 2009; Dilling & Reimer, 1995). There are many implicit effects can be detected in human behaviour and in the decision making processes e.g. the buying behaviour as well. By addressing the appropriate implicit motives of an individual the selective and unconscious cognition can be used in the communication process to achieve intended results (Chlupsa, 2009; Chlupsa & Mueller, 2012).

What drives people is not always presented in a conscious self-concept. Sometimes the reasons for our actions are difficult to explain. This may well be caused by the fact that the most important motives are implicit and stored in a non-verbal format. Implicit motives are neither speech-based nor connected to the self-concepts of an individual. They are located in the evolutionary older parts of the brain and have an affective core. They are presented in a picture based episodic format and go back to the pre-linguistic stage of childhood (McClelland, 1987; McClelland & Pilon, 1983; Kehr, 2004; Scheffer, 2005; Roth, 2007). The implicit motivational system is derived from affective experience. It is assumed that implicit motives represent the first motivational system shaped in human being's (Hofer & Athanasios, 2011). This is why implicit motives generally sustain spontaneous behaviour and are derived from the pleasure of the activity itself (McClelland, Koestner, & Weinberger, 1989). A person's personality is based on the disposition of motives and the deducted needs (Meffert, Burmann, & Kirchgeorg, 2012). Motives are useful to resist the upcoming feeling of unwillingness (Freud, 1930).

Implicit motives have a complex structure and interact with different systems of the personality. Piaget and Inhelder (1973) describe implicit cognition as 'wide knowledge' which implies adaptive reactions which base on sensomotoric programs. Sensomotoric programs are the interplay between sensorial and motorical processes. The results are automatic response actions (Luhmann, 2009; Laube, 2009). An important aspect of the sensomotoric procedures is that most parts are unconscious. From actual research we know that there is an episodic memory with a holistic representation of events, feelings and actions in a specific situation (Kuhl, 2001; Kuhl, 2010; Scheffer, 2005). The very nature of implicit motives is to work beyond the level of consciousness (Langens, 2009). Motives work as orientating, selecting and energising drivers of behaviour (McClelland, 1987). This could be explained by the fact that implicit motives are formed in a pre-linguistic stage. This is the reason why implicit motives emerge more energetically the more they are the object of frustration in childhood (Heckhausen & Heckhausen, 2010; Kuhl, 2005).

Another explanation for implicit motives is based on evolutionary psychology. In an evolutionary context, life in small groups was an important long term issue. The group life was characterised by a collectivist and interdependent orientation. As motives are to satisfy personal needs in an interdependent environment it is useful to conceal the real motivation behind a particular action. Frequently, implicit motives are concealed to such a degree that even the acting individual is not aware of their existence (McClelland, 1987; McClelland & Pilon, 1983; Scheffer, 2005). In general it can be assumed that people do not know their implicit motives. Implicit motives are closely connected to

operant behaviour and will flexibly be changed in a given context. Implicit motives such as affiliation, power and achievement generate significant differences in individual behaviour (Scheffer, 2005; Langens & McClelland, 1997; Kuhl, Scheffer, Mikoleit, & Strehlau, 2010; Langens, Schmalt, & Sokolowski, 2005; Kuhl, 2010; Traindl, 2007). Current research reveals a correlation of implicit coded stimuli and the detected implicit motives of test subjects (Kordik, 2011).

### **Affiliation**

The history of the affiliation motive starts with Henry Murray (1938). He referenced in his classifications of 44 organic needs a main motivation of positive tropism toward people and the sub motive for affiliation (Sokolowski & Heckhausen, 2012). The basis of the affiliation motive is the natural interest for contact to other people. An interesting aspect is to avoid being left alone. Needs such as safety and the feeling of security are important aspects of the affiliation motive (Scheffer, 2005). Sigmund Freud ascribes the need of affiliation with the feeling of helplessness in early childhood (Freud, 1927). Even Bischof reflects the affiliation motive with the early state of childhood (Bischof, 1985; Sokolowski & Heckhausen, 2012). The affiliation motive has two totally contrary components. The two motive components are (1) the hope of affiliation and in contrast (2) the fear of rejection. People with a high interest in affiliation have a positive idea about other people, tend to like people faster, seem to be friendlier than others, they are positive and make social decisions. The hope of affiliation is their guideline for their

behaviour. These actions are connected to an array of positive emotions such as, for example, self-consciousness. In contrast, the fear of rejection is dominated by feelings such as overstraining, unpopularity and helplessness. The result is a careful distance in the contact to other people combined with a false interpretation of body signals and rejection (Sokolowski & Heckhausen, 2012; Mehrabian & Ksionzky, 1974). Individuals characterised by the implicit affiliation motive are satisfied by a protective and secure, warm and accepting atmosphere (Alsleben & Kuhl, 2011). The affiliation motive has its relevance for the solidarity in groups, cooperation and team work (Peinl, 2008; Peinl, 2011; Scheier, 2012). As a result, the affiliation motive is inspired by situations where people can interact and get in contact with other people in order to establish a positive and reciprocal relationship (Langens, Schmalt, & Sokolowski, 2005). An affiliation motivated individual is interested to get and stay in touch with other people. Crucial dimensions for relationships are sympathy, antipathy and the emotional distance. Emotional distance describes the mutual understanding of people (Scheffer, 2005).

## **Power**

Power means to have access to resources and status positions and the unilateral control of behaviour. The power motive is a central concept of human motivation and refers to the desire to influence the behaviour or the emotions of others (Schmalt & Heckhausen, 2010; Winter, 1973; Ewen, 2012). To be important and to be able to influence people is what power motivated persons are striving for. Power motivation needs formal or social influence. Negative effects are an aggressive and venturous

behaviour (Scheffer, 2005). People with a strong power motive are frequently found in higher levels of hierarchy. They often work as journalists, teachers or professors and are in favour of highly competitive sports. Research has shown that these kind of people are more likely to read sport and sex magazines, prefer more highly concentrated alcohol and tend to engage in sexual multiple partner activities without strong emotional ties (Hofer, Busch, Bond, Campos & Li, 2010). People with a power motive are interested in premium goods and sports cars (Schmalt & Heckhausen, 2010). Nevertheless, the most important issue is to get control over other people. The reason why power motivated individuals are willing to take a high risk seems to be a problem of hubris (Kuhl, 2010). The power motive is a driver in the field of competition and battle as well as activating the willingness to fight (Peinl, 2008; Peinl, 2011). The power motive is inspired by situations that provide control of other persons. The goal is to control situations and other people (Langens, Schmalt & Sokolowski, 2005). Power motivated individuals have a high interest in progress and strongly prescribe their strategies and visions. They strive for responsibility in management positions. Energy, enforcement, leadership and charisma are characteristic traits of the power people (Scheffer, 2005). Power is the ability to have physical, mental, or emotional impact on other individuals or groups (Stanton, & Schultheiss, 2009).

## Achievement

Achievement is the most explored motive up to now. Even Murray (1938) listed achievement on his list of psychological needs. He defined achievement as the ability to solve difficult situations, to accomplish things better or faster, solve problems, obtain a high standard and outpace others in competition. The basis of achievement motivation are activities related to a standard of excellence (Brunstein & Heckhausen, 2011). The achievement motive can be understood as an efficiency motive as well. Basic properties are curiosity and interest. Thus exploration is a typical dimension of the achievement motive. The standard of excellence is the most crucial issue of achievement motivated individuals (Scheffer, 2005). In general achievement orientated people are neither sub challenged nor overstrained. They tend to have a good balance between their basic level of achievement and the level of difficulty of their tasks (Kuhl, 2010). Individuals with an achievement motivation try to avoid failures, flops and blame. They are motivated by performance, success and praise which generates positive feelings (Brunstein & Heckhausen, 2011). The achievement motive evokes a striving for better performance and is inspired by situations requiring an extra ordinary standing (Peinl, 2008; Peinl, 2011). Their goal is to dominate a situation and to succeed as a leader (Langens, Schmalt, & Sokolowski, 2005). Implicitly achievement motivated individuals tend to set standards for everything they do (Alsleben & Kuhl, 2011).

They prefer clear structures and frequently appear cold and calculating. In general achievement motivation follows a high expertise in one or more fields of knowledge or skills. Achievement motivated individuals frequently perform in the role of an expert (Scheffer, 2005). Figure 5 visualize the 'Triumvirate' of the Implicit Motives.

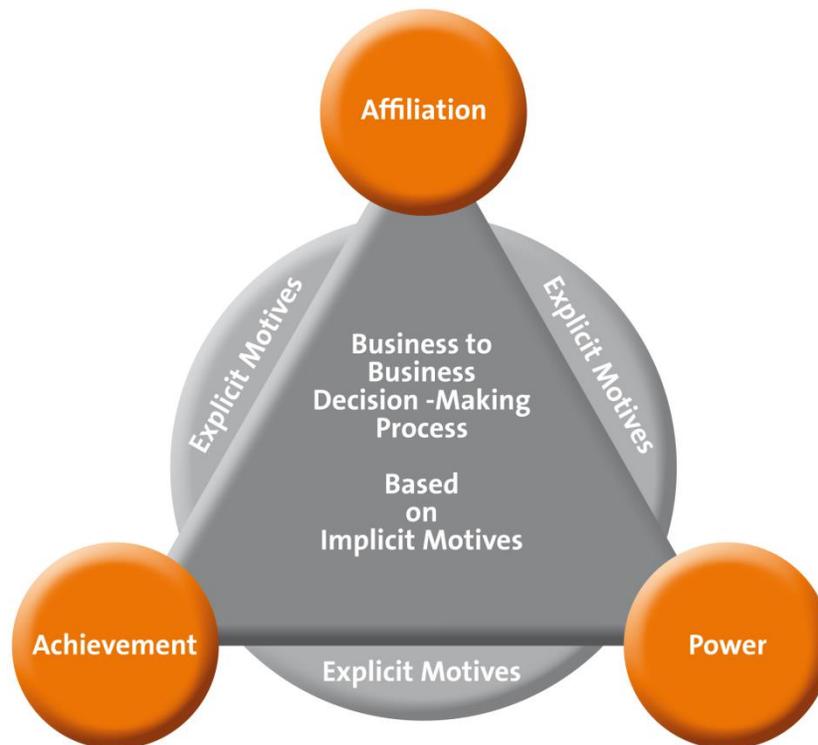


Figure 5: Triumvirate of the Implicit Motives adapted from Scheffer (2005)

*2.1.1.2.3 Differentiation of Implicit Motives versus Emotion*

First of all it has to be stated that no consistent definitions exist on what the term 'emotion' covers. Concerning emotions, Hanoch posits the problem is to end up with differing theories of emotions (Hanoch, 2005; Haehnel, 2010). Based on the accepted theory that emotions have an important role for a brand (Esch, 2012; Meffert, et al, 2012), it could be assumed that implicit communication and perception has a relevant role in this context. Neuropsychology reveals distinctly that emotions are anchored in the implicit system and help to understand both concepts of the emotional system and the reward system in the brain (Schneider, 2009). The main actors in the limbic system are the amygdala, the hippocampus, the cingulate gyrus, the hypothalamus, parts of the thalamus and some parts of the orbitofrontal cortex (Haeusel, 2005). The amygdala transfers the stimuli into electrical signals by applying chemical messengers called neurotransmitters. The releases of the neurotransmitters are the emotions we feel. We try to maintain stimuli bringing up positive feelings by following the implicit motives. Vice versa we try to avoid or even eliminate negative feelings which do not match our implicit motives (Haeusel, 2005). It has been suggested by Hausel (2005) that the function of our implicit regulation is similar to a guide beam or an autopilot in aeronautics. Whenever we drift away from the intended track an alarm is triggered. This alarm will be perceived as an annoying situation and a feeling of displeasure. If we drift off too far, the alarm will become stronger making us angry, anxious or upset. These negative feelings cause us to return and stay on course. Being on track we get rewarded by positive feelings (Haeusel, 2005; Amicia, Hoefler, & Roetzenhaus 1, 2013). In particular,

feminine cultures, which emphasise the importance of feelings more than logic, may be inclined to accept forms of judgment that are tied to affect and emotion (Hofstede, 2001). According to Hofstede, managers in more feminine primed cultures can be expected to use intuition and to deal with feelings (Dane & Pratt, 2007). Thus, our daily life reveals that buying decisions, for example, are not always rational and are frequently driven by emotions (Kenning P, 2013; Bruhn & Koehler, 2010; Graef, 2012).

*2.1.1.2.4 Differentiation of Emotion versus Feelings*

Emotions are diverse and complex phenomena. That is why a relatively small number of researchers have paid close attention to specifying the complex ways by which emotions shape human thinking and decision making. For a long time, the economic discourse on the role of emotions in decision making has largely been muted (Hanoch, 2005; Muramatsu & Hanoch, 2005). In an attempt to resolve the resulting terminological confusion, Kleinginna and Kleinginna (1981) compiled 101 definitions and sceptical statements out of a huge body of literature on emotion (Kleinginna & Kleinginna, 1981; Moell, 2007). Based on the model of emotional categories of Schmidt-Atzert (2008), only pleasure (Mayring, 2009), fear (Hock & Kohlmann, 2009), grief (Schmitt & Mees, 2009) and anger (Hodapp & Bongard, 2009) are generally accepted elements in all fields of science (Schmidt-Atzert, 2008). The function of emotions is to keep the organism considering internal and external challenges (Egloff, 2009). The individual experience of emotion can be described based on three components: (1) The emotional experience such as individual feelings which will be associated with emotion as a subjective element; (2) all reactions of the body such as blushing with shame or a rapid pulse as a physiological element, and (3) the reaction of an individual confronted with a particular situation indicated by facial expressions, gesticulation, posture and vocal range as a motoric-expressive element (Haehnel, 2010). It is difficult to separate emotions and feelings. At first sight it seems that emotions always affect feelings and vice versa (Kuhl, 2010). According to Kelly and Barsade (2001) people may not realise that they are experiencing a mood and may also not realise that moods are influencing their

behaviour (Haehnel, 2010). There are three levels in the cognition of a feeling (see Figure 6). The deepest level is covered by (1) the implicit motives which are triggering (2) the emotions. If we proceed our goals of our implicit motives positive feedback in the form of positive emotions is received (Haeusel, 2005). On the highest level are (3) the feelings, which are the feedback we get from our body based on stored emotions (Storch, 2006).

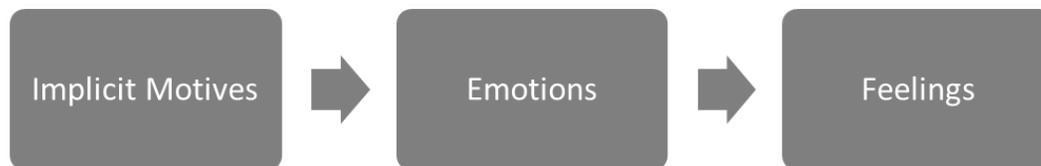


Figure 6: Context of Implicit Motives, Emotions and Feelings

Developed for the thesis

According to Domagalski (1999) and Loewenstein (2000) logical thinking and cognitive processing can be assumed as deliberate whereas emotions, intuition and passion are considered to be destructive. The activating effect of emotions would be considered as inefficient. This might be the reason why emotions are not regarded as contributing to organisational buying decisions in most theories on human or organisational issues. According to Haehnel emotions do not positively contribute to organisational buying decisions (Haehnel, 2010). Yet human emotions usually do not appear isolated. There is a complex interplay of newly appearing and already learned stimuli (Meffert, Burmann, & Kirchgeorg, 2012). Table 1 provides that the concepts and definitions about emotions are various (Kleinginna & Kleinginna, 1981) based on a research about emotions.

Source	Definition of Emotions
Charles Darwin (1872)	“Actions of all kinds, if regularly accompanying any state of mind, are at once recognized as expressive. These may consist of movements of any part of the body, a wagging of a dog’s tail, the shrugging of a man’s shoulders, the erection of the hair, the exudation of perspiration, the state of capillary circulation, laboured breathing, and the use of the vocal or other sound-producing instruments...That the chief expressive actions, exhibited by man and by lower animals, are now innate or inherited, - that is, have not been learnt by individual, - is admitted by everyone.”
William James (1884)	“My theory...is that the bodily changes follow directly the perception of the exciting fact, and that our feeling of the same changes as they occur is the emotion.”
Sigmund Freud (1915)	“Ideas are cathexes - ultimately of memory traces - while affects and emotions correspond to processes of discharge, the final expression of which is perceived as feeling”
Carl Gustav Jung (1923)	“Feeling is also a kind of judging, differing, however, from an intellectual judgement, in that it does not aim at establishing an intellectual connection but is solely concerned with the setting up of a subjective criterion of acceptance or rejection.”
Burrhus Frederic Skinner (1953)	“The ‘emotions’ are excellent examples of the fictional causes to which we commonly attribute behaviour....The names of the so-called emotions serve to classify behaviour with respect to various circumstances which affect its probability.”
E. R. Hilgard, R. L. Atkinson, and R. C. Atkinson (1979)	“Emotion. The condition of the organism during affectively toned experience, whether mild or intense.” “Emotions are usually aroused by external stimuli and...are more often aroused by internal stimuli and are ‘naturally’ directed toward certain objects in the environment.”
Robert E. Silverman (1978)	“Emotion is behaviour that is primarily influenced by conditioned visceral responses. Our viscera are always reacting; but in emotion, their reactions affect perception, learning, thinking, and virtually everything we do.”

Table 1: Different Definitions of Emotions based on Kleinginna & Kleinginna (1981)

## 2.1.2 Theories of Decision Making

### 2.1.2.1 Rational Decision Making

The theory of rational choice has increased in importance within social science (Friedrichs, Stolle, & Engelbrecht, 1993). Decisions cannot be understood by all these rational qualifications and reservations. Yet if economics finds verifiable and verified generalisations on economic behaviour, these generalisations must to be acknowledged in the general theories of human behaviour. (Simon, 1959; Simon, 1978; Simon, 1992). An increasing numbers of researchers view rationality from an organisms' perspective (Chase & Gigerenzer, 1998; Batchelor & Burch, 2013; Santos & Platt, 2014). A general distinction in philosophy is that rationality is often related to the 'head' whereas intuition is related to the 'heart' (Dane & Pratt, 2007). Thus, the classical rational way to solve problems and to make a decision is to gather information, to analyse the facts and finally to make a decision (Carnegie, 2011).

Rational decision making can be divided into three main approaches: (1) *Scoring* procedures; (2) *investment* approaches and (3) the *buying center* approach. The first approach, the oldest method of *scoring* goes back to Benjamin Franklin. He was a naturalist, a scientist, a statesmen and one of the most important representatives of the enlightenment. His moral algebra was an early version of the modern utilitarianism and the rational decision making theory. At one time Franklin gave his nephew a

recommendation on how to decide between the two women he loved. In case of doubts, he should list all reasons, pro and contra, in two parallel columns. After two or three days of thinking about this, he should complete an operation very similar to an algebra problem to make the decision (Gigerenzer, 2007). It is alleged that the young nephew of Benjamin Franklin did the proposed operation and finally he decided not to follow the theory but his 'heart'. The crucial point is that even in this seemingly rational form of decision making, Franklin suggested to integrate motives in the decision making process. It seems that although he was a scientist by nature, he knew by intuition that there might be something more to be considered. Rational decision making models, which have garnered the lion's share of research on managerial decision making, utilise this extensional system of information processing. Rational decision making is completely different to intuition based decision making.

The *investment* approach tries to focus on costs and benefits and involves the use of systematic procedures designed to thoroughly assess all pertinent information to make a decision based on conscious deliberation. In short, it is highly analytical and relies on logical connections. Moreover, as has been discussed, rational decision making involves a totally different type of information processing system than the experiential system utilized by intuition (Dane & Pratt, 2007). A research on the expertise of financial managers and the stock market reveals a clear picture. Most Chief Financial Officers (CFOs) had little understanding of the future movements of the stock market. In numbers, the correlation between the stock market and the estimations was nearly zero (Kahneman, 2011). A study on self-medication presents that people were more or less

interested in the package labels when buying a product (Hanoch, Katsikopoulos, Gummerum, & Brass, 2007). That is why it is important to accept that emotions play a significant role in human behaviour (Hanoch, 2002).

The last of the three major rational approaches is the *buying center* approach which is the most prominent concept of rational decision making. According to the buying center approach, members of a team have different roles such as buyer, user, influencer, decision maker and gate keeper. The idea of the buying center approach is to ensure rational decision making, but doubts are expressed with regard to practical application (Eckhardt, 2010; Pepels, 2004).

Yet the use of *scoring*, *investment* and *buying center* approaches seems to be an appropriate procedure to evaluate the best possible options. These are the reasons why they are frequently used in B2B decisions.

### 2.1.2.2 Organisational Buying Behaviour

Buying centres and choice models are alive (Wilson, 1995) yet apart from scoring, investment and buying centre approaches the international cooperation of the IMP-Group delivers a different approach of industrial marketing and purchasing (IMP) concepts. The group was founded in the 1970's from dis-satisfied researchers' of conventional marketing thinking (Hakansson, 2013).

A dynamic model of buyer-supplier relationships, the 'Interaction Model', was developed and used in comparative empirical studies of industrial market (IMP Group, 2014). The Industrial Marketing and Purchasing Group (IMP Group) using an ethnographic methodology described in their relationship model based on 878 interviewed buyers in 318 firms within France, Italy, Germany, Sweden and the United Kingdom. Based on the IMP model interaction is a series of short-term social interactions which are influenced by long term business processes. As buyer and seller relationships have become an integral part of B2B strategies academics developed models of relevant variables that may influence the relationship of the business partner. Based on Wilson (1995) important variables for the relationship are e.g. commitment, trust and satisfaction (Wilson, 1995).

In the business to business context diverse stakeholders must be targeted in the marketing project of a complex selling process (Malaval & Bénaroya, 2013). Each company has to think about the complex network of relationships of customer, suppliers and other counterparts (Ford, Gadde, Hakansson, & Snehota, 2011) and business performance depends on the way firms are connected to other firms (Wilkinson, 2008). Pressured to meet the demands of global competition companies replace the traditional model of buyer-seller interactions and focus as well on the social exchange between the partners. For this background it has become increasingly important to understand the important factors of business relationships (Metcalf, Frear, & Krishnan, 1992) used in the IMP Model.

### 2.1.2.3 Decision Making Process in the Human Brain

Writ large in the literature on decision making is the idea of the homo economicus, a person with inexhaustible resources and capacities. Many models of rationality see the human mind as a space of unlimited time and knowledge (Gigerenzer & Goldstein, 1996).

*'If you look at economics textbooks, you will learn that homo economicus can think like Albert Einstein, store as much memory as IBM's Big Blue, and exercise the willpower of Mahatma Gandhi.'* (Thaler & Sunnstein, 2009, p. 7)

A key problem is the rational assumption is that people are entirely self-interested (Henrich, et al., 2011). Due to the philosophic idea of the so-called homo economicus, modern economic theory ignores the influence of emotions assuming that human decision making is based on rational maximisation. The homo economicus is the prototype of a human being who is acting solely based on rationality and which is merely driven by economic motives. Based on this theory, customers are just looking for the best possible satisfaction of needs, business people are just focused on profit maximization (Laux, Gillenkirch, & Y., 2012; Samuelson & Nordhaus, 1987; Preiser, 1990; Mueller 2, 2012; Deelmann, 2013). Yet the human brain is not equipped with unlimited knowledge; time and processing power is not unlimited (Bechara & Damasio, 2004).

High numeracy levels are associated with better abilities in judgement (Hanoch, Miron-Shatz, Cole, & Himmelstein, 2010). Nevertheless, researchers have shown that even physicians and health care professionals have difficulties in interpreting and communicating statistical information. Medical doctors perform even worse if the choice of medical treatments is larger. This highlights the role of numerical risk evaluation in health-related and in financial decisions as well (Hanoch, Miron-Shatz, Cole & Himmelstein, 2010; Miron-Shatz, Hanoch, Graef & Sagi, 2009).

In the history of the decision making process theory, there have been three key explanations on human beings decisions making: (1) Neoclassical; (2) cognitive neuroscience and (3) neuroeconomics.

The first was the neoclassical stage (Glimcher, Camerer, Fehr, & Poldrack, 2009). Adam Smith (1723-1790) described a number of phenomena for understanding choice behaviour. These phenomena were more or less ad hoc rules explaining how environmental variables influenced the behaviour. Authors like Samuelson (1915-2009) presented simple mathematical assumptions of binary choices, revealing stable preferences.

The second stage was cognitive neuroscience stage. In the late 1980s, scientists started to study the brain of monkeys and examined how they made decisions. The experiments

revealed that the firing rates of single neurons were directly connected to the stochastic choice produced by the animals in response to noisy sensory signals. This was a landmark in neuroscience; because it provided the first really clear proof of a correlation between the neuronal activity and the stochastic choice (Glimcher, Camerer, Fehr, & Poldrack, 2009).

The third stage emerged from the new field of neuroeconomics. The goal was to describe the neurobiological 'hardware' that supported choice behaviour in situations ranging from perceptual decision making to the expression of more complicated preferences (Glimcher, Camerer, Fehr, & Poldrack, 2009; Camerer, Loewenstein, & Rabin, 2004). The experiments showed that people are not just an accumulation of brain components. Our brain capacities are not endless because the human brain is basically very old and we use a lot of old mechanisms to solve new situations. The actual situation is that our brain has to deal with new problems by using a very old 'hardware'. A recent study with 300 interviews of managers in Germany reveals non-rational effects in the business to business decision making. 77 per cent of the interviewed persons in the study stated that they blind out emotions in the business decision making process. Amazingly 54 per cent expressed they would cancel a deal despite positive facts if they were to have 'negative feelings' (Otto, 2011).

New findings in brain research draw a new picture of mankind. Insights show that the biggest part of our cognition is implicit (Freud, 1930; Gigerenzer, 2007; Kahneman,

2011; Chlupsa, Doehl, Lean, & Hanoch, 2013; Bargh J. , Die Macht des Unbewussten - Teil 1, 2013; Snyder 1, 2013). Our implicit memory acts as the 'pilot' for our daily life and our conscious mind just covers a small part of our decision making process. Based on research, this effect is not just a phenomenon of a shopping tour in the supermarket. Even the choice of our partner seems to be made by our unconscious mind (Gigerenzer, 2007; Deppe, Schwindt, Kugel, Plassmann, & Kenning, 2007). An exciting point is, if our unconscious mind is such an important driver in our cognition then what about the idea of rational decision making? If more than 95 per cent of our decisions are implicit (Roth, 2013), what does this mean for the seemingly rational area of the business to business decisions? It seems that our unconscious mind has an important and underestimated role in our decision making process. It is therefore important to find a way to use the new academic insights to understand what our implicit memory is interested in and how to communicate appropriately with our unconscious mind. Even Sigmund Freund (1900) posits that the implicit circle is the bigger one covering the smaller conscious circle (Freud, 1900; Spitzer & Wulf, 2010). As Figure 7 visualizes the biggest part of our cognition is implicit.

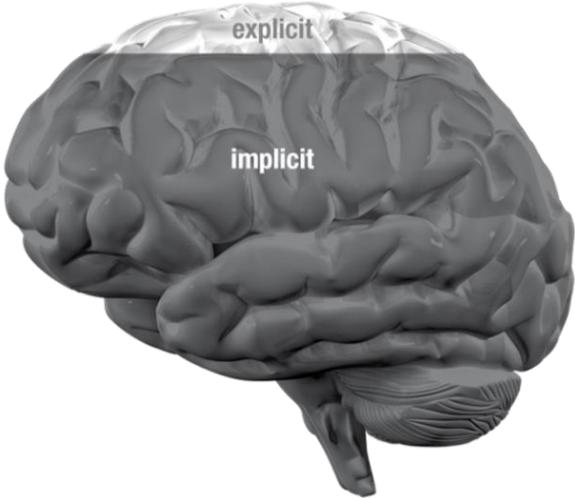


Figure 7: Explicit versus Implicit Cognition based on Kahneman (2011)  
With permission of Branding Code

#### 2.1.2.4 Decision Making and Involvement

Involvement describes the level of participation of the customers. It is an indicator for the engagement a person is willing to offer for a brand. Basically involvement could be classified in two dimensions, low and high involvement (Meffert, Burmann, & Kirchgeorg, 2012; Trommsdorff, 1998). Considering cognition, involvement could be divided into four dimensions, including low and high cognition involvement (Esch, 2012).

##### *2.1.2.4.1 Low Involvement*

The nature of low involvement decisions is that the customer has a low level of interest. In such cases, Meffert (2012) posits that there are very limited processes in decision making. The level of activation depends on personal, situational, stimulus and factors (Meffert, Burmann, & Kirchgeorg, 2012; Fehse, 2009)

##### *2.1.2.4.2 High Involvement*

In contrast, high involvement decisions are important for the customer. Often these decisions are closely related to the person's individuality and self-image. The customer accepts financial, social, psychological and sometimes health risks for the decision

(Meffert, Burmann, & Kirchgeorg, 2012; Fehse, 2009). Therefore, Meffert identifies a complex underpinning decision making process.

In contrast to Meffert, Esch (2012) differentiates between cognitive and emotional involvement. Due to the more detailed classification of low and high cognitive and emotional involvement the result is a quad matrix with the four dimensions of mixed-, experience-, objective positioning and actuality (Esch, 2012). Interestingly Meffert refers to new neurological findings, yet does not offer further explanations.

### 2.1.2.5 One-Reason and Sequential Decision Making

The theory of rationality agrees that we have to select all relevant information, to evaluate and calculate to reach the right judgement (Samuelson & Nordhaus, 1987; Deelmann, 2013). Despite the basic rules of rationality, decisions are often just based on a one-reason decision making process, the so called 'take the best heuristic (Gigerenzer, 2007)'. These judgements are connected to the episodic memory. The effect of recall goes beyond the recognition. Recalls are directly connected to episodes, facts and reasons in the form of stimuli or signals which help to come to a decision. This effect is well known in the animal sciences. Birds of paradise choose their partner based on the analysis of the plumage and peacocks check the number of spots on the feathers. For human beings, the reason to choose a partner is often a social one. A woman is interested in a man because other women are also interested in men. This reason is often sufficient because it works like a guarantee for one's own peer group. So 'homo heuristicus' has a biased mind and often ignores available information (Gigerenzer, 2007; Gigerenzer & Brighton, 2009; Goldstein & Gigerenzer, 2002). Since 1980 the political climate in the former Federal Republic of Germany has become more colourful through the emergence of parties emphasising ecological issues. A study investigated whether that change in political structure was accompanied by a change in the voters' cognitive structure. Voters elected by altering their customary left-right one-dimensional scheme or assimilated by placing novel parties into the old scheme. Furthermore, an ecological dimension could be reduced to the individual left-right schemes (Gigerenzer, 1982). If a party is closer to the individual ideal point model the

preference is higher. In the classical six party system, 92 per cent of the voters used this rule of thumb (Gigerenzer, 2007). That means that voters use simple decision mechanisms instead of complex decision making scenarios.

An expanded version of the one-reason decision making process is the sequential decision making process. In the sequential decision process, one reason is in the focus. If this reason does not result in a decision, the next reason for the decision making process will be used. Finally, one reason is important for the decision. This process is also called lexicographic search. When searching the content in lexicon the first letter has the first priority, then the second and so on. Intuition based on the 'take the best' rule (Gigerenzer, 2007) has to check different reasons but the focus is always on one fact. Using the right search and stopping rules (Hanoch, 2005), preserve us from getting bogged down by endless calculation and evaluation.

Based on 20 studies of real life problems in psychology, economy, biology, sociology and healthcare (Gigerenzer, 2007) found that on average, the 'take the best' rule obtained more effective decisions compared to outcomes from multiple regression analysis. The multiple regressions achieved 68 per cent correct forecasts and the 'take the best' rule 71 per cent. Finally, our intuition is reliable if we deal with issues difficult to forecast and a low level of information. A complex analysis is useful to exploit the history and the future is predictable to a large degree or if a lot of assumed information is available (Gigerenzer, 2007). This line of investigation has shown that basal ganglia are

involved through positive affective stimuli and positive emotional experience. The identical neural mechanisms play a central role in engendering the nonconscious associations that spur intuitive judgments. In essence, both intuitions and emotional appraisals appear to arise by highly similar neurological pathways. Summarising, evidence from the field of organisational, cognitive, and neurological psychology suggests that affect and emotions are an integral component of intuitive judgments (Dane & Pratt, 2007).

### 2.1.2.6 Intuition and Decision Making

Agor (1986) argued when executives make intuitive judgments, they often experience strong and positive emotions (e.g., excitement, harmony). Such positive feelings may lead to an enhanced sense of confidence in an individual's own judgments. Thus, if they feel good about a judgment, they must be right about it (Dane & Pratt, 2007; Bargh, 2013). What is the function of a brand in business to business communication? One issue is minimising the risk of an investment: When deciding on capital expenditure, it would be better to place the order at a well-known company. The other consideration is orientation. Brands are like lighthouses by the sea (Haeusel, 2005). If one has no idea how to manage a situation, it would be best to navigate into the direction of a big brand. When faced with a problem, individuals can use heuristics to draw associations among multiple stimuli, to focus on critical information, and to develop an idea of the right answer or best route to proceed (Dane & Pratt, 2007; Amicia, Hofer, & Roeckenhaus 1, 2013). Simon reveals that very simple perceptual and choice mechanisms are used in the choice mechanism to satisfy several needs (Simon, 1956). Basic mechanisms may be relatively simple, yet they operate in interaction with extreme boundary conditions connected to the long-term memory and the ability to learn (Simon, 1980). Why do business people buy iPhones and BlackBerrys or tablet computers? Naturally, they may receive their e-mails a little bit faster. Yet is this the real motivation, or is there a concealed more internalised and less conscious motivation? Often people do not know what they are thinking. If you ask a smoker for the warning labels on a packet of cigarettes, he will nearly always comment that smoking has bad consequences for

health and may even cause cancer. He will confess that he really takes the warning on the cigarette package seriously. Nevertheless, through an analysis of the activities in his brain in a functional magnetic resonance imaging (fMRI), his brain reveals the truth: What the identical person really thinks is, wherever there is a warning there must be a cigarette and I want it now (Lindstrom, 2008). In the ideas of the two fields of economics and neuroscience, they have to learn a lot from each other, especially in the area of decision making (Bechara & Damasio, 2004). A research reveals facts about the decision making by a purchaser in industry. About 54 per cent of the companies have regulations for the purchasing process, 46 per cent do not. 80 per cent of the participants regard regulations for the buying process as useful, but one third will not apply any regulation. Only 55 per cent conduct a complete market analysis, which means that 45 per cent make decisions without market research (Otto, 2011). Nowadays nobody can have a global market overview. The entire differences between all competitors in general cannot be detected. The consequence is that a real systematic choice of the supplier based on pure rational criteria is not possible and therefore purchasing decisions focus on prices or emotional characteristics. The trust in the sales team or the brand of the supplier is at the centre of the decision. The latest findings of brain research in the field of neuroeconomics provide evidence that the cognition and decision making of people can be influenced and that there are no significant varieties between members of professional groups or customer groups i.e. business to business or business to customer. A concept of values crops up in the mind of customers and the result is the big picture of a brand (Otto, 2011). Decision making processes in companies are very different. It seems that the process of decision making depends on

the size of the company and on the existing regulations. In general, the study shows that our instincts and feelings have a more important impact on the business to business decision making than assumed. Drawing on recent advances in psychology and the decision sciences, Dane and Pratt suggest that, under certain conditions, intuition may indeed facilitate rapid and effective decision making in organisations. Moreover, the speed characteristic of intuition has been recognised by management theorists for a long time. Barnard (1938) proclaimed intuition to be a component of non-logical mental processes that are capable of handling a mass of experience or a complexity of abstractions in a flash, distinguishing logical and nonlogical modes of thinking (Barnard, 1938). Dane & Pratt (2007) emphasised that intuition is to be regarded as a potential means of helping managers to make both fast and accurate decisions. Literature in psychology shows how a large portion of cognitive thinking happens outside consciousness. Yet despite on-going interest of psychologists, the subject area of organisations have yet to focus in nonconscious and automatic processes extensively on these mechanisms and how they may influence behaviour in organisations. Intuition is different from instinct and insight, terms which are often used synonymously with intuition in everyday speech. Epstein (1994) and Hogarth (2001) argue that biological instincts, e.g. shutting the eyes in bright light, are 'hardwired' responses or automatic reflexes to stimuli. Thus, instincts are innate capabilities that originate outside the experiential processing system. In brief, intuition differs from more rational models of decision making in such a way that it is nonconscious, holistic, associative, and faster. Intuition may be most appropriate for 'executive' decisions, which involve strategy, investment, and human resource management issues. These types of decisions are far

less structured than math problems (Dane & Pratt, 2007). Experts can rely on their expertise if the environment is regular and homogeneous. Enough time and experience is needed to train the intuitive judgements. If experts have about 10,000 hours of pattern training we can perhaps rely on their judgement. Identification of connected systems can be understood as templates underpinning the strategic thinking of experts (Chassy, 2013). Yet the validity of an expert judgement is limited to the field in which the expert is active and has gained experience. For all other aspects, direct feedback is important for training in all other aspects in which he is just a layman. A classic example is driving a car. In critical situations, we get a direct feedback if we make the right decision. The anaesthesiologist gets the promptest feedback on their work from all medical doctors. In another survey about patients who died on the intensive care unit researchers compared the diagnoses that medical doctors made shortly before death with the data from the autopsy report. The result was that 40 per cent of the clinicians who were completely sure about their diagnosis were wrong (Kahneman, 2011). That means that intuition in decision making is much more important than assumed.

### 2.1.2.7 Specific Situation of Managerial Decision Making

It has been suggested that people like to believe they solve complex problems applying complex strategies even when really they use rather simple strategies (Gigerenzer, 2007). Especially in daily business, many factors influence our involvement. We are switching between e-mails, meetings and phone calls. There are many things which interfere in our decision making process. The fact that not every bit of information gets the same priority was described by Doehl (1983) in the early 1980s. The cognitive scope covers the sum of the virtual information about the subject of acceptance with regard to the context of acceptance. In addition to this, the cognitive scope consists of the socio-organisational environment and the socio-economic-political environment. The variables of the evaluative scope conspire selectively with the limited affiliation and processing capacity concerning to the perceived environmental information. This unconscious selection of information regarding the context of acceptance can be understood as 'cognitive filter' of the subject of acceptance whose transparency is defined by the according values and preferences and experiences (Doehl, 1983). Even though managers are very similar to small children, they perform best if they get good stories, they can believe (Bosshart, 1997; Mikunda, 1998; Frenzel, Mueller, & Sottong, 2006). Asked about the feelings and decisions of the day, a typical manager may state he made all decisions 100 per cent consciously and rationally. According to Haeusel, the manager is wrong: he argues that nearly his entire behaviour of the day is based on three biological imperatives (Haeusel, 2005):

Balance (Security, Stability, Consistency)

Dominance (Enforcement, Elimination, Power, Status, Autonomy)

Stimulant (Attraction, Risk, Desire, Search of new stimulation)

Each of these instructions, based on implicit motives and the 'Zurich model of social motivation' (Bischof, 1993), is an unlimited striving for more of everything. For instance, more dominance means more powerful cars; more stimulants mean more spectacular holiday destinations (Haeusel, 2005). It seems that complex products cannot be communicated based purely on information. They need an emotional packaging with images, metaphors and music. As Bosshart (1997) argues, customers are buying emotions (Bosshart, 1997). Yet little is known about the characteristics of emotionality in the business to business sector (Salander, 2010). Expert intuition may be described as a 'pattern matching' process: Information is encoded and chunked into patterns, linked in schemes, and then equated compared to environmental stimuli (Dane & Pratt, 2007). The holistic and associative properties of intuition may help to integrate the disparate elements of an unclear defined or judgment problem into a coherent perception of how to proceed. Experts may be particularly well-suited to draw these holistic associations on judgmental tasks because the sophistication of their cognitive structures permits them relatively easily to integrate the components of a problem. This suggests that individuals may not be able to generate complex, domain-relevant schemas and, thus, must rely more often on simple schemas and heuristics. Organisations, interested in acquiring individuals with expert knowledge, often hire managers and executives of other firms

and agencies. Thinking individuals assumes that cognitive schemas must be relevant to generate accurate intuitive judgments (Dane & Pratt, 2007). Dane and Pratt suggest that managers should be careful to embrace intuitive judgments made by organisational newcomers without relevant experience in the specific field of industry.

## 2.2 Critical Literature Review of Models and Theories

This section considers bodies of knowledge relevant to models of psychology, sociology, neurology and marketing within the research. There are several different models with different objectives. The most important opinions will be introduced and checked for their relevance to the scientific interdisciplinary interplay.

As this research is interdisciplinary there are various fields involved in the development of the thesis. To accomplish a sufficient overview on the models discussed in the literature it is important to start with a wide focus. To shed new light on the content of the thesis it is crucial to detect the critical literature in the fields related to the thesis. Thus, as described in Figure 8, a detailed research and review is undertaken in the areas of (1) psychology, (2) sociology, (3) neurology and (4) business and marketing. In the field of *psychology* a special interest lies in the models of cognition and decision making. The focus will set on the implicit versus explicit cognition and the new findings in decision making and intuition. In the area of *sociology* the focus is on the models of the behavioural, industrial or so called labour sociology. A narrow focus will build the models on group decision making. The field of *neurology* will add some models out of the field of neuroeconomics and neuroimaging which spotlight the knowledge about the human brain, the coding and decoding of information and the related aspects of information overload'. Finally, there are new approaches in the area of *marketing* especially in the connected fields of industrial and technical marketing. A particular focus will be on the

area of business to business versus business to customer marketing and the awareness of brands.

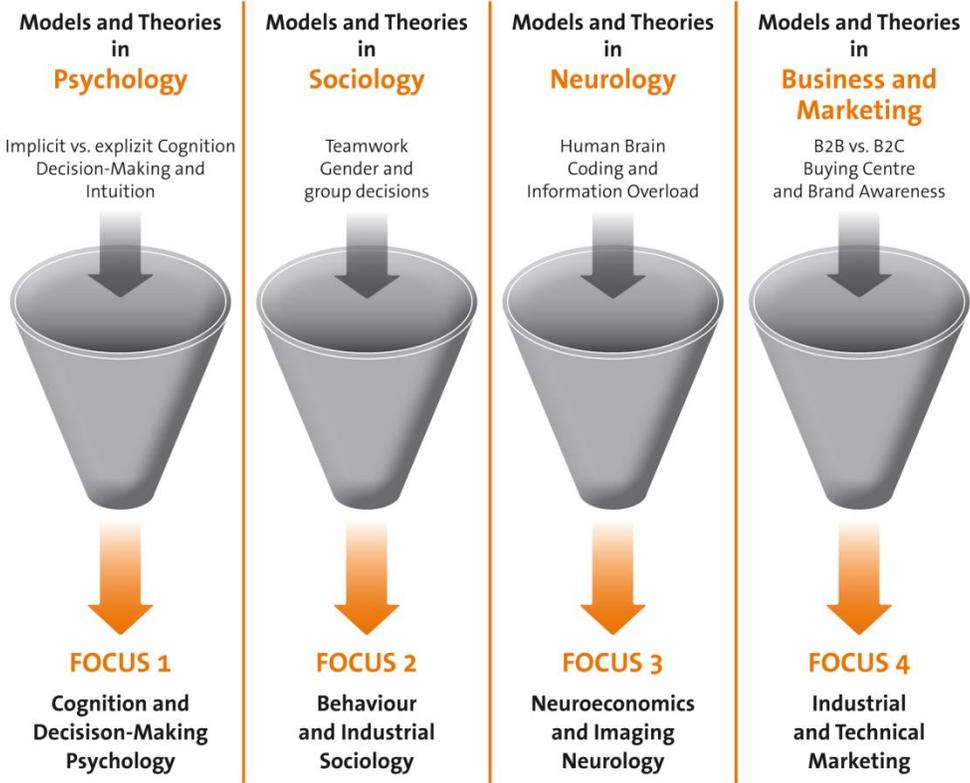


Figure 8: Integration and Focus of Models and Theories

## 2.2.1 Models and Theories in Psychology

The first phase of the critical literature review covers the research in the area of the models and theories in psychology. As an important aspect, a detailed focus is set on the areas of cognition and decision making in psychology.

### 2.2.1.1 Implicit versus Explicit Cognition



Figure 9: Automatically Emotional Decoding adapted from Kahneman (2011)

Licensed picture of iStock Pictures

Probably people are not interested to think about the emotional state of this picture (see Figure 9) above. Nevertheless, they do. The nature of the implicit system is permanently to check and solve the most important problems to stay alive. Through evolution we inherit the neuronal networks to check against the constant threat (Kahneman, 2011; Spitzer & Wulf, 2010; Miller G. F., 2000). One example is the extremely fast processes to distinguish enemies from friends (Haeusel, 2005; Kahneman, 2011). Our implicit system is always in operation mode. As soon as we open our eyes it permanently monitors the three dimensional scope of objects surrounding us. Automatically the position and identity will be decoded. Usually the implicit system delivers more information than we need. The implicit system is a kind of "mental scattergun". As a result we have intuitive feelings about everything in our lives and we are always searching for patterns (Kahneman, 2011).

First our conscious mind is not involved in all decisions we make due to the fact that from an evolutionary perspective our emotional memory is much older than our conscious memory (Storch, 2006). More recently, psychologists have adopted a dual processing approach (Kahneman, 2011), arguing for two distinct types of information processing systems in human beings. One information processing system, which from the evolutionary perspective regarded as the older of the two systems conducts the automatic and relatively effortless processing of information. This system, which permits perceptions of knowledge without conscious attention, has been referred to as an experiential, automatic, tacit, natural, and associative system. For every decision both systems respond to stimulus - rational system and emotional system. This system

enables individuals to learn information deliberately, to develop ideas, and to analyse in an attentive manner. This system has been referred to by various names, including rational, intentional, deliberate, extensional, rule based, episodic, system 2 and explicit system (Dane & Pratt, 2007; Elger & Schwarz, 2009; Kahneman, 2011; Mueller, 2012; Streif, 2013). The explicit memory works slowly and processes as many details as possible. We are able to realise, reflect and formulate all information in our explicit memory. The explicit memory is also known as episodic memory. The explicit memory is characterised by a conscious recollection of the event and by the reflection about the event (Lee, 2002). The implicit memory works fast and in a diffuse manner. It is more difficult to express the information we receive from our implicit memory. Bargh and Chartrand (1999) argue that a large portion of everyday life is determined by the first information processing system (Bargh & Chartrand, 1999). As such processes are rapid, effortless, and often more effective, nonconscious processes serve as 'mental butlers' conveniently managing tendencies and preferences (Dane & Pratt, 2007). The implicit memory represents the emotional part of the feelings we have when trying to make a good decision. If we intend to make a rational decision we need time to evaluate every possibility. The implicit memory gives the feedback in every situation for a decision even if we are exhausted in 200 milliseconds (Storch, 2006; Rangel, 2013). Lee (2002) underlines the thesis of Storch. She found evidence for the two types of implicit and explicit memory. Whereas the explicit memory is represented by the conscious recall of an event, the implicit memory has a better performance in the task of an experienced event (Lee, 2002). The emotional memory conserves knowledge as emotions and feelings, and is a collection of all our life experience. If we have to make a decision our

brain produces imaginal pictures of future scenarios and so we see our future like a short movie trailer (Storch, 2006; Amicia, Hofer, & Roeckenhaus 1, 2013). In this moment we try to find the best solution, based on the stored emotion of our somatic markers. We can understand the function and teamwork of both our implicit and explicit memory by considering how to use a cell phone. If we take our cell phone and check the register of phone numbers, our explicit memory transfers the letters to words and names. Your implicit memory prompts an internal image, joined by a more or less good or bad feeling on the individual the number is assigned to. Satpute and Lieberman (2006) postulate that the processes in the implicit system can be conscious but do not need to be conscious. The important distinction is that the processes are not conscious by themselves (Satpute & Lieberman, 2006). Referring to Scheier and Scarabis it is not the issue whether the implicit is conscious or unconscious. What matters is that implicit processes are not reflected (Schneider W. , 2009; Scarabis & Schneider, 2009; Scheier, Linke, & Schneider, 2010). For example, Scheier and Scarabis invoke the ordinary activity of knotting shoelaces. The activity is not unconscious but the activity can be done implicitly because the activity is automatic and without any reflection. As a matter of fact the process of knotting shoelaces is very difficult to explain consciously and effectively reflective in a phone call. As a consequence Scheier and Scarabis define a continuum between explicit and implicit processes with two extremes and classify the continuum from very implicit over spontaneous to very explicit (Schneider, 2009). Friese, Hofmann and Waenke (2009) distinguish four conditions in which implicit processes have an important role.

1. Low involvement: The interest e.g. in advertisement is low. There is no motivation to think explicitly about the message or the product itself.
2. Pressure of time: If we have no time to think explicitly the implicit processes dominates and we try to make decisions by 'gut feeling'.
3. Overload: If we get so much information about the product or advertising messages that our cognitive resources are swamped we cannot think explicitly to evaluate the information.
4. High complexity: Complex decisions such as buying a car or a washing machine can benefit from the implicit system. Due to its big capacity all relevant details can be processed.

To sum up, current research reveals that the implicit system dominates decisions with low involvement, pressure of time, information overload, or confusion based on a large scale of complexity. In contrast the explicit system plays an important role in decisions with high involvement, low scale of deflexion and a lot of time (Frieese, Hofmann, & Waenke, 2009). There is evidence that individuals are likely to rely on intuition when they are facing extreme time pressure. That is why intuition plays a significant role in the decisions of fire fighters, military commanders, emergency room surgeons and corporate executives acting under severe time constraints. It is not very surprising that intuition seems to be more appropriate than rational methods to integrate wide-ranging stimuli into usable categories of information (Dane & Pratt, 2007).

In her paper on the effects of the implicit memory on memory-based versus stimulus-based brand choice Lee describes the scenario of a couple looking for a restaurant. The man tries to remember one of the billboard advertisements while his wife checks the tourist guidebook. This situation illustrates the two different contexts in which customers usually make their brand choice. Some of our decisions are based on stimuli located in our environment whereas other decisions are based on information obtained from our memory (Lee, 2002). What does this mean for the daily decision making process in the business to business area? If we compare this to the classical idea of decision making of the rational homo economicus we get a completely new picture. Every company logo, every sales representative and every offer does represent not only a package of rational information (Bausback, 2007). The package of implicit information it also contains seems to be even bigger. The limit of information is the magical figure seven, plus or minus two. That is considered the maximum capacity of our short-term memory (Gigerenzer, 2007). Explicit learning happens when individuals are consciously aware of changes accruing to their underlying knowledge bases (Lovett & Shah, 2007). Thus, we assume a general relationship between explicit learning and intuition effectiveness. Explicit learning will positively influence the effectiveness of intuitive decision making by generating complex, domain-relevant schemas. This suggests that although explicit and implicit learning can occur simultaneously, implicit learning involves a different process of knowledge acquisition and storage. Both implicit learning and intuition have been linked to the nonconscious processing system. Implicit learning will positively influence the effectiveness of intuitive decision making through the formation of complex, domain-

relevant schemas (Dane & Pratt, 2007). To solve a mathematical task is a prototypic process of slow, rational and explicit thinking.

The human brain and the brains of many animals as well always prioritise negative information (Kahneman, 2011). This reflex is an important evolutionary mechanism to survive. In contrast the fear of spiders or recalling knowledge stored into the mind is an automatic process. If anything happens that is regarded as normal the explicit system accepts the suggestions of the implicit system. As soon as the implicit system gets into trouble for whatever reason, then help is requested from the explicit system. The explicit system will only be alarmed if things happen that appear as unusual for the implicit system. One of the most important tasks of the explicit system is controlling our behaviour, for example to be friendly even if we are very angry. This means the explicit system has to control the impulse coming from our implicit system. The separation of tasks is very efficient. It minimises the efforts and optimises the performance. As the neural system needs more glucose than most of other parts of the body mental activities seem to be highly glucose consumptive processes. As a result laziness is deeply rooted in human beings as a typical rule to minimise efforts in physical and as in cognitive processes as well. The only problem is that just the explicit system knows how to use rules and the implicit system cannot be deactivated (Kahneman, 2011). The implicit system is often source of our impulse as base of our decision making process. It offers an implicit interpretation of the actual situation based on the present and the recent past and connects it with expectations on the near future. A central feature of the implicit 'association machine' merely is presenting activated perceptions to create a coherent

story. In contrast, the implicit system is neither interested in the quality nor in the quantity of the data. This strategy is called the WYSIATI effect 'What you see is all there is' (Kahneman, 2011; Macknik, 2013). Therefore, good communication has to follow the rules of our brain's cognition (Chlupsa, 2009). As presented in Figure 10 most parts of the decision making process seems to be implicit.

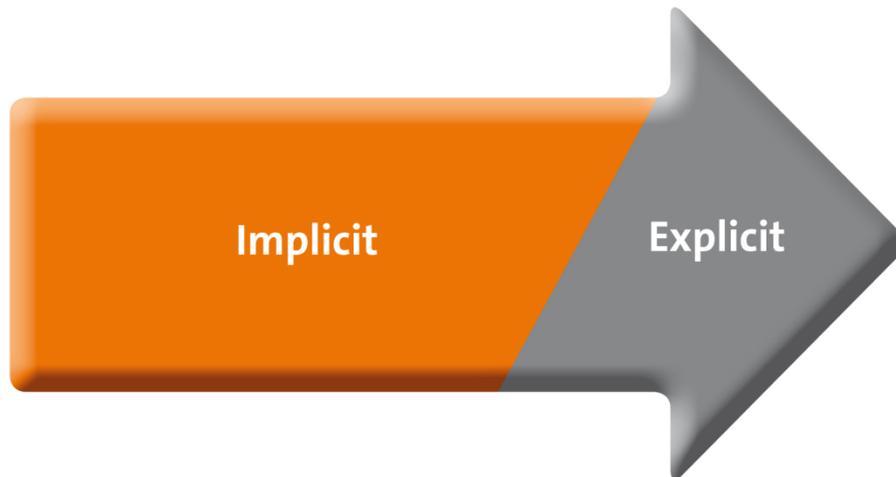


Figure 10: Process of Decision Making

## 2.2.1.2 Impacts and Effects based on Implicit Motives

### 2.2.1.2.1 *Effects of the Affiliation Motive*

The brain decides on the success of an advertising message. Only messages that are responding to implicit instructions have a chance of a pole position in the customer's brain. The branding process is following the same principle. If brands are positioned in an implicit way they will work as unique identities. In a world of increasing new products and offers, competing for the interest of customers; strong brands are like lighthouses by the sea: outstanding. Due to brand awareness they fulfil a central implicit instruction of balance and safety reducing the complexity to select competitive products (Haeusel, 2005).

### 2.2.1.2.2 *Effects of the Power Motive*

Based on the evidence of atrocity of the Nazi-regime, the American Government decided to check the specific personality characteristics of the German population to get an explanation for this horror. The main thesis was that the Germans are very subservient to authorities and in addition very cruel. One of the most impressive experiments after World War II is the 'Milgram Experiment' (Haeusel, 2005). The result was that nearly all students who took part in the experiment would have killed the putative test person by command of the professor. After this result Milgram abstained

from running the experiment in Germany. The reason is the conformation automatism based in our old parts of the brain. It is needed to allow groups to react without a lot of discussion. The cognitive process will be stopped and we follow the commands of a strong leader. Another example for dominance of the power motive is the experiment by Haney, Banks and Zimbardo (1971). They installed a prison in the cellar of the Stanford Institute. Twenty four students who knew each other were randomly separated into two groups. The prison guards, classified as students mistreated the prisoner students with an extreme brutality (Zimbardo, Maslach, & Haney, 2000). The prisoners did not defend themselves and drifted into a deep apathy (Haeusel, 2005). As positive result the power motive helps to hold a social group controlled together.

### *2.2.1.2.3 Effects of the Achievement Motive*

Due to a missing impact the experience of the everyday life does not seem to be sufficient. That is the reason to strive for more intensive experiences such as in extreme sport where self-monitoring is a central motive. Fun and experience are not challenging enough. An existential experience is needed (Bosshart, 1997; Graef, 2012). Restaurants with Thai, Vietnam, Caribe or other oriental food are the evidence that people want to break out into a hazard-free adventure “Carry me off to another life, but bring me back for lunch” (Popcorn, 1992, p. 47). In relation to the ‘information overload’ (Martinez-Conde, 2013) a process of the de-materialisation is going on. Customers do not want to buy real products anymore (Bosshart, 1997). What they are interested in instead is themes, messages, symbols and metaphors, cult and experiences. Las Vegas or Walt

Disney teaches us that two crucial criteria of differentiation are entertainment and emotions (Bosshart, 1997; Wolf, 1999; Halstenberg, 2004).

### 2.2.1.3 Impacts and Effects of Implicit Cognition

#### 2.2.1.3.1 *The Effects of Conditioning and the Endowment*

*Conditioning:* An elementary theory in psychology is the classical conditioning of Pawlow (1849-1936). The basic assumption is that every person has automatic reflexes. If neutral stimuli are frequently and simultaneously combined with automatic reflexes new stimulus response associations will be adopted. After some time the neutral stimulus will even work without the basic event. Pawlow verified the theory with the feeding of dogs and the level of secretion by activating a tone (Gerrig & Zimbardo, 2008; Kuhl, 2001; Kuhl, 2010; Meffert, Burmann, & Kirchgeorg, 2012). The effect of conditioning is able to explain effects such as customer- product- and brand loyalty. With a high degree of certainty a customer who has made a positive experience and activated his rewarding system will repeat his decision.

*Endowment Effect:* The simple fact that something belongs to someone or not is an interesting effect. From a rational perspective the value of a product should be the same. Economically the price is merely the intersection point between the offer and demand of a product (Preiser, 1990; Samuelson & Nordhaus, 1987). In contrast several

experiments revealed that in reality the price of product varies if somebody owns a product or wants to buy it (Elger & Schwarz, 2009; Kahneman, 2011; Mueller, 2012).

*Pricing Effects:* Contrary to the basic economic theories the effect of an increase of prices is two times higher than the decreasing of prices and is linked to the aversion of losses. Contrary to the economical assumption that the price is directly connected to the volume in reality the factor is 2:1 on the market which suggests that the effect of higher prices is two times stronger than a decrease in price. The crucial point is that for the rational agent the previous price should be irrelevant (Elger & Schwarz, 2009; Kahneman, 2011; Mueller, 2012). This means we are more interested in avoiding losses instead of gaining profits. On an evolutionary level a classic example is the territory defence, which also is activated when a company is re-structured (Kahneman, 2011).

2.2.1.3.2 *The Effects of Priming and Reaction*

Nowadays we know that priming effects are part of our daily life. Priming effects occur in the implicit system and we do not have direct control (Kahneman, 2011; Bargh, 2013). The basic goal of the priming effect is to shorten the reaction time for a specific event. The classic example is the presentation of green colour representing grass in experiments (Elger & Schwarz, 2009; Kuhl, 2010; Scheffer, 2005). A study of Coleman on managers reveals that priming works in a business and management environment as well (Coleman, 2004).

*Florida-Effect:* The 'Florida-Effect' describes a classical experiment in priming. Students were primed with words on aging without using the word 'old'. After having done so the time they need to cross the floor was stopped (Bargh, 2013). The primed students needed more time than the control group. The effect of influencing behaviour based on association is called the idiomatic effect. This effect also works the other way. The reciprocal effect is that if test subjects who take a pencil between their teeth, usually start to laugh after a few minutes because they interpret things as more funny. In another test masked as a study for headphones people were asked to move their heads. While some of them had to shake their heads the others should nod their heads. Those ones who shook their heads denied the comments of the audio signal in the headphones while the group who nodded their heads agreed (Kahneman, 2011). In the Netherlands a railway company put printings of a bookshelf on the roof of a wagon in the

silent section, which resulted in a decrease of the noise level. Other experiments confirm the knowledge of Freud on the connection of symbols, metaphors and unconscious associations (Dijksterhuis, 2012).

*Lady-Macbeth-Effect:* The “Lady-Macbeth-Effect” reveals that people who feel psychologically soiled feel the need to clean their bodies. There is a special interest in the used body parts. Therefore, they lying people via telephone used more mouth wash and lying persons via mail more soap for the hands in an experiment in which they had to lie to other people (Dijksterhuis, 2012; Kahneman, 2011).

#### *2.2.1.3.3 The Effect of Anchor in the Decision Making Process*

Judgements of people will be affected by figures which do not represent relevant information. This phenomenon is called the “Anchor Effect”. An experiment with judges revealed that the level of penalty correlates with the numbers of a pronged cube. Judges who diced a high number pleaded for a longer arrestment than judges who gained a lower number of ‘eyes’. Even if we know about the anchor effect we are not able to resist because we do not know how we would decide if we had no anchor. A banker thinking about an investment in Ford stocks usually answers the questions if he likes Ford cars or not (Elger & Schwarz, 2009; Kahneman, 2011; Mueller 1, 2012). If confronted with difficult questions, we answer the easier ones without realising the real underlying processes.

The mood of a person has a high impact on their implicit cognition as well. That is an old evolutionary signal. A good mood means everything is fine. The problem is if we are in a good or even euphoric mood we lose the contact to intuition (Kahneman, 2011).

The feelings about a product changes if the price will be changed. People pay for their goal attendance. The higher the relevance is for the implicit motive, the more people are willing to pay (Scheier, Linke, & Schneider, 2010). We have a kind of implicit reference price for the products we know (Ravaja, Outi, & Mikko, 2013). Plassmann et al propose that marketing actions, such as changing the price of a product can affect neural representations of experienced pleasantness. Results show that increasing the price of wine increases the subjective reports of flavour and pleasantness, which was contrary to reality as the wine was the same all the time (Plassmann, O'Doherty, Baba, & Rangel, 2008; Mueller 2, 2012; Rangel, 2013).

*2.2.1.3.4 The Effect of Framing in the Communication Process*

Kahneman use the term “Framing-Effect” to describe unjustified impacts of wordings on decision preferences (Kahneman, 2011; Poeppel, 2010; Deppe et al., 2007). Framing means to express logical equivalents in the form of numerical or linguistic information in different ways. The classic formulation is if the glass is half full or half empty. From a logical point of view it is irrelevant if the glass is half full or half empty because physically the situation is the same (Gigerenzer, 2007). In an experiment with patients and medical doctors the same treatment was worded in two different ways. For a patient in a hospital who has to undergo a big operation it is important if the probability to die is 10 per cent or the probability to survive is 90 per cent. An important finding of the study was that medical doctors have the same susceptibility in the framing process as their patients (Gigerenzer, 2007; Kahneman, 2011). Another example is the low number of organ donors in Germany with 12 per cent in contrast to Austria nearly 100 per cent. In countries with a high level the people have to tick a box if they do not want to donate organs. In countries with a low level people have to agree by filling up an additional document (Kahneman, 2011). The context influences the interpretation of every element. If a real context is missing our implicit system creates a useful one. If our unconscious mind is not sure it bats on the most relevant solution based on its live experience (Roth, 2013). Usually that process is very useful, yet the problem is that in case of overload of our explicit system our implicit system nearly believes everything. Hasty conclusions are a typical example for framing effects. Thus, the same information can get totally different meanings in different contexts (Kahneman, 2011).



Figure 11: Example of the Framing Effect adapted from Kahnemann (2011)

Writing with permission of Bernadette Glodek

In Figure 11, a hasty and usual view the first box gets the meaning of ABC. Joined by numbers the B changes into the number 13. Another framing effect: whether a sound appears quiet or loud depends on the noise surrounding us. A light has a higher effect in a dark room than in a bright one (Kahneman, 2011). Human cognitive decisions are strongly susceptible to the manner the options are presented (Depepe, et al., 2007). Further to the visible effects Depepe presents evidence for a neural correlates in the human brain of the framing effect (Depepe et al., 2005). In addition, we succumbing simple illusions. If we read, bold letters look more trustworthy than normal letters. And if the contrast between the letters and the paper is higher, what usually happens if we use high quality paper is that it looks more believable (Kahneman, 2011). From an evolutionary background, the concept of separating the world into patterns seems to be useful (Mueller 1, 2012).

*2.2.1.3.5 The distinction of Recognition and Recall*

Goldstein and Gigerenzer (2007) started a short experiment in an American college course and in a German student class. Which city has more citizens: Detroit or Milwaukee? The US students had different opinions, for the German students it was obvious that Detroit is the bigger city. The German students were right, but not because they were more intelligent. The US students knew a lot about both cities. The German students knew more about Detroit. They merely used the recognition heuristic to answer the question. The phenomenon of the recognition heuristic is easy. If you know one thing and do not know the other thing, then the thing you know is more important. The instinct to take what you know has a high survival value in nature. Yet the recognition heuristic works as well if we buy products that we know. Companies make use of this rule of thumb in their communication campaigns with a low level of information. The purpose is a high recognition value (Gigerenzer, 2007). Recognition is the ability to distinguish between unknown and known, to differentiate between old and new.

Recognition, recall and the unknown separate our world in three states of memory (Gigerenzer, 2007). If visitors enter your office they are a part of one of the three categories. The first category covers people, we do not know. The second category represents people we recognise but do not know anything about. The third category contains people we recognize and who remind us of other things (Dilling & Reimer, 1995; Gigerenzer, 2007). The sequence of analysing another person is more or less random. Nevertheless, the first impression will always be strengthened whereas

following information will be suppressed. If we have the first contact with a person an interesting effect the “Halo-Effect” could occur. This effect describes a tendency to like things we have never observed. If we have a basic feeling of affection our unconscious mind fills the missing information with assumptions which fit to our emotional reactions (Kahneman, 2011). As an effect people trust names they know. Even if the name is very close to one’s own name it is taken as more reliable. The effect is that companies with easier names have higher ratings on the stock market as people think they are more profitable (Kahneman, 2011; Mueller, 2012).

#### *2.2.1.3.6 Selective Attention, Change- and Inattentional Blindness*

The experiment by Simons and Chabris is one of the most spectacular demonstrations about what inattentional blindness is. The test subjects see some students playing with a ball in front of a lift landing area. The subjects’ task is to count how many times the players wearing white shirts pass the ball. During the game a person in a gorilla passes the scene. Most people do not realize the gorilla due to the effect of attentional blindness. That means that we often do not detect independent changes to objects and scenes based on ‘change blindness’. Furthermore, without attention, we may not even perceive changes due to ‘inattentional blindness’. To sum up these findings suggest that we only perceive and remember those objects that receive focused attention (Mack & Rock, 1998; Simons & Charabris, 1999; Anderson J. R., 2007; Simons & Chabris, 2010; Kahneman, 2011; Moore, 2001; Amicia, Hoefler, & Roeckenhau 1, 2013). This study

presents two important facts. We have an obvious blindness about things that happen and moreover we are blind for our blindness (Kahneman, 2011). Another experiment proved that people do not recognise a change of the sales person during the sales process. In the test situation there were two sales persons behind the desk, one visible and one not. The first person started the sales process and, when the client checked his money in the purse, the sales staff reversed from the nonvisible to visible position. More than 75 per cent of the tested people did not realise the shift in the sales staff (Stern TV, 2010).

One hypothesis for this effect of the inattentional blindness is that our brain tries to save energy. Due to the process the brain cannot observe everything. Thus, it assumes that constant elements will not change from one moment to the next. This cognitive shortcut may save a lot of energy but it can also cause decisions, made on insufficient or flawed information (Niedeggen, 2010). In some situations we have a particular inattentional blindness, because we are focused on certain elements which will change. For example, in a payment process our attention is completely focused on the product we want to buy and on the money we will receive.

The same cognitive effect we can see in another experiment in a shopping centre. People were asked which marmalade they would prefer. After the supposed test in which the decision for the favourite marmalade had to be made, the test person was asked to reply to some of the questions asked before. When replying to the questions

the glasses of marmalade were changed. Actually the test person did not get the favourite marmalade. The persons then had to try the 'favourite' marmalade with the wrong taste again and had to describe the taste. Amazingly all tested persons described the favourite marmalade without realizing that they tasted the wrong one (Stern TV, 2010).

Selective attention is part of our life. Poeppel talks about the natural breath of the brain. Every three seconds our brain looks to the world and seeks new information (Poeppel, BrainBranding, 2008). The study of Ottler (2011) presents the effect of selective attention in the field of communication. As visible in figure 12 he reports that customers were irritated by a bottle of well-known Swiss lemonade in an advertisement of a brand for outdoor equipment. In the scenery of a label for young clothes visible in figure 13 the customers were mainly interested in the faces of the models without realising the presented products. This suggests that the brand is more important than the changing products (Reidel, 2011).



Figure 12: Selective Attention and Areas of Interest by Ottler (2011)

Used with permission of Prof Simon Ottler



Figure 13: Selective Attention of Faces by Ottler (2011)

Used with permission of Prof Simon Ottler

#### 2.2.1.4 The Impact of Intuition

Intuition has a long history in economic and organisational science. It seems to represent access to divine or inborn knowledge. Many Buddhists considered intuition as a gateway to a wider and richer world. Others maintained that intuition is the mystical avenue to knowledge. Researchers in the areas of management and psychology have explained intuition using a wide range of phenomena including heuristic, expertise and nonconscious information processing (Dane & Pratt, 2007). Intuitions are rapid, parallel; affectively charged, holistic judgements obtained at without the apparent intrusion of rational thought (Kuhl, 2010; Leybourne & Sadler-Smith, 2006). Intuition has evolved abilities to use the brain applying rules of the thumb providing the possibility to act fast and with amazing precision. Intuition achieves quality by making use of the intelligence of the unconscious by the ability to realise in which situation we should use the right rules without cognition (Batchelor & Burch, 2013). It seems that intuitions are more effective than sophisticated thinking and computer strategies. Nevertheless, intuition can set us on the wrong track (Gigerenzer, 2007). For a long time intuition has been seen as involving a form of information processing that differs from rational, or analytical, processes. Distinctions between 'rational' and 'nonrational' human thought can be traced as far back as Aristotle (Sloman, 1996). Sometimes the term rational or logical is applied to decision making that is consciously analytic. The term nonrational is assigned to decision making that is intuitive and judgmental. The term non-rational stands to decision making and behaviour that responds to emotions or deviates from action chosen rationally representing the nonrational and the non-rational components of

managerial decision making and behaviour (Simon, 1987; Newell, Shaw & Simon, 1958). Intuitions are affectively charged judgments that arise from rapid, nonconscious, and holistic associations. The holistic, associative properties of intuition involve recognizing patterns or other linkages among disparate stimuli (Dane & Pratt, 2007). Analysis involves sustained, systematic thought over a substantial period of time, while intuition reflects timely, and seemingly less deliberate, reasoning. Sometimes it is referred to as a sense or professional judgement. Having been on the job for a long time an employee starts to understand that the daily problems are not new and independent from each other. He knows how to ignore the irrelevant patterns of activity and to concentrate on the critical ones. Eventually, he begins to cluster the relevant patterns as a one piece or chunk and understands to link them with others. Collectively, this rich file of pieces generates an extensive data base of knowledge. To be an expert is always a mixture of analysis and intuition. In chess a grand master must be able to recognise and recall roughly 50,000 chunks. This effort needs more than 10,000 hours of chess. Intuition grows from experience. When faced with an arrangement of pieces on a chessboard, chess masters almost immediately recall both the patterns of the chess pieces and the appropriate strategic moves for the actual situation. Consequently, grandmasters in speed chess competitions can effectively play several games simultaneously, even if they only have a few seconds per move (Prietula & Simon, 1989).

Therefore, fast decision makers use more, not less, information than do slow decision makers. They also develop more, not less, options, and use a two-tiered advice process.

Fast decision making based on this pattern of behaviours leads to superior performance (Eisenhardt, 1989). In the literature of this area scholars have failed to agree on what intuition is and what it does. This conceptual confusion derives partly, from the numerous perspectives applied to understand intuition. One confusing aspect of past research is the tendency to call both the intuitive processes and the associated products, or outcomes, 'intuition'. Having both academic and non-academic significance, 'intuition,' perhaps not surprisingly, has a wide range of terms associated with it, including gut feelings, sense, and mystical insights. The following Table 2 provides a sample of definitions of intuition selected from work in psychology, philosophy, and management (Dane & Pratt, 2007). Intuition has nothing to do with magic. Intuition is more or less recognition. Simon stated in his incomprehension about the mythologised meanings about expert intuition that we are not at all surprised by a two year old child discovering a dog and saying "bow-wow" the effect is just the same. The situation cues a stimulus as an entry to the information stored in the cognition. The result is the answer the expert gets from his brain (Kahneman, 2011).

Source	Definition of Intuition
Jung (1933: 567–568)	That psychological function transmitting perceptions in an unconscious way
Wild (1938: 226)	An immediate awareness by the subject, of some particular entity, without such aid from the senses or from reason as would account for that awareness
Bruner (1962: 102)	The act of grasping the meaning, significance, or structure of a problem without explicit reliance on the analytic apparatus of one's craft
Westcott & Ranzoni (1963: 595)	The process of reaching a conclusion on the basis of little information, normally reached on the basis of significantly more information
Rorty (1967: 204)	Immediate apprehension
Bowers, Regehr, Balthazard, & Parker (1990: 74)	A preliminary perception of coherence (pattern, meaning, structure) that is at first not consciously represented but that nevertheless guides thought and inquiry toward a hunch or hypothesis about the nature of the coherence in question
Shirley & Langan-Fox (1996: 564)	A feeling of knowing with certitude on the basis of inadequate information and without conscious awareness of rational thinking
Simon (1996: 89)	Acts of recognition
Shapiro & Spence (1997: 64)	A nonconscious, holistic processing mode in which judgments are made with no awareness of the rules of knowledge used for inference and which can feel right, despite one's inability to articulate the reason
Burke & Miller (1999: 92)	A cognitive conclusion based on a decision maker's previous experiences and emotional inputs
Policastro (1999: 89)	A tacit form of knowledge that orients decision making in a promising direction
Lieberman (2000: 111)	The subjective experience of a mostly nonconscious process—fast, alogical, and inaccessible to consciousness—that, depending on exposure to the domain or problem space, is capable of accurately extracting probabilistic contingencies
Raidl & Lubart (2000-2001: 219)	A perceptual process, constructed through a mainly subconscious act of linking disparate elements of information
Hogarth (2001: 14)	Thoughts that are reached with little apparent effort, and typically without conscious awareness; they involve little or no conscious deliberation
Myers (2002: 128–129)	The capacity for direct, immediate knowledge prior to rational analysis
Kahneman (2003: 697)	Thoughts and preferences that come to mind quickly and without much reflection
Epstein (personal communication, 2004)	The working of the experiential system

Table 2: Definitions of Intuition adapted from Dane and Pratt (2007)

Dane and Pratt (2007) define intuitions as affectively charged judgments that arise through rapid, nonconscious, and holistic associations. In doing so, they delineate intuition from other decision making approaches like insight or rational decision making. As the epigraph suggests, intuition draws on our inborn ability to synthesize information quickly and effectively - an ability that may be hindered by more formalized procedures. They believe that intuition is marked by a unique process and outcome; however, they also believe that it is important to disentangle the two, in order to avoid the confusion of the past when researchers often mixed the intuitive process and the associated products or outcomes (Dane & Pratt, 2007). As early as the 1970s, Thomas Isaack (1978) highlighted in the article 'Intuition: A Ignored Dimension of Management' that there is a lack of attention. From his point of view it would be important to encourage more interest in the subject of intuition and management (Isaack, 1978). Agor demonstrates how managers use intuitions for strategic decisions (Agor , 1986). Executives often make crucial decisions by relying on their keen intuitive skills, also known as their 'gut' (Hayashi, 2001). Research suggests that intuition may be integral to successfully completing tasks that involve high complexity and short time horizons, such as corporate planning, stock analysis, and performance appraisal (Dane & Pratt, 2007). Our mind constantly receives and processes information that we are not consciously aware of. That is why emotions and feelings might not only be important for our intuitive ability to make good decisions but may actually be essential. Therefore, Hayashi frames several high-profile executive-level decisions as intuitive or 'gut' decisions (Hayashi, 2001). As there is a need for a fast action, traditionally conceptualized as an exogenous feature of the surrounding, managers usually want to act fast to achieve competitive advantages.

Yet it remains unclear how the focus on speed actually affects the organisation and improves performance. The mere existence of a magazine called *Fast Company* highlights the widespread acceptance of the need for speed. A 19-month ethnographic study revealed that an organisation can generate the need for speed by its own emphasis of speed in the past (Perlow, Okhuysen, & Reppenning, 2002). As a consequence, there has been pressure to understand how to make high quality decisions in a short time (Eisenhardt, 1989). Research on time pressure in negotiation has considered that strategic choice largely ignored information processing (De Dreu, 2003). Common to the heuristic and to the expert decision making perspectives is the idea that individuals nonconsciously make holistic associative connections between the stimuli they encounter and their underlying cognitive structures in the process of intuiting (Dane & Pratt, 2007).

In an experiment, Lepper and Iyengar (2000) from the Columbia Business School wanted to check the credo of the US super markets. Choice is good – and more choices are better. His ideas were that there is a negative effect when the array of choices is larger than we can handle, it has negative effects. The psychologists set up a stand (see Figure 14) in a delicatessen shop for a raised standard of living in California. He either offered six or twenty-five glasses of jam for testing. 60 per cent of the customers stopped to taste when 25 glasses were offered but only 25 per cent stopped when the amount of glasses was less. Yet only 3 per cent of the customers bought a glass of jam from the huge stand. In the case of the smaller offer 30 per cent of the customers bought a glass of jam (Gigerenzer, 2007; Lepper & Iyengar, 2000).

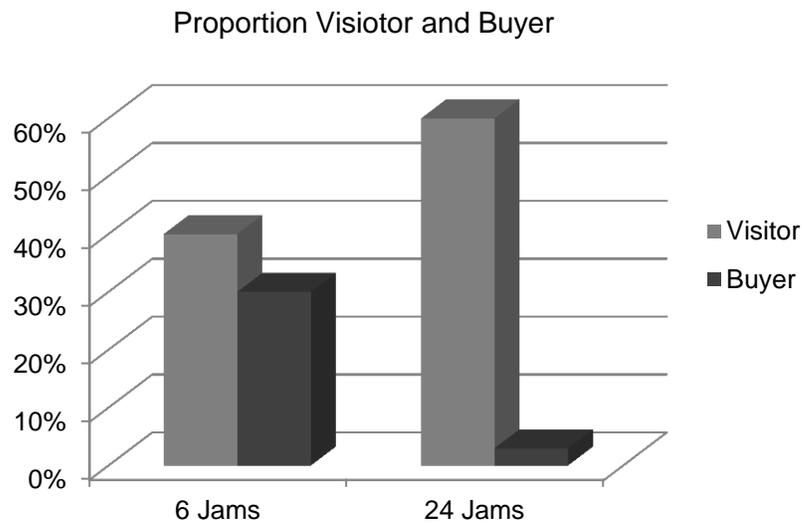


Figure 14: Relation Visitor and Buyer adapted from Lepper and Iyengar (2000)

An experiment with young singles in an online dating profile revealed the same result. The students with less choice felt more comfortable than the students with the larger range of potential partners. In another experiment with golf players the success of beginners and experienced golf professionals was examined under two conditions. The first group had only three seconds for every putt. The players from the second group could take all the time they wanted. The beginners played worse under time pressure. But surprisingly even the professionals played more efficiently under time pressure than without. In a second experiment the golfers should take care on their drive or count tones as a diversion. Concentrating on the drive the beginners achieved better results; in contrast the professionals achieved worse results (Gigerenzer, 2007). With regard to the domain of independence, the relative lack of domain sensitivity diminishes the effectiveness of intuitive decision making when simple 'rules of thumb' are indiscriminately applied to an inappropriate large number of problem domains (Dane & Pratt, 2007). In a study conducted in Stockholm portfolio managers, analysts, brokers and investment bankers would have to forecast the value index of twenty stocks. Every test person had to predict the performance of the stocks based on the names of the companies. The same experiment was conducted with a group of laymen. With the laymen 50 per cent of the forecasts were right indicating that their forecasts were on random level. Yet just 40 per cent of the professionals come to the right decision (Gigerenzer, 2007). It is often discussed that heuristics and other cognitive frameworks are likely to lead to inaccurate intuitive judgments because they tend to be 'simple' and, thus, may be inadequate to process complex environmental stimuli. This argument mirrors the bulk of research on the shortcomings of heuristics and stereotypes (Dane &

Pratt, 2007). In general it is assumed we need as much information as possible and a high performance computer to make a reliable forecast. A complex situation needs a complex procedure. Actually in difficult situations the contrary is true (Gigerenzer, 2007). As Shapiro and Spence (1997) further note, intuition is often more effective in enabling individuals to develop an understanding of the structure of a complex system. For this reason, intuitive judgments are regarded to be more effective than rational analysis whenever a problem becomes increasingly unstructured (Dane & Pratt, 2007). The process of intuition is related to the domain of the 'nonconscious' information processing system. Intuition is a nonconscious process, involving holistic associations, that are produced rapidly, which result in affectively charged judgments. One of the defining characteristics of intuitive processing is that it is nonconscious - it occurs outside of conscious thought. Other determinants of application, such as cultural factors, may also play a role in the use intuition. For example, cultures with a low emphasis on uncertainty avoidance are willing to take unknown risks and are comfortable with ambiguity and chaos. Because intuitive judgments are, by their very nature, difficult to justify rationally and often involve unknown levels of risk, cultures with a low degree in uncertainty avoidance may be more inclined to favour intuitive judgments in decision making than other cultures. The masculine versus feminine cultural distinction (Hofstede G. , 2013) may also account for differences in the use of intuition across cultures (Dane & Pratt, 2007). During an award ceremony at Munich the former president of Russia, Michail Gorbatschow, was asked to listen to the 'Berlin Speech' of the former President of the United States Ronald Reagan: 'Mister Gorbatschow tear down this wall' (Schwartz, 2007). Gorbatschow stated that due to rational arguments to agree to German

reunification would have not been the best idea. Nevertheless, by intuition he was convinced that the Germans were not aggressive any longer. In addition, he remembered a young soldier who stayed in his house during the WW II (Gorbatschow, 2011). Guided by his intuition Gorbatschow agreed to the German reunification.

## 2.2.2 Models and Theories in Sociology

### 2.2.2.1 Teamwork and Decision Making in Groups

Ten thousand years ago before agriculture was established, people lived in small groups. This way of living still has a huge impact on social instincts. The basic instinct is the family instinct which means care about your group. It is also to be seen among primates. The second instinct is special for human beings. Community instinct means to identify with a symbolic group and cooperate and defend the group members (Gigerenzer, 2007). During World War II the German police was sent to a small village to bring all Jewish men who were capable of working in a concentration camp and to kill all women, children and old people immediately. The commander made an unusual offer, if any of the police men would not be able to fulfil the task, he could go out of the line. One dozen of 500 men stepped out of the line, the rest executed the massacre. In the analysis of the reasons for this massacre, anti-Semitism and submissiveness to authority did not matter. Finally, it seems likely that the identification with the other comrades in uniform was the reason. The men did not want to be separated from the own group even if they had to break the ethic rule not to kill other people. For most of the police men it was easier to kill than to step out the line (Gigerenzer, 2007). Nearly in all social collectives the group puts pressure on behaviour and moral values of the person who is part of it. If the police man in this situation got murders for which group of people could do something like that excluded (Browning, 1999). That organisations can force evil outcomes was proven again in the Holocaust, when German doctors in

Auschwitz selected prisoners to stay alive or to be killed by gas right away. It seems that organisational design affects moral outcomes. Falk and Szech (2013) showed this effect in an experiment where test subjects could kill or save mice for money. The result was that on an aggregated level more mice were killed in group decisions, because an actor regards himself as not responsible for the outcomes. It seems that the same mechanism works as in the setup of firing squads, where blank cartridges are used frequently so that nobody can know who did the fatal shot. It seems that people often follow deontological moral principles. The result of the research demonstrates the power of organisations to promote immoral outcomes and it also presents again the immense dynamic power of group decisions (Falk & Szech, 2013).

### 2.2.2.2 Theory of the Ultimatum Game

Considering the ultimatum game, people usually try to come to a more or less fair group decision. In the classic version of the game two persons sitting in two different rooms, do not know each other, never met before and the test persons are not able to see or hear each other. The role as provider or recipient will be assigned by flipping a coin. The provider gets ten coins and offers the recipient a quota between zero and ten coins of the sum. Based on the offer the recipient decides whether to take the amount or not. If the recipient accepts, both players get what they have. If the recipient does not accept the offer nobody gets the coins. Based on the logic of their own benefit both players are interested in maximising their profit. As the provider makes the first step it would be enough if he offers just one coin because one coin maximises the profit of the recipient. Because one coin is better than no coin. This norm is called the Nash-Balance offered by the Nobel Prize winner John Nash. However, in general that is neither the behaviour of the provider, nor the behaviour of the recipient. The most frequent offer is four or five coins. It seems that the players are interested in equity. The game was also played in other cultures with amounts reflecting the salary of a week or a month; the results are the same (Gigerenzer, 2007). Humans are an unusual pro-social species - we vote, give blood, recycle and punish violators of social norms. Evidence indicates that people willingly incur costs to help strangers in anonymous one-shot interactions, and that altruistic behaviour is motivated, at least in part, by empathy and concern for the welfare of others (Silk et al., 2005).

### 2.2.2.3 Theory of the Dictator Game

The expanded version of the ultimatum game is the dictator game. The dictator game has been developed for experiments in economic decision making. It is to measure people's altruism and fairness. In the simplest version of the game with two people in a one-shot version one player is given a sum of money he can deliberately share with another person or not (Gummerum, Hanoch, Keller, Parsons, & Hummel, 2010). In this scenario the recipient cannot decline. If the recipient has no possibility to decline students in the USA, Europe and Asia usually take 80 per cent of the coins and give 20 per cent to the recipient. Elder people in general spend more, sometimes exactly half of the coins. Pure selfishness cannot be evidenced in intercultural studies either in the rainforest of South America, in the savannah of Africa, the upland deserts of the Mongolia, or in a lot of other remote regions (Gigerenzer, 2007).

#### 2.2.2.4 Differences in Gender Decision Making

There is much talk about the female intuition and relatively sparse discussion about the male intuition. That seems to be the reason for the seemingly better intuition of women. However, history presents other approaches. From the age of enlightenment the concept prevailed that intuition is in an inferior position compared to rationality. The conviction that the females are inferior by the males is much older. Polarisation of women and men regarding intelligence and character can be traced to Aristotle. A psychologist has tested the ability of intuition of more than 15,000 women and men. They had to differentiate a true and a false smile, out of ten pairs of pictures each with one face of a spontaneous and pretended smile. Before getting the pictures the test persons were asked about their intuitive abilities. 77 per cent of the women preferred to be highly intuitive but just 58 per cent of the men asserted. Effectively the intuitive judgements of the women were not better than those of the man (Gigerenzer, 2007). The BBC headlined the article 'Female intuition questionable'. In contrast to the popular belief men have the edge over women when it comes to intuition; research reveals that the gap was widest when the participants were asked to look at faces of the opposite sex. Men spotted 76% of women's fake smiles, while women only identified 67% of men's false smiles. Wiseman the leader of the research said the findings questioned the notion of female intuition. "Some previous research has found evidence for female intuition, but perhaps over time men have become more in touch with their intuitive side," he said (BBC NEWS, 2005).

### 2.2.3 Models and Theories in Neurology

New findings of neurology will be critical estimated in the classical marketing theory. The context is that based on a low level of certainty about the clear function of brain areas the results do not deliver the needed validity and reliability. So classical marketers stress the importance of the old and proved concepts of marketing research (Meffert, Burmann, & Kirchgeorg, 2012). Even neurological researchers emphasise that not all of the interrelations and functions of the brain are decoded yet (Elger & Schwarz, 2009, Mueller, 2012). On the contrary, there are still important findings which will affect the marketing communication and decision making concepts.

#### 2.2.3.1 The Somatic Marker Theory

The Somatic Marker Hypothesis is one of the most important studies in the field of decision making. Damasio inverts the classical ideas of decision making with his 'The Somatic Marker Hypothesis' under the headline Descartes' Error (Damasio, 1994; Poltser, 2008; Naqvi, Shiv, & Bechara, 2006). The name 'somatic' is based on the Greek word 'soma' for body. Until this time the idea of René Descart (1596-1650) 'Cogito ergo sum' (Descartes, 1641), I think, therefore I am, was; still the base of the idea of thinking. He argued that a clear and distinct idea must be true and saw linkage between thinking and behaviour in a more mechanical way (Glimcher, 2003). So the

general meaning was that emotions are a negative factor in the decision making process. The hypothesis showed that emotions are important for appropriate decisions. In the definition emotion was described as a collection of changes in body and brain states triggered by a dedicated brain system that responds to specific contents of a person's actual or recalled perceptions to a particular object or event (Damasio 1994, 1999, 2003). The key idea of the hypothesis is that decision making is a process which is influenced by marker signals. Damasio posits that signals mark a scenario as good or bad. These somatic markers brand the feeling in a specific situation as positive or as negative. As visualisation we can think of 'post-it' in different colours. The positive feelings get a green post-it, and the negative feelings get red ones. Thus, every situation in our live generates a lot of green or red 'post-its'. Later on, if we try to encounter a similar situation our body sends exactly the mix of 'post-it' which was learned in a similar situation before, due to feelings positive or negative. The somatic markers are classified in different signals based on the timing of their response. Primary inducers are innate or learned stimuli. They cause pleasurable or aversive states in the human organism. If one of these stimuli is present in the actual surrounding, then automatically and unavoidably a somatic response will happen. Primary inducers are fear objects such as a snake, or a stimulus predicting a fear object. In a positive situation, humans also automatically, spontaneous and compulsory generate a 'pleasure' response when finding a solution to a problem. This 'aha' reaction of solving a puzzle is also an example of primary inducers (Bechara & Damasio, 2004). The secondary inducers are information generated by the recall of a personal or hypothetical emotional event like thoughts and memories. Secondary inducers include the emotional response elicited by

the memory, for example, the encountering of a snake, or the memory of losing a large amount of money (Bechara & Damasio, 2004). Evidence suggests that, in normal brain activity, primary and secondary inducer processing can be elicited by the same stimulus at the same time. This process can occur at multiple levels of operation. Some of these processes are conscious; others occur non-conscious (Bechara & Damasio, 2004). The study was based on several tests with patients suffering from brain damage, especially in the area of the ventromedial prefrontal cortex and the amygdala. The ventromedial prefrontal cortex (VM) is engaged in emotional situations driven by thoughts and reflection. Unlike the amygdala response, which is sudden and habituates quickly, the VM response is deliberate, slow, and lasts for a long time (Bechara & Damasio, 2004). The amygdala is involved in every evaluation of objects. Research indicates that the amygdala has a primary role in the processing and memory of emotional reactions. The amygdala is considered to be part of the limbic system (Haeusel, 2007). In the last 15 years Damasio and his academic team have studied several patients with lesions of the ventromedial prefrontal (VM) cortex who showed impairments in judgment and decision making in real-life settings, in spite of maintaining a normal intellect. These patients with bilateral damage to the VM prefrontal cortex developed severe impairments in personal and social decision making. They have difficulties planning their workday, as well as difficulties in choosing friends, partners, and activities. The actions they elect to pursue often lead to losses of diverse kinds, such as financial losses, losses in social standing and losses of family and friends (Bechara & Damasio, 2004). The hypothesis is that the patient's inability to make advantageous decisions in real-life situations is based on a defect in an emotional mechanism. This defect causes an inadequate prospective of

consequences of an action and accordingly assist in the selection of an advantageous response option (Bechara & Damasio, 2004). The interesting point is that these patients were physically absolute normal and absolutely intact but in psychological standard situations they had a compromised ability to express emotion and experience feelings in appropriate situations. Despite their normal intellect, there were abnormalities in emotion and feeling, along with the abnormalities in decision making (Bechara & Damasio, 2004). With patients from this category Bechara and Damasio started an experiment. They used a gambling task to indicate the reaction of good and bad emotions. In this experiment the subjects had to choose between decks of cards. The goal was to maximise profit. Put simply , some decks were 'bad' and some were 'good'. The normal subjects quickly realised the difference between the decks (Brand, 2013; Amicia, Hoefer, & Roeckenhau 2, 2013). Normal subjects avoided the bad and disadvantageous decks and preferred the good decks. The reaction of the reward or punishment was measured by skin conductance response (SCR). The VM patients generated SCRs, but the patients with an amygdala defect failed in the reaction of reward or punishment. These results suggest that the patient can no longer register how painful it feels when to lose money when the amygdala is damaged. All in all the result provides support for the notion that decision making is guided by emotional, in words of Damasio 'somatic', signals generated in anticipation of future events (Bechara & Damasio, 2004). The somatic marker hypotheses provides neurobiological evidences that people often make judgments based on 'hunches', or 'gut feelings'. Emotions are a main factor in the human decision making process. Back to our post-it visualisation, we all try to get more of green instead of red post-its thus trying to maximize our 'feeling

good' in every decision making process. Incorporating Damasio's theoretical concepts, Storch of Zurich University categorised different types of management decisions. If we ask, for the right way for managers to make qualitatively good decisions, the answer is easy: They have no chance to make the right decision. From an academic point of view it is not serious to define the one and only 'right' decision, for complex and dynamic scenarios as mentioned before (Storch, 2006). It is not the idea of making a right decision, it is the idea of making an intelligent decision based on the existent data. With every decision we make, we try to maximise our feeling good and do not make the right decision but the best one based on our instinct.

#### 2.2.3.2 The Effect of the Information Overflow

The brain is endlessly fascinating and we learn more about it every day (Pradeep, 2013). Each year, a trillion dollars is spent on communicating with and persuading the brain. Yet, very few of us understand how the brain really works. The fact is that brands are not just private. Every day, we are faced with thousands of brands without realising it. One of the CEOs of a leading advertising agency and international lead agency of Mercedes Benz, Jung von Matt described the situation very metaphorically. A man has the choice between maybe five brands of car satisfying his needs and matching with his financial possibilities. In his life he has the choice between three wives because three or four times sometimes he is so close to a woman that marriage would be an issue. But: Every day the same man has the choice between 4,500 commercial messages (Jung & von Matt, 2002). However some of these brands attract our interest and become an

integral part of our life. The interesting point is how our brain processes all this information. Is it realistic that we are able to analyse all information we get in business life when making decisions?

*'Too much choice can tax our cognitive abilities, making it difficult to make a good decision or, alternatively, making one freeze like a deer in the headlights...'*

(Rice & Hanoch, 2008, p. 325)

If too much choice makes us freeze like a deer in the headlights, do we have the possibility to make the right decision in every situation then? Doehl mentions values and preferences. This is an important issue as every person has personal preferences for products or services depending on his lifestyle and the experiences made in the past. If we contrast the approach of Doehl (Doehl, 1983) with the somatic marker thesis of Damasio (Damasio, 1994), the approach of Storch (Storch, 2006) and the inner pictures as well it will be presumable that decision making cannot solely be rational or neutral.

The human mind is doubtless the most complicate organism in the universe, definitely more complicated than the biggest super computer. The human mind disposes about hundred billion neurons, in addition to different chemicals, in the function of neurotransmitters. This huge potential is needed to survive in the nowadays complex world. An average mind must process a real flood of words and media. Based on the latest researches a person is consuming nine hours of TV, radio, newspaper, magazines, books and videos every day. That amounts to 40,000 words every day,

280,000 words every week and 14 billion words every year, prior to becoming 18 years old a child in Great Britain has been overflowed by 140,000 TV commercials (Ries, 1996; Trout & Rivkin, 2001). The information overflow is going on and there is no doubt that something will change in the next years. According to Degler in 1993 there were already 300,000 magazines, over 30,000 radio stations and more than 3,000 TV channels. More than 500 satellites transfer information pictures, data and sounds. A study in Japan reveals that every year around 483 billiards of words drum on a single person via TV, radio, magazines and conversations (Bosshart, 1997; Krause, 1998). The result is an information overflow of 98.1 per cent over all media (Esch, 2004; Esch, 2012; Kroeber-Riel & Esch, 2004). The result is that approximately 80 per cent of all new products or services fail in the first six months (Zaltman, 2003).

### 2.2.3.3 The Sequence of Coding and Decoding

Evolved skills like speech, recognition and the tracking process of objects by the eyes, imitation and emotions are acquired by the natural process of selection, the cultural communication and other mechanism (Gigerenzer, 2007; Fisher, 2013). In contrast to the everyday perception our speech is a relatively young tool in our brain. Moreover, speech is not fixed and develops during the time. The problem is that the period of our speech will vanish and will be substituted by another is relatively short. It seems likely that half of our actual vocabulary might vanish in the next 4,000 to 6,000 years. Nobody will rudimentarily understand actual spoken or written speech in 12,000 years at the latest (Loewer, 2011). The result is that your intuitional feeling for speech does not follow any logical or statistical rules. Tversky and Kahneman presented classical perception errors. As an example they took in an experiment. Based on the principle of relevance we think the information we get is important for the following situation. So it draws a complete different picture if we compare the following statements (Gigerenzer, 2007):

- Petra and Paul married and Petra gets pregnant
- Petra gets pregnant and Petra and Paul married

From the statistical point of view the sequence of the events is unimportant, because we have no indication if the two events are connected. Yet our intuition sets a logical connection between the events if the couple married due to the child or the child came due to the fact they are married.

Heckl, the director of the German Technical Museum arguments: "Communication is the model of survival of the human mankind" ("Kommunikation ist das Überlebensmodell der menschlichen Rasse", translated by Christian Chlupsa) (Knust, 2011, p. 87).

#### 2.2.3.4 The Emotional Perception System

Based on Kahneman (2011) 'econs' think in the dimension of a complete overview of the markets. Yet to understand what overview means it is useful to understand the concepts of the 'Humans' and the neurological process of perception. The neurologist Papez (1937) comes up with the thesis that all emotional processes in the brain take place in the limbic system and all rational processes take place in the neocortex. In contrary the neocortex is assumed to be evolved due to bigger hordes and clans. In these hordes an individual survives which was able to forge the best coalitions against all intrigues and power struggles. With the growing size of the groups it became more difficult to differentiate enemies from friends when managing social networks. That is assumed as the reason why the neocortex evolved. Nevertheless, it is not a moral part of the brain, just used to inherent advantage and follows the implicit commands. An important role of the orbit frontal neocortex is to save all our socio-emotional experiences. If this part of our brain is damaged all of live experience will be deleted. The neocortical based development of the speech offers the possibility to logical thinking and to communicate on the results. It is important to know that our brain is not speech commanded. Humans' speech has a maximum age of 40,000 up to 100,000 years. The areas of the brain related to the eyes and the areas used for the image processing, such as the Thalamus, are more than 5,000 times older. That is the reason why our brain is mainly a visual and sensory brain preferring pictures and direct sensory signals instead of abstract constructs like speech (Haeusel, 2005). The human eye has the function of a camera with a lens, guiding the light generating a picture on the retina. The area of the photo

receptors of the retina can be compared to a film. In contrast to the film the retina has an aperture, where the optic nerve exits to convey the information to the brain. As there is no receptor, objects where the aperture is located cannot be realised. To avoid irritations in the perception our brain fills these gaps with reasonable presumptions of reality. The brain makes the best possible assumption based on environmental information (Gigerenzer, 2007; Zweig, 2007). An object appears on one side of the blind area and slows up to the other side. The human brain assumes that it is in the gap area as well. This process could be compared to the interpolation modus in graphic programs. Pixels will be multiplied and added to the existing picture with this technique new picture based on the former information (Gerrig & Zimbardo, 2008). Our brain cannot do without assumptions about the world otherwise we would realise all the details but no structures. A good perception system has to transcend the existing information, it has to invent things. The brain views more than the eyes. Intelligence means gambling and to take risks (Gigerenzer, 2007).

### 2.2.3.5 The Neuronal Correlates of Recognition

Decision making is based on the simple fact of recognition as well. Gigerenzer supports the hypothesis of a neuronal correlate of the evaluation process. Based on the theory the heuristic of the recognition is flexible. The brain evaluates if the heuristic process should be used or not. An effective use of the recognition heuristic depends on recognition and evaluation. The first step is the recognition of alternatives and the second is the reliability of the evaluation. For example, most people will not eat champignons they find during a walk in the woods. Nevertheless, if the same champignons are offered to them in a restaurant in general people have no regrets to eat them. In the woods the heuristic of recognition is activated. If we do not know the food exactly it could be poisonous. In the restaurant we do not need this programme. This evaluation process is intuitive. We have learned when to start the process of evaluation. Gigerenzer's interpretation to this is the intelligence of the unconscious. If a process like this exists, it should be separated from the recognition process. In addition it should be clearly distinguished, based on the neuronal activities, if people decide to apply heuristics or not (Gigerenzer, 2007).

## 2.2.4 Models and Theories in Business and Marketing

### 2.2.4.1 Evolution of Marketing

Over last years marketing has changed significantly compared to the past. The market situation changed from a classical sellers' market to a highly competitive buyer's market. Customer requirements are becoming more complex; segments are differing a lot, product life cycles becoming shorter. This change in marketing has to fulfil a lot of new requirements because strategic mistakes in the positioning (Ries & Trout, 2001; Kapferer & Kotler, 2008) cannot be compensated by operative actions (Hofmaier, 1993). Successful corporations start with an exciting idea. Sustainability and enduring success will only occur if the basic concept will still work. The focus of companies is more and more 'slogan based'. One of these slogans is 'customer focused', indicating the company is completely focused on the needs of its customers. All activities must aim at an enthusiastic consumer (Engelmann, 1993; Ries & Ries, 1999; Ries & Trout, 1999; Kapferer & Kotler, 2008; Kapferer, 1998). For example, the focus of Volvo is not automotive. The focus of Volvo is 'Security'. The specific focus on BMW is not the car, it is 'joy'. The focus of Mercedes-Benz is expensive 'luxury' (Ries, 1996). The reason for the value of a brand is that it is dominating a specific category of products and services. Coca Cola has for a long time been the most valuable brand in the world due to dominating the category 'Cola'. The brand equity is three times higher than the real assets. Microsoft, the third valuable brand of the world, is dominating the category of PC software (Ries & Ries, 2004; Interbrand, 2011). Based on the Interbrand ranking 2011

(see Table 3) of the Top 100 Brands the top five brands are: Coca-Cola, IBM, Microsoft, Google and GE (Interbrand, 2011; Kilian, 2009).

+	Rank	Previous Rank	Brand	Region/Land	Sector	Brand Value (\$m)	Change in Brand Value
+	1	1		United States	Beverages	71,861	2%
+	2	2		United States	Business Services	69,905	8%
+	3	3		United States	Computer Software	59,087	-3%
+	4	4		United States	Internet Services	55,317	27%
+	5	5		United States	Diversified	42,808	0%
+	6	6		United States	Restaurants	35,593	6%
+	7	7		United States	Electronics	35,217	10%
+	8	17		United States	Electronics	33,492	58%
+	9	9		United States	Media	29,018	1%
+	10	10		United States	Electronics	28,479	6%

Table 3: Interbrand Best Global Brands Screenshot form Webpage (2011)

The power of a brand in simple data presents that worldwide every second 12,000 customers decide for a Coca Cola instead of another drink. The result is a brand with a value of nearly 72 Billion US dollars (Schimansky, 2004; Florack, Scarabis, & Primosch, 2007). Brands are one of the most valuable assets a company has. Successful branding needs an accurately recognisable brand identity (Carbon C.-C. , 2008). The problem is that the terminus brand is still connected with corporate design in the business to business. A general and more holistic view is still neglected (Baumgarth & Wander,

2013). Marshall McLuhan explained in the early sixties when nobody realised the information overload that 'World War III' would be a guerrilla information war'. First of all marketing at first is the battle for cognition with the background of information overload (Bosshart, 1997; Boehm, 2008; Schindler, 2008). In contrary to the main assumption on rationality in business to business marketing is used to introduce emotions into B2B communications on a large scale (Salander, 2010).

#### 2.2.4.2 Brand Awareness Effects on Consumer Decision Making

A unique selling proposition (USP) has to be important, perceptible, consistent and efficient and has to be defensible against the competitors. (Doehl, 2011; Meffert, Burmann, & Kirchgeorg, 2012). Yet most products in the most markets are interchangeable. Homogenous products are the reason for a more emotional communication. Because feelings connected to the products are often the only way to differentiate from the competitors (Meffert, Burmann, & Kirchgeorg, 2012; Graef, 2012). If consumers would make no use of the brand image as orientation, the non-informational based communication would become ineffective. If customers are able to differentiate products by brand recognition this works as a compensation for a real product preference (Gigerenzer, 2007).

#### 2.2.4.3 Exposure Effects on Memory and Brand Choice

To understand the decoding process of brands it is important to understand the interplay between the systems in our brain. In the explicit memory an event is presented in a conscious recollection. In the implicit memory there is no direct reference to the past and to a specific event. The enhanced performance of the implicit memory is the result of a prior exposure. The memory automatically gets suggestions of an exposure event, even without consciously remembering it. This effect of the implicit memory is often referred as priming (Lee, 2002). Lee subclasses two types of priming, perceptual priming and

conceptual priming. In perceptual priming a person is physically confronted with a stimulus, e.g. a snake. Conceptual priming is based on storage of knowledge, e.g. thinking about a snake. Research findings suggest that conceptual and perceptual priming are distinct constructs. Explicit memory, conceptual priming and perceptual priming are distinct constructs of memory (Lee, 2002). This understanding of priming is basic for the so called 'mere exposure effect' (Zajonc, 1968).

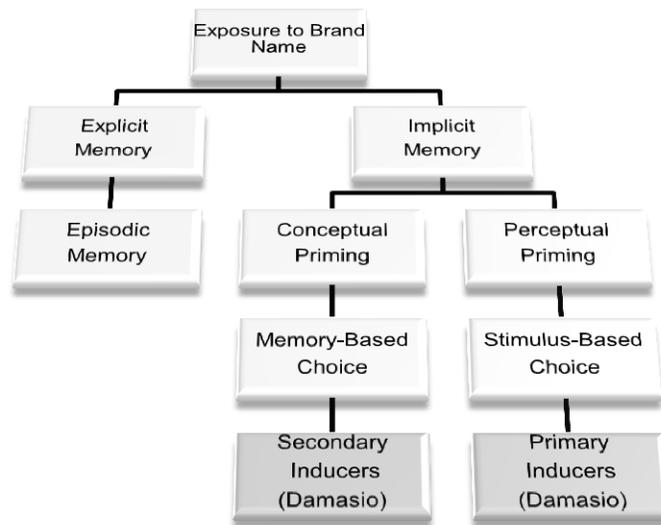


Figure 15: Model of Exposure Effects of Brand Choice adapted from Lee (2002)

#### 2.2.4.4 Focus and Overview of a Brand Decision

Based on the business and marketing literature extensive decision making happens when people buy exclusive and long-lasting goods (Meffert, Burmann, & Kirchgeorg, 2012). At a congress on communication in September 2011 in Donaueschingen around 300 experts discussed new challenges in marketing. Due to a TV report about the findings it is very likely that the idea of decision making, for example, the concept of the homo economicus and the theory on how communication works are no longer appropriate. New findings seem to indicate that people are not so much involved in every decision making at all. It is highly probable that a decision will be made in a few milliseconds based on intuition. Later on the decision maker tries to find a suitable justification. Based on first pilot tests of Plymouth University it is likely that this effect is valid in the field of B2B as well and a high rate on decision is based on intuition. The official reasons to justify the decision seem to be brought up later (Chlupsa, 2011 ). Regarding communication it means that the brain decides within seconds if an object or situation needs a more detailed analysis or not. The decoding process of text information is very time consuming. In contrary pictures and clever designed advertisements address the few key codes based in every human brain very fast. These key codes are completely finished in the stage of childhood (Roth, 2007). Pictures offer faster consumers the feeling to choose the right product or partner (Maier, 2011; Huether, 2009). Talking too much delivering, a lot of text information achieves nothing. It does not matter if looking for a yogurt, buying a sports car or be interested for a new partnership, most of all decisions are implicit (Eagleman, 2012; Freud, 1900; Scheier &

Held, 2006; Chlupsa, 2011; Chlupsa, 2012; Chlupsa, Doehl, Lean, & Hanoch, 2013). First of all we fall in love unconsciously and then we start to speak, to whitewash the decision we made (Chlupsa, 2011). Werner goes as far as to argue that thinking makes no sense (Werner, 2011). Explicit communication does not have a chance against the unconsciousness because our brain still works as it did with our ancestors. From an evolutionary point view only little progress has been achieved the last 100,000 years. Pictures and especially images of people are an important success factor in advertisements (Haeusel, 2005). Letters were not planned in our evolution. Within seconds our unconscious mind makes decisions. By magnet resonance imaging (MRI) it is possible to trace this 'miracle' in real time and uncover contradictions (Poeppel, 2008). The MRI reveals clearly that when it comes to a competition among the conscious and the unconscious explicit communication has no chance. Therefore, it is important to address the appropriate codes and the right feeling for life (Chlupsa, 2011; Chlupsa, 2013).

*2.2.4.4.1 Cortical Brand Effects*

The last 10 years research revealed more insights into the brain than the last 100 years before. One major finding is the model of the brain separated in two hemispheres is no longer tenable. More than 200 Million nerve fibres connect the left and right brain areas via the corpus callosum (Scheier & Held, 2006). Yoon posits that neuroscience can provide new explanations of consumer choice and preferences (Yoon, et al., 2012). Several functional magnetic resonance imaging (fMRI) studies (Zimmermann, 2006; Deppe, Schwindt, Kugel, Plassmann & Kenning, 2007; Haynes, 2013; Gallinat, 2013) have demonstrated that activities in the brain correlated with behavioural measures of decision making and changes after transcranial magnetic stimulation (TMS) (Camus et al., 2009). Plassmann emphasises the popularity of applying neurosciences to marketing, and in particular to the consumer psychology of brands, in the academic and corporate world over the past decade. At the same time she contrarily identified critical issues of prior researches (Plassmann, Ramsay & Milosavljevic, 2012). Nevertheless, some experts doubt that economic neuroscience is a popular trend with no benefit (Guel, 2013). One of the most important findings of the Functional Magnet Resonance Imaging (fMRI) is the finding of the “cortical discharge” in the human brain. If we recognise our preferred brand we minimise the analysing process in our brain. The result suggests that the presence of the respondent’s first choice brand leads to a specific modulation of the neural brain activity. Motivated by Simon and Kahneman, Kenning et al (2005) discovered that people use simple decision strategies which do not follow the basic principles of logic and reasons. As visible in figure 16 they present on a

neuronal level that affective evaluations are carried out if specific stimuli evoke as decision alternatives which are not always conscious (Bruhn & Koehler, 2010; Kenning, Plassmann, Deppe, Kugel & Schwindt, 2005; Deppe, Schwindt, Kugel, Plassmann & Kenning, 2007; Kenning, 2013; Scheier & Held, 2006; Zimmermann, 2006; Born et al., 2007).

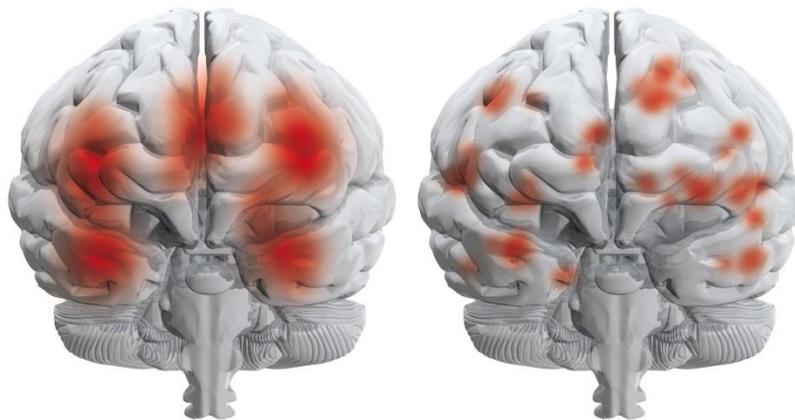


Figure 16: Brand Reaction in the Brain adapted from Kenning and Plassmann (2005)  
Licenced picture of Fotolia Pictures, brain reactions added by author

'Love brands' generate as visible in left brain (see Figure 16) a stronger brain reaction than other brands. That means that customers do not have a ranking of the top five or an evoked set in their minds as assumed. Instead there are just two ranks: Number one the loved brand and all the other brands. Once ranked number one customers step "automatically" to the direction of their 'love brand' (Scheier & Held, 2006). This is in

contrast to the marketing concepts of the last decades when the idea of a relevant set or evoked set in the human mind dominates the marketing concepts (Esch, 2004; Esch, 2012; Esch, 2013; Kirchgeorg, 2013; Kroeber-Riel & Esch, 2004). Deppe describes the new findings (Deppe, Schwindt, Kugel, Plaßmann & Kenning, 2015) with a song of ABBA: „The winner takes it all“ (Andersson & Ulvaeus, 1980; Treacy & Wiersema, 1995). Researchers suggest that the brain employs an abstract model of task structure to guide the choice of behaviour in real-life decision making (Hampton, 2007). Furthermore, researches from neuroscience show that the cognition of all people can be suggested. After all it seems to be obvious that there is no evidence for a significant difference in the process of decision making between B2C and B2B customers (Otto, 2011).

#### *2.2.4.4.2 Eye Tracking*

Davies (2002) argues that ‘staging the drama consumption’ is an important fact in the retail business (Davies & Ward, 2002). Yet the staging in B2B is an important fact as well. By eye-tracking, we have the possibility to expose how customers consider advertisements and other types of media. Yet the most important fact is that with eye tracking methods we get a direct connection to the implicit memory of the test people. As our eyes are much faster than our explicit memory, we can scan the areas of interest and understand the fast unconscious processes (Gallitz, 2013; Gallitz, 2012; Gallitz, 2010).

Yarbus (1967) conducted a research on the visual information processing. Depending on the task the test subjects checked completely different areas of a displayed picture. We can assume as a result that our cognition is not just an incomplete construction of the world. In addition, we get the simulation of an entire environment. Nevertheless, in reality we just receive the conscious information we need (Eagleman, 2012; Yarbus, 1967). The research of Yarbus was the starting point of an important finding.



Figure 17: Eye Tracking Results adapted from Gallitz (2008)

In a research on the optimisation of the layout for a brand of a software company the author applied the eye tracking techniques in cooperation with a specialist. Interest of the research was to detect whether the assumptions regarding implicit communication would work in a real advertising set up. For the research twenty test subjects were engaged to analyse the implicit cognition. The test was conducted in a usability laboratory with the latest equipment of eye trackers. Test subjects had to check six

advertises which were randomly presented. The selective attention and the fast and intensive interest of the visual and implicit elements compared to the presented textual and explicit content were clearly visible. As visible in Figure 17 the first, left picture before presents the different fixations and saccades of the test subjects without a time frame. The following picture in the middle presents the heat maps the time the subjects spent on specific elements. Last right picture presents the evident selective attention of the presented advertisement (Chlupsa, 2011; Gallitz, 2008). An eye tracking research of Schiessl for the German governmental broadcasting service reveals that children prefer McDonalds 'Happy Meals' instead of other food. The reason is that the kids do not buy the meal in reality, they buy the toys presented in the ad. The food is just the accessory (Leufgens & Taßler, 2012).

#### 2.2.4.5 Characteristics of Organisational Buying Behaviour

An important part of the thesis is the interplay between emotions and the organisational buying behaviour (see Table 4). A widely held view in the business sector is that business decisions are rational. In general the decisions are made collectively in teams. Therefore, the decision making process in business is supposed to be based on rational facts and hard criteria such as material, quality, price and service. Emotions should not play any role in a professional, economic decision making process (Pepels, 2004). For the development of hypotheses it is useful to look closer at the different models of the organisational decision making such as (i) *Total models*, (ii) *Partial Models*. In addition, it makes sense to examine the different types of buying behaviour depending on the organisation and to explore the different types of procurement. In particular, different business and management concepts exist on the processing and operation of information: The *promoter and opponent concept* (Godefroid & Pfoertsch, 2008), the *responding concept* (Strothmann, 1979; Pepels, Marketing, 2004), and the *information concept* (Luger, Geisbuesch, & Neumann, 1999). All concepts present acceptable approaches to the question of how managers and business people operate with rational information. After checking the models and the different types of procurement, the current situation in the organisational buying behaviour will be presented. The final question is: Is it possible that emotions and the underlying implicit motives disturb this highly complex, detailed and structured business process or may emotions be even useful in business decision making?

In business to business markets (Cannon & William, 1999), operations are usually looking for specific solutions. In general the decision making process is highly structured, subject to defined processes and supervision by hierarchical levels. The dominant perspective of the organisational buying behaviour suggests that buyers tend to rely on objective criteria when making product choice decisions (Brown, Zablah, Bellenger, & Wesley, 2011). Due to the theory of marginal benefit, an enterprise invests if the benefit is increased by the investment (Doehl, 2011). The decision making process in companies is standardised. It is a step-by-step method in which hard and quantitative data is obtained by observation. Mathematical or statistical analysis tools are applied for decision making. Generally, in the business to business market, an offer is provided by one corporation to another. The term business to business is helpful to identify the specific variables of decision making in this constellation (Kirchgeorg, 2011; Pfoertsch & Michael, 2005). The nature of organisational decision making is that, in general, decisions are made against the background of many limitations such as financial budgets or timescales (Doehl, 2011). In organisations, investments and high expenditures are subject to strict limitations based on internal procedures. B2B decision making processes are often attended by consultants such as architects, lawyers and financial advisers (Jaakkola, 2007). Contrary to the rational impression of organisational decisions, buying centres are far away from the idea of an emotionally cleaned environment (Chlupsa, 2013).

General Characteristics	Consumer Markets B2C	Industrial Markets B2B
Demand	Individual	Organisational
Volume	Small	Large
Customers	Many	Fewer
Location	Dispersed	Concentrated
Distribution	Indirect	Direct
Nature of Buy	Personal	Professional
Influence	Single	Multiple
Negotiations	Simpler	Complex
Reciprocity	No	Yes
Leasing	Less	Great
Promotion	Advertising	Personal Selling

Table 4: B2B Characteristics adapted from Meffert, Burmann &amp; Kirchgeorg (2012)

As mentioned above there are several models in the business to business decision making process. Furthermore, there are different classifications (see Table 5) for the different models. In general we have to distinguish between *partial and total models*. *Total models* try to integrate all influencing variables of the decision making process. The traditional integrated model approach of Webster and Wind considering environment, organisation of the corporation, interpersonal factors and intrapersonal factors as variables is a typical *total model* (Webster & Wind, 1972). The variables in the Howard and Sheth approach differ greatly (Howard & Sheth, 1969): Price, quality and information, and perceptual constructs such as involvement and awareness; learning

constructs such as purchase intention and brand value lead to output variables such as attention, brand awareness, preferences, buying intention and purchase decision (Pepels, 2004). In contrast, *partial models* focus on selected aspects of decision making and ignore the rest. The *partial models* can be divided into concepts using vertical factors such as the interaction between just one participant and suppliers or customers and concepts using horizontal factors such as the interaction between both suppliers and customers. The *promoter concept*, the *reaction concept* and the *information concept* are typical examples of *partial models*. Obviously the buying center approach is the most prominent *partial model* today. Following the *partial model* of Webster and Wind, a *buying center* is a team within an organisation in which all team members have different roles: buyer, user, influencer, decision maker and gate keeper. The idea of the *buying center approach* is to ensure rational decision making, but doubts are expressed with regard to practical work (Eckhardt, 2010; Pepels, 2004).

Models of Procurement	Buyer	Seller	All
Partial Models Vertical	or		
Partial Models Horizontal	and		
Total Models			

Table 5: Partial versus Total Models adapted from Pepels (2004)

In the literature there are numerous models and concepts about the decision making process in the field of business and management. During the critical research process the following four models seem to be useful to a closer look and to take into consideration. (I) Promoter and Opponent Model: The core of this model is the involvement of different persons in organisations. (1) Promoters are persons who recommend or support the buying process of a product or service. (2) Opponents are persons who refuse or oppose the procedure because of personal or professional reasons. Both characters can then be differentiated by power and competence promoters or opponents (Hausschild, 1988, 1998). The source of influence is based on hierarchy and expert knowledge. Power promoters or opponents are usually in the top management, competence promoters or opponents are mostly in the operation and lower management (Godefroid & Pfoertsch, 2008). (II) Responding Concept: The responding concept of Strothmann (1979) is based on the information processing of the recipient. Two prototypes are the extremes in the concept. The (1) clarifier who acts

based on facts and (2) the simplifier who acts based mainly on images and brands. A mix of both types is the so called neutral type (Strothmann, 1979; Pepels, 2004). (III) Information Concept: Based on the search behaviour, the information concept (Kaplan, 2008) differentiates between (1) the literary science type, (2) the objective valuing type, and (3) the spontaneous passive type. The (1) literary science type prefers written information from books or magazines to get a detailed overview. He is just looking for contact to sales personnel if he needs further information after his research. The (2) objective valuing type acts phases and is objectively minded. Offer periods, screening of suppliers and partners and the information process depend on the level of procurement. (3) The spontaneous passive type is not searching for information, he just takes what he gets and prefers personal communication; he is the direct opposite of type (1), the literary type (Rolfes, 2007). (IV) Personal Buying Model: The idea of the personal buying model (see Figure 18) is to understand the decision making process of people by classifying types of reaction models in the dimensions of their emotionality and in the speed of decision making. The basic idea of the concept is that customers decide quick or deliberate, and are guided by facts which addresses the explicit system or emotions which are addressing the implicit system of the brain. These two axes present four types of decision making, that of (1) competitive (2) spontaneous (3) methodical and (4) humanistic. (1) The competitive is described as power oriented and strategically paced. (2) The spontaneous type is activity-oriented and fast paced, whereas the (3) methodical type is detailed-orientated and methodically paced. The (4) humanistic type is relationship orientated and slow paced (Kaplan, 2008).

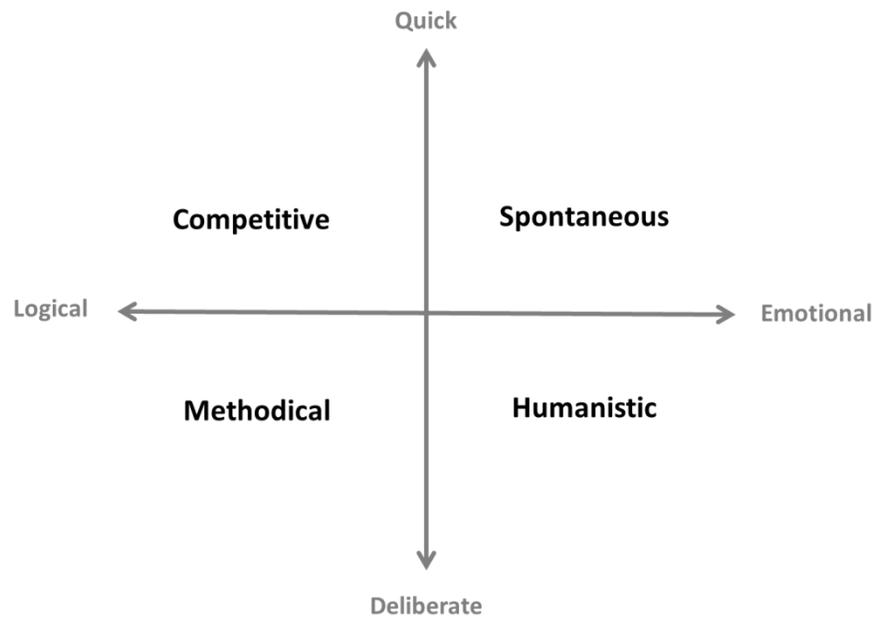


Figure 18: Styles of Information Processing adapted from Kaplan (2008)

Types of procurement: Organisational procurement includes all processes to order goods or services in business. As discussed, this process is completely different to the usual private buying proceedings. Buying processes in business could be differentiated into the four multi factors: (1) Multi organisational: In contrast to the business to customer field two organisations getting into contact. (2) Multi operatively: The buying decision usually has a lot of formal phases, starting with the analysis of the problem and needs, followed by the selection of alternatives and suppliers. At the end all analysis and decisions are ending in a formal documentation. (3) Multi temporality: As the buying decision in the business to business has many phases, they usually need a specific time. (4) Multi personality: In contrast to the B2C buying decision, the B2B buying

procedure involves many persons from different departments of a company. All types of procurement could be categorised into new tasks, modified rebuy, straight rebuy and automatically rebuy (Schneider, 2009). Basically, organisational buying procedures focus on concrete problems. They need internal and external planning, require information and are often accompanied by experts (Doehl, 2011; Schneider, 2009). It could be possible to differentiate five (Table 6) different types of procurement. (1) Single procurement: This can be split into short-dated procurement to satisfy unexpected demands and on-time procurement for new investments in the case the existing supplier is not able to deliver or does not exist anymore. (2) Stock procurement: In this case usually a minimum stock should ensure the production and the procurement process works manually or automatically. (3) Just in time procurement: To save money companies try to hold a minimum of the needed goods and materials in stock to save money and space. The minimum stock could be defined based on time sequences such as days and weeks or based on production figures. (4) Project procurement: In special projects sometimes different types of procurement are interlocking together to form part of a project into a division or a complete project out of the usual operation process. (5) Connection of procurement: Big companies are usually directly connected to their suppliers. Smaller companies are often connected to a wholesaler (Luger, Geisbuesch, & Neumann, 1999).

Types of Procurement		
Single	New Task	Rebuy
Stock	Automatically	Manually
Just in Time	Time-based	Production based
Project	Devison	Complete
Connection	Direct	Indirect

Table 6: Procurement Types adapted from Luger, Geisbuesch, & Neumann (1999)

Based on this critical literature research it seems that group decisions in the setup of a buying center are a realistic approach. However, most buying centres are in a very compressed form far away from theory. Researchers in this field present that on average just three, rather than five persons are involved the decision making process. In 95 per cent of the procurement the purchasing department is part of the process (Haehnel, 2010; Frey, von Rosenstiel, & Graf Hoyos, 2005). The idea of the homo economicus seems to be more frequently used in the area of big companies and groups because every decision making process needs documentation and neutral arguments (Stigler, 2011). This is the reason why a lot of business decisions get a post legitimisation to fulfil the official needs. The basic idea of the rational decision could be refuted with a number of arguments. In the society of the information overflow (Esch, 2004; Esch, 2012; Kroeber-Riel & Esch, 2004; Opaschowski, 2012) a complete overview of the whole worldwide market is impossible (Indukom, 2012). In 70 per cent of the decisions advertisements and communication is the base of the procurement

process (Koppelman, 2003). 50 per cent of the decisions do not need any justification. In 40 per cent of all companies a mistake in the decision making process has no consequences (Forum B2B, 2010). Research shows that 50 per cent of the top decisions makers' cancel a deal if they have a negative intuition. Moreover, 33 per cent of the same decision makers just follow their intuition in business decisions (Indukom, 2012). Researchers verify that emotional interaction in a business to business situation is possible even in a buying center which is regarded as 'the place' of rational decision making (Haehnel, 2010).

### 2.2.4.6 Models with an integrated View on the Implicit Motives

There are several other models which try to include or present the findings on implicit communication including the model of Scheffer and a model developed by the company Branding Code (BRANDING CODE®, 2011; Traindl, 2007; NeuroIPS®, 2013; Neuromarketing & Sales, 2013). The most popular models are the Limbic Map of Group Nymphenburg developed by Hans-Georg Häusel (Gruppe Nymphenburg, 2013; Häusel, 2011) and the Brand Code Model of decode developed by Christian Scheier (decode, 2013; Scarabis & Schneider, 2009). Basically all models are based on findings on implicit cognition and apply the model of the implicit motives in more or less dimensions. Interestingly, all models including the authors' model are dealing a lot with implicit communication, thus presenting a heavy load of explicit information instead of the praised findings and assumptions.

### **2.3 *Interplay of the Connected Interdisciplinary Fields of Science***

The thesis focuses on the direct connection between the implicit motives based in the human brain and the appropriate coding of communication. The unique approach of this thesis is that up to now research in this area is based on consumer products. This thesis tries to detect and prove the importance of the new perceptions for business to business marketing. The thesis tries to expose the code of communication needed, especially in the field of business to business and to reveal the real motivation behind the decision making process. The idea is to find a possibility to reduce the big spam filter of our cognition. This thesis tries to present the benefit of the research for the strategic management, and for the marketing strategy and implementation (see Figure 19) as well as. Finally the thesis should present new findings on the impact of implicit motives on the business to business decision making process.

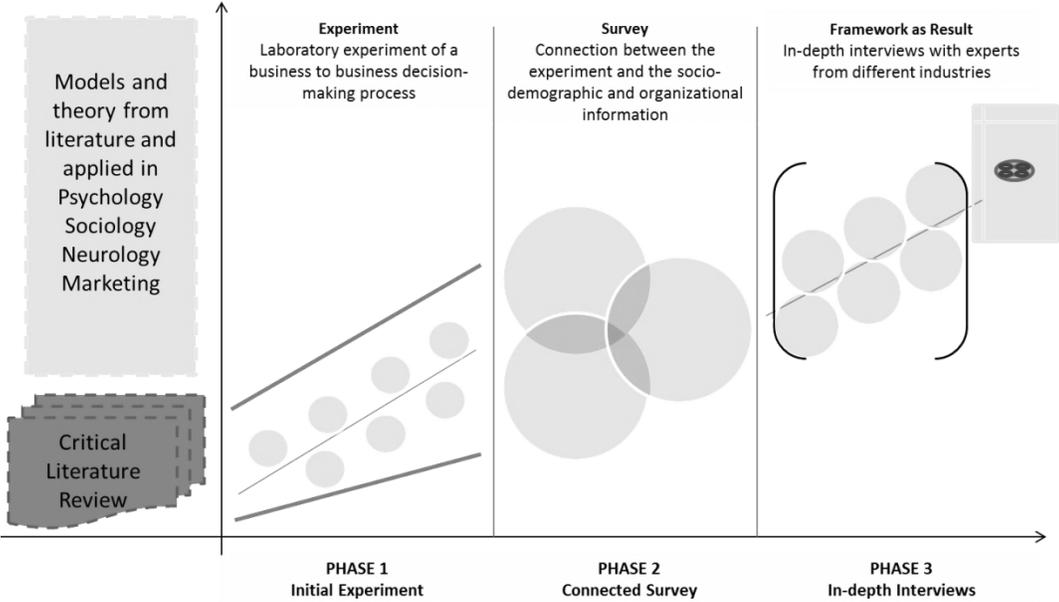


Figure 19: Research Design Graphic Adapted from Steinheber (2011)

### **2.3.1 Existing Models of Decision Making**

Analysis, explanation and prediction of reactions are central and essential functions in marketing. Research on customer behaviour is consistently connected to the understanding of marketing. Several models exist on the decision making process. Furthermore, there are different classifications for the various models. In general we have to distinguish between S-R-Models and S-O-R-Models (Meffert, Burmann, & Kirchgeorg, 2012).

### **2.3.2 The Stimuli Response Model**

Stimuli (S) response (R) models just focus on a behaviouristic approach. In consequence just visible and measurable variables are allowed. Representatives of this approach believe that psychological processes are not observable and should not be the object of market research. Customers' reaction will be classified as (R - response) to the observable (S - stimuli). Stimuli are all senses including marketing activities focused on the customers. Consequently a creative and positive design can cause a buying decision. Not observable processes will be ignored. The term 'black box models' is frequently used in this context (Meffert, Burmann, & Kirchgeorg, 2012; Bausback, 2007; Fehse, 2009).

### 2.3.3 Stimuli Organism Response Model

Stimuli (S), Organism (O), Response (R) Models are operating with intervening variables. The S-O-R model (Woodworth, 1918) is an extended version of the S-R model. The O stands for organism and describes the non-visual variables such thoughts and feelings within the organism. Thus, the organism is in-between the stimuli and the response of the subject (Kuhl, 2010). That is why the term 'real behaviour models' is often used in this context. In addition to visible variables measurable which can be checked by indirect indicators are allowed. So the nonvisible processes in the organism will be used to explain the human decision making. For example, the response (R) to an advertisement as stimulus (S) based on caused preferences (O) can be analysed. S-O-R models can be separated into neo behaviouristic and cognitive approaches. Neo behaviouristic approaches suggest that intervene variables change the incoming stimuli like switching elements. In addition cognitive approaches focus on constructs of information processes such as learning, thinking and knowledge and integrate elements such as live experience as well. Due to this approach decision making is based on emotional-affective and rational-cognitive elements (Meffert, Burmann, & Kirchgeorg, 2012; Bausback, 2007; Huether, 2010).

### 2.3.4 The Gap in the Existing Literature

According to the B2B literature, decision making seems to be a central problem in business and management (Gutenberg, 1958). The ancient idea of the homo economicus (Heinen, 1986; Samuelson & Nordhaus, 1987; Scheier & Held, 2006) as an institution for decision making appears to be obsolete. The complexity of the economy and economics merely based on the general principle of rationality does not appear to be tenable any longer (Dane & Pratt, 2007). Even pioneers in business and management stress that the economic principle is nothing more than a formal principle without mentioning the motives of the acting individual at all (Woehe, 1971). Controversial discussions on the impact of emotions draw a clear picture of the organisational buying procedure (Haehnel, 2010). In psychology, emotions are defined as: joy, inclination, fear, unrest, sorrow, anger, aversion, condemnation, shame and excitement (Schmidt-Atzert, 2008). Inseparably, emotion goes hand in hand with motivation. No motivation without emotion and no emotion without motivation (Brandstaetter, 2009). Motivation is a construct of many variables, a mix of cognitive, affective and physiological processes. From this point of view, motivation is just a hypothetical construct. The result of motivation is based on the genuine model of the classical motivation. It is the coincidence of a potential stimulus and personal motives depending on a specific situation (Heckhausen & Heckhausen, 2010; Rheinberg, 2009; Elger, 2009; LeDoux, 2002). Up to now no fundamental useful solution for the B2B decision making process based on motives and motivation had been presented.

### 2.3.5 Research Hypotheses

#### 2.3.5.1 Rational Decision in the B2B

Against the background of various economic and psychological theories and based on the expressed doubts of the pioneers of business management, pure rational-based decision making seems to be fairly unlikely (Ariely, 2009). There is no B2B decision maker whose actions are just based on facts (Becker & Daschmann, 2010). Emotions seem to be a driving force even in the B2B decision making process. As mentioned before, there is no emotion without motivation (Brandstaetter, 2009). Motivation itself is based on motives. The universal motive of the economic actors is to maximise their own benefit based on rationality, defined as rules of logic (Etzioni, 1988; Schindler, 2008). This is just an idealistic approach, not suitable for every decision making process in business. Generally it is assumed that we need as much information as possible and high performance computers to make reliable forecasts. A complex situation needs a complex solution. Actually in difficult situations the opposite is true (Gigerenzer, 2007). Economic decisions are usually rational within certain limitations due to limited cognitive resources, convenience or lack of time. They are notably driven by the objective to maximise the benefit but also by individual motives (Kirchler, Holler, & Hartner, 2009). The expected effect is that products and services which use the appropriate codes to trigger the implicit motives of the target group are more successful than products and services which are not aware of the coding. The question is does a gap between decision making in business and private situations really exist and does the myth of a

brand really effect a business to business decision. In a company every day a lot of decisions have to be made. The focus is more or less immediately on purchase decisions. Nevertheless, there are a lot of other decisions in the daily work of an enterprise. What are the objects of other decisions in companies and what is the proportion of the different decisions? Furthermore, the decision making in business underlies specific regulations. It differs much from personal decision making. Usually a lot of people are integrated in the process of a business decision. What are the rules for this process? Although the purchasing process of turbines or construction machines is more complex, finally it is done by people as well. People in B2B and B2C do not differ much; even the most sophisticated engineer has just explicit cognition of 40 bits. As a result implicit communication works in the business to business world of managers as well (Scheier & Held, 2006). The conscious is just a 'public relation' action of our brain, providing the feeling we have everything under control (Haeusel, 2013; Snyder 1, 2013). No decisions without emotions (Fesel & Wander, 2013). Negative feelings operate like an emergency break. Even if positive rational reasons suggest we made the right choice, we have problems to transfer it into action (Kiefer, 2012).

### 2.3.5.2 Impact of Implicit Motives in B2B

Human motivation is closely connected to emotional events. Motivation provides customers energy and focus on a goal (Meffert, Burmann, & Kirchgeorg, 2012). Following McClelland a motive is an orientating and energising driving force selecting direct cognition and indirect behaviour (McClelland, Human motivation, 1987). Based on the individual inner predisposition a person reacts consistently by positive or negative on given stimuli. In the classic idea of the Maslow's pyramid the different needs have to be fulfilled step by step which seems unrealistic due to the clear distinction between the levels and the situation based reactions of customers. If the customers' motivations are contradictory motivational conflicts are arising (Meffert, Burmann, & Kirchgeorg, 2012; Weinberg, 1986). A lot of research shows that self-assessment does not match with the implicit results. Explicit and implicit motives are independent constructs (Scheffer, 2009). Against this background it seems to be advisable to analyse the two types of motives separately.

## 2.3.6 Generating Main Hypotheses

### 2.3.6.1 B2B Decision Making a Special Situation

When Bill Clinton, former President of the United States, recognised a clear and actual danger of a confrontation with the Iraq he stated that he could not wait for the decision and said: 'That these are the reasons we have to act and we act now' (Arnove, 2003; Financial Times, 1998). Business decisions are not war decisions, yet the situation is sometimes alike. In critical business situations, when the production stops or products do not pass specific quality standards, managers have to made snap decisions, like military commanders (Gladwell, 2008; Gladwell, 2010).

Current research suggests that the implicit system dominates decisions with low involvement, pressure of time, information overload or confusion based on a high scale of complexity. In contrast, the explicit system plays an important role in decisions with high involvement with a low scale of reflexion and a lot of time. Complex decisions can benefit from the implicit system because, due to its large capacity, it can process all the relevant details needed (Friese, Hofmann, & Waenke, 2009).

### 2.3.6.2 Implicit Communication

To sum up the detailed analysis of the implicit coding process: It is not easy to detect what makes man tick: behaviour, energy or toughness. The reason why the analysis is difficult is that most of the crucial motives are implicit. These motives are stored in a non-verbal format (Scheffer, 2009). Our conscious mind is not involved in all decisions (Storch, 2006; Snyder 1, 2013; Macknik, 2013; Amicia, Hoefer, & Roeckenhaus 1, 2013). The reason is that our emotional memory is much older than our conscious memory. For every decision we have two systems of responding to a stimulus: the rational system and the emotional system. The explicit memory works slowly and processes as many details as possible. We can realise and formulate all information in our explicit memory, also known as episodic memory. The explicit memory is characterised by a conscious recollection of the event and the reflection about the event (Lee, 2002; LeDoux, 2002). The implicit memory works in a fast and diffuse manner. It is more difficult to articulate the information we receive from our implicit memory. The implicit memory is the emotional part of our brain. It delivers the feelings we have when we try to make a good decision. If we want to make a rational decision we need time to evaluate every possibility. The implicit memory provides the feedback for a decision in 200 milliseconds, in every situation, even if we are exhausted (Storch, 2006; Macknik, 2013; Haynes, 2013). Whereas the explicit memory is characterised by the conscious recollection of an event, the implicit memory performs better at the task of having an experienced event (Lee, 2002). The emotional memory conserves knowledge as emotions and feelings, and is the storage of all our life experience. If we have to make a

decision, our brain produces imaginary pictures of future scenarios. We look into the future similar to a short movie trailer (Storch, 2006; Amicia, Hoefler, & Roeckenhaus 1, 2013). That is the moment we try to find the best solution, based on the stored emotion. Research has clearly detected four conditions where implicit processes have an important role (Frieese, Hofmann, & Waenke, 2009). As implicit codes are processed unconscious they attract direct the implicit motives. Implicit codes bridge the gap between to the motives of people and trigger an action (Reiter, 2012). The coding process depends on cultural, sociological and psychological aspects and that is why implicit communication will be decoded objectively (Aktag, 2012; Scheier & Held, 2006). Further notions of fixed properties of general aesthetic range from colour attributes, balance of proportion, contrast and intensity to form properties (Carbon C.-C. , 2010). Every second our sense delivers 11 million bits to our brains. That means 1.4 megabyte every second. In the same time our conscious mind receives just 40 to 50 bits. That means that nearly 100 per cent of data we receive from our environment are unconscious. And this unconscious information acts implicit in our brains. On an explicit level we are just able to process eight numbers or one short sentence per second. In contrast to 40 to 50 bits explicit information we have the possibility to use 11 million bits for implicit communication. This fact is a present of evolution and works completely unconsciously and automatically. In cases of discrepancies always the implicit cognition (Scheier & Held, 2006; Amicia, Hoefler, & Roeckenhaus 1, 2013).

The mission of marketing communication is to connect brands with implicit meanings. Braem argues that our cognition is closely connected so that we are not able to differentiate between the various sense and signals. He posits that a classification of sense is not useful (Braem, 2006). In contrast Scheier and Held distinguish four basic senses of implicit messages: speech, stories, symbols and sense (Scheier, 2007; Herbst & Scheier, 2004; Scheier & Held, 2006; Munzinger & Musiol, 2008; Schmitt & Simonson, 1998; Florack, Scarabis, & Primosch, 2007).

### 2.3.6.3 Speech

Facial expressions are the archaic cosmos of human communication. Mimic, gestures and voice modulation are the predecessors of speech. Amazingly is that these elements are still more powerful than the textual messages (Mechsner, 2012; Todorov, 2013). An emotive meaning is incomplete if nothing is said about the overtones that may colour a particular expression (Mautner, 2005; Brizendine, 2007). The information is coded in speech and can be divided into words which is delivered as explicit information and information about real meaning send as implicit signals (Hoogervorst, van der Flier, & Koopman, 2004). Explicit signals are words or figures and verbal information. Implicit information are the sound of the voice, attitude, gestures and distance. The volume of the voice, speed, intonation and breaks are important indicators. Non verbal sound expressions, such as sighing or moaning are important signals as well. Explicit signals of the content level deliver information, while implicit signals deliver information about the information (Birkenbihl, 1994; Kroeber-Riel & Weinberg, 2003). Communication is

always more than the explicit information. Subtle nonverbal codes present even more and often express more than the words spoken. Sometimes the crucial core of organisational success is communicated nonverbal (Scheier & Held, 2006; Brizendine, 2010; Hoogervorst, van der Flier, & Koopman, 2004; Khan, Lodhi, & Makki, 2010). Technics like the FAST-Technology (Facial Affect Scoring Techique) focus on body signals such as gestures and facial expressions and draw conclusions on psychological processes (Meffert, Burmann, & Kirchgeorg, 2012; Weinberg, 1986). Research at the Max-Planck-Institute shows that our brain connects different sensory signals. Uncounciously lip reading is used for a better understanding of speech (Handelsblatt, 2012). Another phenomenon is the so called cocktail party effect. Amazingly we are able to follow a communication even in a very loud enviroment. Instead of checking all incoming audio signals the brain filters just the relevant frequencies like a equilizer (Schiawski, 2012).

### 2.3.6.4 Stories

Stories transport implicit, cultural and learned meanings more than the obviously explicit information (Scheier & Held, 2006). Our society is characterised by a cumulative culture. From generation to generation the traditional findings build the base for the innovation (Mechsner, 2012).

*Archetypes:* Carl Gustav Jung (1875-1961) describes the model of archetypes that presents valid prototypic prefiguration of life over the cultures (Jung, 1972). These archetypes are examples for the intuitive and subconscious cognition (Kuhl, 2010; Schmidlin, 2012; Luetz, 2011). These archetypes are ancient patterns. A part of the collective knowledge of human memories is saved in our body. It seems that a big part of our subconscious mind is based on primal events. Most people are focused on explicit cognition e.g. counting what the lower the influence of the unconscious is and that more archetypal instincts take over control (Braem, 2006).

*Viewing Direction:* If we look at a picture some stringent assumptions about moving objects will automatically be activated. This dynamics is still working in “frozen” situations (see Figure 20) such as pictures. Most pictures are underlying a sub-contextual viewing direction. Epecially if a presented person looks into a specific direction. The viewing direction is always connected to the reading direction and determines our cognition.



Figure 20: Implicit Viewing Direction adapted from Beste et al (2011)

Licensed picture of Fotolia Pictures

If people are asked which woman in the picture before is longing more for her family, most people would vote for the right. If somebody is looking against our viewing direction then he is locking backwards to what was left behind (Beste, vom Hove, Reif, & Werth, 2011).

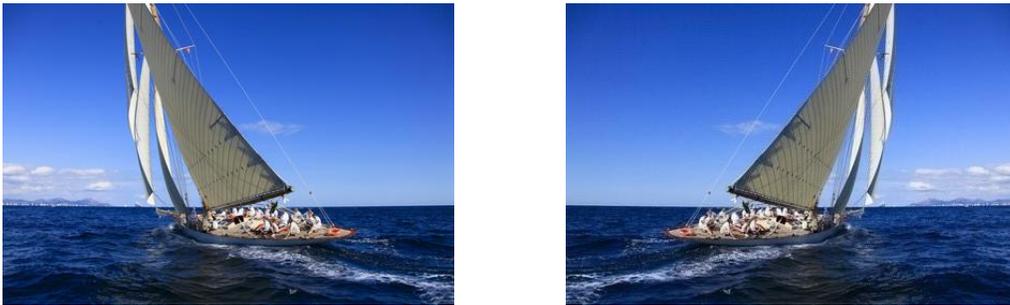


Figure 21: Implicit Motion Vectors adapted from Beste et al (2011)

Licensed picture of Fotolia Pictures

If people are asked (see Figure 21) which boat is starting the daily cruise and which one is ending it. Most people answer the boat in the right picture above is starting the trip. Based on our cognition and the assumption of a dynamic situation the right boat is driving in our viewing direction (Beste, vom Hove, Reif, & Werth, 2011).

### 2.3.6.5 Symbols

The world is not just colourful. The biggest part of our information is based on optical information. The world is organized and managed by the impact of colours (Braem, 2006). Green symbols mean go on. Emergency exits, meeting points are green as well. Generally emergency signs are angular with white and green symbols. The symbolic message of the traffic light is used in many other areas. Red means dangerous. Emergency breaks and alarm buttons are red. The rip cord is red and a red signal in front of a studio of a radio station means do not enter. International warning signs have three common optical elements, a red edge, red elements and a rounded shape (Heller, 2006). Natural and environmental symbols are important drivers as well. We love quiet houses at the sea side or next to the water because we are more relaxed near the water (Conniff, 2002). Thus, we are still more symbol and nonverbal minded than we assume (Kroeber-Riel & Weinberg, 2003).

A representative study of Brandmeyer and GfK with 1,006 people reveals that presented advertisements (see Figure 22) without products or brand names the customers were able to decode the brands due to the nonverbal coding. For example, Marlboro was recognized by 70.3 per cent of all the respondents (Brandmeyer, Pirck, Pogoda, & Prill, 2008; Scheier & Held, 2006).



Figure 22: Study about the Nonverbal Decoding of Brands from VDZ (2008)

With permission of the VDZ

Brands are also not just coded by products and logos. Instead they are more represented by nonverbal codes such as colours, shapes and symbols. That means that a brand is not just created by formal elements and additionally the cognition is affected by the core message of a company. That is the reason why strong brands can act like chameleons or people we know do on carnival. Strong brands can be presented in different facets without losing their core meaning. Subtle implicit codes control the behaviour rationally not reflected by cost-effectiveness considerations. Thus, very subtle brand signals trigger behaviour effects without being realised by the customer himself. If

logos of credit card companies such as Visa or MasterCard are presented at the front door of a restaurant the customer shows a higher willingness to spend more money (Brandmeyer, Pirck, Pogoda, & Prill, 2008; Scheier & Held, 2006).

#### 2.3.6.6 Sense

David Hume (1711-76) an English philosopher argued that the key beliefs we have are the products of associative laws of imagination (Kiefer, 2012; Mautner, 2005). What we see, hear or feel characterises the meaning of our cognition. In contrast to nowadays Hume posited that thinking is a process of conscious and structured minds similar to the sequence of a string of pearls. Today we know that thinking is a seemingly unstructured simultaneous process (Kahneman, 2011; Macknik, 2013). That is why communication has to be understood from a customer perspective (Kiefer, 2012).

Evolutionary based more sensual impacts achieve higher effect. If your forefathers heard a rustling in the bush and while birds were flying away they knew the sabretoothed tiger was approaching. Against this background Scheier and Held promote “multisensory enhancement” a sensory coding including all sense to get a maximum effect in the communication process. Following the slogan one and one makes ten instead of two (Scheier & Held, 2011). In contrast to that Kiefer warns against the “multisensory scattergun”. Addressing all sense is not necessary and sometimes

problematic. Using all sense is like bombing our brain. It is more important to decide which senses are appropriate and useful (Kiefer, 2012).

Whenever we buy something our decision is influenced on aesthetical aspects. Preferences are often based on visual cues. Usually, we are not able to give a clear justification for our preference (Scheier, Linke, & Schneider, 2010; Schmid, et al., 2012). We can decide almost instantaneously what we like. And we are highly consistent in our assessments (Faerber & Carbon 2, The power of liking: Highly sensitive aesthetic processing for guiding us through the world, 2012). A central problem in the literature is a lack of precision regarding the description of aesthetic impressions (Augustin, Wagemans, & Carbon, 2011). The underlying mechanism is still not well understood (Faerber & Carbon 2, The power of liking: Highly sensitive aesthetic processing for guiding us through the world, 2012). What we know is that old evolutionary systems are still working in our perception. That is the reason why appearance features such as symmetry; averageness and the colour of skin are important indicators influencing the attractiveness of faces. The effect of liking something can be found within natural categories such as faces (Faerber & Carbon, 2012; Schneider, Hecht, & Carbon, 2012). Yet the minor rush decisions based on liking could have wide-reaching consequences. These considerations imply a robust, efficient, and rather universal type of processing that seems to work fast and rather implicit (Faerber & Carbon 2, The power of liking: Highly sensitive aesthetic processing for guiding us through the world, 2012). In the following we will have a closer look at colours and contrast, form and design and haptic and surface to understand that we all be manipulated by simple coding effects.

2.3.6.6.1 *Colours and Contrast*

**Colours**

Colours do not exist. Yet at the same time colours seem to be natural. The colourful environment only exists in our brain and colours are just an illusion (Gekeler, 2005). Nevertheless, colours are an important part of our life. Clothes, symbols, designs and schemes colours are everywhere (Frieling, 2006). Already Goethe investigated the power of colours. A lot of theories exist about colours. The spectrum ranges from understandable concepts to curiosities such as colours as medical treatments. Brost reports about successes in the healing with colours (Braem, 2006). This has to be viewed in a differentiated way and is not connected to this research.

Modern approaches on the input of colours are the theories from Frieling and Luescher. Luescher states that colours are visualised feelings (Braem, 2006; Luescher, 2006). Colours control our lives merely when we do not think about them. The way we think, feel and act depends on the secret power of colours. Effects of colours are strongly connected to our archetypical experiences, to biological, chemical, physical and psychical processes in our body as well (Braem, 2006). Colours automatically cause unconscious associations and reactions which are based on internalised life experience. In contrast the symbolic meaning of colours is much older and derives from centuries old traditions (Heller, 2006; Huether, 2010).

An interesting example is the subjective feeling about the temperature of environment. In a blue and green coloured room the subjective feeling is that the room is cold. At the same temperature in an orange coloured room the feeling is that the room is warm. Another example reveals the implicit power of colours. In an American logistic company some employees were more exhausted on some days than another. After a test researches revealed that the employees felt the darker boxes were heavier than the bright ones. The heaviest feeling was connected to the black and the most effortless feeling seems to be the white box (Braem, 2006). Black boxes were regarded as most heavy where as white boxes seemed to be effortlessly to handle. Colours have an impact of the process of decision making. That is why it is important to have an idea which colour represents which aspect.

*Green:* Life is green. Green is the symbol of life. From our ancestors we learned that our life is safe if we are surrounded by green. For many nations green is the symbol of hope. An annual former pagan procedure is the Christmas tree, a symbol of never ending life. A green tree still stands for life as a drought tree is always a symbol of death. Green is the colour for "go on" in traffic (Braem, 2006). The symbolic power is originated from the experience of growing nature (Heller, 2006). The theory of colours describes green with the following associations: Nature, vegetation, growth, damp, safety, stability, persistence, self-confidence, silence and harmony (Braem, 2006; Heller, 2006; Luescher, 2006).

*Blue:* The endless sea and the universe sky are typical associations related to blue. Amazingly is that in nearly all cultures the lord life in the sky or on a very high mountain close to the sky. Blue is a symbol for the cycle of life, water runs down the river and goes up to the sky. Finally, the blue sky is mirrored in the blue sea. Blue is the colour of things that are allowed in traffic (Braem, 2006). An old English wedding tradition says, something old and something new, something borrowed, something blue, as symbol for loyalty (Braem, 2006; Heller, 2006). The theory of colours describes blue with the following associations: Reliability, loyalty, sympathy, friendship, wet, coolness, dreams and thinking (Braem, 2006; Heller, 2006; Luescher, 2006).

*Red:* Give any person you want a range of coloured pencils and ask them to paint a heart. The result will always be the same a heart coloured in red. It seems that red is the oldest colour of mankind which was first used in cave paintings. Red means blood and Goethe uses this symbol for Mephitis in his Faust. In the Catholic Church the idea of blood is represented by wine during the ceremonies. Red is also the symbol of fire. Fire has an immense attraction for people, especially the ability to control the fire, such as fireplaces and campfires. Red is the symbol for love, blood and the devil. Red is the colour of the warning signs in traffic (Braem, 2006). The reason is that red is the most unnatural colour in the environment at night and day (Heller, 2006). Make up, fingernails and lipstick are going back to the old Egypt's and the daughters of the pharaohs. For a long time red was a signal for power. Cardinals and Kings presented to be the ones who decide about life and death. Red presents aggression and occupancy, which is the reason why a lot of flags use red as a stylistic element. A current symbol is still the red

phone between Washington and Moscow. An experiment reveals that the same content of an advertisement presented in a red design was tested as more informative, more up to date, fresher, younger and more attractive compared to a blue design. Customers who often drink coffee evaluate the same coffee out of a red can as more aromatically than the mild out of blue can or as too strong if served out of a brown can (Braem, 2006). A red cap for small children refers to the tradition that the cap should hide the kids from the views of demons, envy and the evil (Heller, 2006). The theory of colours describes red with the following associations: Activity, blood, power, pleasure, dynamic, temperament, fire, dry, energy, performance and love (Braem, 2006; Heller, 2006; Luescher, 2006).

*Black:* More than every other colour black has a powerful symbolic messages. Black means no, is the colour of the darkness and the borderline between good and bad. Historically black has always been a signal for the claim of power. Black is the symbol of scorched earth. Black is the beginning and the end, life is in between (Braem, 2006). If any colour is combined with black the meaning changes to the opposite of its symbolic character (Heller, 2006). The theory of colours describes black with the following associations: Ash, coal, dirt, soot, darkness and the death (Braem, 2006; Heller, 2006).

*Yellow:* The brightest most shining colour is yellow. The association with the sun is very close. In dark winter days Goethe used the view through a yellow glass as psychological mood enhancer. The golden colour is directly connected to yellow. Sun, heat and gold are important parts of the human history. So the glossy effect of yellow will increase in golden colours. For a long time gold was regarded by the people as stocked sunbeams with a part of divinity. Thus, the non-rational feeling we have concerning gold is still staying alive. The Latin word for gold is “aurum” and is connected with the word “aureole” what means halo. From old days to now gold is a symbol for fortune (Braem, 2006). The symbolic power of yellow is positive and connected to the sun and gold (Heller, 2006). The theory of colours describes yellow with the following associations: Young, funny, active, pushy, cheeky, bright and extroverted (Braem, 2006; Heller, 2006).

*Orange:* Communication, heat and sensuality are characteristics of orange. Caribbean’s, Samba and open and friendly contacts are the nature of the orange colour (Braem, 2006). There was no meaning for orange before fruit orange. In all languages the colour is similar to the fruit. That is perhaps the reason that orange is always associated with fruit (Heller, 2006). The theory of colours describes orange with the following associations: Alive, fruit, warm, fun, dry, generous, luxury, effusive and intimate (Braem, 2006; Heller, 2006; Luescher, 2006).

*Violet:* This active, pushy, loud colour stands for the direct way to the goal. Purple is powerful, aggressive and if needed as the root of the word presents violent. In the former days cardinals used violet to underpin their role between this life and beyond (Braem, 2006). Until now violet is the colour of extravagance (Heller, 2006). The theory of colours describes violet with the following associations: Sensibility, fascination, mystic, dubious and intimate (Braem, 2006; Heller, 2006).

*Brown:* The ground is the symbol of brown. This colour symbolises to be rooted, safety, reliability and maturity. Brown represents the strongest aroma. Bread, Coffee, Chocolate and Sunday toast are connected to this colour (Heller, 2006). The theory of colours describes brown with the following associations: Solid, grounded, rooted (Braem, 2006; Heller, 2006).

*White:* Purity, the immaculate heart and freedom are the symbols of white. The white coloured sportsmen in the Olympic Games are still an example of the peaceful togetherness of different nations. A bride presents her purity by wearing a white wedding dress (Braem, 2006). One of the most important ingredients delivers the name of white. The cultural and linguistic background of white is “wheat” (Heller, 2006). The theory of colours describes white with the following associations: Cleanness, purity, freedom and peace (Braem, 2006; Heller, 2006).

*Grey:* In the Greek myth the grey ferryman Charon guides the souls into the world of shades. Grey markets, grey mice describe an intermediate and a more or less intangible status (Braem, 2006). How grey appears depends of the surrounding colours (Heller, 2006). The theory of colours describes grey with the following associations: Aging, fading, boringness, to die off and repression (Braem, 2006; Heller, 2006).

*Silver:* Since ancient times silver presents value. The old Greeks mined silver in Attika and called it “agyron”. The appreciation of silver is presented in gold, silver and bronze medals in all sport disciplines (Braem, 2006). Silver is mainly associated with gold. The winner gets the gold medal the silver medal is the comfort (Treacy & Wiersema, 1995). Silver often appears as cold. The cool effect of silver can be experienced in everyday life experienced by aluminium foil to protect food. In contrast to gold silver is a colour of functionality. Gold is old fashioned, silver is modern (Heller, 2006). The theory of colours describes silver with the following associations: Elegance, coolness and status (Braem, 2006; Heller, 2006).

Knowing the associations and symbolic attributes of colours it is obvious that decision making can be significantly influenced by making use of the right colour.

## Contrast

As we frequently make decisions on liking or not liking every day, this process has to work promptly, efficiently, robustly and rather automatically. In a study on subtle changes of shape and colour saturation with 3D models of chairs it was proved that liking is based on a complex and integrative process whereas typicality is based on shape properties only. The result shows that liking rates are highly sensitive connected to changes of shape and saturation of colours. The decoding process of objects has different levels of attention. In the first phase we are not aware of missing components if they are not important for the categorization due on the effect of selective attention. But in the second phase when the liking or disliking decision is made the colour saturation comes into the scenery for the effect of liking (Busey, 1998, Faerber & Carbon 2012; Goldstone, 1998; Lin & Murphy, 1997).

2.3.6.6.2 *Form and Design*

*Form:* Cognition of an object is a process with a very high degree of complexity (Scheier, Linke, & Schneider, 2010). A detected object will be extracted and analysed by its single elements of design. In the following steps the object will be conceptualised in neuronal nets and compared to existing samples in the brain. This matching process guarantees a quick and efficient recognition of objects (Meffert, Burmann, & Kirchgeorg, 2012). Perception of product design is an important factor for the strength of a brand and thus it is an important economical factor. It is important to understand how design information is picked up by the human sensory systems and integrated into the consumers brand memory. Initial perception can be understood as a four stage model. In the (1) first stage a 2-D retinal image is derived which corresponds with the first impression of the stimuli. In this stage the information is completely unstructured and not interpreted. In the second phase, (2) the image based stage, the retinal image will further extract elements such as lines and edges. In the third (3) surface based stage, surface attributes like colour, shininess, and texture will be exposed. Real 3-D processing only occurs at the fourth the (4) object-based stage. It is assumed that in this phase general stored knowledge about implicit information of 3-D objects is used as visual representations. Therefore, hidden assumptions based on 3-D representations about the nature of the visual world are used to include information about the not visible parts of the surface (Leder, Carbon, & Kreuzbauer, 2007).

*Design:* Firms increasingly use design to differentiate their own products from competitors. Despite the relevance of the thinking about design concepts and the underlying mechanisms have to be understood (Reimann & Schilke, 2012). A study about the perceptual and cognitive processes of art presents the importance of design, object and scene perception. It reveals that information about style are available within approximately around 224 milliseconds (Augustin, Defranceschi, Fuchs, & Carbon, 2011). Similar to speech in which sometimes the meaning of all content before is compressed in a single whispered word. The poetry we use in our speech can be used in a design language as well. You can build things as a combination of pattern or you can build a design with elements that superimpose themselves and get a deeper and more intensive level on nonverbal codes. The better all used patterns and codes are compressed, the better the design is (Alexander, Ishikawa, & Silverstein, 1995). With regards to buildings the famous architect Kenneth Frampton postulated concerning building that the presence of an object is articulated by the reduction of the poetic design language. Ludwig Mies van der Rohe (1886-1969) described in a speech at Illinois Institute of Technology in 1938 that different materials have different meanings. The archetypical genesis of every design the textile creation with node as an ancient connection is based on Gottfried Semper (1803-1879) (Frampton, 1993). Opinions on design differ a lot. In the regard to the meaning of design and what design is able to effect. Following Edgar J. Kaufmann (1885-1955) design should ensure the need of safety and satisfy the need for significance and creativity (Doering, 1999). Famous architects are speaking about implicit contradictions between aesthetics and design

(Frampton, 1993). The concept of corporate identity was created and obtained important meaning all over the world (Doering, 1999; Schmitt & Simonson, 1998).

According to evolutionary psychology people prefer curved designs. There is evidence that preferences for curved objects might be biologically motivated or could be modulated actual by trends or Zeitgeist effects (Carbon, 2010). Silvia and Barona demonstrated specific liking of curved forms. In two experiments people preferred circles more than the angular hexagons and liked curved polygons better than the angular polygons (Silvia & Barona, 2009). In contrast Bar and Neta present a plausible explanation for the preferences of curved designs (Carbon & Leder, 2005). As people constantly make snap judgments (Gladwell, 2008) about objects encountered in the environment these rapid judgements must be based on physical properties of targets. That is why sharp contours convey a sense of threat and trigger negative bias (Bar & Neta, 2006). Sharp contours are often associated with the thorn of a rose or the outline and the teeth of a shark. Angular forms seem to be the ideal candidates for a simple communication of danger (Carbon, 2010; Brizendine, 2010). As visual objects are processed very fast on cognitive and affective basis such processes must be found on visual primitive and over-learned cognitive processes. Researches reveal that first identification of facial expression can be formed within the first 39 milliseconds. Bar and Neta tested this hypothesis by presenting 140 pairs of matching pictures of real objects for period of just 84 milliseconds (Bar & Neta, 2006; Carbon, 2010; Carbon & Leder, 2005). General preferences for visual objects seem to be based on evolutionary processes and on heuristics which indicate which objects are more or less dangerous.

Angular forms might provide cues of danger (Carbon, 2010). Design presents the characteristics of its owners. Finally customers decide for objects that reflect their interests and personality (Doering, 1999). Consumers may not be consciously aware or willing to express or share results with the researcher. In a study about multi-dimensional implicit associations a group of researcher used the implicit association test (IAT) to show the indirect measurement of attitudes. They used attributes as word stimuli for the categories such as: safe-unsafe; young-old; innovative-conventional; aggressive-peaceful, etc. (Gattol, Säaksjärvi, & Carbon, 2011). These attribute categories are directly connected to the dimension of the implicit motives affiliation, power and achievement. Innovative designs often break common visual habits. Effects of innovativeness were particularly strong after participants had been exposed to the product during the phase of familiarisation (Carbon, Hutzler, & Minge, 2006). Zajonc (1968) showed that stimuli to which a person has been exposed previously have more positive effects than new stimuli (Zajonc, 1968). It seems that touch is affected by factors similar to those in the visual domain indicating a common cognitive basis (Jakesch & Carbon, 2012).

2.3.6.6.3 *Touch and Surface*

*Touch:* Empirical aesthetics is a young field of science but a very old subject of human interest (Carbon & Jakesch, 2012). Based on our experience we infer characteristics. Therefore, we associate quality with heavy products and believe that cheap products are light weights. The information transferred has to be coded on a haptic level as well (Ehrsson, 2013). If we feel soft and warm products we associate with them safety and reliability. A slimy consistency makes people feel unpleasant (Kiefer, 2012). To understand what people appreciate, like, love or prefer often there is no clear rational basis available for decision making (Carbon & Jakesch, 2012).

*Surface:* Aesthetic appreciation has proven to be highly reliable for many domains (Carbon, 2011). Brand products consist of several aesthetically appealing elements. These elements lead to a positive brand evaluation. The chrome elements of a Jaguar car communicate luxury. The glossy surface of an Apple product in connection with the typical shape presents a luxury as well. Brand Style Categorisation is determined by various combinations. Thus, luxury styles include design attributes such as chrome, shiny surface and ornaments (Leder, Carbon, & Kreuzbauer, 2007).

### 2.3.6.7 Main Hypotheses

It seems to be established in the literature that the perception in the human mind is influenced by various effects. Every human perception will be affected by a lot of measurable changes in conditions. Speech, stories and symbols as well as our senses are various variables for a change in our cognitive filter. This selective perception leads to highly different cognition of a personal world. And maybe the most important fact is that all these perception and evaluation effects are working permanently and could not be deactivated for a single so called 'rational' decision.

If we compare this to the classical idea of decision making of the rational homo economicus we get a completely new picture. Every selling proposition, every offer is linked to a package of rational information but it seems that the hidden package of implicit information is even bigger.

What does this mean for the daily decision making process in the business to business sector? What are the hidden factors having an impact on the decision making process? And what is the impact of the implicit motives? This leads to two main hypotheses of the thesis:

The battery of hypotheses (see Table 7) will start with the null hypothesis. Ronald Aylmer Fisher (1890-1962) explained in 1935 that “In relation to any experiment we may speak of this hypothesis as the ‘null hypothesis’, and it should be noted that the null hypothesis is never proved or established, but is possibly disproved, in the course of experimentation. Experiments just exist for giving facts a chance of disproving the ‘null hypothesis’ (Siebertz, Van Bebber, & Hochkirchen, 2010, p. 95). Finally, the null hypothesis should give facts of an experiment the chance to contradict that there is no correlation.

<b>Hypotheses</b>	
<b>H<sub>0</sub></b>	There is no correlation between implicit motives and B2B decision making
<b>H<sub>1</sub></b>	People have a verifiable structure of implicit motives
<b>H<sub>1a</sub></b>	Structure of implicit motives is verifiable based on level of hierarchy
<b>H<sub>1a</sub><sup>1</sup></b>	Employees have an over proportional high intensive affiliation motive
<b>H<sub>1a</sub><sup>2</sup></b>	Managers have an over proportional high intensive achievement motive
<b>H<sub>1a</sub><sup>3</sup></b>	Top managers have an over proportional high intensive power motive
<b>H<sub>1b</sub></b>	Implicit motives are verifiable connected to the gender
<b>H<sub>1b</sub><sup>1</sup></b>	Women are over proportional affiliation motivated than man
<b>H<sub>1b</sub><sup>2</sup></b>	Men are over proportional power motivated
<b>H<sub>2</sub></b>	There is interplay between the implicit motives and B2B decision making
<b>H<sub>2a</sub></b>	A correlation in the personal decision, between the personal implicit motive and the choice based on the coding of the product exist
<b>H<sub>2b</sub></b>	A correlation in the management decision between the imaginary implicit motive of the colleagues and the choice based on the coding of the product exist
<b>H<sub>2c</sub></b>	A correlation in the group decision between the imaginary implicit motive of the colleagues and the choice based on the coding of the product exist
<b>H<sub>3</sub></b>	There are deducible Impacts on the Business to Business Marketing

Table 7: Set of Hypotheses

## 2.4 Chapter Summary

Different business and management concepts exist on the processing and operation of information, the promoter and opponent concept (Godefroid & Pfoertsch, 2008), the responding concept (Pepels, 2004, Strothmann, 1979), or the information concept (Luger, Geisbuesch, & Neumann, 1999). All concepts present acceptable approaches to answer the question how managers and business people operate with rational information. Nevertheless, concepts are based on the assumption that people are searching for rational information. From a psychological perspective it seems to be unlikely that people are able to process all information needed on available decision making (Simon, 1979). Simon proved clearly in the concept on 'bounded rationality'. Hanoch posits "Too much choice can tax our cognitive abilities, making it difficult to make a good decision or, alternatively, making one freeze like a deer in the headlights..." (Rice & Hanoch, 2008, p. 325). Obviously more does not always mean better following Hanoch: All models presented on implicit motives, including the system developed by the author, have strong cognitive elements. Without a solid understanding of implicit cognition none of the models delivers a suitable approach to communication planning. At least Gigerenzer and Goldstein argue that tools could have the power to inspire new theories (Gigerenzer & Goldstein, 1996). Finally, deep routed processes of cognition and perception based in the human brain cannot be deactivated for single seemingly 'neutral' and rational B2B decisions.

### 3. Research Methodology

This chapter considers the basis to reflect the interdisciplinary research. As science is a personal and social process, nothing in the methods of science guarantees success in arriving at 'truth' (Miller, 2005). Ludwig Wittgenstein describes Philosophical investigations as a struggle against the bewitchment of our understanding by the resources of our language (Harper, 2012). The basic discussions on research philosophy go back to Karl Popper (1902-1994). The so called 'School of Popper' puts a strong emphasis on the interest in the research topic (Chalmers, 2007). Popper postulates that the rules of methodology are the rules of the game of the empirical science. He defines two basic rules. (1) The game will never end and (2) a once established hypotheses can never be discarded if no hypotheses with better verifications or falsifications will be set up (Popper, 1997). Philosophy is concerned to the human experience in common, reveals the limit of the human knowledge, teaches us to accept errors and helps on the way of aspiration for new findings (Hartmann, 2012).

#### 3.1 *Research Philosophies - Pragmatism*

The research focus on the question, if it is possible that the same person who is wearing Adidas sport shoes, Levis jeans, a Polo Ralph Lauren shirt, and Ray Ban sunglasses changes his mind at the door to his office and makes decisions purely based on the

facts (Chlupsa, 2013). The easy answer the last 20 years as a consultant in an advertising agency was just 'no'. Because I developed my own communication model and made a lot of projects with this idea. But in the last years of working as a lecturer at the Munich University of Applied Sciences I realised that the world is not just black or white even not in the world of marketing. After a long time in the communication industry I focus now on my academic career. And I think there is a difference in a statement between selling a project to a company and lecturing students at University. So I am very interested at the end of the research if the projects we run in the communication industry were successful by the idea of the implicit motives or despite.

From a marketing perspective the philosophy of science debates appears like an esoteric area (Tadajewski, 2004). By contrast Hirschman argues that marketing has evolved and so must the methods of inquiry. However, Tadajewski underlines that the philosophy of science that underpins marketing research increasingly seen to be an important feature of doctoral inquiry (Tadajewski, 2004). A review of philosophy is a vital aspect of the research process. It opens researchers mind to other possibilities (Holden & Lynch, 2004).

The philosophical approach of this thesis is pragmatism. There are many forms of pragmatism, arising out of actions, situations and consequences. The concern is about application 'what works' as solutions for problems (Patton, 1987). Instead of methods, problems are most important (Creswell, 2003). In the idea of Herbert Simon (1916-2001)

it seems that people working in an organization are more interested in a satisfactory solution than in an optimal one (Bryman, 2012).

The ideal situation for studying particular factors is a situation in which all disturbing factors are missing completely. Cartwright calls this kind of idealisation that eliminates all other possible causes the 'Galilean Idealisation', based on the findings of Galileo on the pull of earth (Pratten, 2007). Nevertheless, it is very difficult to receive a degree of Galilean idealisation especially in social sciences. Due to most empirical studies in strategic management correlational methods are used (Miller & Tsang, 2012).

Reiss argues that nothing is wrong using formal mathematical or statistical techniques. Things almost go wrong if these techniques are combined with false beliefs or if they are applied incorrectly (Reiss J. , 2004). This thesis tries to detect the basic effects of how your senses are deceiving us in the decision making process, especially with the focus on the business to business sector. What we see in reality are often sensations which are mere illusions of what is real (Saunders, Lewis, & Thornhill, 2009). These sensations are important factors of our daily lives and our decision making process as well.

### **3.2 Research Approach - Deductive Research Approach**

Heterodox economists, ranging from Marxian via Post-Keynesian to Institutional, have been unable to arrive at any consensus on the alternative paradigm. The methodology of neoclassical economics was first described 'The Methodology of Positive Economics' by Milton Friedman in 1953 despite all criticism this essay represents the most famous scientific approach to the domain of economics. Friedman's instrumentalism argues that theories are valuable if they can be used to make accurate predictions. Moreover, Abraham Kaplan argued in his book 'Conduct of Inquiry' that the goal in pattern modelling is to detect laws and theories for understanding. Pattern modelling is an attempt of explanation something by a set of elements. He postulates that especially in social and economic since institutional economics can be characterised as a holistic system which is evolutionary because changes in the pattern of relations are to be seen as the very essence of social reality (Johnson, 1996). Applying a research requires to choose a deductive or an inductive approach. In the deductive approach a theory and hypotheses will be developed and prior to the design for the research strategy applied to test these hypotheses. Working in a deductive way means to test a theory. In the inductive approach data will be collected and the theory will base on the results of the data analysis. Induction means to bring up a theory (Saunders, Lewis, & Thornhill, 2009). In an outdated way of speaking, deduction is reasoning from the general to the particular. Induction is reasoning from the particular to the general. Inductive reasoning is complex to provide strong evidence that makes conclusions most probable. (1) Mary was exposed to measles last week (2) Mary woke up today with spots all over her body

and therefore, Mary has been infected by measles. The hypothetic argument is deductive in its logical form. It appears to provide a great degree of certainty about what is true. (1) All unmarried men are bachelors (2) Joe is an unmarried man therefore, Joe is a bachelor (Johnson, 1996). The research approach of the thesis is based on a deductive approach. Deduction emphasises: moving from theory to data, the collection of quantitative data, a highly structured approach and the necessity to select samples of sufficient size in order to generalise conclusions. This is why a research should apply the deductive approach, i.e. develops a theory followed by a hypothesis, than the design of the research strategy is developed to test the hypothesis (Saunders, Lewis, & Thornhill, 2009). The theory is that implicit motives located in the human brain influence the business to business decision making process. The first step is to explain causal relationships between specific variables (Saunders, Lewis, & Thornhill, 2009). The specific variables are the implicit motives themselves: the age of the people, the gender of the people and the position of people within the hierarchy of an organisation. The main objective of the deduction is to come to a level of generalisation.

**3.3 Research Strategy and Design – Experiment, Survey and Interview**

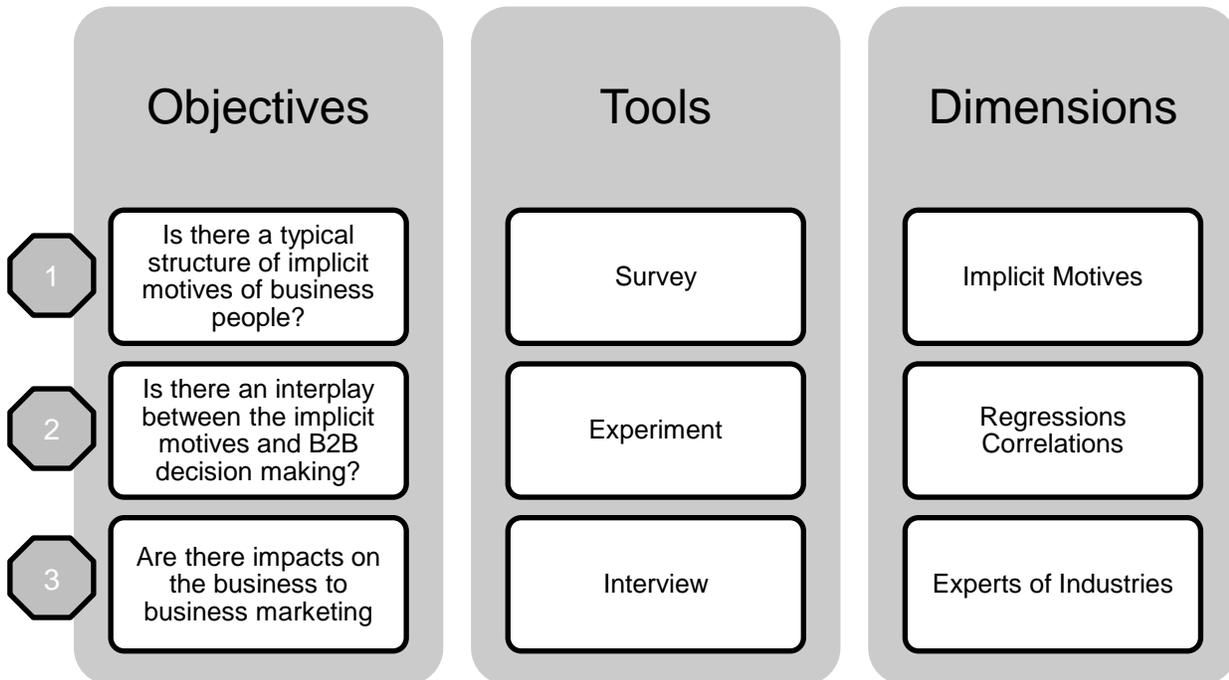


Figure 23: Set of Objectives

In research literature the most often used classification of research purpose most often is a threefold on (1) exploratory, (2) descriptive and (3) explanatory. An (1) exploratory study tries to detect what is happening and to reveal new insights to assess phenomena in a new light (Robson, 2002). A (2) descriptive study is to portray an accurate profile of persons, events or situations (Robson, 2002). An (3) explanatory study establishes causal relationships between specific variables (Saunders, Lewis, & Thornhill, 2009).

According to Yin strategy can be used for exploratory, descriptive and explanatory research (Yin, 2009). The choice of research strategy is guided by the research question and the regarded objectives. Primary the research strategy can be classified as experiments, surveys, cases studies, action research, grounded theory, ethnography or archival research (Saunders, Lewis, & Thornhill, 2009). The research strategy (see Figure 24) of this thesis is based on an experiment, a survey and interviews.

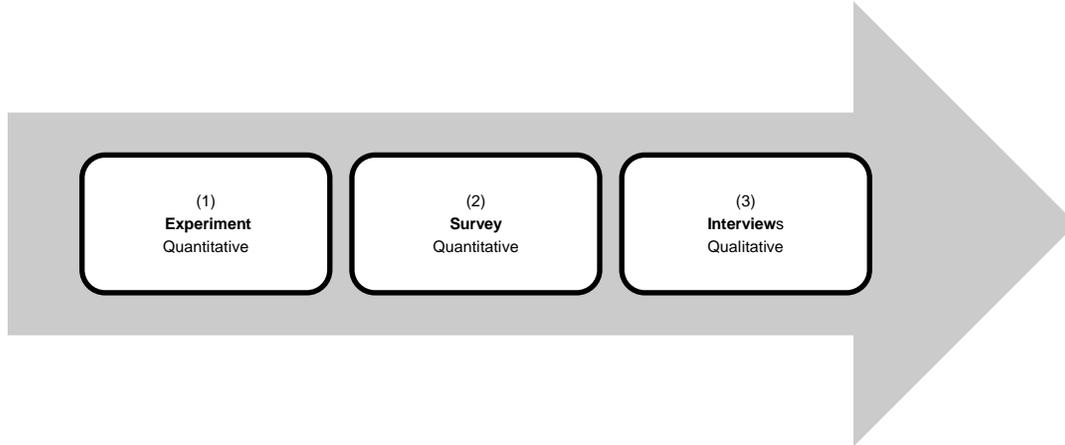


Figure 24: Research Strategy

### 3.3.1 (1) Experiment

An experiment is a form of research that owes much to natural science (Saunders, Lewis, & Thornhill, 2009). Based on Hogarth experimentation can have many goals. A major goal is to test a theory of conditional expectations and if condition  $x$  holds effect  $y$ . Another goal is to build models of situations. Because it is hard to deny the value of experiments and not all experiments reveal results that people trust. Both the experimental participants and the situation faced should be representative for populations to generalise the results (Hogarth, 2005). Thus, the testing of economic theories generates scepticism on the relationship between the experiments, theory and economics. Another question is if economic theories could really be tested in the laboratory (Cubitt, 2005). In contrary Jones emphasises that there are not generally intermediaries between theories and the external world (Jones, 2008). Sometimes

experiments are not intended to test theories and often used outside the domain of economics. There is no general immunity of economic theory against experimental testing. For a given theory the appropriate design depends on the view of the relationships (Cubitt, 2005). 'Design experiments' as term was introduced by Ann Brown and Allan Collins (1992). These experiments were developed to carry out formative research and to test designs based on principles derived from prior research. Design research is a powerful tool for addressing needs such as difficulties arising from the complexity of real-world situation (Collins, Joseph, & Bielaczyc, 2004). In contrast some economists are disturbed by the robust anomalies of the standard economic theory that have been discovered in the lab. An obvious way of defending the theory is to question the design of the experimental conditions due to the setup could be unrealistic or just not 'right' (Guala, 2005). Nevertheless, in natural science there is a general consensus on the participation of the material world in the experimental knowledge production. The crucial 'material' of behavioural experiments is the participation of experimental subjects in the production of knowledge of individual and collective behaviour. Behaviour experiments produce knowledge in various research situations and the crucial 'material' of these experiments is the participants (Santos, 2007). These experiments should be made with sensitivity in the selection of participants and experimental situations. These principles are hard to follow but provide results which can be generalised if crucially assessed (Hogarth, 2005). Whenever an experiment is applied it should be embedded in a well-defined theory (Sudgen, 2005). Most methodological discussions in experimental economics have been pursued by justifying the use of experiments as theory-testing vehicles (Jones, 2008). Experimenting in the human science is affected

by the control of exercise and the real understanding about human behaviour. Control is required to produce pertinent and intelligible results. More control means more outcomes of economists' actions. Thus, experiments in the field of the economy must achieve a difficult balance (Santos, 2009). The potential of independent action is crucial in behaviour experiments to convey information about the cognitive and psychological make-up of the individuals and their social norms (Santos, 2007). Two roles of experiments in behavioural economics can be distinguished, experiments as exhibits and experiments as test of theories. An exhibit is an experimental design which reliably induces some specific effects of phenomenon in human behaviour. Following Kahneman an informal exposition is an exhibit a 'bottled phenomenon'. Thus, new exhibits also can be detected by investigating existing ones. For example, Kahneman observed behaviour in 'ultimatum games' studied in the 'dictator games' (Sudgen, 2005). In this research experiments are used to test a new theory. Experiments are often used in social science, particularly in psychology (Saunders, Lewis, & Thornhill, 2009) and accepted as a suitable method of economical research (Jones, 2008). As a first step in the empirical research of this work an (1) experiment should provide a first indication for the connection between the decision making process in business to business and the implicit motives. Santos provides a cautionary warning on using the results to make assumptions on the motivational factors that underlie the human behaviour. Such assumptions can only be obtained from behavioural experiments that establish a tight correlation between motives, actions and outcomes. If any of these relations does not hold the inference about individual values, beliefs, expectations, preferences and attitudes are not warranted. Santos stresses the problem of assumption of human

beings, especially that people are instrumentally rational, their actions are always targeted by an intended outcome (Santos, 2009). The argumentation of Santos is precisely the idea behind the experiment. If the decision making process is entirely rational, the experiment will not bring up any variations in the decisions. The tested persons should always make the same economic decision. Due to the relationship between benefit and performance, just one of the outcomes can be the best. To get a clear result it will be important to detect the appropriate stimuli for the manipulation of a business to business decision focused on implicit motives. In the literature it is recommended to implement an experimental group and a control group (Saunders, Lewis, & Thornhill, 2009). Finally, there is no possibility of creating a placebo effect without triggering implicit motives themselves. The reason is that both sides of the experiment are manipulated by the decoding process of our unconscious mind which is the basis for interpreting the communication. The idea behind the experiment is to detect the direct interplay between implicit motives and the business to business decision making process. If the decision making process would be completely rational, people should always make the same economic decision. The test subjects have to come up with a standard buying scenario in the field of capital goods. They have to buy two durable products: a car and office equipment.

The experiment has three dimensions and different stages:

- (i) Personal Decision
- (ii) Management Decision
- (iii) Group Decision

### **3.3.2 (2) Survey**

Survey strategies are often referred to design a questionnaire (Saunders, Lewis, & Thornhill, 2009) in contrast to the explanation of De Vaus (2005) is broader and describes this approach as applying the same question in the same order to each participant, which could be a structured interview as well as an online-questionnaire (De Vaus, 2005). Answering the research questions within the dimensions of who, what, where, how much and how many is a popular, frequently used and common strategy in business and management science (Saunders, Lewis, & Thornhill, 2009). The survey connected to the experiment should figure out the basic data for the statistical analysis of the results derived from the experiment. To check the correlation between the decisions of the participants and the hypotheses it is necessary to check several data. The questions asked were broken into two distinct sections (1) socio-demographic and (2) organisational questions. The first section the (1) socio-demographic is concerned with data and information such as gender, age and education. In the second section the categories were used are (2) organisational data and information such as the function of

the participants within the company, the level of hierarchy and competence in business decision making. As the survey stands in a one to one connection to the experiment and the participants are on site, guidelines about the use of free run envelopes and questions which avoid raising potentially off-putting questions too early in the questionnaire are not needed (Fowler, 2002; Weissberg, Krosnick, & Bowen, 1996 ). Nevertheless, Oppenheim (1992) argues that the quality of the questionnaire design can have higher impact upon the response level than the length of the form. Due to that important aspect not all participants can be controlled during the test procedure (Lean, 1996; Oppenheim, 2005). For example, by asking how important something is, the respondent is effectively being forced to select one of a finite number of replies ranging from 'very important' to 'very unimportant'. Other guidelines in the literature include the avoidance of jargon as well as of questions which are loaded, leading, double-barrelled or double-negative (Lean, 1996; Marshall & Rossman, 2006; Oppenheim, 2005; Patton, 1987; Robson, 2002).

### **3.4 Description of the Pilot Test**

Almost every aspect of a survey can be tested by pilot work. Normally some issues will receive greater priority than others (Oppenheim, 2005). The idea behind the experiment is to show the direct interplay between implicit motives and the business to business decision making process. If the decision making process were completely rational, people should make always the same economic decision. The test subjects had to come up with a standard buying scenario in the field of investment goods. They have to buy two capital products: a company car and office equipment. The pilot test was conducted with, Masters and Diploma students of Munich University of Applied Sciences. The earliest stages of the pilot work are intended to explore issues concerned with the conventionalisation of the research question (Oppenheim, 2005).

Based on an iterative process the final data collection was improved on the findings of the pilot test. Thus in contrast to the final data collection the pilot test was based into the following three dimensions and different stages:

- (i) Test of the implicit motives of the test persons.
- (ii) Buying process for own use (Car and office equipment)
- (iii) Buying process for three colleagues (Car and office equipment)

First (i) the test subjects were tested on their implicit motives. After having been tested on their implicit motives, the test subject had to (ii) buy a company car and office equipment for himself. In the third stage they had to (iii) buy company cars and office equipment for three colleagues. The idea behind the experiment is to detect if the implicit motives of the test subject will match with the implicit codes of the selected product. If the test subjects choose a product for a colleague, the implicit category should match the implicit type of the colleagues. If the test person acts as homo economicus, they have to choose the same product every time. In this case it does not matter at all if they buy a car or other investment goods for their colleagues or themselves. The decision should be based on the facts and features of the product only, not on the motives and motivation. To guarantee a high confidentiality the questionnaires and envelopes were mechanical numbered (see Figure 25).

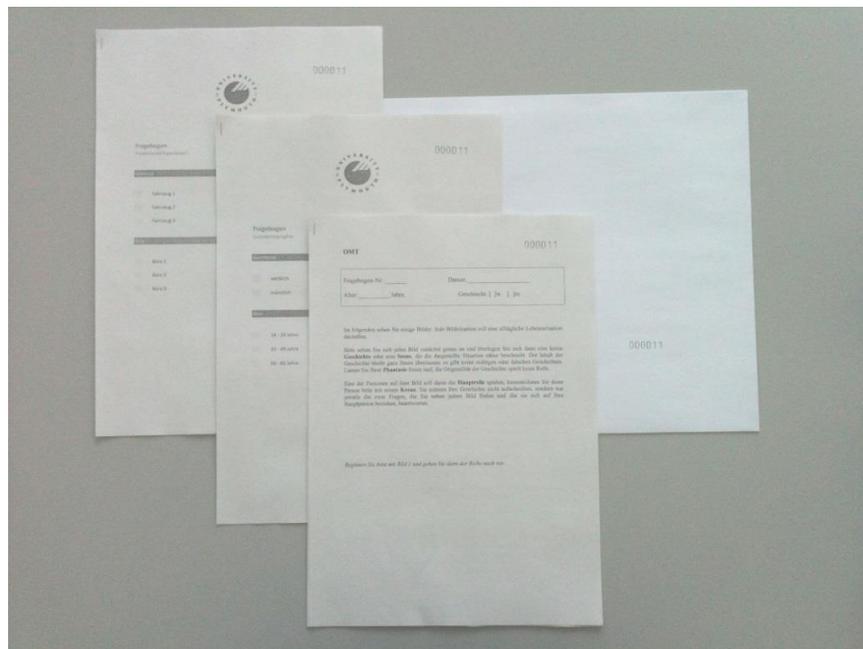


Figure 25: Pilot Test Questionnaires

### 3.4.1 The Phases of the Pilot Test

As mentioned before the pilot test was the first set-up to prove and improve the data collection. Based on the findings of the pilot test the complete elements and procedure were changed and the experiment was improved. The bright boxes (see Figure 26) in the following graphic show the basic experiment for the test subject's own use in the pilot test. The dark box shows the phase of manipulation. In this phase of the experiment, the test subject gets an imaginary colleague. After having chosen a car and office equipment for himself, the test subject now has to choose a car and office equipment for three different, imaginary colleagues. There are three different types of colleagues and the typology of the three different colleagues is optimised for the implicit motive structures based on the result of the critical literature review and the non-recognisable implicit coding effects.

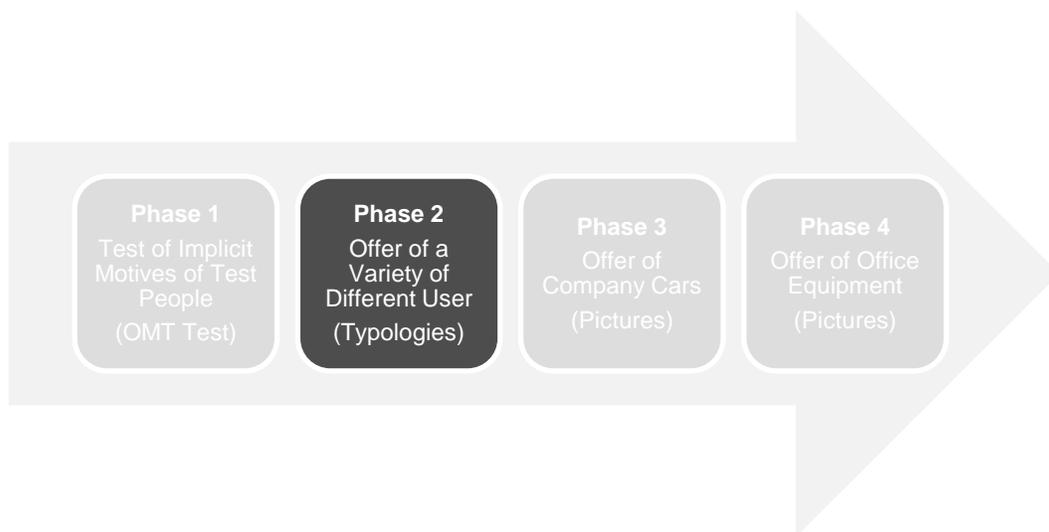


Figure 26: Design of the Pilot Test

### 3.4.2 Method and Design of the Pilot Test

#### 3.4.2.1 Pilot Phase 1 of the Experiment: The Mind Set

The first stage of the experiment is to check the implicit mind set of the test subject (Snyder 2, 2013). For this stage the Operant Multimotive Test (OMT) will be used. The test procedure of the OMT was invented by Julius Kuhl and David Scheffer in 1999. Basically the OMT Test differentiates the implicit motives of the tested persons by using ambiguous pictures. For testing, ambiguous pictures are presented to the test subjects. The OMT Test is similar to the Thematic Apperception Test (TAT) which explores motives as well. In the TAT the test persons have to write down a complete story. In the OMT Test the test person just has to make notes. The classic TAT Test is based on 6 pictures whereas the OMT Test uses a minimum of 15 pictures. The advantage of the OMT Test is to evaluate all implicit motives: Affiliation, achievement and power. Based on their former life experiences the test subjects make a personal interpretation of the picture. The aim of the test is to show the structure of the implicit motives.

#### 3.4.2.2 Pilot Phase 2 of the Experiment: The Manipulation

The second stage is the manipulation phase. In the first step of the experiment, the test subject must buy a product for himself. In the second version of the experiment, the test subject has to buy a business to business product for three colleagues. These colleagues are not real. The typology of the colleagues is based on the implicit motives. The idea is to trigger the mirror neurons which are the basis for social understanding. The test subject should decode the implicit motives of the imaginary colleague and choose the appropriate product (Spitzer, 2008; Amicia, Hofer, & Roebenhaus 1, 2013).

#### 3.4.2.3 Pilot Phase 3 of the Experiment: The Company Car

In the third stage, the test subjects are faced with a selection of cars. The budget for the cars is nearly the same but the cars are different. The cars reflect the needs of persons with different implicit characteristics. For the pilot test, the choice of cars was a grey Volvo for the implicit motive affiliation, a black Chrysler for the implicit motive power and a red Alfa Romeo for the implicit motive achievement. The backgrounds of the pictures and the colours of the cars were adapted to the areas of association based on the implicit motives.

#### 3.4.2.4 Pilot Phase 4 of the Experiment: The Business Product

The fourth stage in the experiment follows the same procedure as in the car experiment. The various choices will have the same implicit coded basis for the test subjects. Phase four is to make sure that the choice of the test subject has the quality of a similar decision based on the implicit motives.

### 3.4.3 Testing the New Set-up via Pre- and Pilot Tests

Often surveys have an insufficient design or no design at all (Oppenheim, 2005). In contrast this research had to pass one pre- and two pilot tests prior to the final roll-out. As a lot of details of the experiment and the survey were changed after the first pilot test and the feedback on publications about the 'The impact of Implicit Motives in the Area of Business to Business' (Chlupsa, 2012) it seemed useful to start the data collection with a new (I) pre- and (II) pilot test. As the test procedure had to be identical for all of the initially 120 to 150 participants a script for the structure, sequence and wording of the experiment and the survey was used. For the first stage the (I) pre-test the supervisor team Professor Dr Wolfgang Doehl, Dr Jonathan Lean and Dr Yaniv Hanoch was used (Eley & Jennings, 2005). An important part in this phase of the research and data collection was whether the new setup of the entire data collection worked and whether every participant was able to understand the task in the experiment as well as in the survey. Another important aspect was the timing of the experiment including the survey, to provide the companies and especially the managers and top managers in the industry with a reliable time frame for both the survey and the experiment. After some minor changes in the new set-up of the data collection the next phase, the second (II) pilot test started. For the pilot test a group of 40 international students from Asia, Europe and USA of Munich University of Applied Sciences were used. The data collected in the pre- and pilot test phases will not be included in the data collection. At this stage of the project the focus was more on operational facts e.g. the understanding, sequence and

timing of the experiment. The results of the first pilot test were presented and published in academic journals.

### **3.5 Description of the Final Experiment and the Survey**

The basic idea for the experiment is to show the direct interplay between the implicit motives and the business to business decision making process. Referring to the main objectives the experiment should present new findings about:

H<sub>1</sub>: People have a verifiable structure of implicit motives

H<sub>2</sub>: There is interplay between the implicit motives and B2B decision making

Rather than using a convenient test subject pool like students relevant subsamples to provide further validation should be used (Hanoch, Johnson, & Wilke, 2006). To obtain as realistic data as possible the concept was to go into the companies and make a field study in the usual environment of business people (Oppenheim, 2005). Experiments in which the measurement of the cause-effect relationship is collected in a realistic environment are so called field experiments (Meffert, Burmann, & Kirchgeorg, 2012; Pepels, 2000). As more detailed explained later in the Chapter 3.9 the sample size for the experiment based on the research is fixed of a minimum of 120 and a maximum of initially 150 people. This sample size is important to make reliable statistical tests and results in a multivariable data analysis. The test persons should work in a business to business situation and represent the diverse levels of decision makers in an enterprise. Managers and employees from companies from several industrial sectors were selected as participants. To reach a level on generalisation the experiment was made in different cities in central Europe. As far as possible it tried to focus on realistic decision making situation in the industry. A lot of well-known brands and institutions took part in this

research. For the data collection a quota sample approach were used to build up a small world as a realistic picture of the real world (Barnett, 1991; Saunders, Philip, & Thornhill, 2009; Sedlmeier & Renkewitz, 2008; Larsen & Marx, 2001). The quota of industry is based on the Eurostat in the aggregated version of the 'Nomenclature generale des Activites economiques dans les Communautés europeennes' (NACE) codes with a cross reference on the 'International Standard Industrial Classification of All Economic Activities' (ISIC) (OECD Statistics, 2012). The data collection activities started after receiving the permission of the ethical committee of the University of Plymouth (University of Plymouth, 2012).

### 3.5.1 Approach and Privacy of the Experiment

To ensure that nobody was able to draw conclusions from the filled forms concerning the test subjects got a coded envelope. The envelope, the product choice form, the sociographic and the psychographic form were numerically paginated. As a result a large number of more than 3,000 paginations (see Figure 27) had to be made by hand.

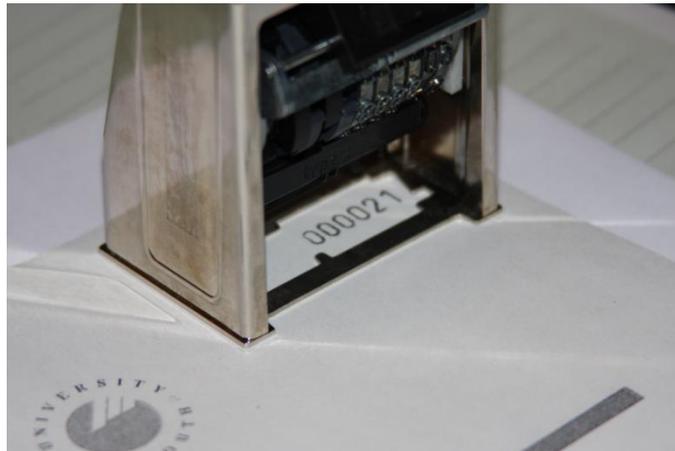


Figure 27: Pagination of Data Collection Forms

The test persons had to come up with a standard buying scenario in the field of business to business investment goods. The participants had to buy two investment products. In the first stage the test person had to buy one company car and one office piece of equipment on his own. In the second stage they should buy one company car and office equipment for three imaginary colleagues. In the third stage the participants had to

make a group decision and had to buy the identical products (cars and office equipment) simulating a buying center situation. The basic idea of the experiment is that the implicit category of the test person should match the implicit codes of the product. If the participant has to choose a product for a colleague the implicit category should match the implicit type of the colleague. If the decision making process would be completely rational, as assumed in the classical economic theory, the participants always have to make the same economical decision. In this case it should not matter to buy a car or office equipment for a colleague or oneself, alone or in a buying center situation (Pfoertsch & Michael, 2005). The decision should be merely based on to facts and features of the product. If our participants are the so called 'homo economicus' the choice must be all times the same product. There should be no variations in the decision making process.

### **3.5.2 The Phases of the Research Experiment**

The experiment and the survey were separated into ten (see Figure 28) phases. Due to the experiences of the pilot test the sequences of the data collection were changed. In general it could be distinguished between different levels of consciousness in an experimental situation. Transparent tasks, non-transparent tasks and quasi-biotic tasks in which the participant just realises the role in the set-up and biotic in which the test person has no idea about the real role and interest in the research (Meffert, Burmann, & Kirchgeorg, 2012). As the participants in the pilot test were primed in the direction that

the experiment was about a psychological topic due to the psychological Operant Multi Motive Test about the motive structure was the beginning of the test procedure the starting point were changed to the business decision making process. After the change of sequence of the data collection the participants got a clear role of a quasi-biotic briefed person in which the participants know the role of the business decision maker yet not the detailed scene behind. In addition to the pilot test a sequence with a group decision making process was to be integrated.

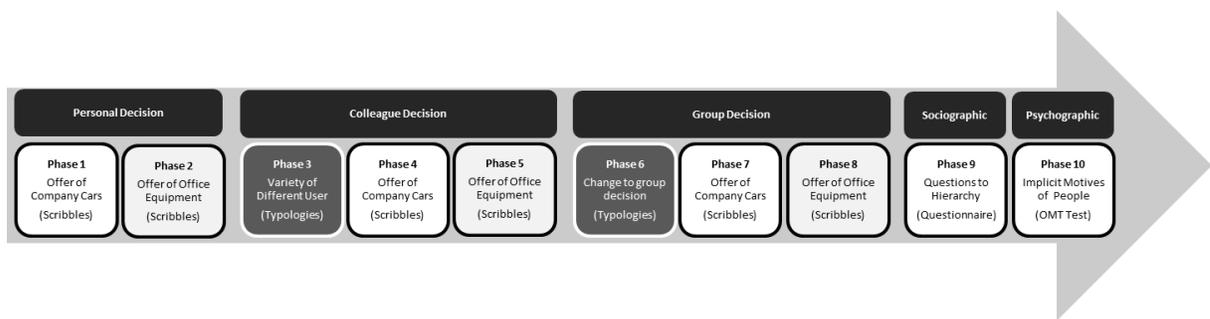


Figure 28: Design of the Final Experiment

### 3.5.3 The Choice in the Decision Making Process

Based on the experience of the pre- and pilot tests a more complex data analysis was intended. The concept was to deal with a multi-causal model to achieve both more complex and meaningful data. The goal was to apply a design based on multivariate analysis (Oppenheim, 2005). As other studies (Garber, 2012) could not offer a better range of business products than the categories used in the pilot test the business car and the office equipment were used again. Some people may criticize that a company car is not a specific B2B product. Nevertheless, many cars which will be used for private use are bought by companies (De Meo, 2013).

As every point of contact has to be optimised concerning the fit between the implicit motive of the customer and the implicit coding of the product, only people who know about the codes are able to address this neuronal network to create a strong brand. Codes must be checked for the background of the motive target group (Scheier & Held, 2006).

To avoid priming effects of existing brands sketches of the products with typical forms, designs, colours and contrasts were created. The director design of BMW Habib states, that anyone who looks to a car always starts an internal dialogue (Habib, 2013).

Because most brands in the automotive industry do have an idiosyncratic 'Formsprache' making as the key indicator of the brand identification (Carbon & Jakesch, 2012) it was difficult to create designs not attached to idiomatic brand designs and to avoid 'looks like effects'. The sketches presented were developed in collaboration with a highly reputed industrial designer Joerg Wensch at Isaria Corporate Design, working on showroom concepts for nearly all European car manufacturers (Chlupsa, 2013). The design and classification of the products was based on the results of the critical literature research and the given concepts about implicit communication.

### 3.5.3.1 Presented Affiliation Products

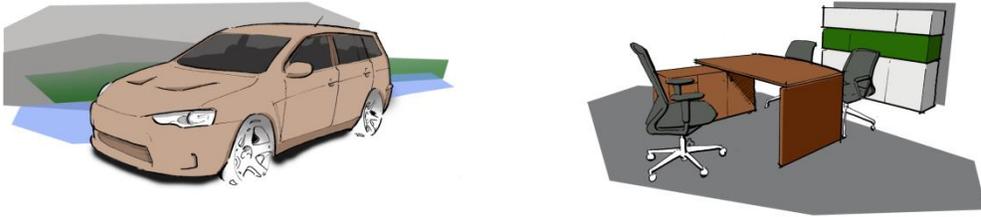


Figure 29: Sketches of Affiliation Products

*Motive:* Affiliation coded products are to attract the implicit affiliation motivated test subjects. The classification is based on the results of implicit communication into chapter 2.3.6.

*Colours and contrast:* Colours such as brown and green represent the colours of nature (see Figure 29) and give people a native and down to earth feeling (Braem, 2006; Heller, 2006; Luescher, 2006).

*Form and Design:* According to evolutionary psychology people prefer curved designs. Curved forms seem to guarantee safety (Carbon, 2010). For cars with an affiliation coded appearance the dominating element of the wheels (see Figure 29) are the tyres and not the rim. Typical examples are big SUVs like the Jeep (Jeep, 2013) or the old and classic design of the Mercedes Benz Unimog (Mercedes Benz, 2013). Wood is a classical element in office equipment such as in the first furniture collection of IKEA (IKEA, 2013).

### 3.5.3.2 Presented Power Products



Figure 30: Sketches of Power Products

*Motive:* Power coded products are to attract the implicit power motivated test subjects. Heavy-motorised vehicles provoke the assumption of a dominant behaviour in the traffic (Stricker, 2012).

*Colours and contrast:* In business a black car, a black suit and a black brief case represent reputation, prestige and dignity (see Figure 30) of the owner (Braem, 2006). In a research 43.5 per cent of the people believe that drivers of black cars are the greatest daredevils (Stricker, 2012). Black represents premium. A designer bag or a credit card in black always symbolises a premium character (Scheier, Linke, & Schneider, 2010). For the experiment a anthracite, almost black car was used.

*Form and Design:* Luxury styles include design attributes (see Figure 30) such as chrome, a shiny surface and ornaments (Leder, Carbon, & Kreuzbauer, 2007). Classic examples in the automotive industry are the cars of Rolls Royce (Rolls Royce, 2013) and Chrysler (Chrysler, 2013) with big wheels and a massive appearance. In the world

of office equipment the cubistic design of USM (USM, 2013) is a typical representative power of products as status symbol.

### 3.5.3.3 Presented Achievement Products



Figure 31: Sketches of Achievement Products

*Motives:* Achievement coded products are to attract the implicit achievement motivated test subjects.

*Colours and contrast:* Red is the most unnatural colour (see Figure 31) in the environment (Heller, 2006). People preferring red colours are persons who want to be seen. Research reveals that people believe drivers of red cars are the third aggressive people in the daily traffic (Stricker, 2012).

*Form and Design:* Achievement coded products (see Figure 31) have to be sportive and dynamic. Always to be first is the dominating life motto of achievement motivated people. Classic examples are Alfa Romeo (Alfa Romeo, 2013), Maserati (Maserati, 2013) and last but not least Ferrari (Aktag, 2012; Ferrari, 2013).

#### 3.5.3.4 Experiment – Personal Decision:

*Motives:* In the personal decision the test subjects should be attracted by the product with the best fit to their implicit motives. Thus, the implicit motives should correlate to their product choice for themselves. As mentioned above a product category for each of the implicit motives was created. The coding of the products was based on the illustrated examples. The implicit classification of Scheier et al were used for the coding process of the three implicit product categories (Scheier & Held, 2006; Scheier, Linke, & Schneider, 2010).

*Colours and contrast:* The natural brown and green office equipment and the car with the water element in the background was to attract the affiliation motivated test subjects. The power coded black and silver coloured car and office equipment was to attract the test subjects with power motivation. Finally, the achievement codes subjects were to be attracted by the red car and office equipment.

*Form and Design:* Affiliation products represented by green, wooden and nature attached elements. The surface seems both natural and matt. Products for the power motivated test subjects are massive, cubistic and glossy. For the achievement motivated test subjects the products are dynamic, angular and shiny.

### 3.5.3.5 Experiment – Colleagues Decision: Variety of Different User

To achieve on a level of generalisation no real colleagues out of the companies would be used. Prototypic colleagues were created instead. Basic assumptions concerning the look and feel of the presented pictures are based on Hans-Georg Haeusel's so called limbic types, the sinus milieus and the analysis of Hirschberger and Faust. Following Hirschberger and Faust a combination of, for instance, two methods would be useful although difficult to compare. (Hirschberger & Faust, 2011; Haeusel, 2005; Haeusel, 2006, Sinus Institute, 2011). The limbic types clusters people in six different motivations based on their mix of implicit motives. When composing the utilised pictures no mixed motive motivations were used at all. The focus was on the specific attributable motives. Following Haeusel's terminology affiliation motivated persons are harmonisers, power motivated persons are performers and achievement motivated persons are hedonists. The sinus milieus separate nine different types of customers based on value orientation and income (Sinus Institute, 2011). The focus in this research are the traditionslists, the high achievers and adaptive pragmatists. The colour concepts applied based on Braem, Heller and Luescher (Braem, 2006; Heller, 2006; Luescher, 2006). The idea of the decoding process is based on the mirror neurons (Haeusel, 2005; Kuhl, 2001; Spitzer, 2008; Scheier & Held, 2006).

## Affiliation Colleague



Figure 32: Picture Colleague for Affiliation Motive  
Licenced picture iStock Pictures, colours adjusted

*Motives:* Based on the mirror neurons the affiliation colleague (see Figure 32) is to trigger an affiliation and safety orientated decoding process (Haeusel, 2005; Kuhl, 2001; Spitzer, 2008; Scheier & Held, 2006).

*Traditional Mileu and Traditionalists :* Values and attitudes are tradition, safety and habits. These people are skeptical towards innovation, risk and change. They are rooted in the traditional blue collar culture. The motto of traditionalists is: Do not attract attention (Hirschberger & Faust, 2011; Sinus Institute, 2011). The dominating colours are natural and unobtrusive colours.

## Power Colleague



Figure 33: Picture Colleague for Power Motive  
Licenced picture iStock Pictures, colours adjusted

*Motives:* The power colleague (see Figure 33) is to trigger a power and status orientated decoding process based on mirror neurons (Haeusel, 2005; Kuhl, 2001; Spitzer, 2008; Scheier & Held, 2006).

*High Achiever and Performers:* Power people are ambitious and seem to be more rational than emotional. These people have a global economic mindset and claim the avantgarde style. Performers are very much attached to exclusivity and status products. Standard brands or ordinary products will be disregarded (Hirschberger & Faust, 2011; Sinus Institute, 2011). Dominating colours are balck, grey or silver.

## Achievement Colleague



Figure 34: Picture Colleague for Achievement Motive  
Licenced picture iStock Pictures, colours adjusted

*Motives:* Based on mirror neurons the achievement colleague (see Figure 34) is to trigger an achieving and dynamic orientated decoding process (Haeusel, 2005; Kuhl, 2001; Spitzer, 2008; Scheier & Held, 2006).

*Adaptive Pragmatixts and Hedonists:* Achievement people enjoy their lives. They prefer products that enhance their well-being. These people are success orientated, hedonistic and flexible. Brand labels and expensive products are highly welcome. Hedonists are constantly searching for rewards and enjoyments of all kinds (Hirschberger & Faust, 2011; Sinus Institute, 2011). The dominating colour is red.

### 3.5.3.6 Experiment – Group Decision: Building a Buying Center

Based on the assumption of the personal and management decision the test subjects have to come up with a buying decision for the three imaginary colleagues. The interest in the buying center decision is if there is a difference in the decision making based on the motive structure in the group. A specific point of interest is if the implicit motives of some persons will dominate the group decision or if the decision will represent a more social aspect and the assumable interests of the imaginary colleagues.

### 3.5.3.7 Survey – Sociographic Survey

The terms survey and questionnaires are used in different ways (Oppenheim, 2005). In contrast to surveys via postal questionnaires or internet surveys this research is based on a field study applying a face to face situation. The questionnaires were not administrated by the researcher; all questionnaires were handled by the test subjects themselves. The sociographic survey was to provide a level of classification. Questions were asked on age, gender, education and the time the test subjects work on the job and in the company.

### 3.5.3.8 Survey – Psychographic Survey

The division of labour between cognitive and motivational psychology tends to neglect interactions between cognitive and motivational processes (Kuhl & Kazén, 2008). There are different ways to check the implicit motives of people. The most commonly used procedures for testing the implicit motives are the

- (i) Implicit Association Test (IAT), the
- (ii) Thematic Apperception Test (TAT), and the
- (iii) Operant Multimotive Test (OMT).

*The (i) Implicit Association Test (IAT):* The IAT is probably the most well known and most widespread measure to test for automatically activated associations (Gawronski & Conrey, 2004). The IAT is a computer based testing procedure. In connection to the IAT it is common to speak about an implicit method. It is a reaction based indirect method to measure the strength of associative connections. Basically the IAT uses two discrimination tests, an attribute test and a target test. For a given situation in the test two buttons will always be assigned a collective response category. The central addicted variable is the IAT-Effect, the difference in the time of reaction between a compatible condition in which the associated concept is corresponding to the same buttons and a incompatible condition which the associated concept is corresponding to different

buttons (Mierke, 2004). Even though there is supportive evidence for the validity of the IAT, there are still controversies about its underlying psychological processes (Gawronski & Conrey, 2004). Despite missing the theoretical basics test procedures with the IAT are increasing. Gawronski and Conrey postulate illustrating both the range and the limits of the measure. This review includes the relation to explicit self-report measures, evidence for its predictive ability, studies on context and material effects, and the role of systematic error variance. Based on the results they draw conclusions about the convergent, discriminant, predictive, incremental, and internal validity of the IAT. The internal validity seems to be still critical as the IAT additionally integrates systematically failures in the variances (Gawronski & Conrey, 2004).

*The (ii) Thematic Apperception Test (TAT):* The TAT is based on the implicit motives applying the scoring of Winter coded into the dimensions of affiliation, power and achievement (Schultheiss & Brunstein, 2001). As Implicit motives are motivational dispositions that operate outside a person's conscious awareness and aim at the attainment of specific classes of incentives and the avoidance of specific classes of disincentives (Schultheiss, 2008) it is important to trigger the personal life experience of the participants. Therefore, participants have to write complete imaginative stories in response to six pictures of the TAT. In general the pictures cue strongly from each other with regard to how many score able instances of Affiliation, Power and Achievement they elicited. TAT motive measures show no significant overlap with questionnaire measure of motivational orientation or traits.

The third option is the *(iii) Operant Multimotive Test (OMT)*: The advantage of the OMT Test is to evaluate the whole range of the implicit motives affiliation power and achievement. The test subjects are given ambiguous pictures. Based on their former experiences the test subjects come to a personal interpretation of the picture. Picture interpretation test have their origins in clinical devices. The well-known 'Thematic Apperception Test' (TAT) consists of various vague drawings. People are surprisingly willing to guess (Oppenheim, 2005). Murray (1893-1988) presents with the TAT the first standardised method. The TAT encodes the implicit motives due to an array of episodes in the memory (Scheffer, 2005). Seldom was a test subject of such a comprehensively theoretical validation (Kuhl, 2005). For the psychographic survey a further development of the TAT, the 'Operant Multimotive Test' (OMT) was used. As well as the OMT is developed on the TAT empirical researches has shown that the fit is low and just work in connection with a previous need in a present situation (Scheffer, 2005). In a research Scheffer made a detailed theoretical and empirical examination of the OMT (Kuhl, 2005). In economics and marketing, these operant research techniques are a very unusual approach. In contrast to regular questionnaires the analysis of motives needs an advanced level of evaluation. Thus, it is difficult to detect as motives acting on the highest level intelligence. To satisfy their hidden needs, people apply almost endless possibilities of contextual stories (Kuhl, 2005). The measurement of motives is complex and difficult, because it is hard to present them on a logical level (McClelland, Koestner, & Weinberger, 1989; Scheffer, 2005). Due to the individual biography in general the test subjects write very personal stories. The validity of the OMT was confirmed in a study. Research reveals that the motives measured in the OMT present the needs of an early

stage of childhood (Roth, 2007) in combination with traits depending on the situation (Scheffer, 2005). The aim of the test is to show the structure of implicit motives. Based on the assessment of all advantages and disadvantages of the presented tests, for the first phase of the experiment the Operant Multimotive Test (OMT) will be used. The OMT is paper based and not connected to any IT equipment and software. As the test procedure is indicated in a strong cooperation with the industry the set up situation due to the companies are usually unclear. Based on the pros and cons of the test, the expanded version of the OMT and the possibility not to write complete stories seemed to be the appropriate procedure for effective fast feasible and reliable results. Figure 35 below presents some indicative pictures used in the OMT. Even classical marketers state that nonverbal evaluation approaches should complete the usual measurements in marketing (Meffert, Burmann, & Kirchgeorg, 2012).

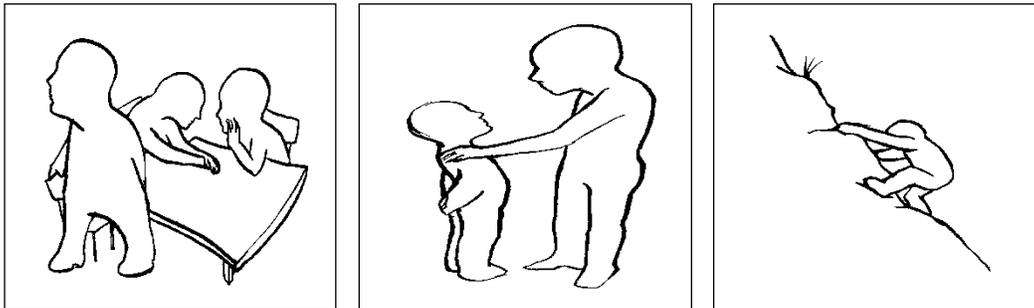


Figure 35: Picture Examples of the OMT Test

With permission of Prof Julius Kuhl

### **3.6 Description of Semi-Structured In-Depth Interviews**

An interview is not an ordinary conversation. In contrast to an ordinary conversation the purpose of all research interviews is to obtain certain information. The effort of in-depth interviews is to obtain resonance from the interviewed persons so that they express their own ideas and views spontaneously in their own words (Oppenheim, 2005). The overall aim of this final data collection phase is to add greater depth, details and meaning to statistical information gleaned from the experiment and the survey (Lean, 1996). Probably no other skill is more important in a research than the ability to conduct good interviews. In contrast to other research the interview technique requires strong interpersonal skills (Oppenheim, 2005). Following the perspective of the experiment and survey in this phase, the emphasis is what can be the implications in the future for business communication. Instead of standardised interviews the research technique of exploratory interviews in the style of depth interviews were used. The purpose of an in-depth interview is to develop ideas instead of gathering statistics. These topics are often very spontaneous and emotionally loaded. As nothing is standardised and the interviews should listen with a 'third ear' it is useful to have a hidden agenda. The interviewer should always be able to control the interview. The hidden agenda should not maintain the fiction of an interesting conversation (Oppenheim, 2005). As the interviews are modelled after this hidden agenda in the following the terminus semi-structured in-depth interview will be used. More particularly, the objectives of the interviews were to gain a better understanding of why certain communication strategies were made in the past. It is also of interest to discuss the results of the empirical research with experts from

different industries to reveal the future impact for business to business marketing and communication in general.

### **3.7 Research Method - Mixed Methods Approach**

Deciding on the most appropriate broad methodological approach for research, consideration should be given to both strengths and weaknesses of (1) qualitative and (2) quantitative techniques and how they might facilitate the attainment of the specific study (Lean, 1996). One way to distinguish is the focus on numeric or non-numeric data. Qualitative data are usually in form of words rather than numbers, so the question is how to draw a valid meaning from qualitative data (Miles & Huberman, 1994). The key advantage of the (1) qualitative approach are many detailed insights in the experiences and options of individuals that might be revealed. In contrast, quantitative research requires responses in categories with less meaningful labels such as 'Yes' or 'No' (Lean, 1996). Qualitative research opens the chance to shed more light on a specific issue. In the 80s and 90s of the past millennium the application of qualitative methods especially in the studies of consumer behaviour increased (Goulding, 1999). In contrast qualitative research is predominantly used as a synonym for any data collection technique such as interviews or data procedures which are producing non-numerical data such as the analysis of pictures or videos (Saunders, Lewis, & Thornhill, 2009). A qualitative approach is one in which the inquirer often makes knowledge claims based primarily on individual experiences (Creswell, 2003). The key advantage of (2) the quantitative approach is to handle responses from a large number of cases, facilitating the statistical aggregation of data and comparing between cases (Patton, 1987). Quantitative is predominantly used as a synonymy for any data collection technique such as questioners or statistics that generate numerical data (Saunders, Lewis, & Thornhill,

2009). A quantitative approach is one in which the investigator primarily uses post-positivist claims for developing knowledge such as reduction of variables (Creswell, 2003).

The combination of methods is associated with different paradigms, (Easterby-Smith, Thorpe, & Lowe, 2002; Lean, 1996). Patton argues that in practice it is possible and often desirable to set aside concerns about methodological purity and use both qualitative and quantitative approaches (Patton, 1987). Strength and rigour of research lies in combining the strength of individual techniques (Lean, 1996). Mixed-model research combines quantitative and qualitative data collection techniques at other phases of the research process (Saunders, Lewis, & Thornhill, 2009). Mixed methods research gather information from both predetermined and emerging methods, from open- and closed-ended questions, from multiple forms of data drawing on all possible statistical and text analysis (Creswell, 2003). Mixed methods research is a natural complement to traditional qualitative and quantitative research. Although there are many differences between qualitative and quantitative research, yet there are also similarities between the various approaches. For example, both use empirical observations to address research questions. Regardless of paradigmatic orientation, all researchers in social science represent an attempt to provide warranted assertions about human beings (Johnson & Onwuegbuzie, 2004).

Mingers postulates that the research result will be richer and more reliable if different research methods from different paradigms will combined (Mingers, 2001). A mixed method design is useful to capture the best of both quantitative and qualitative approaches (Creswell, 2003). Thus, this thesis tried to get the most effective results from a combination of quantitative and qualitative research.

### **3.8 Time Horizons – Cross-sectional Studies**

Research is not a discrete event but a process that has phases or, rather different types of activities, which will predominate at different times (Mingers, 2001). Primarily, there are different types of multi-method research design sequential, parallel, dominant, multi-methodology and multilevel research. For this thesis the sequential design is with results feeding from the first one into the later one. The research process starts with an experiment, followed by a survey. The results will later be discussed in in-depth interviews with experts from the industry (Mingers, 2001).

Previously one pre- and two pilot tests checked the proceeding and the analysis of the field study. The quantitative data collection activities started in October 2012 after the clearance of the ethical committee of the University of Plymouth (University of Plymouth, 2012) and ended six months later in March 2013. Many well-known brands and institutions like Audi, BMW, Capgemini, Intercontinental Hotels, Lufthansa, MINI, NRJ, Porsche; Siemens, Telefonica and other corporations took part on this data collection.

The qualitative data collection started in June 2013 and ended in July 2013. For the quantitative part a sub sample of experts from the quantitative research was used.

### **3.9 Data Collection and Interpretation**

To meet the aims of the research an experiment, a survey and semi-structured in-depth interviews were implemented in the empirical research process. Research methods can be seen as instruments for provoking a response from the world. The response depends on both the world and the instruments (Mingers, 2001). Researcher is becoming increasingly interdisciplinary, complex and dynamic. All researchers need a solid understanding of multiple methods used by other scholars to facilitate communication and collaboration (Johnson & Onwuegbuzie, 2004). A major element goes into the specific methods of data collection and analysis. It is useful to consider the full range of data collection in any study numeric versus non-numeric data (Creswell, 2003). The current change in economics has one remarkable characteristic: all new research programmes in economics have their origins in other sciences and the philosophy of science for economics lie in large degree outside economics in the history and philosophy of science (Davis, 2007). The idea is to control the applied models and findings from the communication industry in an academic way. This thesis is based on the expertise of marketing but also has direct connections to the important fields of psychology, sociology and neurology. Adopting a particular paradigm is like viewing the world through a particular instrument such as a telescope, an X-ray, or an microscope. Each reveals certain aspects, but blinds others (Mingers, 2001). The basic structure of the thesis is based on international secondary literature. Secondary literature involves books and journals. The detailed content is based on primary literature. Primary literature involves sources such as reports, white papers and planning documents. The

terms are reviewed in the tertiary literature. Tertiary literature involves media such as encyclopaedias and dictionaries (Saunders, Lewis, & Thornhill, 2009). The data collection process includes an experiment, a survey and semi-structured in-depth interviews.

### **3.9.1 Data Collection Concept Experiment**

The first data collection phases involve the implementation of an experiment. Firms are made up of many agents; it is not obvious why they should be seen as single entities (Davis, 2007). Data collection and data analysis are based on multiple methods. Based on a cross-sectional analysis it is a mixed methods approach. The focus is on the non-numerical data such as words but the statistical work will prove the correlation between the statements and the reactions of the test subjects. The qualitative data will be quantified and converted into numerical codes to allow a statistical analysis (Saunders, Lewis, & Thornhill, 2009). The reason for the mixed methods approach with the experiment as first phase of data collection is to move from the individual level to a general level. This will allow a solid analysis and clear statements to be made regarding the correlation of variables and results.

### 3.9.2 Data Collection Concept Survey

The aim of the first questionnaire is to get information connected to the experiment. The questionnaire has to generate the basic data for the statistical analysis. The questionnaire basically has two chapters, a (1) socio-demographic and (2) organisational questionnaire. The (1) socio-demographic section is concerned with data and information like gender, age and education. The second section categorises (2) organisational data and information, like the function in the company, the level of hierarchy and competence in business decision making. As well as providing qualitative insights to add greater meaning to the findings of the survey, the question also served to provide a degree of 'pre-understanding' (Gummesson, 2000) in relation to the issues to be explored through the experiment.

Since 1938 implicit motives will tested with the Thematic Apperception Test (TAT). Test persons had to write their own stories based on pictures. These pictures are polysemous drawings with the possibility of different interpretations. Based on defined rules the stories will be decoded and categorised into the implicit motive structure of affiliation, power and achievement. Atkinson and McClelland showed in 1948 in a short term test about the hunger of people the reliability of the TAT. In a long term study the test showed the implicit power motive and the result 16 years later in the success of the test persons. The power motivated managers were more successful as the other managers of the study in a big US company. Based on the TAT an improved and more

reliable test the Operant Multi-Motive Test (OMT) was developed over the last years. For the classification of the test people I will use the Operant Motive Test (OMT) (Brandstaetter, 2009). The OMT is a further development of the (TAT) and the chance is given to stay in permanent and direct contact with the inventor of the OMT-Test Professor Julius Kuhl from the University of Osnabruck during the PhD thesis. Kuhl describes the function of the OMT in a personal discussion: "OMT captures different modes of satisfying the motive-specific need, four active ones: two self-regulated ones ,one based on positive and one based on negative affect and two incentive-regulated (again: one positive-approach and one negative-avoidance) - plus one characterised by passive avoidance...Taking modes of enactment into account reduces the gap between motives or needs and behaviour (Kuhl, 2011)". For the evaluation the implicit motives of the test subjects the OMT manual would be used. The research is based on the classical three motive structure based on (Bischof, 1985; Bischof & Bischof-Koehler, 2012; Kuhl, 2010; Kuhl, 2011; McClelland, 1985; McClelland, 1987; Scheffer, 2005; Scheffer, 2009). The following Table 8 presents the manual used for the decoding of the OMT questioners.

5 Modes of Enactment ↓ (System Configurations) <b>Necessary Conditions*</b>	Motives ( <i>sufficient conditions*</i> )		
	<b>Affiliation (attachment)</b> <i>Social contact:</i> mostly dyadic, horizontal, no "purpose" non-intentional, experiential	<b>Achievement (standard of excellence):</b> performing better or worse than others or than one did earlier, mastering a challenge, goal-oriented	<b>Power (having an impact on others):</b> vertical/ hierarchical relationship, self-expression goal-oriented (means-end)
<b>1) S+:</b> Positive Mood: self-congruent (& often implicit) agency, creativity, natural flow <i>PSI: Level 5 (approach motive)</i>	<b>A1: Personal Encounter</b> (affective sharing: <i>intimacy</i> ) mutual understanding, personal reciprocity	<b>L1: Flow</b> Being immersed in a challenging activity, curiosity, joy about challenge, playful learning, focus on <i>process</i> rather than outcome	<b>M1: Prosocially Leadership</b> self-expression, giving advice, helping, disseminate knowledge, protect others,
<b>2) A+:</b> Positive Incentive external, object-focused attention <i>PSI: Level 6 (approach goal)</i>	<b>A2: Fun with Others</b> extravert or superficial contact, social entertainment, good mood with others, flirting	<b>L2: to do something well</b> (intra-individual comparison: perform better now compared to earlier), concentration, goal-focus	<b>M2: Charismatic Leadership</b> (encourage others) object-focused influence, helping or caring that is situational elicited
<b>3) S(-): Active Coping (self-based)</b> Recognizing negative affect or difficulty combined with creative problem-solving, flexibility or widening of att. <i>PSI: Level 7 (self-regulation)</i>	<b>A3: Restoring Relationship</b> mastering difficulty in relationship (e. g. rejection), understanding pain or weakness perceived in another person	<b>L3: Coping with Failure</b> Recognizing some difficulty or a failure combined with active coping, learning from mistakes, flexibility, reciprocal achievement (active participation in team-work)	<b>M3: Responsible Leadership</b> (leading despite opposition ("breaking the ice"): reconciling conflict, integrating people, make decisions, supporting others' autonomy
<b>4) A(-): Active Avoidance</b> to be avoided negative state is not always mentioned, but can be inferred from controlled or narrow-minded action <i>PSI: Level 6 (avoidance)</i>	<b>A4: Protection (old meaning of "affiliation")</b> seeking security, being close, being loved, clinging to somebody "controlling" relationships	<b>L4: Pressure</b> social comparison: performing better than others, competition, being relieved after succeeding, tiring effort, <i>trying to avoid mistakes</i>	<b>M4: Direction</b> Dominance, giving orders, strictness; inhibited power: feeling conflict toward power (negations), justification of power
<b>5) A- &amp; A(+): Passive Avoidance</b> negative state without coping <i>PSI: Level 5 (avoidance)</i>	<b>A5: Loneliness</b> Feeling abandoned, rejected not liked, feeling lonely	<b>L5: Fear of Failure</b> helpless or disappointed after failure	<b>M5: Powerless</b> having no power, feeling guilty, being suppressed

Note: Children (sometimes even adults) express the need for power from the "inferior" stance (can be coded by adding a „ch“ to the M: M-ch1: receive or ask for advice; M-ch2: admire (or applaud) somebody; M-ch3: accept guidance, advice or conflict-resolution in a difficult situation, M-ch4: to obey; M-ch5: same as M5.  
\*Sufficient conditions\* (in each of the 20 cells): Satisfaction of ONE of the criteria listed is sufficient for coding, provided the meaning is compatible with the system configuration described in the first column of that row (i. e., the system configuration postulated for that level or mode of motive enactment)

Table 8: OMT Manual with Three Implicit Motives

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### 3.9.3 Data Collection Concept Interviews

Basically there are different types of interviews. The first typology differentiates between structured interviews, semi-structured interviews, unstructured or in-depth interviews. The second typology differentiates between standardised interviews and non-standardised interviews. Robson, based on the work of Powney and Watts, refers to a different typology and distinguishes between respondent and informant interviews (Saunders, Lewis, & Thornhill, 2009). Robson describes three approaches to conducting research interviews based upon differing degrees of formality and structure. At the one extreme there is the fully structured interview with standardised questions and limited response options and at the other extreme the unstructured interview (Lean, 1996; Robson, 2002). McCracken identifies three additional functions of this type of approach. Firstly, it enables prompts to be carefully crafted and precisely situated in the interview. Secondly, it establishes channels for the direction and scope of discourse. Finally, the plan allows the questioner to give all of his or her attention to the informants' responses, (Lean, 1996; McCracken, 1988). Easterby-Smith, Thorpe and Lowe warn that such a non-directive approach may lead to poor and subsequently difficult interpretable data (Easterby-Smith, Thorpe, & Lowe, 2002). Because of weaknesses in both the structured and the unstructured approaches, a number of authors favour the semi structured interview (Lean, 1996; Robson, 2002). For this research project the in depth-interview approach is planned. The overall aim of an in-depth interview data collection phase is to add greater depth, detail and meaning to the statistical information (Lean, 1996). In choosing firms for interviews, quota sampling approach will be used (Patton, 1987).

The non-standardised interviews can be differed into one to one and one to many interviews. For this PhD thesis the one to one interview is chosen. The one to one interview has three possibilities: Face-to-face, telephone- or internet interviews. For this qualitative data collection the face-to-face interview was applied. More especially, the objectives of the interview were to gain a better understanding why communication in the business to business is like it is and why marketing managers do or do not use new approaches in the field of business to business communication. Also of interest is to discuss new possibilities of industrial and business communication. A final reason for examining the chosen interview partner is to provoke a reaction from the current 'captains of communication'.

#### **3.9.4 Data Collection Concept Population and Sampling**

Companies and institutions provide managers from the private and public sector. They are all decision makers and the scale of the statistical population is endless. According to a study from Dun & Bradstreet the German Post World Net presented a worldwide number of 56 Million (Deutsche Post World Net, 2007). Based on Eurostat business overview of 2006 there are approximately 20 Million enterprises in the EU 27 member states. In total these companies generate a turnover of 22 Billion Euros. About 129 Million people are employed (European Communities, 2009). Estimations on the number of decision makers differ a lot, due to a weak definition. Based on statistical research a scale of 40 Million decision makers in Europe seem to be realistic. When discussing the

size of sample, Sachs argues in his explanation: After thirty observations in a random sample with an empirical probability of 95% about 85% of the data of a universe, are within the maximum and minimum value. Based on Sachs and Wilks a statistical probability (P) of 95 % and extreme value of the sample ( $\gamma$ ) 95% the result is a sample size of 93 people. Following his remarks on Fountain and Chou the result of an endless statistical base ( $\infty$ ) leads to a sample size of 93 people too (Sachs, 2000). To achieve the opportunity to receive reliable statistical tests and results the sample size for the experiment in this thesis was first fixed to a minimum of 120 and a maximum of 150 people. The participants are to work in a business to business situation and represent the diverse levels of decision makers in an enterprise. For the data collection a quota sampling approach based on the statistical institute of the European Communities will be used (European Communities, 2009).

### **3.10 Chapter Summary**

To sum up the methodology, the chapter started with close reference to Saunders et al's search for the appropriate research process (Saunders, Lewis, & Thornhill, 2009). After a discussion of the research philosophy, the research approach and the research design the methodology adopted was based on an objectivism philosophy in the form of critical realism. The choice of approach was deductive. As a research method, a mixed method approach of quantitative and qualitative elements was chosen.

After the basic methodology, a pilot test and the different phases of the experiment and the surveys were described. An important element in the success of the research was the sequence and the time given by the cooperating companies. The pilot test revealed important aspects which influenced the final study design.

Based on the findings of the first pilot test, two more pre-tests and one more pilot test were conducted to check the new data collection instruments. At the end, a research strategy for the main data collection was finalised.

## 4. Empirical Research and Data Collection

This chapter considers the mixed methods approach for a set of reliable data. It contains the empirical part of the research programme (Experiment, Survey and Interviews). Firstly, the findings and results of several pre- and pilot tests which were necessary to develop the final setup for the experiment are discussed. Then the results of the data collection are presented followed by the findings out of the in-depth interviews with experts out of various fields of industries.

The recent empirical research was not able to refer to a well-tried and proved set of tools to conduct the empirical data collection. The results achieved from the pilot test matched with the results of the literature review (Chlupsa, 2011). Nevertheless, doubts were expressed by peers concerning the eligibility of the test concept and experiment procedure. When reviewing the procedure of the pilot test issues were detected that might have affected the findings.

This is why a test concept and experiment procedure had to be developed over 4 phases: (1) pilot test, (2) pre-test 1, (3) pre-test 2, (4) pilot test 2 which were followed by the (5) data collection (see Figure 36) phase. In every phase empirical data were collected, nevertheless the data of phase 2 to phase 4 were merely applied to develop and examine the test concept and the experiment procedure. The figure below provides an overview of the development and a brief listing of the findings out of the phases 1 to

4 concerning the test procedure which lead to the final test concept and experiment procedure.

The results of phase 1 pilot test and phase 5 data collection are presented in this chapter. In retrospect it has to be concluded that both the test concept and the experiment structure of the pilot test have not been appropriate to capture the complexity of the implicit motives acting as hidden drivers in decision making in business. This is the first result of the thesis and a novel contribution to knowledge.

Development of the Test and Experiment Procedure

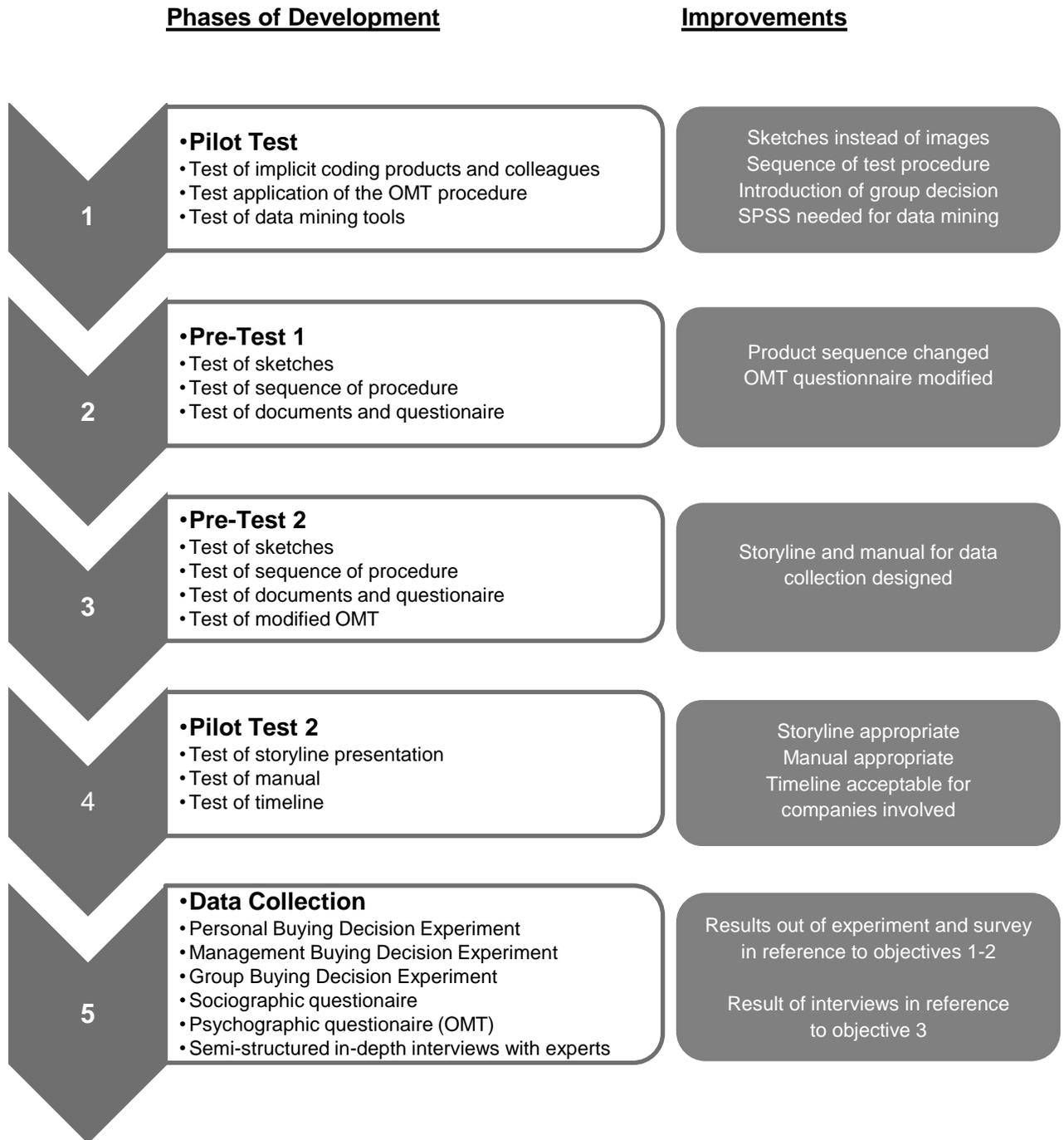


Figure 36: Development Test and Experiment

## **4.1 Pre- and Pilot Tests**

The following test was conducted to examine the relevance and the correlations between the basic objectives of the thesis, and to test the analysing tools for the main data collection process as well.

### **4.1.1 Description of the Pilot Test**

In reference to objective 1 the (1) first stage of the experiment is to examine the implicit mind set of the test subjects. Cognitive psychology examines the mechanisms underlying information processing, motivational psychology explores the needs and goals for which cognitive mechanisms can be used and the feelings aroused in response to the degree of goal attainment or need fulfilment (McClelland, 1985). Based on the findings of the (1) first stage in reference to objective 2 in the (2) second stage, the test subjects have to make a buying decision concerning a company car and office equipment for their own use and in the (3) third stage the test subjects have to make buying decisions concerning company cars and office equipment for three imaginary colleagues. Objective 3 will be analysed in the qualitative part of the research.

In reference to objective 2 the idea of the experiment is that the implicit category a test subject is assigned to will match the implicit codes of the product. When selecting a specific product for a particular colleague, the implicit coded category of the product should match the implicit motives of the colleagues. Acting in accordance with the theory of the homo economicus, the test subjects are expected to select the same product all the time. The decision should be based on the facts and features of the product only, neglecting motives and motivation. Thus, the cheapest car and the cheapest office equipment should be selected.

### **4.1.2 Result of the Pilot Test**

#### 4.1.2.1 Pilot Test - Preliminary Results

In reference to objective 2 a first examination of the results seemingly revealed a clear correlation between the detected implicit motives of the test persons and the implicit codes of the selected products. Based on the principle of coding and decoding the sender codes and the receiver decode the message. The meaning of the codes is always connected to a cultural and subcultural context (Scheier & Held, 2006).

### **Preliminary Results - Personal Decision**

The pilot test was conducted with engineering students attending a continuing education programme in Business Administration at Munich University of Applied Sciences. Following Haeusel and taking into account that the participants intend to broaden their skills led to the assumption of a sample representing high potentials that are successful in their job and striving for a position in management. This is why a strong implicit power motivation of the entire sample was expected (Haeusel, 2005). This was supported by reports on a strong implicit power motivation in the southern areas of Germany (Haeusel, 2008). The first results of the pilot test evinced that most participants selected the power coded car when deciding which company car to buy for themselves. This seemed to support the hypothesis that the implicit motive of the test subject would match the implicit code of the product.

### **Preliminary Results - Management Decision**

For the management decisions the test subjects had the choice between three prototypic colleagues and three different versions of two kinds of products each. The coding process for the colleagues is based on the findings of the critical literature review and the interplay concept of the interdisciplinary fields of science in chapter 2. Every colleague represents a stereotypic prototype of one of the three implicit motives. Each version of the products represents a product coded in accordance with the attributes of

the three implicit motives. Seemingly this part of the experiment worked well and the test subjects decoded the implicit code of the typology of the imaginary colleague as well as the implicit coding of the products. Based on this result of the decoding process the test persons selected the appropriate products. With a high degree of probability the imaginary colleagues would feel comfortable with the selected kind of car and office equipment. Merely in case of the office equipment (see Figure 37) for the power coded colleague the result was not as expected due to an inappropriate coded image. This led to a modification in the test procedure. Instead of images sketches were applied which could be coded much more precisely according to the implicit motives. A side-effect of using sketches was to eliminate the problems concerning the copyright of the images.

The first preliminary data analysis was conducted via excel. It revealed what was expected in advance but has to be proofed: the mechanics of the experiment requires a professional statistic software tool such a SPSS in order to enable an in-depth data analysis.

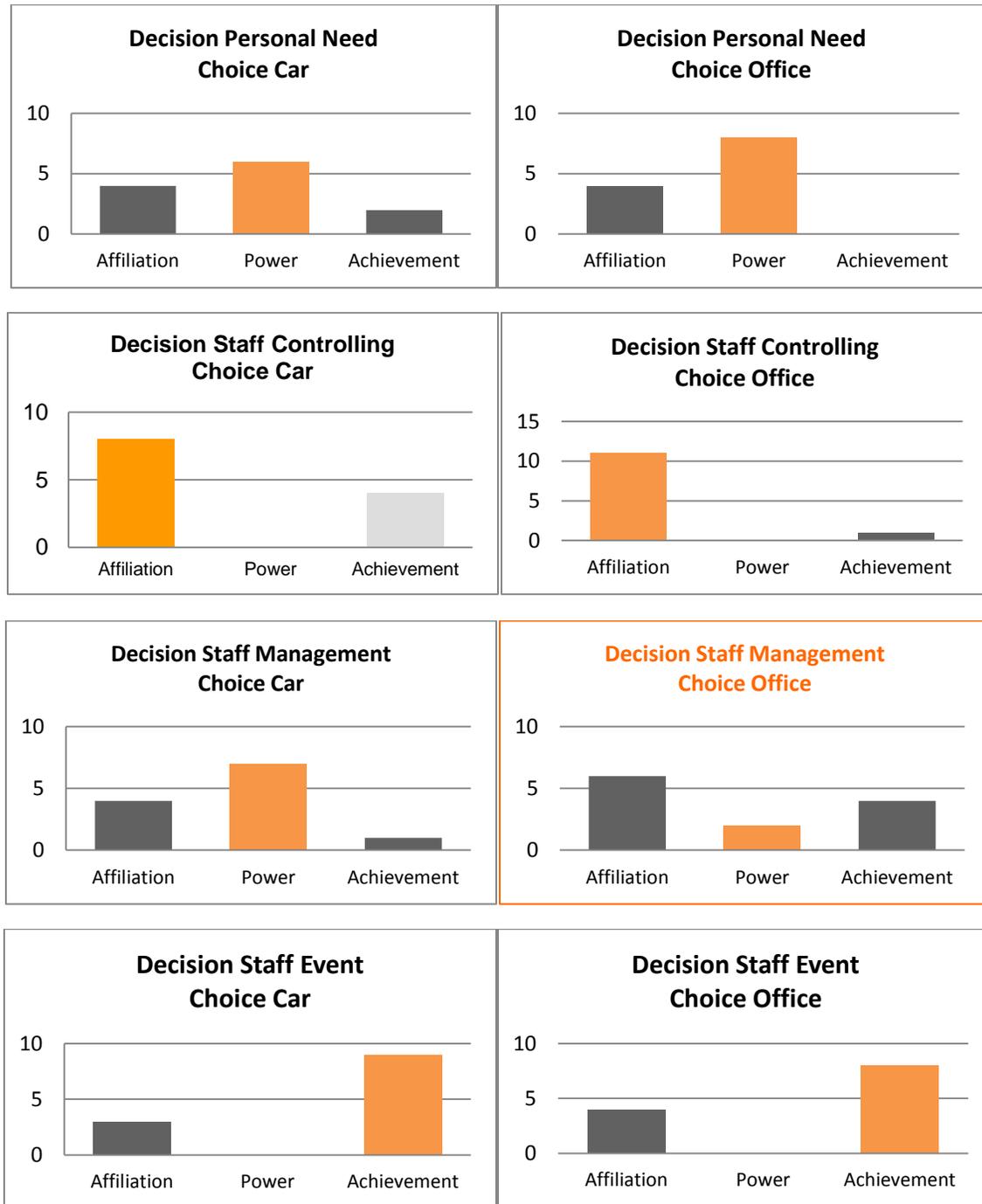


Figure 37: Pilot Test Preliminary Results

#### 4.1.2.2 Pilot Test - Final Results

##### **Pilot Test - OMT Test**

From a scientific perspective an assumption on the implicit motivation of the participants of an experiment is not acceptable. Valid information on the implicit motives of the test subjects is needed to achieve reliable results. In reference to objective 1 and 2 the (1) first stage of the experiment is to examine the implicit mind set of the test subjects. To discover the implicit motives of the OMT Test of University of Osnabruck (Kuhl, 2011) is applied as visible in the *Appendix B*. The analysis of the results was conducted in appliance with the procedures established by Kuhl and documented in the OMT Manual (Kuhl, 2011) as visible in Table 8.

The detailed analysis of the data gained by the participants of the pilot test reveals a particular structure of the implicit motives. Even within the small sample the entire range of implicit motives (*affiliation, power and achievement*) was detected.

Pilot Test - Implicit Motive Structure

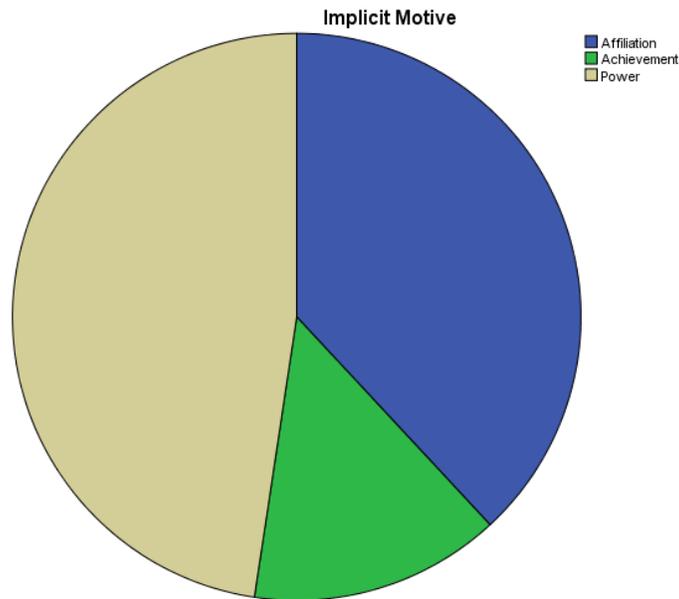


Figure 38: Pilot Test Frequency of Implicit Motives

Although at 47.6 per cent the implicit motive *power* is still the dominant motive, the *affiliation* motive at 38.1 per cent and the *achievement* motive at 14.3 per cent cannot be neglected (see Figure 38) as visible in *Appendix C*. Thus the distribution of the implicit motives within the sample differs significantly from the initial assumption of power motivation. This might be seen as a first but due to the very small sample weak indicator to support the hypothesis.

H1a: People have a verifiable structure of implicit motives

H1a<sup>3</sup>: Top manager have an over proportional high intensive power motive

Due to Haeusel the implicit motive *affiliation* is generally more often detectable in female or elderly peer groups (Haeusel, 2005). Nevertheless share of the affiliation motive cannot be caused by the quota of 28.6 percent of female participants as visible in *Appendix C*. Thus it seems to be useful to examine the coherence between gender and the implicit motive structure.

The bar chart below (see Figure 39) visualise the results of the cross tabulation visible in *Appendix C* of the implicit motives gender revealing the implicit motive power as dominating motive with male participants in the pilot test.

Frequency of Implicit Motives Based on Gender

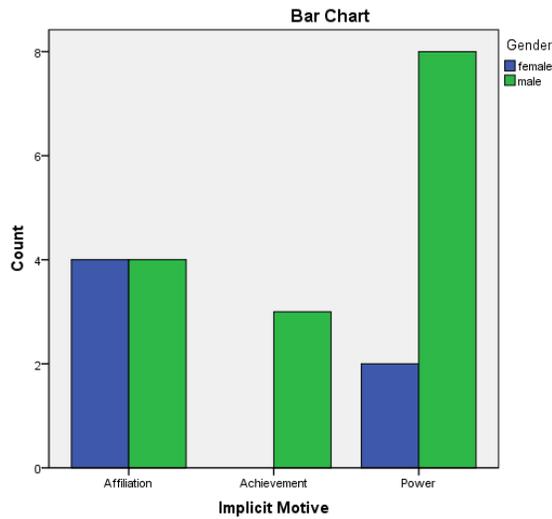


Figure 39: Pilot Test Implicit Motives Based on Gender

With a Cramer’s contingency coefficient  $V$  of 0.4, a statistical relationship between the implicit motives and the gender of the tested students is verifiable. Within the range from 0 = no correlation to 1 = strong correlation a correlation is regarded as valid if the Cramer’s contingency coefficient  $V$  exceeding 0.3 in social science. Thus the correlation between motives and gender in the sample of the pilot test is not significant but numerically provable as visible in *Appendix C*.

Thus a share of 38.1 per cent of the affiliation motive in the sample might be seen as a first but due to the very small sample weak indicator to support the hypothesis

H1b: Implicit motives are verifiable connected to the gender

and

H1b<sup>1</sup>: Women are over proportional affiliation motivated then man as well.

Nevertheless it has to be stated that this result was contrary to other researches and contrary to the findings of the analysis gained by the main data collection (Kazén & Kuhl, 2011).

### Pilot Test - Personal Decision

As visible in the figure below (see Figure 40) most of the test subjects selected the car with the seemingly implicit coding of power particularly when being categorised in the typology of the implicit motive affiliation. This does not comply with the expected findings. One explanation for this obvious mismatch is that the used image of the car contains more implicit coding in the dimension of affiliation thus triggering the wrong associations. Another explanation is that the evaluation of the implicit motives of the OMT test has a bigger inaccuracy than expected.

The analysis of the cross-tabs visible in *Appendix C* does not show a clear correlation between the implicit motives and the selected car at first sight. Most participants with the implicit motive affiliation chose the power coded car whereas participants with the implicit motive achievement more often selected the affiliation coded car than the achievement coded car. Most of the power coded participants chose the achievement coded than the affiliation coded and finally the power coded car. Obviously the process of assigning the implicit codes to product goes awry. In addition, there might be a deficit in the interpretation of the implicit motives. Nevertheless the Cramer's contingency coefficient  $V$  shows a relatively clear correlation between both dimensions. With a Cramer's  $V$  of 0.616 it seems that there is a statistical correlation between the implicit motives and the car selected by the test subjects visible in *Appendix C*.

### Implicit Motives versus Personal Choice Company Car

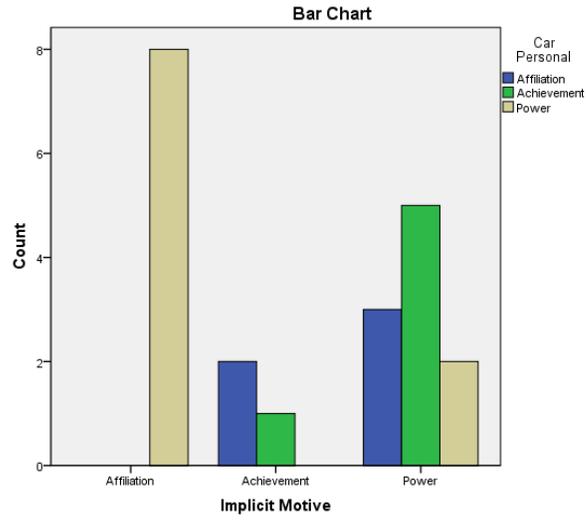


Figure 40: Pilot Test Implicit Motives versus Car Personal

Concerning the implicit motives of the participants and the implicit coding of the office equipment, the figure below (see Figure 41) reflects a similar situation as for the cars. Obviously the coding procedure does not work appropriately either nevertheless more people with the implicit motive affiliation choose the affiliation coded office equipment. In case of the power motivated participants the power coded office equipment is chosen which indicates that the coding process works well. The crosstab seems to look more logical nevertheless and surprisingly the contingency coefficient Cramer's V with 0.198 does not show a clear statistical correlation as visible in *Appendix C*. This contradiction might be caused by the insufficient data base especially in the area of the achievement motive and highlights the importance of a much bigger data base for the final data collection.

### Implicit Motives versus Personal Choice Office Equipment

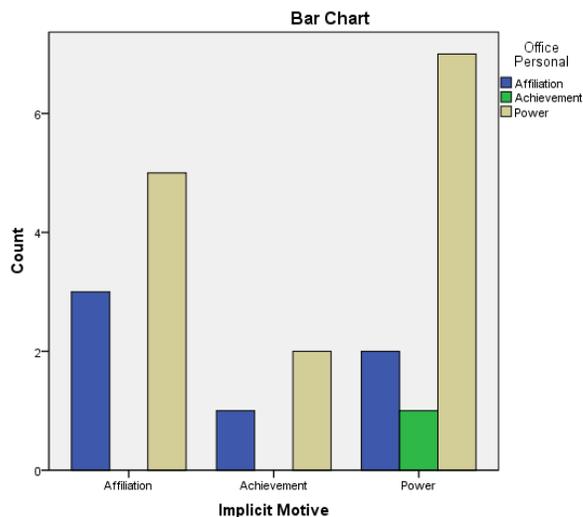


Figure 41: Pilot Test Implicit Motives versus Personal Choice Office

**Pilot Test - Management Decision Colleague Controlling**

As visible in the figure below (see Figure 42) most of the participants assigned both the affiliation coded car and the affiliation coded office equipment to the affiliation coded colleague of the controlling department. A classical statistical contingency coefficient such as Cramer's V cannot be figured out in this case because the variable implicit motive affiliation for the controller colleague is constant.

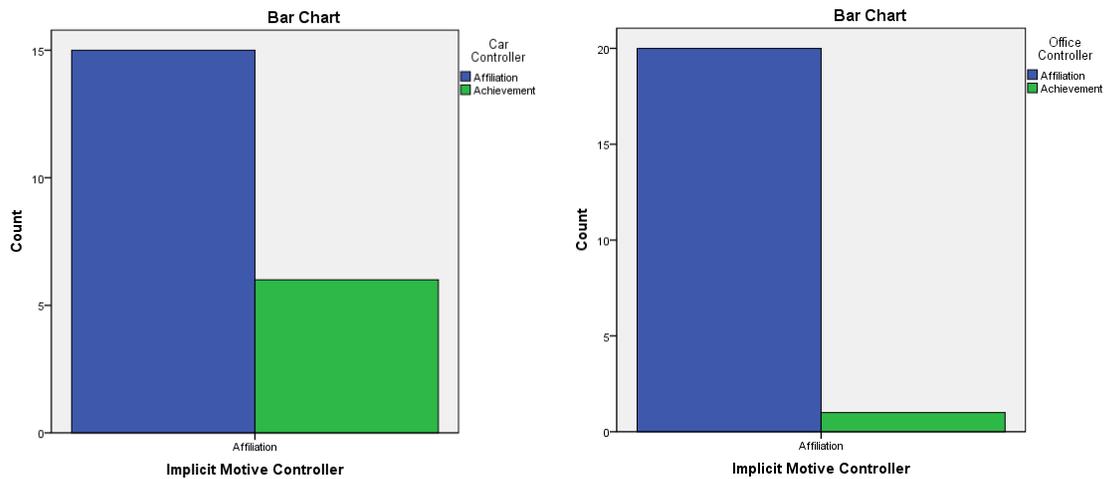


Figure 42: Pilot Test Management Decision Controller

**Pilot Test - Management Decision Colleague Corporate Strategy**

As visible in the figure below (see Figure 43) most of the participants assigned the power coded car to the power coded colleague of the strategic management department. Concerning the office equipment most of the participants assigned the power coded equipment but both the affiliation coded and the achievement coded equipment was assigned as well thus the result is less clear. A classical statistical contingency coefficient such as Cramer's V cannot be figured out in this case because the variable implicit motive power for the corporate strategy colleague is constant.

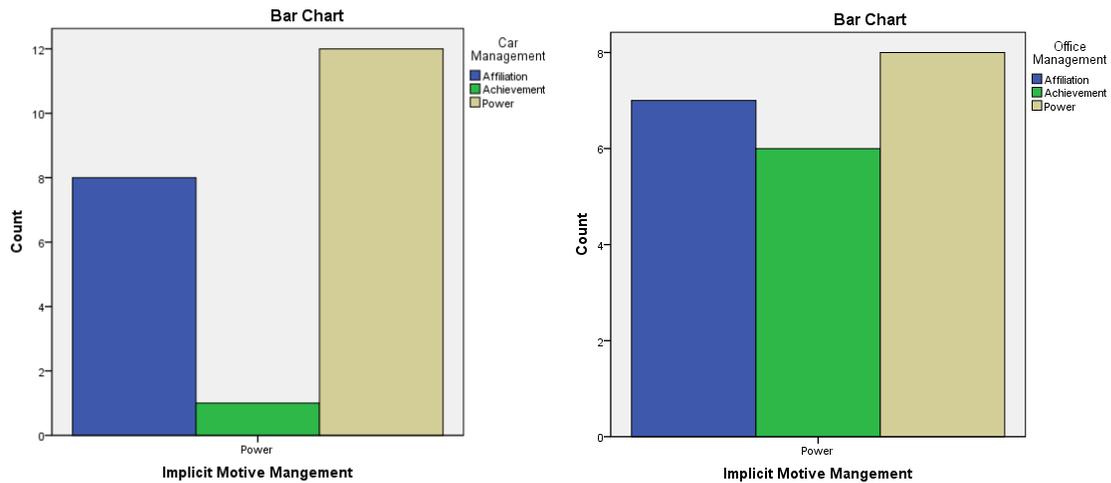


Figure 43: Pilot Test Management Decision Management

**Pilot Test - Management Decision Colleague Event**

As visible in the figure below (see Figure 44) most of the participants assigned the achievement coded car to the achievement coded colleague of the strategic event department. Concerning the office equipment by far most of the participants assigned the achievement coded equipment but both the affiliation coded and the power coded equipment was assigned as well thus the result is a little bit less clear. A classical statistical contingency coefficient such as Cramer's V cannot be figured out in this case because the variable implicit motive achievement for the event colleague is constant.

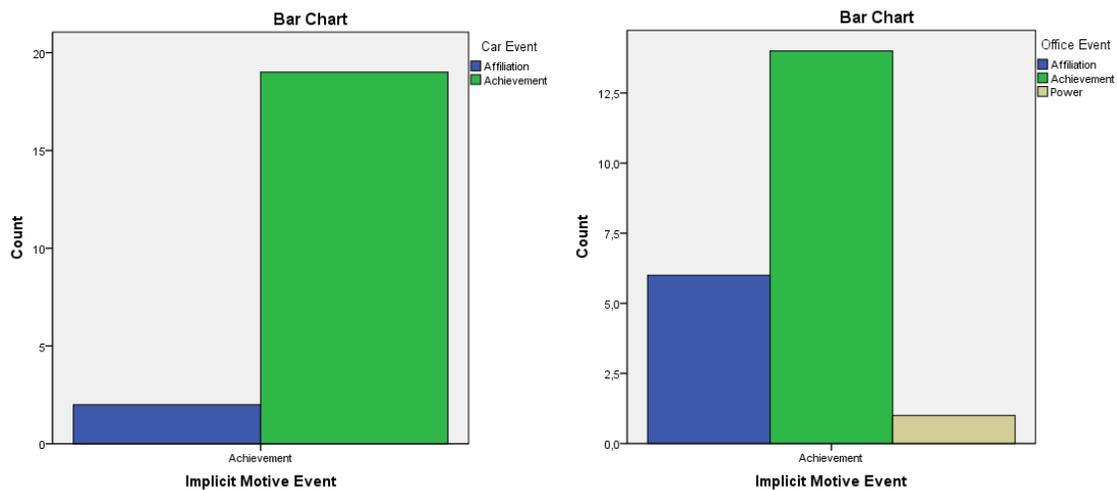


Figure 44: Pilot Test Management Decision Event

#### 4.1.2.3 Pilot Test - Findings for Data Collection

The pilot study was of high importance for the final entire body of research revealing first and preliminary results (1), issues concerning the sample and its volume (2) and the procedure of the data collection as well (3).

(1) Based on the data of the pilot test and according to the expectations, women seem to be more affiliation-motivated than men. In contrary to the initial assumption an extreme dominance of the power motive could not be verified for the peer group. Nevertheless event the pilot test seems to indicate that B2B decision making might be less rational than pretended. It seems that people in a B2B decision making situation are affected by hidden drivers and implicit motives are an important factor in the B2B decision making process.

(2) Due to the limited data volume of the pre-test the problem arose that some statistical values were difficult to compute because some data tend to zero. Taking the distribution of the motive categories into account this might also happen in the final research when applying an un-sufficient data basis. Nevertheless the limited data volume already revealed that the data mining procedure requires high performance concerning statistics such as SPSS.

(3) The pilot test revealed the crucial importance of the implicit coding of the pictures applied, especially concerning the products to be assigned. Concerning the final experiment the implicit communication has to be in focus. It does not seem to be appropriate to use pictures of existing brands. The implicit coding of existing products and brands is powerful and thus beyond the control of the researcher. This is why sketches of vehicles and office equipment representing a maximum of implicit coding embedded in a suitable communication concept had to be designed and tested in additional preparatory steps prior to the final experiment. In addition as a result of the feedback of the participants of the pilot test a third decision was added to the setting of the experiment: a group decision on a car and the office equipment for the imaginary colleague. When taking part in the OMT test the participants became suspicious whether the experiment was merely related to decision making or part of a hidden agenda. This might have affected the choice of products for themselves and the products selected for the imaginary colleague. This is why the order of the data collection within the experiment was detected as crucial and decision making experiments should be conducted prior to the OMT. The OMT test was checked by a second authority to ensure the results are valid.

## 4.2 Data Collection - Final Survey

### 4.2.1 Description and Objectives of the Survey

The basic idea of the research is to show the direct interplay between the implicit motives and the business to business decision making process. Referring to the main objectives the experiment should present new findings concerning the following hypotheses:

H<sub>1</sub>: People have a verifiable structure of implicit motives

H<sub>2</sub>: There is interplay between the implicit motives and B2B decision making

To obtain as realistic data as possible the concept was to address companies and conduct a field study in the working environment of business staff at all levels of hierarchy (Oppenheim, 2005). To ensure a stable level of information and valid data (Kahneman, 2011) the sample consisted out 175 managers and employees of 33 companies out of various industrial sectors. To achieve a solid level on generalization the experiment was conducted in several economic areas in central Europe such as Frankfurt, Ingolstadt, Munich, Nurnberg, Prague, Stuttgart and Salzburg. Gender mixed, disciplinary mixed and hierarchy mixed teams of various well-known brands and institutions such as Audi, BMW, Capgemini, the Intercontinental Hotels, Lufthansa, Mini, NRJ, Porsche, Siemens and others corporations participated in the process of data collection. Via personal contacts, assistance of customers and suppliers and other institutions a small world was designed reflecting as realistic picture of the real world.

Concerning the data collection modus a quota sample approach were applied (Saunders, Lewis, & Thornhill, 2009) based on the aggregated version of Eurostat based on the (NACE) codes with a cross reference on the (ISIC) (OECD Statistics, 2012). The data collection activities were started in October 2012 after the clearance of the ethical committee of the University of Plymouth (University of Plymouth, 2012) and were ended after a period of six month in March 2013

## **4.2.2 Results of the Survey**

### 4.2.2.1 Sociographic Survey

The results of the sociographic data are based on the questionnaire developed for the thesis. To assure an anonymous evaluation of the data a numerical code was used to link the sociographic data to the results of the test. As already explained the decision making experiments were conducted prior to the sociographic survey would presented in order to avoid irritations and priming effects to have an impact on the experiment. The questionnaire was divided into the following chapters: gender, age, timelines, education, factors of procurement and levels of hierarchy.

#### *4.2.2.1.1 Gender*

83 participants out of 175 test subjects were female, 92 participants out of 175 test persons were male (see Figure 45) reflecting 47.4 per cent respectively 52.6 per cent of the sample. Thus the proportion of female and male test subjects is relatively equal.

### Gender of the Test Subjects

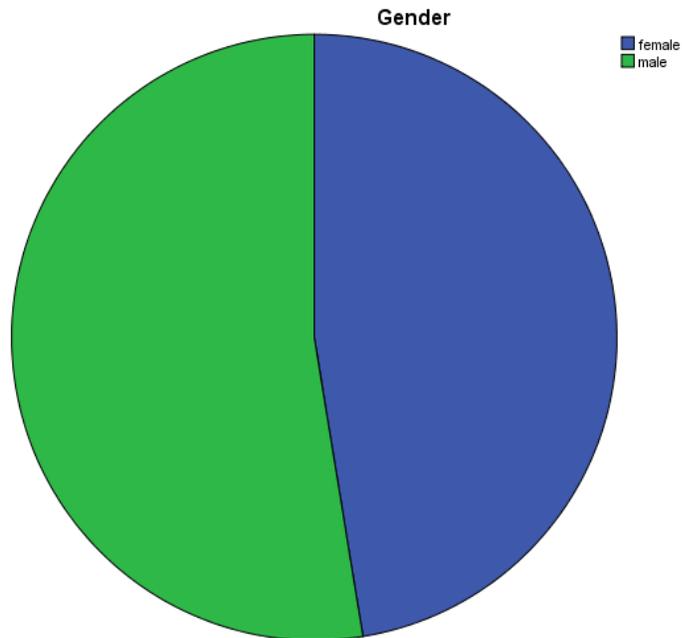


Figure 45: Data Analysis Gender

#### 4.2.2.1.2 Age

The age classification used for the data collection is based on the classical approach segmentations of target groups (see Figure 46) applied in media communication (TNS Infratest, 2013) Accordingly three main categories *youngsters and young adults* between 14 and 29 years of age, *adults* between 30 and 49 years of age and *senior persons* between 30 and 49 years of age were separated. However, researches have

shown that age has no negative effects on decision performance (Tanius, Wood, & Hanoch, 2009).

### Age Segments of the Test Subjects

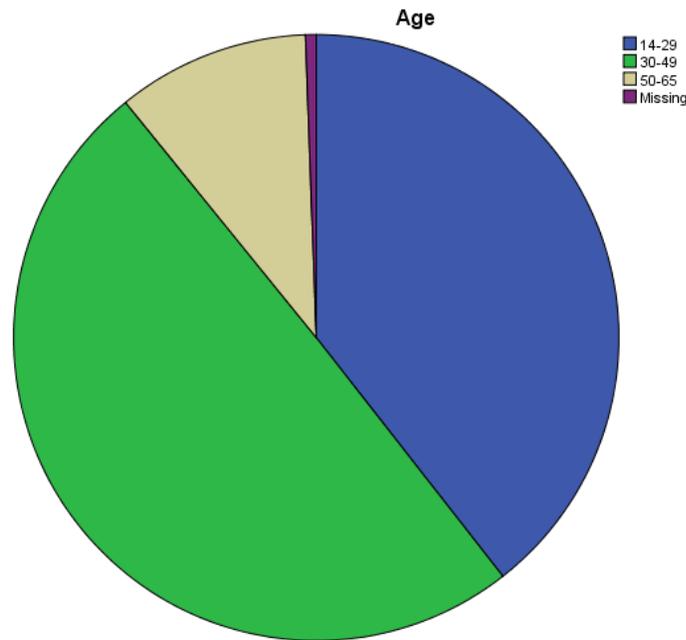


Figure 46: Data Analysis Age

By means of the OMT-Test more detailed information (see Figure 47) concerning the age of the participants was achieved. Three participants did not indicate their age, the youngest participant was 14 years old, the oldest participant was 80 years old when the data collection was conducted. The median of the test subjects is 33 years and most participants were between 21 and 55 years old.

Detailed Age of the Test Subjects

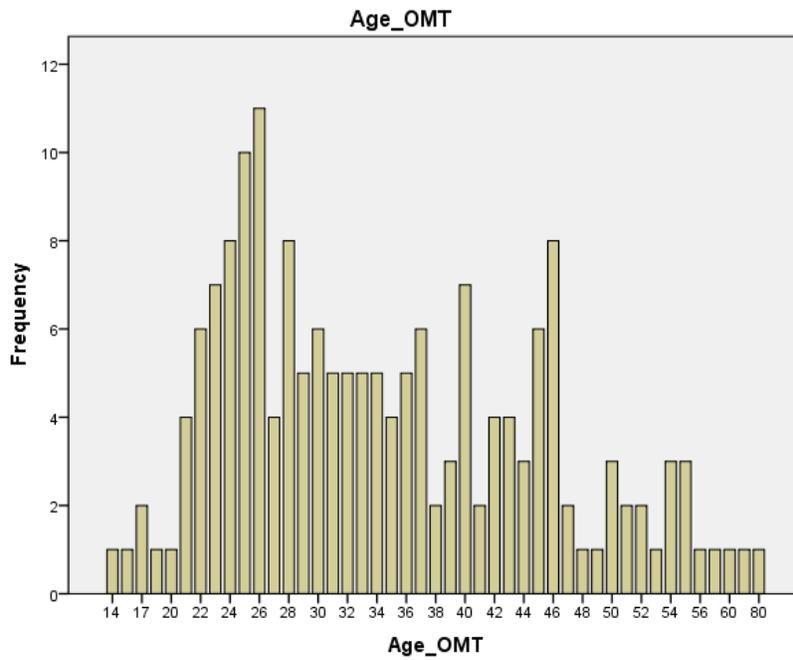


Figure 47: Data Analysis Range Age OMT

4.2.2.1.3 Time

Two timelines were of interest for the survey: the time the participants were working in the job and the time the participants were working with their most recent company. 174 of 175 test subjects responded to the duration of their experience in business whereas 168 of 175 participants provided information on the time (see Figure 48) they have spent in the recent job.

**Time people working in the company**

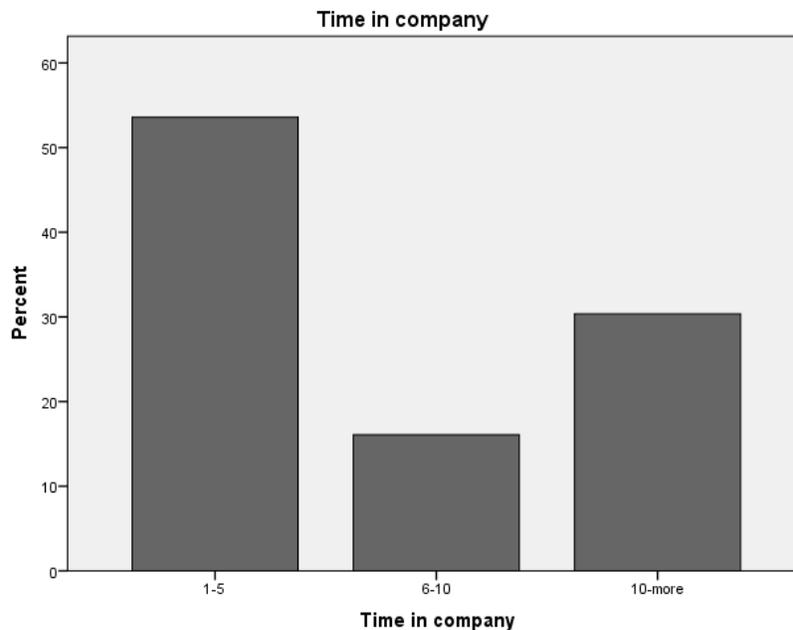


Figure 48: Data Analysis Time in Company

The data concerning the timelines are applied to define the level of expertise. A person having worked more than 10,000 hours in one specific area of profession is an expert. Experts approach a given task in a specific way and achieve a particular level in decision making (Gigerenzer, 2007; Kahneman, 2011; Scheier & Held, 2006). 10,000 working hours reflect approximately a minimum of 5.5 years to achieve the status of an expert in a specific job. Due to this classification all participants with a working experience between 6 years to 10 years, and 10 years and more reached the level of an expert.

Thus, 51.4 per cent of the participants do not represent experts due to their working time in the company between 1 year and 5 years. Nevertheless, regarding the time (see Figure 49) the participants have spent in their recent job the percentage of experts' declines to 44 per cent. Taking both aspects working time in the company and working time on the recent job into account 55.4 per cent of the participants are on an expert level.

Time people working in the job

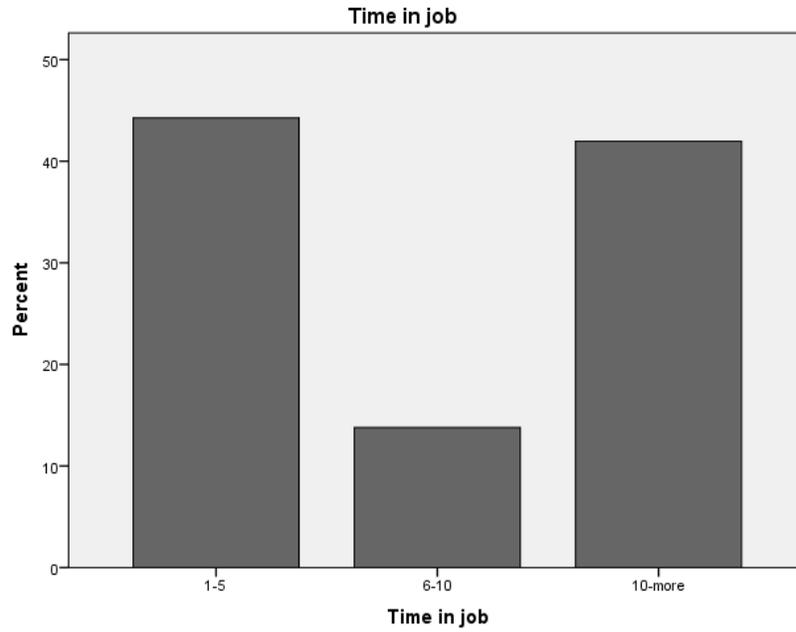


Figure 49: Data Analysis Timeline Job

*4.2.2.1.4 Education*

Data on the level of education were received by all 175 test subjects. The main educational degrees (see Figure 50) are (1) university degrees, (2) professional education and (3) degrees of various academies. (1) At 45.1 per cent the biggest part of the sample is holding a degree of a university. Due to the question concerning the highest education level 1.1 per cent of the participants holding a PhD degree have to be added to the share of the university degrees resulting at a share of 46.2 per cent in the sample. (2) The second biggest part of the data set with 30.9 per cent are participants with a professional education followed by (3) participants holding an academy degree. The remaining part of the participants either joining a company directly after school or still working in educational trainings and has not yet finished the currently targeted degree at the time of the data collection.

Education of the tested people

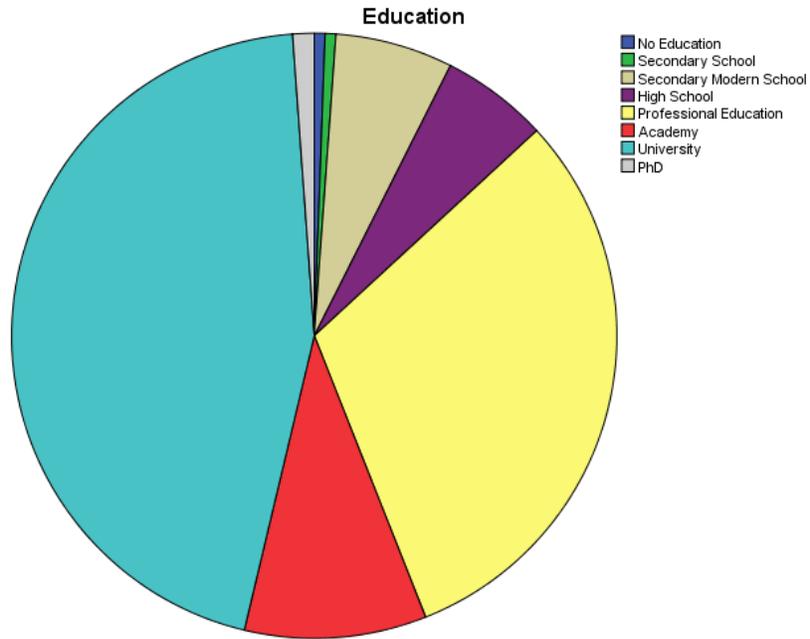


Figure 50: Data Analysis Education

### 4.2.2.1.5 *Factors of Procurement*

For the analysis of the factors of procurement a classical Likert scale was applied. Likert scales are ordinal scales (Meffert, Burmann, & Kirchgeorg, 2012), related to a specific point of interest and the test subject has to indicate the level of consent using five steps between “strongly agree” and “strongly disagree”. In the thesis the Likert scale is applied as a rating instrument to examine the importance of different factors related to procurement. To reveal a clear tendency among the test subjects a pattern of six boxes was used. The item pool consists out of 11 questions. To reflect the result of the research it would be compared to other researches. To get a deeper level of understanding special interests about implicit motives were mixed with items from a study of the University of Mainz combined with forum market research and the agency RTS about B2B decision making. In the previous research reliability, consulting and quality were detected as main factors what matches well the results of the actual research (Otto, 2011). In addition, the factor safety was ranked (see Figure 51) among the top three representing the implicit motive affiliation.

### Most Important Factors of Procurement

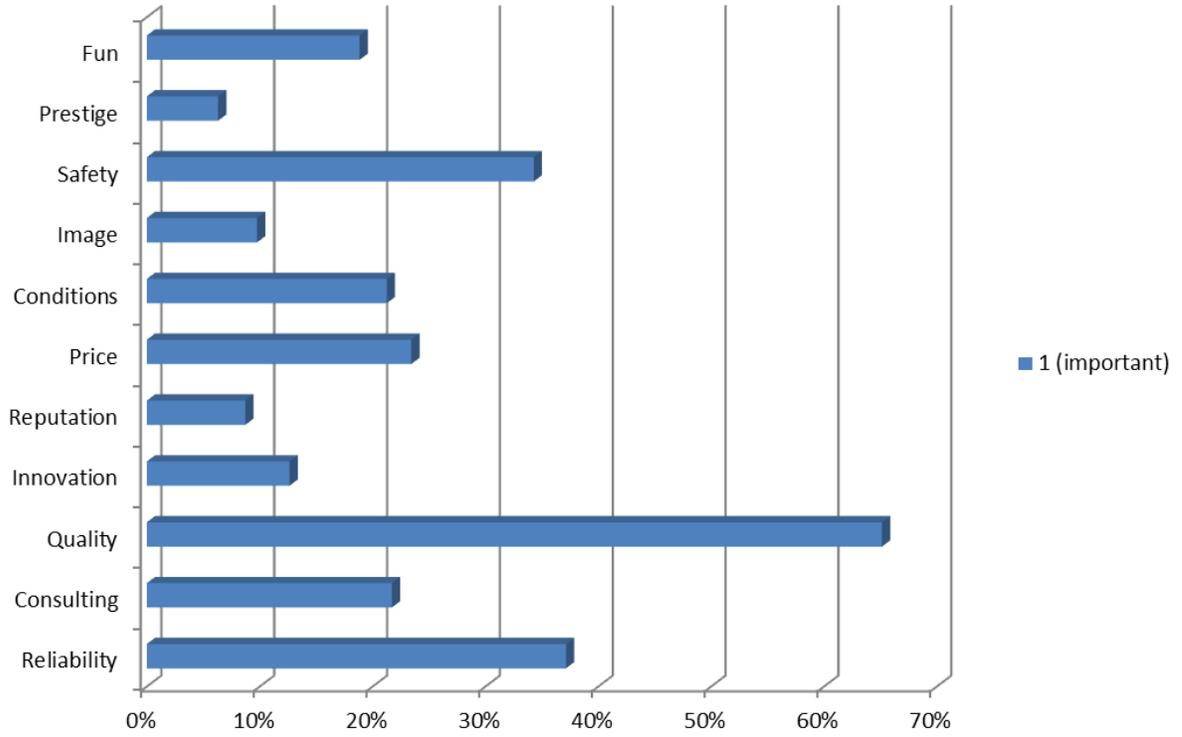


Figure 51: Data Analysis most important Factors of Procurement

*4.2.2.1.6 Levels of Hierarchy*

Concerning the level of hierarchy a response (see Figure 52) was received by all of the 175 test subjects. The point of interest was if there is an interplay between the implicit motives of the participants and the level of hierarchy they belong to. At 70.9 per cent the hierarchy level of “employee” represents the biggest share of the data set, followed by the level “manager” at 23.4 per cent and at the level “top management” at 5.7 per cent. As there are no clear definitions about leadership and clear data about the percentage of managers in the European organisations this distribution seems to be a realistic picture. It has to be stated that there are distinctive definitions of (Holst, Busch, & Kroeger, 2012; Bass & Stogdill, 1990). Based on the IfD Institute 7.58 million people regard their job as ‘management’ (IfD, 2012).

Different Levels of Hierarchy

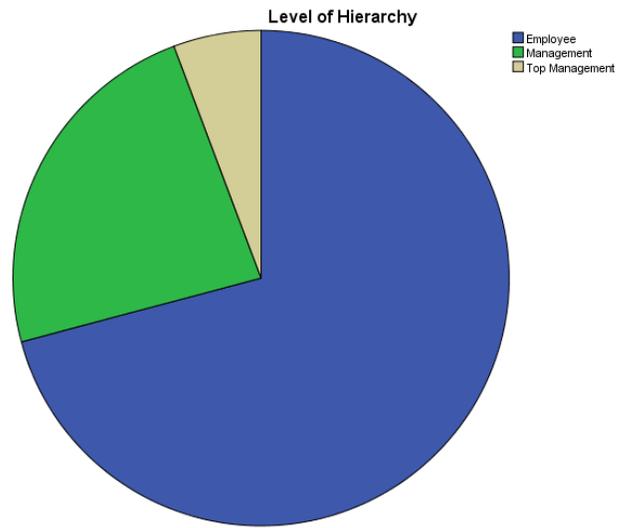


Figure 52: Level of Hierarchy

4.2.2.1.7 Levels of Decision Making

Relevant information on their level of decision making was received by all 175 participants of the survey. As visible in the graphic below (see figure 53) at a percentage of 71.4 most of the participants are mainly involved in operational decisions followed by strategic decisions and decisions on expendable goods at a share of 38.3 per cent each.

Different Levels of Decision Making

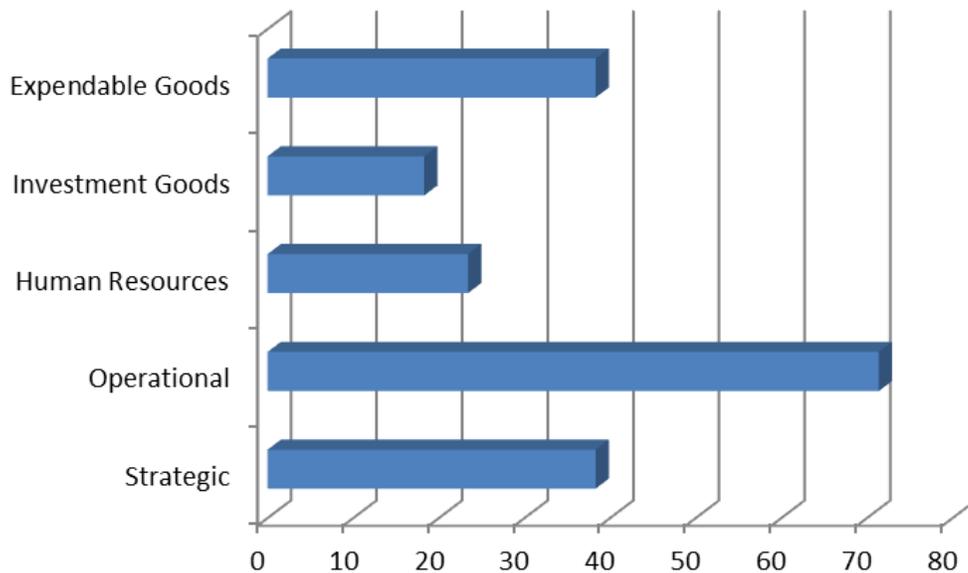


Figure 53: Level of Decision Making in Percentage

4.2.2.1.8 Size of Companies

Information on the size of the company (see Figure 54) they were working with was received by all 175 participants. At 57.7 per cent most test subjects work with (1) a big company employing more than 251 employees, followed by 29.7 per cent of participants working with a medium sized company (2) employing between 51 and 250 employees. At 12.6 per cent small companies (3) employing less than 50 employees are the smallest group in the sample.

Different Sizes of Companies

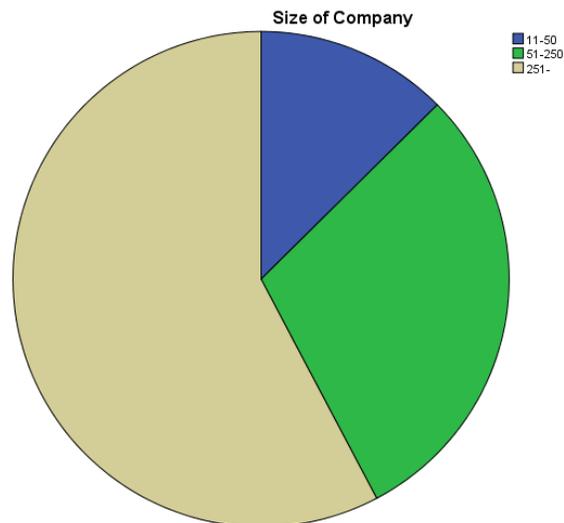


Figure 54: Data Analysis Size of Company

#### 4.2.2.1.9 Sectors

Information on the industry sector (see Figure 55) their company is engaged in was received by all 175 participants. At a percentage of 27.4 most participants of the research are working in the field of (1) support and services. 26.9 per cent of the participants are employed in the sector of (2) wholesaling and trading. 24.0 per cent of the participants work in the sector (3) manufacturers, followed by the sectors construction 9.1 per cent, transporting and information 8.0 per cent and accommodation and food with 4.6 per cent. The graphic below (see Figure 55) provides a more detailed overview. The sample matches well the situation in the European Communities where most citizens are working in the sectors of (1) support, (2) wholesaling and (3) manufacturing.

Different Sectors of Industries

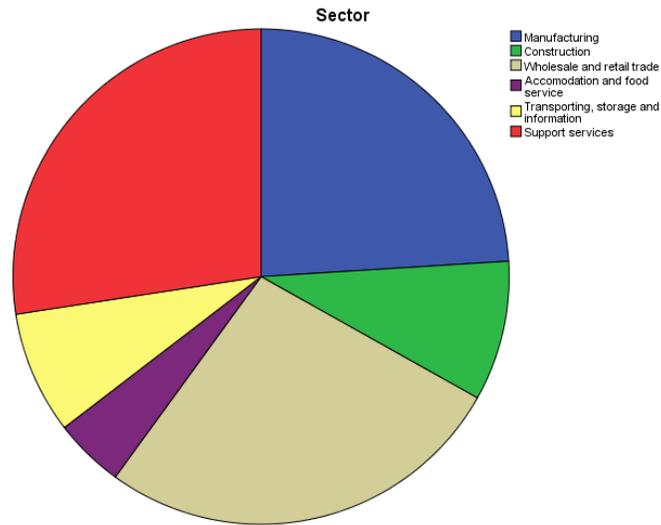


Figure 55: Data Analysis Sectors

Thus, the present research is representing the official data (see Table 9) from Eurostat the official statistical data of the European Communities (see Figure 56).

Sectors	European Communities	Research Sample
Manufacturing	25,9%	24,0%
Construction	11,2%	9,1%
Wholesaler & Trade	25,7%	26,9%
Accommodation & Food	8,0%	4,6%
Transporting & Information	8,9%	8,0%
Support & Services	18,4%	27,4%

Table 9: Data Sectors European Communities (2010)

Different Sectors in the European Communities

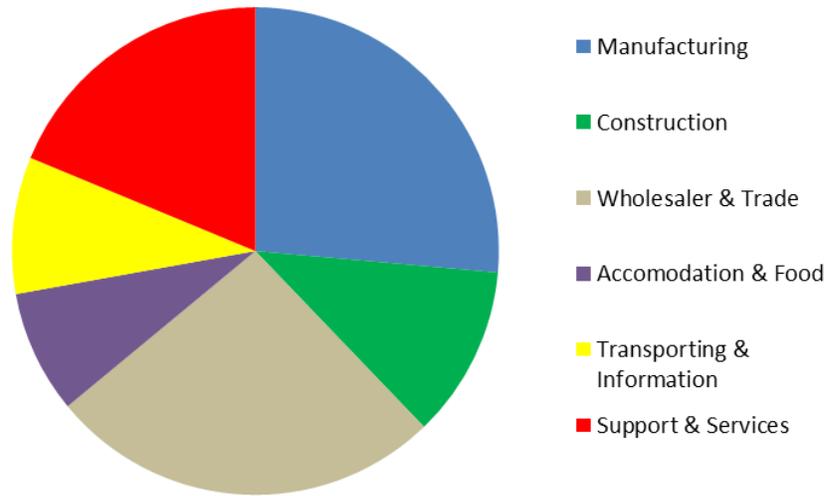


Figure 56: Data Sectors European Communities (2010)

#### 4.2.2.2 Psychographic Survey

In the pilot test the order of the data collection within the experiment was detected as crucial. Assumptions and suggestions on the objectives of the OMT test (see Figure 57) might affect the choice of products in the decision making experiments. This is why the experiments were conducted first then followed by the OMT test.

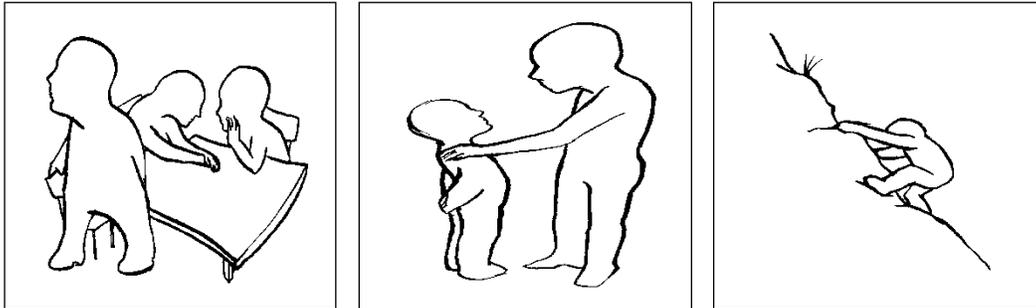


Figure 57: Data Collection Picture Examples of the OMT Test

With permission of Prof Julius Kuhl

The first evaluation of the OMT was made twice. First by the author then by an external reviewer from the University of Osnabruck. The evaluation was carried out separately at the same time in a double blind procedure. For the evaluation process two Excel sheds were used and consolidated (see Table 10) to a single spreadsheet finally to examine the degree of consensus.



### Implicit Motive Structure of the Test Subjects

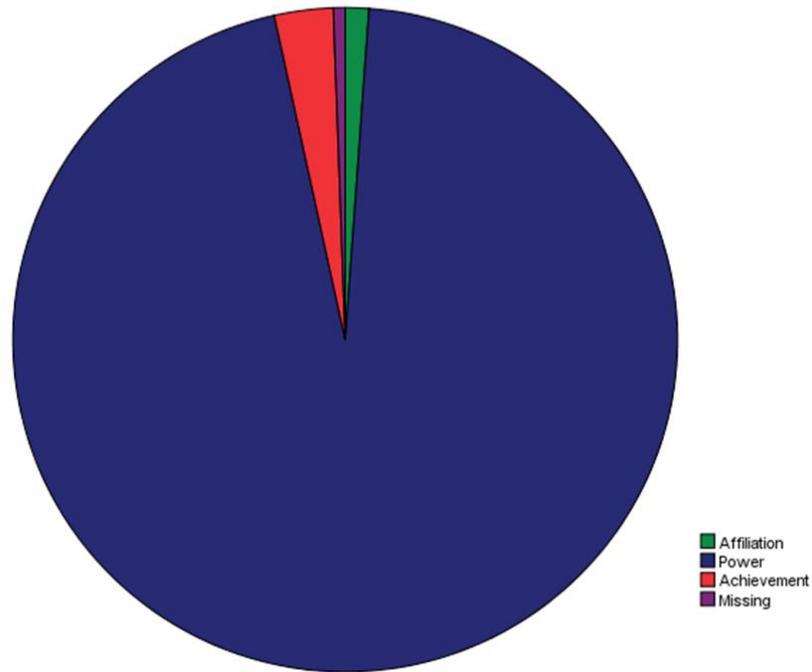


Figure 58: Data Collection Implicit Motive Structure of Test Subjects

Due to the results of the pilot test the mainly power motivated structure (see Figure 58) of the implicit motives of the test subjects was not expected and surprising. In order to detect an additional category of verification the intensity (see Figure 59) of the motives was analysed as well.

Intensity of the Implicit Motives

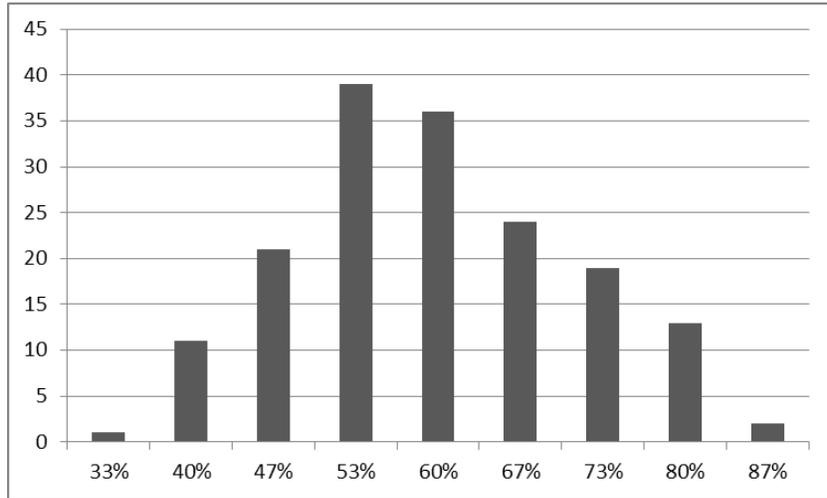


Figure 59: Data Collection Intensity of the Implicit Motives

To get a more distinct picture the intensity was classified in three categories - low, middle and high. This additional analysis presents a more differentiated picture of the implicit motivation. Based on the analysis it can be assumed that the participants are not representing a homogenous group of identically motivated test subjects but rather individuals classifiable (see Figure 60) as low, middle and highly motivated. Most of the participants show a medium degree concerning their specific implicit motivation.

### **Categories of the Implicit Motives**

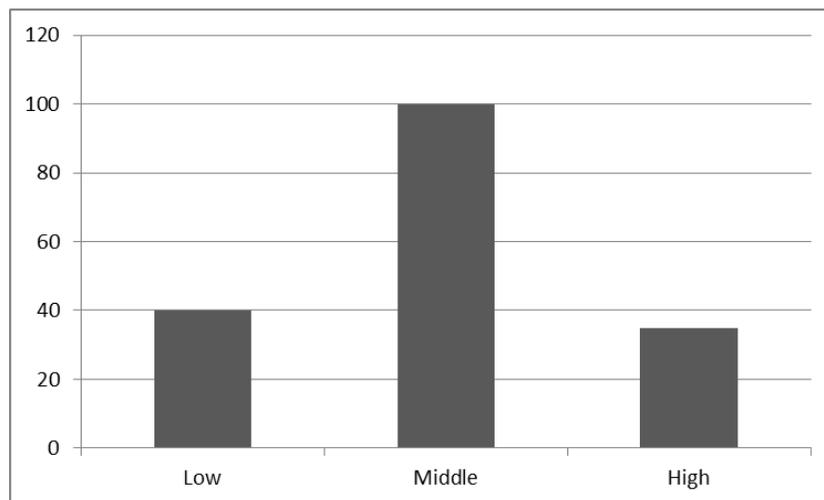


Figure 60: Data Collection Categories of the Implicit Motives

### **4.3 Data Collection - Final Experiment**

#### **4.3.1 Description and Objectives of the Experiment**

There are several decisions made every day in companies all over the world. Yet one of the seemingly most rational and logical is the buying decision. That is the reason for the research to choose a buying task. The test persons have to come up with a standard buying scenario in the field of business to business investment goods. The participants have to buy two investment products. In the first stage the test person has to buy a company car and office equipment for his own use. In the second stage they should buy a company car and office equipment for a colleague. In the third stage the participants have to make a classical group decision and should be the same products cars and office equipment in a buying center situation. The basic idea of the experiment is that the implicit category of the test person should match with the implicit codes of the products. If the participant chooses a product for a colleague the implicit category should match (see Figure 61) with the implicit type of the colleague. If the decision making process would be completely rational, as assumed in the classical economic theory, the participants always have to make the same (see Figure 61) economical decision. In this case it should not be important if they buy a car or office equipment for his colleague or themselves , in a buying center situation. The decision should just be based on to the facts and the features of the product. If our participants are the so called 'Homo economicus' the choice must be at all times the same product. There should be no variations in the decision making process.

Rational decision based on prices versus implicit decision

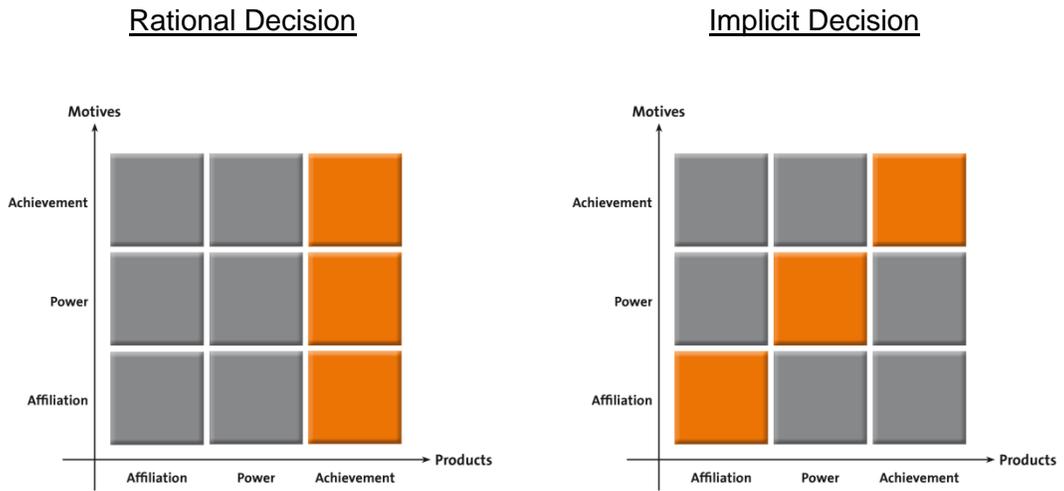


Figure 61: Data Collection Rational decision based on prices vs. implicit decision

Based on the assumption of the rational agent there should be no variation in the decision making. On the assumption of the implicit decision making the implicit motives should match with the implicit coding of the products. For the experiment two categories of products (see Figure 62) were coded based on the research findings. To avoid undesired brand effects sketches instead of real products were used.

**Coded Products based on Research Findings**

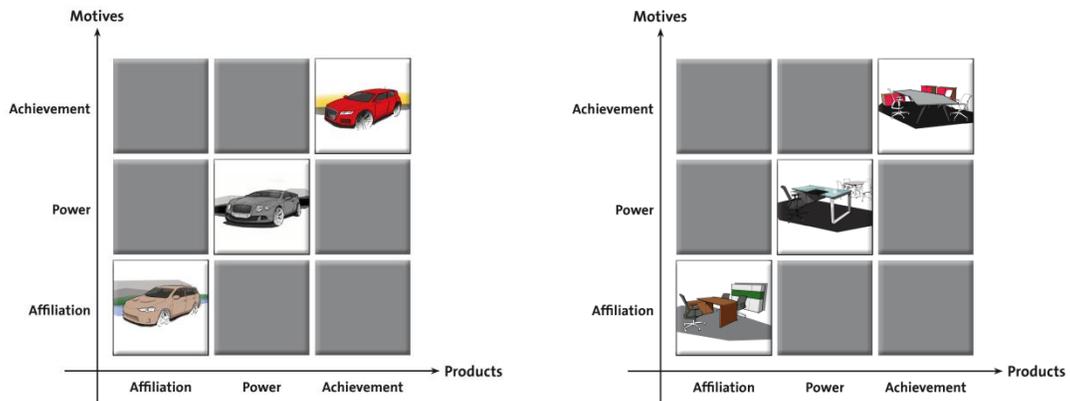


Figure 62 Data Collection Coded Products based on Research Findings

For the management and group decision three prototypic colleagues (see Figure 63) were used. As it was difficult to find the typical persons, photos from a picture agency were bought and some minor corrections in the set of colours via photo shop were done.

**Imaginary Colleagues based on Research Findings**

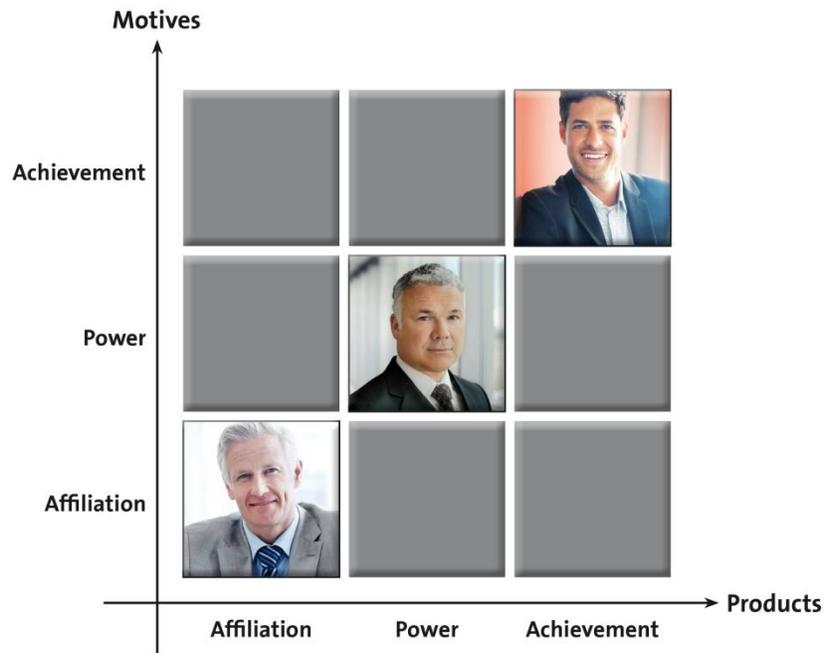


Figure 63: Data Collection Prototypic Colleagues based on Research Findings

## 4.3.2 Result of the Experiment

### 4.3.2.1 Results of the Personal Decision

For the data mining and analysing process IBM® SPSS® Version 20 was applied. Concerning statistical techniques frequencies, cluster analysis and multivariate data analysis were conducted. Due to the assumption of a highly implicit aspect in the decision making process (see Figure 64) most participants were expected to select the power coded product in the personal decision because the major share of the data universe were power motivated participants. This chapter will present the results of the data collection. Interpretation will be carried out in the discussion in chapter 5.

### Assumption of a Mainly Implicit Based Decision

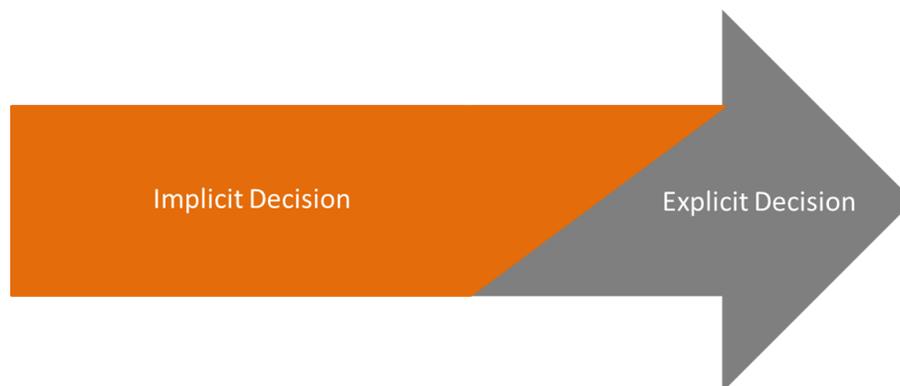


Figure 64: Data Analysis Assumption of a mainly implicit based Decision

For the personal decision experiment the test subjects had the choice between three particular products in each category. Thus, the expected outcome was a distinctive dominance of the interface (see Figure 65) between implicit power coded motives and implicit power coded products.

### Assumption of Personal Decision Making

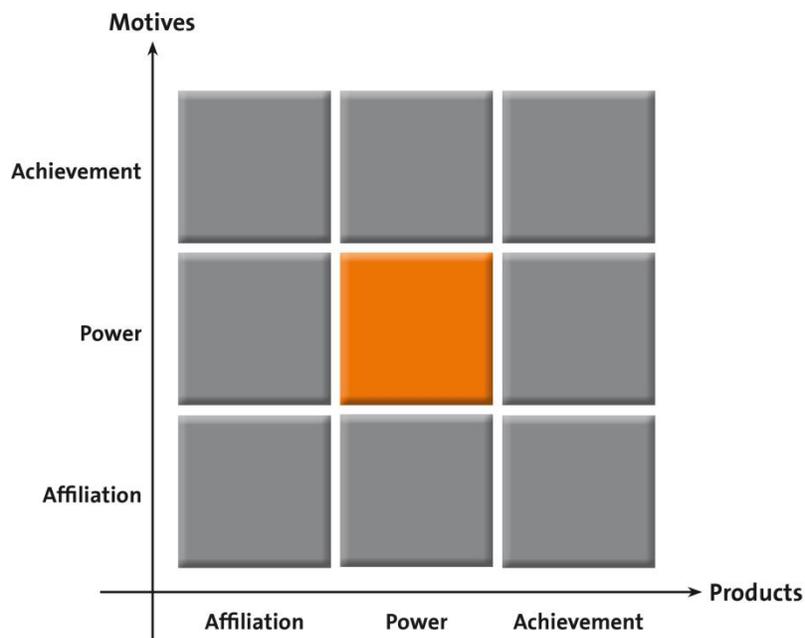


Figure 65: Data Analysis Assumption of Personal Decision Making

### Personal Decision Car

The first personal decision to be made was to select a company car. The assumption was that the most frequently selected car would be the car in the interface (see Figure 66) between the implicit motive of power and implicit coding of power. The car in the box in the middle of the picture should be first choice then.

### Assumption of Personal Decision Company Car

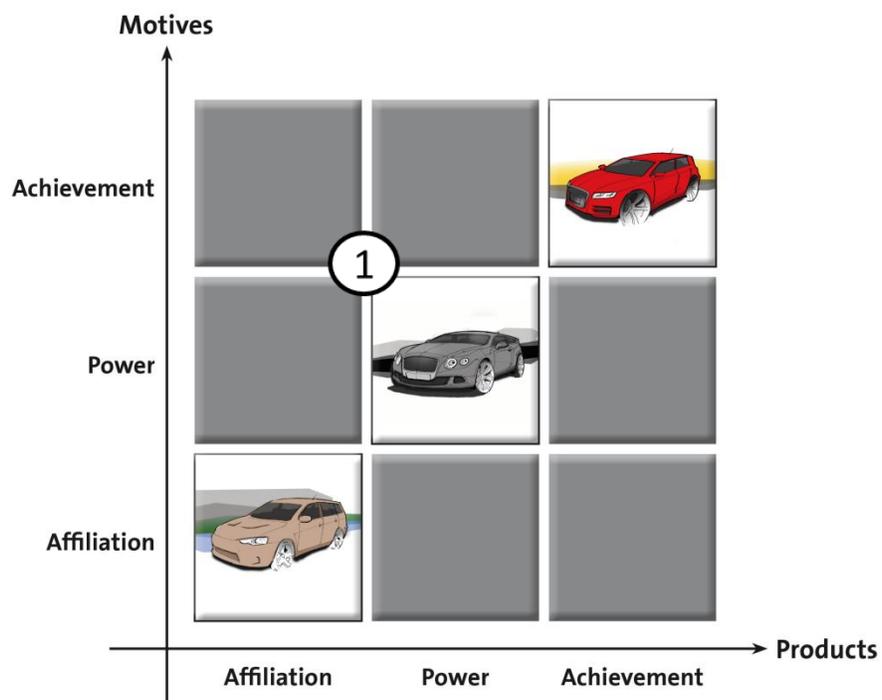


Figure 66: Data Analysis Assumption Personal Decision Car

Due to the low degree of differentiation of the sample, the level of correlation between the implicit motives and the implicit coded products is low. This is also indicated as visible in the *Appendix K* by a Cramer's V of 0.135. After having detected this weak point the volume of the sample was increased from 120 to 175 participants (Backhaus, Erichson, & Weiber, 2011). Nevertheless, the differentiation within the sample did not change significantly.

### Result of Personal Decision Company Car

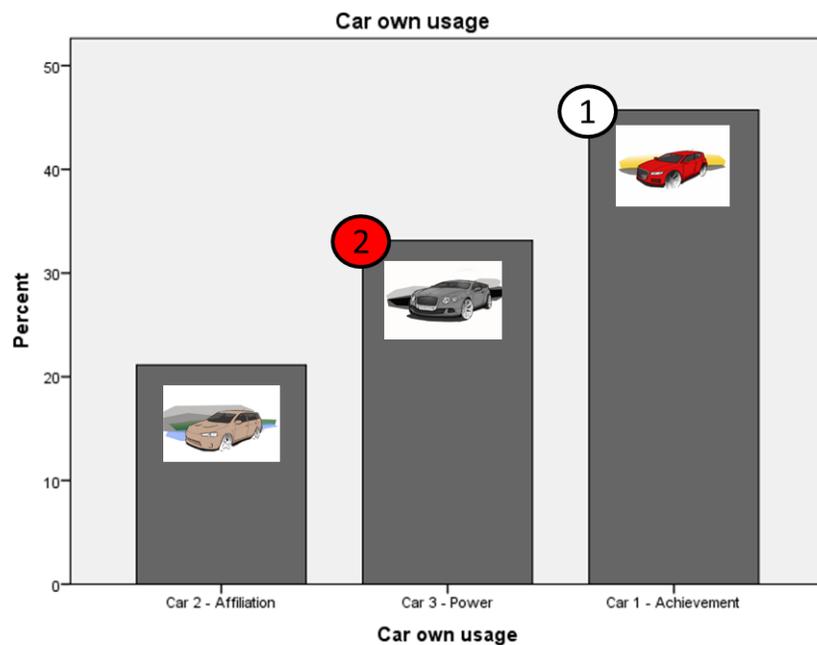


Figure 67: Data Analysis Frequency Personal Decision Car

Result of Personal Decision Company Car

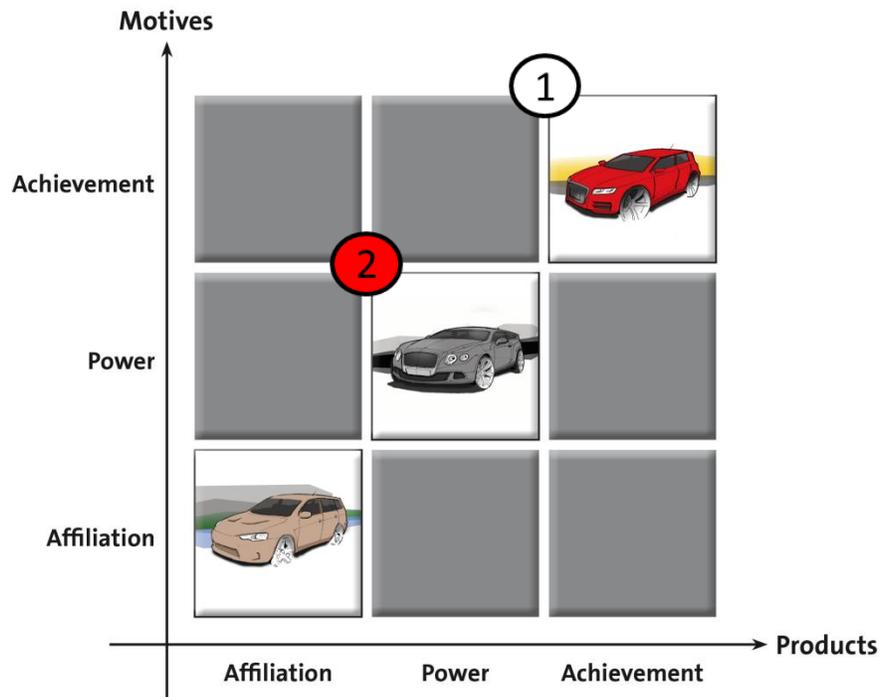


Figure 68: Data Analysis Personal Decision Rejection of Assumption Car

As is visible (see Figure 67), the assumption about the product (see Figure 68) choice of the test persons has to be rejected. Based on the SPSS data analysis and visible in *Appendix K* we cannot assume the 'Null Hypothesis'. 'There is no correlation between implicit motives and B2B decision making'.

To achieve a deeper understanding of the personal choice of the test subject the intensity (see Figure 69) of the motivation was examined. In the first step the focus was merely on the dominating motive of the test subjects. To obtain a more specific and more detailed data set the intensity of each motive was analysed and the revealed intensities were additionally used for the data mining process. As visible below most of the test persons were power or achievement motivated.

### Motive Data Universe of the Test Business People

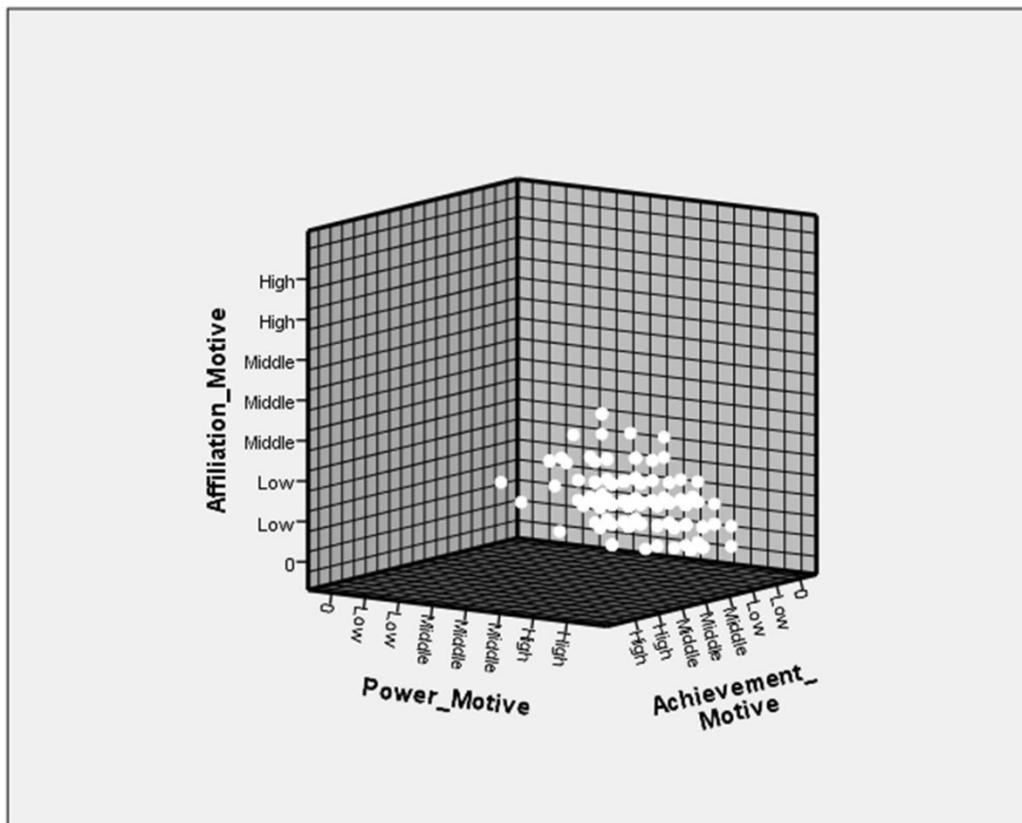


Figure 69: SPSS Data Analysis Motive Data Universe

The data set of this analysis is relatively complicated because it does not only integrate the dominating motive but all three motives. Hence, the full range of motives was covered by the data mining process. In order to generate a reliable set of data various versions of cluster analysis were conducted. After an array of different cluster tests the categorisations in three main clusters high, middle and low as visible in the *Appendix J* was conducted as the most valid result.

Based on the SPSS as visible in *Appendix J* cluster analysis a high level of significance in the chi-square test was achieved. In addition to that a valid statistical correlation with a contingency coefficient of 0.356 and a Cramer's V of 0.269 could be obtained. The average linkage between the groups is presented in the *Appendix J* applying a dendrogram generated out of the SPSS cluster analysis.

**Motive Intensity versus Intensity Car**

The more detailed SPSS graphic below presents the data universe regarding the personal choice of cars in a three-dimensional space (see Figure 70). The dimensions used are the implicit motives, the implicit coding of the cars and the intensity of the implicit motive structure.

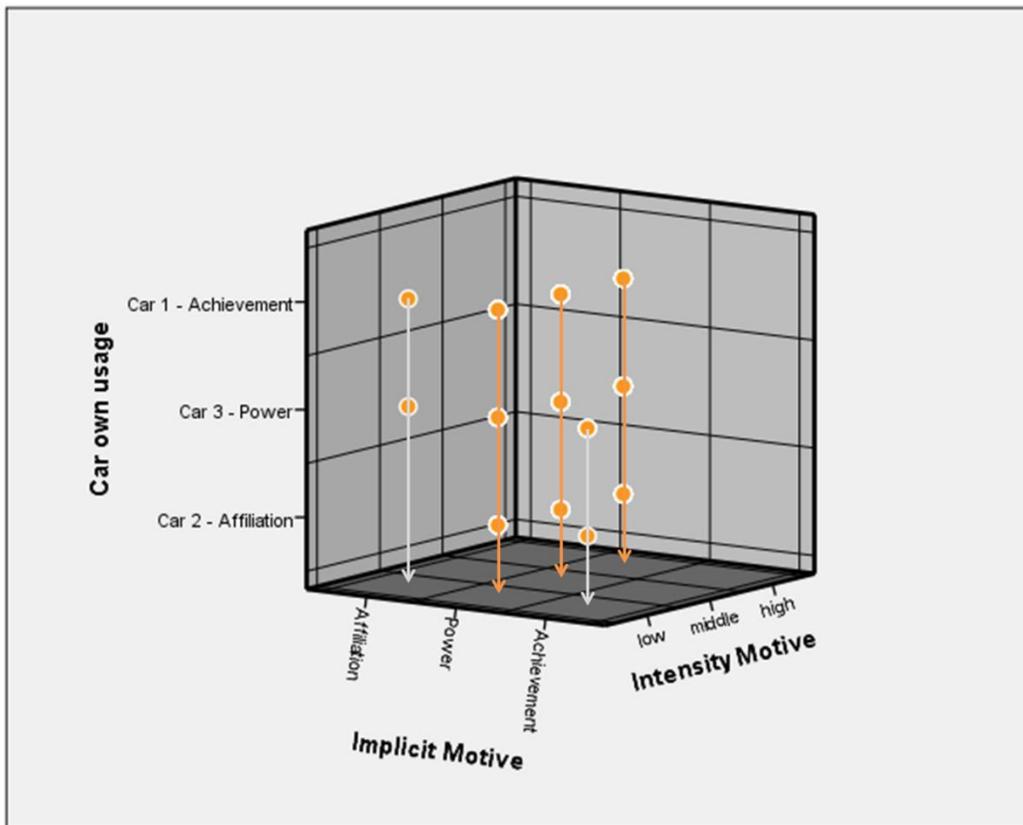


Figure 70: Data Analysis Motives vs. Intensity Car

As the three-dimensional space generates a distinct visualisation of the combinations of the decision making process. A multivariate SPSS data analysis not involving the frequency was made to achieve a deeper understanding of the frequencies and correlations of the given variables.

Whereas the contingency table presented in shape of a cross tabulation is applied to analyse the significance level of correlations, the correspondence analysis is applied to visualise the data.

Multivariate correspondence analysis is a method of multidimensional scaling. The advantage of this technique is to present a visual overview over complex data of cross tabulation. As a graphic method the correspondence analysis is relatively new, nevertheless the mathematical basis can be traced back to Hirschfeld (1935), Horst (1935), Eckart/Young (1936) and in relation to the field of the biometric research to Fisher (1938). In the field of psychology Horst (1935) introduced the term 'Reciprocal Averaging'. Whereas Benzécri (1969) utilises the term 'Analyse des Correspondance' based on the French word 'correspondance' as a system of associations. In summary it can be stated the objective of the correspondence analysis is to visualize two groups of characteristics in a joint space. In this case it is not relevant which of both characteristics is defining the column or row of the cross tabulation. The standard version of SPSS does not generate this version of the multivariate analysis this is why visible results of

the data have to be achieved by additional procedures (Backhaus, Erichson, & Weiber, 2011).

To interpret the dimensions of the visualisation the positions of the column and row elements can be used. As visible in below the largest scattering on the horizontal axis is between the motives achievement and power therefore the 'Dimension 1' might be interpreted as motivation to perform. Whereas the vertical axis might be interpreted as the need of affiliation.

Multivariate Analysis Personal Decision Car

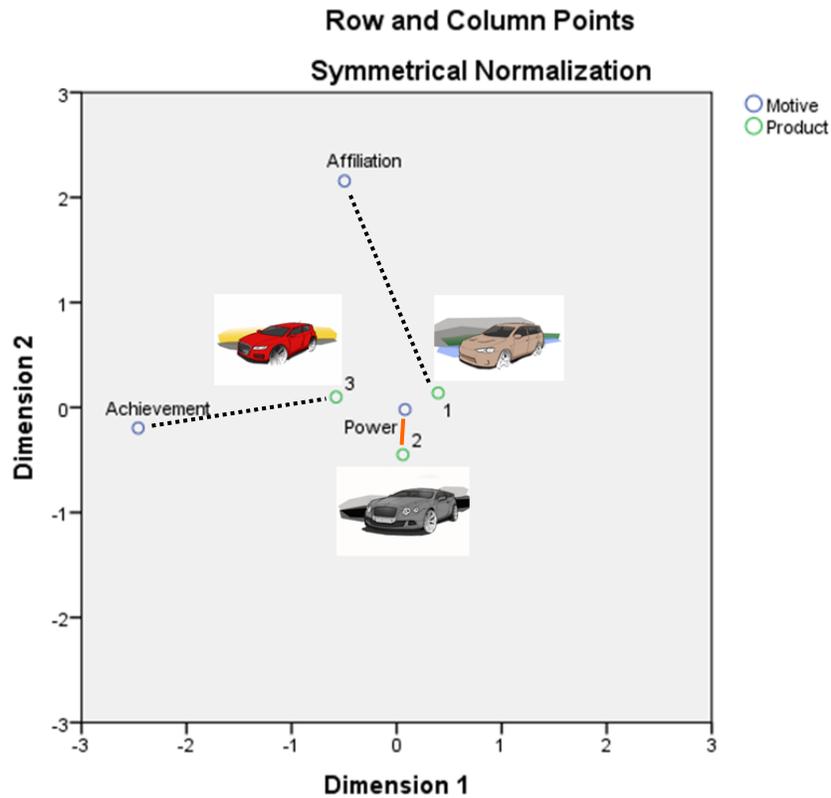


Figure 71: Data Analysis Multivariate Analysis Car

Short distances reflect strong similarities between the profiles whereas large distances reflect strong dissimilarities (see Figure 71). Sometimes the interpretation concerning the column and row elements can be difficult and may cause misinterpretations.

Nevertheless, based on the data set of this research a distinctive correlation between the power motive and the power coded car is identifiable (see Figure 71). Concerning the affiliation motive and the affiliation coded car and the achievement motive and the achievement coded car to no distinct and reliable correlation is perceptible due to the disproportional spread of the motives.

### Personal Decision Office Equipment

For the personal decision experiment the test subjects had the choice between three particular products in each category. Thus, the expected outcome was a distinctive dominance of the interface (see Figure 72) between implicit power coded motives and implicit power coded products.

### Assumption of Preferred Choice

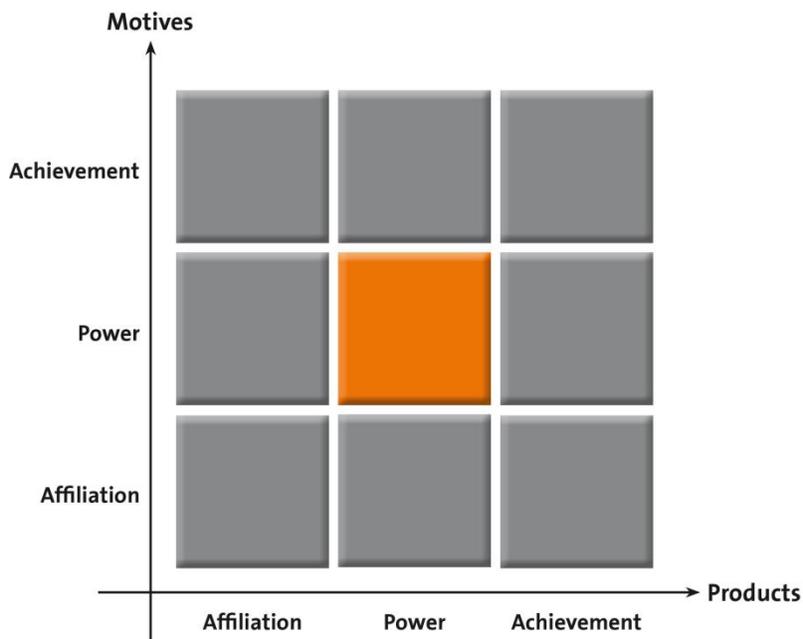


Figure 72: Data Analysis Assumption of Personal Decision Office

The second personal decision to be made was to select the office equipment. The assumption was that the most frequently selected office equipment would be the office equipment in the interface (see Figure 73) between the implicit motive of power and implicit coding of power. The office equipment in the box in the middle of the picture should be first choice then.

### Result Personal Decision Office Equipment

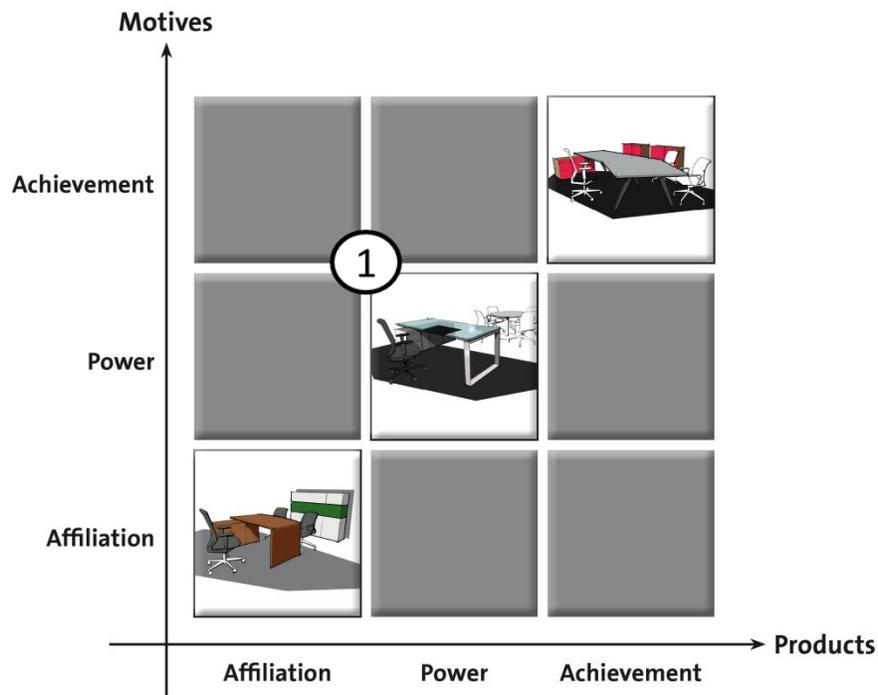


Figure 73: Data Analysis Assumption Personal Decision Office

The cross tabulation in the *Appendix K* presents the product choice of the second experiment of the personal decision. As discussed before, due to the low degree of differentiation of the sample, the level of correlation between the implicit motives and the implicit coded products is low. This is also indicated by a Cramer's V of 0.112 visible in the *Appendix K* which has to be regarded as weak. As is visible (see Figure 74) the result matches the assumption most of the test subjects selected the power coded office equipment.

### Result Personal Decision Office Equipment

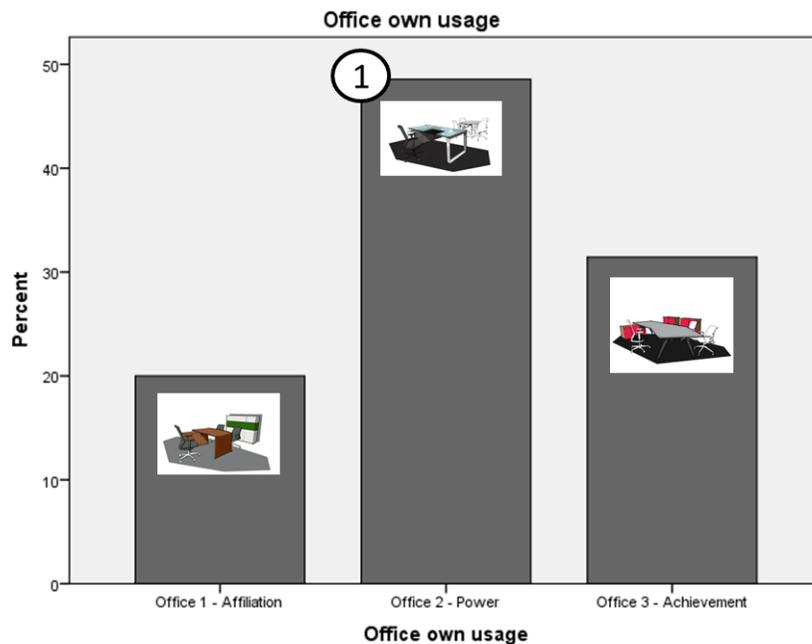


Figure 74: Data Analysis Frequency Personal Decision Office

Confirmation of the Assumption Personal Office Equipment

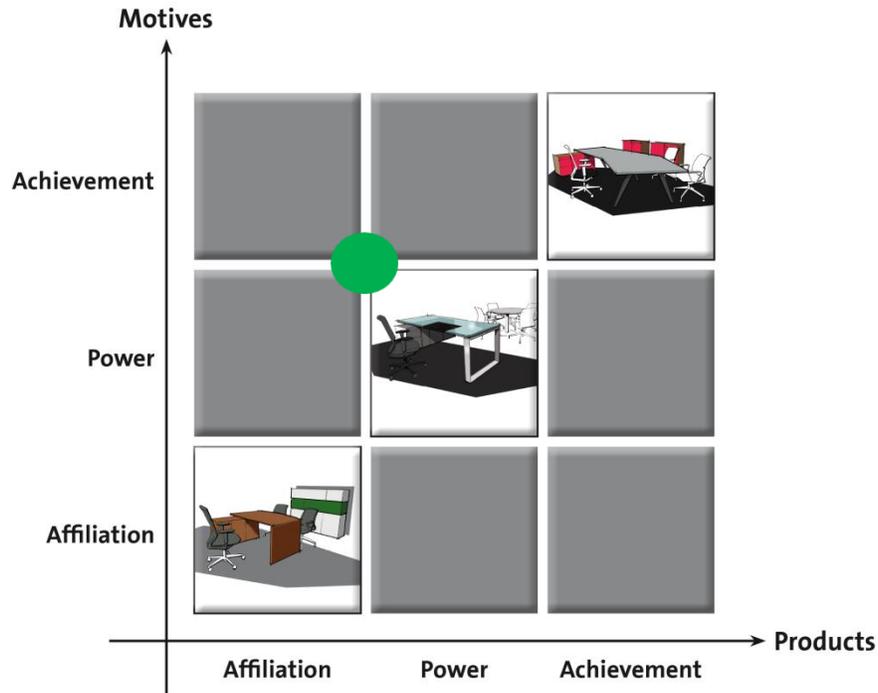


Figure 75: Data Analysis Personal Decision Confirmation of Assumption Office

Based on the data set of this research a distinctive correlation between the power motive and the power coded office equipment (see Figure 75) is identifiable. Concerning the affiliation motive and the affiliation coded office equipment and the achievement motive and the achievement coded office equipment as well no distinct and reliable correlation is perceptible due to the disproportional spread of the motives.

**Motive Intensity versus Intensity Office**

The assumption that most of the power motivated test subjects would select the power coded office equipment could be confirmed. The more detailed SPSS graphic below (see Figure 76) presents the data universe regarding the personal choice of the office equipment in a three-dimensional space. The dimensions used are the implicit motives, the implicit coding of the office equipment and the intensity of the implicit motive structure.

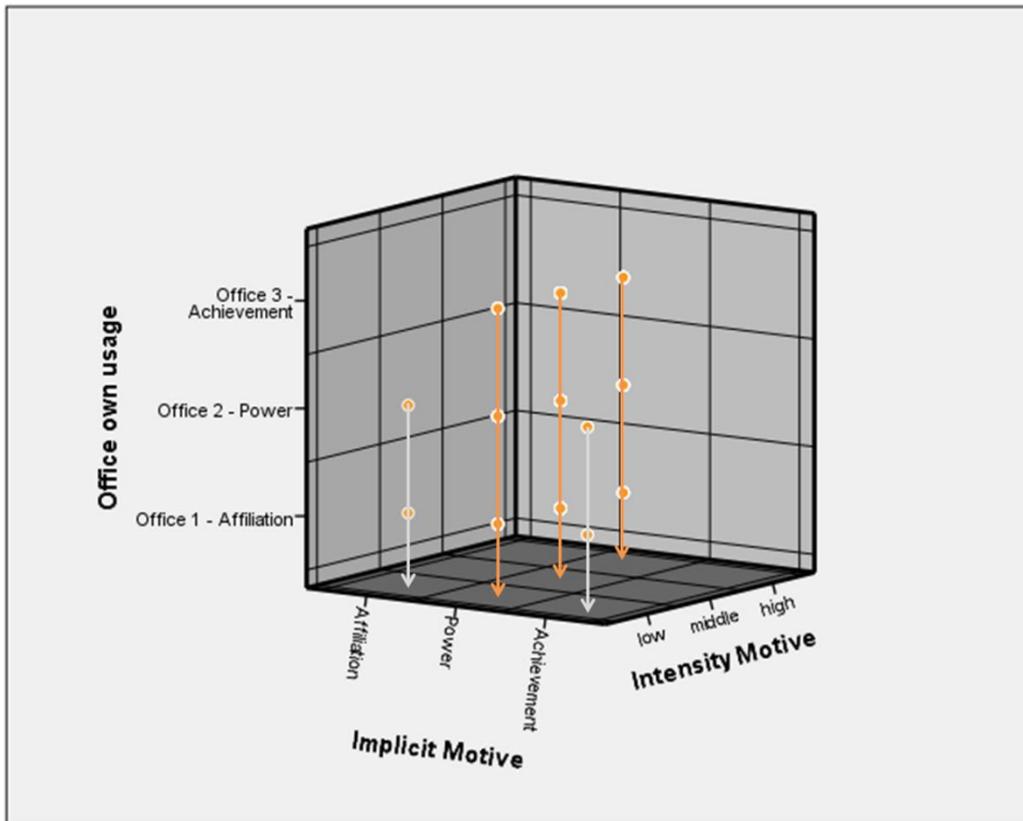


Figure 76: Data Analysis Motives vs. Intensity Office

As mentioned above it is useful to analyse the data set via multivariate data analysis in order to present a clearer 'big picture' of the correlation between the implicit motives and the implicit coded product. The limitations of the database have been mentioned above as well.

Multivariate Analysis Personal Decision Office

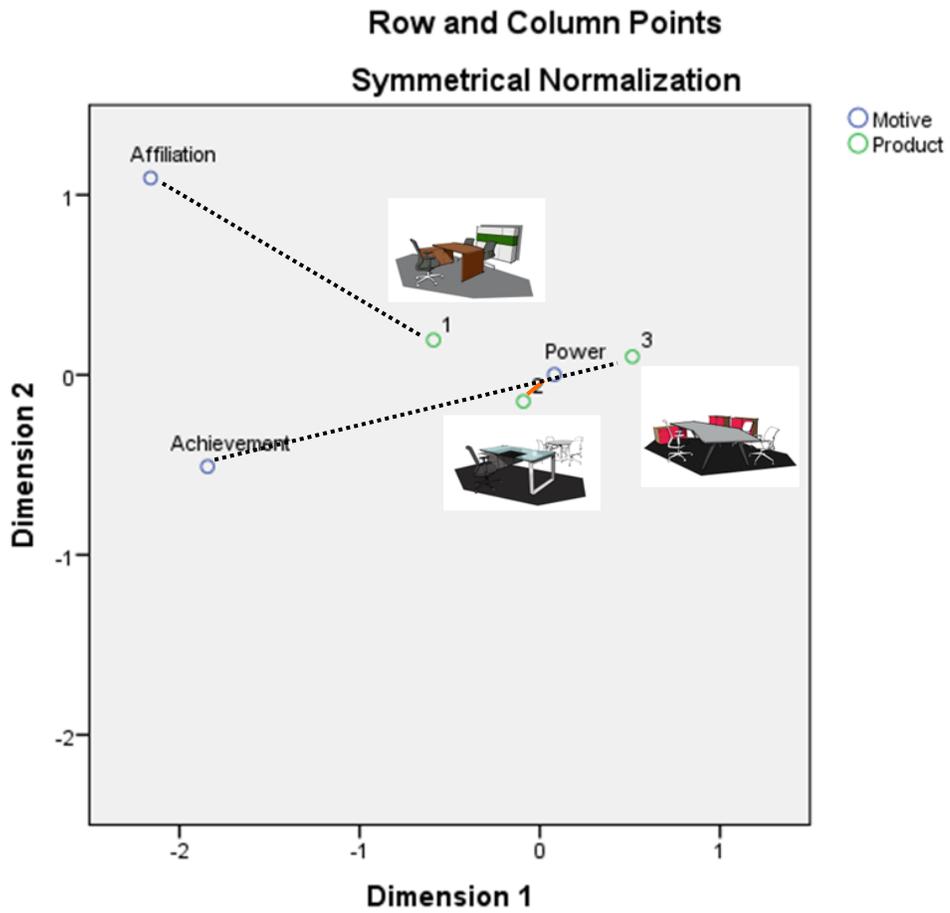


Figure 77: Data Analysis Multivariate Analysis Office

Short distances reflect strong similarities between the profiles whereas large distances reflect strong dissimilarities. Sometimes the interpretation concerning the column and row elements can be difficult and may cause miss interpretations.

Nevertheless, based on the data set of this research a distinctive correlation between the power motive and the power coded office equipment is identifiable (see Figure 77). Concerning the affiliation motive and the affiliation coded office equipment and the achievement motive and the achievement coded office equipment as well no distinct and reliable correlation is perceptible due to the disproportional spread of the motives.

#### 4.3.2.2 Results Management Decision

##### **Management Decision Colleague Controlling**

For the management and group decisions the test subjects had the choice between three prototypic colleagues (see Figure 78) and three different versions of two kinds of products each (see Figure 62). The coding process for the colleagues is based on the findings of the critical literature review and the interplay concept of the interdisciplinary fields of science in chapter 2. Every colleague represents a stereotypic prototype of one of the three implicit motives. Each version of the products represents a product coded in accordance with the attributes of the three implicit motives.

## Imaginary Colleagues for Management and Group Decision

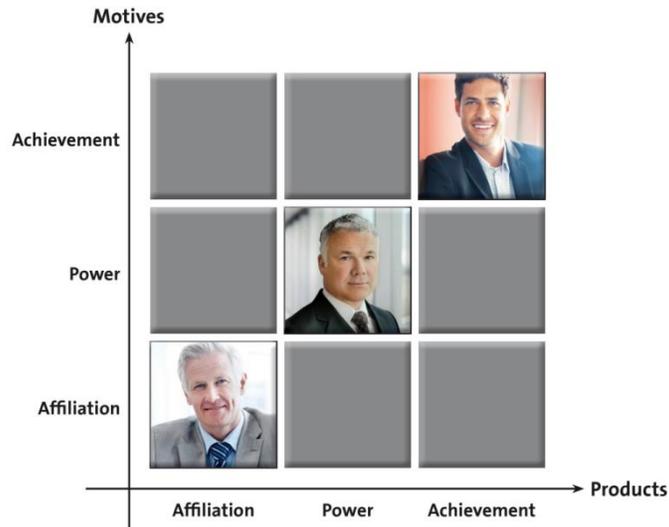


Figure 78: Stereotypic Colleagues for Management and Group Decision

The general assumption of the management decision experiment is that the participants are capable to decode the life style of another person (see Figure 78). The decoding process is based on the mirror neurons and the model of social simulation (Kuhl, 2010; Spitzer, 2008). In the management decision it was expected that the participants select the implicit coded products appropriate to the decoded implicit motives of the imaginary colleague.

The assumption is that each imaginary colleague is driven by a particular implicit motive. As the implicit motive of the imaginary colleague is fixed, no variations exist and due to

statistical reasons it is not possible to generate a cross tabulation based on the motives and the products. In case of the management and group decisions it is feasible to focus on the frequencies a product is assigned to an imaginary colleague (see Figure 79).

### Assumption Management Decision Controlling

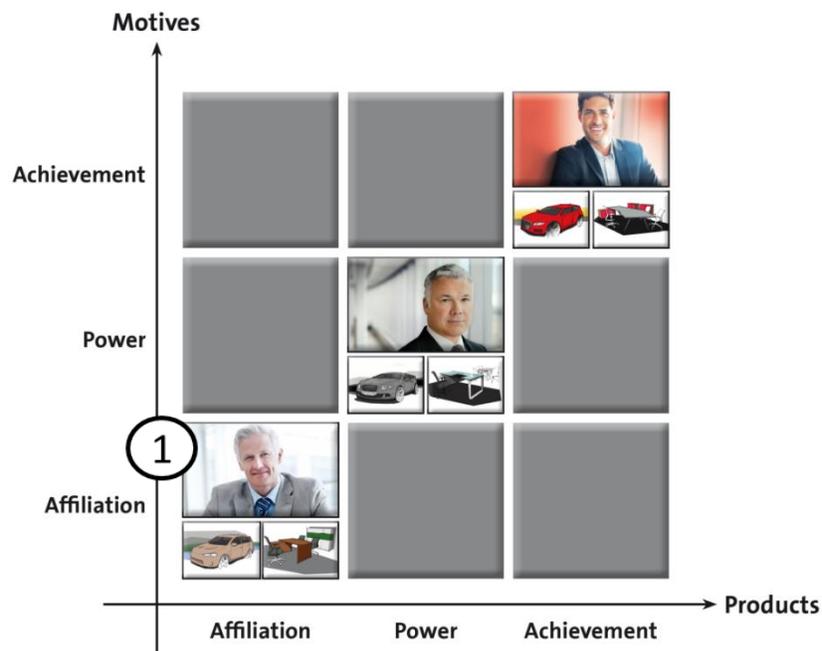


Figure 79: Data Analysis Assumption Management Decision Controlling

In the first task of the management decision experiment the participants have to select a company car for the imaginary affiliation coded colleague of the controlling department.

It could be assumed that the participants assign the affiliation coded car to the affiliation coded colleague (see Figure 79). Thus, the first choice would be the affiliation coded car (see Figure 80). In the array of similar type of cars the affiliation coded car was priced higher than the achievement coded car. The rational decision would be to select the cheapest car for the colleague which is the achievement coded red car.

### Result Management Decision Car Controlling

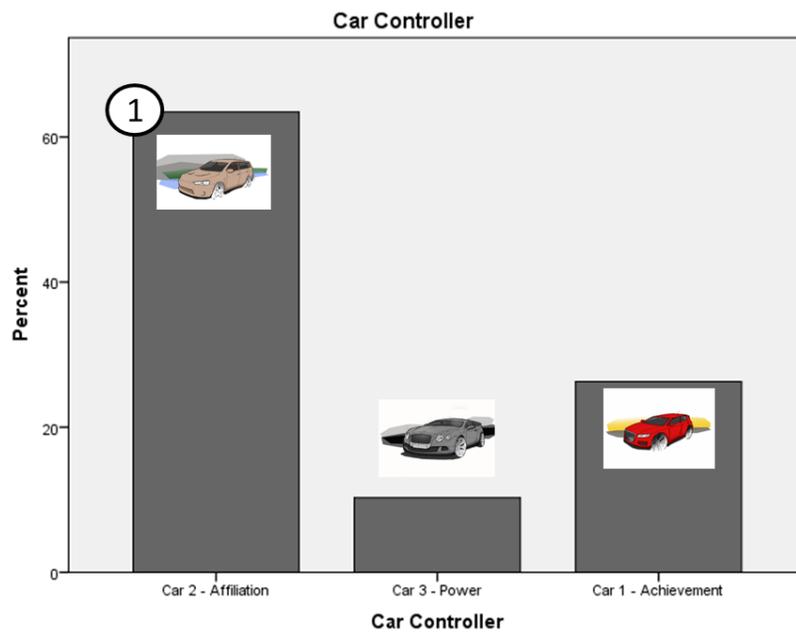


Figure 80: Data Analysis Frequency Management Decision Car Controlling

Nevertheless, as visible in the figure above (Figure 80) most of the participants assigned the affiliation coded car to the affiliation coded colleague. In addition there are some divergences concerning the achievement coded car and the power coded car.

In the second task of the management decision experiment the participants have to select office equipment for the imaginary affiliation coded colleague of the controlling department. It could be assumed that the participants assign the affiliation coded office equipment to the affiliation coded colleague. In the array of similar type of office equipment the affiliation coded office equipment was priced higher than the achievement coded office equipment. The rational decision would be to select the cheapest office for the colleague which is the achievement coded red office.

### Result Management Decision Office Controlling

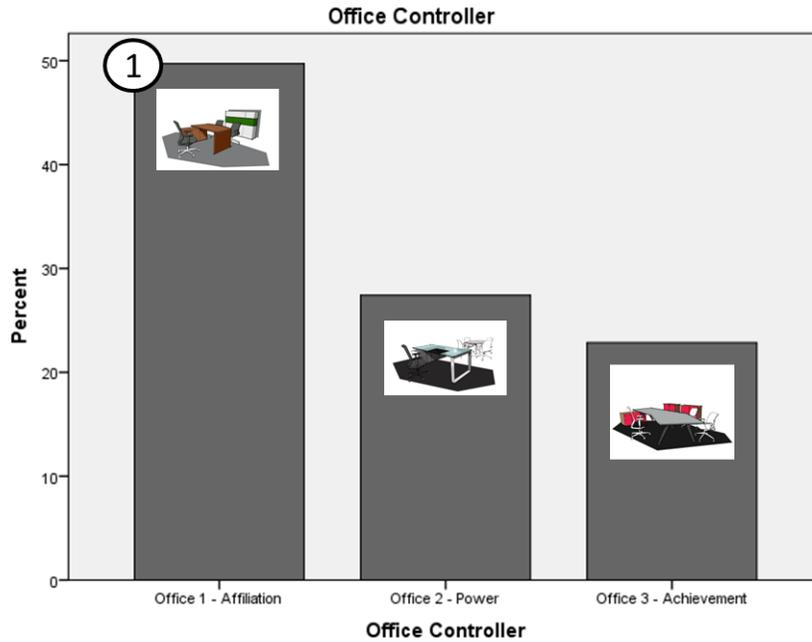


Figure 81: Data Analysis Frequency Management Decision Office Controlling

Nevertheless, as is visible in the figure above (see Figure 81) most of the participants assigned the affiliation coded office equipment to the affiliation coded colleague. In addition there are some divergences concerning the achievement coded office equipment and the power coded office equipment.

Confirmation Management Decision Controlling

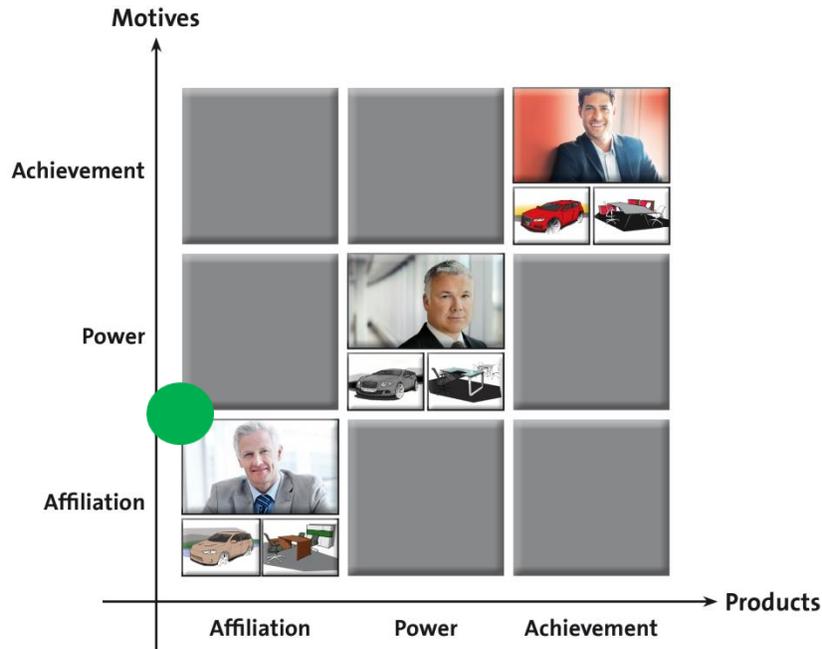


Figure 82: Data Management Decision Confirmation of Assumption Controlling

The assumption can be confirmed that in the first and second task of the management decision most of the test subjects choose the product with the highest implicit fit between the imaginary colleague and the offered implicit coded products (see Figure 82). The interface between the affiliation coded colleague and the rational choice which would have been the achievement coded car and office equipment shows a distinctively lower degree.

### Management Decision Colleague Corporate Strategy

In the third task of the management decision experiment the participants have to select a car for the imaginary power coded colleague of the strategic management department. It could be assumed that the participants assign the power coded car to the power coded colleague (see Figure 83).

### Assumption Management Decision Corporate Strategy

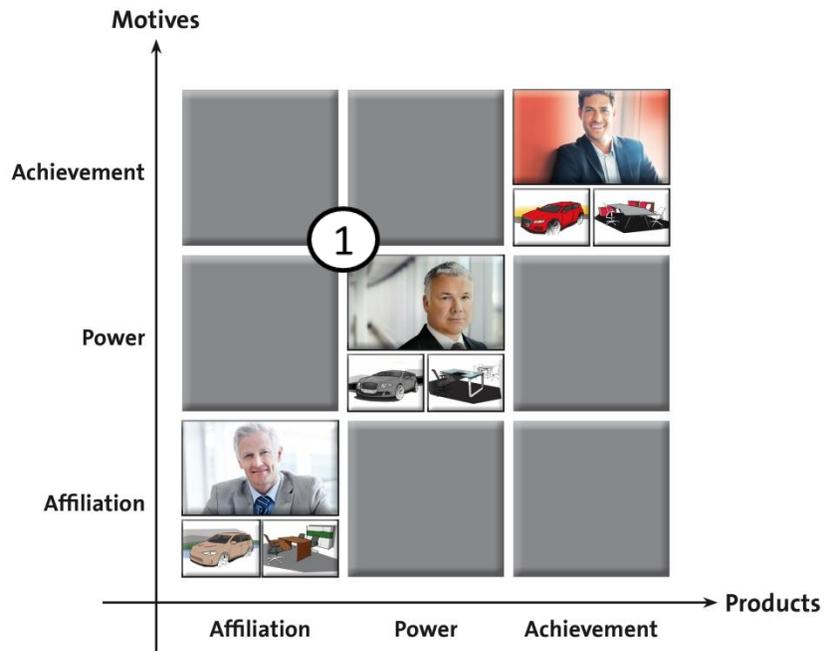


Figure 83: Data Analysis Assumption Management Decision Strategy

Result Management Decision Car Corporate Strategy

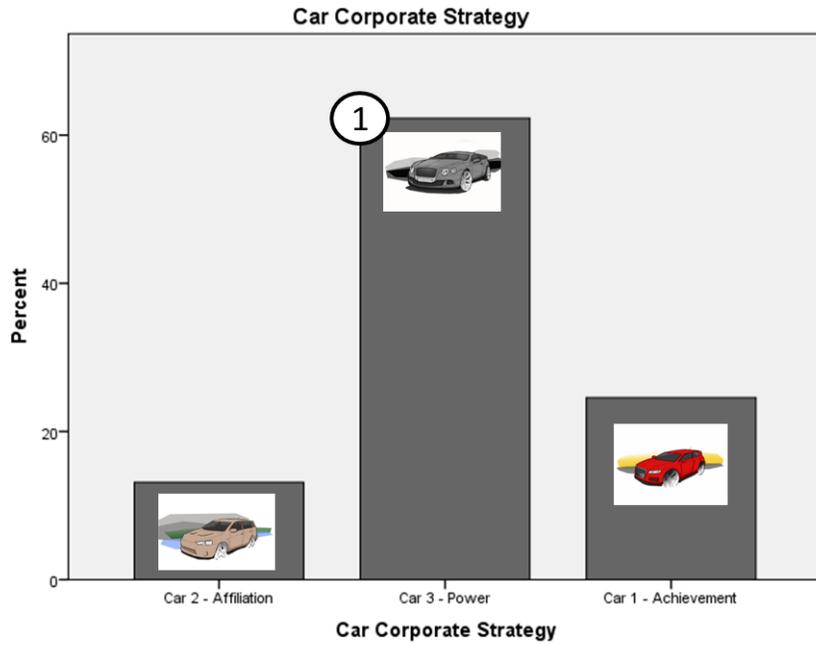


Figure 84: Data Analysis Frequency Management Decision Car Strategy

As is visible in the figure above (see Figure 84) most of the participants assigned the power coded car to the power coded colleague although there are some divergences concerning the achievement coded car and the affiliation coded car.

In the fourth task of the management decision experiment the participants have to select office equipment for the imaginary power coded colleague of the corporate strategy department. It could be assumed that the participants assign the power coded office equipment to the power coded colleague. In the array of similar type of office equipment the power coded office equipment (see Figure 85) was priced higher than the achievement coded office equipment. The rational decision would be to select the cheapest office for the colleague which is the achievement coded red office.

Result Management Decision Office Corporate Strategy

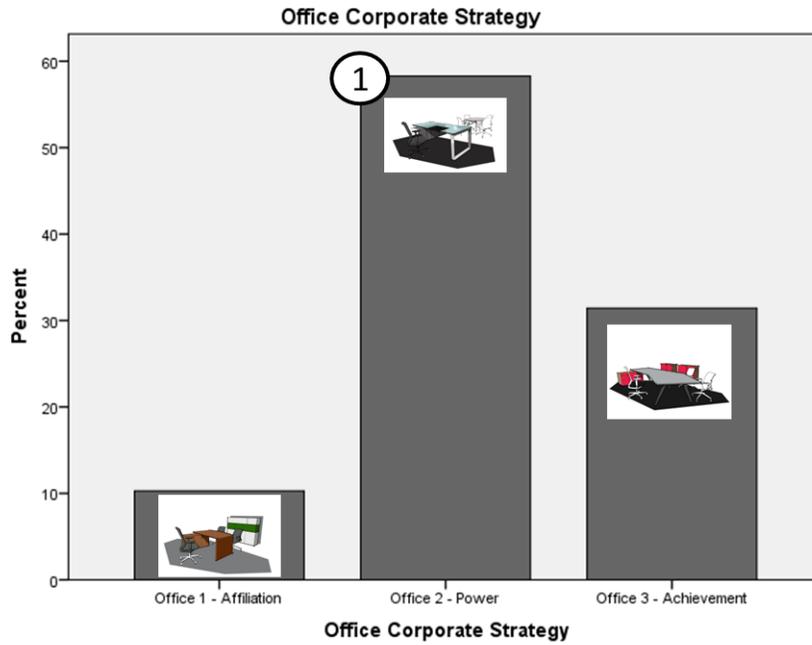


Figure 85: Data Analysis Frequency Management Decision Office Strategy

As is visible in the figure above (see Figure 85) most of the participants assigned the power coded office equipment to the power coded colleague although there are some divergences concerning the achievement coded office equipment and the affiliation coded office equipment.

Confirmation of Assumption Management Decision Corporate Strategy

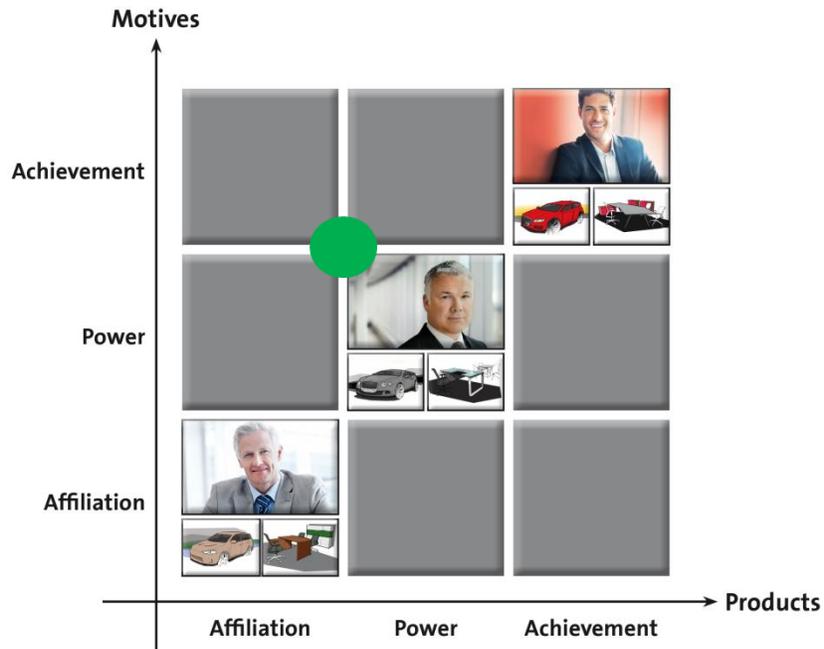


Figure 86: Data Management Decision Confirmation of Assumption Strategy

The assumption can be confirmed that in the third and fourth task of the management decision the most test subjects choose the product with the highest implicit fit between the imaginary colleague and the presented implicit coded products (see Figure 86). The interface between the power coded colleague and the rational choice which would have been the achievement coded car and office equipment shows a distinctively lower degree.

### Management Decision Colleague Event Marketing

In the fifth task of the management decision experiment the participants have to select a car for the imaginary achievement coded colleague of the event marketing department. It could be assumed that the participants assign the achievement coded car to the achievement coded colleague (see Figure 87).

### Assumption Management Decision Event Marketing

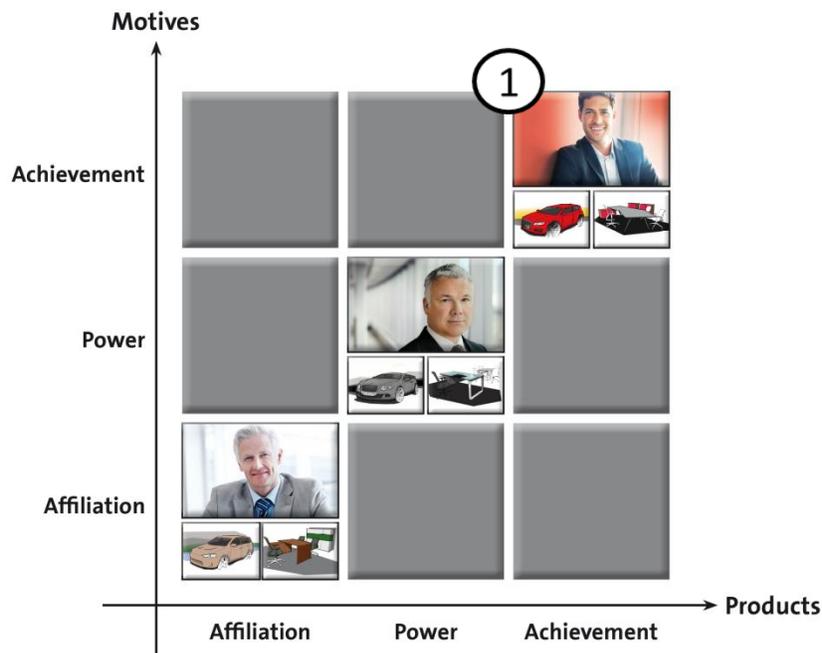


Figure 87: Data Analysis Assumption Management Decision Event

Due to the structure of the test a problem arises in this case. As prices for the products had to be different, reflecting the prices in the real business world task five and six of the decisions making test cover the car and the office equipment with the lowest price. This is why assigning the achievement coded products to the achievement coded colleague cannot be discriminated from rational decision making. It has to be admitted that the lowest price for both the car and the office equipment might not have been the optimal set up for the test.

Result Management Decision Car Event Marketing

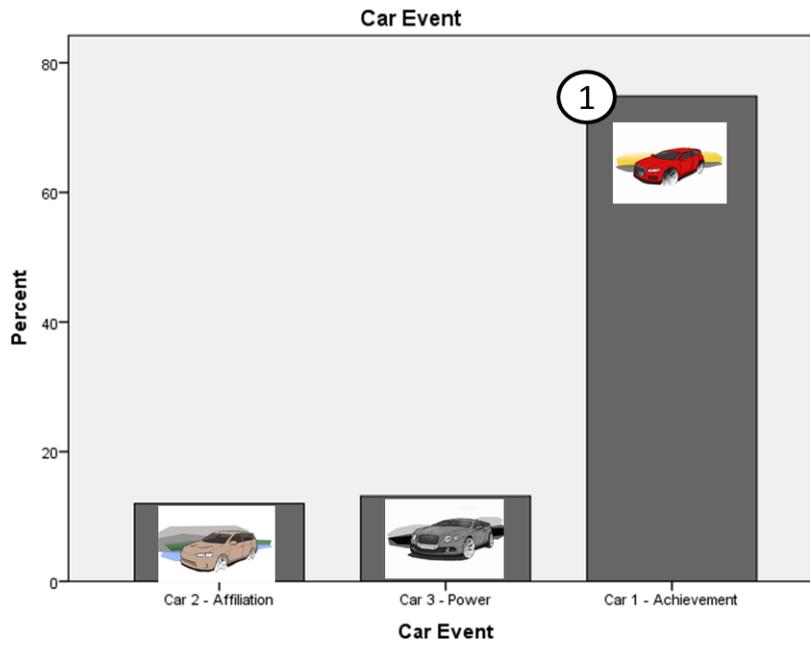


Figure 88: Data Analysis Frequency Management Decision Car Event

As is visible in the figure above (see Figure 88) most of the participants assigned the achievement coded car to the achievement coded colleague although there are some divergences concerning the power coded car and the affiliation coded car.

In the sixth task of the management decision experiment the participants have to select office equipment for the imaginary achievement coded colleague of the event marketing department. It could be assumed that the participants assign the achievement coded office equipment to the achievement coded colleague (see Figure 87).

Assumption Management Decision Office Event Marketing

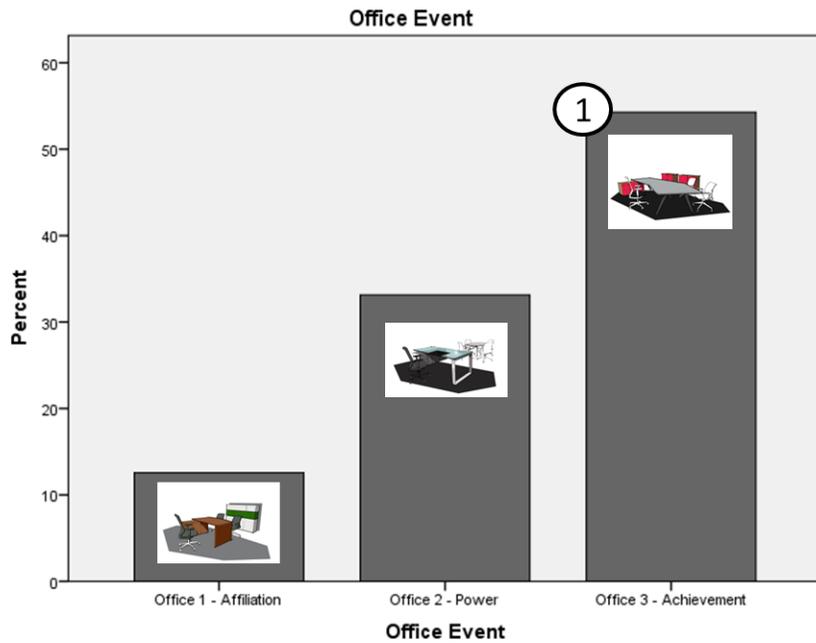


Figure 89: Data Analysis Frequency Management Decision Office Event

As is visible in figure above (see Figure 89) most of the participants assigned the achievement coded office equipment to the achievement coded colleague although there are some divergences concerning the power coded office equipment and the affiliation coded office equipment.

Confirmation of Assumption Management Decision Event Marketing

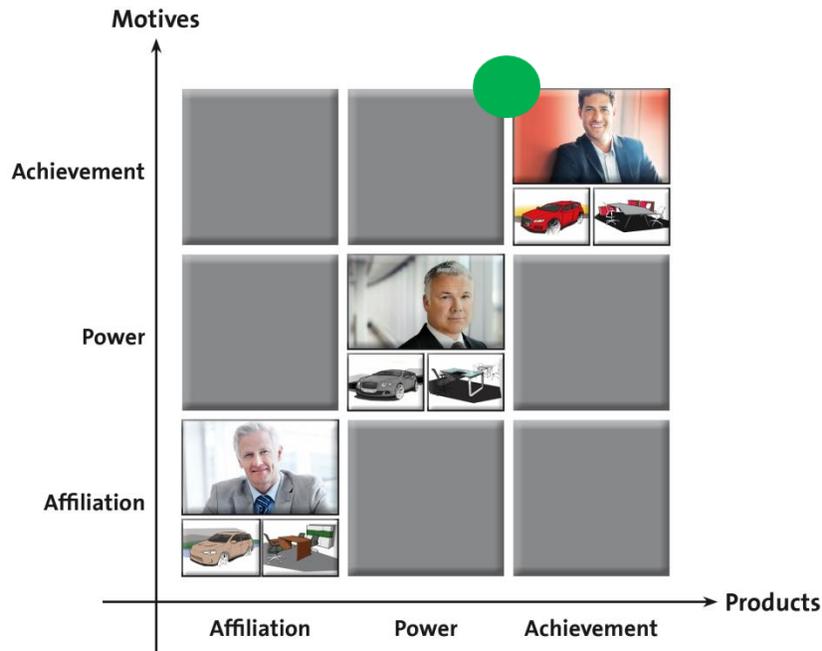


Figure 90: Data Management Decision Confirmation of Assumption Event

The assumption can be confirmed that in the fifth and sixth task of the management decision most of the test subjects choose the product with the highest implicit fit between the imaginary colleague (see Figure 90) and the presented implicit coded products. As mentioned above the set up the experiment does not allow a clear distinction. Nevertheless, there seem to be indicators that even in this case rationality has a low impact on the decision. This will be discussed in chapter 5.

#### 4.3.2.3 Results Group Decision

This part of the experiment covers the group decision experiment. The participants of the personal and management decision making experiment now have to act as members of a buying center. The basis of the group decision experiment was 175 participants clustered in 42 buying centres. Whenever possible the participants were grouped in teams of three to five people each. The size of the teams results from the critical literature research on the typical size of buying centres in industry. No strict guidelines were issued for the team building with the exception to achieve a mix of gender, departments and levels of hierarchy.

As is the case in the management decision the assumption is that each imaginary colleague is driven by a particular implicit motive. As the implicit motive of an individual is fixed, no variations exist and due to statistical reasons it is not possible to generate a cross tabulation based on the motives and the products. In the case of the management and group decisions it is feasible to focus on the frequencies a product is assigned to an imaginary colleague.

### **Group Decision Colleague Controlling**

In the first task of the group decision test the buying center teams have to select a company car for the imaginary affiliation coded colleague of the controlling department. It could be assumed that the buying center teams assign the affiliation coded car to the affiliation coded colleague (see Figure 91). Thus, the first choice would be the affiliation coded car. In the array of similar type of cars the affiliation coded car was priced higher than the achievement coded car. The rational decision would be to select the cheapest office for the colleague which is the achievement coded red office.

### Assumption Group Decision Controlling

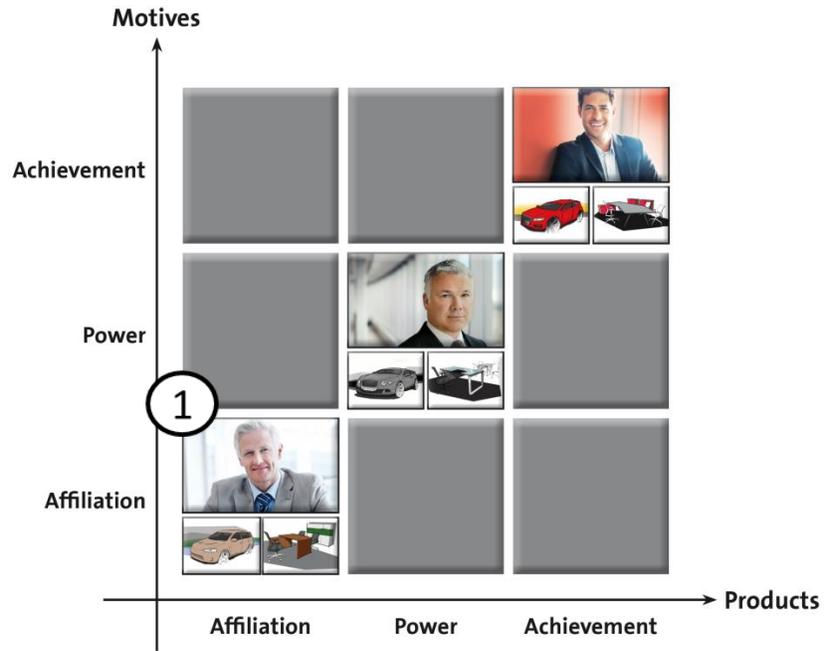


Figure 91: Data Analysis Assumption Group Decision Controlling

Result Group Decision Controlling

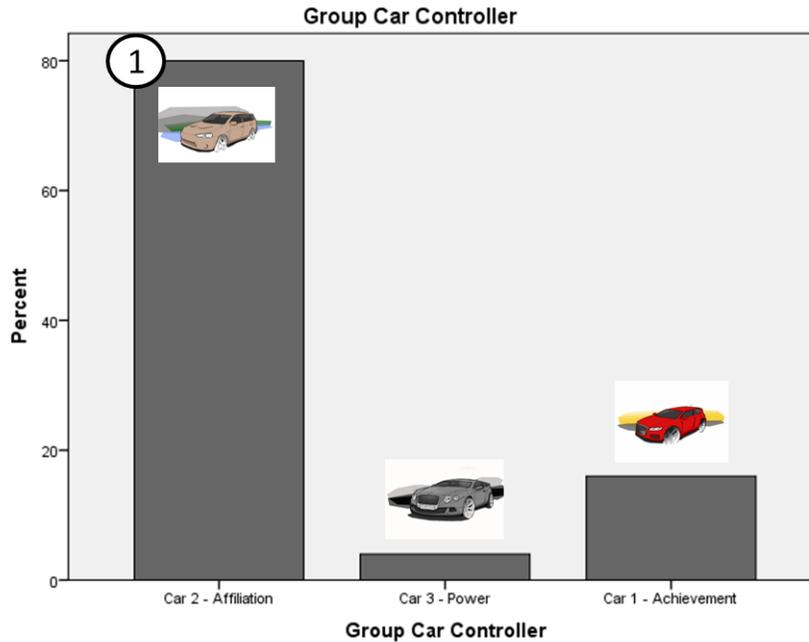


Figure 92: Data Analysis Frequency Group Decision Car Controlling

Nevertheless, as is visible in the figure above (see Figure 92) most of the buying center teams assigned the affiliation coded car to the affiliation coded colleague. In addition there are some divergences concerning the achievement coded car and only a view overlaps to the power coded car.

In the second task of the management decision experiment the buying center teams have to select office equipment for the imaginary affiliation coded colleague of the controlling department (see Figure 91). It could be assumed that the buying center teams assign the affiliation coded office equipment to the affiliation coded colleague. In the array of similar type of office equipment the affiliation coded office equipment was priced higher than the achievement coded office equipment. The rational decision would be to select the cheapest office for the colleague which is the achievement coded red office.

Result Group Decision Colleague Controlling

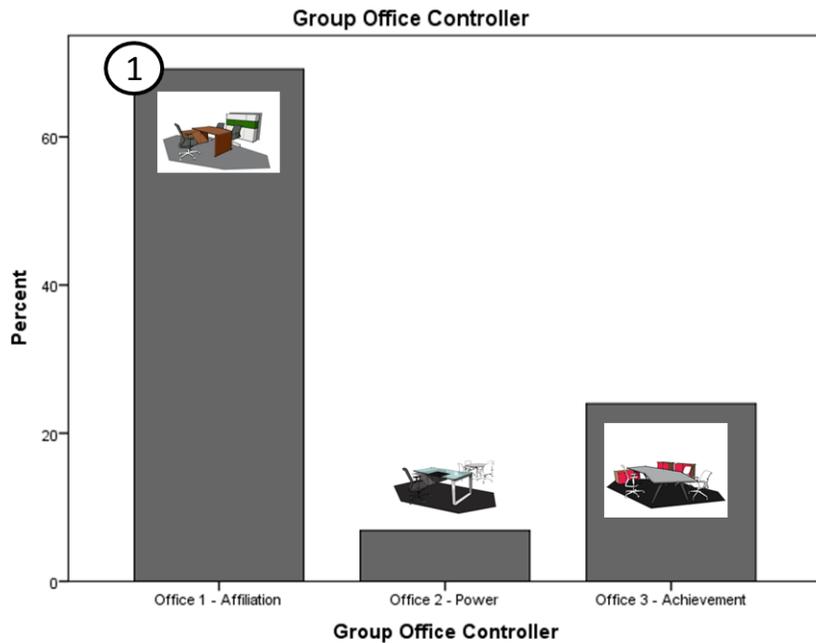


Figure 93: Data Analysis Frequency Group Decision Office Controlling

Nevertheless, as is visible in the figure above (see Figure 93) most of the buying center teams assigned the affiliation coded office equipment to the affiliation coded colleague. In addition there are some divergences concerning the achievement coded office equipment and the power coded office equipment.

Confirmation Assumption Decision Colleague Controlling

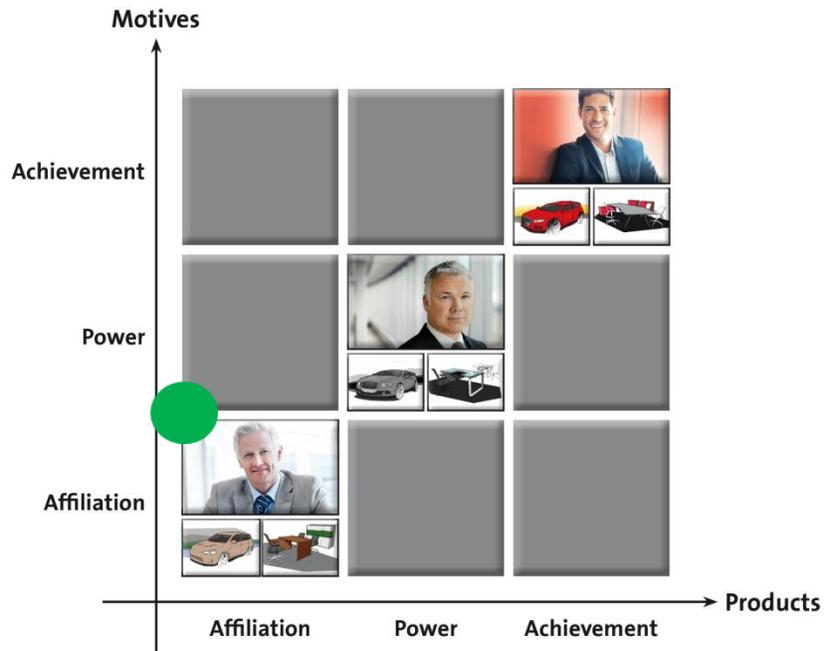


Figure 94: Data Group Decision Confirmation of Assumption Controlling

In both cases the members of the buying centres over-proportionally selected the matching products instead of the less expensive ones (see Figure 94). The affiliation coded colleague of the controlling department gets both a car and affiliation coded office equipment.

**Group Decision Colleague Corporate Strategy**

In the third task of the group decision experiment the buying center teams have to select a car for the imaginary power coded colleague of the strategic management department (see Figure 95). It could be assumed that the participants assign the power coded car and office equipment to the power coded colleague.

**Assumption Group Decision Corporate Strategy**

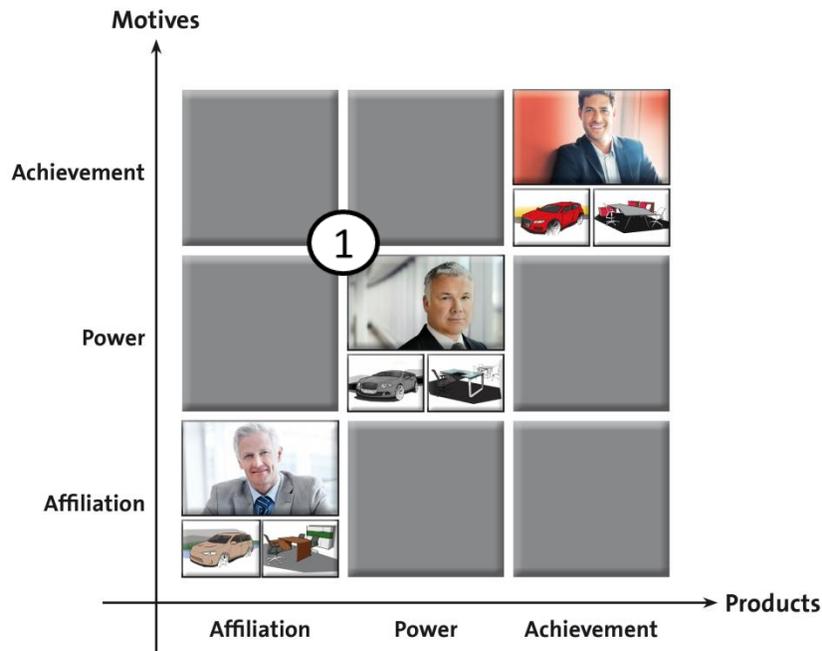


Figure 95: Data Analysis Assumption Group Decision Strategy

Result Group Decision Corporate Strategy

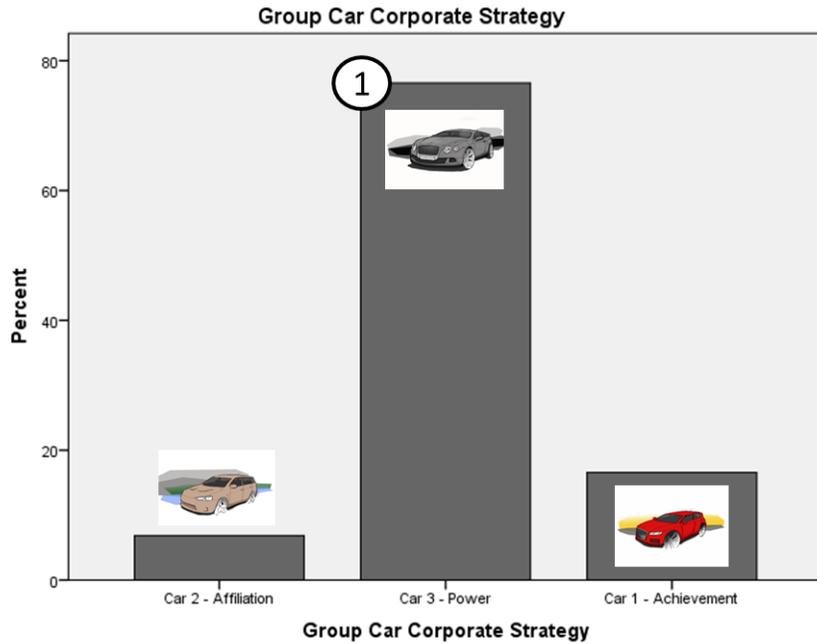


Figure 96: Data Analysis Frequency Group Decision Car Strategy

As is visible in the figure above (see Figure 96) most of the buying center teams assigned the power coded car to the power coded colleague, although there are some divergences concerning the achievement coded car and the affiliation coded car.

In the fourth task of the group decision experiment the buying center teams have to select office equipment for the imaginary power coded colleague of the corporate strategy department. It could be assumed that the buying center teams assign the power coded office equipment to the power coded colleague. In the array of similar type of office equipment the power coded office equipment was priced higher than the achievement coded office equipment. The rational decision would be to select the cheapest office for the colleague which is the achievement coded red office.

### Result Group Decision Corporate Strategy

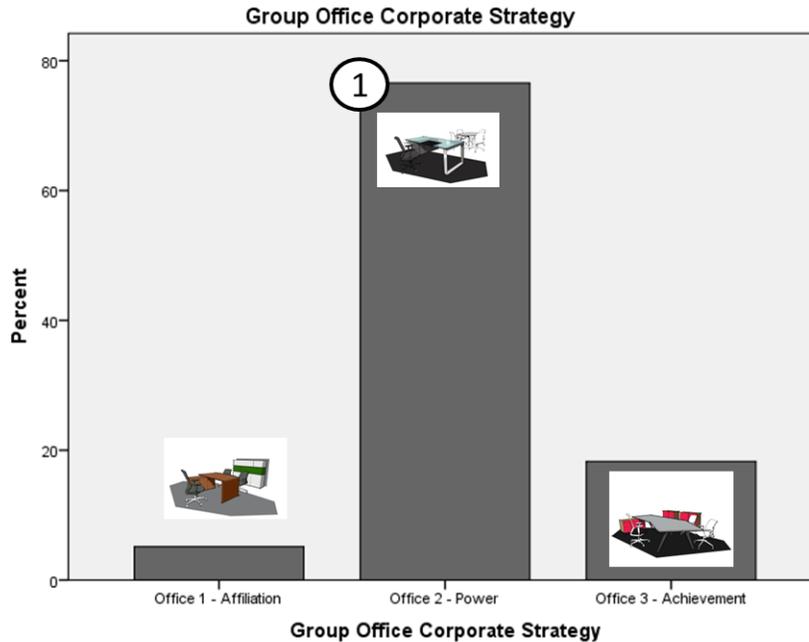


Figure 97: Data Analysis Frequency Group Decision Office Strategy

As is visible in the figure above (see Figure 97) most of the buying center teams assigned the power coded office equipment to the power coded colleague, although there are some divergences concerning the achievement coded office equipment and the affiliation coded office equipment.

Confirmation Assumption Group Decision Corporate Strategy

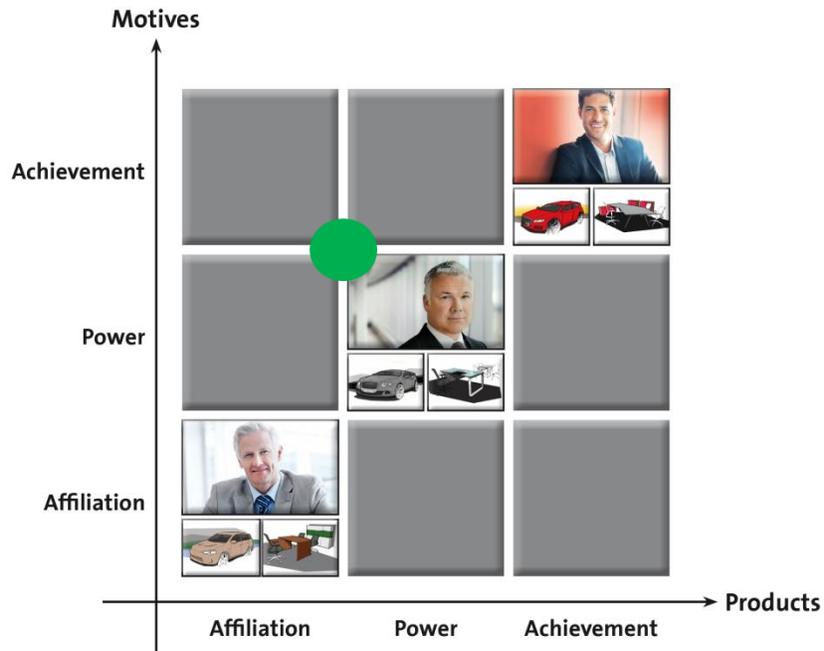


Figure 98: Data Group Decision Confirmation of Assumption Strategy

In both cases the members of the buying centres over-proportionally selected the matching products instead of the less expensive ones (see Figure 98). The power coded colleague of the corporate strategy department gets both a power coded car and office equipment.

### Group Decision Colleague Event Marketing

In the fifth task of the group decision experiment the buying center teams have to select a car and office equipment for the imaginary achievement coded colleague of the event marketing department. It could be assumed that the buying center teams assign the achievement coded car and office equipment to the achievement coded colleague (see Figure 99). As mentioned before, due to structure of the experiment for the achievement coded products the results cannot be discriminated from rational decision making.

### Assumption Group Decision Event Marketing

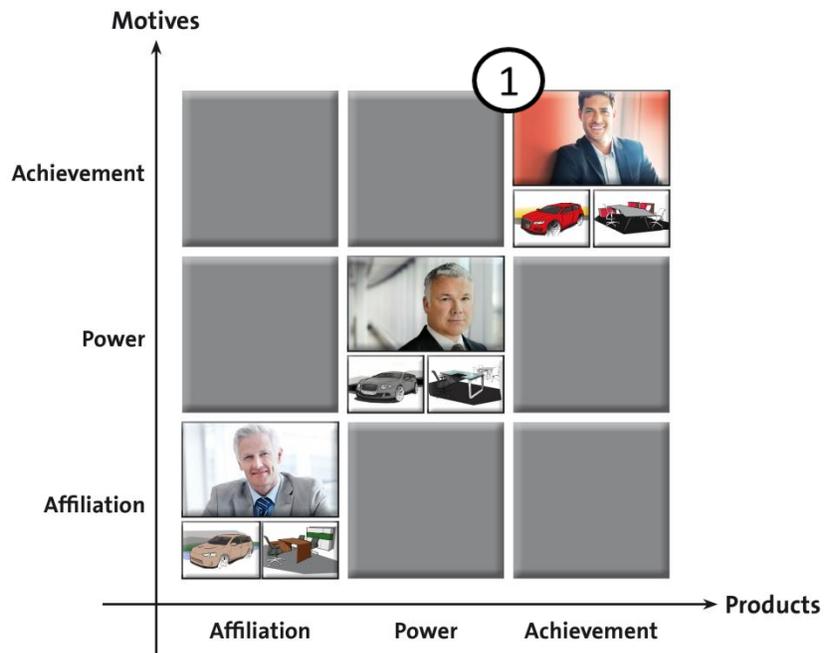


Figure 99: Data Analysis Assumption Group Decision Event

Result Group Decision Event Marketing

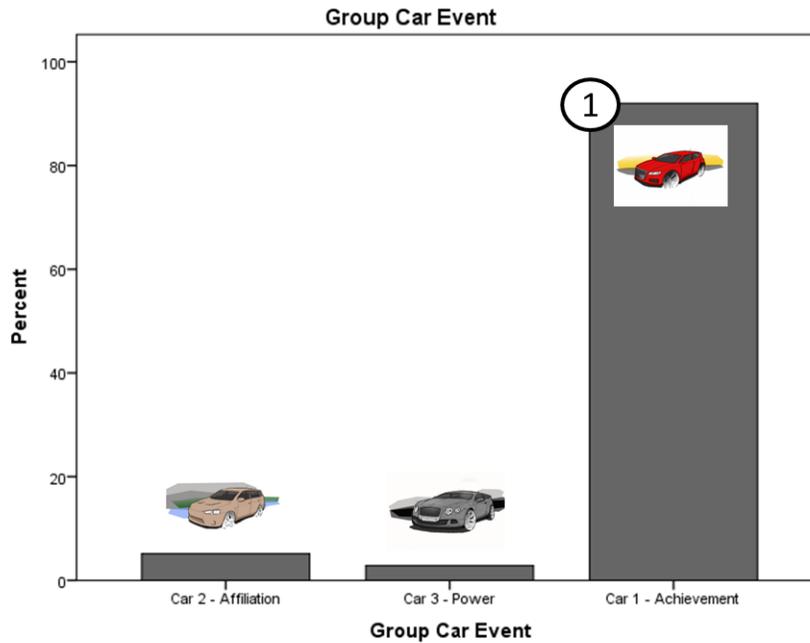


Figure 100: Data Analysis Frequency Group Decision Car Event

As is visible in the figure above (see Figure 100) most of the buying center teams assigned the achievement coded car to the achievement coded colleague although there are minor divergences concerning the power coded car and the affiliation coded car.

In the sixth task of the group decision experiment the buying center teams have to select a car and office equipment for the imaginary achievement coded colleague of the event marketing department. It could be assumed that the buying center teams assign the achievement coded car and office equipment to the achievement coded colleague. As mentioned before, due to structure of the experiment for the achievement coded products the results cannot be discriminated from rational decision making.

Result Group Decision Event Marketing

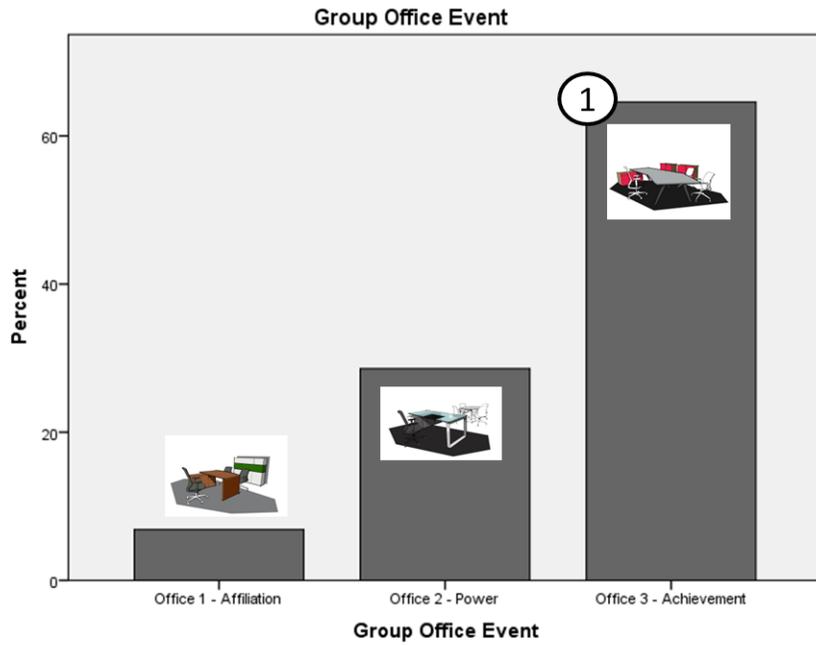


Figure 101: Data Analysis Frequency Group Decision Office Event

As is visible in the figure above (see Figure 101) most of the buying center teams assigned the achievement coded office equipment to the achievement coded colleague, although there are some divergences concerning the power coded office equipment and the affiliation coded office equipment.

Confirmation Assumption Group Decision Event Marketing

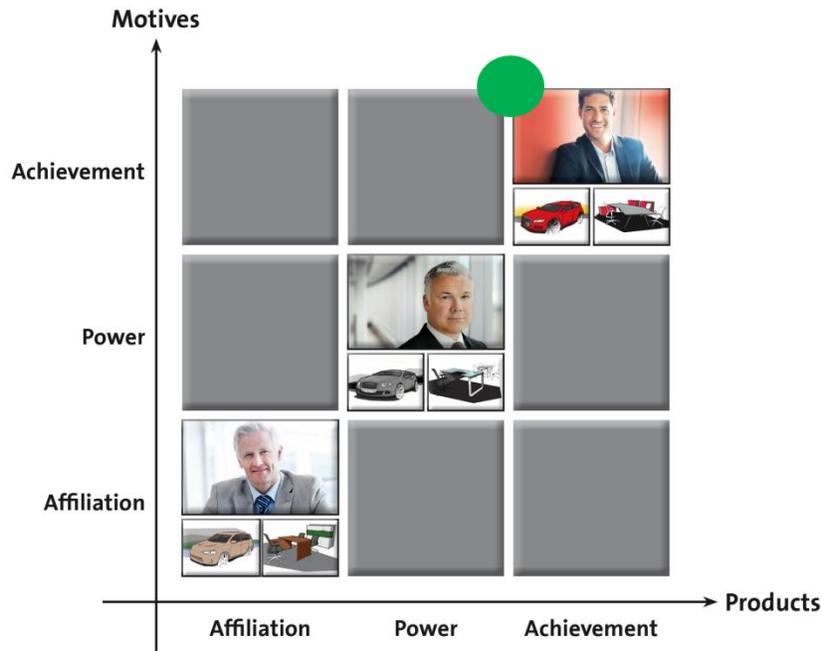


Figure 102: Data Group Decision Confirmation of Assumption Event

In both cases the members of the buying centres over-proportionally selected the matching products. The achievement coded colleague of the controlling department gets both an achievement coded car and office equipment (see Figure 102). As mentioned above the setup of the experiment does not allow a clear distinction. Nevertheless, there seem to be indicators that even in this case rationality has a low impact on the decision. This will be discussed in chapter 5.

#### **4.4 Data Collection - Final Interviews**

##### **4.4.1 Description and Objectives of the Expert Interviews**

For the qualitative research semi-structures in depth interviews with a hidden agenda were used. The interviews are 'key informants' as they are all decision makers from marketing and management. All experts are a subsample of the qualitative data collection of the research. To contrast the meanings about implicit B2B communication the sample would separate in two contrast subsample. The experts were classified into managers with and without experience in implicit communication. To avoid priming effects during the interview and to prove their implicit feeling about of decision making in B2B situations the interview was split into two parts. As quality, rather than quantity, should be the essential determinant of numbers eight high level marketing experts were interviewed. The setting for an interview should be private, quiet and comfortable. The ideal setting for an interview about business to business marketing should so be the respondents' work place (Oppenheim, 2005). As sometimes potential noise settings were avoided and some experts had no chance to avoid interruptions in the office, as an alternative location a neutral meeting room in Munich or an office at the University was offered. Most interviews were made in the experts' offices. Two were made in the neutral meeting room and one at the Munich University.

**Quad Structure of the Interviews**

Interview Structure		
	No Experience	Experience
Before Findings	No Experience Before Presentation	Experience Before Presentation
After Findings	No Experience After Presentation	Experience After Presentation

Figure 103: Interview Structure for the Qualitative Research

The Computer Aided Qualitative Data Analysis (CAQDAS) Software NVivo9 as analysing tool was used. All interviews were digital audio recorded. The interviews were personally paraphrased via NVivo9. Based on the hidden agenda nodes with issues of the interviews were created. These nodes were the basis for the coding process. The paraphrased and coded interviews build a multiple criteria document as a base for the qualitative research. The interviews were carried out in a sequential order so that iterative advances could be used in the following interviews and for the hidden agenda.

Interviews were made in June and July 2013. All interviews were made in the native language of the experts. To avoid mistakes in the translation process all analysis would be completed in experts' native speech and just the final charts would be transferred into English. The original native documents are presented in the *Appendix N*.

The experts were informed about the ethical approval application (University of Plymouth, 2012) and asked for the permission to record the conversation and to use their real names and companies. Seven experts agreed to use real names and companies. Based on internal regulations one expert had no chance to provide his name and company. The expert is a manager from one of the most important international wholesaling and trade companies. The whole group has approximately 300,000 employees. The sector of our expert is one of the most important players for advertising and media in Europe. In the following thesis this person will be described as the trade or retail expert.

The experts without an experience (see Figure 103) in implicit communication are Gert-Ulrich Grahl (41), the product marketing manager of MINI, Thorsten Guenter (43) the responsible manager for the brand PORSCHE in Munich, Erik Henschel (37) manager for multi- and social media from radio NRJ and the trading expert (56). The experts with experience (see Figure 104) are Bernhard Erasmus (55) CEO of KEK IT, Tina Lambert (33) marketing manager and partner of Spangler Automation, Martin Schmid (47)

marketing manager of Exact software and Veronika Ziegler (29) brand manager of O2 a brand of telefonica.

As managers most marketing experts are involved daily in different procurement and sales activities. Examples for procurement activities were office equipment, laptops, and services like address material and agency support. As marketing and sale activities examples are fairs and events with a high frequency of customer contacts.

The results are presented in the sequence of the hidden agenda. In the first part starting with the sociographic data, details about the business to business decision making process, meanings and the use of implicit communication. In the second part, after the presentation of the results of the quantitative research the focus is on the impact on B2B marketing, the categorisation and positioning based on implicit motives and finally the interplay between motives and the decision making process.

## **4.4.2 Result of the Interviews**

### 4.4.2.1 Results before the Presentation of the new Findings

Sometimes we may aim to set up two contrasting sub-samples. For research it is useful to identify some 'key informants' (Oppenheim, 2005). As interview partners' decision makers from the fields of marketing and management were used. All companies of the experts took part on the quantitative of data analysis of the research. In some cases the managers and top managers took part as a test subject.

The first step is to check the expert level in decision making. Martin Schmid, 18 years; Tina Spangler, 14 years; Bernd Erasmus, 36 years, Erik Henschel, 13 years; Veronika Ziegler, 5 years; Gert-Ulrich Grahl, 12 years; Thorsten Guenther 23 years and the trade expert with 40 years. As all persons are five or more years in their jobs all interviewed people are definitely act on an expert level.

Based on the analysis of the coverage (see Figure 104) rate of the semi-structured in-depth interviews a clear focus on the contribution to knowledge is visible. Most dominant number one coverage rates reached the topics about implicit motives, B2B decision making and interplay question of motives. These topics each delivered a minimum of 25 per cent of the whole expert interviews.

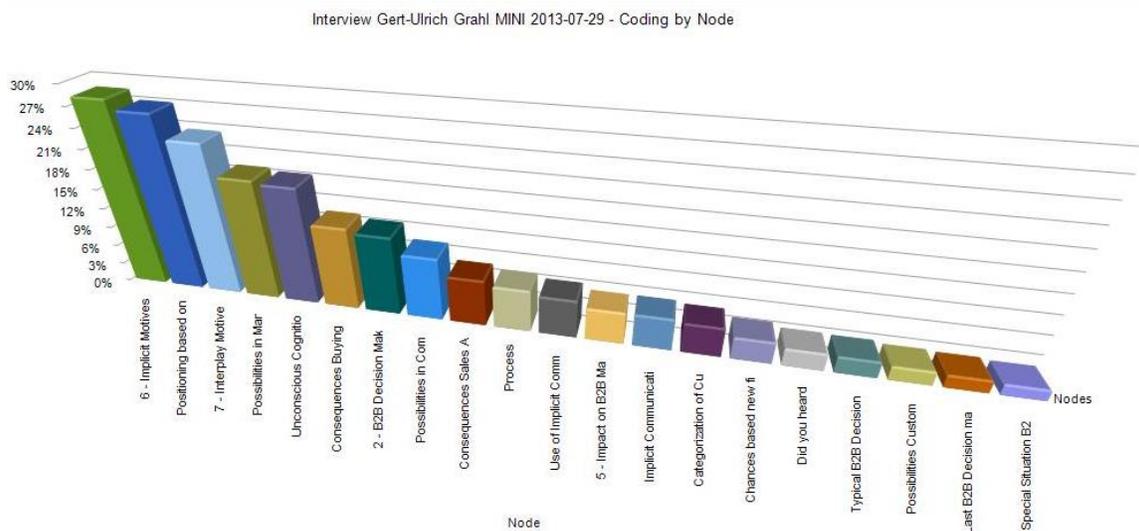


Figure 104: Example of the Covering Rate from Expert Interviews

#### 4.4.2.1.1 Business to Business Decision Making

The first question in the qualitative research was about the criteria of a B2B decision making. In the first step nearly all experts delivered rational factors like price, quality and service and more practical arguments like the ability to supply. Other important factors were the expertise in the field of the products or services (Schmid M. , 2013; Erasmus, 2013; Henschel, 2013; Grahl, 2013; Ziegler, 2013).

On the other hand the experts stressed the important fact of their intuition:

*'Things I am personally involved in and my gut feelings are important factors to be honest. If I have more options then at the end it is my intuition.'* (Erasmus, 2013)

The marketing manager of MINI brought the facts in a short formula:

*'Experience - costs - chemistry. Even if it works together, the team work.'* (Grahl, 2013)

The manager for the Porsche brand Munich emphasised referencing to business cooperation such as events that basic common value is an important source of collaboration:

*'Values like honesty, service orientation, an open mind, sustainability and trust, values that I am standing for.'* (Guenther, 2013)

That leads to the result that not always the cheapest offer makes the deal. It is more the question about the worth of the money. At the end the reliability and sustainability are more important criteria for the business to business decision (Guenther, 2013).

Important factors for customers are very dissimilar. A special situation, for example, is Spangler Automation. As the company integrate components into their products the brand of the provider of the components like Siemens is very important (Lambert, 2013). In contrast, for the software industry the service character behind the product is an important factor for customers (Schmid M. , 2013).

*'Products are interchangeable.'* (Schmid M. , 2013)

The telecommunications manager explained that in the field of telecommunications the striving for market share is getting harder every day as every company has the same products (Ziegler, 2013).

*'In this uniform market everybody just slogging the price hammer and defacto everybody has the same products and services.'* (Ziegler, 2013)

That means in the case of Spangler that the standard of excellence, first class components and expert know-how and a high level of technology and internationalisation are the drivers for their customers' decisions. However, at the end Tina Lambert also emphasises the importance of partnership and sympathy in the business decision making (Lambert, 2013). In the telecommunications industry Ziegler point out that big groups like BMW and Mercedes are mainly interested in a one stop

solution and a high service level as well as a stress-free roll out and good conditions (Ziegler, 2013).

The marketing experts are responsible for different marketing projects. Typical projects are campaigns and mailings for acquisition of new customers (Erasmus, 2013; Schmid M. , 2013), marketing actions for one's own company as well as cooperation marketing with partners (Henschel, 2013; Guenther, 2013; Retail-Expert, 2013) and fairs or exhibitions as well as events (Schmid M. , 2013; Guenther, 2013; Ziegler, 2013; Lambert, 2013).

The process for the B2B decision making underlies in nearly all companies a strict and sequential structure (Grahl, 2013; Henschel, 2013). In some cases the lead is in the purchasing department and the process underlies compliance rules (Grahl, 2013; Retail-Expert, 2013). The purchasing and the marketing department arrive at the end to their own conclusion regarding their favorite partner. In the best case the two choices match (Grahl, 2013). However, some experts stress the importance of their own intuition:

*'At the end it was the reliability, to give this person the money. We checked another offer and it was cheaper, yet I made it despite this offer as I had the feeling I could rely on this person.'*  
(Erasmus, 2013)

Most experts underpin that the ideas and concepts are usually developed in the company and the partners have more or less a service character for different parts of the marketing projects:

*'The idea and the initial launch are my part.'* (Lambert, 2013).

*'The idea comes mostly in the morning during the ironing of my business shirts.'* (Guenther, 2013)

The special situation of a business to business decision in contrast to a private buying decision brought different aspects from the experts. Classical buying decisions of the experts are articles of trade, components, IT and event equipment and services.

The marketing manager of MINI explains that the amount of interfaces between the decision management units (DMU) is the most important differentiation. In a private decision someone just has to ask the partner or some friends according to the product or service. With a corporate background there are many more partners and colleagues who have to be integrated into the decision making process (Grahl, 2013).

Contrasting private and business decisions the CEO of an IT consulting company states:

*'For me the reliability is important. And the money, even though it sounds crazy, is not that important. What I have to learn is that cheapness at the end could be very expensive.'* (Erasmus, 2013)

That is the reason he does it in the same way in making his business decisions (Erasmus, 2013). In contrast, for the retail expert the most important difference is that he acts as a professional retailer based on business, data and facts. For the specialist and sometimes for the customer too, other aspects are more important. Yet the infatuation in detail could cause problems in both dimensions.

*'For me it is not important if a button is left or right, for the product specialist that is the most important question.'* (Retail-Expert, 2013)

The marketing manager of Exact software sees the difference between private and business decisions in the cost and benefit relation. From his point of view this relation is more important in the private sector. Whereas, he states in the field of business and investment goods the price is not such an important factor. In the field of business other factors such as services, possibilities to do my job most efficiently and additional benefits are the more important arguments (Schmid M. , 2013).

The Porsche manager explains that in a business decision he thinks longer and more detailed on the decision (Guenther, 2013).

*'Finally I weigh up 500 times how other people would decide in my situation and if it is right, ethically correct, right from business aspects and how the external view is.'* (Guenther, 2013).

The manager from the automotive industry also thinks that his decision making process in the business is more rational. By contrast, in private decisions he relies on his gut feelings as he has nobody else to explain the decision to. One of the biggest differences is that argumentation is needed in business decisions. As many more people are involved in business decisions (Lambert, 2013). The social media expert from radio NRJ has a clear meaning about the special situation of a B2B decision:

*'Additionally my personal feeling is based on the aspect that whatever we decide or do has to be beneficial for the company.'* (Henschel, 2013)

Veronika Ziegler from O2 Telefonica explains, that in contrast to private decisions, the amounts are incomprehensibly enormous. If an offer is about 10,000 Euros it seems extremely cheap. So the dimensions are completely different, and therefore it is impossible act with the feeling it is one's own money (Ziegler, 2013).

Ask for the reason why the customer should do their business with their companies the Unique Selling Proposition (USP), not all experts deliver a straight answer. Finally, the result was a colourful mix of possible reasons. Bernhard Erasmus thinks that the partner approach in both directions and the reliability is the most important argument for KEK IT. For radio NRJ the young and trendy image seems to be the most important characteristic (Henschel, 2013). For the retail expert it is the modernity of a company with different platforms of online and local trade options in the mix (Retail-Expert, 2013). For Martin Schmid the customer satisfaction is the most important factor. The USP of MINI is based on values such as individuality, fun, lifestyle, coolness and nonconformity (Grahl, 2013).

*4.4.2.1.2 Experience of Implicit Communication*

The question about the term implicit communication was answered by most experts with 'yes'. Seven out of eight interviewed persons respond that they heard about the topic, even the experts do not use concepts of implicit communication. Yet most experts had a more vaguer idea about the content of the term.

*'It is more about the cognition, what we could improve on our brand, for example, how to get a more masculine impression of the MINI brand.'*  
(Grahl, 2013)

The marketing experts who do not use concepts of implicit communication explained that even if their do not know any models of concepts they are sure that they use implicit communication in a more implicit way. So the Porsche manager explained:

*'Even if we do not know how to use this tool, we nevertheless use it.'*  
(Guenther, 2013)

The manager from radio NRJ also explained that particularly in the field of social media, it is an important fact how to use the right wording to explain what is meant (Henschel, 2013).

*'It's just to attain an unconscious goal, if you think three times which implicit reaction you will get if you do it like that.'* (Henschel, 2013)

The marketing experts who used concepts of implicit communication report about different experiences. Tina Lambert explained in reference to Gert Hofstede that the impact of implicit communication connected to the intercultural dimensions was important and has now learned useful content during her MBA studies.

Veronika Ziegler, the brand manager of O2 Telefonica, explained that over the last years an implicit communication tool was the base for the whole customer segmentation. Yet just on the day of the interview the implicit segmentation tool was skipped and followed by a classical segmentation based on lifestyles, use and affinity of technical equipment.

Martin Schmid used implicit communication three times. Two times very successfully in a former company as well as now in his current position as marketing manager of Exact software (Schmid M. , 2013).

*'The first, at this time overwhelming experience, was the Semiramis brand as suddenly an enormous success has been achieved. We doubled the number of our customers within one year.'* (Schmid M. , 2013)

Schmid adds that for the background it has to be known that every solution is in an investment range of 50,000 to 250,000 Euros. He explained that even in the new campaign of Exact the feedback from the target group and the people in the own company is very positive.

*'The feedback of the visitors at the trade fair was extremely positive. The new world of images, the world of feelings is more about the feeling of being good than the differentiation about services.'*  
(Schmid M. , 2013)

An important indicator for the exact software is the so called sales question calls. That is qualified contacts in some companies known as leads. Before the change in the communication concept the so called 'lead pipeline' was around 3.3 million Euros. After five months of implicit communication the amount increased to 15.02 million Euros. Schmid explains that not the complete increase is the result of the change of communication, and yet it delivers essential contribution:

*'It is clearly noticeable that there is another way, a new way, yet a successful way.'* (Schmid M. , 2013)

Martin Schmid explains that he has a very positive opinion about implicit communication. We use always implicit information for our judgements, if we want something or not. If we like a person or not we decide in seconds, he reports. From his point of view marketing is a highly emotional topic (Schmid M. , 2013).

*'If I work with people or in marketing, and if I am not able to communicate emotionally to people, if I just try to communicate rationally, then I think we make a massive mistake.'* (Schmid M. , 2013)

Tina Lambert, the manager in the automotive industry, also used implicit communication and learned a lot in the last years about the branding based on implicit concepts. They still use this concept to work unconsciously with their employees and customers.

*'It works! I am still very happy if somebody says I work for Spangler Automation after such a short time, as we were known as Electro Spangler for more than 30 years.'* (Lambert, 2013)

As she explained: the change worked very fast. It also confirms that communication concepts are accepted if and only they are thoroughly thought and well designed, states Lambert. A clear proportion of the implicit communication and the companies development is hard to say mean the automotive manger. Yet a big part seems to be the success of the new communication strategy (Lambert, 2013).

*'Since the change we have always had an increase in our development.'*  
(Lambert, 2013)

The CEO of KEK IT reduced his experience in a short statement:

*'For us that was a quantum leap.'* (Erasmus, 2013)

Asked for a more detailed explanation of his experience with implicit communication he reports that a lot of factors have to be analysed and used in the correct way. In the first step the company changed their colour climate. The next step was to change the key visuals from abstract pictures to images of real employees. For the new visual world of the company an abstract environmental situation in the new colour climate of the company and the right implicit elements were created (Erasmus, 2013).

*'At the end we get an extremely positive feedback from our customers and that is the way I like it.'* (Erasmus, 2013)

Part of the first part of the interview was the prognosis (see Figure 105) of the results of the findings from the quantitative research. Most experts assumed the lowest level of rational decision making in the area of the personal decision. The exceptions are the Porsche manager Thorsten Guenther and our trade expert. Therefore, most experts also assumed an increasing rational price based decision in the following management decision in the experiment. The prognosis of the group decision presents no clear picture. Some experts followed the widely accepted theory of the buying center approach and assumed a more rational decision; some followed more their personal life experience and assumed a decreasing level of rationality in the group decision making process.

### Prognosis of the Different Levels of Decision Making

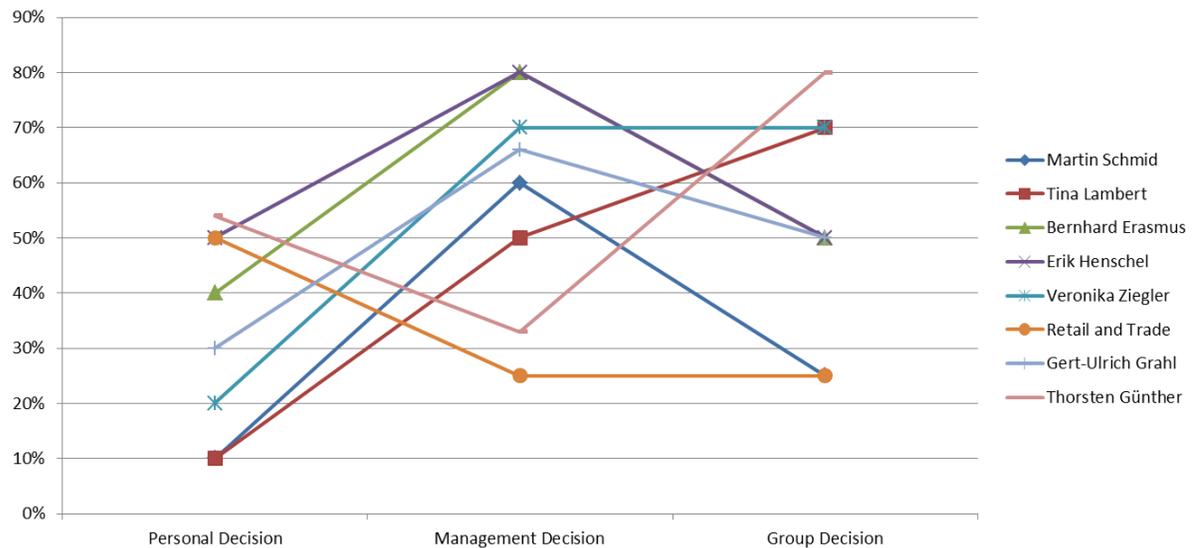


Figure 105: Prognosis of the Different Levels of Decision Making

#### 4.4.2.2 Results after the Presentation of the new Findings

##### 4.4.2.2.1 *Explicit versus Implicit Communication into B2B Decisions*

The retail expert explained that in the past it was easier to know what has to be done:

*'Based on the clientele and the age structure you get a brand focused concept. Today you know nothing.'*  
(Retail-Expert, 2013)

People like small boutiques as well as big stores. That is a development in the local retail business that will increase over the next years. This development will characterise the future of the stationary retail business (Retail-Expert, 2013).

*'In contrast to the past you need more things that inspire people, things you can't explain.'* (Retail-Expert, 2013)

Another important effect is to reflect explicitly the implicit decisions of customers mind.

As the retail expert states:

*'You have no chance to avoid the market leader. As the market leader has a strong dominance; you would create your own disadvantage.'* (Retail-Expert, 2013)

If the market leader does not have the right priority in the shop the turnover will decrease. In the opinion of the retail expert this is one of the most important management decisions nowadays. To oversee the immense power of brands like Apple, Nike and Co could end in an immense disaster (Retail-Expert, 2013).

*'That's a very important thing...you just have to follow what the customer wants. If you know it you will make it.'*  
(Retail-Expert, 2013)

Retail emphasises that the choice of brands is in every field smaller than in previous years. In his retail segment usually just five companies are the main players. And one of them is the most dominant market leader. In reference to the car market he explained that the main players in the premium segment are Mercedes, Audi and BMW. And just Audi and BMW are winning their matches whereas the rest have no chance. The same situation is in his market segment. Transferred to his market segment, he explained not to present the Audi means to lose money (Retail-Expert, 2013).

The marketing manager of radio NRJ emphasises that the biggest part of the cognition of a radio station is implicit. As radio is always a standby media. So the unconscious component in the radio business is much bigger than in the retail business, in which you can take things into your own hands. He explained that all products and services live from their image. Anyway if it is a band, an artist or a product, they all need an image which has to be created by emotions. And that is the only way a radio station could create its image, just by emotions - nothing else (Henschel, 2013). And it seemingly works not just in the listeners market, it seems that it works in the B2B business of the managers too, who book the spots on the radio station. So Henschel illustrated that he receives a lot of comments from managers who say:

*'I am not very interested in this station, but my kids love it. That's the reason I book advertisement on this station.'* (Henschel, 2013)

And as the radio manager stresses, as their radio station is not one of the cheapest ones. He also used a car example and explained:

*'I think that's the same if I will buy a new car. In the end I will think about the price, yet if I had the fixed idea that I want this model, then I will do everything to find enough pros that it will be the focused model. In the end if it is 100 Euros more per month anyway, if it works. And I will start to put lipstick on the pig.'* (Henschel, 2013)

Based on the explicit price decisions the CEO of the IT Company explained that there are still companies which are a strongly focussed on the price. Then you can decide if you want to make the deal under those conditions. Most companies KEK IT is working for are companies that have a focus on the price, yet the price is not the most important factor (Erasmus, 2013).

*'The most important thing is to solve the problem; the price is always the second category.'* (Erasmus, 2013)

Tina Lambert, the marketing manager of Spangler Automation, has a more internal perspective. She thinks of how to create in the process of decision making after these research findings in the future (Lambert, 2013).

*'What does a rational decision mean precisely? Is the decision maybe worse for the company? As we now know decisions are more implicit. So is there is a legitimacy to tug people of different backgrounds to a table to induce a decision?'* (Lambert, 2013)

4.4.2.2.2 *Impact of the Implicit Motives on B2B Marketing*

*'As we are by far less rational than as we assume we make very many decisions completely unconscious, based on intuition.'*  
(Schmid M. , 2013)

The marketing manager of MINI spoke about two big columns in the impact of implicit motives in the car industry. One of the columns is the product and the second one is communication. In the first topic it would be interesting to check the coding of the product design and if it fits with the expected design of the advised target group and in the field of the communication event the same.

*'Is it really enough to put two guys into a MINI Roadster, to get a more male based positioning, or are other things needed like colours, music or special cut techniques for a more masculine direction in the positioning of the car?'* (Grahl, 2013)

4.4.2.2.3 *Segmentation and Positioning based on Implicit Motives*

The marketing specialists, without a background of implicit communication, use conventional segmentation tools. Very popular segmentation instruments are the sinus milieu (Sinus Institute, 2011) or in the car industry the sigma milieu (SIGMA, 2013) studies are used more often. All these milieu theories are based on typical lifestyle criteria. Based on this theories MINI has the postmodern trendsetter as main target group. Following the milieu theories this postmodern trendsetter has a kind of blast effect end open new market segments. The marketing manager of MINI anticipates that based on the nowadays concept a cross check with the implicit theories could generate interesting findings about the real customers of the MINI (Grahl, 2013).

*'In a research set up of milieu concepts, implicit concepts, buyer and non-buyer of MINI cars we could get the feedback if the postmodern trendsetter will be attracted by our communication.'*  
(Grahl, 2013)

In contrast the radio manager said that it is difficult to categorise the listeners into a clear implicit motive category. The main interest in a young and trendy radio station seems to be achievement. Yet he stresses the importance of the power of a brand, and what he explained for him is always connected to the power motive. The affiliation motive of Henschel is located in the area of the governmental radio stations (Henschel, 2013).

The marketing experts with an implicit background have a clear concept about their market segmentation and the positioning based on the implicit motives. Erasmus, the CEO of KEK IT, explained that his customers are located in the affiliation segment (Erasmus, 2013).

*'They say I will have the feeling that I am well located.'*  
(Erasmus, 2013)

He explained that if people are power motivated, then they are usually not very compatible with his company. As he explained if his team had contact to power motivated manager than both sides realised very quickly that there is no compatibility and then the potential customers need other people (Erasmus, 2013).

*'The way of doing my business is a kind of philosophy of life or approach which works in some cases, but not on others.'*  
(Erasmus, 2013)

In the case of exact software the 'feeling good' of their customers are the core of their doings. In contrast to other software companies they do not just present their features and products. They integrate their customers and ask them how they want 'its' software in the future. The result is that the customers accept that the software does not solve every criterion now, yet the customer has the feeling that the company act in their

interest. Schmid leads the positive feedback as well back on the pleasant world of images (Schmid M. , 2013).

In contrast, the manager from the telecommunications industry states that segmentation based on implicit motives is very helpful. Yet every segmentation helps, she explains. And that the new presented categorisation seems to be useful as well, as there are a lot of insights of lifestyle criteria from different perspectives. Ziegler explained that the last month the communication of O2 completely changed. From a relatively stolid and less people focused image communication to a very dynamic and people based picture communication (Ziegler, 2013).

The automotive manager assumes that the affiliation orientated people are more in the field of the public services as the power orientated managers are more in the big groups. In a situation where there is I contact with the customer it could be useful to have such things in mind (Lambert, 2013).

*4.4.2.2.4 Interplay between Implicit Motives and Decision Making*

The question about the chances of communication based on implicit motives brought interesting aspects from both sub samples. Interestingly, the experts without implicit experience discovered a high potential as in contrast the experts with implicit experience warned about the dangers.

The experts from the international radio network without implicit experience explained:

*'Sure, and I think on a large scale, there are lot of things we could do in all areas.'* (Henschel, 2013).

The radio manager spotted potential in the audio core business the on air product as well as in the line extensions the more visual driven web applications. He explained that standard listeners can just realise the complete format of a radio station on an unconscious level. Audio design as jingles, backgrounds, sound effects and the way of presenting the programme can't be realized from the normal radio customer (Henschel, 2013).

*'Nobody would say, hey that was a great jingle, or hey what a great audio packaging.'* (Henschel, 2013)

The radio manager with no implicit experience explained that in his business they use audio visual effects to create customers emotions (Henschel, 2013). Use of visual effects is in the radio business now possible as they use the social and internet media as portfolio extensions.

*'In principle the goal is emotion, not a subjective emotion  
...all what is coming out and you know I feel happy or  
unhappy.'* (Henschel, 2013)

For example, if somebody wins in a radio game and screams, or people who have to cry during a romantic song (Henschel, 2013).

*'Yes sure, at the end we always have these three motive bubble  
set the end of the triangle. Motivation seems to be very easy!'*  
(Grahl, 2013)

The MINI manager without an implicit communication background explained the interplay of implicit motives on his personal experience. He related that he was at a company event of MINI the week before the interview. The event was in a surf hotel at a cooperation partner of MINI. For a surfers hotel the level is extremely high and part of the concept is obtaining some financial cash flow from sponsor partners. In the result the hotel has suites from Jever beer, MINI and the spa partner is Unilever with its Dove

brand. As the marketing expert explains the hotel plays clever with the lifestyle of the cool surf riders (Grahl, 2013). Furthermore, he explained:

*'It is appealing, you feel good there right now, prompt this image from surfing comes into your mind.'*  
(Grahl, 2013)

Then, he reports about the surfboards the hotel has in every room. As he tried to inspect the board in a more detailed way he realised that it was fixed to make sure that it could not be stolen (Grahl, 2013). And as he said this in this moment he realised:

*'You are not as cool as you want!'*  
(Grahl, 2013)

And, then he remembered a blackboard in the wash rooms where customers have the possibility to make statements (Grahl, 2013). And one statement was:

*'1,000 Babbitt - 0 surfer' (author from blackboard - unknown)*

And, as he states that from an analytic, rational and explicit view, the hotel managers do everything right. Yet just a small incongruent implicit message crashes the intuitive feeling of the real cool surfers' hotel.

The retail expert states that what we can learn about the findings is that local shops need to effect more emotions. He explained that the future will be more about solutions and the presentation of solutions (Retail-Expert, 2013).

Thorsten Guenther, the Porsche manager, explains that to predict the chances of communication based on implicit motives it would be useful to understand the approach in depth. He claims that he thinks that many implicit techniques will be used on an implicit level of communication, yet it is still not explicitly (Guenther, 2013).

*'I think there are many chances to use it,  
yet it has to be completely understood.'*  
(Guenther, 2013).

In contrast, Martin Schmid, the marketing manager of a software company, has a background of implicit communication. He also well thinks that there are strong opportunities for implicit communication.

*'Marketing always tried to work in this direction. That was made in an implicit way as well. If I took a picture that should be pleasant or to transfer something, then I work with implicit communication as well.'* (Schmid M. , 2013).

He states that we try to move things closer to the observer. And that was always the job of marketers. The great advantage is that based on studies and case studies now are evidences for implicit communication. This knowledge gives us the chance to convince top managers of this approach. Especially in the software sector there are many technically orientated managers for them it is difficult to accept.

*'We communicate soft facts. Things those are important for our customers.'* (Schmid M. , 2013)

Marketing is the manipulation of target groups. It is not negative to use colours, images and appealing words (Schmid M. , 2013).

*'It common sense that a picture tells more than a thousand words but you have to decide on the right picture.'* (Schmid M. , 2013)

The marketing manager explained the change process in his company. As the colour of the company is red they choose a strawberry as icon. A strawberry is basically a positively charged element, it tastes sweet feels like summer and it is healthy. The idea

is to transport pleasantness. He states that at the last fair they dispersed strawberries as promotion element and get an incredibly positive feedback. In comparison to the years before the sales team does not have a problem to get in contact with the people, they just offered the strawberries and were in contact. At the moment the company is in a phase of orientation. Yet they will try to do many things that transfer the pleasant nature to the customers (Schmid M. , 2013).

*'It is important to get out of this intrinsic box thinking.  
It is not important what I want to sell, it is important  
what my customers want.'* (Schmid M. , 2013)

As Schmid said they tried to create an atmosphere of feeling good. The order on the fair was first to relax with the visitors and then to offer coffee and strawberries again. In consequence they reduced the number of presentation terminals and used the space for more comfort areas.

The Porsche Manager answers on the question about possibilities to use communication based on implicit motives in his show room that he would like, yet has no chance based on the financial limitations and the international corporate identity standards. As he explained, the corporate identity manual regulates everything including the tiles in the wash rooms (Guenther, 2013). Interestingly, his colleague from MINI presented the same example and referenced the mainly overregulated design of the toilets in according to the corporate standards (Grahl, 2013). Both experts state that the strong regulations are sometimes difficult to create a customer compatible environment in different areas. More especially the big differences in rural and urban areas are sometimes problematic, according to the experts (Guenther, 2013; Grahl, 2013).

As a phenomenon in the field of shop design the MINI manger as well as the retail expert spoke about Abercrombie & Fitch (Grahl, 2013; Retail-Expert, 2013).

*'People cue to get entrance to an intensively smelling store,  
in which people are sparely dressed to buy things - crazy.'*  
(Grahl, 2013)

And so the prognosis of the retail expert is that the number of companies such as Abercrombie & Fitch will increase. Shop concepts with basic values and the feeling of 'my store' (Retail-Expert, 2013).

## **4.5 Chapter Summary**

The chapter 4 'Empirical Research and Data Collection' is restricted on the presentation of the results from the pilot studies and the quantitative and qualitative results of the research. For a complete overview and understanding, the interpretation of the data is addressed in chapter 5, the discussion chapter.

From the pilot test we find the result that there seems to be a measurable existence of implicit motives and an interplay between these motives and the business to business decision making process. Therefore, it seems to be useful to go into a deeper phase of the research and to start the main data collection.

The first part of the data collection was a survey. The survey was separated into a sociographic and a psychographic part. Both surveys build the basis for the cross check with the data out of the experiment. An interesting finding of the sociographic survey related to education with 45.1 per cent of the sample being people holding a university degree. From all of the 175 test subjects the main educational degrees were university degrees, followed by professional education and academy degrees. The participants in the research were very well educated. An interesting finding of the psychographic survey was the high dominance of the power motive in the sample.

The result of the experiment was that the price based rational decision decreased with the number of people taking part in the decision. At this stage it seems that as more people are involved in a decision making process, the more non-rational factors play a role in the decision making process.

As a result of the interviews, the feedback was given that the marketing experts were highly interested in the topic of the thesis. All experts interpreted these findings as opportunities for marketing communication. Most experts have experience in the field of emotions. However, they had some knowledge transfer problems between the connection between motives and emotions. This is an extremely difficult issue to explain. Finally, all experts saw the high potential of implicit communication, interestingly not just the managers using implicit concepts but also those who did not. In contrast one large international company stopped all of its investments in implicit communication and turned back to traditional tools of market segmentation.

## 5. Discussion

This chapter considers the key findings of the study for a detailed discussion of the research. It brings the theory, the results out of the experiments, the survey and the interviews together. This chapter explores the interdisciplinary interplay and analysis in-depth with the connections based on the empirical data.

### 5.1 *Discussion from the Survey*

#### 5.1.1 Sociographic Survey

*Gender and age:* The proportion in the data collection was relatively equal. From a marketing perspective all but one test subject was at an age which was in the relevant and addressable target group for all kinds of media. Most of the participants were aged between 21 and 55 years. Due to the dual system of professional education in Germany frequently minors are employed in companies, sometimes at the age of 14 years. This is why in a very few cases participants in the survey are minors. At the time the survey was conducted all of them were employed as apprentices of the participating companies i.e. members of the staff.

*Timelines and expert level:* The prevailing opinion in the literature indicates that people have to spend 10,000 hours on a topic to become an expert. An expert level will be obtained not before having worked for a minimum of five years in a particular field. The sociographic survey reveals that more than 50 per cent of the participants seem to operate on an expert level. Thus, the majority of participants of the research might be regarded as experts in their field of business. As mentioned before experts seem to have a different approach too, as well as a different perspective. As demonstrated in researches on the chess players experts do not need explicit memory concepts because they are able to act applying an implicit and intuitive level of decision making.

*Education:* The research covers a high proportion of well-educated participants. One reason might be the top class sample of the involved companies. Based on the research well trained staff seems to be an important success factor for companies and brands.

*Factors of procurement:* In the current research the most important factors in procurement were identified as quality, reliability and safety. This matches the results of prior bodies of research presenting reliability, consulting and quality quite well. Summarizing the results, reliability and quality seem to be the most important factors in the business to business procurement process.

**Comparison of the Research Results**

Previous Research*	Current Research
1. <b>Reliability</b>	1. <b>Quality</b>
2. <i>Consulting</i>	2. <b>Reliability</b>
3. <b>Quality</b>	3. <b>Safety</b>

\*Head or gut (Kopf oder Bauch, translated by author)

Table 11: Important Factors of Procurement adapted from Otto (2011)

A very rational decision making process can be assumed as the dimensions quality, reliability and safety are seemingly measurable. In addition, it seems that decision makers in business are interested in measurable and explicit factors such as quality. As researches reveal, the factors of reliability and reputation are both strongly connected to the brand image. This might indicate that to convince B2B decision makers merely based on quality and price is no longer tenable (Otto, 2011).

In both studies the price was not that important. In the research of University of Mainz the price was ranked in 12th position in the overall ranking. Nevertheless, in the recent research, price gained the fourth position in the ranking of the most important procurement factors.

Interestingly the implicit motive affiliation expressed in words as 'safety' has entered the list of the top three (see Table 11) procurement factors. As the affiliation motive is the oldest and most important motive (Haeusel, 2005) in the triangle of implicit motivation, it does not seem to be unlikely that the affiliation or rather 'safety' is an important motivational factor. The implicit motive of affiliation can be discovered in other bodies of research as well, often expressed with a different word.

Hofstede’s cultural dimension ‘Uncertainty Avoidance’ (see Figure 106) expressed by the ‘Uncertainty Avoidance Index’ (UAI) reflects the basic needs of the affiliation motive. There is strong evidence that the importance of the affiliation motive differs among cultures (Hofstede G. H., 2001; 2013). Compared to the UK, Germany scores high concerning the UAI what might be regarded as an indicator that the affiliation motive might be a more powerful driver in German B2B decision making than in the UK.

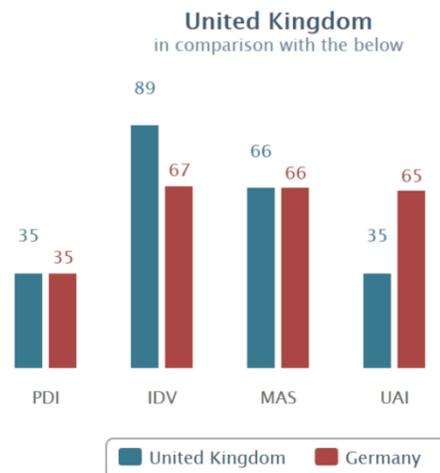


Figure 106: Screenshot of Cultural Dimensions adapted from Hofstede (2013)

*Hierarchy and decision making:* Contrary to the initial assumption the implicit motive cannot be connected to hierarchy because implicit motives are stable during our lives. If implicit motives would be in correlation to the hierarchy, a career from the bottom to the top of the hierarchy would be impossible. In this case the implicit motives of the employees would have to change during their career to the top of the hierarchy.

Research on the long term success in big corporations reveals that the chances of power motivated aspirants increase if they are able to hide the power motivation appropriately. Researches on implicit motives show that power motivated people obviously can suppress their dominance to reach a higher goal (Scheffer, 2005). Nevertheless, it appears be unlikely to proceed doing so over a long period of time. In the case of achievement, for motivated employees the assumption of being able to hide ones source of motivation seems to be impossible. Referring to the given data set of the recent research a serious and reliable analysis is not feasible due to the majority of power motivated participants. Hence, based on other bodies of research a clear correlation between implicit motives and the level of hierarchy apparently is unlikely (Kuhl, 2010; Scheffer, 2005; McClelland, 1987).

*Companies:* The selected array of companies is not in line with the official data as far as the size of the companies is concerned. Most European companies are small or medium sized companies (European Communities, 2009) which is not the case in the recent research. For two reasons the focus and the special interest was mainly on bigger companies and groups. (1) Analysing merely small, often family-run companies might have provoked criticism that the revealed effect of non-rational decision making would have been mainly affected by the size of companies (Stigler, 2011). More than half of the participants in this survey are employed by medium sized or large and often well-known companies or groups famous for the professional way they run their business such as Audi, BMW, the Intercontinental Hotels, Lufthansa, Mini, NRJ, Porsche; Siemens. Furthermore, applying such a sample mix enables a rejection of this criticism.

(2) Furthermore, following the statistical frequency in the European Community, the analysis of many small companies would have caused an additional issue. Many of the small companies might not be in direct contact with final customers because they are supplying bigger companies which again might have caused an over-proportional effect of this groups in the decision making process.

*Sectors:* The comparison of the sectors (see Figure 107) is based on companies involved in the survey. Sometimes the number of attendants by a company was not reliably indicated in advance or even changed prior to the survey due to the priority of daily business. This is why the number of involved companies active in a particular sector was selected as the basis for the correlation of the data set. However, the data universes represent the mix of the industrial sector in European Union.

Comparison of Sectors of EU and Research

Official Data Eurostat

Data of Data Collection

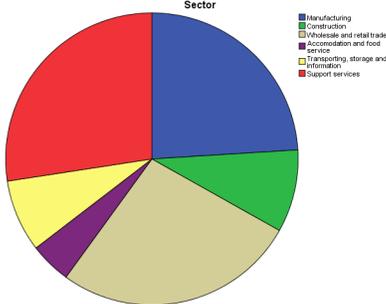
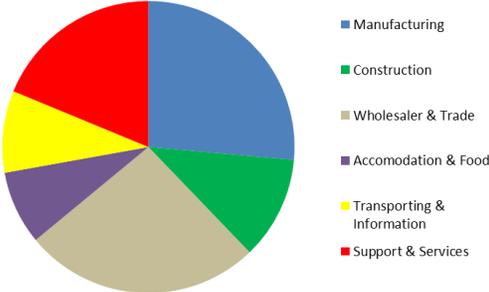


Figure 107: Data Sets Comparison adapted from Eurostat (2010)

### 5.1.2 Psychographic Survey

Implicit motives have to be examined externally because people do not have the ability of introspection. To value one's own implicit motives is similarly useful as to value one's own intelligence quotient (IQ) (Kuhl, 2010). Due to the non-verbal format of the implicit knowledge it cannot be investigated by language based questionnaires, and afford indirect research methods (Scheffer, 2005). Operant and other active tests have frequently been criticised regarding a lack of consistency. However, it has to be mentioned that is with 'Likert' scales merely the compliance of the ticked boxes will be compared and not the context behind the answer. It seems logical that methods applying stories the participants have to derive from their personal lives deliver a more specific result than just ticking boxes. Eventual misjudgements caused in the evaluation have to be accepted as inevitable. In the case of large sets of data minor inconsistencies can be neglected.

Nevertheless, the over-proportional share of power motivated test subjects in the current research seems to be unrealistic. Statistical distributions as revealed in the results of the experiment appear to be unlikely referring to the critical literature review (Haeusel, 2011; Haeusel, 2013; Kuhl, 2001; McClelland, 1985; Scheffer, 2005). The presented data induce the following considerations. (1) The model of the implicit motives as presented by McClelland might be inappropriately wrong (McClelland, 1985; McClelland, 1987). (2) The OMT Test by Kuhl, intended as a tool to analyse the implicit motives, might not work

accurately or does not work at all (Kuhl, 2011). (3) The OMT evaluation process conducted by the author might have failed. (4) The upcoming fourth motive might have disturbed the evaluation of the other motives.

Concerning the consideration above it has to be taken into account. (1) *McClelland's model is wrong*. Long term studies by McClelland and Boyatzis (1982) in the United States have revealed that operant tests have a high level of reliability (Scheffer, 2005).

(2) *Kuhl's OMT test does not work properly or does not work at all*. The OMT is directly derived from the TAT this is why a high level on accordance can be assumed. In reality despite the close connection the OMT and the TAT show a relatively low level of compliance in reality. The line of argumentation in literature is that the TAT focuses the needs of the test subject whereas the OMT focuses the implementation of needs. From this perspective the OMT should deliver more precise results (Scheffer, 2005). Long term studies will have to prove whether the OMT is able to deliver what it pretends to deliver. However, up to now the results presented by Scheffer seem to indicate a high degree of validity of the OMT.

(3) *Authors evaluation process failed.* To avoid this possible outcome a double blind evaluation procedure for the evaluation of the OMT tests was conducted. The correlation of both evaluators the expert of the University of Osnabruck and the author was very high.

(4) *The in the literature discussed fourth motive might have disturbed the evaluation of the other motives.* During the research process scientific decisions about the classical set of implicit motives according to the theory of McClelland, Bischof, and Panksepp arose. Due to the relatively large number of participants in the recent research the existence of a fourth motive cannot disturb the entire research process. Moreover, applying the four motives based evaluation method to the existing set of data did reveal a very low impact on the given data set.

In general it is assumed women are more often affiliation motivated than men. The pilot test of this research also seemingly produced evidence based on a small data basis. This thesis is often supported by referring to the feelings of safety, harmony and the interest in women's sexuality as well (Haeusel, 2005; Haeusel, 2006; Haeusel, 2007).

In contradiction to that Kazén and Kuhl revealed that females and males did not differ in their implicit motives (Kazén & Kuhl, 2011). The final data collection of this research supports the findings of Kazén and Kuhl. The results are contrary to what the pilot test

indicated. Based on 83 female participants the final research revealed no significant correlation between gender and implicit motives.

Concerning the dominance of the implicit power motivation in the sample of this research it seems that highly successful companies need highly power motivated 'Business Gladiators' acting like a pack leader in a dog sledge race (Hoffmann, 2002).

## **5.2 Discussion from Experiments**

### **5.2.1 Decreasing Explicit Decision**

Although refuted many times theories such as the rational agent survive for a long time (Kahneman, 2011).

The first and notable finding of the experiments is that most test subjects did not select the cheapest products representing the rational choice. The cheapest product in the company car experiment was the achievement coded red car. The cheapest office equipment was the achievement coded office. As explained above assigning the lowest price to both the achievement coded products is a weak point in the set-up of the experiment. Concerning the achievement coded products and the achievement motivated imaginary colleague a differentiation between a rational and an implicit caused decision of the test subjects is impossible.

In contrast to the rational agent Kuhl understands the fulfilling of needs from a psychological perspective. He posits that if needs are fulfilled a positive conditioning effect related to the object occurs and the product will be transferred to the category of attractive stimuli (Kuhl, 2010).

Proportion of Price Based Rational Decision

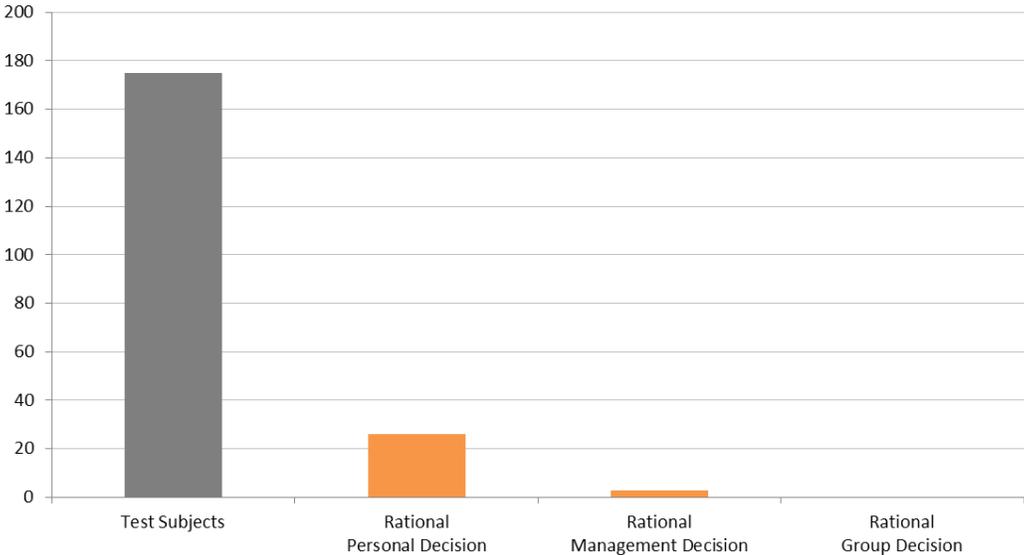


Figure 108: Proportion of Rational Price Based Decision Making

Based on the data of the experiment rationality seems to decrease with an increase of the persons engaged in the decision making process (see Figure 108). It seems that the rationality decreases with the member of persons, real ones and imaginary ones, are integrated into the decision making process. This result is completely in contrast to the idea of a more rational decision making in a buying center and with the assumption more people involved would generate a more rational decision. With the focus on the three different decision making situations (1) the personal decision, (2) the management

decision and the (3) group decision we obtain a distinctive result on the rational decision.

The definition of a rational decision applied in the context of this data analysis is that a person who selects the price based rational product within one decision making category (car or office) every time is classified as a rational agent respectively 'homo economicus'.

In the personal decision experiment 15 per cent of all participants acted as a rational agent and selected the cheapest car and the cheapest office equipment. Due to the assumption of the 'homo economicus' it is unlikely that the price based focus is changed depending on the situation of the decision making. The rational agent is expected to decide rationally in all three experiments i.e. the personal decision, the management decision and the group decision. The 'homo economicus' should always select the product with the lowest price.

Due to the fact that merely 2 per cent of the test subjects in the (2) management decision, and zero per cent of the test subjects in the (3) group decision selected the price based rational products it might be assumed that in the (1) personal decision a considerable part of the decisions might be based on design, trend and 'Zeitgeist' effects as well (Carbon, 2010; Leder, Carbon, & Kreuzbauer, 2007).

The expert interviews which followed the experiments revealed that various participants associated the scribble of the cheapest car with an Audi. (Schmid M. , 2013). In addition to the problems with the lowest price which were mentioned before the cheapest car presumably was associated with the most frequently sold car in Europe (Ostmann, 2009). In 2011 the Audi brand was best in delivery, turnover and profit and gained the highest increase in volume in the company's history (Schuback, 2012). In addition, the market leadership in the B2B segment of company fleets (De Meo, 2013) had been achieved.

Percentage of Rational Decision Making

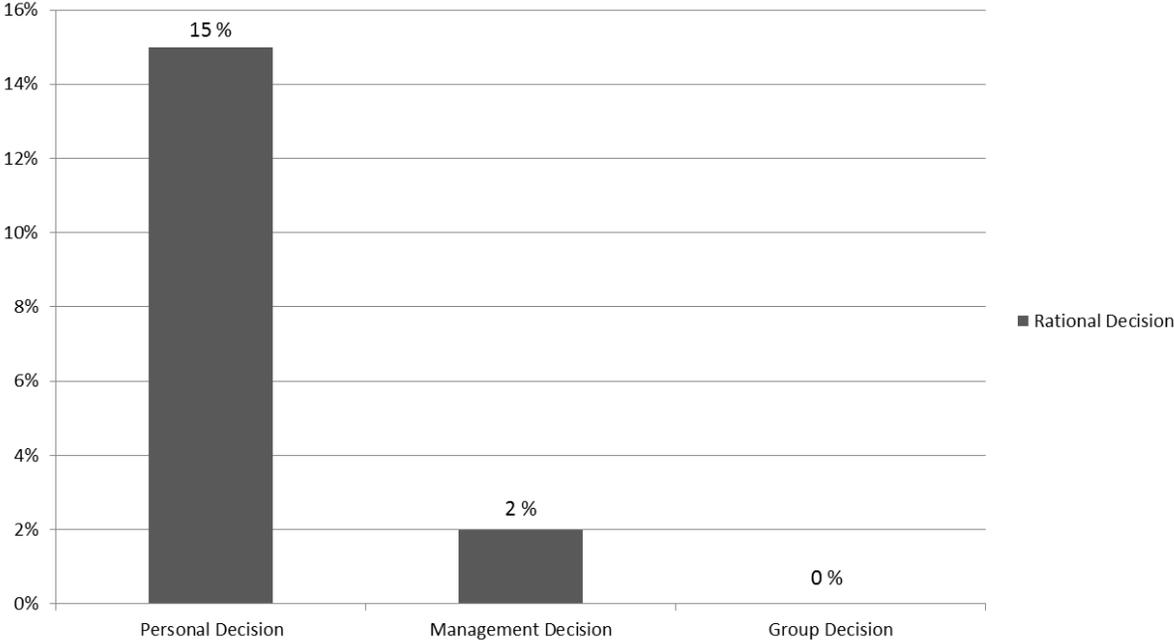


Figure 109: Percentage of Rational Decision Making

In the personal decision experiment merely 15 per cent of the participants made a price based rational decision (see Figure 109). Taking into account that they were aware of being observed and acting in a controlled situation the result concerning the low degree of rational decision making might have been even more dramatic in real business live. To sum up and without any speculation it can be stated that in a controlled situation 85 per cent of the participating business staff did not make a rational choice concerning the price.

In the management decision experiment merely 2 per cent of the participants made a price based rational decision. Taking into account that they had to select products for a colleague and would never have to make use of the selected products or their own personal preferences should not have a huge impact on the decision. In addition, the colleague was an imaginary one, thus a poor decision would not have any personal consequences. Nevertheless, 98 per cent of the participating business staff did not make a rational choice concerning the price.

For the group decision experiment the assumption was that the participants would act as professional buyers. Due to the buying center approach the team members act more rationally as they seemingly face control by the other team members. Surprisingly none of the 42 teams made a price based rational decision. In addition to the circumstances mentioned in the management decision above, which might be in favour of a rational decision, each team member would have been able to justify the rational decision as the result of the group dynamics. Nevertheless, 100 per cent of the participating buying center teams did not make a rational choice concerning the price.

### 5.2.2 Increasing Implicit Decision

If we change the perspective to the quality of the decision making process and focus on the implicit match of the decision concerning the implicit motivated colleague and the implicit coded products we get a complete different picture. The definition of an implicit useful decision applied in the context of this data analysis is a decision which leads to a match of implicit motivation and implicit coded products within one decision making category. Inverse to the rational decision as an implicit useful decision would define the sets on decision which always choose the products with the best implicit fit.

Explicit versus Implicit Decision Making

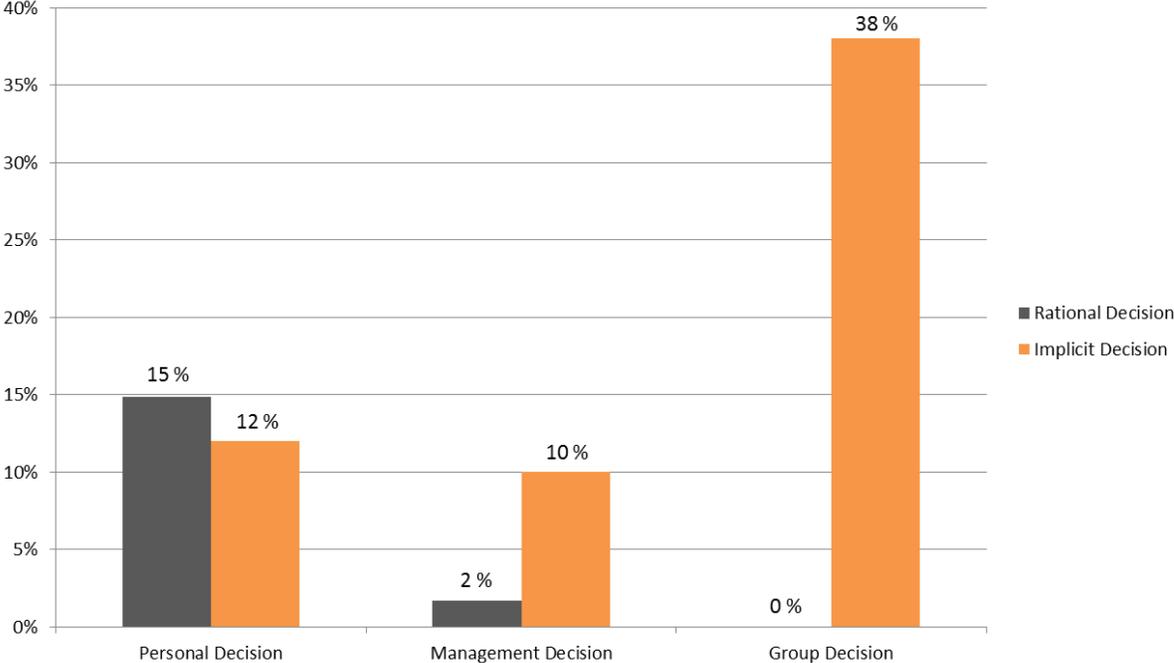


Figure 110: Percentage of Explicit versus Implicit Decision Making

The personal decision test does not reveal a great difference in the decision making process (see Figure 110). 15 per cent of the participants are distinctively on the rational side whereas 12 per cent make their decisions implicitly. 73 per cent of the participants decide neither completely rational nor completely implicit because they decide rationally in the case of the car and implicitly in case of the office equipment or vice versa.

The management decision test leads to more distinctive results merely 2 per cent of the participants are distinctively on the rational side whereas 10 per cent make their decisions implicitly. Nevertheless, of 88 per cent of the participants decide neither completely rationally nor completely implicit because they decide rationally in the case of the car and implicitly in the case of the office equipment or vice versa.

The group decision test shows a very clear result. None of the participants is distinctively on the rational side whereas 38 per cent make their decisions implicitly. 62 per cent of the participants decide neither completely rationally nor completely implicitly because they decide rationally in the case of the car and implicitly in case of the office equipment or vice versa.

### **5.2.3 Personal Decision Business Car**

The personal decision experiment seems to reveal the power of megabrands such as Audi (see Figure 111). As discussed already people seem to select a product from another implicit category if the product has an extreme 'sex appeal', is widely accepted and is regarded as a benchmark in a specific market segment, which is the case with Audi in the company car market. This 'Zeitgeist' or trend effect was also visible at the market launch of the iPhone. Based on the high interest and the high involvement in business equipment such as a personal business cell phone, a lot of managers, the former target customers of Black Berry, switched from a classical business device to a seemingly more attractive business and lifestyle product - the iPhone (Scheier, Linke, & Schneider, 2010). Due to this change in the customer behaviour Apple sold 300 million iPhones (Hofmann & Telgheder, 2013; Kilian, 2009). The same effect has previously been seen concerning the iPod. Apple's iPod is still the world's best-selling digital audio player. Nevertheless, from a technical or monetary view many competitors have superior functionalities and a better cost effectiveness (Carbon & Leder, 2007). In everyday life shared preferences for idiosyncratic products features can be detected paradigmatically reflected by the best-selling iPhone (Faerber & Carbon 1, 2012) referred to 'winner-takes-it-all effect' (Deppe, Schwindt, Kugel, Plaßmann, & Kenning, 2005). Obviously top ranked brands constitute strong affects that brand choice process can base on affective heuristic concepts (Plassmann, Kenning, Michael , Kugel, Schwindt, & Ahlert, 2005; Plassmann, 2009).

Result Personal Decision Business Car

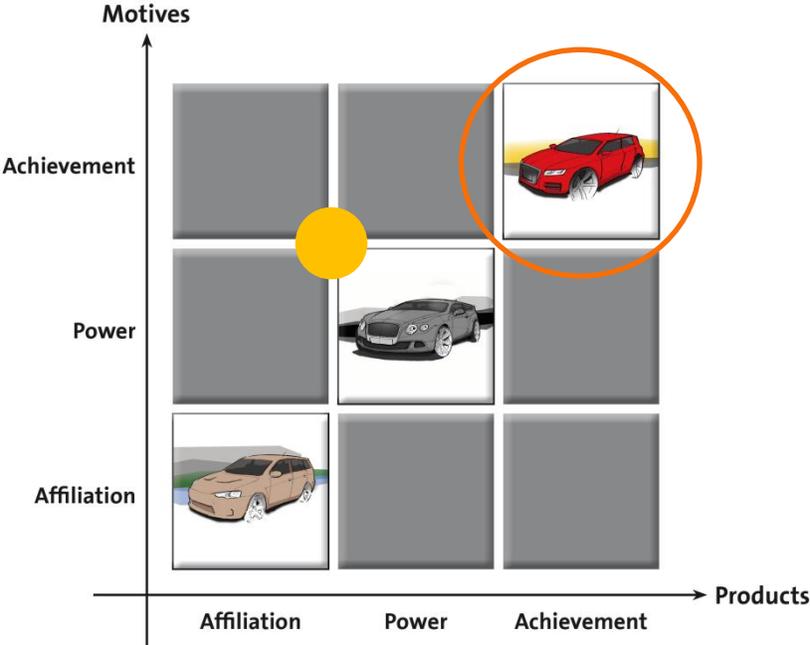


Figure 111: Data Analysis Results Personal Decision Car

In order to generate a deeper understanding of the correlations between the implicit motive and implicit coded cars a multivariate data analysis was conducted. It confirms the strong correlation between the power motive and the power product.

### 5.2.4 Personal Decision Office Equipment

As explained in chapter 2 implicit coded products incorporate elements which should be regarded as attractive by the test subjects due to their implicit motives. Thus, the implicit motives should correlate with the product selected in the personal office equipment decision as the participants of this test select products for themselves.

The result of the personal decision experiment concerning the office equipment reveals that the assumption works. Most of the power motivated test subjects selected the power coded office equipment (see Figure 112). Nearly 50 per cent of the participants selected the implicitly power coded product. Due to the Operant Multimotive Test (OMT) most participants were detected as implicit power motivated. In this area the match of motivation and coding of the products is considerably strong.

In order to generate a deeper understanding of the correlations between the implicit motive and implicit coded products a multivariate data analysis was conducted for the office equipment as well. The strong correlation between the power motive and the power office equipment was confirmed again.

Personal Decision Office Equipment

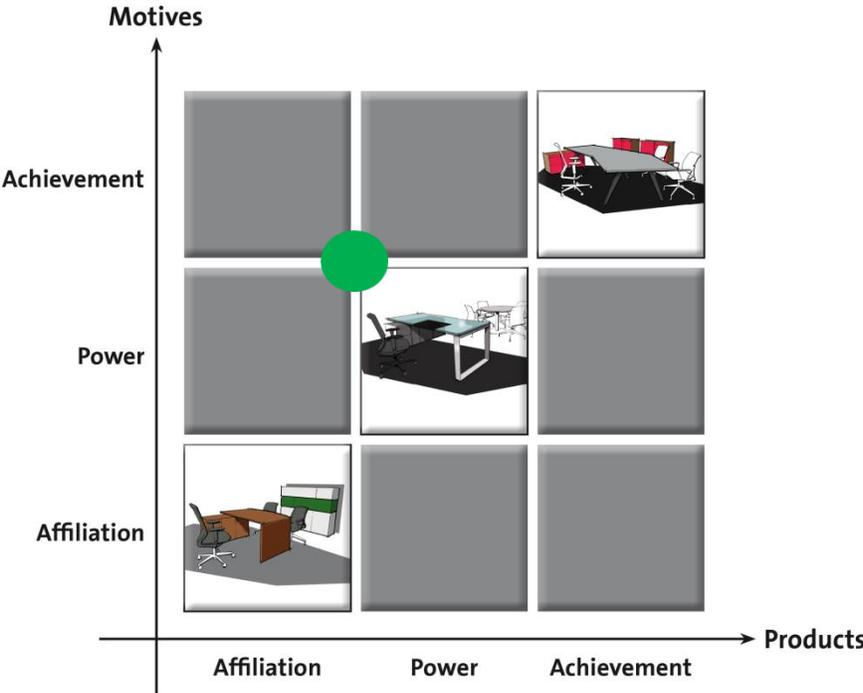


Figure 112: Data Analysis Result Personal Decision Office

### 5.2.5 Management Decision

In order to achieve a certain level of generalisation for the management decision experiment three imaginary colleagues were introduced representing prototypic persons with the three implicit motives. Via mirror neurons the test subject should be able to decode the lifestyle and the connected implicit motives of the colleagues. To create the three imaginary colleagues market segmentation models were used. Based on the assumption about a fit of motives and products, the test subject had to select the best possible product related to each colleague's lifestyle. As is the case in the other experiments a rational price based decision would have the effect of a linear decision making with merely one product for each category without any variations.

#### 5.2.5.1 Implicit motive versus implicit coding affiliation

Based on the mirror neurons the image of the affiliation colleague should trigger an affiliation and safety orientated decoding process within the test subjects. Due to the unconscious decoding the test subject should select the affiliation coded products. The affiliation motivated colleague has its roots in traditions and understatement, the brown company car in the natural environment as well as the wooden desk and the cupboard with the green elements should be selected representing a perfect match.

### 5.2.5.2 Implicit motive versus implicit coding power

In the case of the second imaginary colleague, the power colleague, the mirror neurons should trigger a power and status orientated decoding process within the test subjects. Due to the unconscious decoding the test subject should select the power coded products. The power motivated colleague has his roots in superiority, status and exclusivity, the grey car in the black environment and the glass desk with the leather elements should be selected representing a perfect match.

### 5.2.5.3 Implicit motive versus implicit coding achievement

In the case of the third imaginary colleague, the achievement colleague, the mirror neurons should trigger achievement and dynamic orientated decoding process within the test subjects. Due to the unconscious decoding the test subject should select the power coded products. The power motivated colleague has his roots in hedonism and openness to new trends, the red car in the yellow environment and the dynamic desk with the red boards should be selected representing a perfect match.

Results Management Decision Making

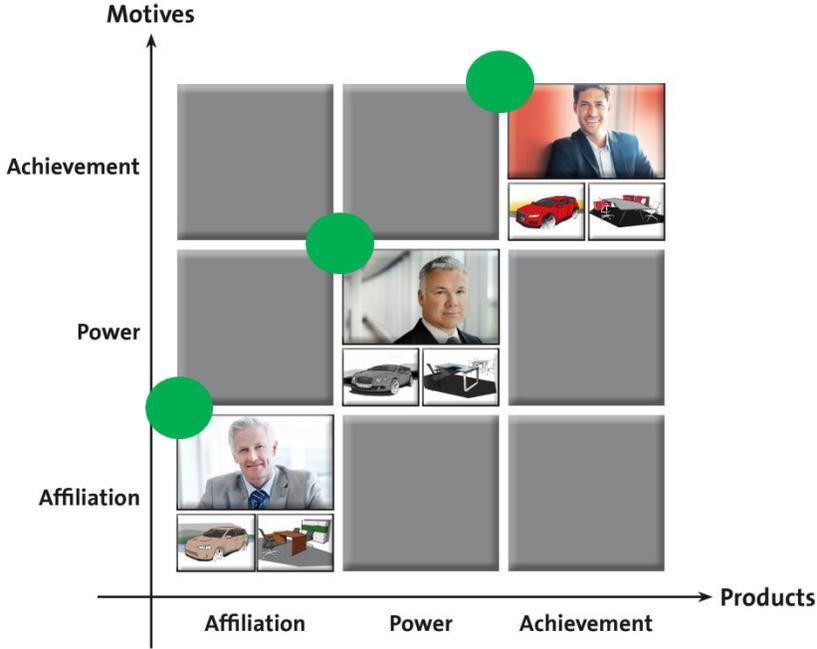


Figure 113: Data Analysis Results Management Decision Making

The management decision experiment ends with a clear result. For each of the three assumptions the test subjects select the best matching product (see Figure 113). Due to the concept of the ‘homo economicus’ and a rational price based decision making it seems at least in two cases the decision is wrong i.e. contrary to the theory. Nevertheless, following sociological and psychological principles of decision making process the participants selected the best matching product concerning the decoded and assumed interests and lifestyles of the imaginary colleagues and their underlying implicit motives.

### 5.2.6 Group Decision

In the group decision experiment, as in the management decision, the test subjects had to select products for the same range of imaginary colleagues. Based on the assumption about a fit of motives and products, the test subject had to select the best possible product related to the lifestyle of each imaginary colleague. As in the other experiments a rational price based decision would have the effect of a linear decision making with merely one product for each category without any variation.

The coding and decoding processes were the same as in the management decision experiment. The assumption was that the colleagues would select the products with the best implicit match of each imaginary colleague's lifestyle and the underlying implicit motives.

The issue of this part of the research was to examine whether the group decision process would increase the number of rational price based decisions. Surprisingly, the number of rational price based decisions decreased in the group decision process experiment. None of the groups consistently selected the cheapest products for the colleagues. In contrary to the social and psychological effects that had an impact on the group decision making process without any exception, products with the best match of implicit coding and implicit motives were selected (see Figure 114).

Results Group Decision Making

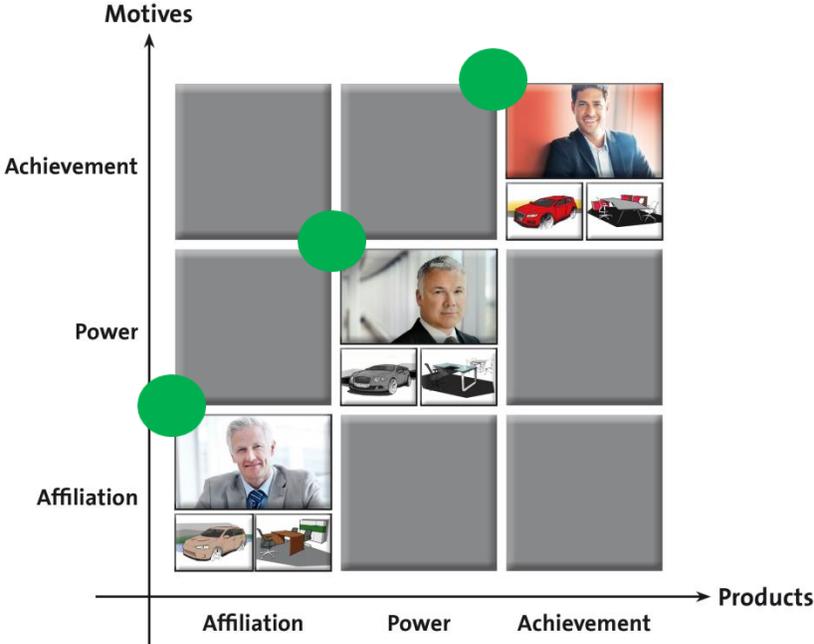


Figure 114: Data Analysis Results Group Decision Making

### 5.3 Discussion from Interviews

#### 5.3.1 Important Topics of the Expert Interviews



Figure 115: Word Cloud Expert Interviews

The 'word cloud' above (see Figure 115) reflects the key words of the topic. It is generated by NVivo 9 out of the semi-structured in-depth interviews due to the word counts eliminating irrelevant expressions such as "and". The size of the words represents the importance of the words within the interviews with all interview partners. The entire interviewing process was conducted in the native language and the visualisation above was then transferred into English. The particular termini related to implicit the issue are mentioned relatively rarely. Thus, a conclusion might be implicit motives and communication does not seem to play such an important role in the daily business of the participants. Nevertheless, the decision making and communication to the customer is proved to be an important issue in general. The figure below presents the high degree of complexity and density of the most important words the experts used in the interviews (see Figure 116).

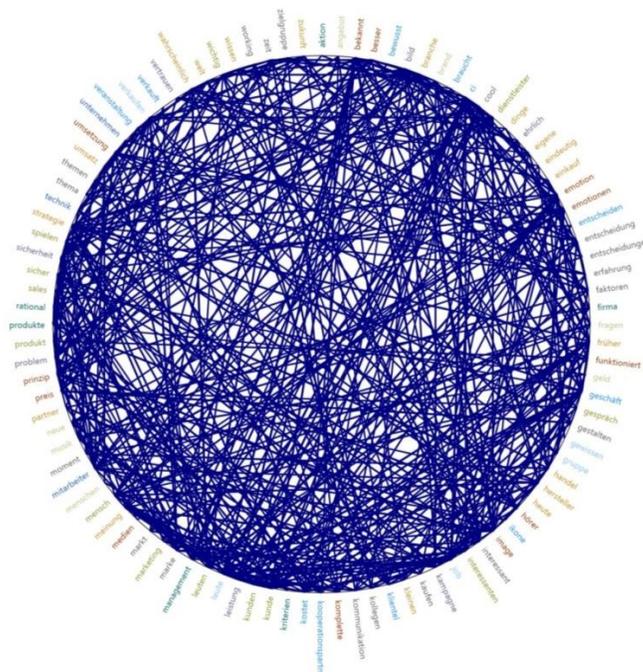


Figure 116: Word Frequency Important Topics

### 5.3.2 Potential of Implicit Communication

In reference to the results of the research, Martin Schmid, the marketing manager of a software company, explained his conviction that unconscious or emotional communication is highly and constantly important, even for highly technical products in the domain of B2B decision making (Schmid M. , 2013):

*'At the end always a human or a group decides, so for me it's relatively clear, anyway which product.'* (Schmid M. , 2013)

The marketing manager of MINI argues that on an implicit level sometimes people use implicit techniques on a subconscious level (Grahl, 2013).

*'I think in the coordination of the quad of design, target group, cognition and communication should be more worked with.'* (Grahl, 2013).

In contrast, and due to the new findings of the research, the marketing manager of Spangler Automations concludes that an explicit decision is merely appropriate for standardised parts and commodities such as stock articles, which can be compared easily by technical specifications and are interchangeable.

### 5.3.3 Personal Experience of Implicit Decisions

In reference to the results of the research and based on his own consulting experiences, Bernhard Erasmus, the CEO of KEK IT, confirms the impact of implicit decisions. His company is applying questionnaires for the selection of products and the evaluation process. In these questionnaires a scale of school marks is used. Weighted results are applied to present an objective overview (Erasmus, 2013). Erasmus underpins the understanding of Martin Schmid, the marketing manager, that many software products are interchangeable (Erasmus, 2013; Schmid, 2013). As a result most providers do not differ much in the evaluations. To achieve distinctive differences Erasmus and his team added a question merely allowing a digital answer at end of the questionnaire. *What is about your intuition? Do you think you want to work with this person or not?* According to the CEO of the consulting company the answers to this question frequently differ extremely (Erasmus, 2013).

*'The decisions are always made on these binary results.  
And that's the point. That's completely right, I mean you're right.'*  
(Erasmus, 2013)

According to Erasmus neither the scoring approach questions nor the gut feelings would be sufficient. People need both traceable reasons and security for the decision making.

*'If somebody says that's o.k. or not, then it's not enough.'*  
(Erasmus, 2013)

A retail expert summed it up: in retail business it is all about the market leader. There is no chance to make money without having the biggest player in the market on sale (Retail-Expert, 2013). Retailers and their brands are highly dependent on manufacturer brands such as Apple, Nike and Co. This statement of the retail expert underpins the findings in the literature review about the cortical discharge. Motivated by Simon and Kahneman, Plassmann et al. presents that people apply simple decision strategies which do not follow basic principles of logic and reason. The cortical discharge is one of the most important findings in the human brain. As soon as we recognise our preferred brand the process of analysing in our brain is reduced to a minimum. The result suggests that the presence of the respondent's first choice brand leads to a specific modulation of the neural brain activity. The comments of experts underline the finding of the qualitative part of this research such as 'the winner takes it all effect' of the seemingly Audi like car in the management and group experiments and the high importance of the 'Zeitgeist' as described by Carbon (2010) and the 'trend effect' in the personal decision making experiment. The radio manager emphasises and references the big boom of the iPhone (Henschel, 2013) when explaining:

*'I think everybody does it. I think that comes all out of the unconsciousness. You feel that this has to be done, as you know rationally that if something else is much cheaper and much better, yet you just want it.'* (Henschel, 2013)

The retail expert sums it up, without implicit cognition Abercrombie & Fitch would not be Abercrombie & Fitch (Retail-Expert, 2013).

*'In a lot shops you have no idea about why you're feeling good. There is nothing you can rationally explain it by. It's a symbiosis of a lot of small things'* (Retail-Expert, 2013).

Concerning the shops the picture is similar. The flagship shops and all other shops of the big brands attract customers. The shops are regarded as 'cult shops' although the customers cannot really explain why. From its perspective Apple is a convincing product; nevertheless there are a lot more convincing products on the market.

*'Even if you add this atmosphere and all these things, then you get this feeling and have no idea way. You will know it but just on a subconscious level.'*  
(Retail-Expert, 2013).

Tina Lambert, manager in the automotive industry, experienced how switching from explicit to an implicit communication changed everything within the company (Lambert, 2013).

*'It feels like a new company.'* (Lambert, 2013).

The change within the company was a total one: Forms, cars, homepage, wording, blocks, pens and really everything starting with the uniform of the staff and ending with the napkins, she states (Lambert, 2013). Even the name of the company was changed.

### 5.3.4 Positioning based on Implicit Motives

According to the MINI manager the conventional milieu worked well for positioning for a long time. Nevertheless, changing environmental factors such as social media, the character of media, the style of communication and the way how people perceive values (Grahl, 2013).

*'I do not think that the conventional models are able to build up the dynamic of the changing values.'* (Grahl, 2013).

The Porsche manager underpins the judgement of Grahl. He explained that perception, evaluation and ambience are changing extremely fast. From his point of view the metamorphosis of the Porsche Cayenne from a heavily criticised model to the best sold SUV ever is an excellent example for the rapid change (Guenther, 2013).

*'Everything is in flow. To relax and to say we are the market leader is definitely impossible.'* (Guenther, 2013)

Tina Lambert, the automotive manager, points out that it takes time to internalise the concept of the implicit motives. She even states that the implicit motives might become a great tool if it would be possible to achieve an awareness and acceptance similar to Hofstede's concept of the cultural dimensions (Lambert, 2013).

### 5.3.5 Interplay between Implicit Motives and B2B Decision

In contrast to the positive feedback by most of experts Lambert expresses concerns about the findings. She is worried about dangerous impacts of internal processes (Lambert, 2013). In reference to the internal decision making process she states:

*'I see no chances - more danger!'* (Lambert, 2013)

So many people worked hard to achieve a better solution and at the end all turns out to be worse (Lambert, 2013).

*'If we know now that a lot is decided more implicit anyhow, or on this basis, then I think it is worse'* (Lambert, 2013).

Grahl, the manager of MINI, explained that there are many possibilities for new theories. And he states that from a theoretical perspective there should be a possibility to conceal the basic motivation (Grahl, 2013).

*'Is it really the concept or why they drive a MINI or the chic mini skirt of the secretary, or maybe the cookies are the reason?'*  
(Grahl, 2013)

Yet he explained as well that in some cases it could be dangerous to reflect one's own motivation too much. Analyses are fine, yet too much self-reflection does not not always seem useful. If not we drift in the direction of the psychoanalysis, and that is not needed without a level of suffering. Sometimes we have to accept that we made the decision. And if we made a decision then it is usually not just based on the reasons before.

*'I think that sometimes we have to trust ourselves!'*  
(Grahl, 2013)

In his opinion starting to think backwards from a decision which definitely turned out to be wrong would be more helpful. Analysing why the decision was made that way and to revise it would be more effective than to think too much in advance (Grahl, 2013).

Martin Schmid, the manager with experience in communication based on implicit motives, explained that in the beginning it was difficult to explain that the company communicated what the customer intended to hear despite what the products were able to perform. By doing so they had to avoid communicating hard facts and lots of pages explaining the features of the software as they were used to do (Schmid M. , 2013).

*'And if we are able to demonstrate to these people with new findings that it works, then it is getting easier. In my opinion that's the most important thing.'* (Schmid M. , 2013)

As a consequence the MINI manager predicts great opportunities for communication based on implicit motives both in the communication between manufacturers and retailers (B2B) and in the communication between manufacturers and customers (B2C).

*'We should think about why the people should come to the showrooms. And what are the motives of people?'*  
(Grahl, 2013)

### 5.4 Chapter Summary

To sum up the sociological part of the research seems to be evidence that a profound academic education combined with work experience on an expert level are the most crucial success factors for companies. As a consequence companies should not think in a hierarchical dimension concerning the further development of new talents. To increase salary and status on the same level of hierarchy but on an expert level of knowledge seems to be more appropriate than the traditional carrier upwards in the levels of hierarchy. More experts might to be needed instead of more managers. This finding is not an central point of the thesis yet an interesting finding.

Economically orientated and mathematically minded people hardly accept psychological phenomena. In addition, operant questionnaires and tests never deliver 100 per cent congruent results. Nevertheless, the psychographic part of the research seems to indicate that the model of the implicit motives might be a valid construct for assumptions concerning consumer preferences and assumptions concerning the related process of decision making.

Regarding a general criticism on implicit motives, it has to be admitted that it is a concept on an invisible phenomenon. The results can be seen but the phenomenon

works behind the scene just as gravity does. However, a new research on body signals and their psychological response delivers new findings on motives.

Nevertheless, the disproportionate number of power motivated participants in the current research does not appear to be realistic, revealing a weak point. An explanation might be the high class sample of iconic companies. To avoid criticism concerning a lack of representatives due to the missing data of big and important corporations, the striving for premium seems to have generated an implicit situation in itself. People with an implicit power motivation seem to be attracted by the shining logos of big brands. Working with an international and well-known brand perhaps charges the implicit power motive of the employees. Hence, the high class sampling might have been a sub-optimal choice for the research in between the motive structure and from a statistical point of view. Concerning the findings on 'non-rational' decision making in international and well known corporations, selecting a sample of high class companies was 'first class'.

In the decision making experiments the coding and decoding process worked well on an implicit level. Merely in the case of extreme iconic and trendy products an effect similar to cannibalization (Esch, 2012) partially occurred in the personal decision experiment. Obviously people tend to megabrands such as Audi and Apple based on the extreme attraction of these this products and brands.

In all decision making experiments, the second personal decision making, both management decisions and both group decisions the participants did not select the rational price based cheapest product representing the mind-set of the homo economicus. Due to the concept of humans the participants selected the products with the best match of implicit coding and implicit motives.

The result seems to prove that marketing is snap communication and for the most part is implicit. Applying classical methods of customer research, the real effects of communication are difficult to reveal. The impact of marketing communication is not consciously perceived by customers. Quality and price are frequently referred to in the process of making a buying decision. Quality seems to have lost its power (Treacy & Wiersema, 1995) in differentiation as more than 85 per cent of competitive products are ranked 'good'. Even the price seems to be a less important factor in the buying decision than assumed. EEG brain scan data combined with reaction times related to a test market revealed that people have a more implicit feeling about the price.

Not surprisingly marketing experts have confirmed that:

*'A lot of things will be controlled by our unconscious mind definitely!'* (Retail-Expert, 2013)

*'And even more emotional marketing is that better is the chance to differentiate from my competitors' (Schmid M. , 2013).*

There seems to be evidence that if an important decision is implicit, intrinsic, deeply imprinted and difficult to explain, then it is the right decision. Evolution has not spent so much effort in the development of our sensory process to neglect this huge body of experience and implicit intelligence. The human brain applies the entire information to learn and develop continuously in an implicit way (Scheier, Linke, & Schneider, 2010).

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## 6. Conclusion from Theoretical and Practical Results

This chapter relates the empirically collected data with the formulated objectives and presents the conclusion of the research. It links the theory, the conclusions from the survey, the experiments and the interviews. In addition to that, this chapter presents the interdisciplinary interplay and approach for practical application.

### 6.1 *Preliminary Remarks*

Nevertheless, everything changes when it becomes dark in London. We have to accept that we incorporate rational and non-rational traits. We can be afraid even if we know that the place is completely safe (Dijksterhuis, 2012). This is a heritage of the evolution concealed in the human brain applying implicit motives as powerful drivers.

To assess the impact of the implicit motives on the B2B decision making process a set of hypotheses was created.

Rejected and Confirmed Hypotheses

Hypotheses		
H <sub>0</sub>	●	There is no correlation between implicit motives and B2B decision making
H <sub>1</sub>	●	People have a verifiable structure of implicit motives
H <sub>1a</sub>	●	Structure of implicit motives is verifiable based on level of hierarchy
H <sub>1a</sub> <sup>1</sup>	●	Employees have an over proportional high intensive affiliation motive
H <sub>1a</sub> <sup>2</sup>	●	Managers have an over proportional high intensive achievement motive
H <sub>1a</sub> <sup>3</sup>	●	Top managers have an over proportional high intensive power motive
H <sub>1b</sub>	●	Implicit motives are verifiable connected to the gender
H <sub>1b</sub> <sup>1</sup>	●	Women are over proportionally affiliation motivated than man
H <sub>1b</sub> <sup>2</sup>	●	Men are over proportionally power motivated
H <sub>2</sub>	●	There is an interplay between the implicit motives and B2B decision making
H <sub>2a</sub>	●	A correlation in the personal decision between the personal implicit motive and the choice based on the coding of the product exists
H <sub>2b</sub>	●	A correlation in the management decision between the imaginary implicit motive of the colleagues and the choice based on the coding of the product exists
H <sub>2c</sub>	●	A correlation in the group decision between the imaginary implicit motive of the colleagues and the choice based on the coding of the product exists
H <sub>3</sub>	●	There are deducible impacts of the research on Business to Business Marketing

Table 12: Rejected and Confirmed Hypotheses

Apparently there is an indisputable evidence for implicit motives acting as drivers in the B2B decision making process. **H 0: There is no correlation between implicit motives and B2B decision making** could be rejected (see Table 12).

## 6.2 *Conclusions from Survey to Theory*

In reference to **Objective 1 - Typical Structure of Implicit Motives** the research hypothesis **H 1: People have a verifiable structure of implicit motives**; could be confirmed, as the sample revealed a variety of implicit motives. Nevertheless, due to the fact that 96 per cent of the participants proved to be power motivated a reservation must be made.

The research hypothesis **H 1a: Structure of implicit motives is verifiable based on level of hierarchy**; could not be confirmed. Likewise research the hypothesis **H 1a1: Employees have an over proportionally high intensive affiliation motive** could not be confirmed, **H 1a2: Managers have an over proportionally high intensive achievement motive** could not be confirmed and **H 1a3: Top managers have an over proportionally high intensive power motive**, could not be confirmed either.

The reason why H1a1 and H1a2 could not be confirmed might be the high number of top ranked companies in the sample. Employees with an implicit power motivation apparently are attracted by highly regarded brands. Working for a top ranked international company seems to charge their implicit power motives.

The reason why H1a3 could not be confirmed might match the findings of McClelland and Boyatzis. In 1982 they detected that mainly power motivated managers who were able to keep their power motivation under control and conceal it to some degree were able to achieve a top management position, after a period of approximately 16 years in business. An indicator might be that the level of power motivation of the participants varied in a considerable range reflected by the intensity discovered in this research.

The research hypothesis **H 1b: Implicit motives are verifiable connected to the gender**, has to be rejected. In general, it is assumed women have a higher affiliation motive than men, due to the higher need of safety and harmony (Haeusel, 2005; Haeusel, 2006; Haeusel, 2007). In contrast to Haeusel, Kazén and Kuhl revealed in a recent research that females and males do not differ in their structure of their implicit motives at all (Kazén & Kuhl, 2011).

The research hypothesis **H 1b1: Women are over proportionally affiliation motivated than man** has to be rejected. Likewise research the hypothesis **H 1b2: Men are over proportionally power motivated**.

The actual research matches the findings of Kazén and Kuhl. 83 women took part in the quantitative research. Nevertheless, no significant correlation for implicit motives connected to the gender could be detected.

## **Conclusion** from Theoretical and Practical Results

Concerns might be expressed about the selection of companies for the sample. Frequently qualitative differences in decision making related to the size of companies are mentioned. To avoid criticism on the differences in the process of decision making in big companies compared to small and medium sized companies the “top-class company” sample was selected. Thus, the ‘high class’ sampling might have been a sub-optimal solution for the research from the statistical point of view. Nevertheless, concerning the findings on ‘non-rational’ decision making in big organisations the top-class sampling was appropriate.

### 6.3 *Conclusions from Experiments to Theory*

In reference to **Objective 2 - Interplay between Implicit Motives and Decision Making** the research hypothesis **H 2: There is an interplay between the implicit motives and B2B decision making**; could be confirmed. A correlation for the hypothesis **H 2a: A correlation in the personal decision, between the personal implicit motive and the choice based on the coding of the product exists**; is notable. Nevertheless, this effect can be overruled by megabrands when people decide for trend products denying their implicit motives.

The research hypothesis **H 2b: A correlation in the management decision between the imaginary implicit motive of the colleagues and the choice based on the coding of the product exist**, could be confirmed.

Although most managers think they decide rationally driven by economic aspects, implicit motives affect their decision making. Only a small number of managers are aware of it and admit that their decisions are impacted and driven by intuition. Thus, organisations face the problem to keep the preferences of their managers under control (Kahneman, 2011). Internal policies are established representing the range of freedom and limitations concerning individual attributes e.g. business cars, office equipment, communication equipment and appropriate classes in aircraft transportation.

The research hypothesis **H 2c: A correlation in the group decision between the imaginary implicit motive of the colleagues and the choice based on the coding of the product exists**; could be confirmed. Despite striving for rationality group decisions are dominated by implicit motives. In a group decision the group members make assumptions on the implicit motives of the future user based on an implicit decoding. Finally, the coded implicit motive of the potential colleague is the important driver force of the group decision.

In addition, the increasing efficiency of group decisions seems to be an illusion. In open discussions or brain storming the group frequently accepts or follows the first suggestion (Dollinger, 2012; Kahneman, 2011). As a result group decisions do not generate more rational decisions. From an economic point of view more non-rational decisions are generated. To avoid domination by one member all participants should prepare a written statement prior to the group meeting. This procedure could ensure more qualified discussion of the impacts of a decision and could preserve the original and initial intentions of the participants (Kahneman, 2011). Concerning the research the results are positive from a human perspective. The more managers were engaged in the decision making process, the more the results matched the coding representing the implicit motives of the imaginary colleague.

#### **6.4 Conclusions from Interviews to Theory**

In reference to **Objective 3 - Impacts on the Business to Business Marketing** the research hypothesis **H 3: There are deducible Impacts of the research on Business to Business Marketing**, could be confirmed.

In the feedback the experts discovered many potentially useful applications for the daily business. Experts without implicit experience detected a high potential, whereas in contrast experts with implicit experience expressed their concerns. The capability to influence the customer in a more effective way creates a lot of potential applications concerning the product design and communication. Amazingly the experts were concerned about the potential manipulation of their employees.

Communication based on implicit motives apparently is regarded as a fascinating tool to optimize external marketing processes. In contrast traditional procedures are preferred for internal processes. Most of the experts are willing to try communication based on implicit motives externally nevertheless they are very reluctant to apply procedures based on implicit motives in internal processes.

## **Conclusion** from Theoretical and Practical Results

Finally, all experts confirmed the interplay between implicit motives and the daily business to business communication. Experts without experience in the field of implicit communication referenced a lot of practical examples for the application of implicit motive structures without having been aware of the underlying mechanisms. Experts with experience in communication based on implicit motives allowed insights in their daily work, without delivering too many details on strategies of the companies they were working for. Obviously, there are deducible impacts on the business to business marketing.

### **6.5 Connection of Conclusions**

A lot of human behaviour has unconscious roots. Customers are affected by phenomena which are not accessible for our conscious mind (Kenning, 2011; Seja, 2012). This is the reason why successful brands communicate via nonverbal codes, as 95 per cent of the marketing communication is implicit (Freud, 1900; Scheier & Held, 2006; Chlupsa, 2011; Chlupsa, 2012; Chlupsa, Doehl, Lean, & Hanoch, 2013). Due to strong limitations to the communication of rational messages implicit codes should be applied in B2B communication. Nevertheless, some amount of explicit information is required to serve the explicit cognition and to ensure that the implicit communication can work concealed behind the scenery. The explicit information needed generates the illusion and conviction of the decision maker she or he is still making rational decisions.

Finally, implicit communication is detected to drive successful communication. Marketing is performing at its best when implicit communication meets activated motives (Scheier & Held, 2006). Apparently implicit motives require an appropriate coding. Neuronal networks organise the coding of brands in the human brain. This is the reason why interchangeable codes always activate the entire range of competitors assigned to a specific code. Nevertheless, strong brands generate peerless implicit codes to be unique. Distinct differentiation in the code structure is indispensable.

## **Conclusion** from Theoretical and Practical Results

Understanding the implicit mechanisms can help a lot to comprehend why some companies in the same industry are more successful than others. Generating the appropriate coding to make a brand unique requires a profound understanding of both, the character of the brand and the implicit motive structure of the target customers. In order to acquire brand expertise a sufficient time is indispensable. Becoming a brand expert requires approximately 10,000 hours of brand and market experience. Nevertheless, many companies change the marketing managers every three years. As the biggest part of marketers' cognition is implicit too, hidden champions former owner-managed companies such as Apple, Microsoft generate significant competitive advantages (Scheier & Held, 2006).

## **6.6 Summary and Implications to Practices**

### **6.6.1 Summary of the Results**

To sum up, this research presents various novelties and significant contributions to knowledge. First time a complete coding and decoding process in a B2B decision making situation in a controlled environment was done. The coding and decoding procedure was based on a setup with relevant factors like colours and contrast, form and design and different surfaces and look of materials.

The novelty of the research is that there is clear evidence for a limited role of rational decision making in the business to business decision making process. From the perspective of the homo economicus clear non-rational drivers were identified. The hypotheses about the interplay of implicit motives and business to business decision making could be confirmed in personal, management and group decisions. In addition, marketing experts emphasised the importance and potential impacts for future business to business marketing.

Summarizing, it has to be said that 'null hypothesis' **H0: There is no correlation between implicit motives and B2B decision making** could not be confirmed. Apparently, there is interplay between the implicit motives and the business to business decision making process.

People make seemingly non-rational decisions every day. Customers buy huge SUV cars to drive in crowded cities. In most of the European countries it is forbidden to drive off-road. Customers buy Rolex watches displaying the same time as a cheap ones do.

Companies hire managers on million-pound salaries hoping they will save the money for the company. An option to save money could be to drive cheap cars such as the Dacia Logan and Nissan Micra. Instead Jaguar, S-Class Mercedes, Audi A8 and the BMW 7 series dominate the company fleets for top-management.

Another option to save money would be to buy industrial buildings in cheap rural areas. Instead most of the international headquarters are situated in mega cities such as London, New York or Berlin. These are just some samples to demonstrate the daily non-rationality of business. It seems that explicit rationality is not the driving force.

### **6.6.2 Contribution to Knowledge - Objective 1**

#### **Typical structure of Implicit Motives**

This thesis is a novelty and a contribution to the rich body of research on the powerful idea of implicit cognition, implicit perception and implicit motivation. Based on the results of the experiments important non-rational drivers appear to be still active in the business to business decision making process. The high proportion of power motivated test subjects has been an issue in data mining apparently generated by selected premium brands. The frequently assumed typical structure of implicit motives of business people has to be rejected. But based on the research it seems that highly successful companies require highly power motivated 'Business Gladiators' who can keep their implicit motives under control and make use of them as soon as it is appropriate.

### **6.6.3 Contribution to Knowledge - Objective 2**

#### **Interplay between Implicit Motives and Decision Making**

In nearly all cases it was possible to predict the major product choice of the participants. Nevertheless, in the case of megabrands it proved to be more difficult to provide reliable

predictions. Apparently, the rational level of decision making decreases with the number of people involved in the process. In contrast, the match of the implicit level increases. As result that more people involved in social decision making generate a better quality of the decision. Based on the results of the research rationality and explicit decision making are playing a less important role in the decision making process than assumed.

#### **6.6.4 Contribution to Knowledge - Objective 3**

##### **Impacts on the Business to Business Marketing**

Due to the evaluation of the marketing experts implicit communication plays an important role in the future marketing for the business to business and the business to customer sector as well. Both groups of experts agreed on this evaluation. Even the marketing experts who are not yet involved in the development or application of implicit marketing concepts predict a high importance of this topic for future marketing activities. Connecting and integrating implicit motives with consistent models of a management processes are apparently a challenge.

### **6.6.5 Comparison to Former Studies**

In the early 50s Simon published the concept of 'bounded rationality' and later on was awarded with the Nobel Prize. Kahneman presented the two system approach in the human brain, in the meantime this is an accepted model of implicit cognition and he was also rewarded with the Nobel Prize. McClelland offered the acknowledged concept about the implicit motives to explain the impact of the implicit decisions. Gigerenzer presented various examples for the importance of intuition and implicit decisions. Doehl discovered the concept of the 'Cognitive Filter' for the acceptance of innovation in business. With the concept of the 'Somatic Marker' Damasio revealed the neuronal evidences of implicit processes. In the 90s Hanoch presented the paralyzing effect of information overload. Nevertheless, it still seems to be difficult, particularly in the field of business administration, to accept that a considerable part of decision making process is implicit. Fast implicit reactions inherited by evolution enabled mankind to survive. Having the big picture (implicit cognition) while focusing on a particular issue (explicit cognition) is the great advantage of human beings. Carbon revealed that our appraisal of shape, colour and design are often based on evolutionary implicit effects.

People seem to have some kind of implicit spectacles. The human brain permanently works in a standby modus and only life threatening issues get a priority of perception. During this standby modus the human brain is always examining the environment in search of codes and patterns. As a result merely information which attracts our implicit

## **Conclusion** from Theoretical and Practical Results

motives gets access to our cognition. As soon as a relevant set of patterns is recognized the information passes our 'cognitive filter' and the 'association machine' triggers the relevance to achieve our implicit goals. The entire process works completely concealed. Finally, the conscious mind acting as 'public relations manager' of our brain delivers an unconscious decision which is assumed to be a rational one.

Solely experts with knowledge about the implicit motives of the target group have the chance to approach their customers. Customers only perceive what matches their motives. The critical success factor of future marketing will be how to deal explicitly with implicit processes.

The novelty of this research is the unique implicit coding and decoding of in a controlled environment and the clear evidence for implicit motives as important unconscious drivers in the business to business decision making.

### **6.7 Outlook and Remaining Research Gap**

To sum up, more work has to be done on implicit motives. Concerning the implicit motives the discussion on the classical triangle of three implicit motives applied in this thesis and the approach of a 4th implicit motive is not yet finished and continue.

Even in the field of emotions more efforts are required on what emotions precisely are, and concerning the link to the related concepts such as implicit motives. Especially the vice versa effects of implicit motives and emotions have to be examined.

Researchers on emotions in the field of buying centre situations verify an impact of emotions on managers and business people. However, more work on the topic of emotions and business to business relations has to be undergone to understand the correlation and the underlying processes in business situations, especially in the important business to business sector.

Establishing a research network applying a panel to examine implicit coded products and procedures would generate a huge advantage and exciting opportunities for further researches. Due to the fact that implicit motives are stable within the personality of individuals, volunteers could act as participants in experiments for their entire lifetime.

Out of the researcher's perspective a faster and more visual, picture and symbol based advanced operant motive tests would be helpful. Spending nearly one hour to undergo

## **Conclusion** from Theoretical and Practical Results

the story based test is difficult to be accepted in today's business environment. The panel combined with a more easy to apply operant motive test might provide a powerful tool such as the cultural dimensions of Hofstede.

This thesis tries to build another step in the research about implicit motives in the business to business sector and to build a base for more research in this area.

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## Appendix A. Pilot Test Questionnaires

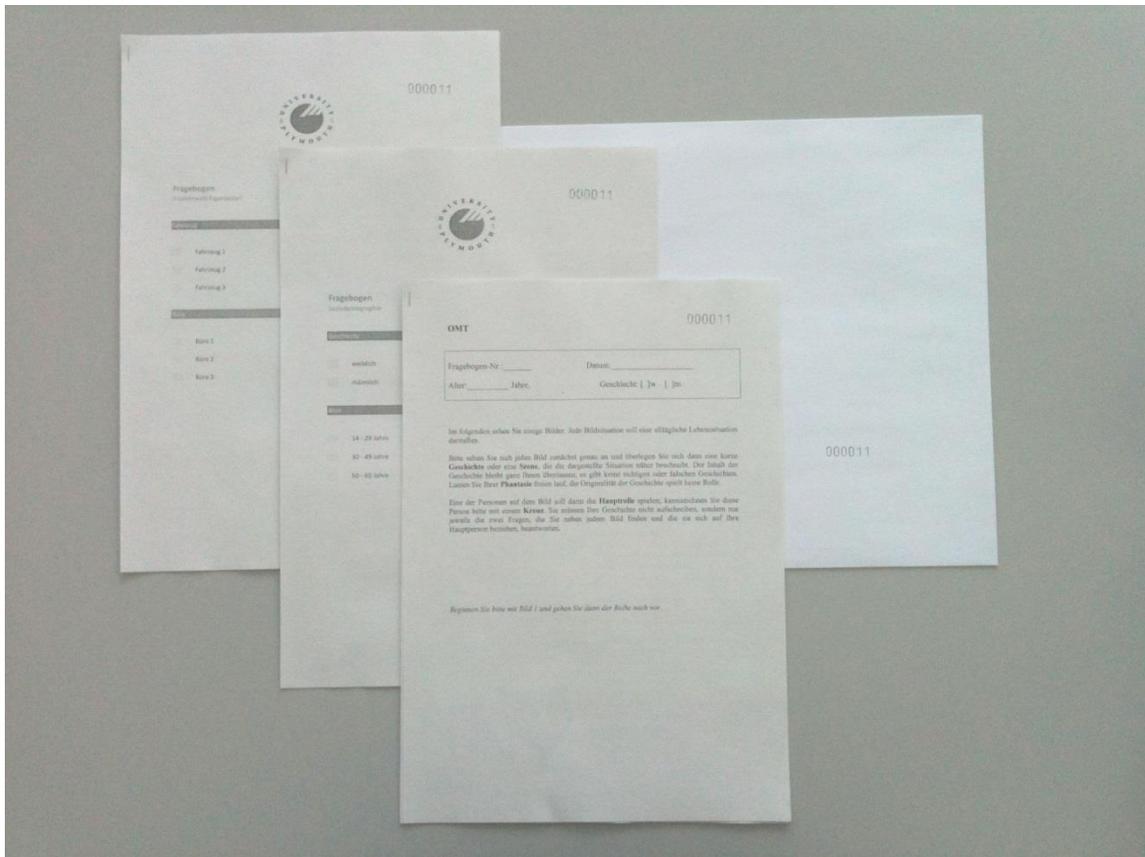


Figure 117: Pilot Test Questionnaires Overview



**Fragebogen**

Produktwahl Eigenbedarf

**Fahrzeug**

- Fahrzeug 1
- Fahrzeug 2
- Fahrzeug 3

**Büro**

- Büro 1
- Büro 2
- Büro 3



**Fragebogen**

Produktwahl Mitarbeiter Buchhaltung

**Fahrzeug**

Fahrzeug 1

Fahrzeug 2

Fahrzeug 3

**Büro**

Büro 1

Büro 2

Büro 3



**Fragebogen**

Produktwahl Mitarbeiter Management

**Fahrzeug**

- Fahrzeug 1
- Fahrzeug 2
- Fahrzeug 3

**Büro**

- Büro 1
- Büro 2
- Büro 3



**Fragebogen**  
Produktwahl Mitarbeiter Eventmarketing

**Fahrzeug**

Fahrzeug 1

Fahrzeug 2

Fahrzeug 3

**Büro**

Büro 1

Büro 2

Büro 3

Figure 118: Pilot Test Questionnaires Product Choice



**Fragebogen**  
Soziodemographie

**Geschlecht**

- weiblich
- männlich

**Alter**

- 14 - 29 Jahre
- 30 - 49 Jahre
- 50 - 65 Jahre



Bildungsabschluss

- kein Abschluss
- Hauptschule
- Realschule
- Abitur / Fachabitur
- Berufsausbildung
- Akademie / Berufsakademie
- Hochschule / Universität
- Promotion
- Professur



**Fragebogen**  
Unternehmensdaten

**Funktion im Unternehmen**

- Mitarbeiter
- Management (Abteilungsleiter)
- Top Management (Geschäftsführer / Vorstand)

**Welche Entscheidungen treffen Sie?**

- Strategische Entscheidungen (Geschäftsfelder)
- Operative Entscheidungen (Auftragsplanung)
- Mitarbeiter Entscheidungen (Personalverantwortung)
- Einkauf von Investitionsgütern (Maschinen)
- Einkauf von Verbrauchsgütern (Material)

Figure 119: Pilot Test Questionnaire Sociographic Data

## Appendix B. Pilot Test Questionnaires of the OMT Test

### OMT

Questionnaire #: \_\_\_\_\_ Date: \_\_\_\_\_  
Age: \_\_\_\_\_ years, Sex: [ ]f [ ]m

On the pages that follow you will see a number of pictures. Each of them illustrates an everyday situation.

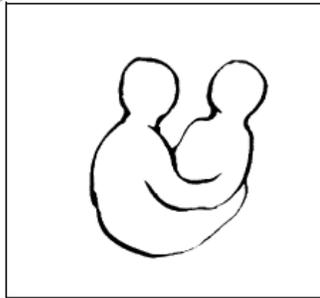
We would like to ask you to look thoroughly at each picture and to think about a short **story** or little **scene** that describes the situation depicted in the picture. The story's content is totally up to you and there are no correct or incorrect stories. Just give free rein to your **imagination**, it does not matter whether your story is inventive or not.

Please **mark** one of the people in the picture with an „x“ and answer the questions **with reference to that person**. You need not write down your story, but simply answer the questions next to each picture.

*Please start with picture 1 and then work through pictures 2-15 in sequential order.*

Appendix B. Pilot Test Questionnaires of the OMT Test

1)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

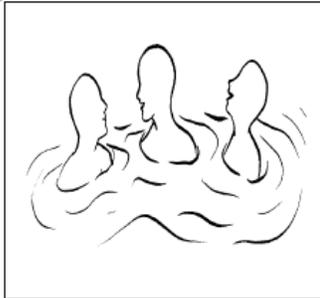
Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

2)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

3)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

Why does the person feel this way?

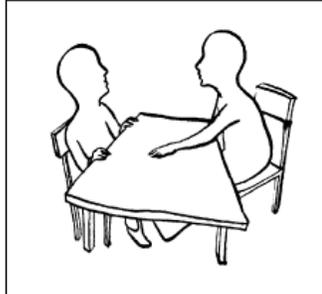
\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

Appendix B. Pilot Test Questionnaires of the OMT Test

4)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

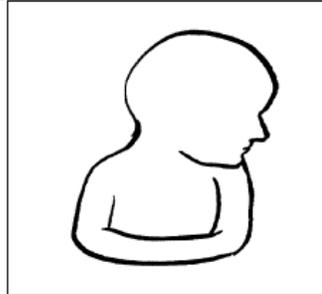
Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

5)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

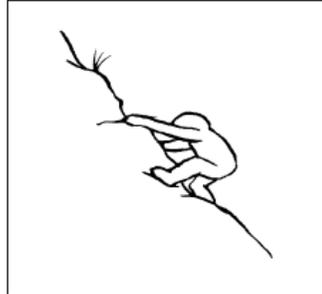
Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

6)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

Why does the person feel this way?

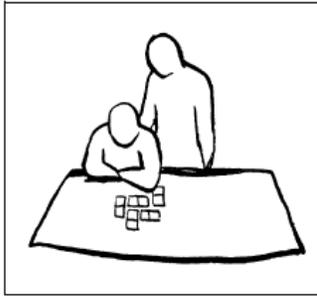
\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

Appendix B. Pilot Test Questionnaires of the OMT Test

7)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

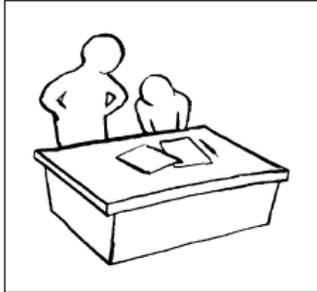
Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

8)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

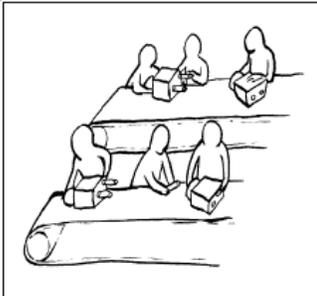
Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

9)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

Why does the person feel this way?

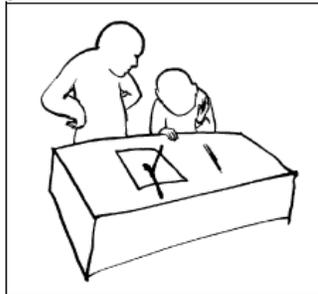
\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

Appendix B. Pilot Test Questionnaires of the OMT Test

10)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

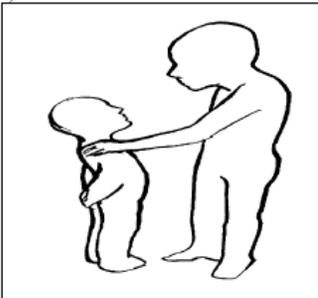
Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

11)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

12)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

Appendix B. Pilot Test Questionnaires of the OMT Test

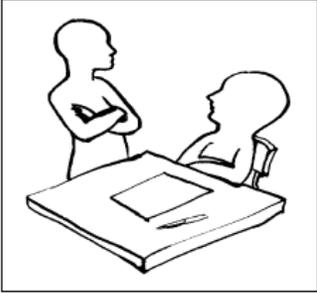
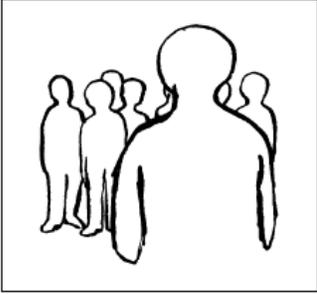
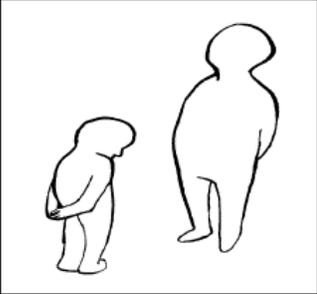
13)		<p>What is important for the person in this situation and what is he/she doing? _____ _____</p> <p>What are the person's feelings? _____ _____</p> <p>Why does the person feel this way? _____ _____</p> <p>What is the outcome of the story? _____ _____</p>
14)		<p>What is important for the person in this situation and what is he/she doing? _____ _____</p> <p>What are the person's feelings? _____ _____</p> <p>Why does the person feel this way? _____ _____</p> <p>What is the outcome of the story? _____ _____</p>
15)		<p>What is important for the person in this situation and what is he/she doing? _____ _____</p> <p>What are the person's feelings? _____ _____</p> <p>Why does the person feel this way? _____ _____</p> <p>What is the outcome of the story? _____ _____</p>

Figure 120: Pilot Test Questionnaire of the OMT Test

## Appendix C. Pilot Test SPSS Data Analysis

### Frequency Implicit Motives

#### Statistics

Implicit Motive

N	Valid	21
	Missing	0

#### Implicit Motive

		Frequency	Per Cent	Valid Per Cent	Cumulative Per Cent
Valid	Affiliation	8	38,1	38,1	38,1
	Achievement	3	14,3	14,3	52,4
	Power	10	47,6	47,6	100,0
	Total	21	100,0	100,0	

Table 13: Frequency Implicit Motives

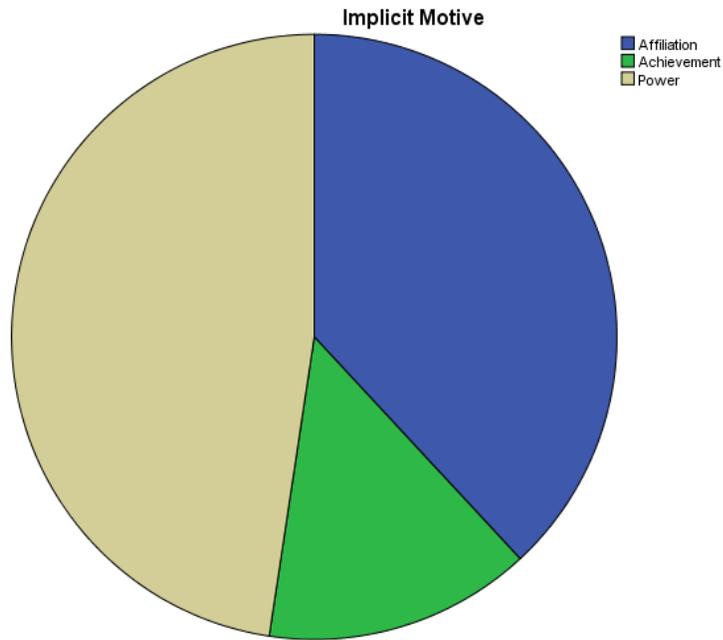


Figure 121: Frequency Implicit Motives

Frequency Gender

Statistics

Gender

N	Valid	21
	Missing	0

Gender

		Frequency	Per Cent	Valid Per Cent	Cumulative Per Cent
Valid	female	6	28,6	28,6	28,6
	male	15	71,4	71,4	100,0
Total		21	100,0	100,0	

Table 14: Frequency Gender

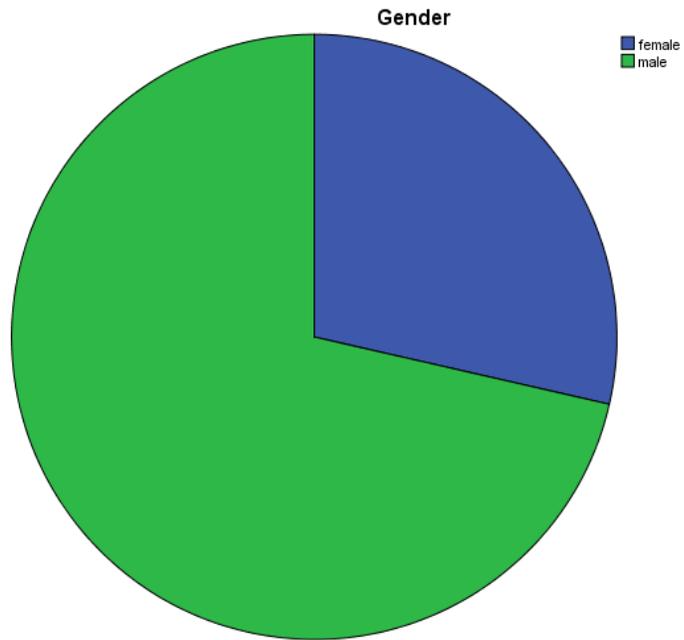


Figure 122: Frequency Gender

**Implicit Motives versus Gender**

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Per Cent	N	Per Cent	N	Per Cent
Implicit Motive * Gender	21	100,0%	0	,0%	21	100,0%

**Implicit Motive \* Gender Cross tabulation**

Count

		Gender		Total
		female	male	
Implicit Motive	Affiliation	4	4	8
	Achievement	0	3	3
	Power	2	8	10
Total		6	15	21

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3,360 <sup>a</sup>	2	,186
Likelihood Ratio	4,029	2	,133
N of Valid Cases	21		

		Value	Approx. Sig.
Nominal by Nominal	Phi	,400	,186
	Cramer's V	,400	,186
	Contingency Coefficient	,371	,186
N of Valid Cases		21	

Table 15: Implicit Motives versus Gender

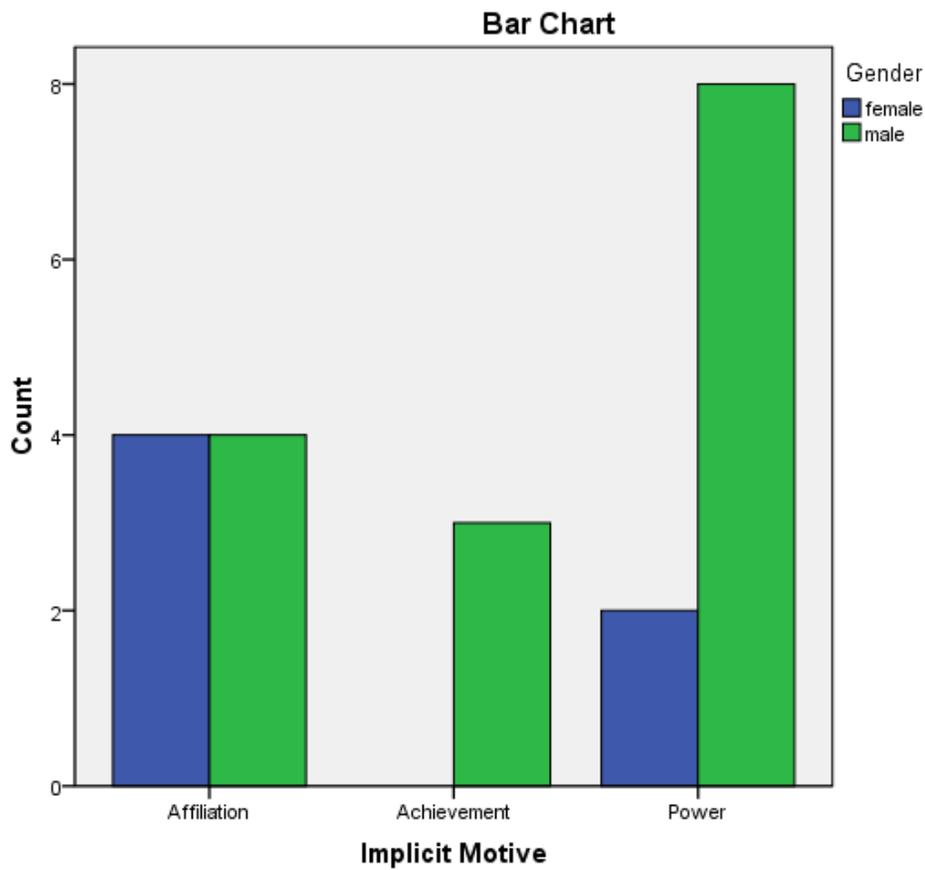


Figure 123: Implicit Motives versus Gender

**Implicit Motives versus Choice Car Personal**

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Implicit Motive * Car Personal	21	100,0%	0	,0%	21	100,0%

**Implicit Motive \* Car Personal Cross Tabulation**

Count

		Car Personal			Total
		Affiliation	Achievement	Power	
Implicit Motive	Affiliation	0	0	8	8
	Achievement	2	1	0	3
	Power	3	5	2	10
Total		5	6	10	21

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15,937 <sup>a</sup>	4	,003
Likelihood Ratio	19,811	4	,001
N of Valid Cases	21		

**Symmetric Measures<sup>a</sup>**

		Value	Approx. Sig.
Nominal by Nominal	Phi	,871	,003
	Cramer's V	,616	,003
	Contingency Coefficient	,657	,003
N of Valid Cases		21	

a. Correlation statistics are available for numeric data only.

Table 16: Implicit Motives versus Choice Car Personal

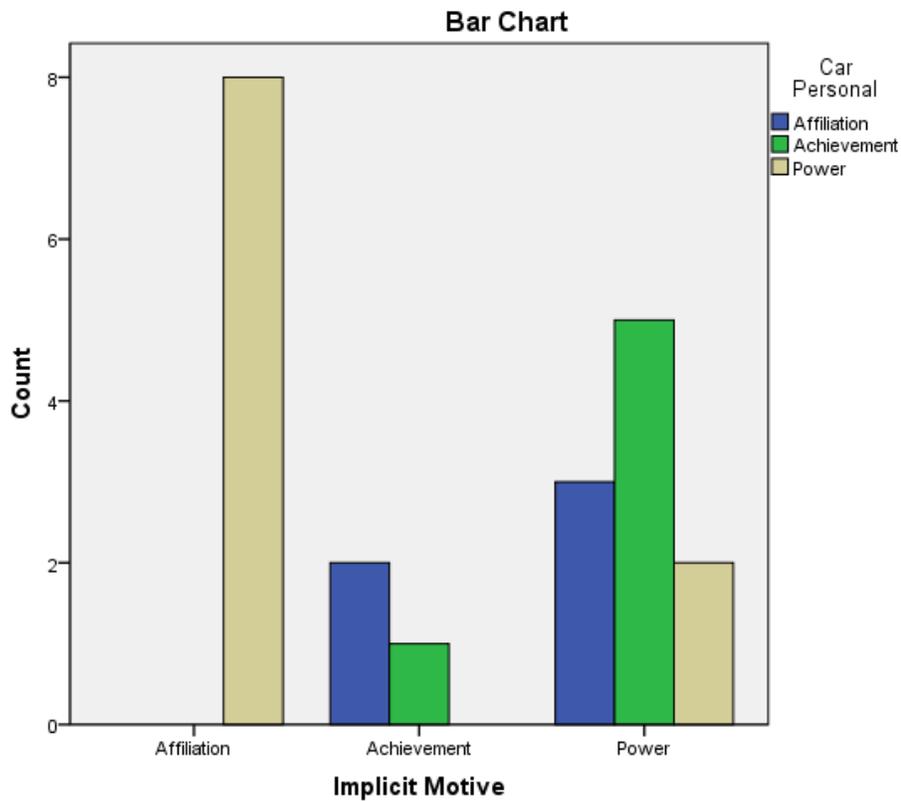


Figure 124: Implicit Motives versus Choice Car Personal

**Implicit Motives versus Choice Office Personal**

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Implicit Motive * Office Personal	21	100,0%	0	,0%	21	100,0%

**Implicit Motive \* Office Personal Cross Tabulation**

Count

		Office Personal			Total
		Affiliation	Achievement	Power	
Implicit Motive	Affiliation	3	0	5	8
	Achievement	1	0	2	3
	Power	2	1	7	10
Total		6	1	14	21

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1,642 <sup>a</sup>	4	,801
Likelihood Ratio	2,035	4	,729
N of Valid Cases	21		

a. 7 cells (77,8%) have expected count less than 5. The minimum expected count is ,14.

Symmetric Measures		Value	Approx. Sig.
Nominal by Nominal	Phi	,280	,801
	Cramer's V	,198	,801
	Contingency Coefficient	,269	,801
N of Valid Cases		21	

a. Correlation statistics are available for numeric data only.

Table 17: Implicit Motives versus Choice Office Personal

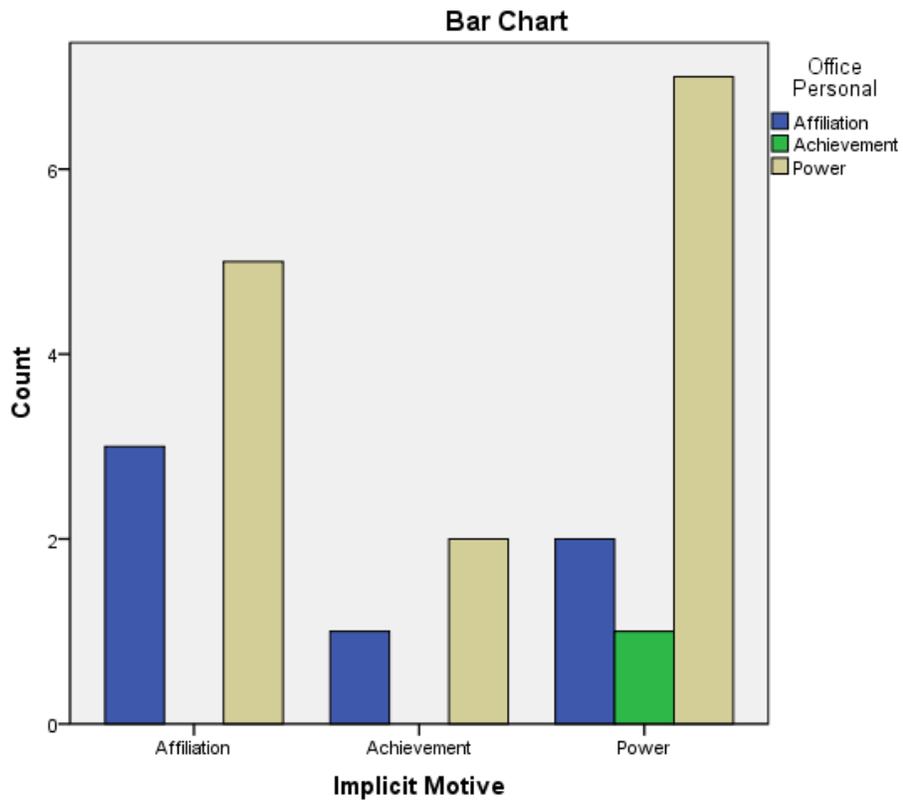


Figure 125: Implicit Motives versus Choice Office Personal

**Implicit Motive versus Choice Colleague Controller**

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Implicit Motive Controller * Car Controller	21	100,0%	0	,0%	21	100,0%
Implicit Motive Controller * Office Controller	21	100,0%	0	,0%	21	100,0%

**Crosstab**

Count

		Car Controller		Total
		Affiliation	Achievement	
Implicit Motive Controller	Affiliation	15	6	21
Total		15	6	21

**Crosstab**

Count

		Office Controller		Total
		Affiliation	Achievement	
Implicit Motive Controller	Affiliation	20	1	21
Total		20	1	21

Table 18: Implicit Motive versus Choice Colleague Controller

Appendix C. Pilot Test SPSS Data Analysis

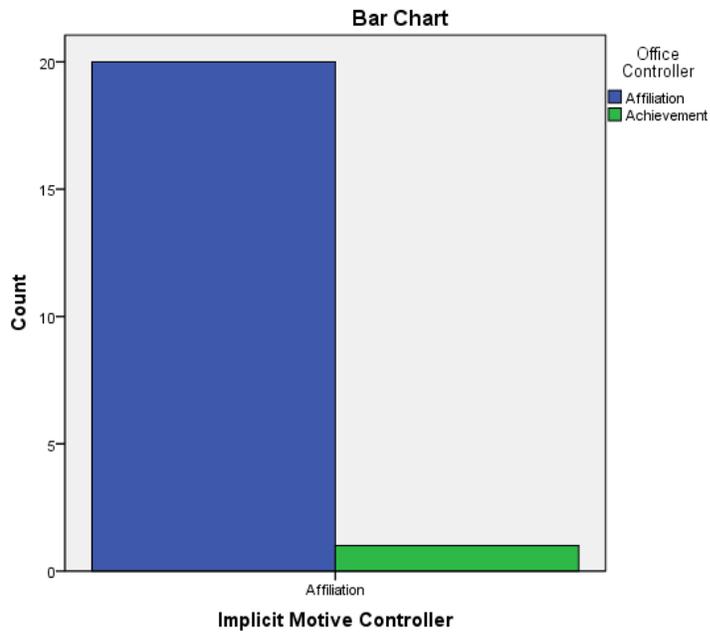
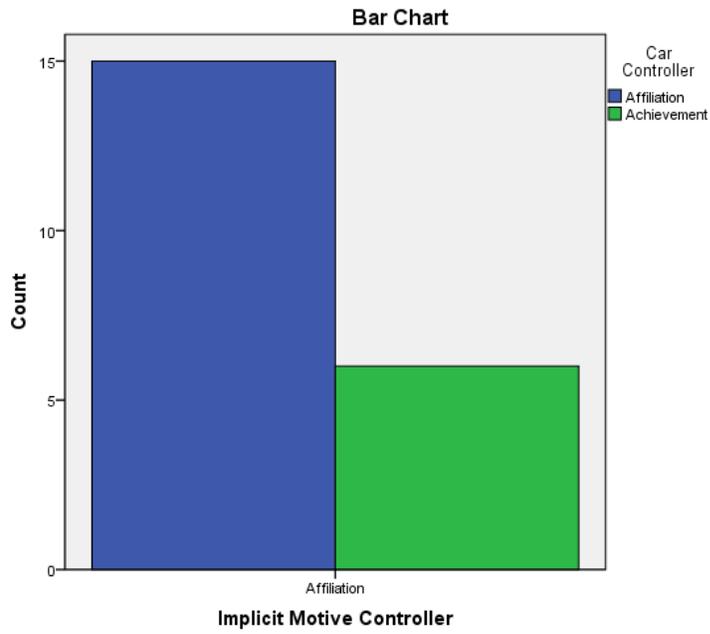


Figure 126: Implicit Motive versus Choice Colleague Controller

**Implicit Motive versus Choice Colleague Management**

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Implicit Motive Mangement * Car Management	21	100,0%	0	,0%	21	100,0%
Implicit Motive Mangement * Office Management	21	100,0%	0	,0%	21	100,0%

**Crosstab**

Count

		Car Management			Total
		Affiliation	Achievement	Power	
Implicit Motive Mangement	Power	8	1	12	21
Total		8	1	12	21

**Crosstab**

Count

		Office Management			Total
		Affiliation	Achievement	Power	
Implicit Motive Mangement	Power	7	6	8	21
Total		7	6	8	21

Table 19: Implicit Motive versus Choice Colleague Management

## Appendix C. Pilot Test SPSS Data Analysis

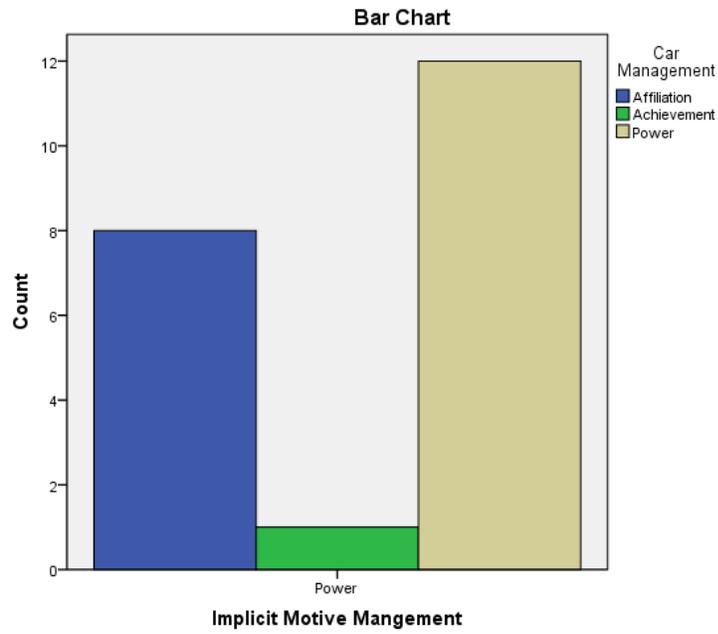


Figure 127: Implicit Motive versus Choice Colleague Management

**Implicit Motive versus Choice Colleague Event**

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Implicit Motive Event * Car Event	21	100,0%	0	,0%	21	100,0%
Implicit Motive Event * Office Event	21	100,0%	0	,0%	21	100,0%

**Crosstab**

Count

		Car Event		Total
		Affiliation	Achievement	
Implicit Motive Event	Achievement	2	19	21
Total		2	19	21

**Crosstab**

Count

		Office Event			Total
		Affiliation	Achievement	Power	
Implicit Motive Event	Achievement	6	14	1	21
Total		6	14	1	21

Table 20: Implicit Motive versus Choice Colleague Event

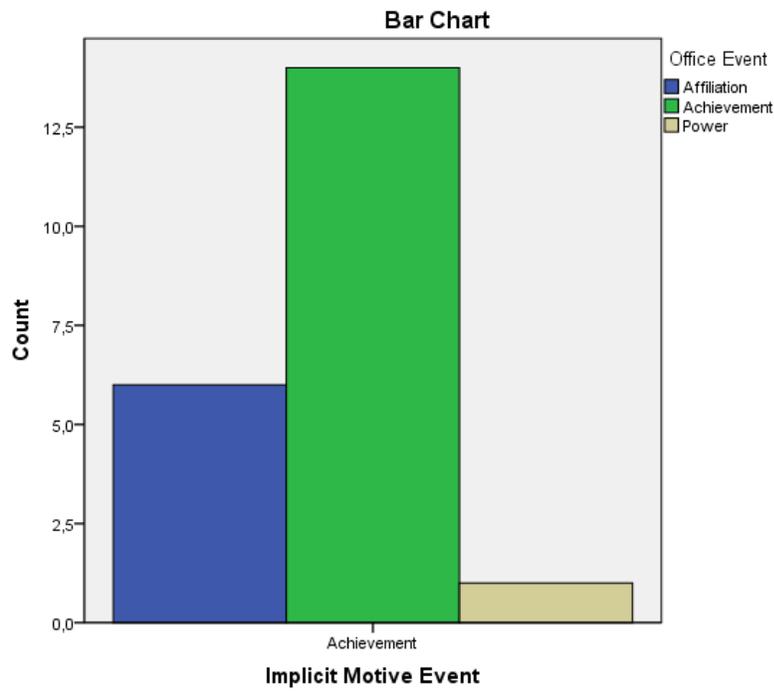
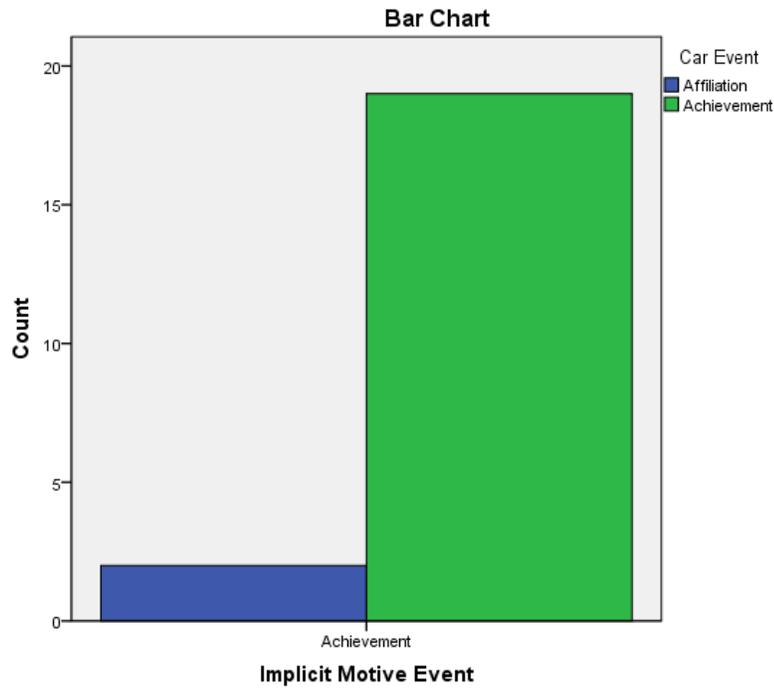


Figure 128: Implicit Motive versus Choice Colleague Event

## Appendix D. Data Collection Cover Letter



**Hanns Seidel Stiftung**  
Leiter Presse und Kommunikation  
Herrn Hubertus Klingsbögl  
Lazarettstraße 33  
80636 München

München, den 24. Oktober 2012

### Unterstützung der Studie für meine Doktorarbeit

Lieber Herr Klingsbögl,

die aktuelle Studie über den Einfluss der impliziten Motive auf Geschäftskundenentscheidungen ist Teil meiner Promotion an der University of Plymouth in Kooperation mit der Hochschule München.

Teil der wissenschaftlichen Datenerhebung ist eine Studie die möglichst praxisnah in den Unternehmen durchgeführt wird. Gerne lade ich Sie ein, Teil dieser Studie zu sein.

Die Erhebung gliedert sich in ein Experiment zur Entscheidungsfindung und eine Umfrage. Der zeitliche Aufwand liegt bei 1,5 Stunden.



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Registergericht München HRB 150 191 | Steuernummer 9143 / 808 / 10421 | USt-IDNr. DE 813633861  
Geschäftsführer Christian Chrupsa Dipl.-Betriebswirt | info@cantus-media.com | www.cantus-media.com

  
**CANTUS MEDIA**  
WERBEAGENTUR

**Anforderungen:**

- Ein ruhiger Raum für das Experiment
- Es sollten mindestens 5 Mitarbeiter anwesend sein, gerne auch mehr
- Die Mitarbeiter sollten sich aus verschiedenen Hierarchiestufen zusammensetzen

Da die Studie auch für Sie mit einem gewissen zeitlichen Aufwand verbunden ist  
biete ich Ihnen an:

**Ihr Vorteil:**

- kostenloser Workshop im Anschluss an die Studie zur Verbesserung Ihrer Unternehmenskommunikation
- kostenloser Vortrag zur vorangegangenen Pilotstudie, gerne ab sofort möglich
- oder kostenloser Vortrag zur Studie an der Sie teilgenommen haben, nach Abschluss der Erhebung
- Einblicke in völlig neue und noch nicht veröffentlichte Forschungsergebnisse
- Einladung zum Abschluss Event und der Präsentation des gesamten Forschungsprojektes

Ich freue mich auf Ihre Zusage.

Mit freundlichen Grüßen

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Christian Chlupsa

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Figure 129: Data Collection Cover Letter

## Appendix E. Data Collection Picture Manipulation

### Colleague Controlling



### Colleague Corporate Strategy



Colleague Event Marketing



Figure 130: Data Collection Picture Manipulation

## Appendix F. Data Collection Presentation Experiment



Presentation PhD Experiment

### **DECISION MAKING BUSINESS TO BUSINESS**

## Appendix F. Data Collection Presentation Experiment



### Great to be here

Thank you very much to be part of this experiment. This is a data collection for a PhD Thesis.

This research project is under the control of the Faculty Research Ethical Approval Committee which considered the ethical approval and is fully satisfied that the project complies with the University of Plymouth's ethical standards for research involving human participants. As participant you have always the right to withdraw your input.

Ethical Approval Application No: FREAC1112.37

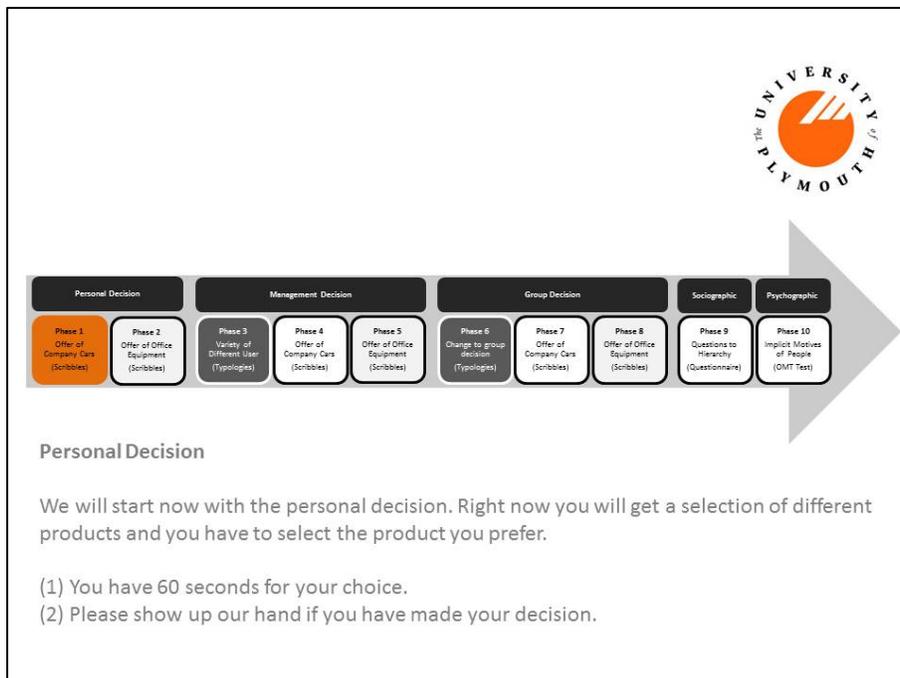
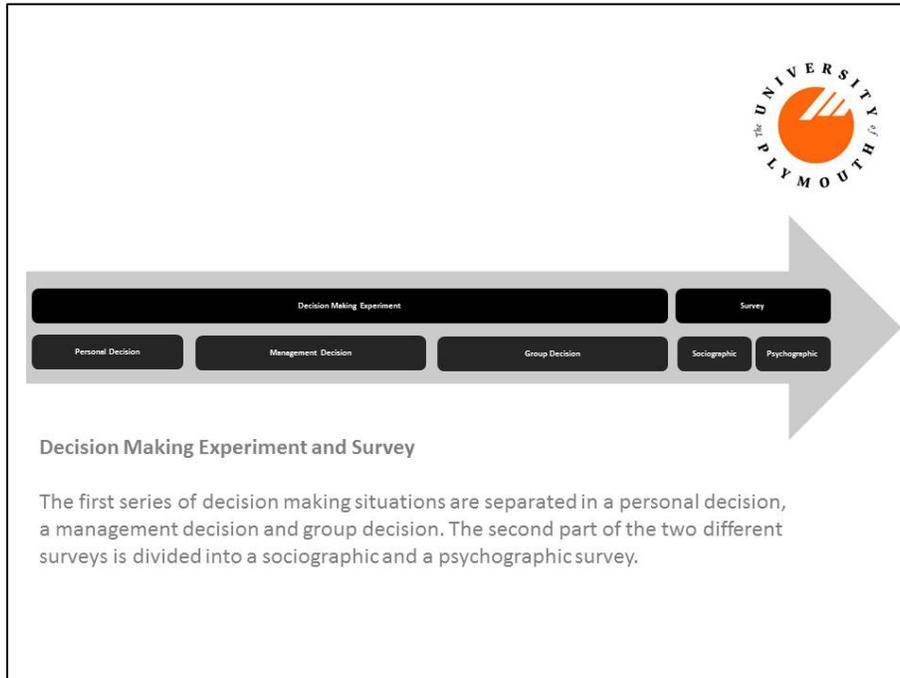


Decision Making Experiment

Survey

### Business Decision Making

The experiment has two main parts. The first part consists of a series of different decision making situations. The second part has two different surveys.



Please choose your preferred company car





39.790 €

Car 1



39.980 €

Car 2



39.880 €

Car 3



Personal Decision

Management Decision

Group Decision

Sociographic

Psychographic

Phase 1  
Offer of  
Company Cars  
(Scribbles)

Phase 2  
Offer of Office  
Equipment  
(Scribbles)

Phase 3  
Variety of  
Different User  
(Typologies)

Phase 4  
Offer of  
Company Cars  
(Scribbles)

Phase 5  
Offer of Office  
Equipment  
(Scribbles)

Phase 6  
Change to group  
decision  
(Typologies)

Phase 7  
Offer of  
Company Cars  
(Scribbles)

Phase 8  
Offer of Office  
Equipment  
(Scribbles)

Phase 9  
Questions to  
Hierarchy  
(Questionnaire)

Phase 10  
Impulse Motives  
of People  
(OMT Test)

**Personal Decision**

We will now go on with the personal decision. Again you will get a selection of different products.

- (1) You have 60 seconds for your choice.
- (2) Please show up our hand if you have made your decision.

## Appendix F. Data Collection Presentation Experiment

Please choose your preferred office equipment





19.880 €

Office 1



19.890 €

Office 2



19.790 €

Office 3



Personal Decision

Management Decision

Group Decision

Sociographic

Psychographic

Phase 1  
Offer of  
Company Cars  
(Scribbles)

Phase 2  
Offer of Office  
Equipment  
(Scribbles)

Phase 3  
Offer of  
Different User  
(Typologies)

Phase 4  
Offer of  
Company Cars  
(Scribbles)

Phase 5  
Offer of Office  
Equipment  
(Scribbles)

Phase 6  
Change to group  
decision  
(Typologies)

Phase 7  
Offer of  
Company Cars  
(Scribbles)

Phase 8  
Offer of Office  
Equipment  
(Scribbles)

Phase 9  
Questions to  
Hierarchy  
(Questionnaire)

Phase 10  
Implics Motives  
of People  
(OMT Test)

**Management Decision**

We will start now with your management decision. First of all we present a colleague of our company. Your task is to choose a product for this colleague.

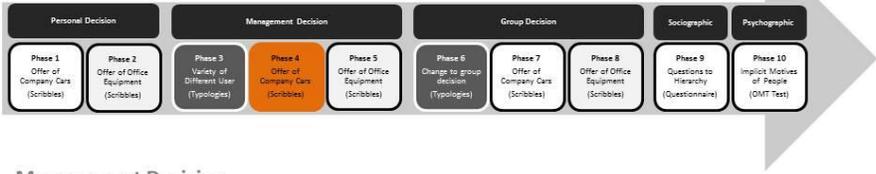
Controlling




**Walter Smith**

Job: Payment, Dunning Process

Hobbies: Family, Garden, Nature, Hiking

**Management Decision**

Now we will go on with the decision you have to make for products a colleague in your company will have to use. Your task is to choose a product for this colleague. You will get a selection of different products.

(1) You have 60 seconds for your choice.  
 (2) Please show up our hand if you have made your decision.

## Appendix F. Data Collection Presentation Experiment

Please choose a company car for your colleague of controlling






39.790 €

Car 1



39.980 €

Car 2



39.880 €

Car 3



Personal Decision		Management Decision			Group Decision			Sociographic	Psychographic
Phase 1 Offer of Company Cars (Scribbles)	Phase 2 Offer of Office Equipment (Scribbles)	Phase 3 Variety of Different User (Typologies)	Phase 4 Offer of Company Cars (Scribbles)	Phase 5 Offer of Office Equipment (Scribbles)	Phase 6 Change to group decision (Typologies)	Phase 7 Offer of Company Cars (Scribbles)	Phase 8 Offer of Office Equipment (Scribbles)	Phase 9 Questions to Hierarchy (Questionnaire)	Phase 10 Implics Modes of People (OMT Test)



**Management Decision**

Now we will go on with the decision you have to make for products a colleague in your company will have to use. Your task is to choose a product for this colleague. You will get a selection of different products.

- (1) You have 60 seconds for your choice.
- (2) Please show up our hand if you have made your decision.

## Appendix F. Data Collection Presentation Experiment

Please choose a office equipment for your colleague of controlling






19.880 €

Office 1



19.890 €

Office 2



19.790 €

Office 3



Personal Decision

Management Decision

Group Decision

Sociographic

Psychographic

Phase 1  
Offer of  
Company Cars  
(Scribbles)

Phase 2  
Offer of Office  
Equipment  
(Scribbles)

Phase 3  
Identity User  
(Typologies)

Phase 4  
Offer of  
Company Cars  
(Scribbles)

Phase 5  
Offer of Office  
Equipment  
(Scribbles)

Phase 6  
Change to group  
decision  
(Typologies)

Phase 7  
Offer of  
Company Cars  
(Scribbles)

Phase 8  
Offer of Office  
Equipment  
(Scribbles)

Phase 9  
Questions to  
Hierarchy  
(Questionnaire)

Phase 10  
Implics Motives  
of People  
(OMT Test)

➔

**Management Decision**

Now we will go on with the management decision. First we present a colleague from our company. Your task is to choose a product for this colleague.

Corporate Strategy




**Michael Boos**

Job: Corporate Strategy, Strategic Planning

Hobbies: Travelling, Golf, Trading



Personal Decision		Management Decision			Group Decision			Sociographic	Psychographic
Phase 1 Offer of Company Cars (Scribbles)	Phase 2 Offer of Office Equipment (Scribbles)	Phase 3 Variety of Different User (Typologies)	Phase 4 Offer of Company Cars (Scribbles)	Phase 5 Offer of Office Equipment (Scribbles)	Phase 6 Change to group decision (Typologies)	Phase 7 Offer of Company Cars (Scribbles)	Phase 8 Offer of Office Equipment (Scribbles)	Phase 9 Questions to Hierarchy (Questionnaire)	Phase 10 Implics Motives of People (OMT Test)

**Management Decision**

Now we will go on with the decision you have to make for products a colleague in your company will have to use. Your task is to choose a product for this colleague. You will get a selection of different products.

- (1) You have 60 seconds for your choice.
- (2) Please show up our hand if you have made your decision.

Please choose a company car for your colleague in corporate strategy






39.790 €

Car 1



39.980 €

Car 2



39.880 €

Car 3



Personal Decision		Management Decision			Group Decision			Sociographic	Psychographic
Phase 1 Offer of Company Cars (Scribbles)	Phase 2 Offer of Office Equipment (Scribbles)	Phase 3 Variety of Different User (Typologies)	Phase 4 Offer of Company Cars (Scribbles)	Phase 5 Offer of Office Equipment (Scribbles)	Phase 6 Change to group decision (Typologies)	Phase 7 Offer of Company Cars (Scribbles)	Phase 8 Offer of Office Equipment (Scribbles)	Phase 9 Questions to Hierarchy (Questionnaire)	Phase 10 Implics Modes of People (OMT Test)

**Management Decision**

Now we will go on with the decision you have to make for products a colleague in your company will have to use. Your task is to choose a product for this colleague. You will get a selection of different products.

- (1) You have 60 seconds for your choice.
- (2) Please show up our hand if you have made your decision.

## Appendix F. Data Collection Presentation Experiment

Please choose a office equipment for your colleague of corporate strategy






19.880 €

Office 1



19.890 €

Office 2



19.790 €

Office 3



Personal Decision

Management Decision

Group Decision

Sociographic

Psychographic

Phase 1  
Offer of  
Company Cars  
(Scribbles)

Phase 2  
Offer of Office  
Equipment  
(Scribbles)

Phase 3  
Identity User  
(Typologies)

Phase 4  
Offer of  
Company Cars  
(Scribbles)

Phase 5  
Offer of Office  
Equipment  
(Scribbles)

Phase 6  
Change to group  
decision  
(Typologies)

Phase 7  
Offer of  
Company Cars  
(Scribbles)

Phase 8  
Offer of Office  
Equipment  
(Scribbles)

Phase 9  
Questions to  
Hierarchy  
(Questionnaire)

Phase 10  
Implics Modes  
of People  
(OMT Test)

**Management Decision**

Now we will go on with the management decision. First we present a colleague from our company. Your task is to choose a product for this colleague.

Event Marketing




**Pablo Marcos**

Job: Events, Social Media

Hobbies: Mountain biking, Snowboarding



Personal Decision		Management Decision		Group Decision		Sociographic	Psychographic		
Phase 1 Offer of Company Cars (Scribbles)	Phase 2 Offer of Office Equipment (Scribbles)	Phase 3 Variety of Different User (Typologies)	Phase 4 Offer of Company Cars (Scribbles)	Phase 5 Offer of Office Equipment (Scribbles)	Phase 6 Change to group decision (Typologies)	Phase 7 Offer of Company Cars (Scribbles)	Phase 8 Offer of Office Equipment (Scribbles)	Phase 9 Questions to Hierarchy (Questionnaire)	Phase 10 Implics Motives of People (OMT Test)

**Management Decision**

Now we will go on with the decision you have to make for products a colleague in your company will have to use. Your task is to choose a product for this colleague. You will get a selection of different products.

- (1) You have 60 seconds for your choice.
- (2) Please show up our hand if you have made your decision.

Please choose a company car for your colleague of event marketing






39.790 €

Car 1



39.980 €

Car 2



39.880 €

Car 3



Personal Decision		Management Decision			Group Decision			Sociographic	Psychographic
Phase 1 Offer of Company Cars (Scribbles)	Phase 2 Offer of Office Equipment (Scribbles)	Phase 3 Variety of Different User (Typologies)	Phase 4 Offer of Company Cars (Scribbles)	Phase 5 Offer of Office Equipment (Scribbles)	Phase 6 Change to group decision (Typologies)	Phase 7 Offer of Company Cars (Scribbles)	Phase 8 Offer of Office Equipment (Scribbles)	Phase 9 Questions to Hierarchy (Questionnaire)	Phase 10 Implics Modes of People (OMT Test)

**Management Decision**

Now we will go on with the decision you have to make for products a colleague in your company will have to use. Your task is to choose a product for this colleague. You will get a selection of different products.

- (1) You have 60 seconds for your choice.
- (2) Please show up our hand if you have made your decision..

## Appendix F. Data Collection Presentation Experiment

Please choose a office equipment for your colleague of event marketing






19.880 €

Office 1



19.890 €

Office 2



19.790 €

Office 3



Personal Decision

Management Decision

Group Decision

Sociographic

Psychographic

Phase 1  
Offer of  
Company Cars  
(Scribbles)

Phase 2  
Offer of Office  
Equipment  
(Scribbles)

Phase 3  
Variety of  
Different User  
(Typologies)

Phase 4  
Offer of  
Company Cars  
(Scribbles)

Phase 5  
Offer of Office  
Equipment  
(Scribbles)

Phase 6  
Change to group  
decision  
(Typologies)

Phase 7  
Offer of  
Company Cars  
(Scribbles)

Phase 8  
Offer of Office  
Equipment  
(Scribbles)

Phase 9  
Questions to  
Hierarchy  
(Questionnaire)

Phase 10  
Implics Modes  
of People  
(OMT Test)

**Group Decision**

We will start now with the group decision. You are acting as a group. First of all we present a colleague of our company. Your task as group is to choose together a product for this colleague.

At the end please note your OMT questionnaire numbers on the team questionnaire.

Controlling




**Walter Smith**

Job: Payment, Dunning Process

Hobbies: Family, Garden, Nature, Hiking




**Group Decision**

Now we will go on with the group decision. You are acting as a group. First of all we present a colleague of our company. Your task as group is to choose together a product for this colleague.

- (1) You have 3 minutes for your choice.
- (2) Please show up our hand if you have made your decision.

## Appendix F. Data Collection Presentation Experiment

Please choose a company car for your colleague of controlling






39.790 €

Car 1



39.980 €

Car 2



39.880 €

Car 3



Personal Decision

Management Decision

Group Decision

Sociographic

Psychographic

Phase 1  
Offer of  
Company Cars  
(Scribbles)

Phase 2  
Offer of Office  
Equipment  
(Scribbles)

Phase 3  
Variety of  
Different User  
(Typologies)

Phase 4  
Offer of  
Company Cars  
(Scribbles)

Phase 5  
Offer of Office  
Equipment  
(Scribbles)

Phase 6  
Change to group  
decision  
(Typologies)

Phase 7  
Offer of  
Company Cars  
(Scribbles)

Phase 8  
Offer of Office  
Equipment  
(Scribbles)

Phase 9  
Questions to  
Hierarchy  
(Questionnaire)

Phase 10  
Implics Modes  
of People  
(OMT Test)

**Group Decision**

Now we will go on with the group decision. You are acting as a group. First of all we present a colleague of our company. Your task as group is to choose together a product for this colleague.

- (1) You have 3 minutes for your choice.
- (2) Please show up our hand if you have made your decision.

## Appendix F. Data Collection Presentation Experiment

Please choose a office equipment for your colleague of controlling






19.880 €

Office 1



19.890 €

Office 2



19.790 €

Office 3



Personal Decision

Management Decision

Group Decision

Sociographic

Psychographic

Phase 1  
Offer of  
Company Cars  
(Scribbles)

Phase 2  
Offer of Office  
Equipment  
(Scribbles)

Phase 3  
Variety of  
Different User  
(Typologies)

Phase 4  
Offer of  
Company Cars  
(Scribbles)

Phase 5  
Offer of Office  
Equipment  
(Scribbles)

Phase 6  
Change to group  
decision  
(Typologies)

Phase 7  
Offer of  
Company Cars  
(Scribbles)

Phase 8  
Offer of Office  
Equipment  
(Scribbles)

Phase 9  
Questions to  
Hierarchy  
(Questionnaire)

Phase 10  
Implics Modes  
of People  
(OMT Test)

**Group Decision**

We will now go on with the group decision. You are acting as a group. First of all we present a colleague of our company. Your task as group is to choose together a product for this colleague.

Corporate Strategy




**Michael Boos**

Job: Corporate Strategy, Strategic Planning

Hobbies: Travelling, Golf, Trading



Personal Decision		Management Decision			Group Decision		Sociographic	Psychographic	
Phase 1 Offer of Company Cars (Scribbles)	Phase 2 Offer of Office Equipment (Scribbles)	Phase 3 Variety of Different User (Typologies)	Phase 4 Offer of Company Cars (Scribbles)	Phase 5 Offer of Office Equipment (Scribbles)	Phase 6 Change to group decision (Typologies)	<b>Phase 7 Offer of Company Cars (Scribbles)</b>	Phase 8 Offer of Office Equipment (Scribbles)	Phase 9 Questions to Hierarchy (Questionnaire)	Phase 10 Implic Motives of People (OMT Test)

**Group Decision**

Now we will go on with the group decision. You are acting as a group. First of all we present a colleague of our company. Your task as group is to choose together a product for this colleague.

- (1) You have 3 minutes for your choice.
- (2) Please show up our hand if you have made your decision.

## Appendix F. Data Collection Presentation Experiment

Please choose a company car for your colleague of corporate strategy






39.790 €

Car 1



39.980 €

Car 2



39.880 €

Car 3



Personal Decision

Management Decision

Group Decision

Sociographic

Psychographic

Phase 1  
Offer of  
Company Cars  
(Scribbles)

Phase 2  
Offer of Office  
Equipment  
(Scribbles)

Phase 3  
Variety of  
Different User  
(Typologies)

Phase 4  
Offer of  
Company Cars  
(Scribbles)

Phase 5  
Offer of Office  
Equipment  
(Scribbles)

Phase 6  
Change to group  
decision  
(Typologies)

Phase 7  
Offer of  
Company Cars  
(Scribbles)

Phase 8  
Offer of Office  
Equipment  
(Scribbles)

Phase 9  
Questions to  
Hierarchy  
(Questionnaire)

Phase 10  
Implics Motives  
of People  
(OMT Test)

**Group Decision**

Now we will go on with the group decision. You are acting as a group. First of all we present a colleague of our company. Your task as group is to choose together a product for this colleague.

- (1) You have 3 minutes for your choice.
- (2) Please show up our hand if you have made your decision.

## Appendix F. Data Collection Presentation Experiment

Please choose a office equipment for your colleague of corporate strategy






19.880 €

Office 1



19.890 €

Office 2



19.790 €

Office 3



Personal Decision

Management Decision

Group Decision

Sociographic

Psychographic

Phase 1  
Offer of  
Company Cars  
(Scribbles)

Phase 2  
Offer of Office  
Equipment  
(Scribbles)

Phase 3  
Variety of  
Different User  
(Typologies)

Phase 4  
Offer of  
Company Cars  
(Scribbles)

Phase 5  
Offer of Office  
Equipment  
(Scribbles)

Phase 6  
Change to group  
decision  
(Typologies)

Phase 7  
Offer of  
Company Cars  
(Scribbles)

Phase 8  
Offer of Office  
Equipment  
(Scribbles)

Phase 9  
Questions to  
Hierarchy  
(Questionnaire)

Phase 10  
Implics Modes  
of People  
(OMT Test)

**Group Decision**

We will now go on with the group decision. You are acting as a group. First of all we present a colleague of our company. Your task as group is to choose together a product for this colleague.

Event Marketing




**Pablo Marcos**

Job: Events, Social Media

Hobbies: Mountain biking, Snowboarding



Personal Decision		Management Decision			Group Decision		Sociographic	Psychographic	
Phase 1 Offer of Company Cars (Scribbles)	Phase 2 Offer of Office Equipment (Scribbles)	Phase 3 Variety of Different User (Typologies)	Phase 4 Offer of Company Cars (Scribbles)	Phase 5 Offer of Office Equipment (Scribbles)	Phase 6 Change to group decision (Typologies)	<b>Phase 7 Offer of Company Cars (Scribbles)</b>	Phase 8 Offer of Office Equipment (Scribbles)	Phase 9 Questions to Hierarchy (Questionnaire)	Phase 10 Implics Motives of People (OMT Test)

**Group Decision**

Now we will go on with the group decision. You are acting as a group. First of all we present a colleague of our company. Your task as group is to choose together a product for this colleague.

- (1) You have 3 minutes for your choice.
- (2) Please show up our hand if you have made your decision.

Please choose a company car for your colleague of event marketing






39.790 €

Car 1



39.980 €

Car 2



39.880 €

Car 3



Personal Decision

Management Decision

Group Decision

Sociographic

Psychographic

Phase 1  
Offer of  
Company Cars  
(Scribbles)

Phase 2  
Offer of Office  
Equipment  
(Scribbles)

Phase 3  
Variety of  
Different User  
(Typologies)

Phase 4  
Offer of  
Company Cars  
(Scribbles)

Phase 5  
Offer of Office  
Equipment  
(Scribbles)

Phase 6  
Change to group  
decision  
(Typologies)

Phase 7  
Offer of  
Company Cars  
(Scribbles)

Phase 8  
Offer of Office  
Equipment  
(Scribbles)

Phase 9  
Questions to  
Hierarchy  
(Questionnaire)

Phase 10  
Implics Motives  
of People  
(OMT Test)

**Group Decision**

Now we will go on with the group decision. You are acting as a group. First of all we present a colleague of our company. Your task as group is to choose together a product for this colleague.

- (1) You have 3 minutes for your choice.
- (2) Please show up our hand if you have made your decision.

## Appendix F. Data Collection Presentation Experiment

Please choose a office equipment for your colleague of event marketing






19.880 €

Office 1



19.890 €

Office 2



19.790 €

Office 3



Personal Decision

Management Decision

Group Decision

Sociographic

Psychographic



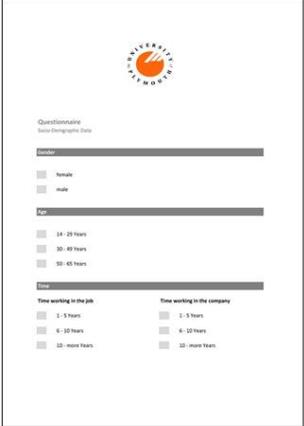
Phase 1 Offer of Company Cars (Scribbles)	Phase 2 Offer of Office Equipment (Scribbles)	Phase 3 Variety of Different User (Typologies)	Phase 4 Offer of Company Cars (Scribbles)	Phase 5 Offer of Office Equipment (Scribbles)	Phase 6 Change to group decision (Typologies)	Phase 7 Offer of Company Cars (Scribbles)	Phase 8 Offer of Office Equipment (Scribbles)	Phase 9 Questions to Hierarchy (Questionnaire)	Phase 10 Implics Motives of People (OMT Test)
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**Sociographic Survey**

We will start now with the sociographic survey. There is no time limit, if you are finish please be quite till all test persons has finished their survey.

## Appendix F. Data Collection Presentation Experiment

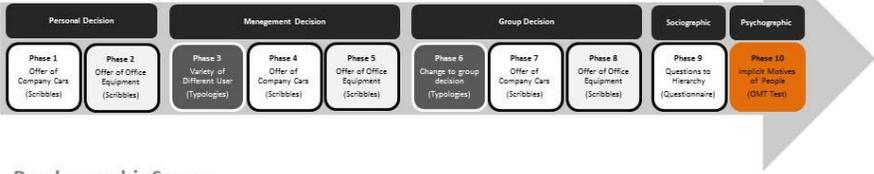




**Sociographic Survey**

We will start now with the sociographic survey. There is no time limit, if you are finish please be quite till all test persons has finished their survey.





**Psychographic Survey**

We will start now with the psychographic survey. There is no time limit. As the time people need to fill up the test is very different please be quite till all test persons has finished their survey. If you want you can leave the room.

# Appendix F. Data Collection Presentation Experiment



**OMT**

Questionnaire # _____	Date: _____
Age: _____ years	Sex: [ M ] [ F ]

On the pages that follow you will see a number of pictures. Each of these illustrates an energetic situation.

We would like to ask you to look thoroughly at each picture and to think about a short story or little scene that describes the situation depicted in the picture. The story's content is limited only to you and does not set an context or scenario either. Just give free reign to your imagination. It does not matter whether your story is accurate or not.

Please mark one of the people in the picture with an "X" and answer the questions with reference to that person. You need not make them your story; but simply answer the questions posed to each picture.

**Please mark the figure that you regard as the central person with an "X"**



Please start with picture 1 and then work through pictures 2-12 in sequential order.

**Psychographic Survey**

Please note your number from the OMT now on your group decision form.



PhD Experiment

**THANK YOU VERY MUCH!**

Figure 131: Data Collection Presentation Experiment

## Appendix G. Data Collection Modified Questionnaires



**Questionnaire**  
Fragebogen

Products for own usage  
Produktauswahl Eigenbedarf

**Car**

Car 1 - Fahrzeug 1

Car 2 - Fahrzeug 2

Car 3 - Fahrzeug 3

**Office**

Office 1 - Büro 1

Office 2 - Büro 2

Office 3 - Büro 3



**Questionnaire**  
Fragebogen

**Products Controller**  
Produktauswahl Rechnungswesen

**Car**

- Car 1** - Fahrzeug 1
- Car 2** - Fahrzeug 2
- Car 3** - Fahrzeug 3

**Office**

- Office 1** - Büro 1
- Office 2** - Büro 2
- Office 3** - Büro 3



**Questionnaire**  
Fragebogen

**Products Corporate Strategy**  
Produktauswahl Unternehmensstrategie

**Car**

- Car 1** - Fahrzeug 1
- Car 2** - Fahrzeug 2
- Car 3** - Fahrzeug 3

**Office**

- Office 1** - Büro 1
- Office 2** - Büro 2
- Office 3** - Büro 3



**Questionnaire**  
Fragebogen

Products Event Marketing  
Produktauswahl Eventmarketing

**Car**

**Car 1 - Fahrzeug 1**

**Car 2 - Fahrzeug 2**

**Car 3 - Fahrzeug 3**

**Office**

**Office 1 - Büro 1**

**Office 2 - Büro 2**

**Office 3 - Büro 3**

Figure 132: Data Collection Questionnaire Products



**Questionnaire Group**  
Fragebogen Gruppe

**Products Controller**  
Produktauswahl Rechnungswesen

Please note your OMT Questionnair numbers here:  
Bitte notieren Sie die Nummern des OMT Tests hier:

**Car**

**Car 1 - Fahrzeug 1**

**Car 2 - Fahrzeug 2**

**Car 3 - Fahrzeug 3**

**Office**

**Office 1 - Büro 1**

**Office 2 - Büro 2**

**Office 3 - Büro 3**



**Questionnaire Group**  
Fragebogen Gruppe

**Products Corporate Strategy**  
Produktauswahl Unternehmensstrategie

**Car**

**Car 1 - Fahrzeug 1**

**Car 2 - Fahrzeug 2**

**Car 3 - Fahrzeug 3**

**Office**

**Office 1 - Büro 1**

**Office 2 - Büro 2**

**Office 3 - Büro 3**



**Questionnaire Group**  
Fragebogen Gruppe

**Products Event Marketing**  
Produktauswahl Eventmarketing

**Car**

**Car 1 - Fahrzeug 1**

**Car 2 - Fahrzeug 2**

**Car 3 - Fahrzeug 3**

**Office**

**Office 1 - Büro 1**

**Office 2 - Büro 2**

**Office 3 - Büro 3**

Figure 133: Data Collection Questionnaire Products Group



Questionnaire - Fragebogen  
Sociographic Data - Soziographie

Gender - Geschlecht

- female - weiblich  
 male - männlich

Age - Alter

Based on ARD/AGF/GfK Media Research

- 14 - 29 Years - 14 - 29 Jahre  
 30 - 49 Years - 30 - 49 Jahre  
 50 - 65 Years - 50 - 65 Jahre

Time - Zeit

Time working in the job

- 1 - 5 Years - 1 - 5 Jahre  
 6 - 10 Years - 6 - 10 Jahre  
 10 - more Years - 10 - more Jahre

Time working in the company

- 1 - 5 Years - 1 - 5 Jahre  
 6 - 10 Years - 6 - 10 Jahre  
 10 - more Years - 10 - more Jahre



**Educational Achievement - Bildungs- und Berufsabschluss**

- No Education** - kein Abschluss
- Secondary School** - Hauptschule
- Secondary Modern School** - Realschule
- High School** - Abitur
- Professional Education** - Berufsausbildung
- Academy** - Berufsakademie
- University** - Hochschule/Universität
- PhD** - Promotion
- Professor** - Professor

**Please mark your highest education**  
Bitte kennzeichnen Sie Ihren höchsten Bildungsabschluss



**Factors of Procurement - Faktoren der Kaufentscheidung** Based on forum market research

<b>Reliability - Vertrauen</b> important - wichtig	<input type="checkbox"/>	unimportant - unwichtig					
<b>Consulting - Beratung</b> important - wichtig	<input type="checkbox"/>	unimportant - unwichtig					
<b>Quality - Qualität</b> important - wichtig	<input type="checkbox"/>	unimportant - unwichtig					
<b>Innovation - Innovation</b> important - wichtig	<input type="checkbox"/>	unimportant - unwichtig					
<b>Reputation - Reputation</b> important - wichtig	<input type="checkbox"/>	unimportant - unwichtig					
<b>Price - Preis</b> important - wichtig	<input type="checkbox"/>	unimportant - unwichtig					
<b>Conditions - Konditionen</b> important - wichtig	<input type="checkbox"/>	unimportant - unwichtig					
<b>Image - Image</b> important - wichtig	<input type="checkbox"/>	unimportant - unwichtig					
<b>Safety - Sicherheit</b> important - wichtig	<input type="checkbox"/>	unimportant - unwichtig					
<b>Prestige - Prestige</b> important - wichtig	<input type="checkbox"/>	unimportant - unwichtig					
<b>Fun - Spaß</b> important - wichtig	<input type="checkbox"/>	unimportant - unwichtig					



**Questionnaire - Fragebogen**

Company-Related Data - Unternehmensbezogene Daten

**Level of Hierarchy - Funktion im Unternehmen**

- Employee - Mitarbeiter**
- Management (Department Manager) - Führungskraft (Abteilungsleiter)**
- Top Management (CEO) - Geschäftsführung**

**Level of Decision Making - Entscheidungsbefugnis**

- Strategic Decisions - Strategische Entscheidungen**
- Operational Decisions - Operative Entscheidungen**
- Human Resources Decisions - Personalentscheidungen**
- Procurement of Investment Goods - Einkauf von Investitionsgütern**
- Procurement of Expendable Goods - Einkauf von Verbrauchsgütern**

**Multiple answers possible!**  
Mehrfachnennungen sind möglich!



**Questionnaire - Fragebogen**  
Company-Related Data - Unternehmensbezogene Daten

**Size of the Company** Based on European Commission

< 10 Employees

< 50 Employees

< 250 Employees

> 250 Employees

**Sector** Based on Eurostat compressed list of NACE codes

**Mining - Bergbau**

**Manufacturing - Herstellung**

**Energy and water supply - Energie- und Wasserversorgung**

**Construction - Bau**

**Wholesale and retail trade - Handel**

**Accommodation and food service - Beherbergung und Gaststätten**

**Transporting, storage and information - Verkehr, Logistik und Nachrichtenübermittlung**

**Support services - Dienstleistung**

Figure 134: Data Collection Questionnaire Socio Demographic and Company Data

## Appendix H. Data Collection Modified Version of OMT Test

### OMT

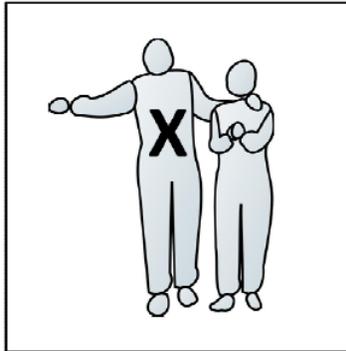
Questionnaire #: \_\_\_\_\_ Date: \_\_\_\_\_  
Age: \_\_\_\_\_ years, Sex: [ ]f [ ]m

On the pages that follow you will see a number of pictures. Each of them illustrates an everyday situation.

We would like to ask you to look thoroughly at each picture and to think about a short **story** or little **scene** that describes the situation depicted in the picture. The story's content is totally up to you and there are no correct or incorrect stories. Just give free rein to your **imagination**, it does not matter whether your story is inventive or not.

Please **mark** one of the people in the picture with an „x“ and answer the questions **with reference to that person**. You need not write down your story, but simply answer the questions next to each picture.

Please mark the figure that you regard as the central person with an "X"

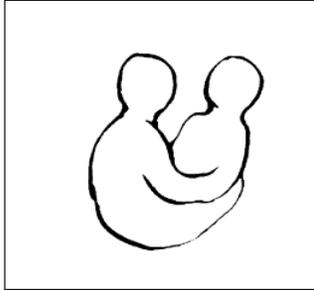


*Please start with picture 1 and then work through pictures 2-15 in sequential order.*

Appendix H. Data Collection Modified Version of OMT Test

Please mark the figure that you regard as the central person with an "X"

1)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

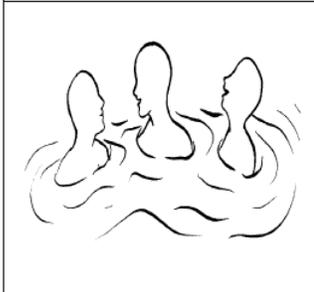
Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

2)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

3)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

Why does the person feel this way?

\_\_\_\_\_

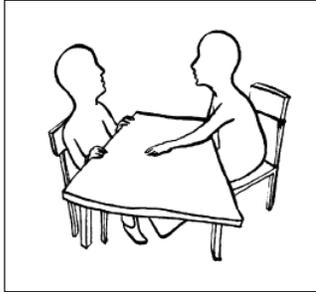
What is the outcome of the story?

\_\_\_\_\_

Appendix H. Data Collection Modified Version of OMT Test

Please mark the figure that you regard as the central person with an "X"

4)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

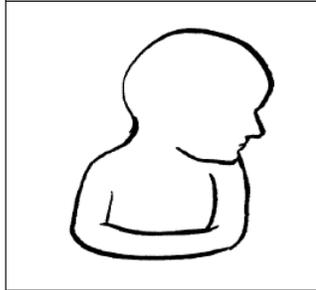
Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

5)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

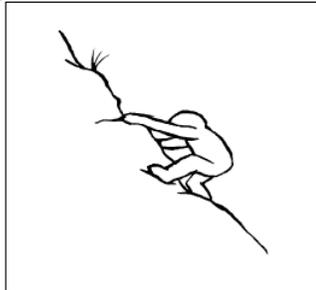
Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

6)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

Why does the person feel this way?

\_\_\_\_\_

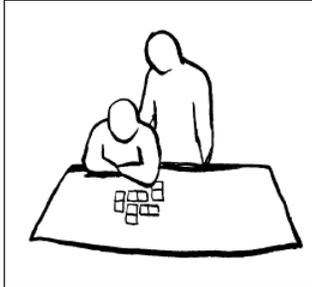
What is the outcome of the story?

\_\_\_\_\_

Appendix H. Data Collection Modified Version of OMT Test

Please mark the figure that you regard as the central person with an "X"

7)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

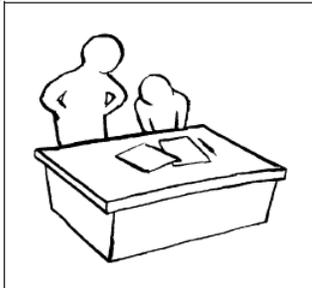
Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

8)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

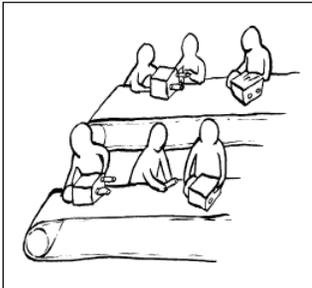
Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

9)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

Why does the person feel this way?

\_\_\_\_\_

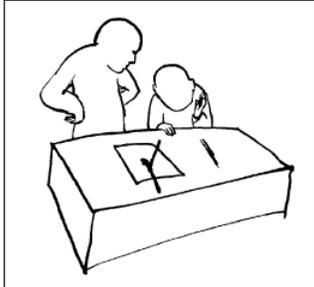
What is the outcome of the story?

\_\_\_\_\_

Appendix H. Data Collection Modified Version of OMT Test

Please mark the figure that you regard as the central person with an "X"

10)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

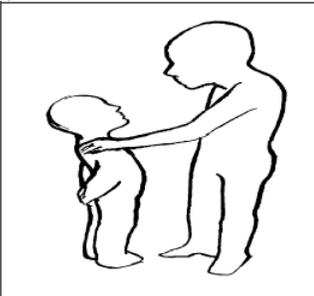
Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

11)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

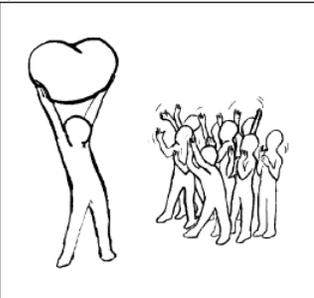
Why does the person feel this way?

\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

12)



What is important for the person in this situation and what is he/she doing?

\_\_\_\_\_

What are the person's feelings?

\_\_\_\_\_

Why does the person feel this way?

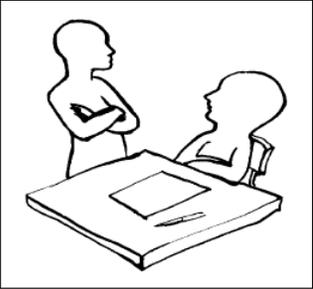
\_\_\_\_\_

What is the outcome of the story?

\_\_\_\_\_

Appendix H. Data Collection Modified Version of OMT Test

Please mark the figure that you regard as the central person with an "X"

13)  What is important for the person in this situation and what is he/she doing?  
\_\_\_\_\_  
\_\_\_\_\_  
What are the person's feelings?  
\_\_\_\_\_  
\_\_\_\_\_  
Why does the person feel this way?  
\_\_\_\_\_  
\_\_\_\_\_  
What is the outcome of the story?  
\_\_\_\_\_  
\_\_\_\_\_

14)  What is important for the person in this situation and what is he/she doing?  
\_\_\_\_\_  
\_\_\_\_\_  
What are the person's feelings?  
\_\_\_\_\_  
\_\_\_\_\_  
Why does the person feel this way?  
\_\_\_\_\_  
\_\_\_\_\_  
What is the outcome of the story?  
\_\_\_\_\_  
\_\_\_\_\_

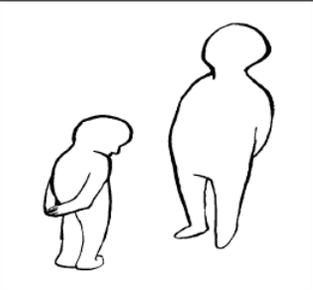
15)  What is important for the person in this situation and what is he/she doing?  
\_\_\_\_\_  
\_\_\_\_\_  
What are the person's feelings?  
\_\_\_\_\_  
\_\_\_\_\_  
Why does the person feel this way?  
\_\_\_\_\_  
\_\_\_\_\_  
What is the outcome of the story?  
\_\_\_\_\_  
\_\_\_\_\_

Figure 135: Data Collection Operant Multi-Motive-Test (OMT)

# Appendix I. Data Collection Experiments Companies

## Overview Quota Sampling Approach

### PhD Data Collection



Sector Branche	Mining Bergbau	Manufacturing Herstellung	Energy and water supply Energie- und Wasserversorgung
Quota / Average proportion Quote / Durchschnittlicher Anteil	0,7%	25,9%	1,2%
Employees based on quota Mitarbeiter basierend auf Quote	1	39	2
Companies based on quota & groups Firmen basierend auf Quote und Gruppen	0	8	0
100% executed - durchgeführt	1 2 3 4 5	1 PORSCHE 2 Audi - Interview no experience 3 BMW 4 MINI - Interview no experience 5 Webasto 6 Spangler Automation - Interview experience 7 Exact - Interview experience 8 isaria Colours 9 DSRAM	1 2 3 4 5 6 7 8 9
75%	6 7 8 9	10 Pinsker 11 Bang & Olufsen 12 Bosch 13 Rexroth 14 Linde 15 Geberit 16 Océ	10 11 12 13 14 15 16
50%	10 11 12 13 14 15 16	17 Rhode & Schwarz 18 smart 19 Hofbräu München 20 Hoenle AG 21 GKN Aerospace	17 18 19 20 21
25%	17 18 19 20		
Minimum size of sample Size of groupe decision	150 5	↔ asked - angefragt → confirmed - zugesagt	✔ executed - durchgeführt ✘ rejected - zurückgewiesen

Overview Quota Sampling Approach



Sector	Construction	Wholesale and retail trade	Accommodation and food service
Branche	Bau	Handel	Beherbergung und Gaststätten
Quota / Average proportion Quote / Durchschnittlicher Anteil	11,2%	25,7%	8,0%
Employees based on quota Mitarbeiter basierend auf Quote	17	39	12
Companies based on quota & groups Firmen basierend auf Quote und Gruppen	3	8	2
	1 Hueber Pleinfeld ↗ 2 Porr AG ↗ 3 Zublin ↗ 4 Walter Bau 5 MEA 6 Kaindl 7 Bachner 8 Hörmann 9 m3 Bauprojektmanagement 10 Dehn + Söhne 11 RÖDER ZVS 12 Schmid 13 14 15 16 17 18 19 20	1 BMW Automag ↗ 2 PORSCHE Munich - Interview no experience ↗ 3 Automaten Seitz ↗ 4 Wormland ↗ 5 atlas ↗ 6 Beissbarth ↗ 7 8 9 10 Vivesco 11 MBA 12 IP Deutschland 13 Orbis Partner 14 Sport Scheck 15 Gienger 16 Bromberger 17 decop 18 19 20	1 Intercontinental Hotels ↗ 2 Hotel Gloecklhofer ↗ 3 The Charles 4 Accor 5 Starwood 6 Kempinski 7 Dolder 8 9 10 11 12 13 14 15 16 17 18 19 20

↗ confirmed - zugesagt  
↗ executed - durchgeführt  
↔ asked - angefragt  
↔ rejected - zurückgewiesen  
no permission



**Chronological List of Companies for Experiments and Surveys**

Company	Date	Time
<b>Exact</b> Aschheim	15. October 2012	10:15 – 11:40
<b>Hueber</b> Pleinfeld	4. December 2012	10:30 – 12:00
<b>BMW Automag</b> Munich	5. December 2012	10:00 - 12:00
<b>Automaten Seitz</b> Munich	6. December 2012	14:30 - 16:00
<b>PORSCHE Centre Olympiapark</b> Munich	15. January 2013	15:00 - 16:30
<b>TÜV</b> Munich	16. January 2013	15:00 - 16:30
<b>SIEMENS</b> Prague	18. January 2013	9:30 - 11:00

## Appendix I. Data Collection Experiments Companies

<b>Atos</b> Frankfurt	31. January 2013	10:00 - 11:30
<b>Lufthansa</b> Frankfurt	31. January 2013	14:00 - 16:30
<b>DQS</b> Frankfurt	1. February 2013	10:30 - 12:00
<b>Hotel Gloecklhofer</b> Burghausen	11. February 2013	11:30 - 12:30
<b>MINI</b> Munich	20. February 2013	17:30 - 18:30
<b>Webasto</b> Stockdorf	21. February 2013	14:00 - 16:00
<b>PORSCHE AG</b> Ludwigsburg	26. February 2013	15:00 - 16:00
<b>Capgemini</b> Stuttgart	26. February 2013	19:00 - 20:30

## Appendix I. Data Collection Experiments Companies

<b>SPANGLER Automation</b> Toeging	27. February 2013	9:30 - 11:00
<b>Theo Wormland</b> Munich	28. February 2013	9:00 - 10:00
<b>O2 Telefonica</b> Munich	1. March 2013	10:00 - 14:30
<b>Radio NRJ</b> Munich	4. March 2013	12:00 - 13:00
<b>KEK IT</b> Munich	5. March 2013	11:00 - 13:00
<b>OSRAM</b> Munich	6. March 2013	9:30 - 11:00
<b>isaria AG</b> Oberpfraammern	7. March 2013	10:00 - 12:00
<b>Vereinigte Weinkellereien</b> Rosenheim	11. March 2013	13:00 - 14:30

## Appendix I. Data Collection Experiments Companies

<b>Intercontinental Hotels</b> Salzburg	11. March 2013	16:30 - 17:30
<b>BMW AG</b> Munich	12. March 2013	14:00 - 15:00
<b>Züblin</b> Neu-Ulm	18. March 2013	15:30 - 17:00
<b>Audi AG</b> Ingolstadt	19. March 2013	13:00 - 14:30
<b>PORR</b> Munich	20. March 2013	11:00 - 12:30
<b>Wholesaler without permission</b> Munich	20. March 2013	14:00 - 15:30
<b>atlas</b> Munich	20. March 2013	16:30 - 17:30
<b>Beissbarth</b> Munich	21. March 2013	11:00 - 13:00

## Appendix I. Data Collection Experiments Companies

<b>isaria Corporate Design</b>	21. March 2013	16:00 - 17:30
Oberpframmern		
<b>Hanns Seidel Foundation</b>	25. March 2013	14:00 - 16:00
Munich		

Table 21: Chronological List of Companies for Experiments and Surveys

## Appendix J Presentation for Expert interviews



PhD Data Analysis

### **THE IMPACT OF IMPLICIT MOTIVES ON THE BUSINESS TO BUSINESS DECISION MAKING PROCESS**

University of Plymouth Business School

Christian Chlupsa

**B2B Decision Making**  
Business to Business Decision Making



# B2B

BUSINESS TO BUSINESS

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2

**B2B Decision Making**  
Basic Assumptions



**Characteristics**  
Demand, Volume, Distribution, Nature of Buy, Negotiations, Promotion

**Rational Decisions**  
Rational principles, homo oeconomicus, problem or solution based, marginal utility

**Fact Based**  
Hard Criteria, Material, Quality, Service, Price

**Group Decisions**  
Buying centre decisions, team decisions, community or collective decisions

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## B2B Decision Making

Basic Assumptions

**Characteristics**  
Demand, Volume, Distribution, Nature of Buy, Negotiations, Promotion

**Rational Decisions**  
Rational principles, homo oeconomicus, problem or solution based, marginal utility

**Fact Based**  
Hard Criteria, Material, Quality, Service, Price

**Group Decisions**  
Buying centre decisions, team decisions, community or collective decisions



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General Characteristics	Consumer Markets B2C	Industrial Markets B2B
Demand	Individual	Organisational
Volume	Small	Large
Customers	Many	Fewer
Location	Dispersed	Concentrated
Distribution	Indirect	Direct
Nature of Buy	Personal	Professional
Influence	Single	Multiple
Negotiations	Simpler	Complex
Reciprocity	No	Yes
Leasing	Less	Great
Promotion	Advertising	Personal Sells



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General Characteristics	Consumer Markets B2C	Industrial Markets B2B
Demand	Individual	Organisational
Volume	Small	Large
Customers	Many	Fewer
Location	Dispersed	Concentrated
Distribution	Indirect	Direct
Nature of Buy	Personal	Professional
Influence	Single	Multiple
Negotiations	Simpler	Complex
Reciprocity	No	Yes
Leasing	Less	Great
Promotion	Advertising	Personal Sells

San Diego State University

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**B2B Decision Making**  
Basic Assumptions

**Characteristics**  
Demand, Volume, Distribution, Nature of Buy, Negotiations, Promotion

**Rational Decisions**  
Rational principles, homo oeconomicus, problem or solution based, marginal utility

**Fact Based**  
Hard Criteria, Material, Quality, Service, Price

**Group Decisions**  
Buying centre decisions, team decisions, community or collective decisions

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**B2B Decision Making**  
Managerial Decision Making



```
graph TD; A[Identification of the purpose of the] --> B[Information gathering]; B --> C[Principles for judging the alternatives]; C --> D[Brainstorming and analyze the different]; D --> E[Evaluation of the alternatives]; E --> F[Select the best alternative]; F --> G[Execute the decision]; G --> H[Evaluate the results];
```

Bazerman(1990), Friedman (1957)

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**B2B Decision Making**  
Basic Assumptions



**Characteristics**  
Demand, Volume, Distribution, Nature of Buy, Negotiations, Promotion

**Rational Decisions**  
Rational principles, homo oeconomicus, problem or solution based, marginal utility

**Fact Based**  
Hard Criteria, Material, Quality, Service, Price

**Group Decisions**  
Buying centre decisions, team decisions, community or collective decisions

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**B2B Decision Making**  
Ishikawa diagram / fishbone diagrams

The diagram is an Ishikawa (fishbone) diagram. A central horizontal arrow points to the right, ending in a circle labeled 'Problem'. Above the arrow, the word 'Cause' is written. Below the arrow, the word 'Effect' is written. Six boxes are arranged around the arrow: 'Equipment', 'Process', and 'People' are above the arrow; 'Materials', 'Environment', and 'Management' are below the arrow. Arrows point from each of these six boxes towards the central arrow. On the left side, two arrows point towards the central arrow: one is labeled 'Secondary cause' and the other is labeled 'Primary cause'. In the top right corner, there is a circular logo for 'The University of Plymouth' with a stylized orange and white design. At the bottom right, there is a small text 'Götz Schmidt (2009)'. At the bottom center, there is a footer 'University of Plymouth | PhD Data Analysis 2013 | Christian Chlupsa'. At the bottom right, there is a page number '10'.

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**B2B Decision Making**  
Basic Assumptions

**Characteristics**  
Demand, Volume, Distribution, Nature of Buy, Negotiations, Promotion

**Rational Decisions**  
Rational principles, homo oeconomicus, problem or solution based, marginal utility

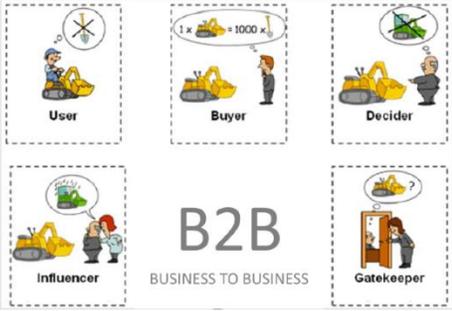
**Fact Based**  
Hard Criteria, Material, Quality, Service, Price

**Group Decisions**  
Buying centre decisions, team decisions, community or collective decisions

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**B2B Decision Making**  
Group Decisions - Buying Center



**B2B**  
BUSINESS TO BUSINESS

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Salesfocus  
12

**B2B Decision Making**  
Question – What you think?



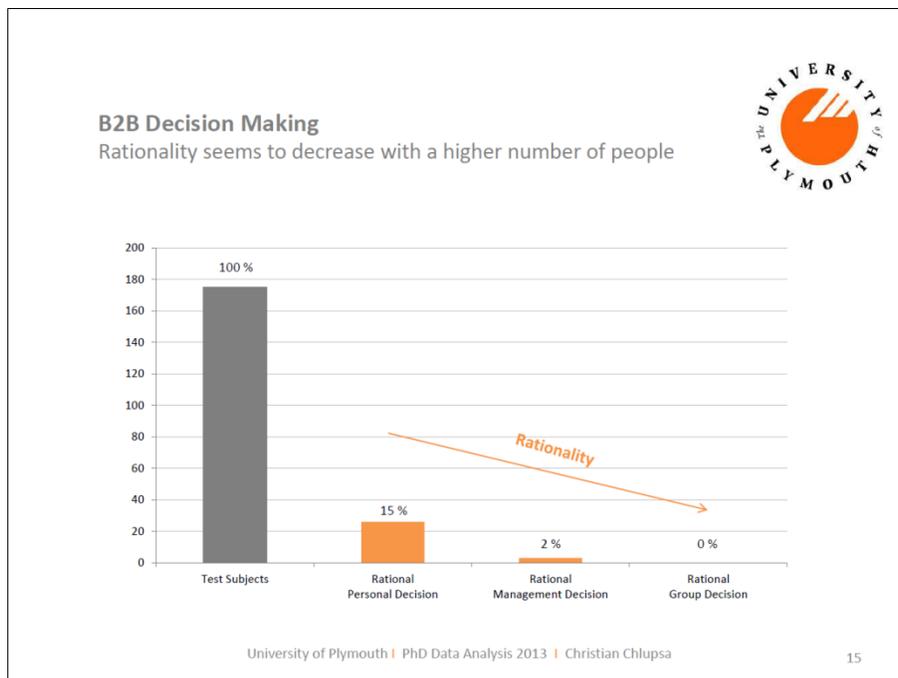
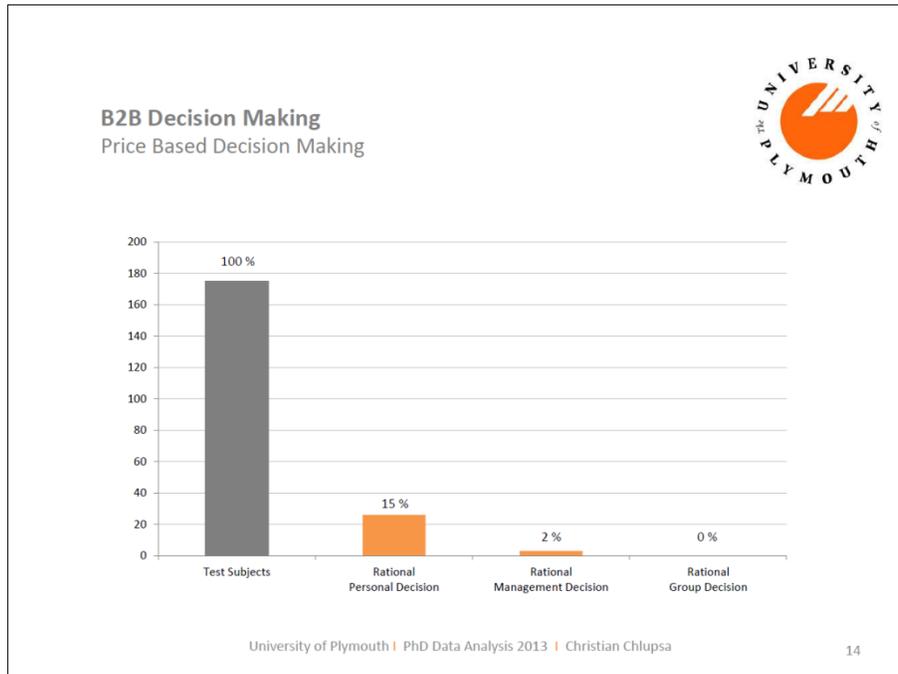
**Personal Business Decision**  
How many people made a rational based personal decision in our field study situation?

**Management Decision**  
How many people made a rational based management decision in our field study situation?

**Group Decision**  
How many people made a rational based group decision in our field study situation?

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**B2B Decision Making**  
Implicit vs. Explicit Decision Making



Rational Emotional

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**B2B Decision Making**  
Implicit vs. Explicit Decision Making

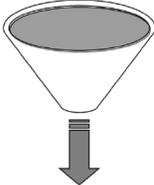
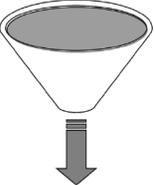
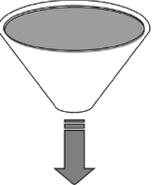
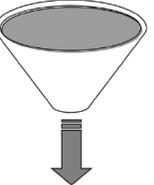


Explicit Decision Implicit Decision

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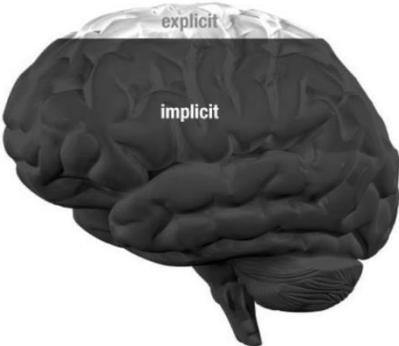
**B2B Decision Making**  
Models and Theories



<p>Models and Theories in Psychology Implicit vs. explicit Cognition Decision-Making and Intuition</p> 	<p>Models and Theories in Sociology Teamwork Gender and group decisions</p> 	<p>Models and Theories in Neurology Human Brain Coding and Information Overload</p> 	<p>Models and Theories in Business and Marketing B2B vs. B2C Buying Centre and Brand Awareness</p> 
<p><b>FOCUS 1</b> Cognition and Decision-Making Psychology</p>	<p><b>FOCUS 2</b> Behaviour and Industrial Sociology</p>	<p><b>FOCUS 3</b> Neuroeconomics and Imaging Neurology</p>	<p><b>FOCUS 4</b> Industrial and Technical Marketing</p>

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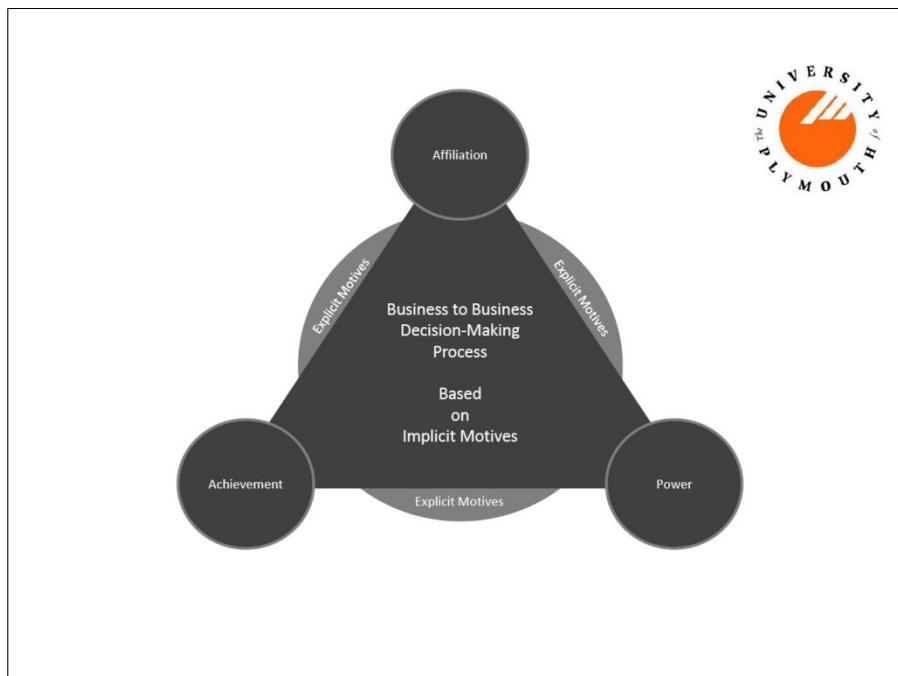
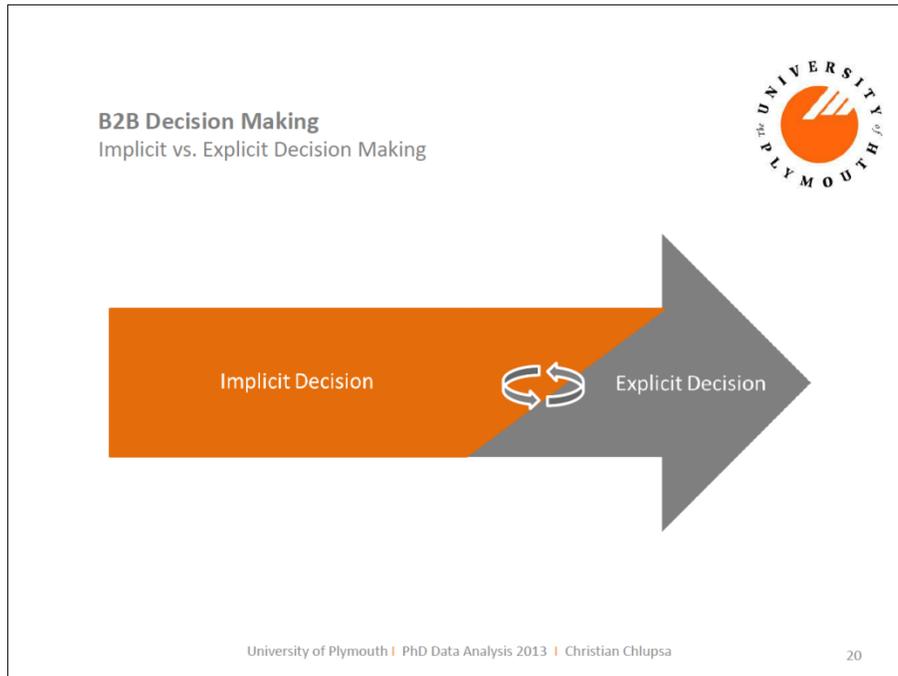
**B2B Decision Making**  
Implicit Motives

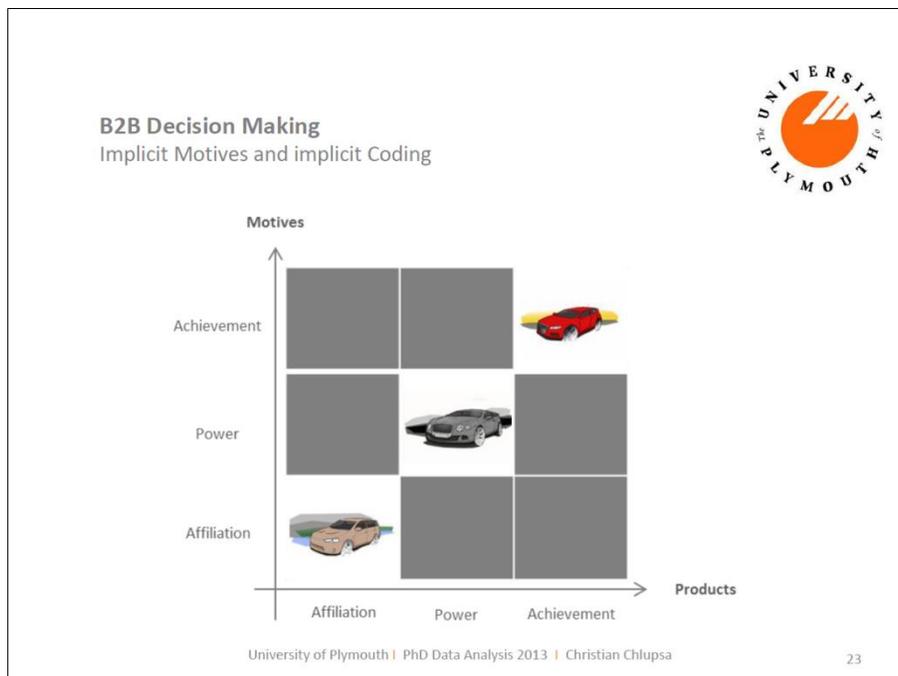
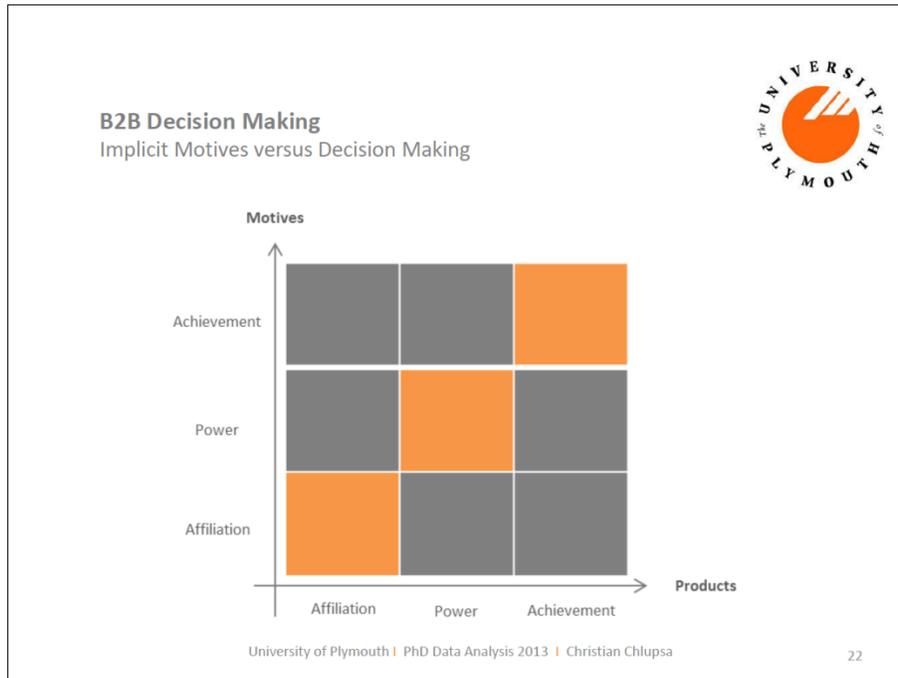


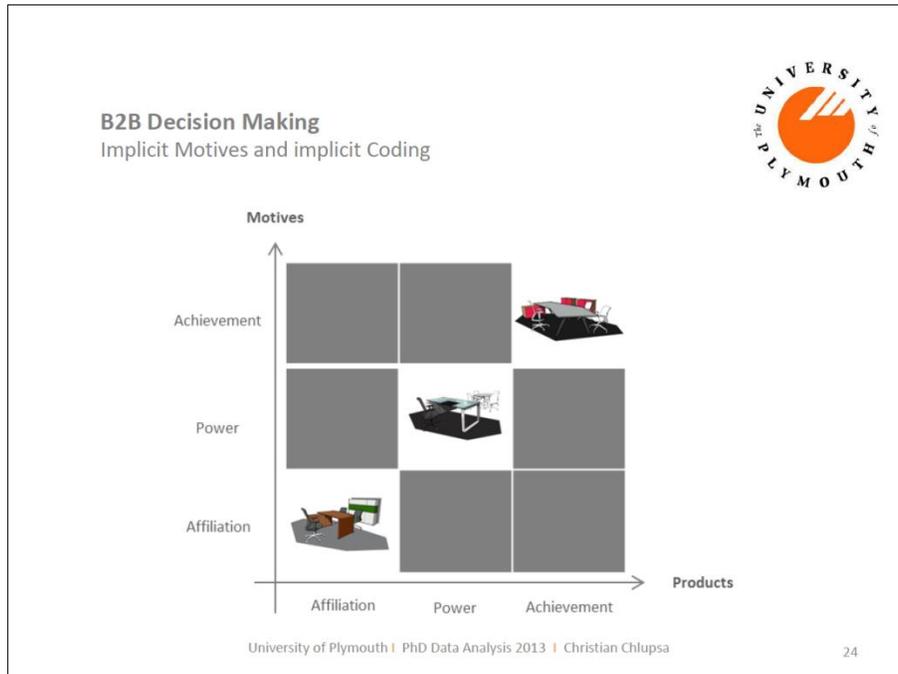
explicit

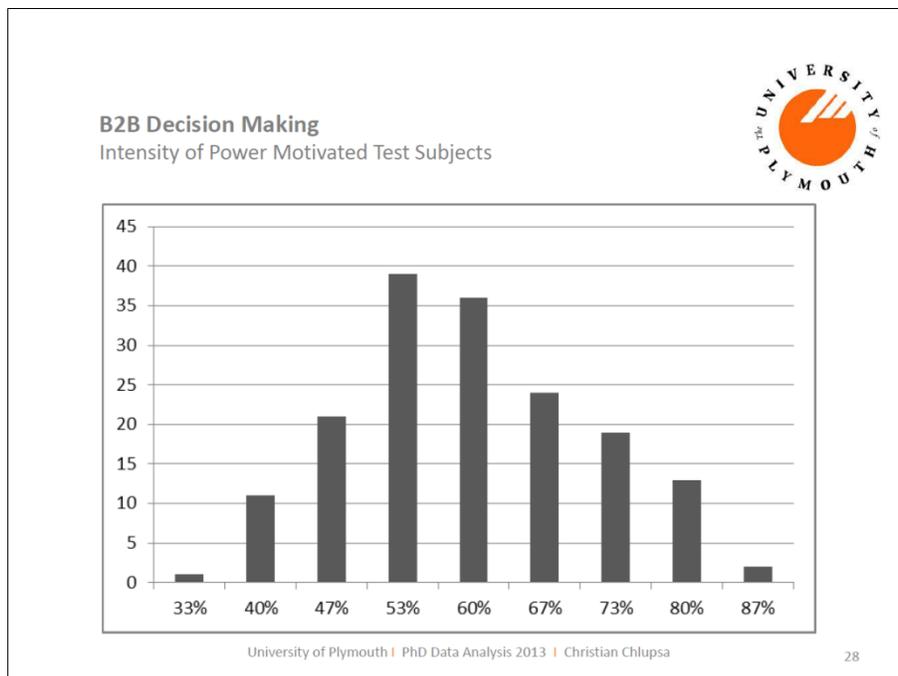
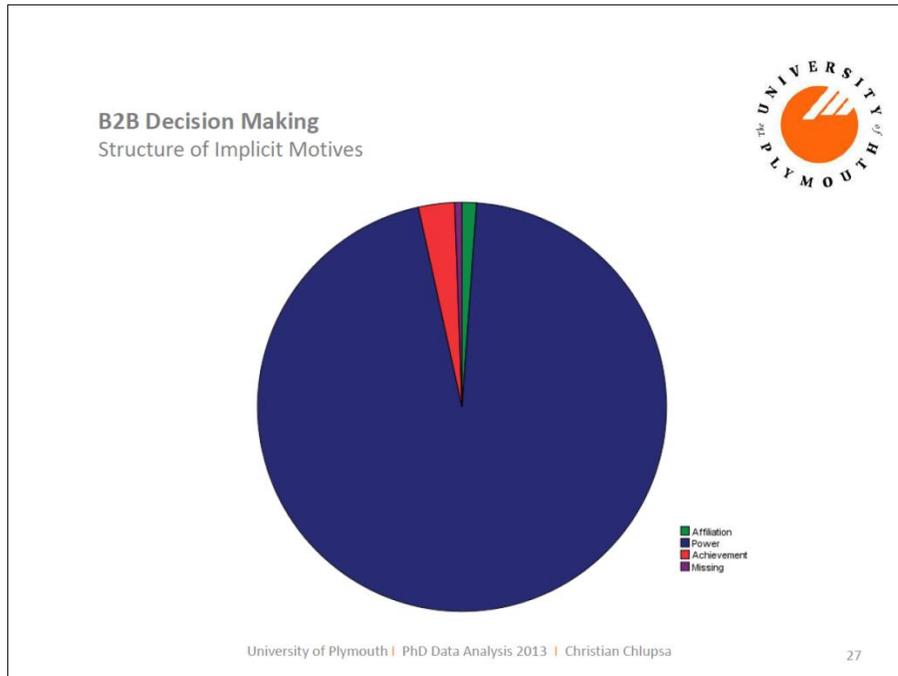
implicit

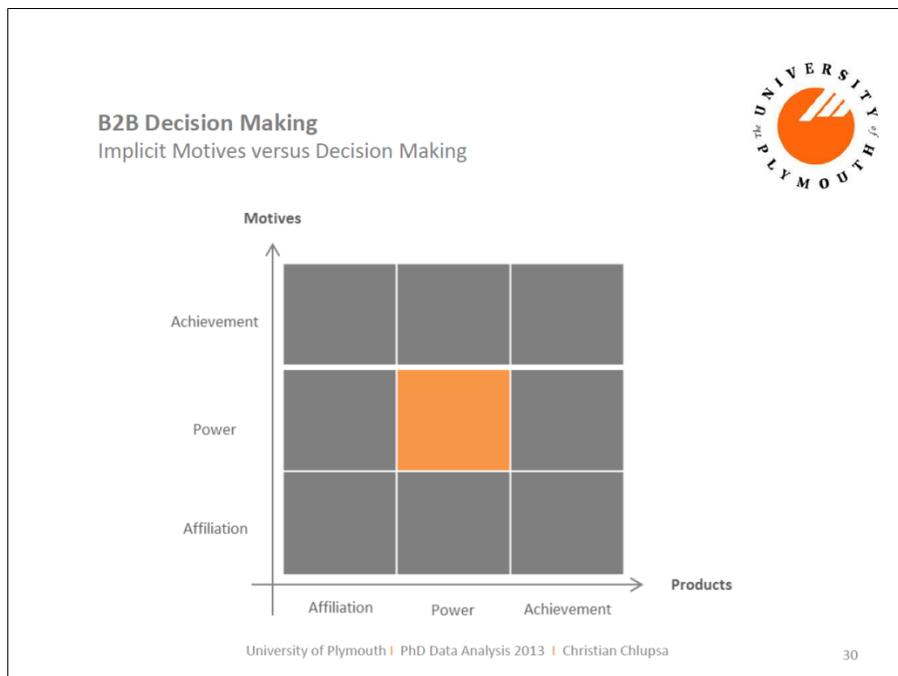
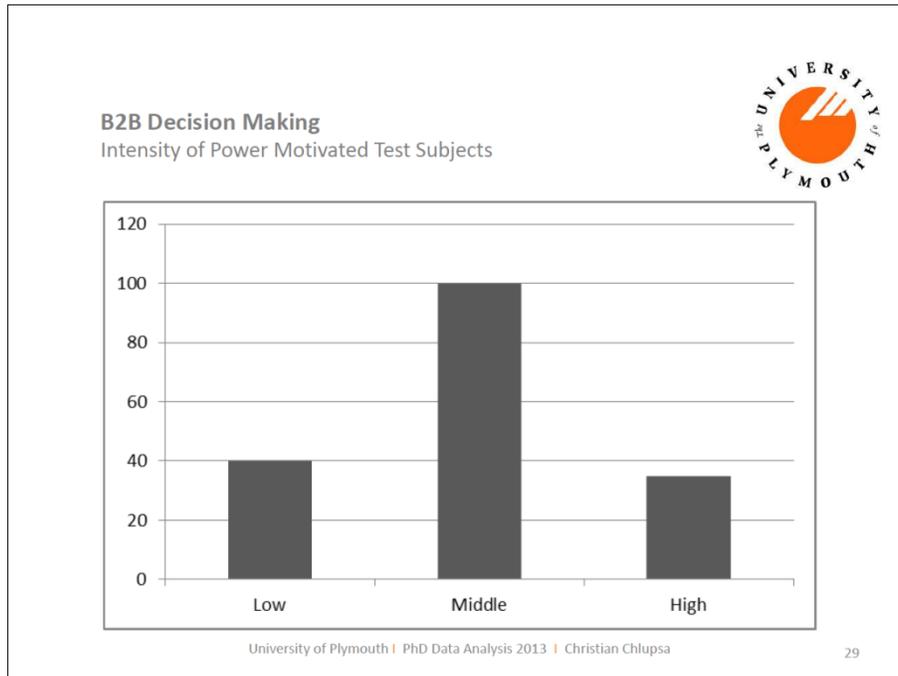
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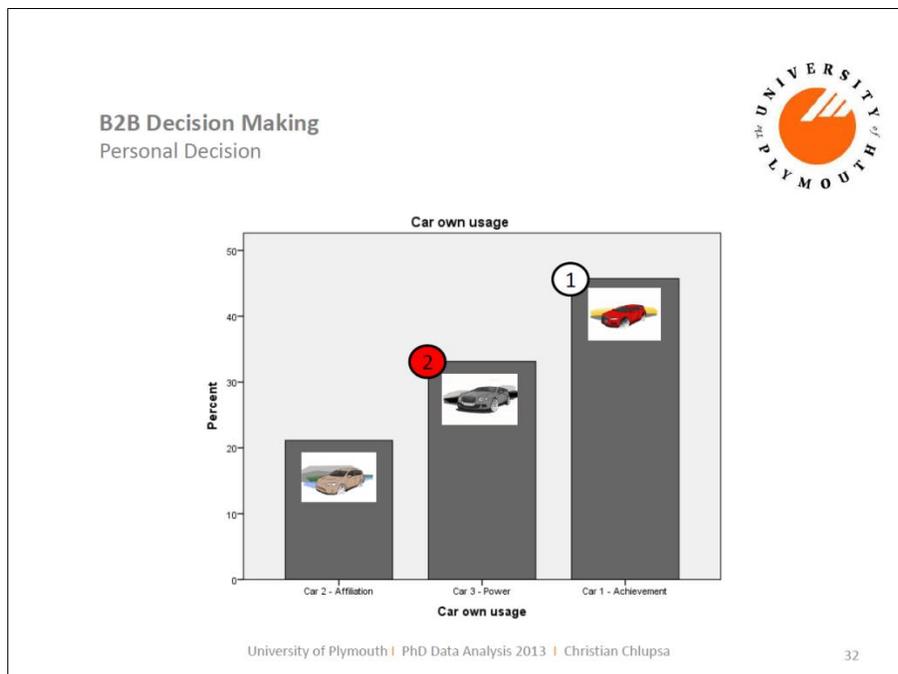
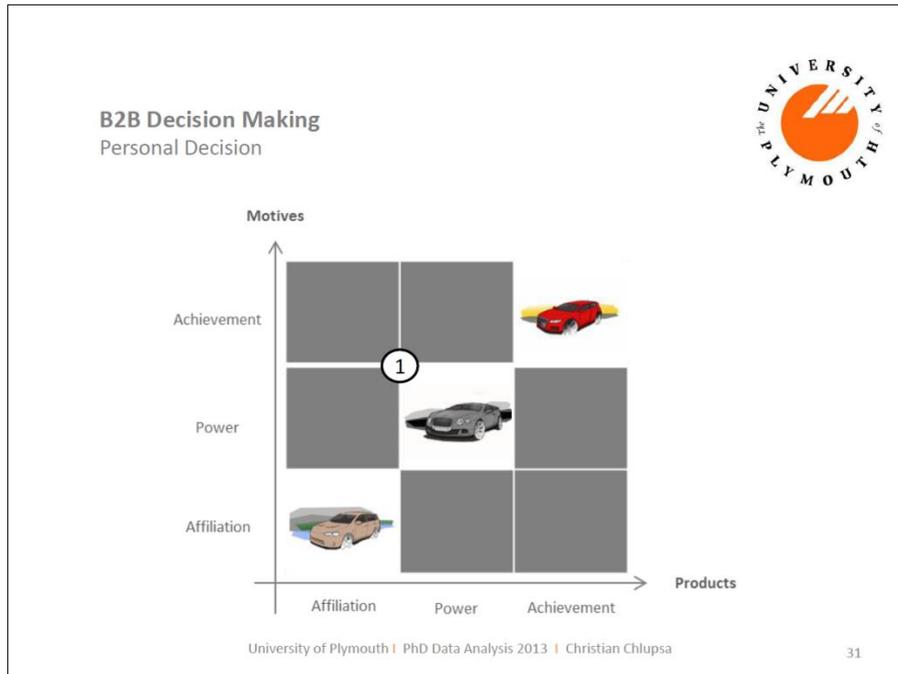


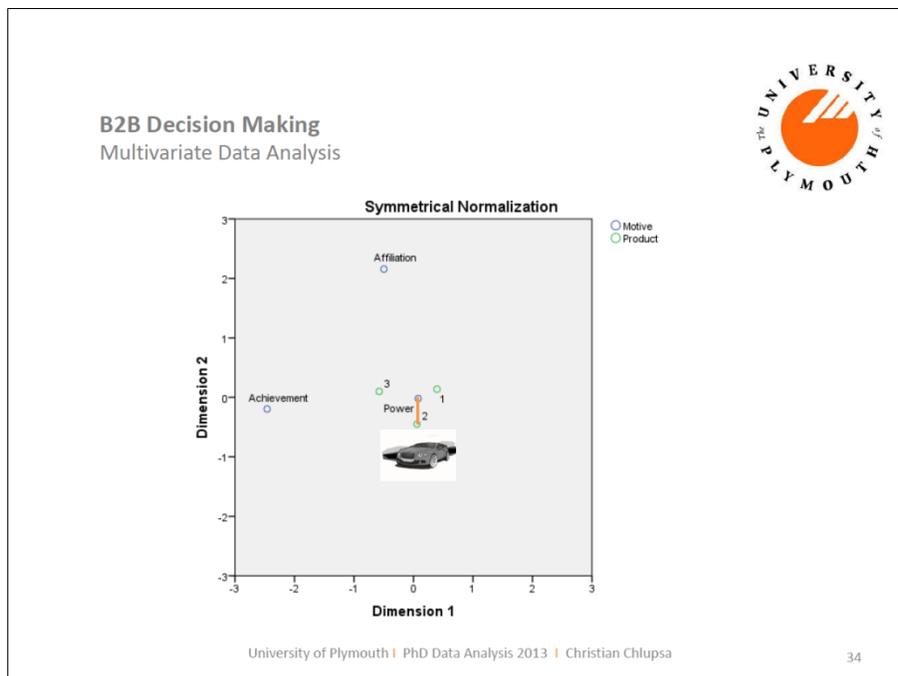
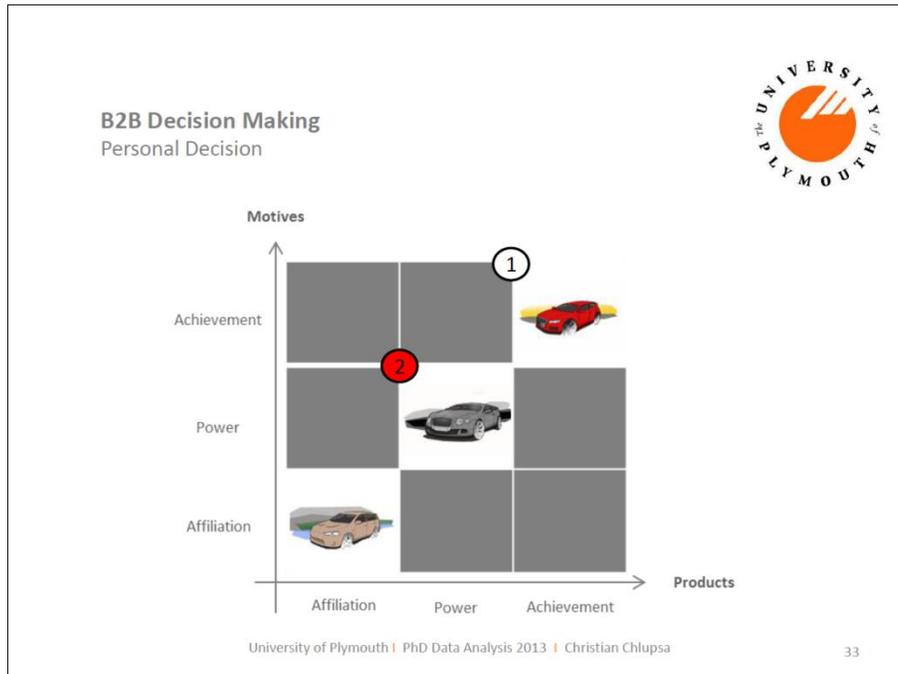


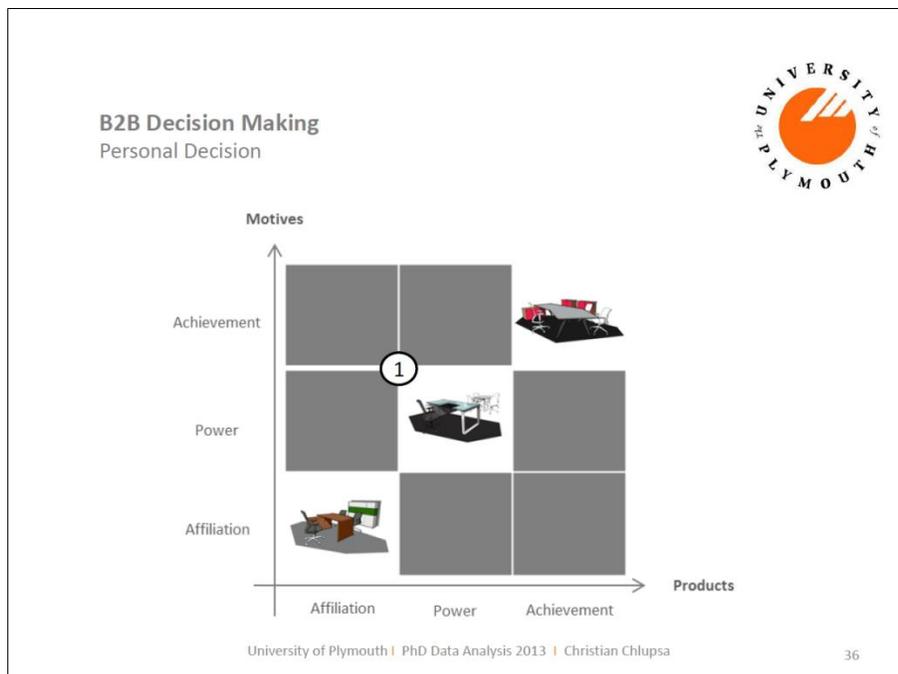
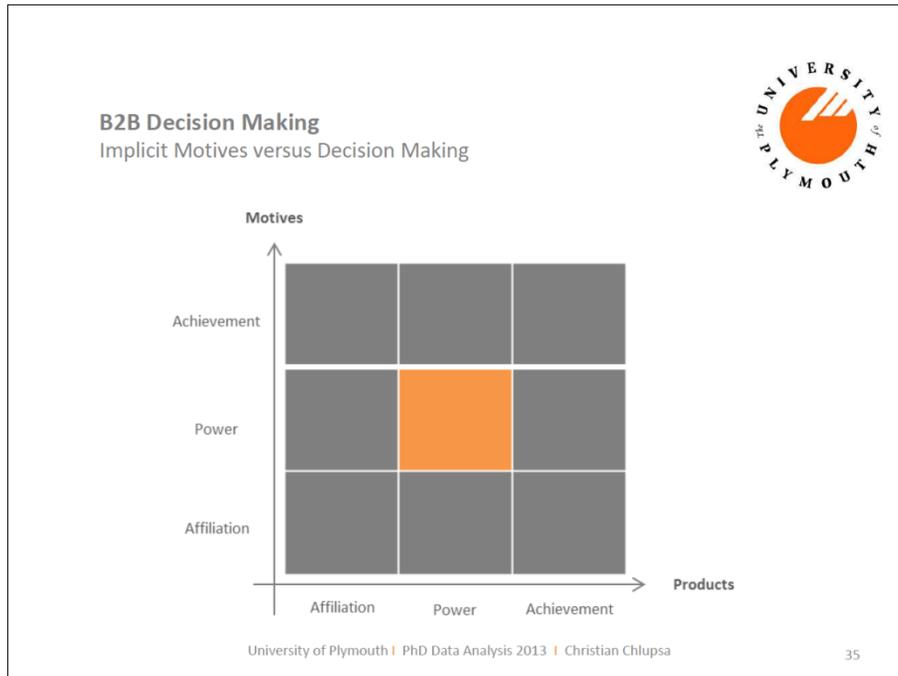


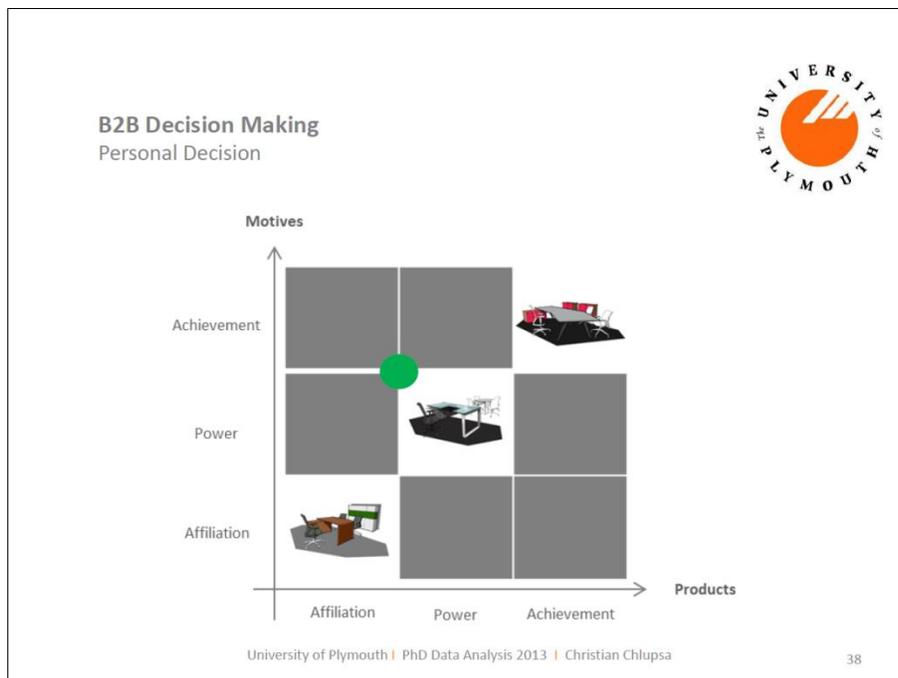
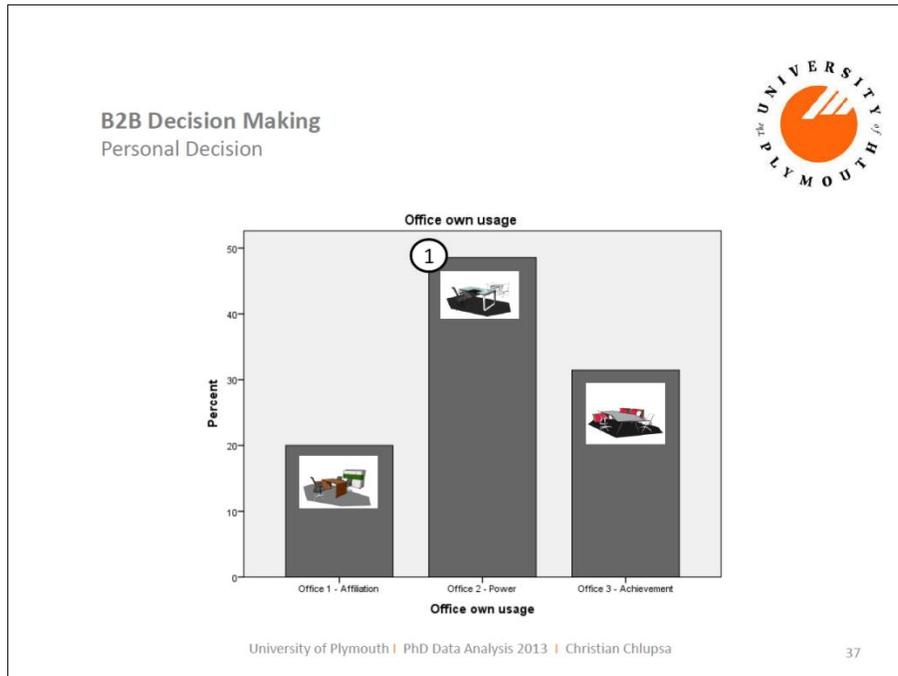


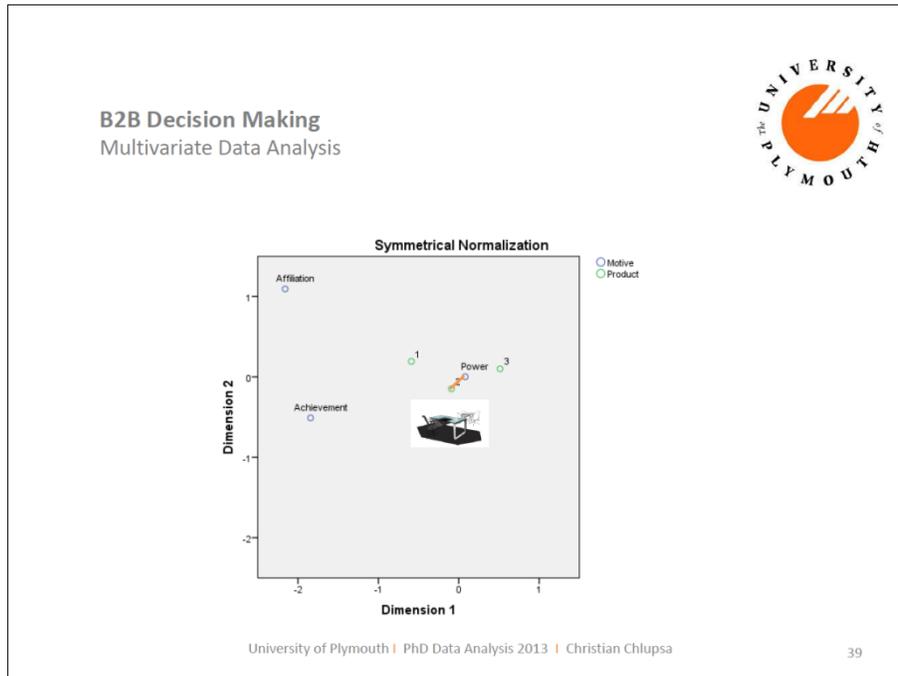


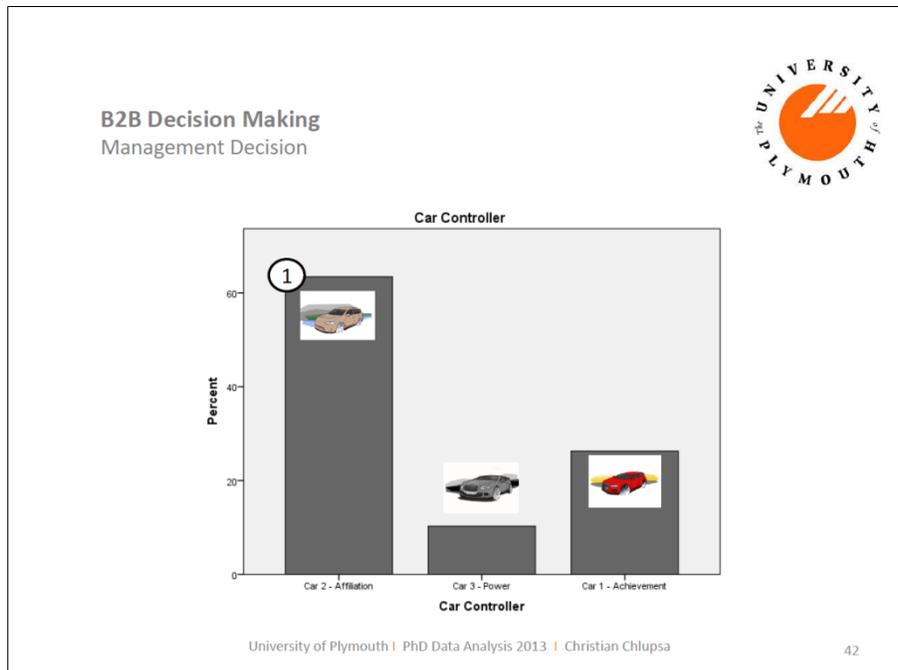
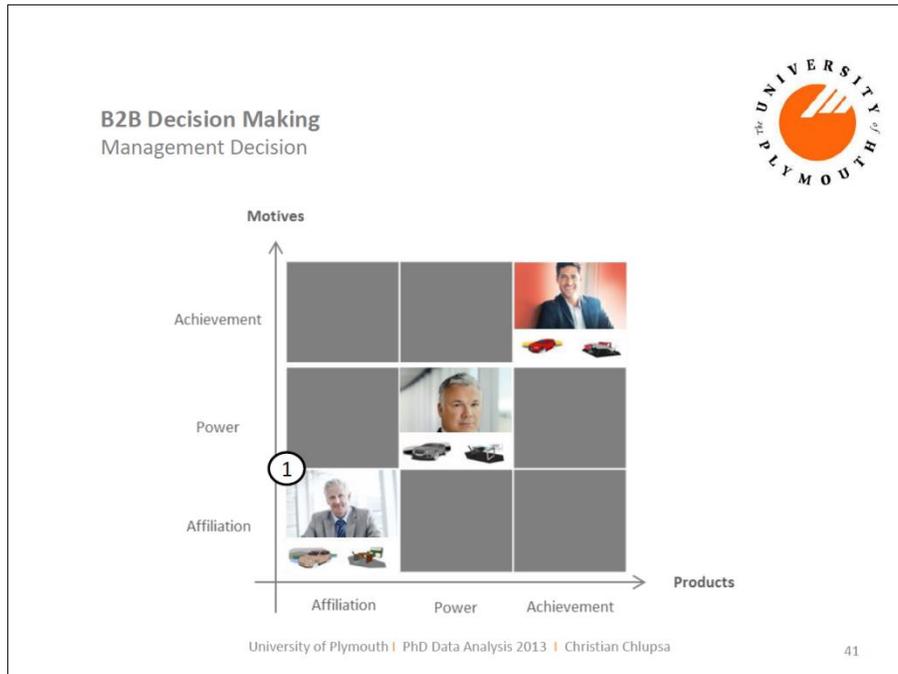


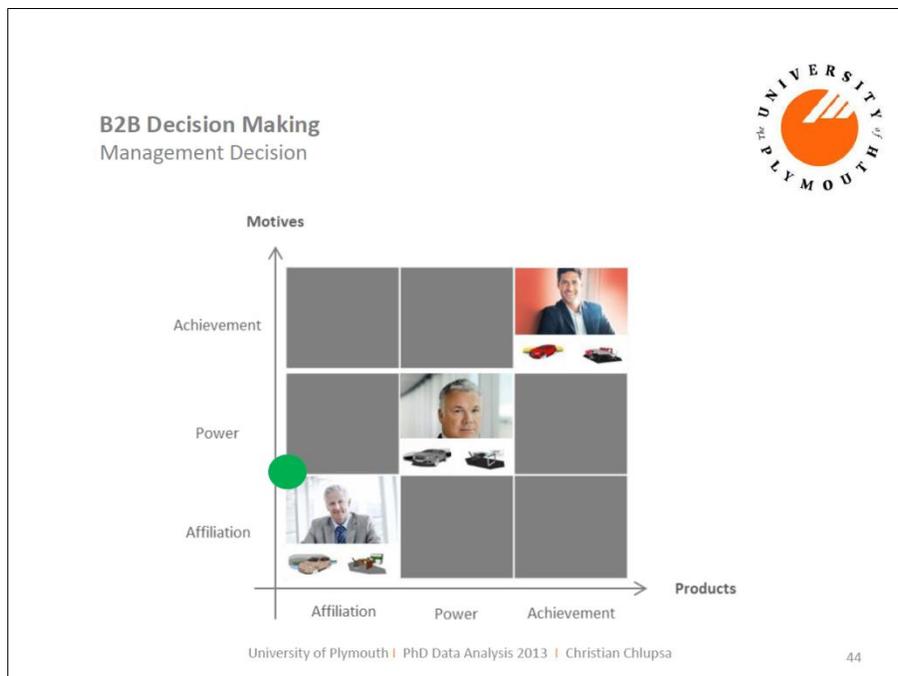
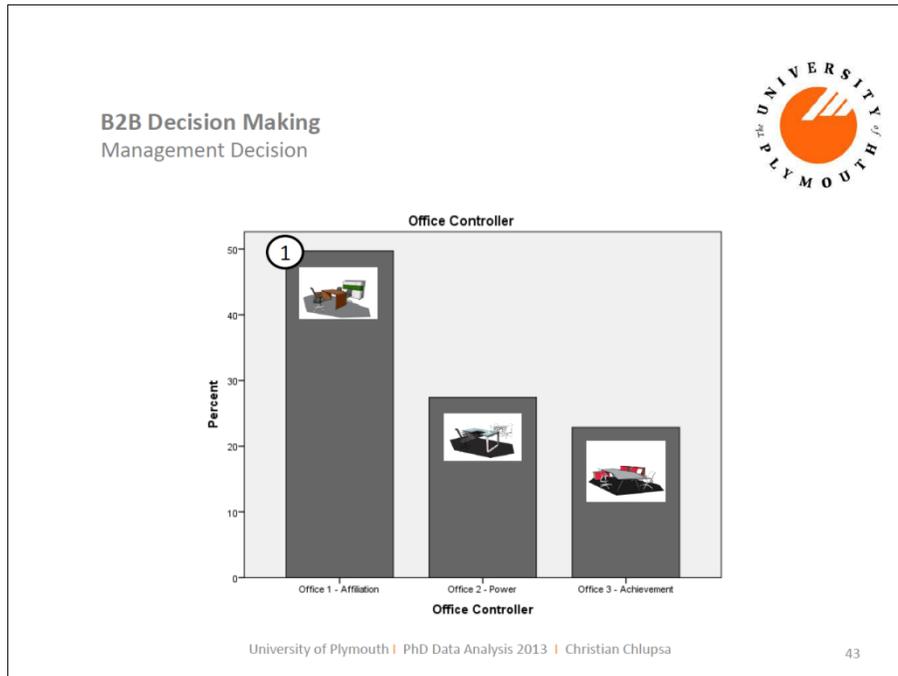


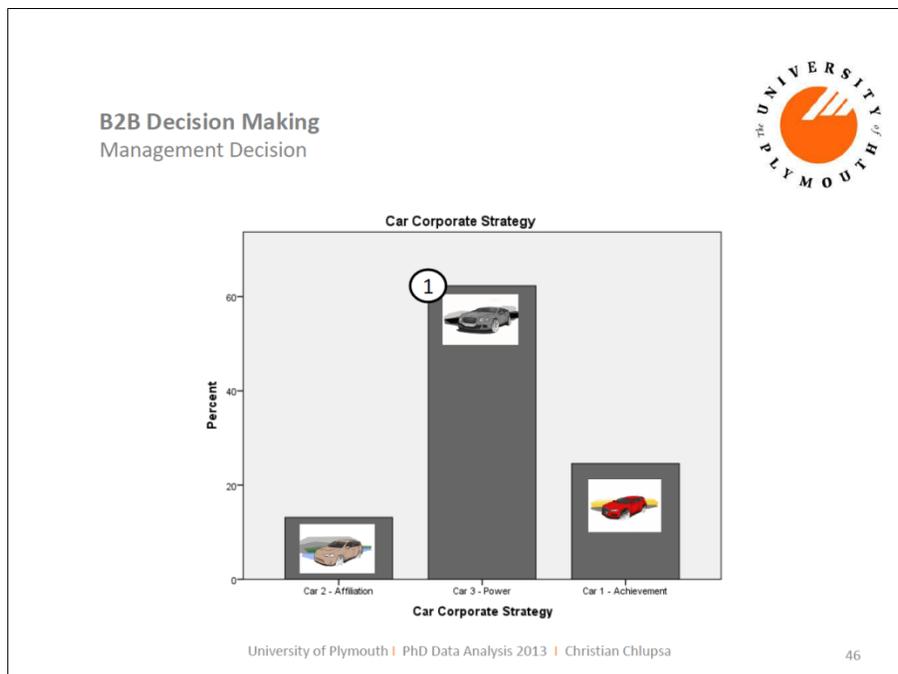
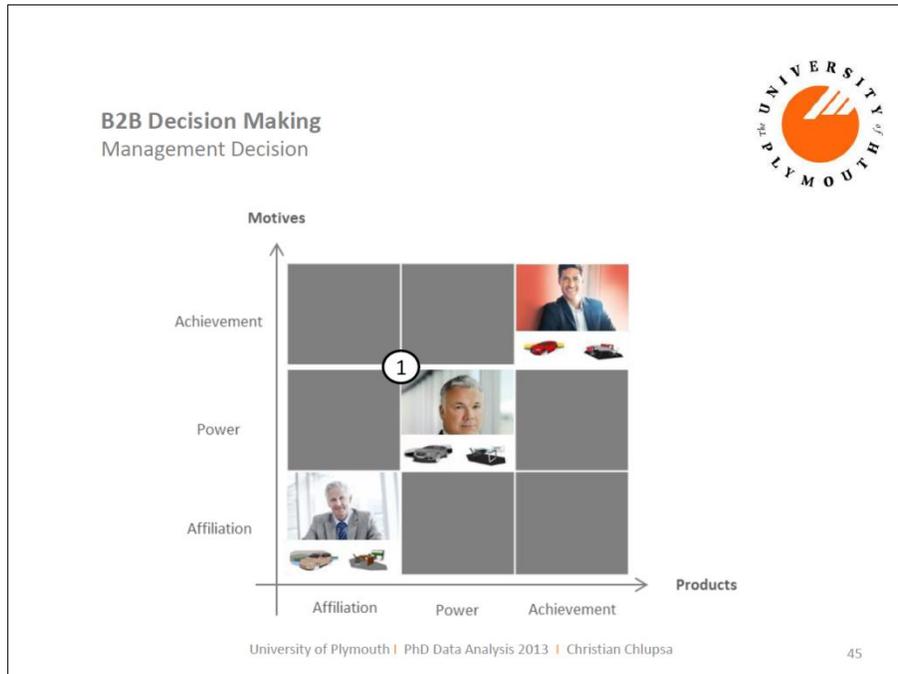


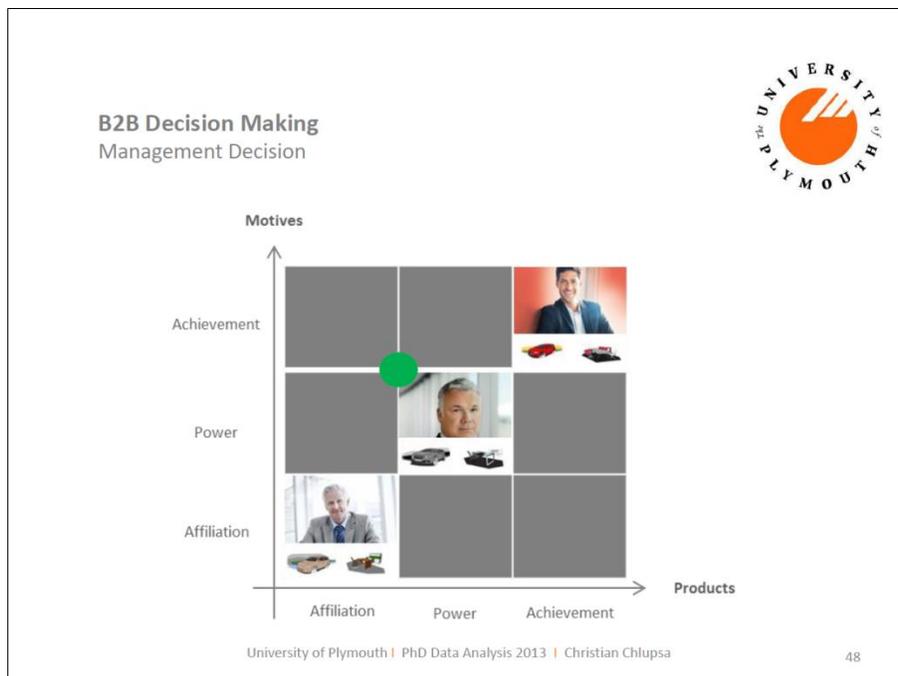
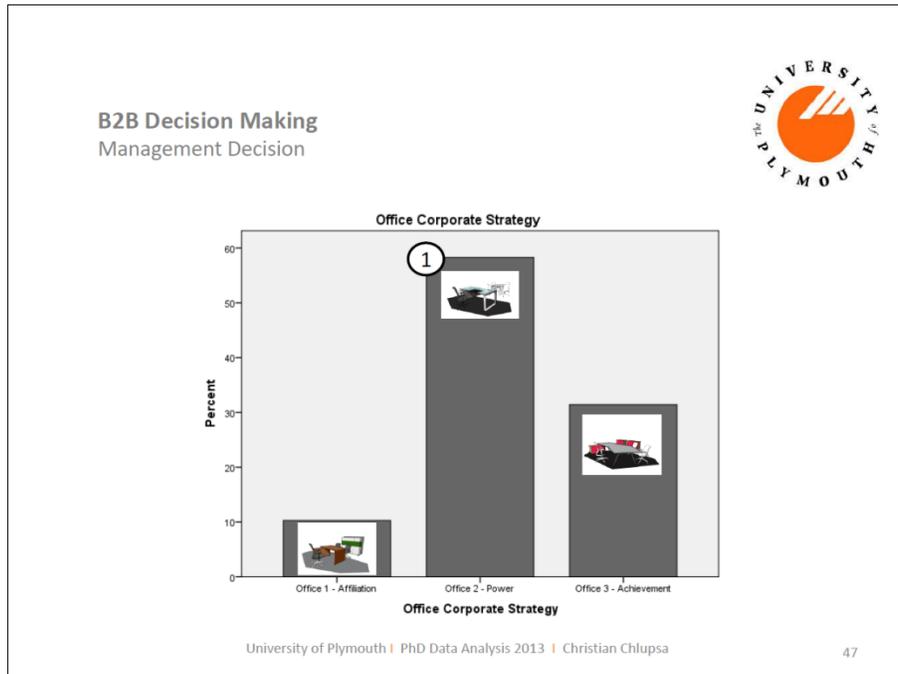


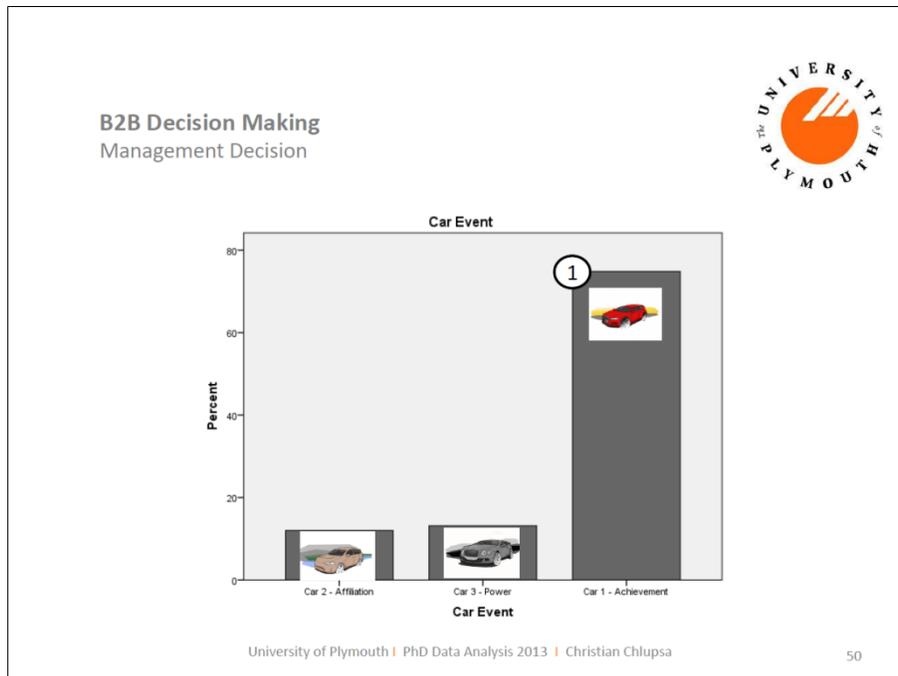
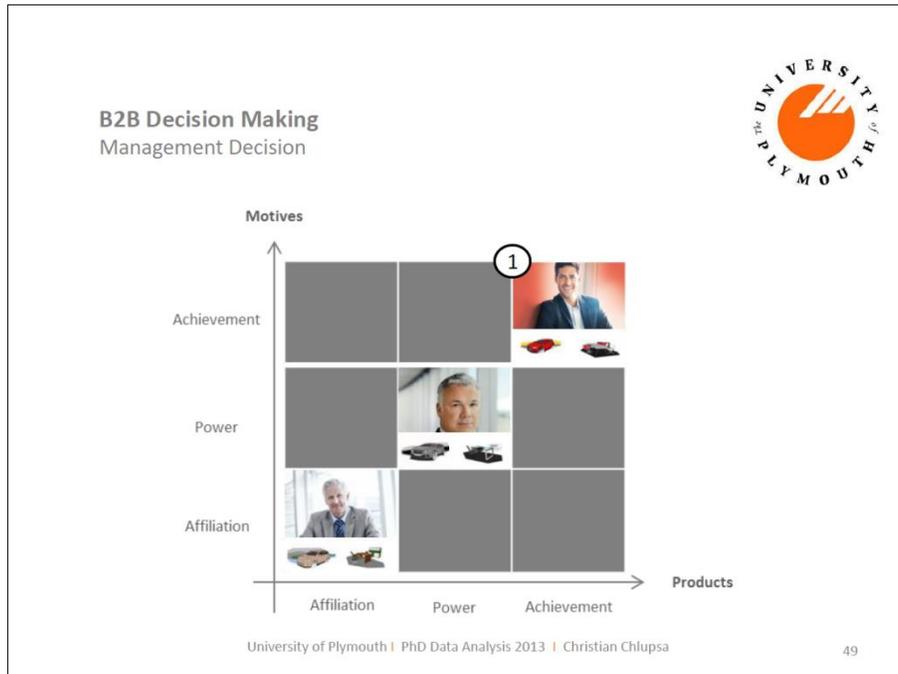


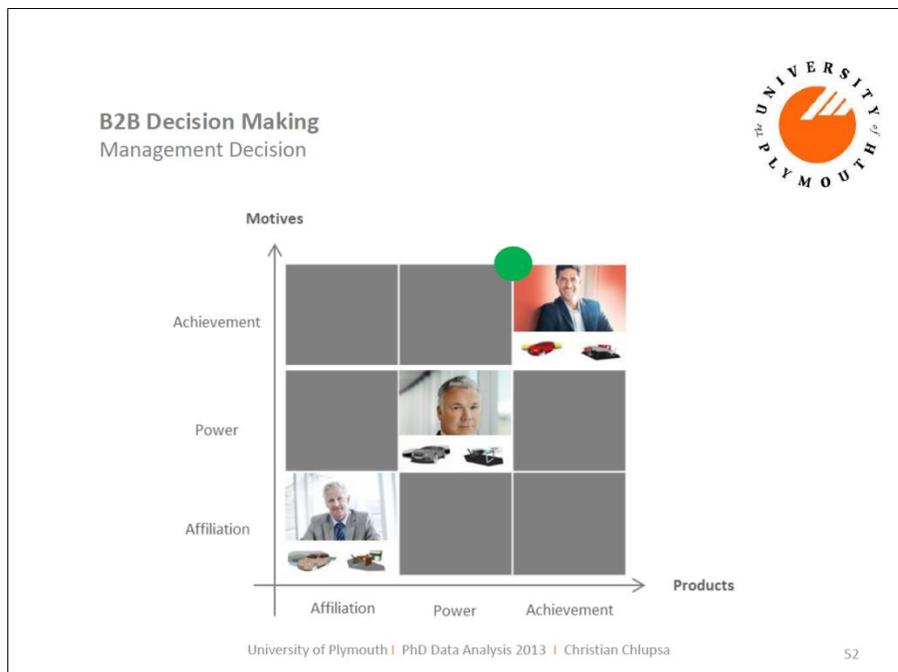
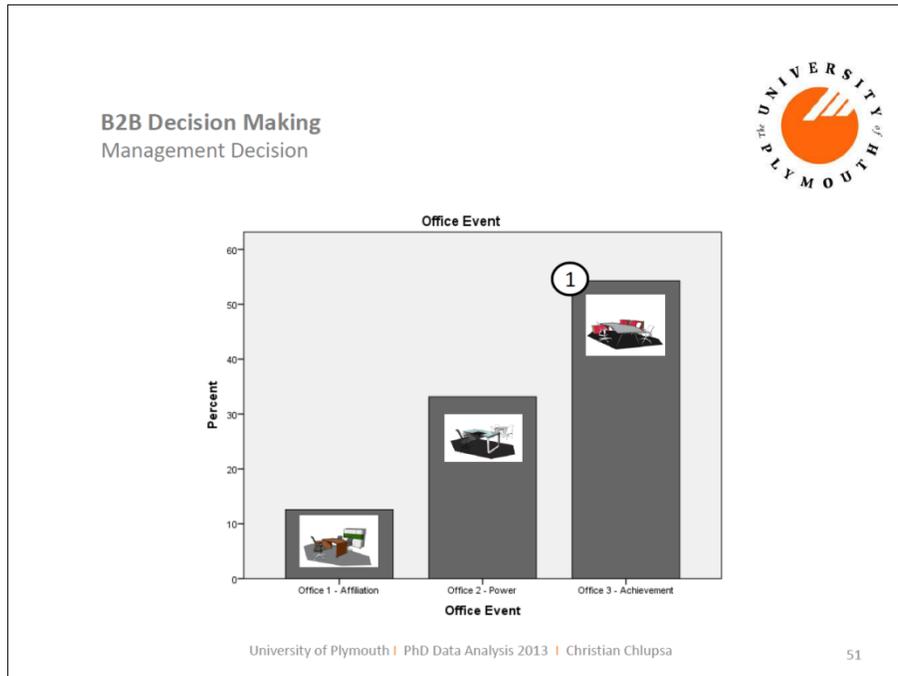


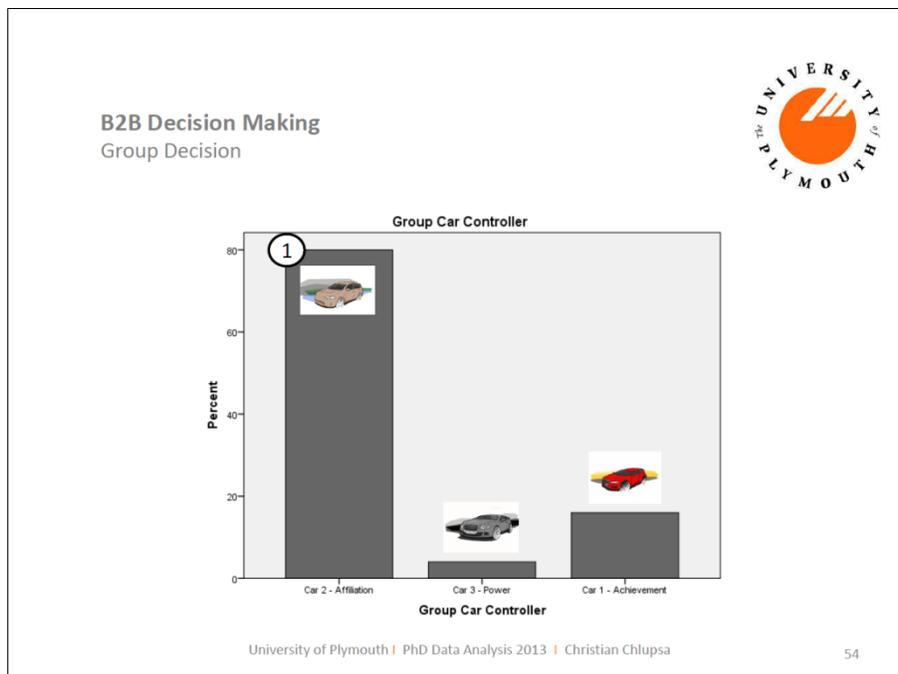


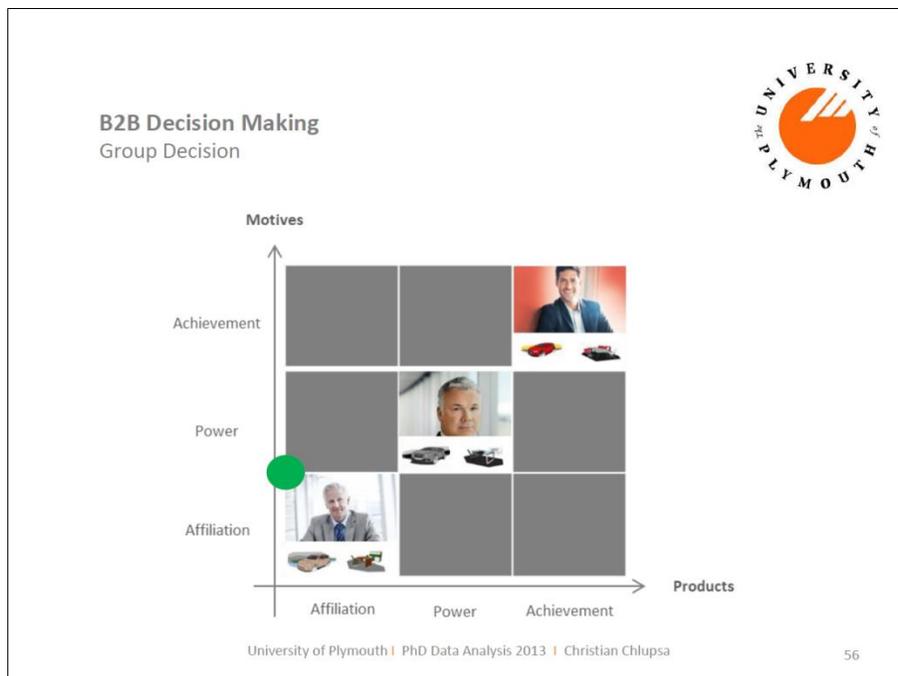
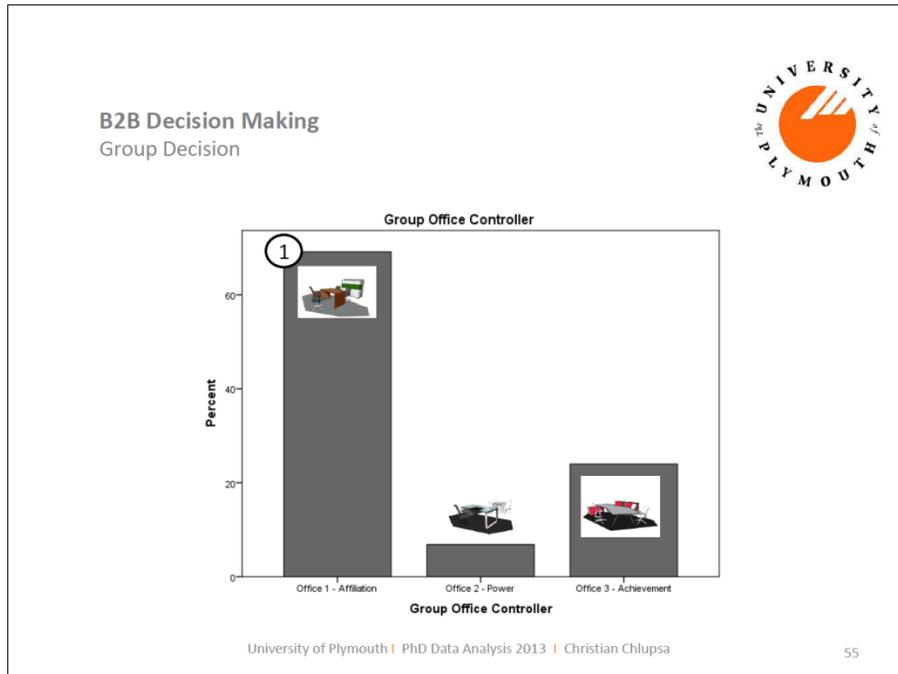


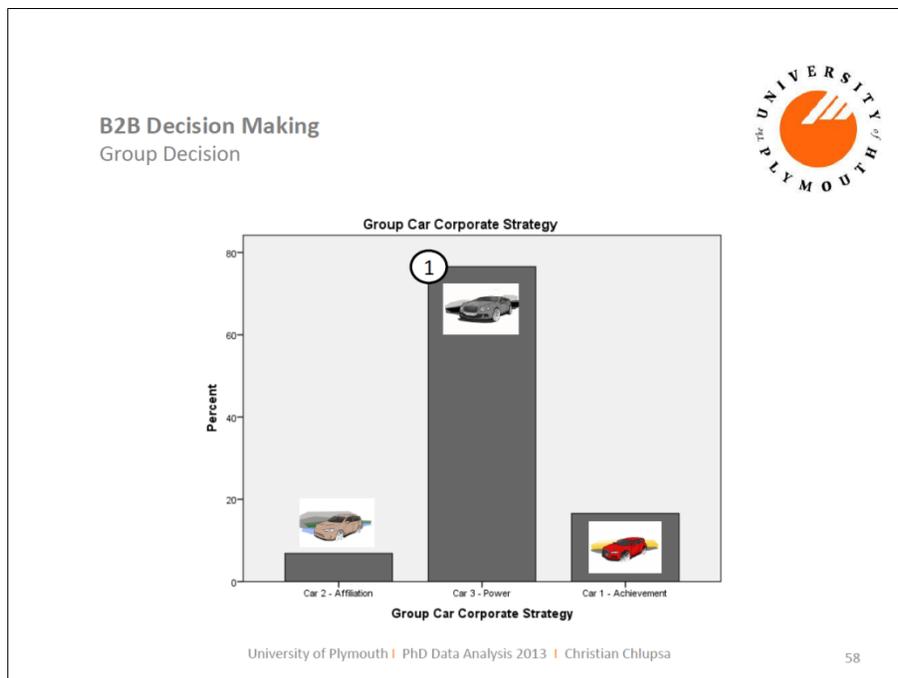
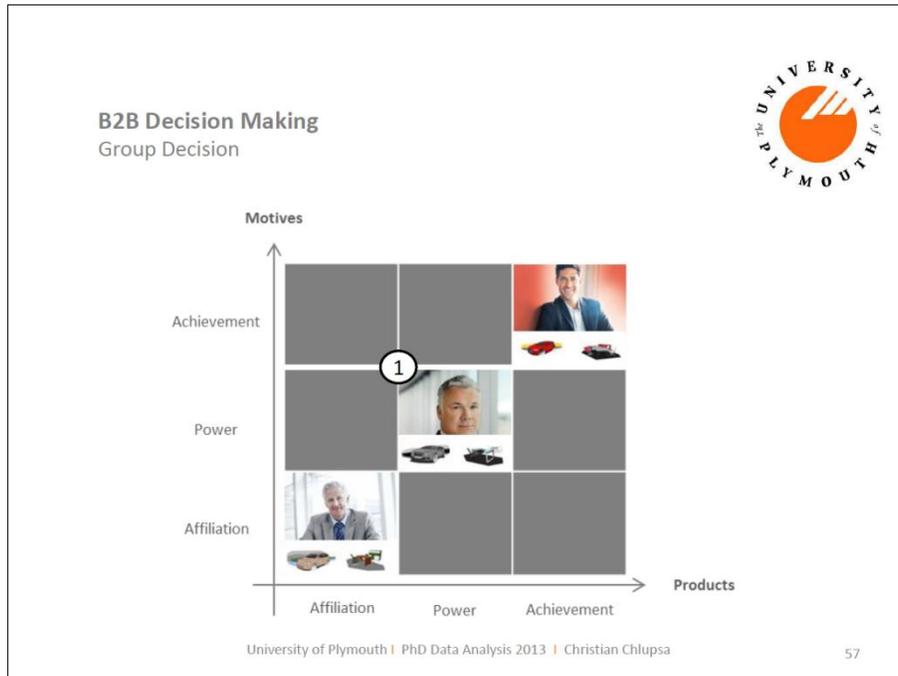


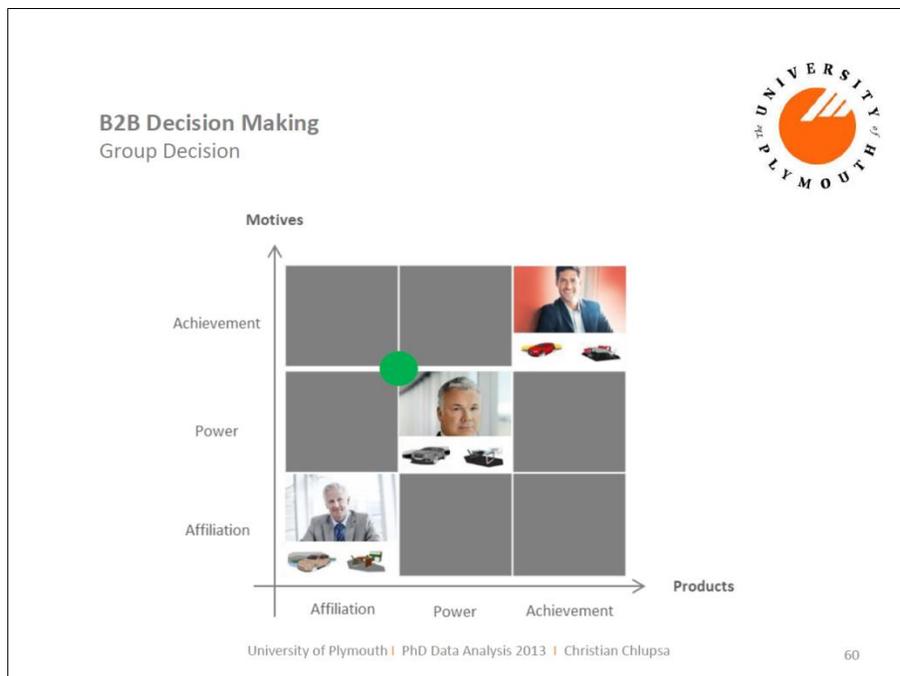
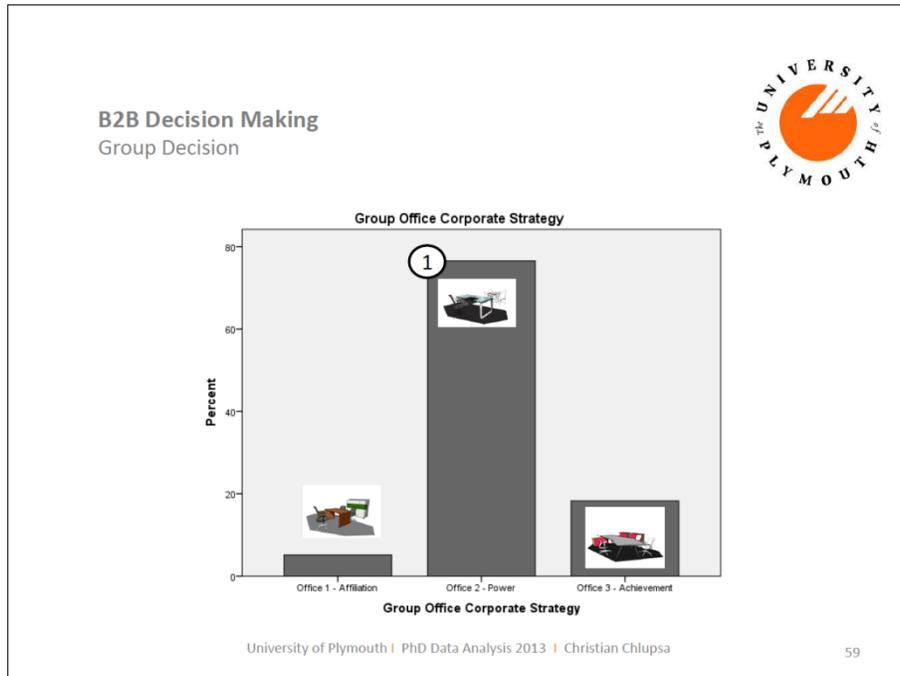


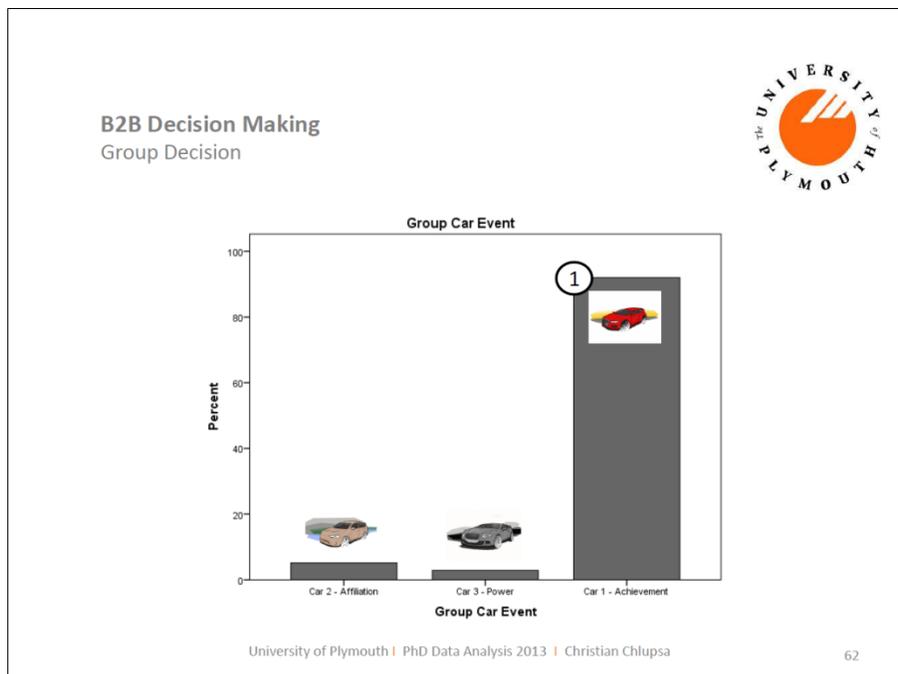
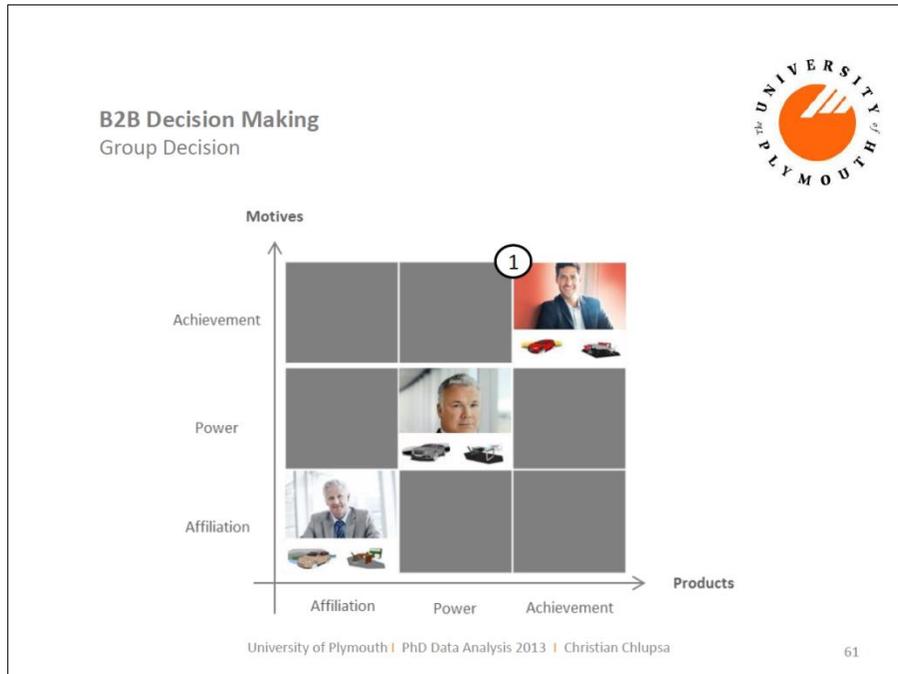


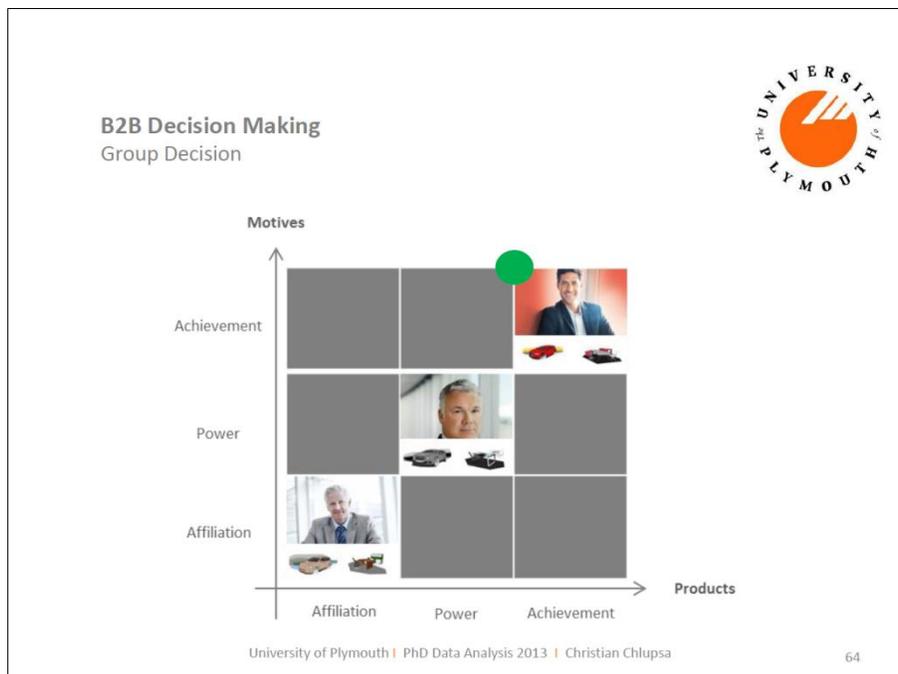
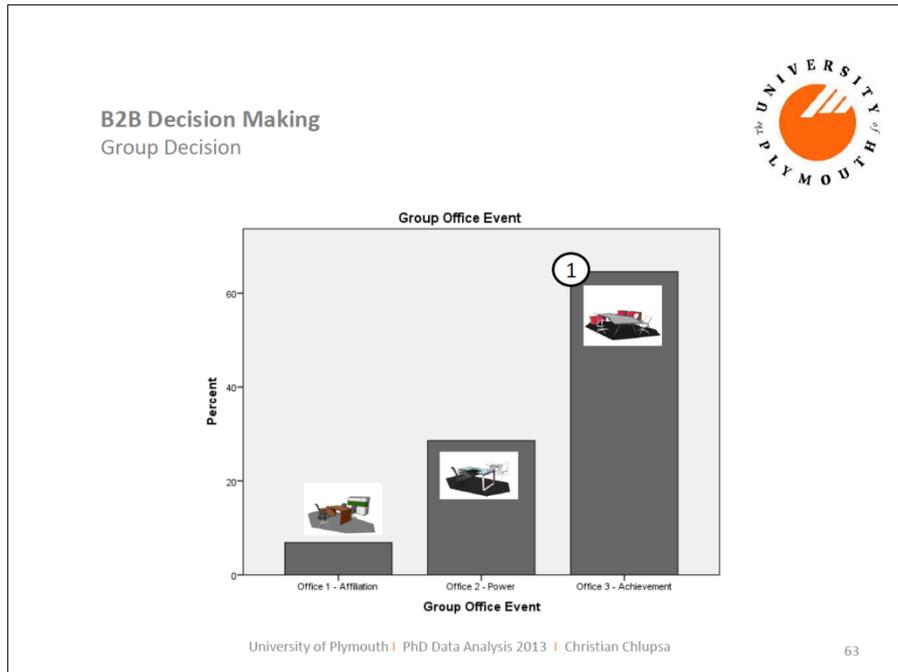


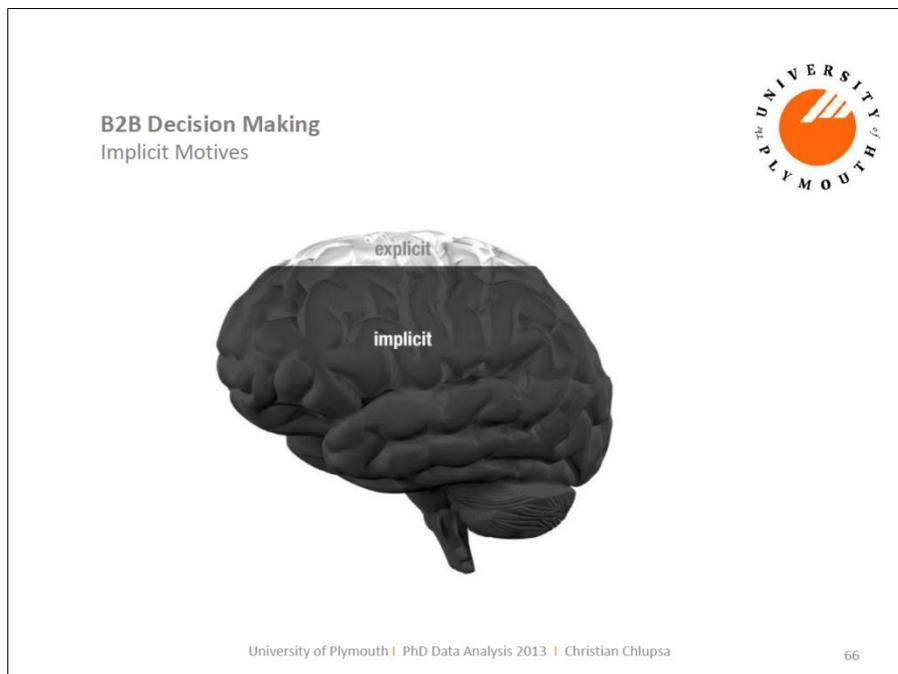
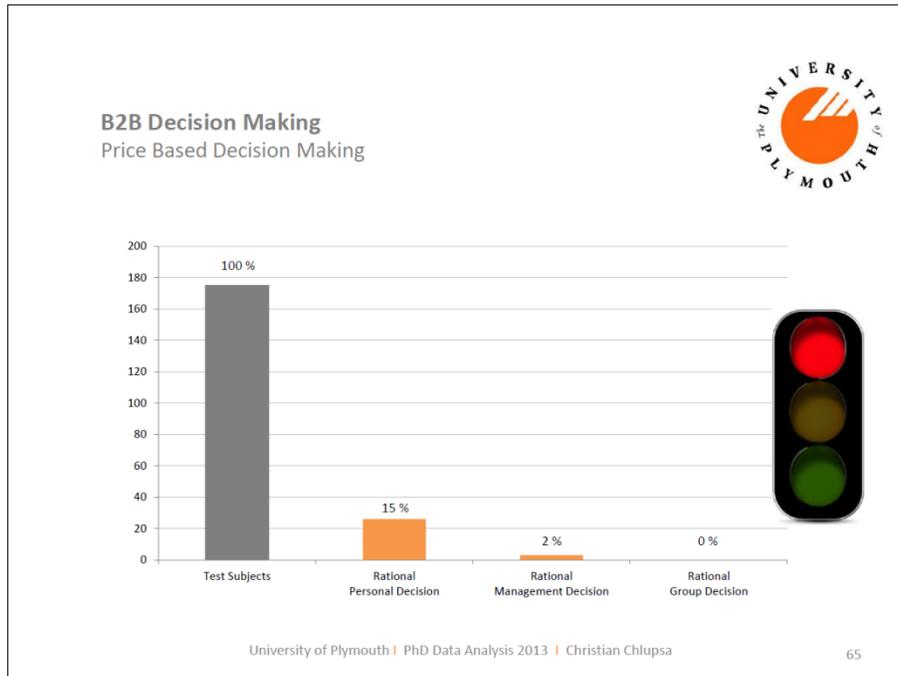


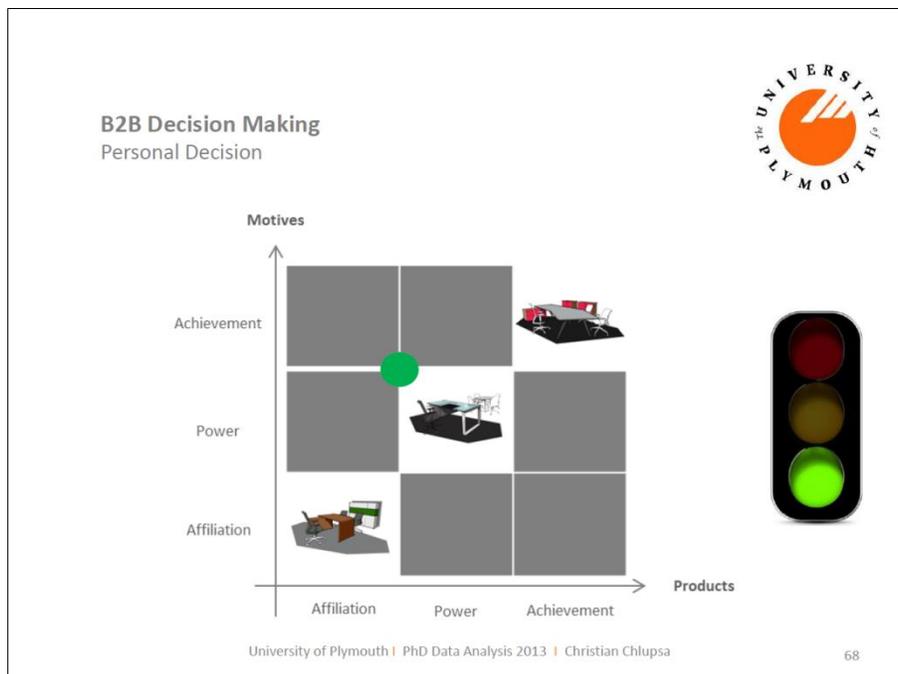
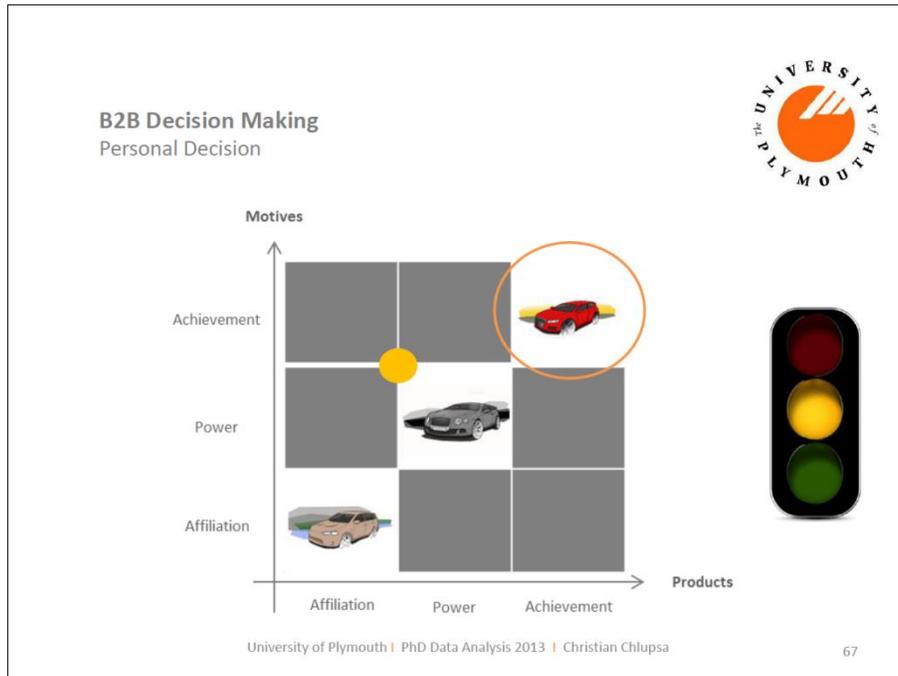


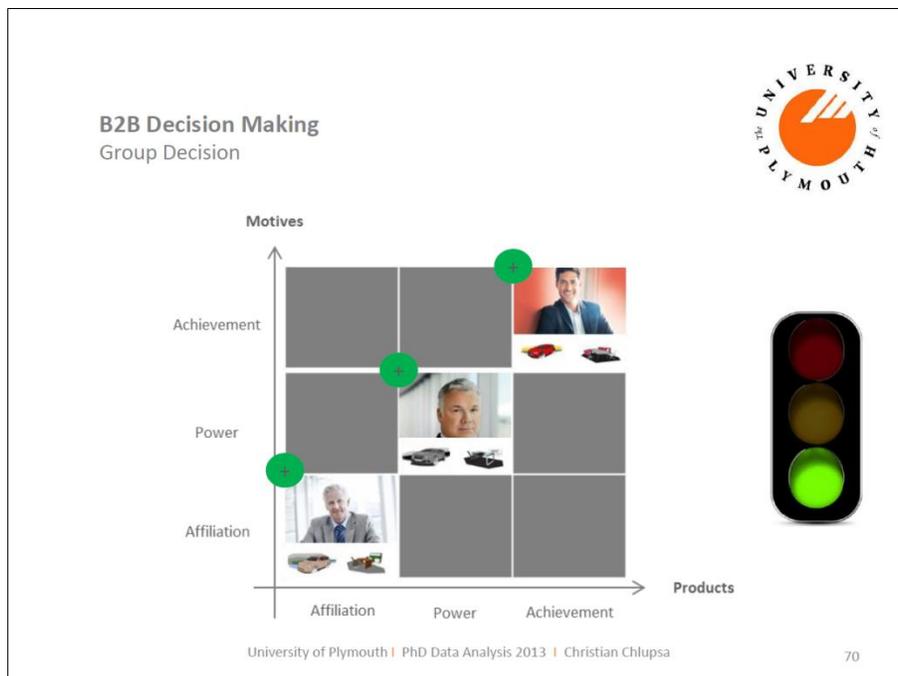
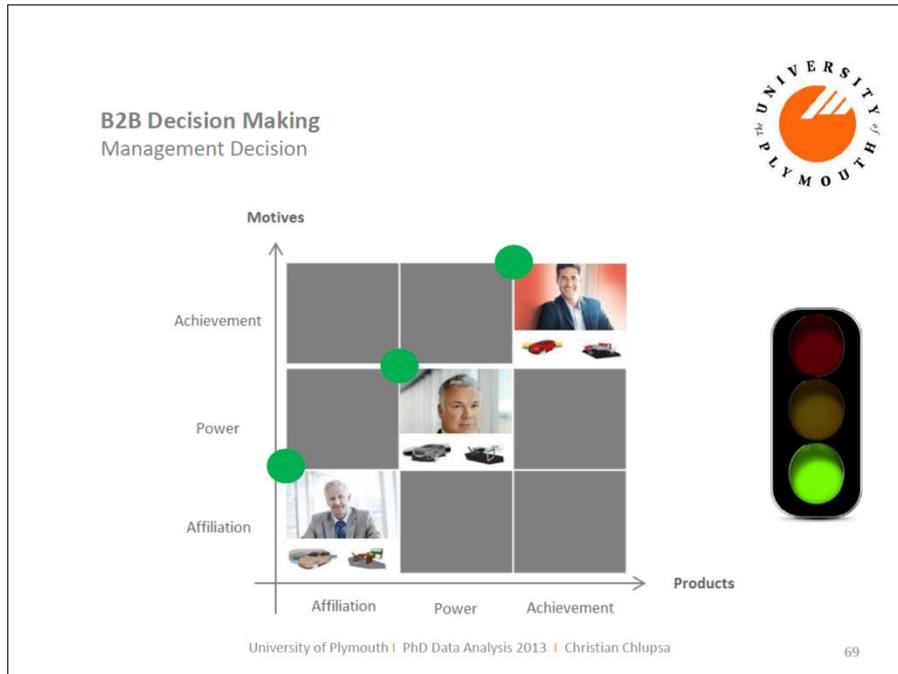




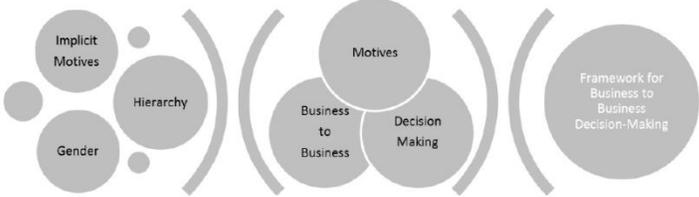








**B2B Decision Making**  
Objectives of the PhD Thesis



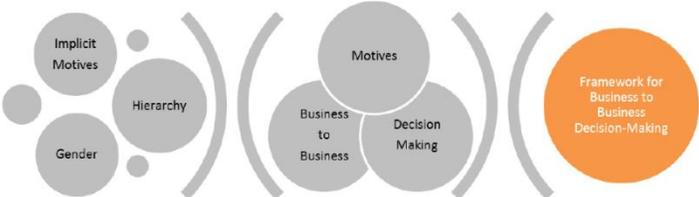
**Objective 1**  
Typical Structure of Implicit Motives

**Objective 2**  
Interplay between Motives and Decision-Making

**Objective 3**  
Impacts on the Business to Business Marketing

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**B2B Decision Making**  
Objectives of the PhD Thesis



**Objective 1**  
Typical Structure of Implicit Motives

**Objective 2**  
Interplay between Motives and Decision-Making

**Objective 3**  
Impacts on the Business to Business Marketing

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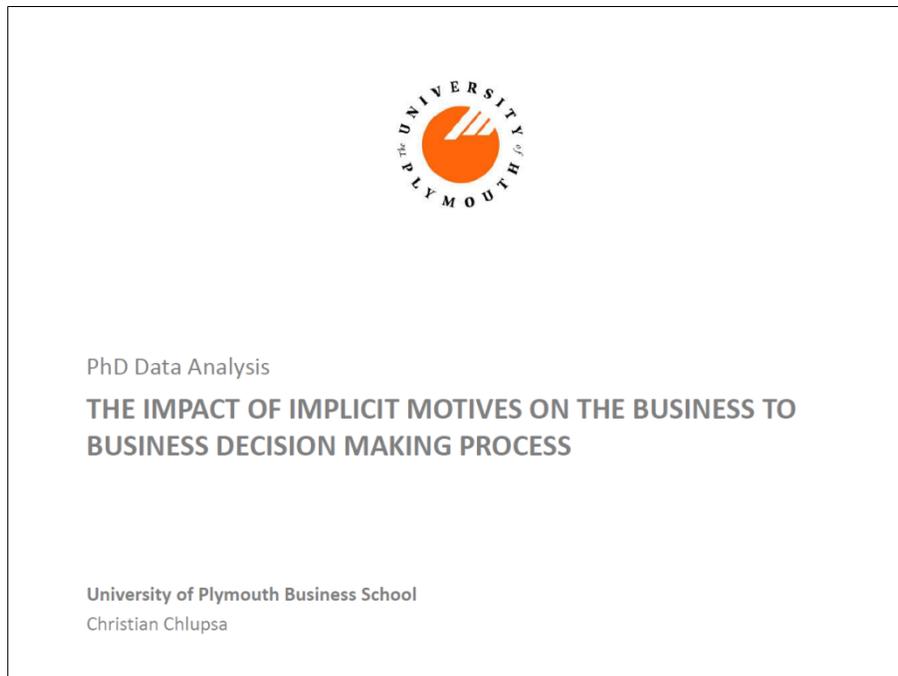
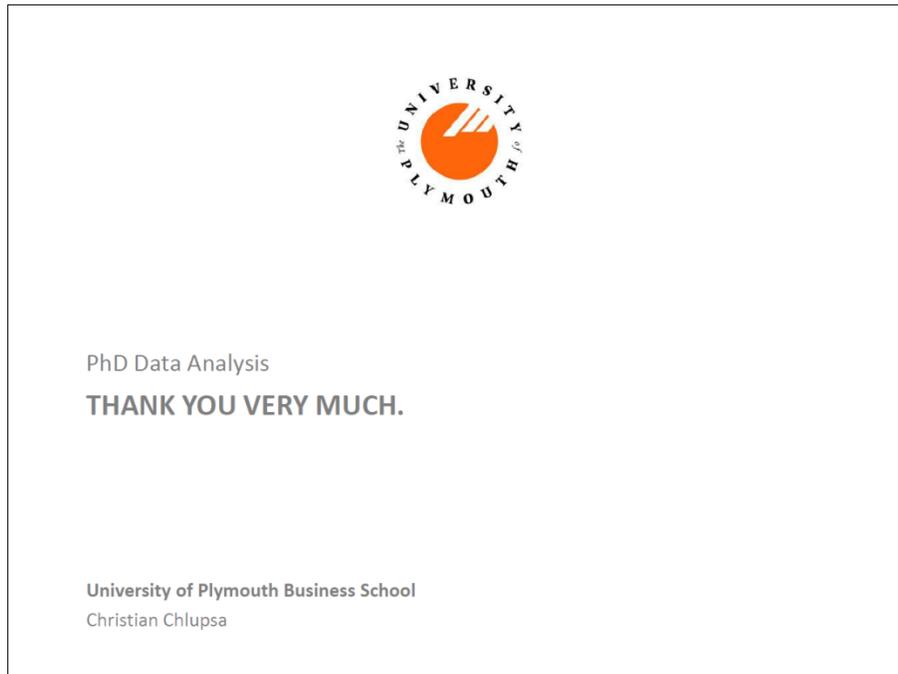


Figure 137: Presentation for Expert Interviews

## Appendix K. Data Collection SPSS Data Analysis Survey

### Frequency Gender

#### Statistics

Gender

N	Valid	175
	Missing	0

#### Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	female	83	47,4	47,4	47,4
	male	92	52,6	52,6	100,0
	Total	175	100,0	100,0	

Table 22: Data Collection Frequency Gender

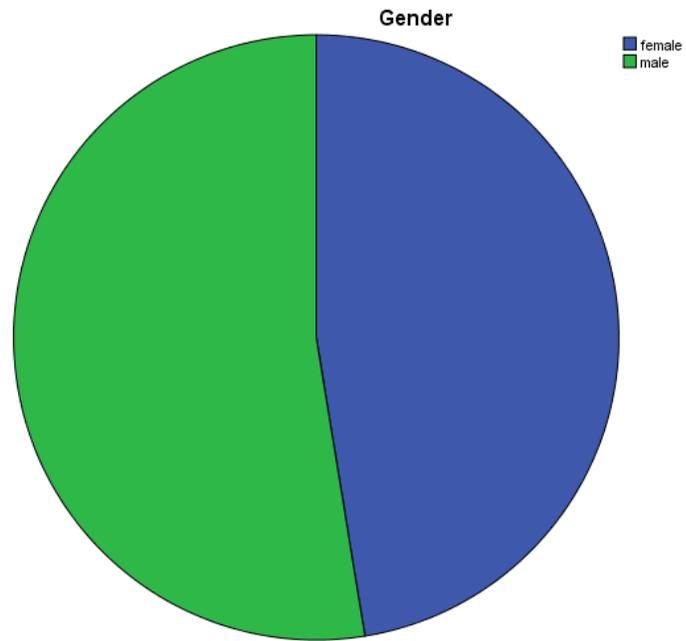


Figure 138: Data Analysis Frequency Gender

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * Implicit Motive	174	99,4%	1	0,6%	175	100,0%

**Gender \* Implicit Motive Crosstabulation**

Count

		Implicit Motive			Total
		Affiliation	Power	Achievement	
Gender	female	1	77	4	82
	male	1	90	1	92
Total		2	167	5	174

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2,245 <sup>a</sup>	2	,326
Likelihood Ratio	2,365	2	,306
Linear-by-Linear Association	1,445	1	,229
N of Valid Cases	174		

a. 4 cells (66,7%) have expected count less than 5. The minimum expected count is ,94.

## Appendix K. Data Collection SPSS Data Analysis Survey

### Directional Measures

			Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Nominal by Nominal	Uncertainty Coefficient	Symmetric	,015	,019	,810	,306 <sup>c</sup>
		Gender Dependent	,010	,012	,810	,306 <sup>c</sup>
		Implicit Motive Dependent	,035	,042	,810	,306 <sup>c</sup>

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Likelihood ratio chi-square probability.

### Symmetric Measures

		Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Nominal by Nominal	Phi	,114			,326
	Cramer's V	,114			,326
	Contingency Coefficient	,113			,326
Interval by Interval	Pearson's R	-,091	,072	-1,204	,230 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	-,092	,072	-1,211	,228 <sup>c</sup>
N of Valid Cases		174			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Table 23: Data Analysis Interplay Gender vs. Motives

Frequency Age

Statistics

Age

N	Valid	174
	Missing	1

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	14-29	69	39,4	39,7	39,7
	30-49	87	49,7	50,0	89,7
	50-65	18	10,3	10,3	100,0
	Total	174	99,4	100,0	
Missing	System	1	,6		
Total		175	100,0		

Table 24: Data Collection Frequency Age

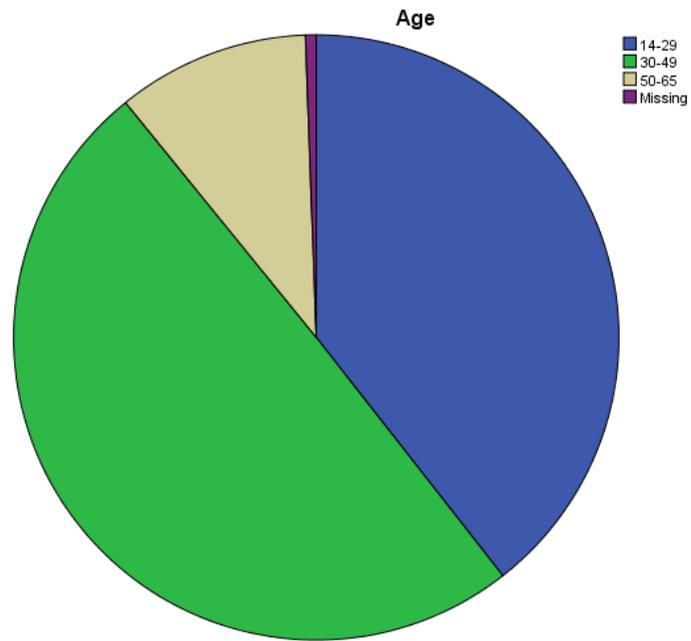


Figure 139: Data Analysis Frequency Age Questionnaire

## Appendix K. Data Collection SPSS Data Analysis Survey

**Age\_OMT**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	14	1	,6	,6	,6
	16	1	,6	,6	1,2
	17	2	1,1	1,2	2,3
	18	1	,6	,6	2,9
	20	1	,6	,6	3,5
	21	4	2,3	2,3	5,8
	22	6	3,4	3,5	9,3
	23	7	4,0	4,1	13,4
	24	8	4,6	4,7	18,0
	25	10	5,7	5,8	23,8
	26	11	6,3	6,4	30,2
	27	4	2,3	2,3	32,6
	28	8	4,6	4,7	37,2
	29	5	2,9	2,9	40,1
	30	6	3,4	3,5	43,6
	31	5	2,9	2,9	46,5
	32	5	2,9	2,9	49,4
	33	5	2,9	2,9	52,3
	34	5	2,9	2,9	55,2
	35	4	2,3	2,3	57,6
	36	5	2,9	2,9	60,5
	37	6	3,4	3,5	64,0
	38	2	1,1	1,2	65,1
	39	3	1,7	1,7	66,9
	40	7	4,0	4,1	70,9
	41	2	1,1	1,2	72,1
	42	4	2,3	2,3	74,4
	43	4	2,3	2,3	76,7
	44	3	1,7	1,7	78,5
	45	6	3,4	3,5	82,0
	46	8	4,6	4,7	86,6
	47	2	1,1	1,2	87,8
	48	1	,6	,6	88,4
	49	1	,6	,6	89,0
	50	3	1,7	1,7	90,7
	51	2	1,1	1,2	91,9
	52	2	1,1	1,2	93,0
	53	1	,6	,6	93,6
	54	3	1,7	1,7	95,3
	55	3	1,7	1,7	97,1
56	1	,6	,6	97,7	
57	1	,6	,6	98,3	
60	1	,6	,6	98,8	
64	1	,6	,6	99,4	
80	1	,6	,6	100,0	
	Total	172	98,3	100,0	
Missing	System	3	1,7		
	Total	175	100,0		

## Appendix K. Data Collection SPSS Data Analysis Survey

### Statistics

Age\_OMT

N	Valid	172
	Missing	3

### Statistics

Age\_OMT

N	Valid	172
	Missing	3
Mean		34,68
Median		33,00

Table 25: Data Analysis Frequency Age OMT Test

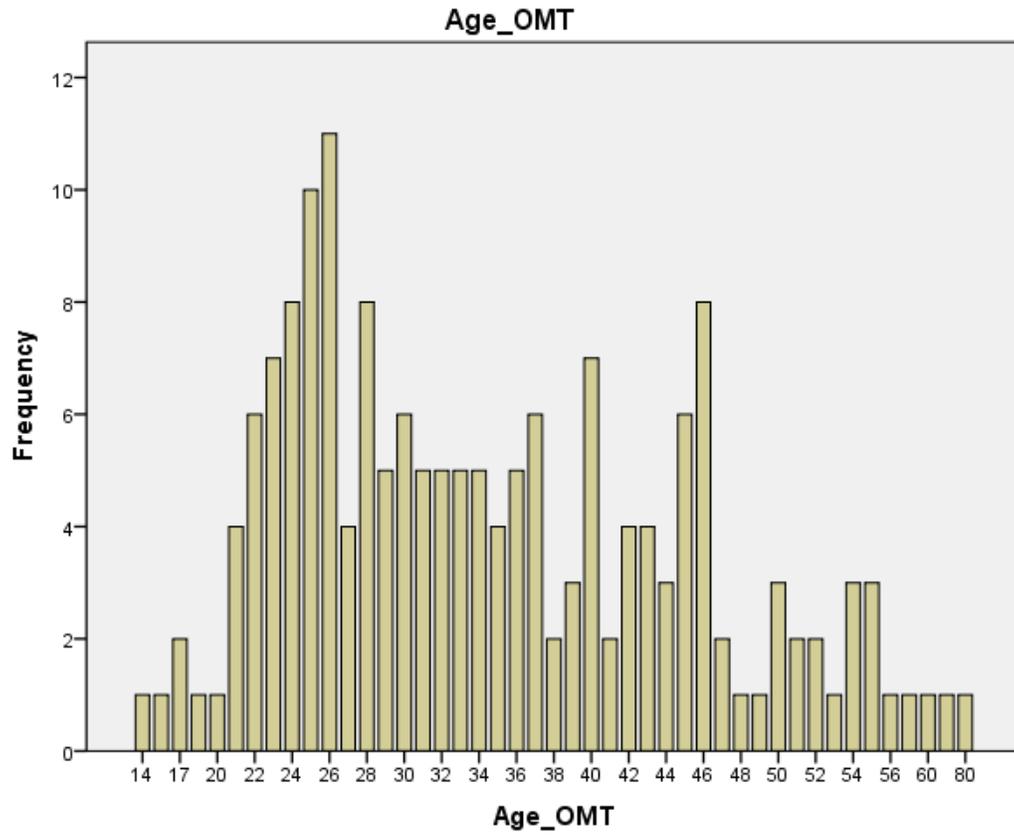


Figure 140: Data Analysis Frequency Age OMT-Test

**Time Working in the Job**

**Statistics**

Time in job

N	Valid	174
	Missing	1

**Time in job**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	77	44,0	44,3	44,3
	6-10	24	13,7	13,8	58,0
	10-more	73	41,7	42,0	100,0
	Total	174	99,4	100,0	
Missing	System	1	,6		
Total		175	100,0		

Table 26: Data Analysis Time Working in the Job

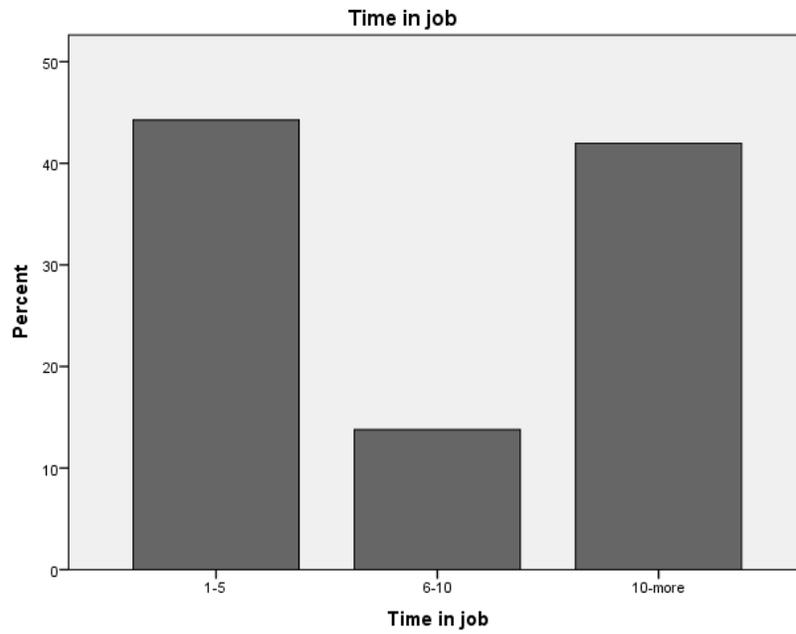


Figure 141: Data Analysis Time Working in the Job

**Time Working in the Company**

**Statistics**

Time in company

N	Valid	168
	Missing	7

**Time in company**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	90	51,4	53,6	53,6
	6-10	27	15,4	16,1	69,6
	10-more	51	29,1	30,4	100,0
	Total	168	96,0	100,0	
Missing	System	7	4,0		
Total		175	100,0		

Table 27: Data Analysis Time Working in the Company

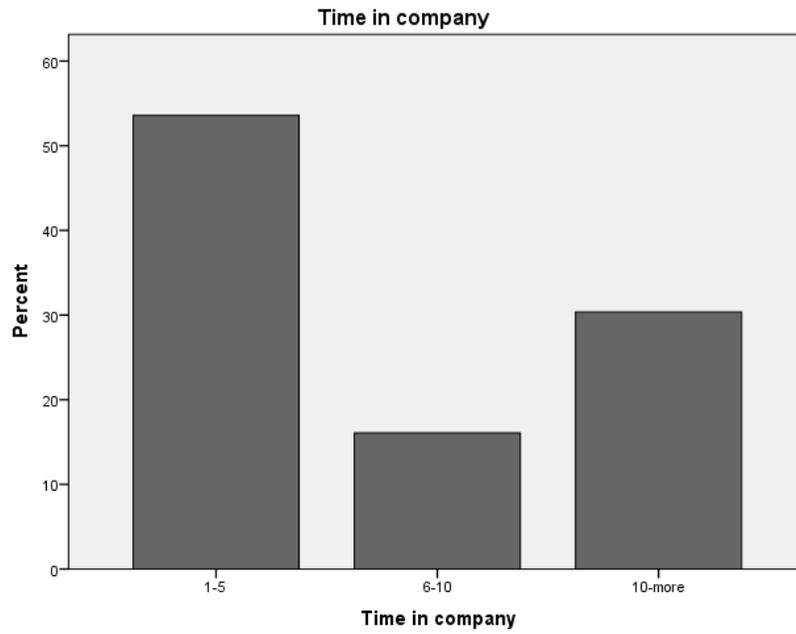


Figure 142: Data Analysis Time Working in the Company

Frequency Age

Statistics

Education

N	Valid	175
	Missing	0

Education

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No Education	1	,6	,6	,6
Secondary School	1	,6	,6	1,1
Secondary Modern School	11	6,3	6,3	7,4
High School	10	5,7	5,7	13,1
Professional Education Academy	54	30,9	30,9	44,0
University	17	9,7	9,7	53,7
PhD	79	45,1	45,1	98,9
Total	2	1,1	1,1	100,0
	175	100,0	100,0	

Table 28: Data Analysis Education

Education

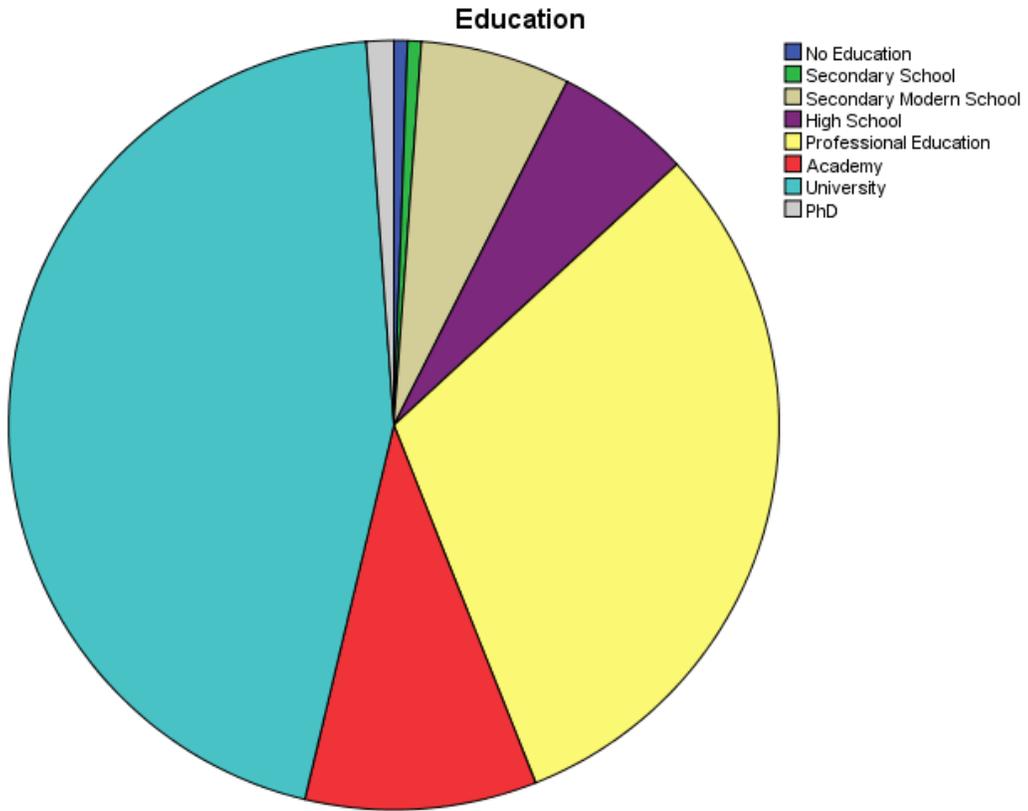


Figure 143: Data Analysis Education

Factors of Procurement

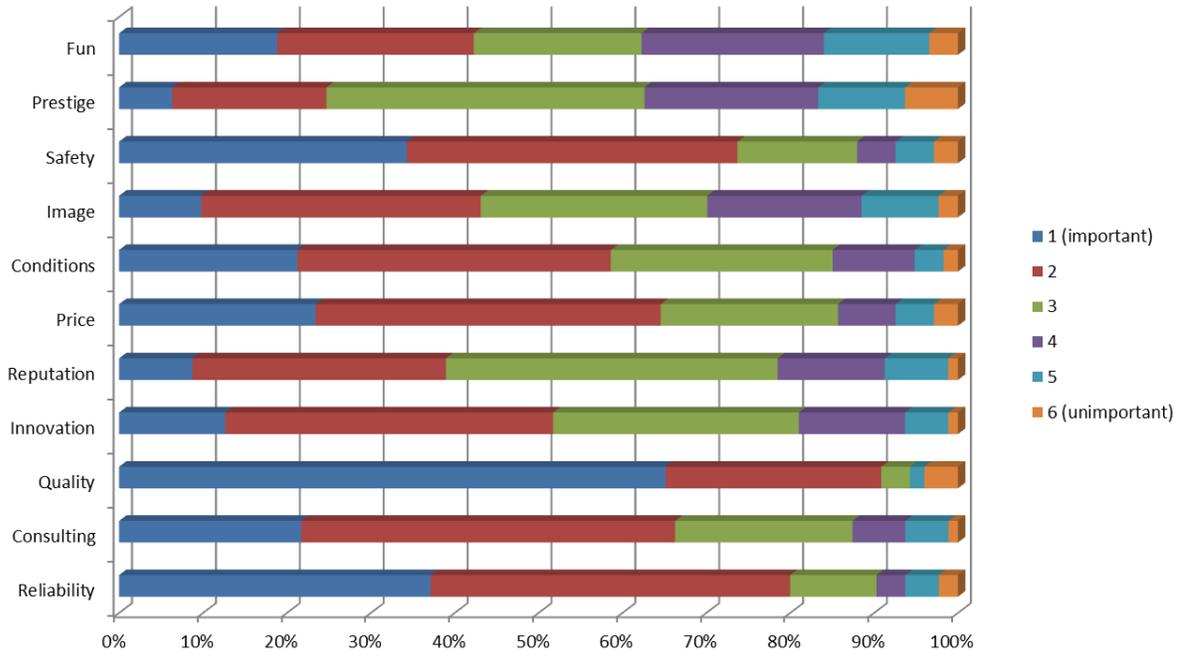


Figure 144: Factor of Procurement

### Important Factors of Procurement

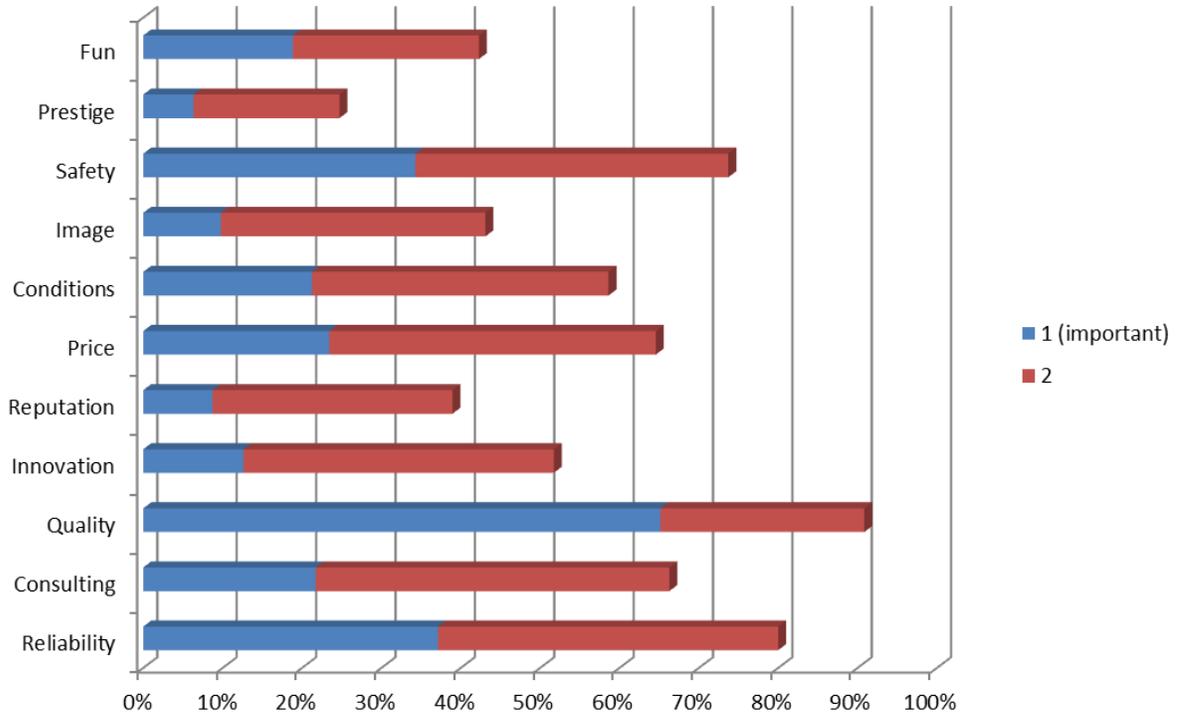


Figure 145: Important Factors of Procurement

### Most Important Factors of Procurement

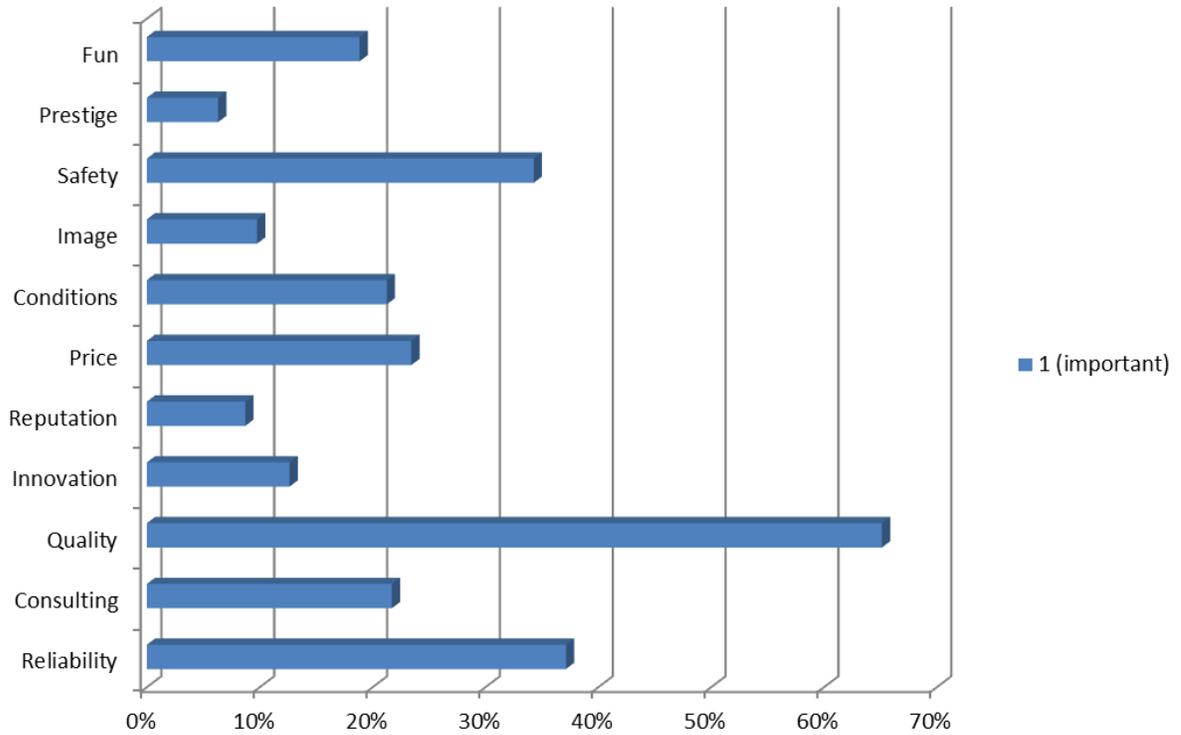


Figure 146: Most Important Factors of Procurement

**Level of Hierarchy**

**Statistics**

Level of Hierarchy

N	Valid	175
	Missing	0

**Level of Hierarchy**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employee	124	70,9	70,9	70,9
	Management	41	23,4	23,4	94,3
	Top Management	10	5,7	5,7	100,0
	Total	175	100,0	100,0	

Table 29: Data Analysis Level of Hierarchy

Level of Hierarchy

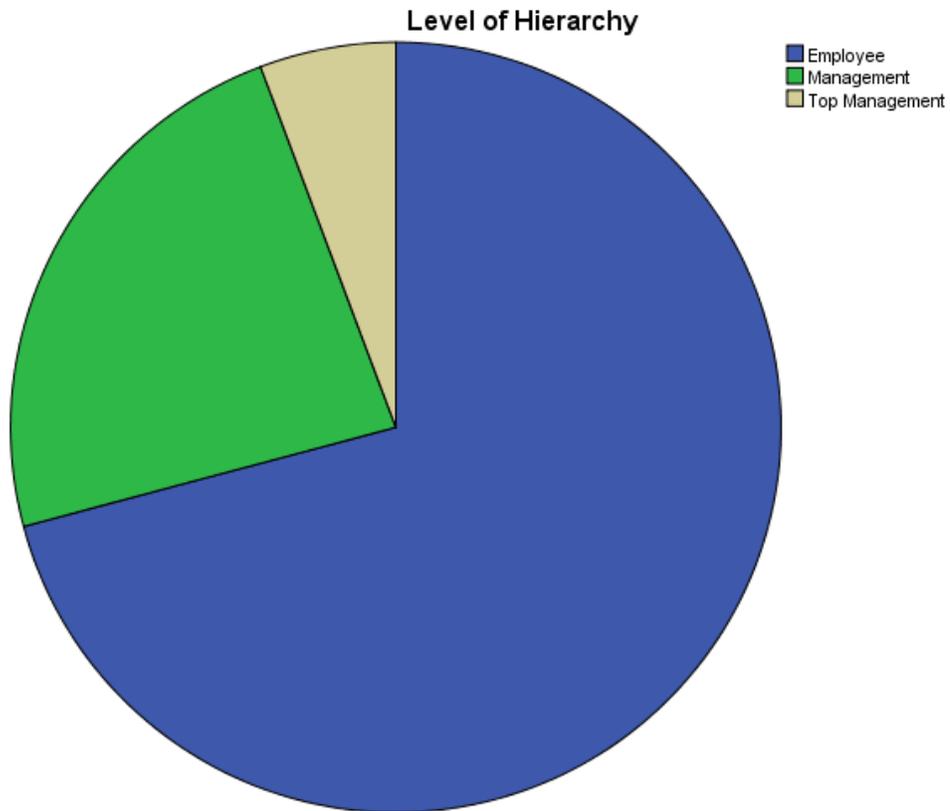


Figure 147: Data Analysis Level of Hierarchy

**Level of Decision Making**

**Statistics**

		Level of Decision Making Strategic Decisions	Level of Decision Making Operational Decisions	Level of Decision Making HR Decisions	Level of Decision Making Investment Goods	Level of Decision Making Expendable Goods
N	Valid	175	175	175	175	175
	Missing	0	0	0	0	0

**Level of Decision Making Strategic Decisions**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	67	38,3	38,3	38,3
	no	108	61,7	61,7	100,0
Total		175	100,0	100,0	

**Level of Decision Making Operational Decisions**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	125	71,4	71,4	71,4
	no	50	28,6	28,6	100,0
Total		175	100,0	100,0	

**Level of Decision Making HR Decisions**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	41	23,4	23,4	23,4
	no	134	76,6	76,6	100,0
	Total	175	100,0	100,0	

**Level of Decision Making Investment Goods**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	32	18,3	18,3	18,3
	no	143	81,7	81,7	100,0
	Total	175	100,0	100,0	

**Level of Decision Making Expendable Goods**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	67	38,3	38,3	38,3
	no	108	61,7	61,7	100,0
	Total	175	100,0	100,0	

Table 30: Data Analysis Level of Decision Making

Level of Strategic Decision Making

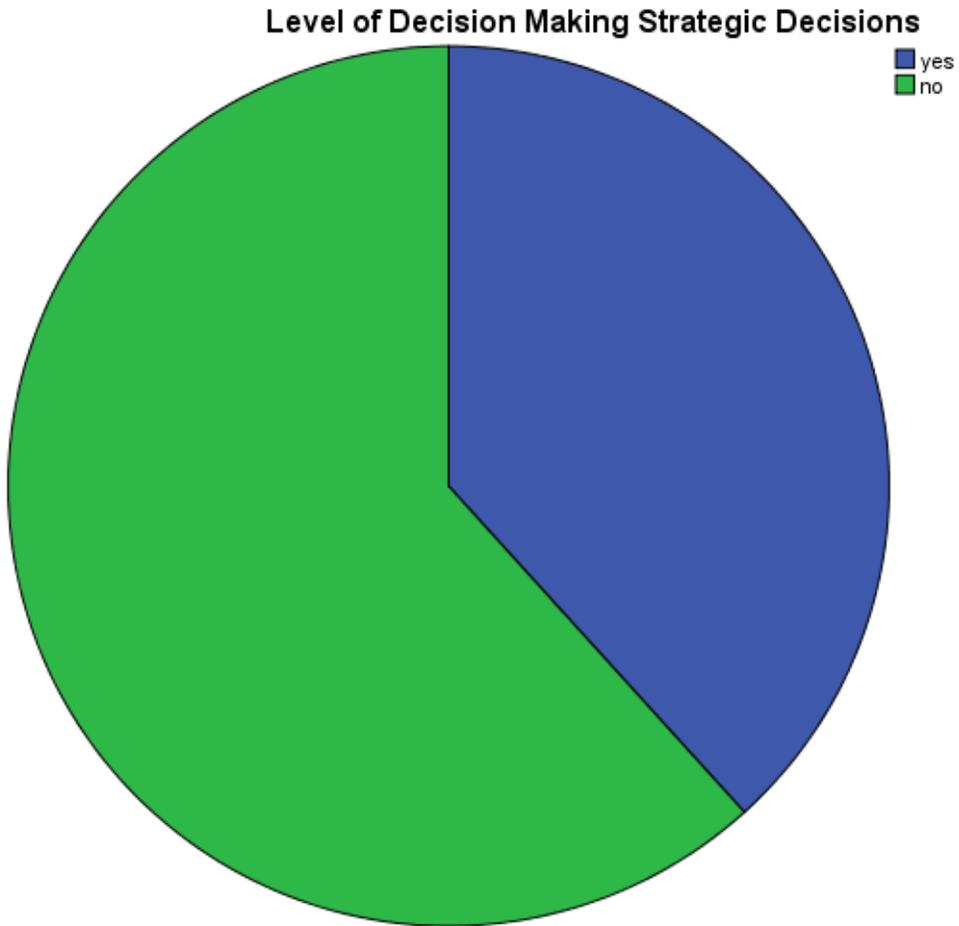


Figure 148: Data Analysis Level of Strategic Decision

Level of Operational Decision Making

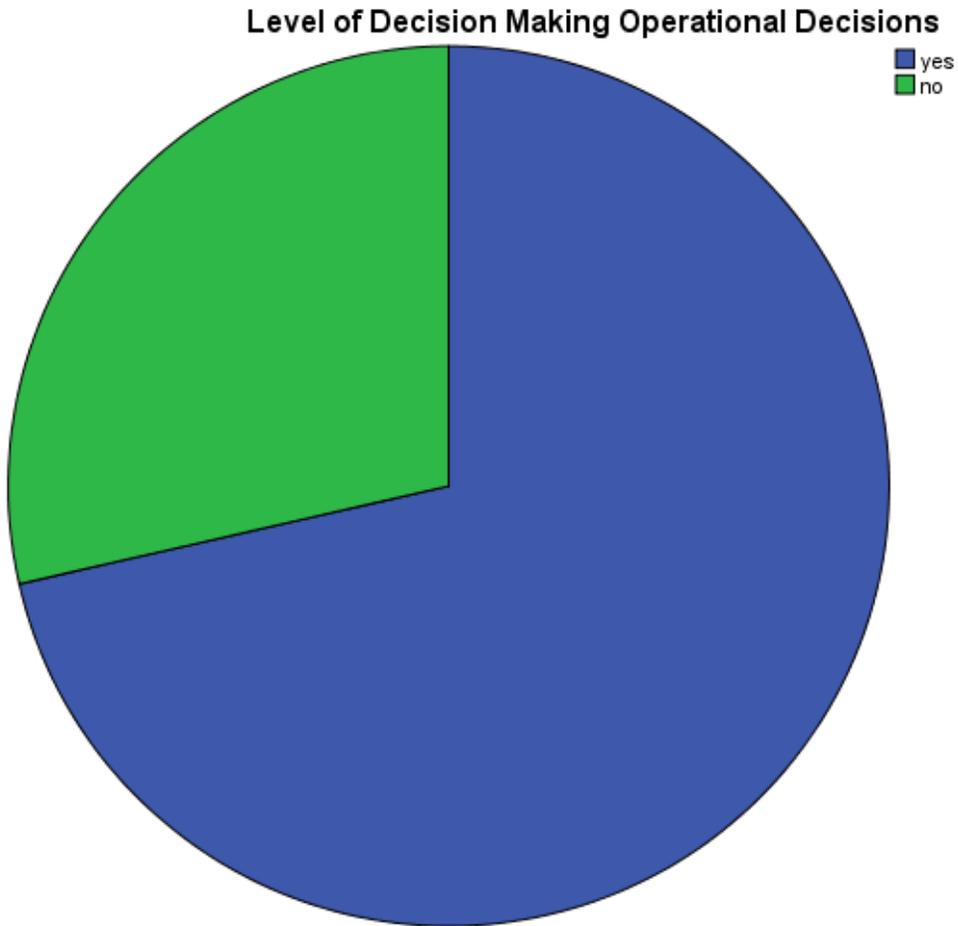


Figure 149: Data Analysis Level of Operational Decision

Level of Human Resources Decision Making

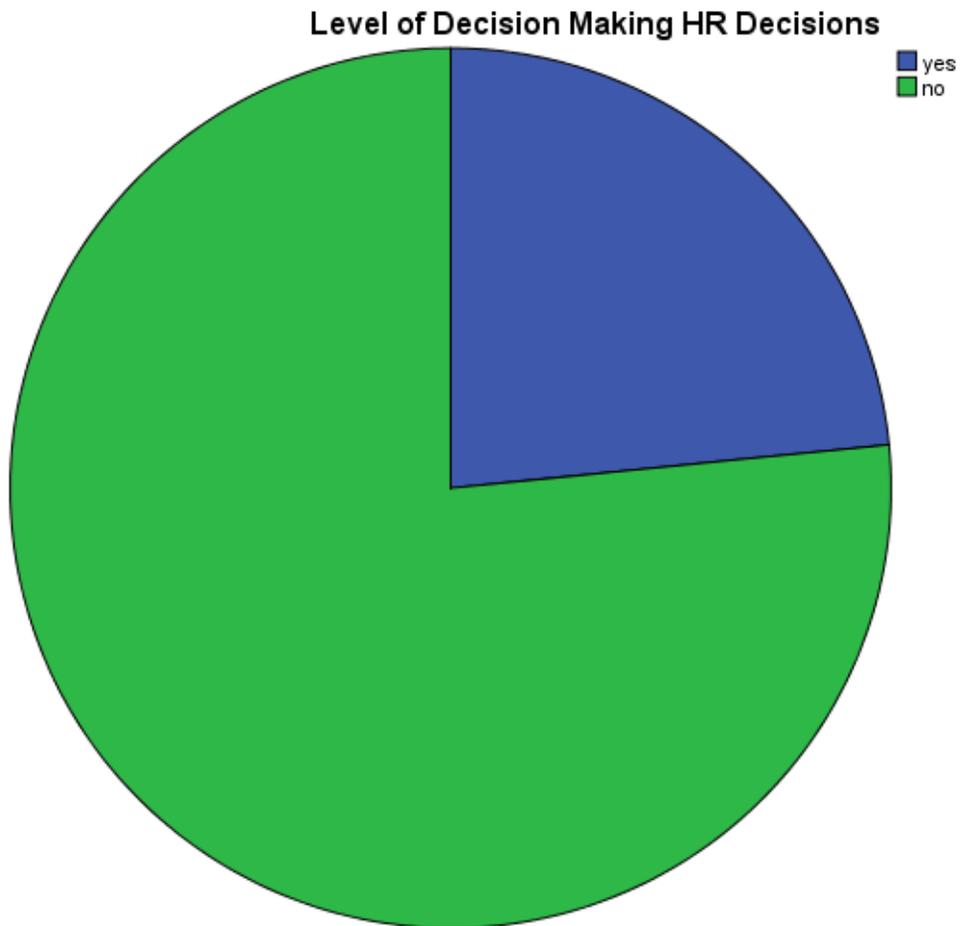


Figure 150: Data Analysis Level of Human Resources Decision

Level of Investment Goods Decision Making

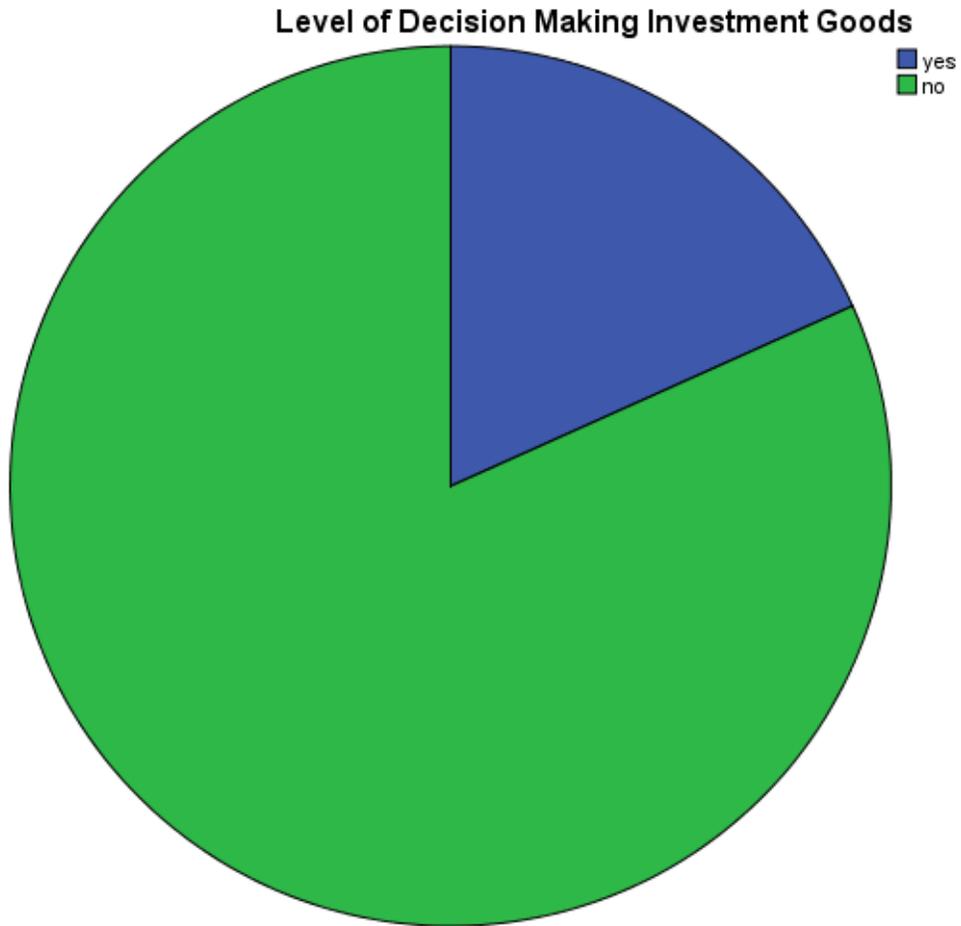


Figure 151: Data Analysis Level of Investment Goods Decision

Level of Expendable Goods Decision Making

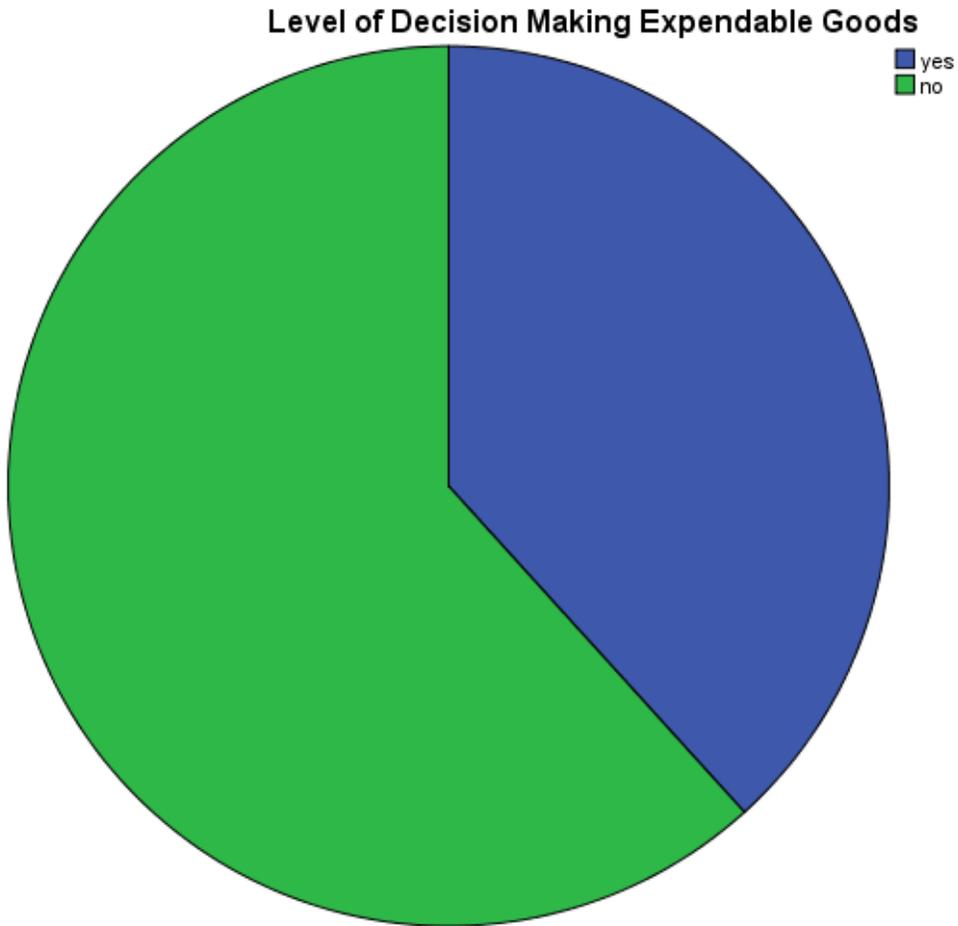


Figure 152: Data Analysis Level of Expendable Goods Decision

**Size of Company**

**Statistics**

Size of Company

N	Valid	175
	Missing	0

**Size of Company**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	11-50	22	12,6	12,6	12,6
	51-250	52	29,7	29,7	42,3
	251-	101	57,7	57,7	100,0
	Total	175	100,0	100,0	

Table 31: Data Analysis Size of Company

Size of Companies

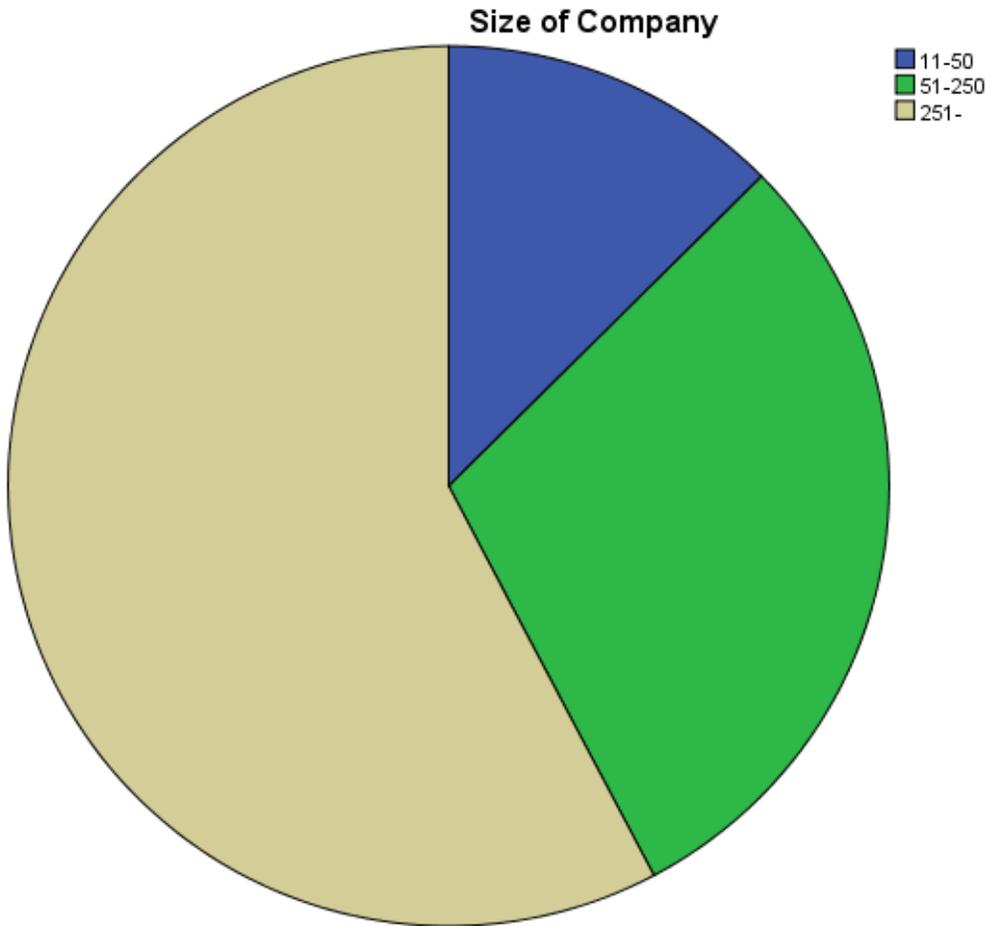


Figure 153: Data Analysis Size of Company

**Sectors**

**Statistics**

Sector

N	Valid	175
	Missing	0

**Sector**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manufacturing	42	24,0	24,0	24,0
	Construction	16	9,1	9,1	33,1
	Wholesale and retail trade	47	26,9	26,9	60,0
	Accomodation and food service	8	4,6	4,6	64,6
	Transporting, storage and information	14	8,0	8,0	72,6
	Support services	48	27,4	27,4	100,0
	Total	175	100,0	100,0	

Table 32: Data Analysis Sectors of Business

Sectors of Companies

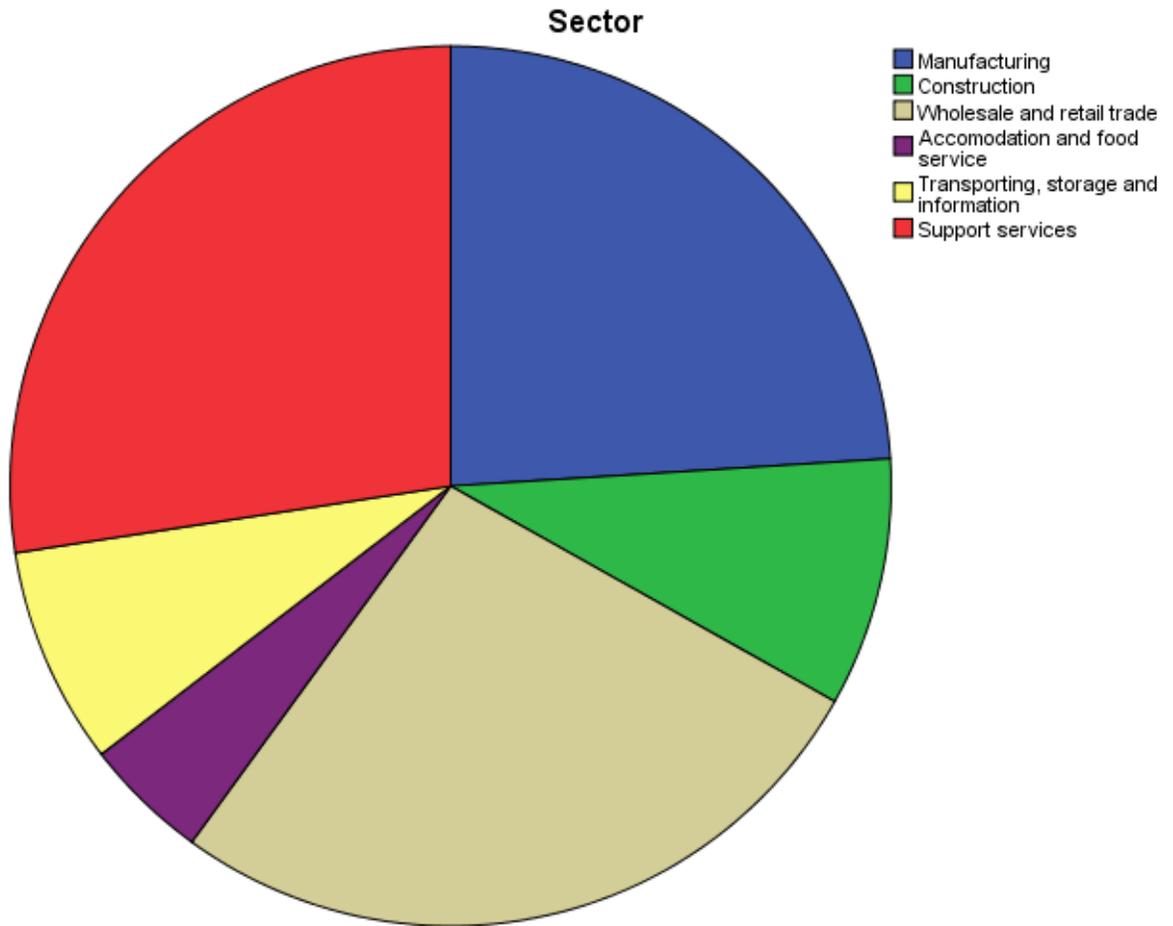


Figure 154: Data Analysis Sectors of Business

Frequency Implicit Motives

**Statistics**

Implicit Motive

N	Valid	174
	Missing	1

**Implicit Motive**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Affiliation	2	1,1	1,1	1,1
	Power	167	95,4	96,0	97,1
	Achievement	5	2,9	2,9	100,0
	Total	174	99,4	100,0	
Missing	System	1	,6		
Total		175	100,0		

Table 33: Data Analysis Frequency Implicit Motives

Frequency of Implicit Motives

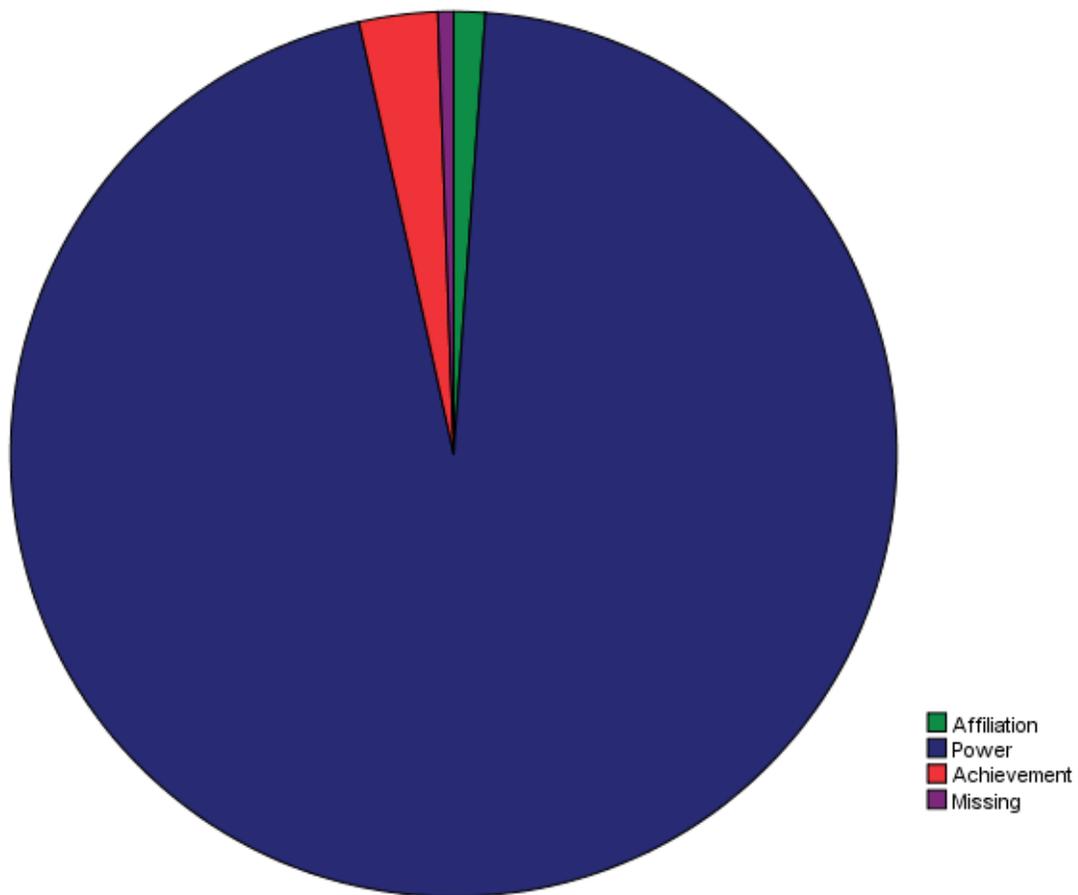


Figure 155: Data Analysis Frequency Implicit Motives

Cluster Analysis

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Implicit Motive * Intensity Motive	174	99,4%	1	0,6%	175	100,0%

Implicit Motive \* Intensity Motive Crosstabulation

Count

		Intensity Motive			Total
		high	middle	low	
Implicit Motive	Affiliation	0	0	2	2
	Power	35	100	32	167
	Achievement	0	0	5	5
Total		35	100	39	174

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25,246 <sup>a</sup>	4	,000
Likelihood Ratio	21,991	4	,000
Linear-by-Linear Association	2,894	1	,089
N of Valid Cases	174		

a. 6 cells (66,7%) have expected count less than 5. The minimum expected count is ,40.

**Appendix K. Data Collection SPSS Data Analysis Survey**

**Symmetric Measures**

		Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Nominal by Nominal	Phi	,381			,000
	Cramer's V	,269			,000
	Contingency Coefficient	,356			,000
Interval by Interval	Pearson's R	,129	,106	1,711	,089 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	,133	,108	1,754	,081 <sup>c</sup>
N of Valid Cases		174			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Table 34: Data Analysis Cluster Analysis Intensity

# Appendix K. Data Collection SPSS Data Analysis Survey

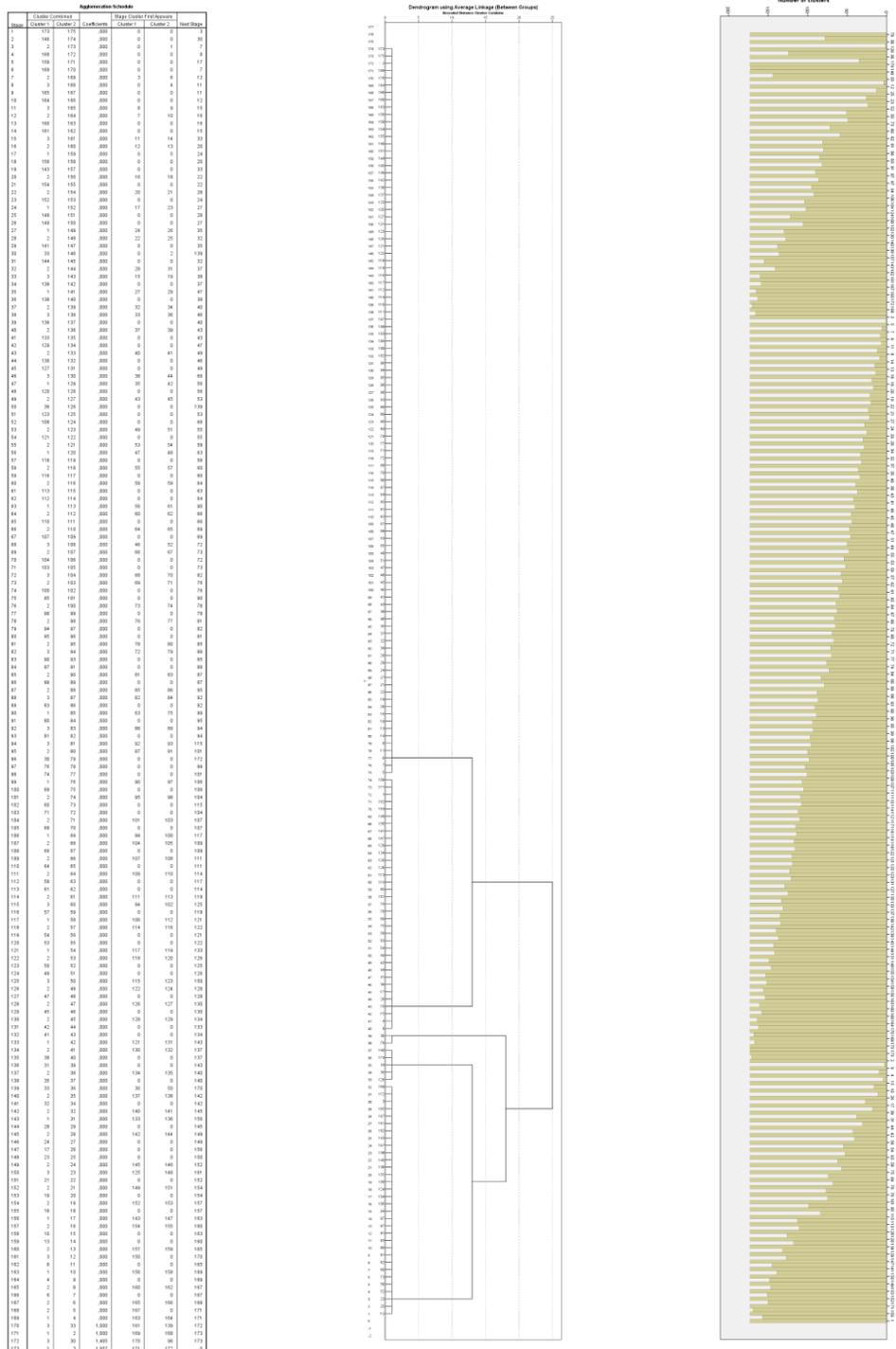


Figure 156: Data Analysis Cluster Analysis Intensity

## Appendix L. Data Collection SPSS Data Analysis Experiment

### Frequency Personal Decision Car

#### Statistics

Car own usage

N	Valid	175
	Missing	0

#### Car own usage

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Car 1 - Achievement	80	45,7	45,7	45,7
	Car 2 - Affiliation	37	21,1	21,1	66,9
	Car 3 - Power	58	33,1	33,1	100,0
	Total	175	100,0	100,0	

Table 35: Data Analysis Frequency Personal Decision Car

Frequency Personal Decision Car

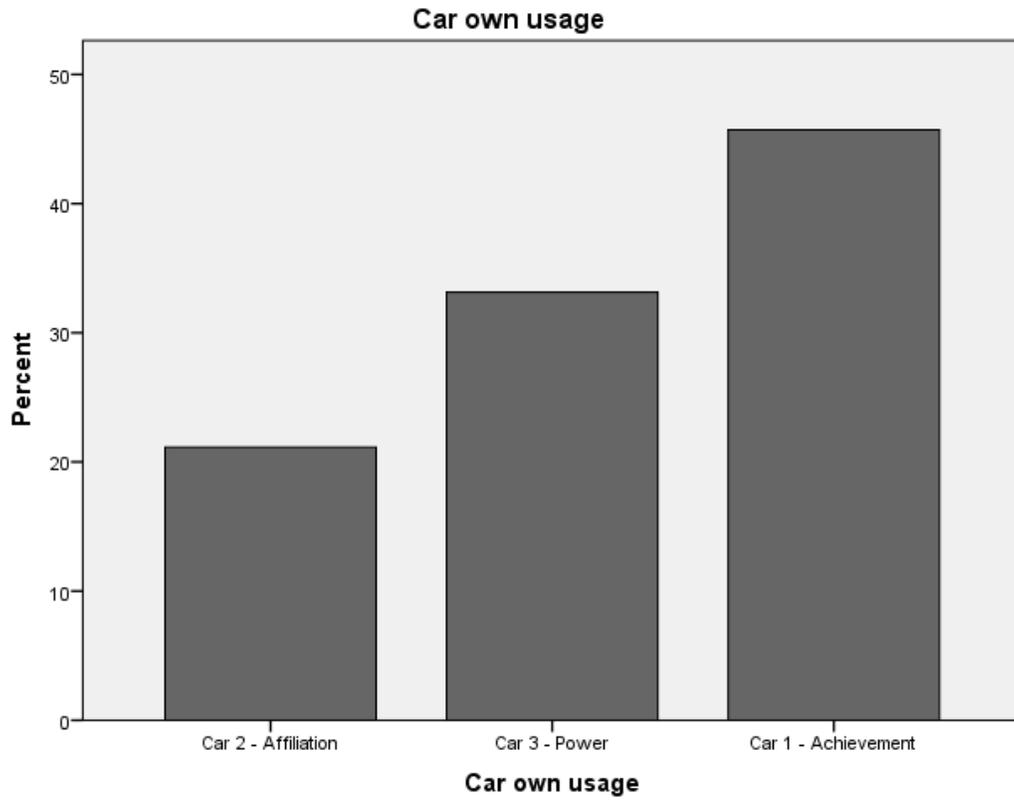


Figure 157: Data Analysis Frequency Personal Decision Car

Frequency Personal Decision Office Equipment

**Statistics**

Office own usage

N	Valid	175
	Missing	0

**Office own usage**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Office 1 - Affiliation	35	20,0	20,0	20,0
	Office 2 - Power	85	48,6	48,6	68,6
	Office 3 - Achievement	55	31,4	31,4	100,0
	Total	175	100,0	100,0	

Table 36: Data Analysis Frequency Personal Decision Office Equipment

Frequency Personal Decision Office Equipment

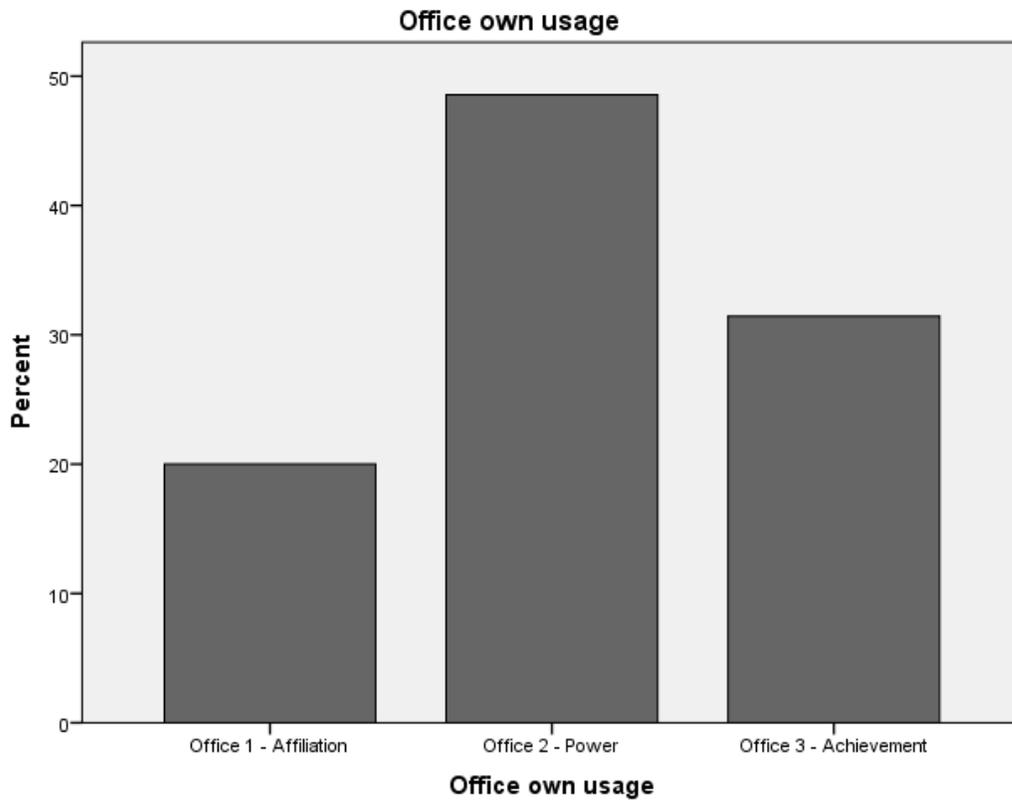


Figure 158: Data Analysis Frequency Personal Decision Office Equipment

**Personal Decision Implicit Motive vs. Car**

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Car own usage * Implicit Motive	174	99,4%	1	0,6%	175	100,0%

**Car own usage \* Implicit Motive Crosstabulation**

Count

		Implicit Motive			Total
		Affiliation	Power	Achievement	
Car own usage	Car 1 - Achievement	1	78	0	79
	Car 2 - Affiliation	0	36	1	37
	Car 3 - Power	1	53	4	58
Total		2	167	5	174

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6,339 <sup>a</sup>	4	,175
Likelihood Ratio	8,084	4	,089
Linear-by-Linear Association	3,523	1	,061
N of Valid Cases	174		

a. 6 cells (66,7%) have expected count less than 5. The minimum expected count is ,43.

## Appendix L. Data Collection SPSS Data Analysis Experiment

### Directional Measures

			Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Nominal by Nominal	Uncertainty Coefficient	Symmetric	,037	,016	2,209	,089 <sup>c</sup>
		Car own usage Dependent	,022	,010	2,209	,089 <sup>c</sup>
		Implicit Motive Dependent	,121	,036	2,209	,089 <sup>c</sup>

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Likelihood ratio chi-square probability.

### Symmetric Measures

		Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Nominal by Nominal	Phi	,191			,175
	Cramer's V	,135			,175
	Contingency Coefficient	,187			,175
Interval by Interval	Pearson's R	,143	,074	1,891	,060 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	,144	,072	1,910	,058 <sup>c</sup>
N of Valid Cases		174			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Table 37: Data Analysis Personal Decision Implicit Motive vs. Car

**Personal Decision Implicit Motive vs. Office Equipment**

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Office own usage * Implicit Motive	174	99,4%	1	0,6%	175	100,0%

**Office own usage \* Implicit Motive Crosstabulation**

Count

		Implicit Motive			Total
		Affiliation	Power	Achievement	
Office own usage	Office 1 - Affiliation	1	32	2	35
	Office 2 - Power	1	80	3	84
	Office 3 - Achievement	0	55	0	55
Total		2	167	5	174

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4,400 <sup>a</sup>	4	,355
Likelihood Ratio	6,118	4	,190
Linear-by-Linear Association	,513	1	,474
N of Valid Cases	174		

a. 6 cells (66,7%) have expected count less than 5. The minimum expected count is ,40.

## Appendix L. Data Collection SPSS Data Analysis Experiment

### Directional Measures

			Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Nominal by Nominal	Uncertainty Coefficient	Symmetric	,029	,012	2,144	,190 <sup>c</sup>
		Office own usage Dependent	,017	,008	2,144	,190 <sup>c</sup>
		Implicit Motive Dependent	,091	,028	2,144	,190 <sup>c</sup>

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Likelihood ratio chi-square probability.

### Symmetric Measures

		Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Nominal by Nominal	Phi	,159			,355
	Cramer's V	,112			,355
	Contingency Coefficient	,157			,355
Interval by Interval	Pearson's R	-,054	,077	-,716	,475 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	-,057	,074	-,746	,457 <sup>c</sup>
N of Valid Cases		174			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Table 38: Data Analysis Personal Decision Implicit Motive vs. Office

Multivariate Analysis Personal Decision Car

Correspondence Table

Row	Column			
	Affiliation	Power	Achievement	Active Margin
1	1	78	0	79
2	0	36	1	37
3	1	53	4	58
Active Margin	2	167	5	174

Summary

Dimension	Singular Value	Inertia	Chi Square	Sig.	Proportion of Inertia		Confidence Singular Value	
					Accounted for	Cumulative	Standard Deviation	Correlation 2
1	,183	,033			,917	,917	,061	-,339
2	,055	,003			,083	1,000	,022	
Total		,036	6,339	,175 <sup>a</sup>	1,000	1,000		

a. 4 degrees of freedom

Overview Row Points<sup>a</sup>

Row	Mass	Score in Dimension		Inertia	Contribution				
		1	2		Of Point to Inertia of Dimension		Of Dimension to Inertia of Point		
					1	2	1	2	Total
1	,454	,396	,138	,013	,389	,157	,965	,035	1,000
2	,213	,060	-,450	,003	,004	,783	,056	,944	1,000
3	,333	-,577	,099	,020	,607	,059	,991	,009	1,000
Active Total	1,000			,036	1,000	1,000			

a. Symmetrical normalization

## Appendix L. Data Collection SPSS Data Analysis Experiment

**Overview Column Points<sup>a</sup>**

Column	Mass	Score in Dimension		Inertia	Contribution				
		1	2		Of Point to Inertia of Dimension		Of Dimension to Inertia of Point		Total
					1	2	1	2	
Affiliation	,011	-,496	2,157	,003	,015	,973	,150	,850	1,000
Power	,960	,080	-,020	,001	,033	,007	,981	,019	1,000
Achievement	,029	-2,460	-,196	,032	,951	,020	,998	,002	1,000
Active Total	1,000			,036	1,000	1,000			

a. Symmetrical normalization

Table 39: Multivariate Data Analysis Personal Decision Car

Multivariate Data Analysis Personal Decision Car

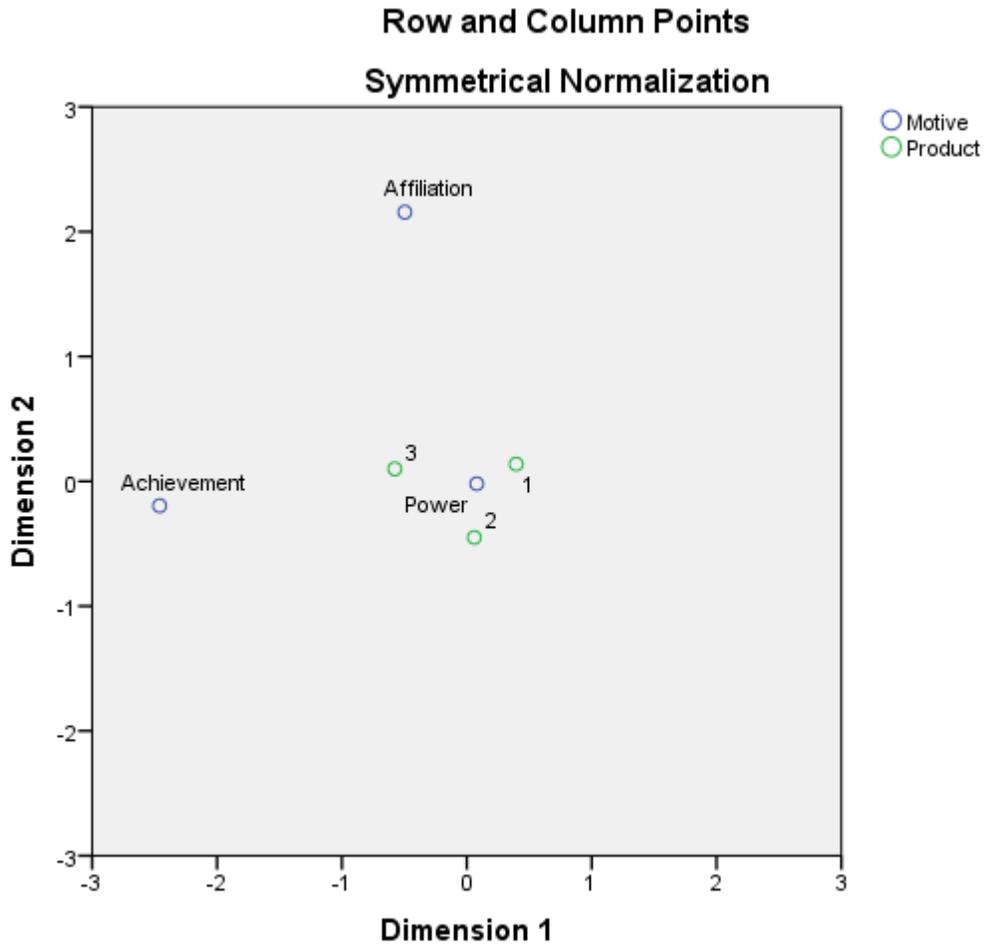


Figure 159: Multivariate Data Analysis Personal Decision Car

Multivariate Analysis Personal Decision Office

Correspondence Table

Row	Column			
	Affiliation	Power	Achievement	Active Margin
1	1	32	2	35
2	1	80	3	84
3	0	55	0	55
Active Margin	2	167	5	174

Summary

Dimension	Singular Value	Inertia	Chi Square	Sig.	Proportion of Inertia		Confidence Singular Value	
					Accounted for	Cumulative	Standard Deviation	Correlation 2
1	,158	,025			,982	,982	,055	,044
2	,021	,000			,018	1,000	,088	
Total		,025	4,400	,355 <sup>a</sup>	1,000	1,000		

a. 4 degrees of freedom

Overview Row Points<sup>a</sup>

Row	Mass	Score in Dimension		Inertia	Contribution				
		1	2		Of Point to Inertia of Dimension		Of Dimension to Inertia of Point		
					1	2	1	2	Total
1	,201	-,590	,194	,011	,444	,355	,986	,014	1,000
2	,483	-,091	-,147	,001	,025	,492	,740	,260	1,000
3	,316	,514	,101	,013	,531	,153	,995	,005	1,000
Active Total	1,000			,025	1,000	1,000			

a. Symmetrical normalization

## Appendix L. Data Collection SPSS Data Analysis Experiment

**Overview Column Points<sup>a</sup>**

Column	Mass	Score in Dimension		Inertia	Contribution				
		1	2		Of Point to Inertia of Dimension		Of Dimension to Inertia of Point		Total
					1	2	1	2	
Affiliation	,011	-2,160	1,094	,009	,340	,648	,967	,033	1,000
Power	,960	,081	,002	,001	,040	,000	1,000	,000	1,000
Achievement	,029	-1,844	-,510	,016	,620	,352	,990	,010	1,000
Active Total	1,000			,025	1,000	1,000			

a. Symmetrical normalization

Table 40: Multivariate Analysis Personal Decision Office Equipment

Multivariate Analysis Personal Decision Office Equipment

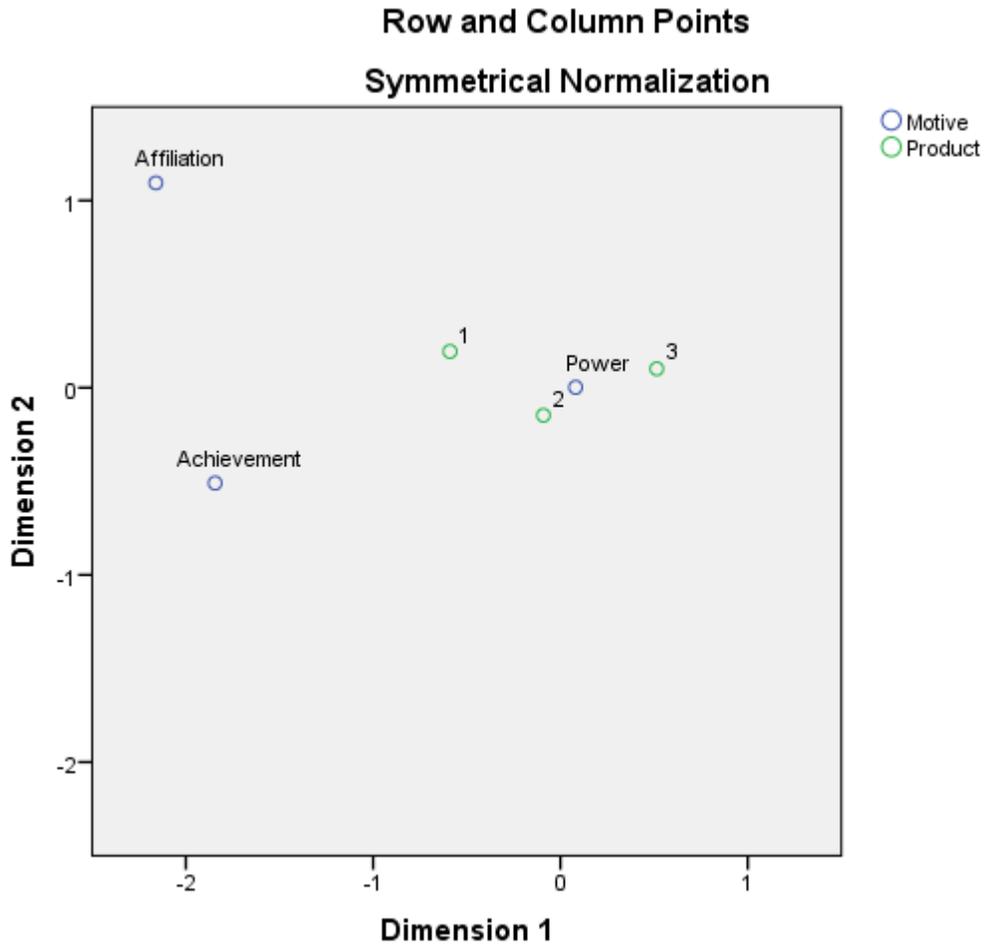


Figure 160: Multivariate Analysis Personal Decision Office Equipment

**Management Decision Frequencies Car Controller**

**Statistics**

Car Controller

N	Valid	175
	Missing	0

**Car Controller**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Car 1 - Achievement	46	26,3	26,3	26,3
	Car 2 - Affiliation	111	63,4	63,4	89,7
	Car 3 - Power	18	10,3	10,3	100,0
	Total	175	100,0	100,0	

Table 41: Management Decision Frequencies Car Controller

Management Decision Frequencies Car Controller

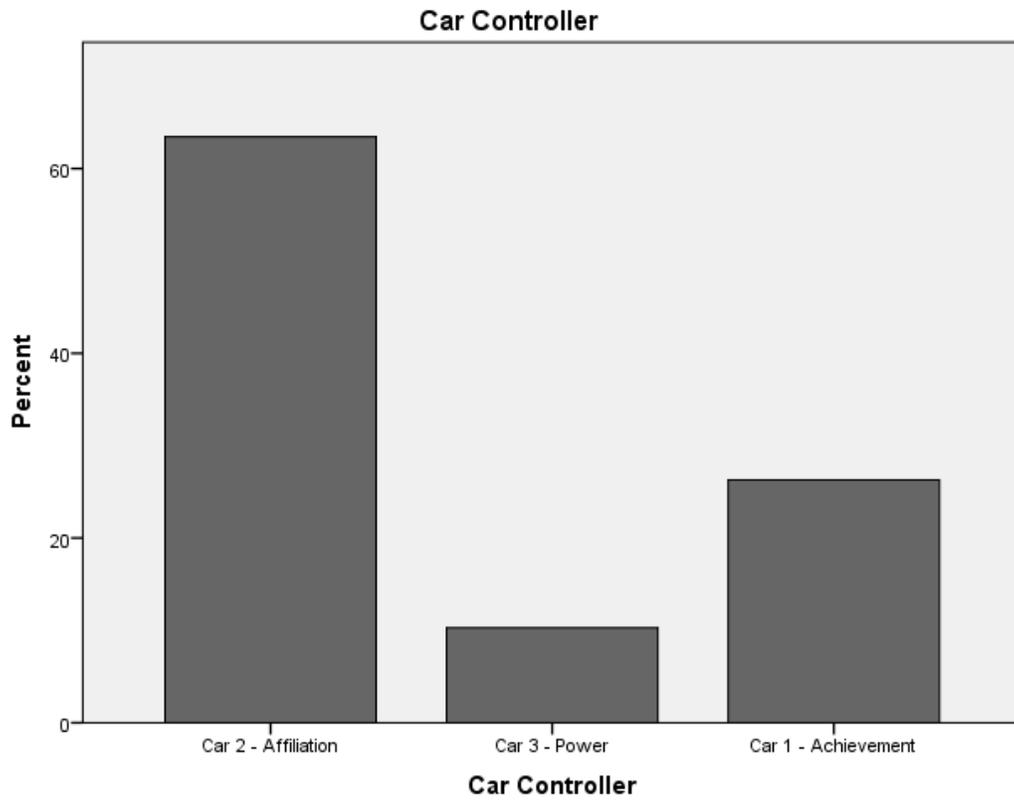


Figure 161: Management Decision Frequencies Car Controller

**Management Decision Frequencies Office Controller**

**Statistics**

Office Controller

N	Valid	175
	Missing	0

**Office Controller**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Office 1 - Affiliation	87	49,7	49,7	49,7
	Office 2 - Power	48	27,4	27,4	77,1
	Office 3 - Achievement	40	22,9	22,9	100,0
	Total	175	100,0	100,0	

Table 42: Management Decision Frequencies Office Controller

Management Decision Frequencies Office Controller

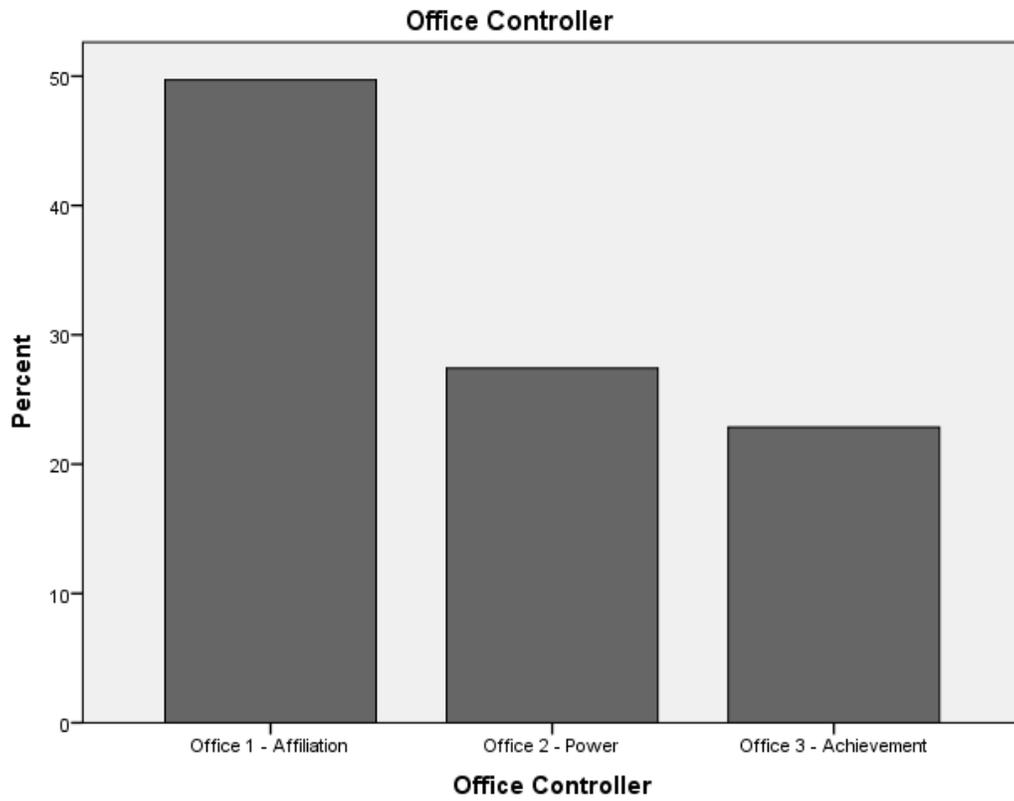


Figure 162: Management Decision Frequencies Office Controller

**Management Decision Frequencies Car Corporate Strategy**

**Statistics**

Car Corporate Strategy

N	Valid	175
	Missing	0

**Car Corporate Strategy**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Car 1 - Achievement	43	24,6	24,6	24,6
	Car 2 - Affiliation	23	13,1	13,1	37,7
	Car 3 - Power	109	62,3	62,3	100,0
	Total	175	100,0	100,0	

Table 43: Management Decision Frequencies Car Corporate Strategy

Management Decision Frequencies Car Corporate Strategy

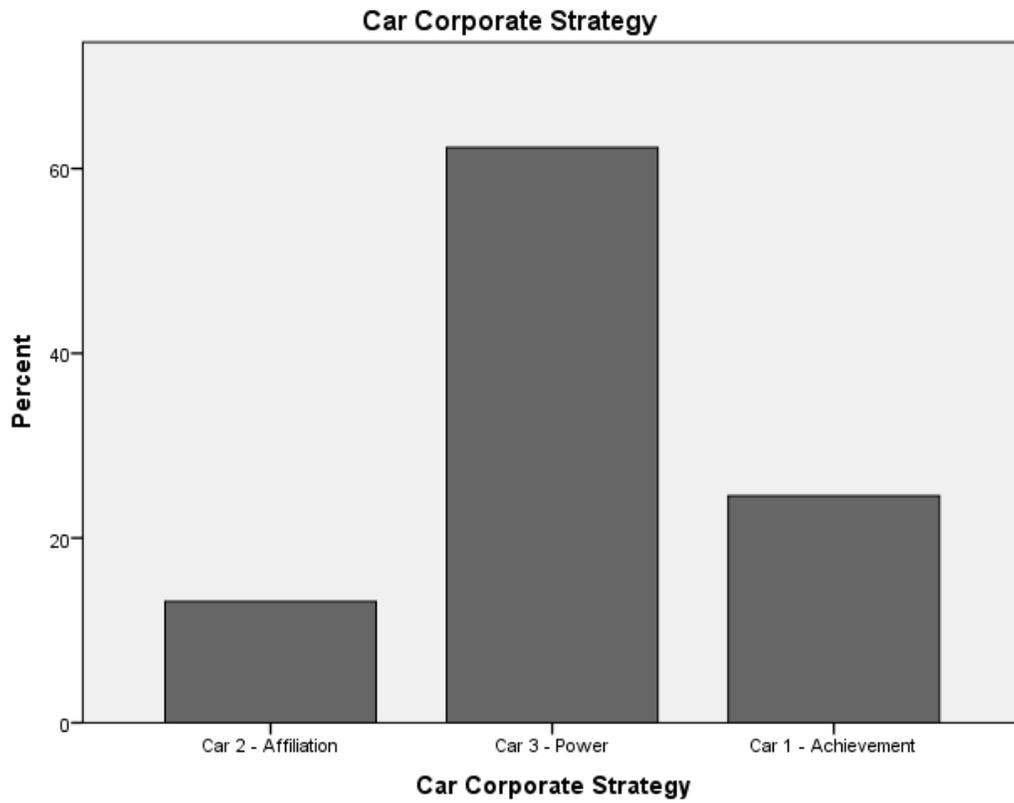


Figure 163: Management Decision Frequencies Car Corporate Strategy

**Management Decision Frequencies Office Corporate Strategy**

**Statistics**

Office Corporate Strategy

N	Valid	175
	Missing	0

**Office Corporate Strategy**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Office 1 - Affiliation	18	10,3	10,3	10,3
	Office 2 - Power	102	58,3	58,3	68,6
	Office 3 - Achievement	55	31,4	31,4	100,0
	Total	175	100,0	100,0	

Table 44: Management Decision Frequencies Office Corporate Strategy

Management Decision Frequencies Office Corporate Strategy

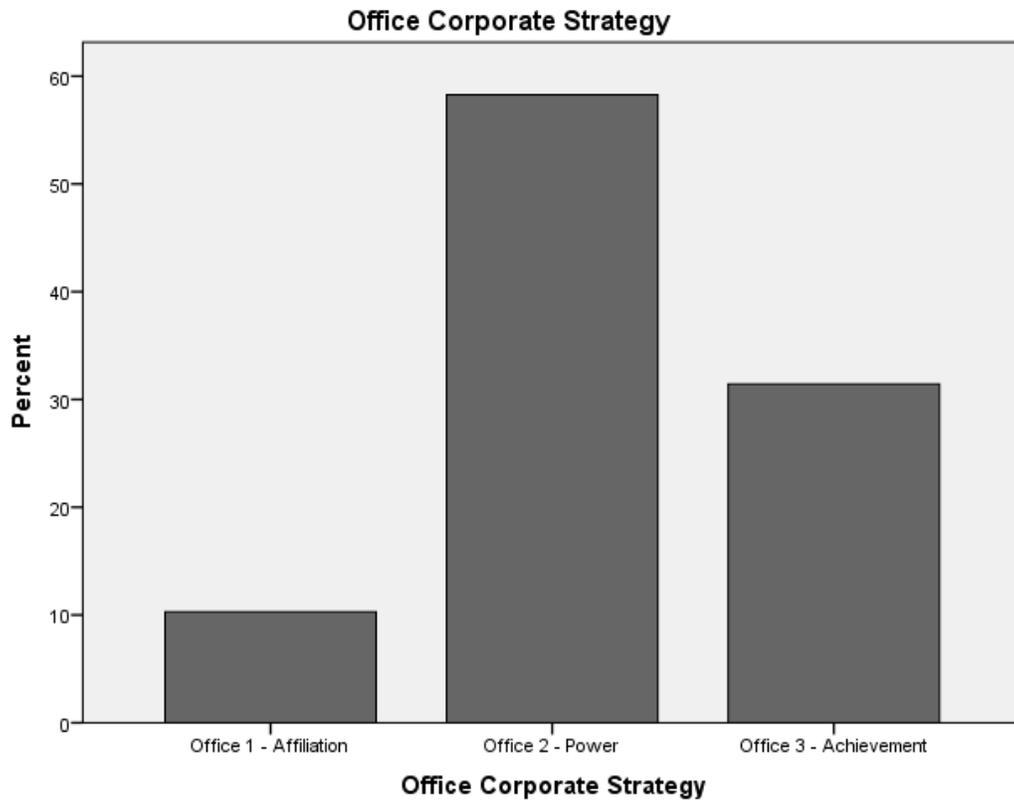


Figure 164: Management Decision Frequencies Office Corporate Strategy

**Management Decision Frequencies Car Event Marketing**

**Statistics**

Car Event

N	Valid	175
	Missing	0

**Car Event**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Car 1 - Achievement	131	74,9	74,9	74,9
	Car 2 - Affiliation	21	12,0	12,0	86,9
	Car 3 - Power	23	13,1	13,1	100,0
	Total	175	100,0	100,0	

Table 45: Management Decision Frequencies Car Event Marketing

Management Decision Frequencies Car Event Marketing

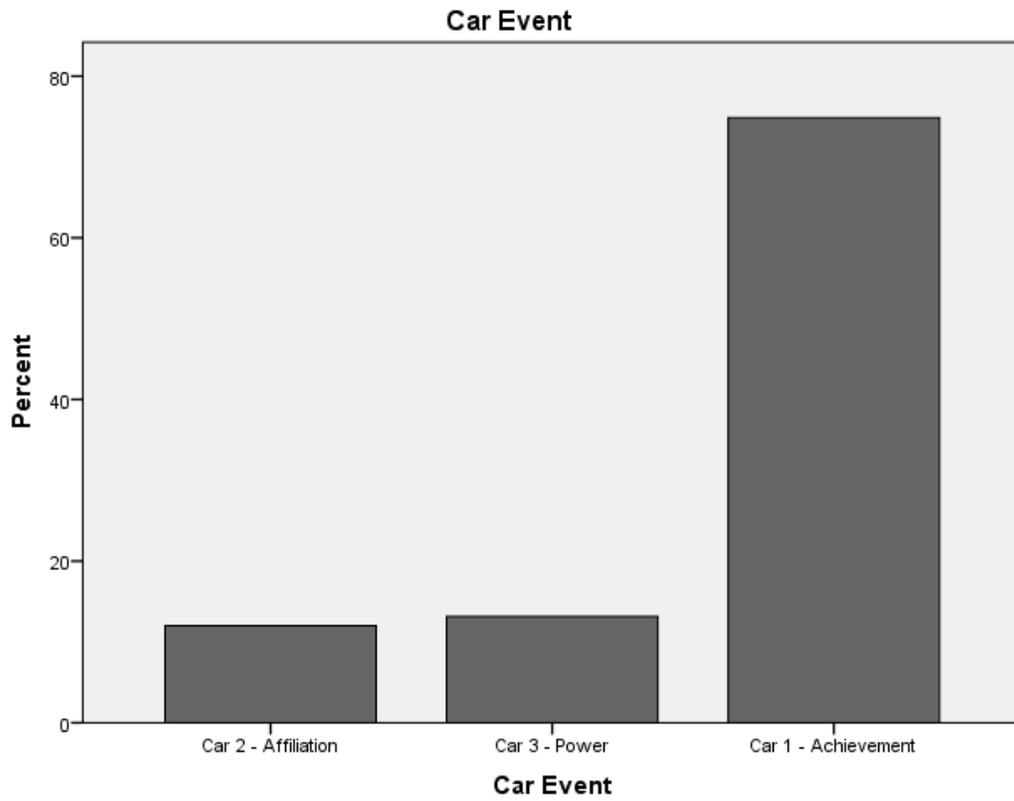


Figure 165: Management Decision Frequencies Car Event Marketing

**Management Decision Frequencies Office Event Marketing**

**Statistics**

Office Event

N	Valid	175
	Missing	0

**Office Event**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Office 1 - Affiliation	22	12,6	12,6	12,6
	Office 2 - Power	58	33,1	33,1	45,7
	Office 3 - Achievement	95	54,3	54,3	100,0
	Total	175	100,0	100,0	

Table 46: Management Decision Frequencies Office Event Marketing

Management Decision Frequencies Office Event Marketing

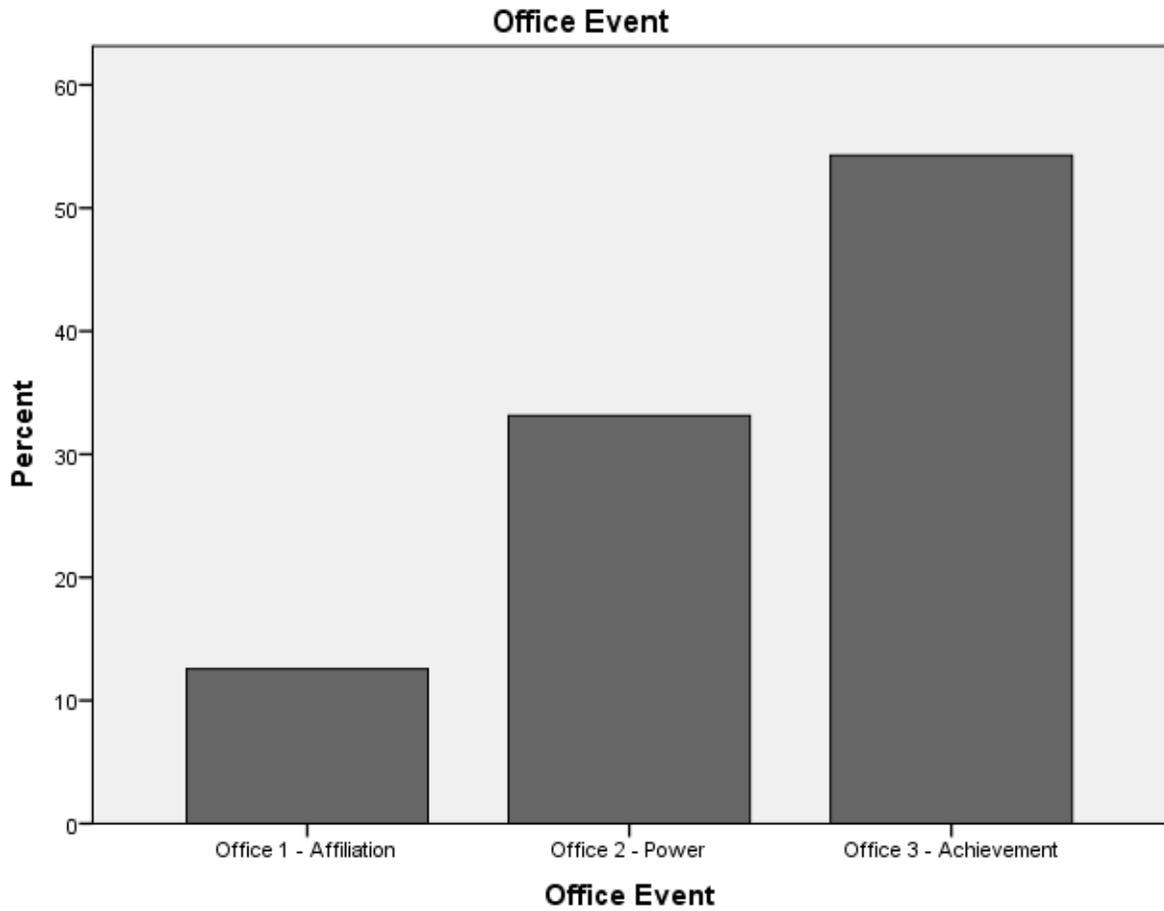


Figure 166: Management Decision Frequencies Office Event Marketing

## Appendix M. Data Collection Expert Interviews

### Expert Interviews without an Implicit Communication Background

#### **MINI**

##### **Gert-Ulrich Grahl**

Marketing Manager

Munich, 29. July 2013

#### **NRJ**

##### **Erik Henschel**

Marketing Manager

Munich, 09. July 2013

#### **PORSCHE**

##### **Thorsten Guenter**

CEO Porsche Munich

Munich, 29. July 2013

#### **Wholesaling market leader**

**(No permission for company name and interview partner)**

CEO

Munich, 17. July 2013

Table 47: Interviews without an Implicit Communication Background

**Interview Partners with an Implicit Communication Background**

**Exact**

**Martin Schmid**

Marketing Manger

Munich, 05. June 2013

**KEK IT**

**Bernhard Erasmus**

CEO

Munich, 09. July 2013

**SPANGLER Automation**

**Tina Lambert**

Marketing Manager

Dietfurth, 11. June 2013

**O2 Telefonica**

**Veronika Ziegler**

Marketing Manager

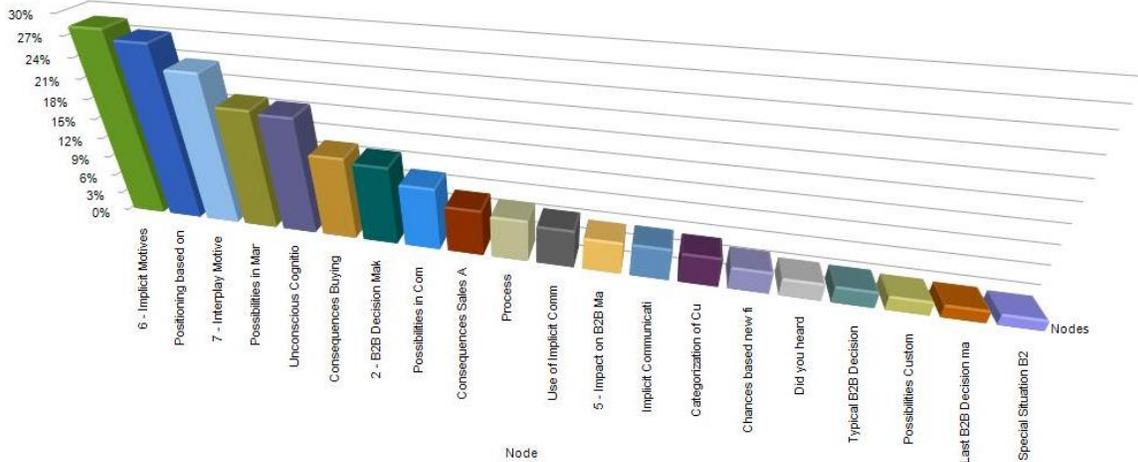
Munich, 10. July 2013

Table 48: Interviews with an Implicit Communication Background

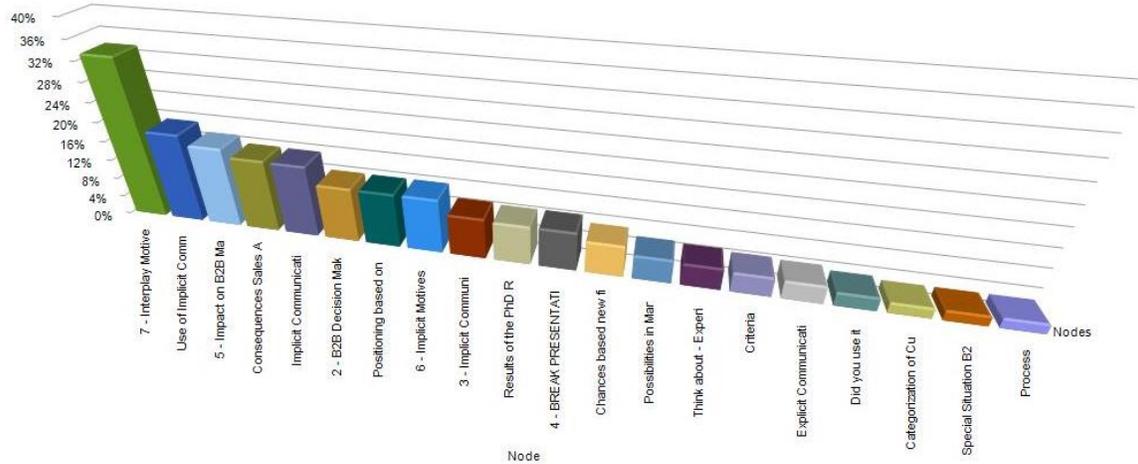
## Appendix N. Data Collection NVivo Data Analysis Coverage

### Expert Interviews without an Implicit Communication Background

Interview Gert-Ulrich Grahl MINI 2013-07-29 - Coding by Node

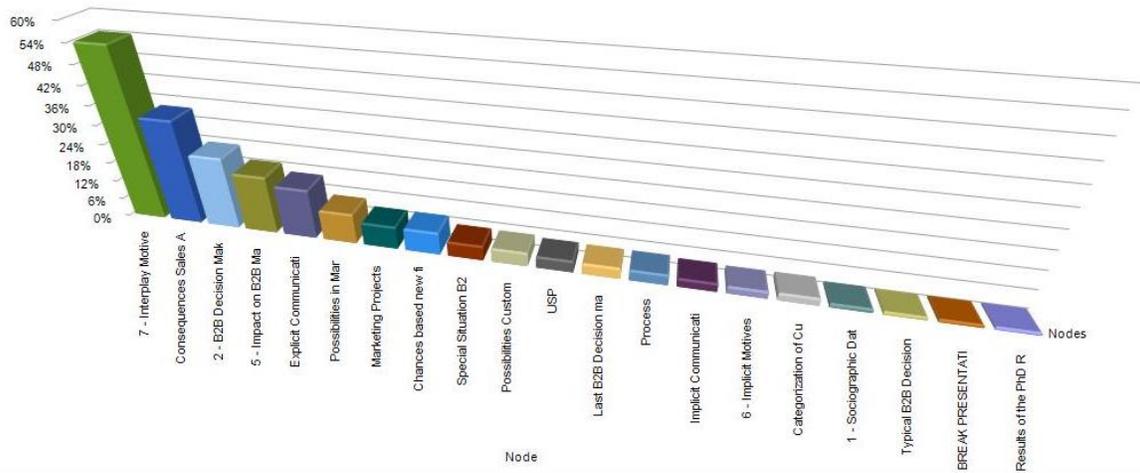
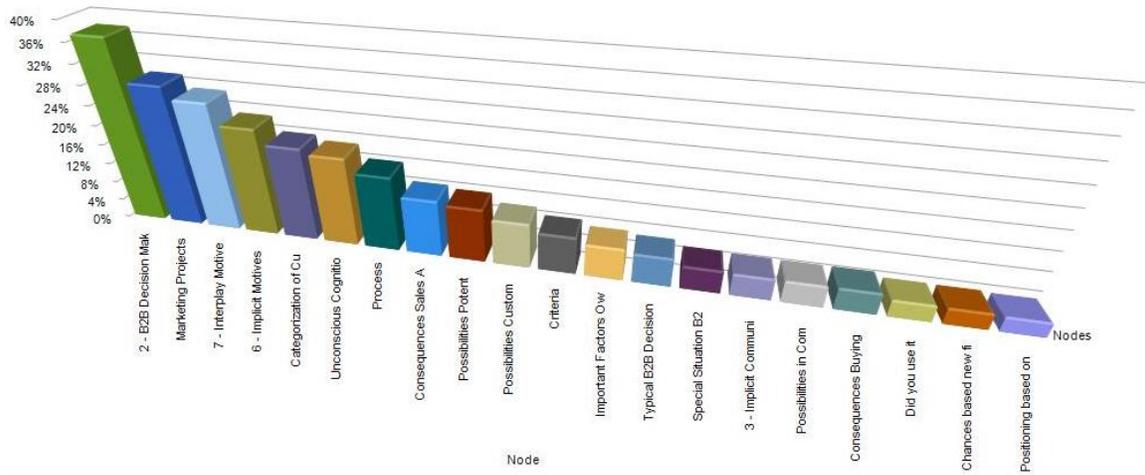


Interview Erik Henschel 2013-07-09 - Coding by Node



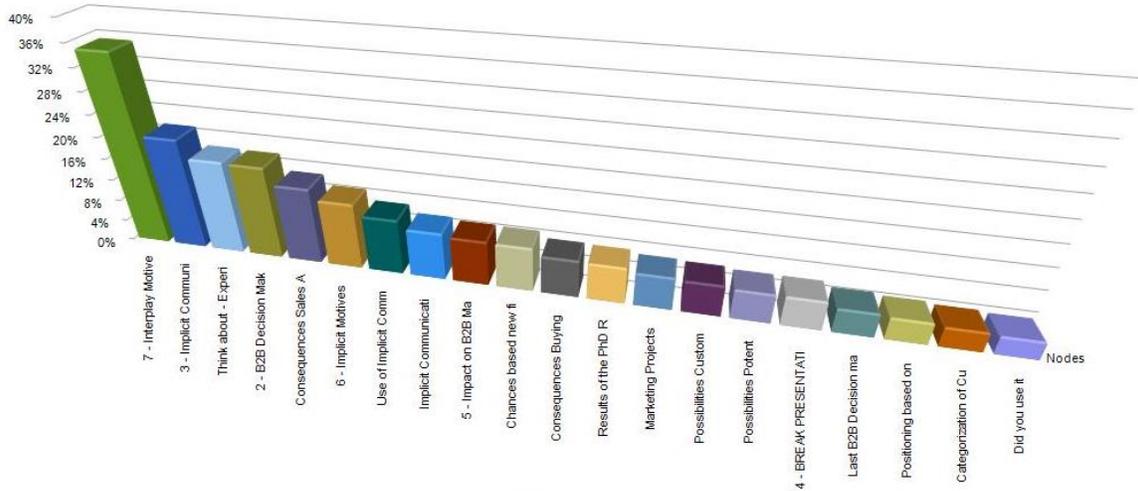
# Appendix N. Data Collection NVivo Data Analysis Coverage

Interview Thorsten Günther PORSCHE 2013-07-29 - Coding by Node

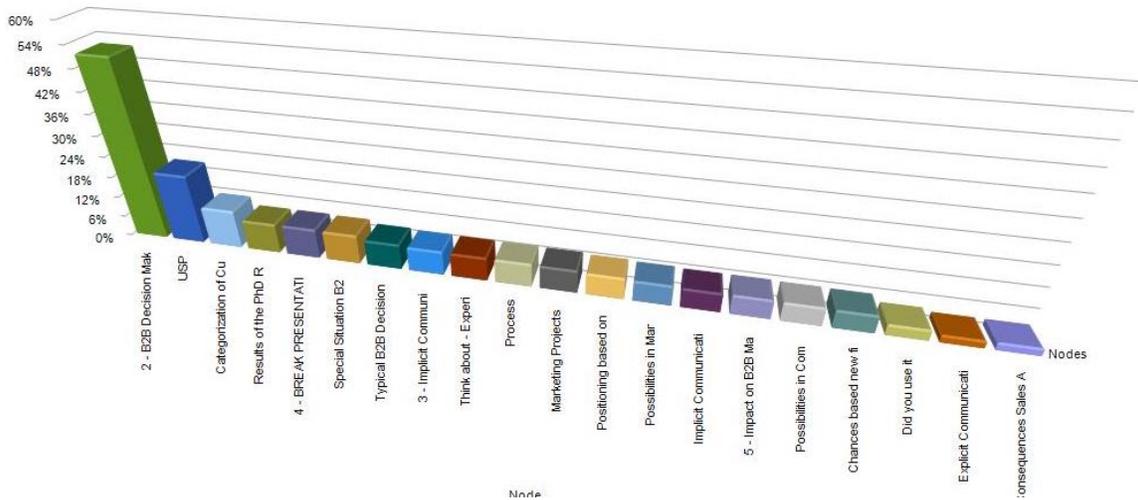


Interview Partners with an Implicit Communication Background

Interview Martin Schmid Exact 2012-06-05 - Coding by Node



Interview Berhard Erasmus KEK IT 2013-07-09 - Coding by Node



# Appendix N. Data Collection NVivo Data Analysis Coverage

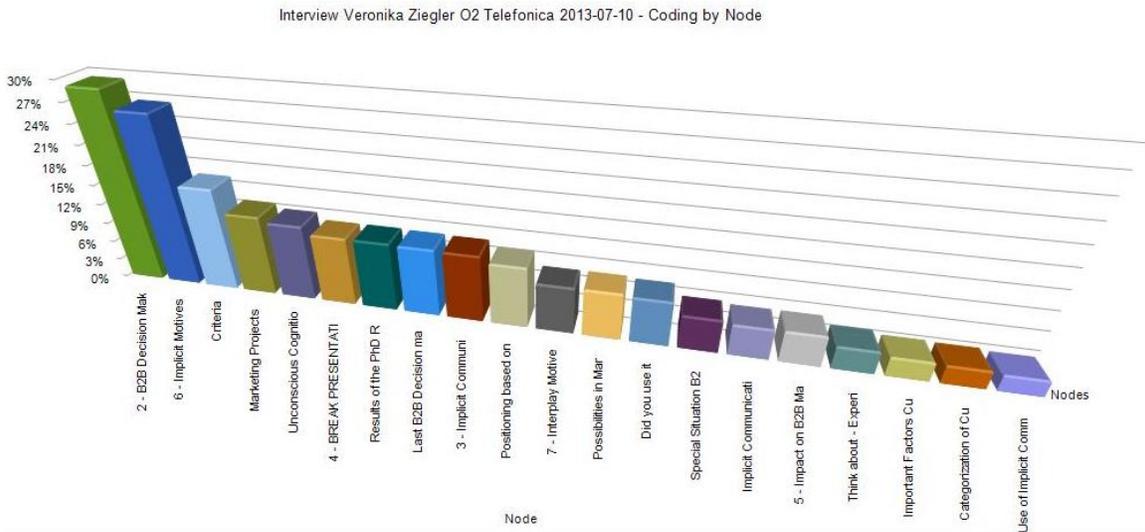
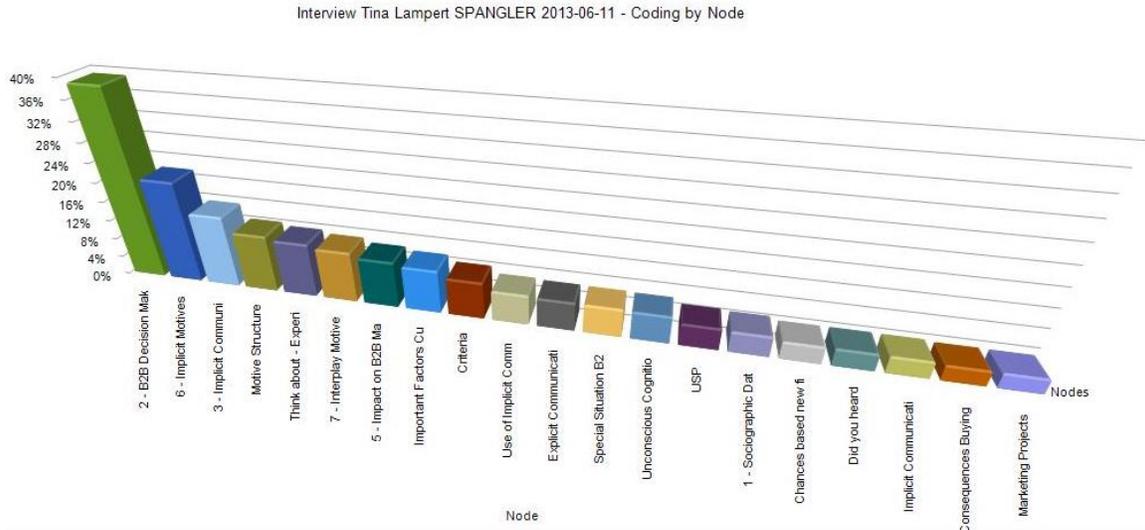


Figure 167: Data Collection Percentage Coverage

## Appendix O. Data Collection Data Analysis Word Frequency

aktion anbot bekannt **besser** bewusst bild **branche** brand braucht ci

cool dienstleister **dinge** ehrlich eigene eindeutig einkauf emotion emotionen

entscheiden **entscheidung** entscheidungen

erfahrung faktoren **firma** fragen früher **funktioniert** geld

**geschäft** gespräch gestalten gewissen gruppe handel hersteller

**heute** hörer ikone **image** interessant interessenten job kampagne

kaufen kleinen klientel kollegen **kommunikation** komplette

kooperationspartner kostet kriterien **kunde**

**kunden** leistung **leute** leuten

management marke **marketing** markt medien meinung

mensch **menschen** mitarbeiter moment musik **neue** partner

**preis** prinzip problem **produkt** produkte rational sales

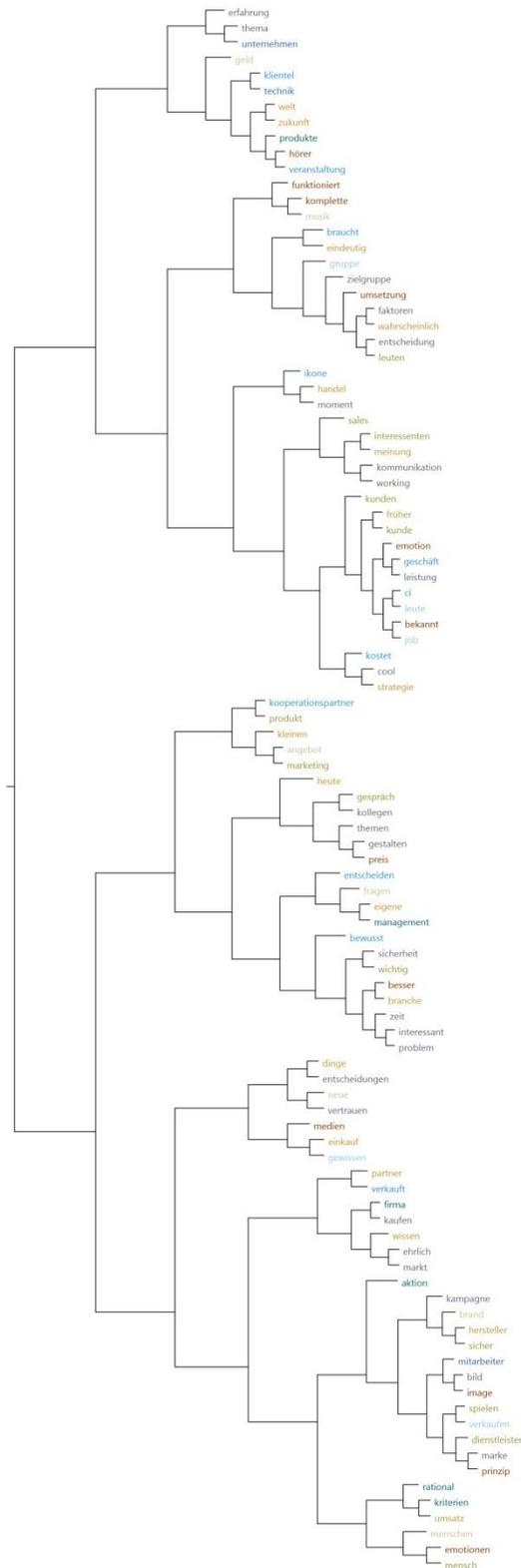
sicher **sicherheit** spielen strategie technik **thema**

themen umsatz umsetzung **unternehmen** veranstaltung verkaufen verkauft

vertrauen wahrscheinlich welt wichtig **wissen** working zeit

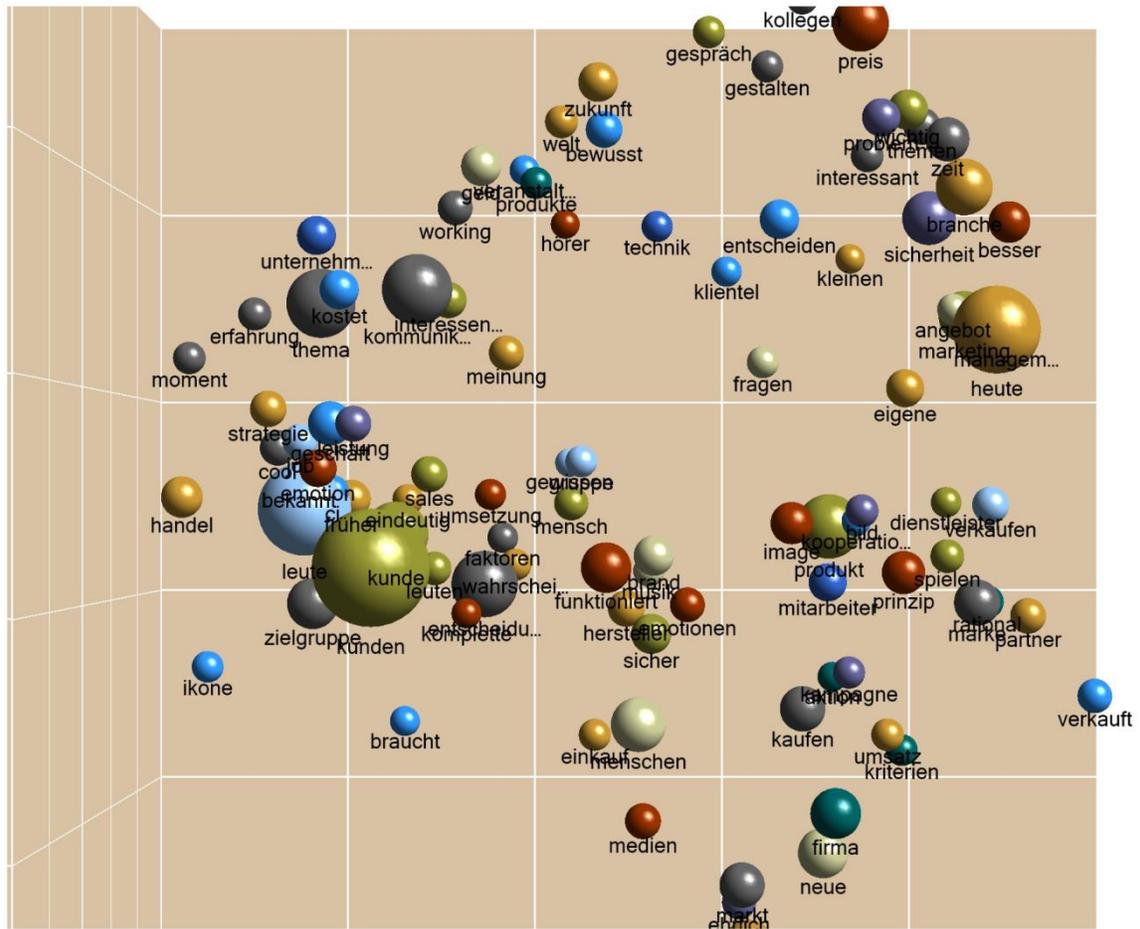
**zielgruppe** zukunft

# Appendix O. Data Collection Data Analysis Word Frequency





### Word Frequency Query



# Appendix O. Data Collection Data Analysis Word Frequency

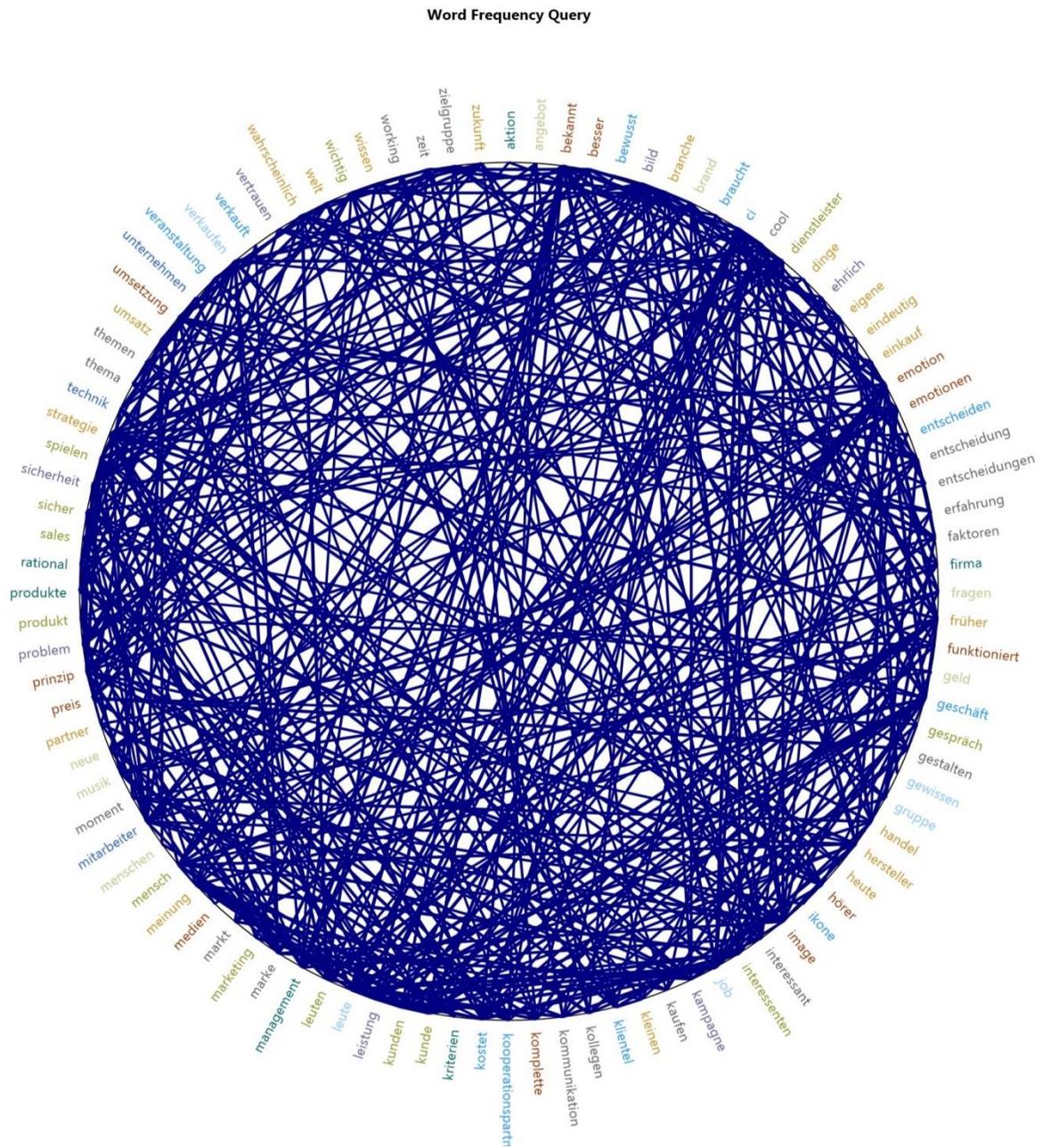


Figure 168: Data Collection Data Analysis Word Frequency

## Appendix P. Skill Development Activities

### Center of University Didactics

Neurological Didactics 2012

### Center of University Didactics

Intercultural Academic Teaching 2012

### University of Applied Sciences Munich

Working in Science for PhD Students 2012

### University of Applied Sciences Munich

PhD Intensive Seminar 2012

### University of Applied Sciences Munich

PhD Conference 2012

### University of Plymouth

Language Support Tutorial 2012

Table 49: Skill Development Activities



Figure 169: Certificate Centre of University Didactics for Neurological Didactics



Figure 170: Certificate Centre of University Didactics for Intercultural Teaching



Figure 171: Certificate Working in Science for PhD Students



Figure 172: Certificate Faculty PhD Intensive Seminar



Figure 173: Certificate Faculty PhD Conference

## Appendix Q. Research Interviews

Prof Dr Julius Kuhl

University of Osnabruck

Topic: Segmentation of the implicit motives, Design of the experiment

Osnabruck, 2011-03-23

Prof Dr Thomas Stumpp

University of Applied Sciences Munich

Topic: Statistical tools for the analysis of correlations and regressions of the experiment

Munich, 2011-06-28

Dr Maja Storch

University of Zurich

Topic: Testing the implicit motives of people

Telephone Conference Munich, 2011-02-07

Prof Dr Ulrich Bucher

DHBW University of Stuttgart

Topic: Multivariable Data Analysis

Munich, 2012-11-16

Table 50: Research Interviews

## Appendix R. Conferences and Lectures

### Conferences

#### PhD Symposium 2010

Munich

Speech

#### PhD Symposium 2011

Plymouth

Speech

#### PhD Symposium 2011

Munich

Speech

Organising Committee

#### Neuromarketing Conference 2012

Munich

Participant

**PhD Symposium 2012**

Plymouth

Speech

**NeuroPsychoEconomic Conference 2012**

Rotterdam

Poster Presentation

**Research Forum 2012**

Munich

Poster Presentation

**PhD Symposium 2012**

Munich

Speech / Poster

Organising Committee

**NeuroPsychoEconomic Conference 2013**

Bonn

Poster Presentation

## Lecturers

### **Baltic College University of Applied Sciences Schwerin**

International Marketing

Marketing

Network Marketing

### **BiTS University of Applied Sciences Iserlohn**

Marketing

Strategic Marketing

History and Trends in Business Administration

### **Munich University of Applied Sciences**

Branding

International Marketing & Branding

Technical Marketing

Marketing

Neuroeconomics

Table 51: Conferences and Lectures



Figure 174: Certificate PhD Symposium Munich 2011

## **Appendix S. Presentations; Guest Lectures**

### **Presentations and Guest Lecturers**

#### **Adam-Ries University of Applied Sciences**

Munich

Guest Lecture 2013

#### **Baltic College**

Schwerin

Guest Lecture 2012

#### **BiTS University of Applied Sciences**

Iserlohn

Guest Lecture 2013

#### **Chamber of Commerce**

Toeging

Guest Lecture 2010

#### **Conference of Advertisement**

Donaueschingen

Keynote Speech 2011

**DQS**

Frankfurt

Guest Speech 2011

**EBZ European Center of Education**

Magdeburg

Guest Speech 2013

**FOM University of Economics & Management Munich**

Munich

Guest Lecture 2010

**KLW-Forum**

Nuremberg

Guest Speech 2010

**Marketing Club**

Dusseldorf

Guest Speech 2011

**School of Marketing and Media**

Munich

Guest Lecture 2011

**TÜV Sued Customer Forum**

Munich

Guest Speech 2013

**Tourism Marketing Usedom Island**

Uckeritz

Guest Speech 2013

**University of Applied Sciences Deggendorf**

Deggendorf

Guest Lecture 2010

Guest Lecture 2011

**University of Applied Sciences Hannover**

Hannover

Guest Lecture 2010

Guest Lecture 2011

Table 52: Presentations; Guest Lectures



Herrn  
Christian Chlupsa  
CANTUS MEDIA GmbH  
Prinzregentenstraße 128  
Im Prinzrgentenhof  
81677 München

Ansprechpartner:  
Christiane Buchner  
Arnulfstraße 30  
80335 München  
christiane.buchner@fom.de

■ HOCHSCHUL-  
STUDIENZENTREN  
AACHEN | BERLIN | BONN |  
BREMEN | DORTMUND |  
DUISBURG | DÜSSELDORF |  
ESSEN | FRANKFURT A. M. |  
GÜTERSLOH | HAMBURG |  
HANNOVER | KÖLN |  
LEIPZIG | MANNHEIM |  
MARL | MÜNCHEN | NEUSS |  
NÜRNBERG | SIEGEN |  
STUTTART | WUPPERTAL |  
BENELUX: LUXEMBURG

■ STUDIENBERATUNG  
BUNDESWEIT  
Telefon 0800 1959595  
Telefax 0800 8959595

■ POSTANSCHRIFT  
Leimkugelstraße 6  
45141 Essen  
Telefon 0201 81004-0  
Telefax 0201 81004-180  
info@fom.de  
www.fom.de

Unser Zeichen cb	Telefon (089) 20 24 52 09	Telefax (089) 20 24 52 29	Datum 12. Dezember 2011
---------------------	------------------------------	------------------------------	----------------------------

**Bestätigung Referententätigkeit**

Sehr geehrter Herr Chlupsa,

wir bedanken uns bei Ihnen für den ca. 1 ½-stündigen Vortrag „Neuromarketing – Neue Chancen für die Werbung“ im Rahmen unserer Impulse-Reihe am Mittwoch, den 8. Dezember 2010 an der FOM – Hochschule für Oekonomie & Management am Hochschulstudienzentrum München.

Die Veranstaltung wurde von rund 50 Teilnehmern besucht. Die Rückmeldungen der Teilnehmer waren durchweg positiv – v. a. wurden die fachliche Kompetenz, die Verständlichkeit der dargestellten Inhalte sowie die Qualität der anschließenden Diskussionsrunde hervorgehoben.

Die Veranstaltungsreihe „Impulse“ an der FOM München umfasst wissenschaftliche Vorträge zu verschiedenen zeitgemäßen Wirtschaftsthemen, die unabhängig voneinander besucht werden können und gibt so einen Überblick über aktuelle Stimmungen, Tendenzen und Perspektiven. Die Veranstaltungen richten sich an Fach- und Führungskräfte sowie an alle Wirtschaftsinteressierten und finden ca. 1 x pro Monat statt.

Mit freundlichen Grüßen

FOM Hochschule für Oekonomie & Management gemeinnützige GmbH  
Hochschulstudienzentrum München

Oliver Dorn  
Geschäftsleitung FOM München

Prof. Dr. Gerald H. Mann  
Studienleitung FOM München

SITZ  
FOM HOCHSCHULE FÜR  
OEKONOMIE & MANAGEMENT  
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HOCHSCHULLEITUNG  
Prof. Dr. Burghard Hermeier  
Rektor  
Dr. Harald Beschorner  
Kanzler

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Commerzbank AG Essen  
Konto 121 171 300  
BLZ 360 400 39  
IBAN: DE33 3604 0039 0121 1713 00  
BIC/SWIFT COBADEFF360  
National-Bank AG Essen  
Konto 121 487  
BLZ 360 200 30  
IBAN: DE43 3602 0030 0000 1214 87  
BIC/SWIFT NBAGD3EXXX  
USt-ID-Nr. DE192903941

AMTSGERICHT  
HRB 10896 Essen  
GESCHÄFTSFÜHRUNG  
Klaus Dieter Braun

Figure 175: Guest Lecture FOM University of Economics an Management

Städtische Berufsschule für  
Medienberufe



Landeshauptstadt  
München  
**Referat für  
Bildung und Sport**

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CANTUS MEDIA GmbH  
Herrn Christian Chlupsa

Prinzregentenstraße 128  
Im Prinzregentenhof  
81677 München

Riesstraße 40  
80992 München  
Telefon 089 233 85500  
Telefax 089 233 85501  
Email:  
bsmedien.sekretariat@muenchen.de

21.11.2011

**Bestätigung Referententätigkeit**

Sehr geehrte Damen und Herren,

wir bedanken uns bei Herrn Christian Chlupsa für den ca. 1,5-stündigen bei uns am 17.11.2011 gehaltenen  
Vortrag zum Thema:

**Neue Chancen durch implizite Kommunikation**

Die Veranstaltung wurde von rund 120 Teilnehmern besucht.

Der behandelte Stoff der Fortbildungsmaßnahme war prüfungsrelevant für die Auszubildenden des Berufes  
Kaufleute für Marketingkommunikation.

Mit freundlichen Grüßen,

Harald Schrader, OSiD  
Schulleiter

Figure 176: Guest Lecture School of Media Munich

**Christian Chlupsa**  
**CANTUS MEDIA GmbH**  
**Prinzregentenstraße 128 I**  
**Im Prinzregentenhof I**  
**81677 München**



**Fakultät Betriebswirtschaft**  
Marketing  
Dienstleistungsmanagement

**Prof. Dr.  
Henning Schulze**

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☎ +49-991-36 15-81 122  
✉ [henning.schulze@fbi-deggendorf.de](mailto:henning.schulze@fbi-deggendorf.de)  
✉ [hs@magnit.de](mailto:hs@magnit.de)

Deggendorf, den 14.12.2011

**Herzlichen Dank für Ihren Besuch und Ihren mitreißenden Vortrag  
an unserer Hochschule**

Sehr geehrter Herr Chlupsa,

mit diesem Schreiben möchte ich Ihnen Dank sagen für Ihren vierten Gastvortrag im Rahmen der Lehrveranstaltung Marketing Einführung des Bachelorstudienganges Betriebswirtschaft an der Hochschule Deggendorf.

Sie haben es wieder einmal geschafft, die ca. 120 Studierenden mit Ihrem Thema „Neue Chancen durch implizite Kommunikation“ zu faszinieren und über 90 Minuten in Ihren Bann zu ziehen. Die anschließende Diskussion zeigte, dass die Studierenden nicht nur zugehört haben, sondern auch viele Denkanstöße aus Ihrem Vortrag mitnahmen.

Ich denke, dass Ihnen ein guter Mix aus Theorie und Praxis gelungen ist. Einer der Studierenden merkte nach der Veranstaltung in persönlichen Gespräch an, dass zu merken gewesen sei, dass Sie tief in beiden Bereichen unterwegs wären: der Praxis und der Wissenschaft.

Dem stimme ich vollstens zu und füge hinzu, dass Sie bei uns als Gastreferent jederzeit wieder willkommen sind.

Mit den besten Grüßen

Ihr



Figure 177: Guest Lecture University of Deggendorf



Fachhochschule Hannover · Postfach 92 02 61 · 30441 Hannover

Herrn  
Christian Chlupsa  
Cantus Media GmbH  
Prinzregentenstr. 128  
81677 München

---

### Bestätigung von Dozententätigkeiten

Herr Christian Chlupsa hält an unserer Hochschule seit dem Wintersemester 2008 regelmäßig Gastvorträge zu aktuellen Themen des Neuromarketings im Rahmen meiner Marketing-Vorlesungen.

Aufgrund seines theoretisch sehr guten Fachwissens, seiner besonderen didaktischen Fähigkeiten und seiner interessanten, praxisbezogenen Darstellungen waren die Veranstaltungen sehr fundiert und fanden bei den Studierenden daher stets große Resonanz.

Ich danke Herrn Chlupsa sehr für sein bisheriges Engagement und hoffe, ihn auch zukünftig für weitere Gastvorträge gewinnen zu können.

Prof. Dr. Chr. Seja  
Abteilung Wirtschaft, Fachgebiet Marketing

Hannover, 09.01.2012

Figure 178: Guest Lecture University of Hannover



Duale Hochschule Baden-Württemberg · Ravensburg  
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**Branding Code**  
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**81677 München**

**Prof. Dr. Günther Suchy**  
Studiengangsleiter  
Medien- und Kommunikationswirtschaft/Journalismus-PR  
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Telefax + 49. 751. 18999-2704  
suchy@dhw-ravensburg.de  
b.franke@dhw-ravensburg.de  
[www.dhw-ravensburg.de](http://www.dhw-ravensburg.de)  
24. Oktober 2011

**Bestätigung**

Betreuung und Korrektur einer Projektarbeit  
zum Thema „Neuromarketing“

Hiermit bestätige ich Herrn Diplom-Kaufmann Christian Chlupsa die Mitarbeit am Fachbereich Medien- und Kommunikationswirtschaft, Vertiefung Journalismus/PR, im Rahmen der Betreuung einer Projektarbeit im Sommersemester 2011.

Herr Chlupsa hat die Themenentwicklung, die fachlichen Betreuung sowie die abschließende Korrektur und Gutachtenerstellung einer Projektarbeit zum Thema „Neuromarketing“ im 5. Fachsemester umgesetzt.

Herr Chlupsa überzeugte durch seine fachliche Kompetenz und sein freundliches Auftreten. Zudem verstand er es, die von ihm betreute Studierende zu vollem Einsatz zu motivieren. Dies belegt die durchwegs positive Resonanz der Studierenden sowie das sehr gute Ergebnis der betreuten Arbeit.

A handwritten signature in blue ink, appearing to read 'Günther Suchy', is written over a light blue horizontal line.

Günther Suchy  
Studiengangsleiter

**Prof. Dr. Günther Suchy**  
Duale Hochschule Baden-Württemberg Ravensburg  
Studiengangsleiter Medien- und Kommunikationswirtschaft  
Fachrichtung Journalismus-PR  
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Telefax + 49. 751. 18999-2701

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info@dhw-ravensburg.de  
[www.dhw-ravensburg.de](http://www.dhw-ravensburg.de)

Figure 179: Guest Lecture University of Ravensburg

## **Appendix T. Publications**

### **Detailed List of Publication**

#### **The Impact of the Implicit Motives on the Business to Business**

##### **Decision Making Process**

Postgraduate Symposium 2011

University of Plymouth

ISSN: 9781841023229

#### **The Impact of Implicit Motives on the Decision-Making Process:**

##### **A Hypothesis for the Business to Business Sector**

PhD Symposium 2011

University of Applied Sciences Munich

ISBN: 978-3-943872-06-4

#### **The Impact of Emotions on the Organisational Buying Behaviour**

Postgraduate Symposium 2012

University of Plymouth

Submitted

**The impact of implicit motives on the decision making process:**

**A hypothesis for the business to business sector**

NeuroPsychoEconomics Conference 2012

Erasmus University Rotterdam

ISSN 1861-8243

**The Impact of Emotions on the Organisational Buying Behaviour**

Postgraduate Symposium 2012

University of Plymouth

Submitted

**The perceptions of generation Z on media use**

Postgraduate Symposium 2012

University of Plymouth

In Cooperation with Juergen Steinheber, Co-Lecturer

Submitted

**The Impact of Emotions on the Organisational Buying Behaviour**

PhD Symposium 2012

University of Applied Sciences Munich

ISBN: 978-3-943872-06-4 - accepted not published

**The impact of implicit motives on the business to business  
decision making process**

NeuroPsychoEconomics Conference 2013

University of Bonn

ISSN 1861-8243

**Welche Preise unser Gehirn als fair einstuft**

Bayerische Staatszeitung

Verlag Bayerische Staatszeitung

Friday 3<sup>rd</sup> Mai 2013

**The Impact of Implicit Motives on the Decision-Making Process:**

**A Preliminary Analysis**

Social & Public Policy Review

UPP University of Plymouth Press

In Cooperation with Jonathan Lean

ISSN 1752-704X - accepted not published

Table 53: Detailed List of Publication

## Reference List of Publications

Chlupsa, C. (2009, Vol. 3). Neuromarketing - Neue Chancen für die Werbung. Forum, p. 6.

Chlupsa, C. (2011, September 22.). schwarzwaelder-bote.de. (J. Meyer, Interviewer)

Chlupsa, C. (2011, September 21). Denken ist zwecklos! (D. Werner, Interviewer)

Chlupsa, C. (2011, September 21). Ins Hirn und ins Herz der Kunden. (S. Maier, Interviewer)

Chlupsa, C. (2011). Neuromarketing - Neue Chancen für die Werbung. BRANDING CODE® Vortrag Neuromarketing Werbetreff 2011 Handout (pp. 1-27). München: CANTUS MEDIA.

Chlupsa, C. (2011, October 07.). Neuronal Marketing. Script. Munich, Bavaria, Bavaria: Munich University of Applied Sciences.

Chlupsa, C. (2011). The Impact of the Implicit Motives on the Business to Business Decision Making Process. In P. B. School (Ed.), Plymouth Business School Postgraduate Symposium (pp. 80-94). Plymouth: University of Plymouth.

Chlupsa, C. (2012, July 04.). Motives in B2B decision making. Neuromarketing Science & Business Association - Newsletter. Venlo, Netherlands, <https://dl.dropboxusercontent.com/u/51691878/Implicit%20Coding%20in%20Business%20Revised.pdf>: NMSBA Neuromarketing Science & Business Association.

Chlupsa, C. (2012). The impact of implicit motives on the decision-making process: a hypothesis for the business to business sector. In A. f. NeuroPsychoEconomics (Ed.), 2012 NeuroPsychoEconomics Conference Proceedings (p. 44). Washington DC: Association for NeuroPsychoEconomics.

Chlupsa, C. (2013, Mai 23.). Glücklich kaufen - Christian Chlupsa erforscht für eine Studie den Wohlfühlpreis. (I. -S. Alwardt, Interviewer)

Chlupsa, C. (2013, June). PhD Node - Die Chancen zur berufsbegleitenden Promotion. WI News, pp. 3 - 6.

Chlupsa, C. (2013, June). Stardesigner unterstützt Doktorarbeit. WI News, p. 7.

Chlupsa, C. (2013, June). Studie zum Neuro-Pricing: Dem Wohlfühlpreis auf der Spur. WI News, pp. 17 - 18.

Chlupsa, C. (2013, February). Ultima Ratio? (S. Streif, Interviewer)

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Wie kommen Botschaften am besten da hinein? Christian Chlupka verdeutlicht beim Werbetreff des Schwarzwälder Boten Unternehmen und Entscheidern wichtige Erkenntnisse des Neuromarketing. Fotos: Kienler

## Ins Hirn und ins Herz der Kunden

WerbeTreff-Vorträge: Wie Botschaften besser rüberkommen und was man als Mittelständler von Google lernen kann

Von Steffen Maier

Donaueschlingen. Am Anfang war das Hirn. Hielgrau, aus Plastik, leicht knetbar, liegt es in hundertfacher Ausführung auf den Tischen in den Donaueschlingen. Donauhallen. Wie Werbebotschaften Herz und Hirn der Kunden erreichen und Unternehmer das Internet nicht hirnlos, sondern intelligent nutzen können, darum drehen sich die Fachvorträge beim Werbetreff des Schwarzwälder Boten.

Viel reden, viel Text – das bringt alles nichts. Davon ist Christian Chlupka überzeugt. Er ist Betriebswirt, sein Schwerpunkt ist Marketing, noch genauer: Neuromarketing. Chlupka untersucht, wie und warum eine Information

es bis ins Gehirn schafft. Eigentlich, so Chlupka, ist alles ganz einfach, das menschliche Hirn ist schließlich Milliarden Jahre alt – »nahe Hardware«. Chlupka hat die Hardware analysiert – die Regeln, welche Botschaften es im Gehirn schaffen, sind seiner Meinung nach simpel.

Ganz egal, ob man im Supermarkt Joghurt oder im Autohaus einen neuen Benzowagen kauft oder welchen Partner man sich fürs Leben wählt; 95 Prozent aller Entscheidungen, so Chlupka, fallen unbewusst. »Erfol verleben wir uns unbewusst, dann fangen wir mit dem Reden an und quatschen uns alles schön.«

Ungemünzt auf Werbung bedeutet das: Innerhalb weniger Sekunden entscheidet das Gehirn, ob eine Sache einer genaueren Prüfung lohnt. Während man sich Texte relativ langwierig erschließen muss, Buchstabe für Buchstabe, Silbe für Silbe, Satz für Satz, sprechen Bilder und clever gestaltete Aussagen viel schneller die wenigen Schlüsselreize an, die Menschen bereits im Kindesalter fertig ausprägen. Bilder vermitteln Konsumenten schneller das Gefühl, das richtige Produkt, den passenden Partner zu wählen.

»Neuromarketing hilft, Kommunikation effizient zu gestalten«, so Chlupka. Kommunikation – das ist auch das Lieblingswort von Ewald Wessling. Früher Geschäftsführer, ist Wessling heute Professor für Veränderungsmanagement und Experte für den digitalen Wandel. »Revolution 2.0 - Wie Computer und Internet uns verändern« lautet sein Vortrag in Donaueschlingen.

»Vor allem aber gibt es Hinweise, was Unternehmen beachten müssen, wenn sie im Internet auftreten, und was selbst ein Mittelständler im Schwarzwald von bekannten Internet-Riesen wie Google, Ebay oder Amazon lernen kann. Wichtigste Erkenntnis, predigt Wessling: Der Nutzer, das heißt der Besucher der Internetseite, muss an erster Stelle stehen. Das Pseudobeispiel dafür sei Google: Die Startseite bietet allein die Suchoption, sie ist übersichtlich, ganz ohne Werbung gestaltet – obwohl es durchaus lohnend wäre, dort Werbung zuzulassen. Google ist schließlich die meistbesuchte Seite der Welt.

Ebenfalls von Google lernen könne man die Maxime, dass alles einfach funktionieren müsse – wer auf kompliziert aufgebaute und verschachtelte Internetauftritte Lust und Verlesse die Seite schnell wieder, so Wessling. Noch ein Grundsatz des Internets: Der Ehrliche ist, anders als es das Sprichwort weiß, der Schluss. Begründung: Böses kommt doch aus Licht.

Wesslings Schluss: Offenheit und Transparenz sind das A und O. Und wie mit dem Publikumsjoker in Günther Jauch's Fernsehquiz »Wer wird Millionär« gehe auch im Netz: Dummheit behrt sich auf. Zusätzlich zu den vielen, die nicht Bescheid wissen und sich auf alle Antwortmöglichkeiten gleichmäßig verteilen, gibt es doch welche, die Bescheid wissen. Und genau die geben am Ende den Ausschlag für die richtige Antwort. Dieses Prinzip nutzt im Netz beispielsweise die Enzyklopädie Wikipedia.

Wesslings vielleicht wichtigster Tipp an die Unternehmer in den Donauhallen in Sachen Internet, soziale Netzwerke wie Facebook oder für Plattformen wie Twitter: einfach ausprobieren. Präsent sein. Und: Mit und von der jungen Generation lernen, für die das Netz keine fremde Welt ist, sondern die Welt, in der sie täglich unterwegs sind.



Der Moderator des Werbetreffs in Donaueschlingen, Bernd Maier (Bild links). Wie bitte? Die Vorträge zu »Neuromarketing« und »Revolution 2.0« kösten bei den Zuhörern in den Donauhallen vielfach Erheiterung und nachdenkliches Lächeln aus. Verarbeitung: Nach den Vorträgen rund um das digitale Medienzeitalter diskutierten die Vertreter aus den Branchen Werbung, Handel, Industrie und Dienstleistung im Foyer und vor den Donauhallen in Donaueschlingen munter weiter – unter anderem darüber, was Ewald Wessling (Bild rechts) über Chancen und Herausforderungen des Internets referiert hatte.

Figure 180: Publication Newspaper Schwarzwälder Bote 2011

100 Menschen • Werbetreff 2011

Gegen das Unterbewusstsein kommt keine Werbung an. Denn unser Gehirn funktioniert noch immer wie das unserer Urahnen, erläuterte Christian Chlupsa



**i** **Christian Chlupsa** ist ein Mann der Praxis: Als Geschäftsführer der Münchner Agentur Cantus Media ist sein Spezialgebiet mit Branding Code Aufbau und Führung von Marken auf Basis psychologischer und neurologischer Erkenntnisse. Der studierte Betriebswirt mit Schwerpunkt Marketing arbeitete zuvor als Radiomoderator

# Denken ist zwecklos!

Sie treffen bewusste Entscheidungen? Mitnichten! Warum das so ist, erklärte Neuromarketing-Experte Christian Chlupsa



Die kleinen grauen Teile aus Weichplastik auf den Plätzen der Teilnehmer des Werbetreffs waren nett anzusehen. Aber als – verkleinerte – Nachbildung eines Gehirns zugleich erschreckend: Denn in unserem echten Gehirn geht es noch immer zu wie in Urzeiten. „Aus Sicht der Evolution hat sich darin seit 100 000 Jahren wenig getan“, erntlichterte Christian Chlupsa, Geschäftsführer der Agentur Cantus Media und Experte für Neuromarketing. Über den Zustand des Gehirns könnte man nun klagen. Oder man nutzt ihn. Denn gerade für Werbetreibende lassen sich daraus schlichte Schlüsse ziehen. Einer davon: „Bilder und insbesondere Bilder von Gesichtern entscheiden

oft über den Erfolg einer Anzeige“, so Chlupsa. Das wiederum hängt schlicht mit der Freund-Fetnd-Erkennung unserer Urahnen zusammen. Schrift war in der Evolution eben nicht vorgesehen. In Sekundenschnelle trifft unser Unterbewusstsein unsere Entscheidungen. In Magnetresonanztomographen lässt sich das Wunder in Echtzeit verfolgen. Mehr noch: „Man kann dabei auch Widersprüche aufdecken“, so der Experte. Denn natürlich sagen auch Raucher, dass qualmen schädlich ist. Zeigt man ihnen aber eine Schachtel und blickt per Tomograph ins Gehirn, ist klar erkennbar: Her damit! Ähnlich verhält es sich mit Getränken. Diese Erkenntnisse beeinflussen sogar Konzerne. Beispiel Noka:

Noch vor Jahren hatten die Finnen einen prägnanten Klingelton. Chlupsa: „Den kannte jedert! Und wenn man die Leute fragte, sagte jeder über diese Töne Postives.“ Beim Blick aufs Tomographenbild kam etwas anderes heraus: „Das Hirn dachte: ‚Das Scheiß-Telefon klingelt schon wieder!‘“ Noka stampfte den Klingelton ein. Damit ist klar: Gegen den Kampf von Ratio und Unterbewusstsein kommt keine Werbung an. „Deshalb muss man auf Schlüsselreize und Lebensgefühle treffen. Dann klappt’s mit dem Unterbewusstsein“, so Chlupsa. **wer**

 [www.branding-code.de](http://www.branding-code.de)

Figure 181: Publication Magazine econo 2011

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## The Impact of the Implicit Motives on the Business to Business Decision Making Process

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### Abstract

This conceptual paper sheds new light on the business to business decision making process beyond the regimentation of the existing models in business and management. The thesis proposes the interplay between the economic decision making process in the field of business to business against the background of the implicit motives. The article draws from marketing and psychological perspective and shows the missing link in the models of the business to business decision making process. The research strategy is based on an experiment, a survey and interviews. As a conceptual paper, this article does not offer results. Instead, it shows the way to reveal the impact of the implicit motives on the business to business decision making process.

**Keywords** – Business to Business, Decision Making  
Implicit Motives

### I. INTRODUCTION

Making decisions is the basic of our daily life and this is where marketing derives from. There are different tracks in marketing. Consumer marketing is called Business to Consumer (B2C) and Industrial Marketing is called Business to Business (B2B). Eventually, all B2C and B2B marketing activities are concentrated on influencing the process of decision making.

The more emotions are regarded and accepted as the most powerful force in decisions made by consumers, the more and the harder companies try to keep them out of the decision making procedure in business life. Consumer decisions might be emotional, business decisions need to be rational.

The most sophisticated approach to eliminate emotion or personal motivation from decision making in a company is the buying center approach, frequently applied in modern organizations. However, there is no way to eliminate emotion and individual motivation from

decision making in business life as there are implicit motives acting as powerful but hidden drivers.

This thesis is to substantiate the impact of the implicit motives in the business to business decision making process.

## II. DISCUSSION

*Economical Decision Making:* Economy is based on choices and choice means decision. This is the classical idea in the science of business and management (Zerfaß, 2010). This area of corporate management deals with the decision making process in the company. Due to different constellations of personal and group decisions, owners and director decisions show that the operational decision making process is a central problem in business and management (Gutenberg, 1958). There is a long tradition in science dealing with the decision making process. The concept of the homo oeconomicus who decides and acts on the rational principle is part of this tradition. The idea is that a defined outcome has to be achieved with a minimum of resources. Or vice versa a certain input has to obtain the best possible result. The model of the rational decision supposes that one or more defined aims should be fulfilled. Every decision making process is characterized by a restricted number of alternatives that can be followed at the same time. The idea of the concept is that for every option the customer gets a prognosis of the estimated consequences. The homo oeconomicus has to evaluate the future outcomes of his choice without complete and reliable information. As the future is uncertain, the homo oeconomicus has to make a decision under uncertainty. The results of his decision are uncertain. (Heinen, 1986). The complexity of economy and the economic principle are based on the general principle of rationality as well. Yet, even pioneers in business and management science actually stress that the economic principle is just a formal principle without even mentioning motives and objectives of the economic actors (Wöhe, 1971). To get a deeper insight into the different types of decision making, it seemt to be appropriate to distinguish between the generic types of decision making.

*A. Consumer Decision Making:*

A characteristic situation of consumer decision making process is the weekly shopping tour in the supermarket. The customer is faced with thousands of products and brands to choose from.

### 1) *Definition of B to C Decision Making:*

The customer decision making process is defined as a process by which consumers identify their needs, collect information, evaluate alternatives, and make a purchase decision. These actions are determined by psychological and economic factors and are influenced by environmental factors such as cultural environment, peer group, and social values. In a Business to Consumer Market, the offer is provided by a corporation to a customer. The terminus B2C is used to separate this type of market from other markets in order to identify special parameters of decision making (Kollmann, 2011).

### 2) *The Objective Nature of B to C Decision Making:*

The nature of the consumer decision making is in general that the customer makes his decision for himself. The everyday decision making process of the consumer is low structured and does not follow defined procedures or has to face problems with limited financial budgets or critical time schedules. In contrast with the exception of limited financial resources the customer is completely free to make a decision.

### *B. Business to Business Decision Making:*

Scholars and marketing managers have focused increased attention on buyer-seller relationships in business to business markets (Cannon & William , 1999). The characteristic situation of the Business to Business decision making process is the purchasing process in a company. Corporations are usually looking for specific solutions. In general the decision making process is well structured, subject to defined processes and supervision by hierarchical levels. The dominant perspective of the organizational buying behavior suggests that buyers tend to rely on objective criteria when making product choice decisions (Brown, Zablah, Bellenger, & Wesley, 2011).

1) *Definition of B to B Decision Making:* Due to the theory of marginal benefit an enterprise invests if the benefit is increased by the investment. The decision making process in companies is standardized. It is a step by step method in which hard and

quantitative data obtained by observation. Mathematical or statistical analysis tools are used for making decisions. General in the Business to Business Market an offer is provided by one corporation to another. The terminus Business to Business is helpful to identify the specific variables of decision making in this constellation (Kirchgeorg, 2011).

2) *The Objective Nature of B to B Decision Making*

The nature of organizational decision making is that in general decisions are made against the background of many limitations such as financial budgets or timescales. In organizations investments and high expenditures are subject to strict limitations based on internal procedures.

B2B decision making processes are often attended by consultants such as architects, lawyers and financial advisors

C. *Business to Business versus Business to Customer*

As a matter of fact there are many differences between the B2B and the B2C market. Companies operating in industrial markets are purchasing goods and services to be used in production of other products or services which are sold to other companies (Kotler & Pfoertsch, 2006). Consumers use product for themselves. In Business Markets the point of sale is company to company. In Consumer Markets the point of sale is company to privates. B2B business is the challenge of superior solutions for a specific problem in order to increase the production figures, reduce costs or to improve services. Consumer decisions fulfill needs, are rather volatile and based on emotion. Business decisions are based on rationality, teamwork, rules and hierarchy. They are fact based, time critical, face a limited budget and are focused on deficit situations.

D. *Existing Models of B to B Decision Making*

Several models exist on the business to business decision making process. Furthermore there are different classifications for the different models. In general we have to distinguish between partial and total models.

1) *Integrated Models:*

Total models try to analyze all influencing variables of the decision making process (Pepels, 2004). The approach of Webster and Wind using environment, organization of the corporation, interpersonal factors and intrapersonal factors as variables is a typical total model. The variables in the Howard and Sheth approach differ a lot: *Price, quality and information, perceptual constructs* such as involvement and awareness; *learning constructs* such as purchase intention and brand value lead to *output variables* such as attention, brand awareness, preferences, buying intention and purchase decision (Stigler, 2011).

2) *Partial Models:*

In contrary partial models focus on selected aspects of the decision making and ignore the rest. The partial models can be divided in concepts using vertical factors such as the interaction between just one participant suppliers or customers and concepts using horizontal factors such as the interaction between both supplier and customer (Pepels, 2004). The promoter concept, the reaction concept and the information concept are typical examples of partial models. Obviously the Buying Center Approach is the most prominent partial model of today. Following Webster and Wind a buying center is a team within an organization in which the team members have different roles: buyer, user, influencer, decision maker and gate keeper (Stigler, 2011). The idea of the buying center approach is to assure rational decision making, but doubts are expressed with regard to practical work (Pepels, 2004).

2) *The Gap in the existing literature:*

Controversial discussions about the impact of emotions draw a clear picture of the organizational buying procedure (Haehnel, 2010). Emotions defined as: joy, inclination, fear, unrest, sorrow, anger, aversion, condemnation, shame and excitement (Schmidt-Atzert, 2008). Inseparably emotion goes hand in hand with motivation. No motivation without emotion and no emotion without motivation (Brandstätter, 2009). Motivation is a construct of many variables, a mix out of cognitive, affective and physiological processes. From this point of view motivation is just a hypothetical construct. The result of a motivation is based on the genuine model of the classical motivation, the coincidence of a potential stimulus and personal motives depending on a specific situation (Rheinberg, 2009).

### III. HYPOTHESES DEVELOPMENT

#### **A. Rational Decision in the Business to Business**

Against the background of various economic and psychological theories and based on the expressed doubts of the pioneers of business management, pure rational based decision making seems to be fairly unlikely. There is no B2B decision maker whose acting is just based on facts (Becker & Daschmann 2010). Even in the B to B decision making process emotion seems to be a driving force. As mentioned before there is no emotion without motivation.

Motivation itself is based on motives. The universal motive of the economic actors is to maximize the own benefit based on rationality, defined as rules of logic (Etzioni, 1988). This is just an idealistic approach, not suitable in every decision making process in business. Economic decisions are usually rational within certain limitations due to limited cognitive resources, convenience or lack of time. They are notably driven by the objective to maximize the benefit but also by individual motives. (Kirchler, Holler, & Hartner, 2009). This is why it is worthwhile to have a closer look on motives and their impact on the decision making process in B to B business.

#### *B. Impact of Motives*

A motive is a driving force selecting the direct cognition and the indirect behavior, it is orientating and energizing (McClelland, 1987). A lot of researches show that self-assessment is incongruent to the implicit results. Explicit and implicit motives are independent constructs (Scheffer, 2009). Against this background it seems advisable to analyze the two types of motives separately.

##### *1) Explicit Motives:*

Explicit motives are connected to the speech based self-concept of an individual. They are located in the younger parts of the brain. Explicit motives provide a conscious and focused attention (Scheffer, 2009).

##### *2) Implicit Motives:*

In contrary implicit motives are neither speech based nor connected to the self-concepts of an individual. They are located in the older parts of the brain and have an affective core

(McClelland, 1987, Scheffer, 2009). The nature of the implicit motives is that they work beyond the consciousness (Langes, 2009).

*C. Generating Main Hypotheses*

It is not easy to find out what makes man tick: behavior, energy or enduringness. The reason why the analysis is difficult is that the most important motives are implicit. These motives are saved in a non-verbal format (Scheffer, 2005). Our conscious mind is not involved in all decisions (Storch, 2006). The reason is that our emotional memory is much older than our conscious memory. For every decision we have two systems of responding to a stimulus: the rational system and the emotional system. The explicit memory works slowly and processes as many details as possible. We can realize and formulate all information in our explicit memory, also known as episodic memory. The explicit memory is characterized by a conscious recollection of the event and the reflection about the event (Lee, 2002).

The implicit memory works fast and diffuse. It is more difficult to articulate the information we receive from our implicit memory. The implicit memory is the emotional part our brain. It delivers the feelings we have when we try to make a good decision. If we want to make a rational decision we need time to evaluate every possibility. The implicit memory gives the feedback for a decision in 200 milliseconds, in every situation, even if we are exhausted (Storch, 2006). Whereas the explicit memory is characterized by the conscious recollection of an event, the implicit memory has a better performance in the task of having an experienced event (Lee, 2002). The emotional memory conserves knowledge as emotions and feelings, and is the storage of all our life experience. If we have to make a decision our brain produces imaginal pictures of the future scenarios. We look into the future like a short movie trailer (Storch, 2006,). That's the moment we try to find the best solution, based on the stored emotion.

A research has clearly detected four cases where implicit processes have an important role (Friese, Hofmann, & Wänke, 2009).

(i). Low involvement:

The interest e.g. in advertisement is low. There is no motivation to think explicit about the message or the product itself.

(ii). Pressure of time:

If we have no time to think explicit the implicit processes dominates and we make good decisions.

(iii). Overload:

If we get so much information about the product or advertising messages that our cognitive resources are swamped then we cannot think explicit about the information.

(iiii). High complexity:

Complex decisions like buying a car or a washing machine can benefit by the implicit system because due to his big capacity it can process all the relevant details needed.

To sum up current researches prove that the implicit system dominates decisions with low involvement, pressure of time, information overload, or confusion based on a high scale of complexity. In contrast the explicit system plays an important role in decisions with high involvement with a low scale of reflexion and a lot of time (Frieze, Hofmann, & Wänke, 2009). If we compare this to the classical idea of decision making of the rational Homo Oeconomicus we get a completely new picture. Every offer has a package of rational information but it seems that the package of implicit information is even bigger. What does this mean for the daily decision making process in the business to business area. What are the hidden factors having an impact on the decision making process? This leads to three hypotheses:

H1: There is a typical Structure of Implicit Motives  
in Business People.

H2: There is an interplay between the Implicit  
Motives and B to B Decision Making

H3: There are Impacts on the Business to  
Business Marketing

#### IV. METHODOLOGY

##### *1) Philosophical Position of Ontology an the Critical Realism:*

The thesis is written on the philosophical position of realism, with the essence that what our senses show us is real and true. Objects have an existence independent from the human mind (Saunders, Philip, & Thomhill, 2009). The thesis is written in the assumption of

ontology with the aspect of subjectivism. The idea is to interpret the results through social conditioning. The type of realism is the critical realism. "Critical realists point out how often our senses deceive us" (Saunders, Philip, & Thornhill, 2009). The very idea of the dissertation is to show the effects of deceiving of your sense in the decision making process especially in the business to business area. What we see in reality are often sensations which are mere illusions of what is real (Saunders, Philip, & Thornhill). These sensations are important factors of our daily life and our decision making process as well. Thus, the critical realist's position is that our knowledge of reality is a result of social conditioning and cannot be understood independently of the social actors involved in the knowledge derivation process (Dobson, 2002).

### 2) *Deductive Research Approach:*

The research approach of the thesis is based on a deductive approach. "This is whether your research should use the deductive approach, in which you develop a theory a hypothesis (or hypotheses) and design a research strategy to test the hypothesis..." (Saunders, Philip, & Thornhill). The theory is that the implicit motives based in the human brain influence the business to business decision making process. In the first step, there is the search to explain causal relationships between variables (Saunders, Philip, & Thornhill, 2009). Variables are the implicit motives themselves: the age of the people, the gender of the persons and the position in the hierarchy of the organization. The aim of the deduction is to come to a level of generalization.

### 3) *Research Design:*

The research strategy is based on an experiment, a survey and interviews.

To get a clear result it will be important to detect the right stimulus for the manipulation of a business to business decision focused on the implicit motives. In the literature there is the hint to implement an experimental group and a control group. Finally there is no possibility to create a placebo effect without triggering the implicit motives themselves. The reason is that both sides of the experiment are manipulated by the unconscious mind which is the basis to interpret the communication.

A combined survey should help to detect the particular relationship between the variables used and the official data. Answering the research questions within the dimensions who, what, where, how much and how many is a popular, frequently used and

common strategy in business and management science (Saunders, Philip, & Thornhill, 2009).

The results will be discussed with experts from different industries to reveal the impact for the business to business marketing.

*4) Research Method Mixed Methods Approach:*

Data collection and data analysis are based on multiple methods. Based on a Cross-Sectional Analysis it is a mixed methods approach. The focus is on the non-numeric data such as words but the statistical work will prove the correlations between the statements and the reaction of the test people. The qualitative data will be quantified and converted into numerical codes to allow a statistical analysis (Saunders, Philip, & Thornhill, 2009). The reason for the mixed methods approach is to come from the individual level on a general level. Thus a solid analysis and clear statements on the correlation of variables and the results can be made.

*5) Data Collection:*

The basic structure of the thesis is based on international secondary literature. Secondary literatures are books and journals (Saunders, Philip, & Thornhill, 2009). The detailed content is based on primary literature. Primary literatures are sources like reports, white papers and planning documents (Saunders, Philip, & Thornhill, 2009). The terms are reviewed in the tertiary literature. Tertiary literatures are media such as encyclopaedias and dictionaries (Saunders, Philip, & Thornhill, 2009).

V. CONCLUSION

In this study, the researcher posited that the implicit motives are an important factor in the B2B decision making process. On the one hand it seems to be important to make rational decisions. On the other hand, the nature of decision making in B2B seems to be examined in completely new light. The theoretical justification of the thesis is close to Haehnle (Haehnel, 2010). Yet, the focus on interest is not on the level of emotion. It penetrates deeper in the area of the implicit motives which are regarded as important drivers of the decision making process. This theoretical concept analysis the interaction between the business to business decision making process and the implicit motives embedded in every human being. Finally this work will highlight the impact on the business to business marketing process.

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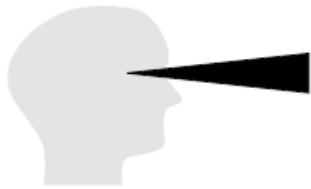
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**The impact of implicit motives on the decision-making process:  
a hypothesis for the business to business sector**

Christian Chlupsa<sup>29</sup>

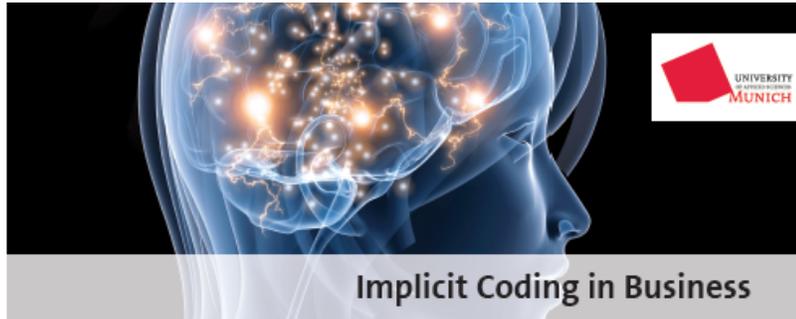
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**Abstract**

This paper proposes interplay between the economic decision-making process in the field of business to business against the background of implicit motives. This theory sheds new light on the business to business decision-making process beyond the regimentation of the existing models in business and management. The article is drawn from an economical and psychological perspective and shows the missing link in the models of the business to business decision-making process. The research strategy for this paper is based on an experiment. The key idea of this hypothesis is that every decision-making process is influenced by implicit motives. These motives are stored in a non-verbal format and so our conscious mind is not involved in all decisions. Based on the results of the experiment it can be postulated with a high degree of certainty that a rational choice in B2B based on facts can be nearly ruled out. It seems that there is clear interplay between implicit motives and the choice of products.

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<sup>29</sup> Corresponding author: Christian Chlupsa, University of Plymouth and Munich University of Applied Sciences, E-Mail: christian.chlupsa@hm.edu.



# Implicit Coding in Business

- 1 -  
**Implicit B2B Decisions**

*This study proposes interplay between the economic decision-making process in the field of business to business against the background of implicit motives.*

*This theory sheds new light on the business to business decision making process beyond the regimentation of the existing models in business and management.*

*The study is drawn from an economical and psychological perspective and shows the missing link in the models of the business to business decision-making process.*

*The research strategy for this study is based on an experiment. The key idea of this hypothesis is that every decision-making process is influenced by implicit motives.*

*These motives are stored in a non-verbal format and so our conscious mind is not involved in all decisions. Based on the results of the experiment it can be postulated with a high degree of certainty that a rational choice in B2B based on facts can be nearly ruled out.*

*It seems that there is clear interplay between implicit motives and the choice of products.*

- 1 -  
**Implicit B2B Decisions**

Most decisions in business and management seem rational and fact based. Nevertheless, most people argue that they will cancel a deal if they have a negative or bad feeling about it. Therefore, it seems that the biggest part of our decision-making process is implicit.

- 2 -  
**Models and Theories**

This research is an interdisciplinary project. To shed new light upon the content, it is important to carry out a critical literature review within the connected subjects. Business and marketing are both based upon parts of the disciplines of psychology, sociology, and neurology.

- 3 -  
**Implicit Cognition**

Economic textbooks teach that homo oeconomicus can think like Albert Einstein, store as much memory as IBM's Big Blue, and exercise the willpower of Mahatma Gandhi. Yet our implicit memory is the pilot in our daily life and our conscious mind makes just a small part of our decision-making process.

- 4 -  
**Implicit Motives**

The implicit memory is the emotional part of our brain. Implicit motives are neither speech-based nor connected to the self-concept of an individual. They are located in the older parts of the brain and have an affective core. The nature of implicit motives is that they work beyond the level of consciousness.

- 5 -  
**Set of Objectives**

The first objective is to reveal correlations based on hierarchies and the different formal groups of decision makers. The second is the interplay between motives and the decision making process. The third is the impact and consequences for the business to business communication.

- 6 -  
**Design of Experiment**

The idea is to show the direct interplay between implicit motives and the B2B decision-making process. If the process was completely rational, people should always make the same economic decision. The test subjects had to come up with a standard buying scenario in the field of investment goods.

- 7 -  
**Experiment**

The start of the experiment involved checking the implicit mindset of the test subject. For this stage the CMI Test was used. In the first stage, the test subject had to buy a company car and office equipment for himself. In the second stage they had to buy company cars and office equipment for three colleagues.

- 8 -  
**Mix of Implicit Motives**

At 41.6 percent, the implicit motive power is the clearly dominant motive. The second most frequent implicit motive with 36.1 percent in the tested group was Affiliation. The third implicit motive with 14.3 percent was achievement. Based on the data we get the feedback that women are more affiliation oriented than men.

- 9 -  
**Implicit Business Decisions**

The cross-checking with the connection between the imaginary implicit motives and the product choice for the colleagues, shows a relatively clear picture. Most test subjects chose the suitable product for the imaginary colleagues. The bar charts show the extreme correlation.

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Figure 184: Poster Implicit Coding in Business



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# 2013 NeuroPsychoEconomics Conference Proceedings

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## The impact of implicit motives on the business to business decision making process

Christian Chlupsa<sup>16</sup>, Wolfgang Döhl, Jonathan Lean, Yaniv Hanoch

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### Abstract

This paper proposes interplay between the economic decision making process in the field of business to business (B2B) purchasing against the background of implicit motives. This theory sheds new light on the business to business decision making process beyond the regimentation of the existing models in business and management. The article is drawn from an economical and psychological perspective and shows the missing link in the models of the business to business decision making process as it relates to purchasing decisions. The research strategy for this paper is based on an experiment and a survey (n = 175). The key idea of this hypothesis is that every decision making process is influenced by implicit motives. These motives are stored in a non-verbal format and so our conscious mind is not involved in all decisions. Based on the results of the experiment it can be postulated that rational choice in B2B decision making may play a limited role. It seems that there is interplay between implicit motives and the choice of products.

---

<sup>16</sup> Corresponding author: Christian Chlupsa - University of Plymouth / Munich University of Applied Sciences, E-Mail: christian.chlupsa@hm.edu.



## Impact of Implicit Motives in B2B

*This paper proposes interplay between the economic decision making process in the field of business to business (B2B) purchasing against the background of implicit motives.*

*This theory sheds new light on the business to business decision making process beyond the regimentation of the existing models in business and management.*

*The article is drawn from an economical and psychological perspective and shows the missing link in the models of the business to business decision making process as it relates to purchasing decisions.*

*The research strategy for this paper is based on an experiment and a survey (n = 175). The key idea of this hypothesis is that every decision making process is influenced by implicit motives.*

*These motives are stored in a nonverbal format and so our conscious mind is not involved in all decisions. Based on the results of the experiment it can be postulated that rational choice in B2B decision making may play a limited role.*

*It seems that there is interplay between implicit motives and the choice of products.*

- 1 -  
**Implicit Cognition**



Economic textbooks teach that homo economicus can think like Albert Einstein, store as much memory as IBM's Big Blue, and exercise the willpower of Mahatma Gandhi. Yet our implicit memory is the pilot in our daily life and our conscious mind makes just a small part of our decision making process.

- 2 -  
**Implicit B2B Decisions**



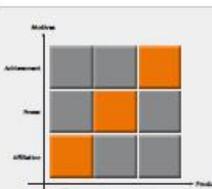
Most decisions in business and management seem rational and fact based. Nevertheless, most people argue that they will cancel a deal if they have a negative or bad feeling about it. Therefore, it seems that the biggest part of our decision making process is implicit.

- 3 -  
**Implicit Motives**



The implicit memory is the emotional part of our brain. Implicit motives are neither speech-based nor connected to the self-concept of an individual. They are located in the older parts of the brain and have an affective core. The nature of implicit motives is that they work beyond the level of consciousness.

- 4 -  
**Explicit versus Implicit Decision**



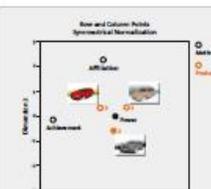
Based on the assumption of the rational agent there should be no variation in the decision making. On the assumption of the implicit decision making the implicit motives should match with the implicit coding of the products. For the experiment two categories of products were coded based on the research findings.

- 5 -  
**Implicit Motive Structure**



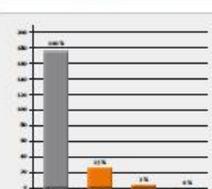
To evaluate the implicit motives all 175 test subjects had to complete an OMT Test with 15 stories each, so at the end 2,625 stories had to be read, analyzed and evaluated by the researcher. Based on the double blind procedure we get the result that nearly all subjects are highly power motivated.

- 6 -  
**Correlation of Power Product**



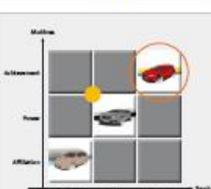
Based on the data set a clear correlation between the power motive and the power coded car is visible, whereas the affiliation and achievement motive present no clear picture caused of the disproportional spread of the motives.

- 7 -  
**Decreasing Explicit Decision**



The first and foremost finding of the experiments is that most test subjects did not select the rational choice - i.e. the cheapest product. Based on the data from the experiment it seems that rationality decreases with the number of people, real ones and imaginary ones, associated with the decision making process.

- 8 -  
**Influences of Implicit Decision**



From the experiment we can observe that megabrand - like the most popular car in Germany Audi - could influence the implicit decision making process. It seems that no matter what their implicit motives are, people are drawn to a product if it has an extreme sex appeal and is widely accepted. The "Zeigler" effect was also visible at the market launch of the iPhone.

- 9 -  
**Implicit Business Decision**



Based on the research we observe that in most decision making situations, the 175 test subjects from international well-known and successful companies, made implicit decisions. Based on the results of the research it seems that rationality and explicit decision making are playing a smaller role in the decision making process than is often assumed.

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Figure 186: Poster Impact of Implicit Motives in B2B

## Glücklich kaufen

Christian Chlupsa erforscht für eine Studie den Wohlfühlpreis

München – Christian Chlupsa weiß, wie der Mensch tickt. Und um das zu erklären, wählt er gerne das Beispiel mit der Rolex. 29 000 Euro kostet ein besonders exquisites Modell des Schweizer Uhrenherstellers, nicht unbedingt ein Schnäppchen. „Und trotzdem“, sagt Chlupsa, „wir kaufen die Rolex, und begründen das damit, dass wir eine Uhr brauchen, an der wir die Zeit ablesen können.“ Chlupsa lacht, er weiß: Diese Erklärung ist totaler Quatsch.

Es ist Freitag, elf Uhr vormittags, und Christian Chlupsa ist gut gelaunt. Der 40-Jährige sitzt hinter seinem Schreibtisch und hat sich in Fahrt geredet. Reden und gute Laune verbreiten, das kann Chlupsa gut, früher hat er beim Radio moderiert. Lange bevor er dorthin kam, wo er jetzt sitzt: in sein Büro im dritten Stock der Fakultät für Wirtschaftsingenieurwesen an der Hochschule München. Christian Chlupsa ist Dozent an der Fakultät in der Lothstraße, und momentan beschäftigt er sich hauptsächlich mit zwei Dingen: mit Preisen und Menschen. Zusammen mit dem Hirnforscher und Diplompsychologen Kai-Markus Müller erkundet Chlupsa, was er „den Wohlfühlpreis“ nennt: einen Preis, den der Kunde als fair einstuft.

„Neuro-Pricing“ nennt sich das Thema der Studie, die Aufschluss darüber geben soll, wie unbewusste Prozesse im Gehirn das Kaufverhalten von Kunden bestimmen. Und mit Verkauften kennt Chlupsa sich aus. Schließlich habe er eine lange „schmuddelige Werbevergangenheit“ hinter sich, wie er selbst sagt. Für Porsche und Siemens hat Chlupsa Werbung gemacht, eine ganze Zeit aber nicht mehr verkauft als „Bier und bunte Lichter“. Er schrieb und machte Radiospots für große Diskotheken in der Region und konzentrierte sich dabei immer „voll auf das Thema Emotion“. „Wir waren die ersten, die die Synchronstimme von Jack Nicholson und Tom Hanks hatten“, erzählt Chlupsa begeistert. Die Werbebranche, sie fasziniert ihn noch immer.

5000 Leute pro Nacht kamen nach dem ersten Spot ins Nightflight am Münchner Flughafen – da wusste Chlupsa, was Emotion in der Werbung schaffen kann. Marketing sei schon zur Schulzeit sein Ding gewesen, als er zum Bäcker lief, um ihn als Anzeigenkunden für die erste eigene Jugendzeitung zu werben. Und nun forscht er also.

Chlupsa hat Betriebswirtschaft studiert mit Schwerpunkt Marketing, schon in seiner Diplomarbeit befasste er sich mit der Frage, wie Emotion in Werbung und Wirtschaft wirkt. Aber irgendwann reichte ihm das nicht mehr, und er fing an, sich mit Psychologie und Business-to-Business-Marketing zu beschäftigen. Dass ein hoch bezahlter Manager, der jeden Tag im Porsche



Welchen Preis findet der Kunde fair? Das erforscht Christian Chlupsa derzeit für eine Studie. FOTO: STEPHAN RUMPF

zur Arbeit fährt, im teuren Anzug und mit italienischer Marken-Sonnenbrille ins Büro kommt, im geschäftlichen Bereich ausschließlich rational Entscheidungen trifft, wollte er nicht glauben. Deshalb promoviert Chlupsa jetzt zu diesem Thema, er ist überzeugt: den rein wirtschaftlich denkenden Menschen gibt es nicht.

Auch die Studie, die er jetzt zusammen mit Müller macht, könnte in seine Promotion einfließen. Chlupsa stellt eine 0,75-Liter-Flasche Mineralwasser auf den Tisch: „4,50 Euro für dieses Wasser, was würden Sie sagen: teuer oder billig?“, fragt er gespannt. Teuer. Für die Studie haben Chlupsa und Kai-Markus Müller 30 Teilnehmer am Kopf verkabelt, ihnen immer wieder Produkte gezeigt und die Frage nach dem angemessenen Preis gestellt – und dabei Signal und Reaktionszeit gemessen. „Der erste Impuls entsteht schon nach 300 Millisekunden“, erklärt Chlupsa, der Mensch bekommt selbst davon nichts mit. 150 weiteren Studenten haben die Wissenschaftler eine Plastikkarte mit fünf Euro Guthaben in die Hand gedrückt, mit der sie an einem präparierten Automaten Snacks und Getränke kaufen konnten. „Den Preis für Latte Macchiato haben wir immer verändert, einmal haben wir dafür 4,65 verlangt, einmal nur 5 Cent.“ Derzeit wertet Chlupsa die Daten noch aus, aber die ersten Ergebnisse zeigen, dass es „so etwas gibt wie einen Wohlfühlpreis“.

Und was bedeutet das nun für die Wirtschaft? „Der Großteil aller Produktneueinführungen floppen in Jahresfrist.“ Viele Unternehmen kalkulierten am Markt vorbei. Könnte man aber bereits in der Marktforschungsphase voraussagen, was dem Kunden zum Beispiel ein neues Auto wert sei, könnten Unternehmen dadurch ihre Gewinne sogar steigern, sagt Chlupsa. Dennoch gelte eine Regel auch weiterhin: „Die Unternehmen, die die besten Geschichten erzählen, werden auch in Zukunft die erfolgreichsten sein.“ INES ALWARDT

Figure 187: Publication Newspaper Süddeutsche Zeitung



## PhD Node – Die Chance zur berufsbegleitenden Promotion

*Prof. Dr. Wolfgang Döhl, Christian Chlupsa, Michael Zellner*

### Der PhD Node unserer Fakultät

„Once upon a time...“ hatte die heutige Vizepräsidentin der Hochschule München Prof. Dr. Christiane Fritze, Prof. Dr. Wolfgang Döhl, sowie einer der Doktoranden Roland Vogt während eines Aufenthalts an der Plymouth University die Idee zur Gründung einer Kooperation mit der britischen Universität, um auch deutschen Studierenden eine internationale Promotion zu ermöglichen.

Seit vier Jahren ist die Plymouth University Kooperationspartner des Promotionsstudiums an der Fakultät für Wirtschaftsingenieurwesen im Rahmen des sogenannten PhD Node. Mit der Gründung des „Munich Node“ ermöglicht die Hochschule München in Zusammenarbeit mit der britischen Universität eine neue, attraktive Qualifikationsmöglichkeit. Die Nachwuchswissenschaftler promovieren unter der Regie der Plymouth University, aber vor Ort in München, innerhalb von drei bis fünf Jahren.

### Die Besonderheiten des PhD

Im Vergleich zu den meisten deutschen Promotionen läuft der PhD nicht als Einzelvorhaben, sondern im Rahmen eines strukturierten Programms. Der PhD startet mit der Bewerbung, einem sogenannten „proposal“ und durchläuft dann festgelegte Stationen. Jeder Doktorand startet als Anwärter für den Master of Philosophy (MPhil), erst nach einem zweiten, positiven, externen Gutachten über die erste Promotionsphase wird dieser in den Doctor of Philosophy (PhD) übergeführt. Die finale Verteidigung der Dissertation erfolgt vor Professoren einer anderen britischen Universität.

Die Betreuer der Promotion haben nicht wie in Deutschland üblich auch die Prüfungshoheit, diese liegt bei einem externen Gutachter. Damit haben die Betreuer eher eine Trainer- als eine Prüferfunktion. Auch der Umfang mit rund 80.000 Wörtern

plus Anhängen füllt schnell einen Aktenordner und ist damit im Regelfall deutlich über dem Volumen nicht angelsächsisch geprägter Dissertationen. Dabei legen die Briten einen großen Wert auf die Forschungsmethodik und auf eine saubere Einordnung in die Wissenschaftstheorien.

Im Vergleich zu klassisch deutschen Promotionen startet die Themenfindung zunächst sehr breit und fokussiert sich erst später auf die Details. Dadurch kann die genaue Fragestellung der Arbeit relativ lange angepasst werden, was ein Vorteil bei neu erscheinenden Publikationen sein kann. Auch die Publikation eigener Artikel, den sogenannten „papers“, ist ein wichtiger Bestandteil des PhD-Programms. Mindestens drei wissenschaftliche Papers sollte jeder Doktorand bis zur Verteidigung seiner Promotion, der sogenannten „Viva“, veröffentlicht haben.

Die Erfahrungen im PhD Node Munich haben gezeigt, dass es fachlich zu keinerlei Komplikationen kommt. Die Quelle von Missverständnissen liegt wie so oft eher im interkulturellen Bereich, verursacht durch grundsätzlich verschiedene Bildungssysteme, falschen gegenseitigen Erwartungen sowie völlig unterschiedlichen Lebenserfahrungen. Gerade in turbulenten Phasen ist deshalb oft die ruhige Hand eines besänftigenden Doktorvaters wichtig.



„Eine Doktorarbeit ist wie ein Kleinkind, oft raubt sie Dir den Schlaf, dafür macht sie Dich auch glücklich.“

Christian Chlupsa

*The Impact of Implicit Motives on the Business to Business Decision Making Process*

AUSBILDUNG





„More matter, with less art“

**Der Doktorvater**

Der Doktorvater, „Director of Studies“, ist die Schlüsselfigur im Promotionsprozess. Zu Beginn muss jeder Doktorand einen geeigneten Betreuer an der Hochschule München finden. Dieser ist quasi der Brückenpfeiler zum Betreuer an der Plymouth University. Über fachliche Fragen hinaus spielen aber auch Aspekte wie Sympathie, Vertrauen und Motivation des Erstbetreuers eine wichtige Rolle. Da im Laufe von drei bis fünf Jahren so manche Klippe und reichlich Gegenwind gemeistert werden muss, geht dies nur mit einem top Team und absolut blindem Vertrauen. Der Doktorvater der Hochschule München erhält übrigens für seinen Betreuungsaufwand keinen finanziellen Ausgleich und tut dies nur für Ruhm, Ehre und eine absolut tolle Idee.



**Die Doktoranden**

Christian Chlupsa gründete 1988 seine eigene Werbeagentur. Der Wunsch zu promovieren war immer da, aber alle Anläufe an deutschen Universitäten scheiterten, weil niemand an der berufsbegleitenden Promotion eines Selbstständigen interessiert war. Auch mehr als 20 Jahre Erfahrung in Marketing und Kommunikation mit namhaften Kunden, wie Porsche, Siemens und den Kempinski Hotels, konnten im System der klassisch-deutschen Promotionskultur nichts bewirken. Ein weiteres Problem war das starke psychologische Element im Thema, dem sich die meisten Wirtschaftswissenschaftler nicht

stellen wollten. Die Plymouth University gestaltete ein Programm, das an der psychologischen Fakultät startete und später in die wirtschaftswissenschaftliche Fakultät integriert wurde. So beurteilen heute sowohl Wissenschaftler der psychologischen, als auch der betriebswirtschaftlichen Fakultät die laufende Promotion zum Thema: „The Impact of Implicit Motives on the Business to Business Decision Making Process“. Aus der Promotion heraus entstanden auch neue Perspektiven; so ist heute die Lehre an der Hochschule München ein fester Bestandteil des beruflichen Alltags.

Michael Zellner ist Vice President bei einer der führenden internationalen Unternehmensberatungen und berät Unternehmen rund um strategische und operative Fragestellungen. Er hat nach seinem betriebswirtschaftlichen Diplom einen MBA am Instituto de Empresa in Spanien gemacht. Sein Forschungsthema sind hybride Strategien, die sich wider der weitverbreiteten Meinung sowohl auf Kosten- wie auch Differenzierungseffekte konzentrieren und damit sehr erfolgreich sind. Insbesondere erforscht er, welche konsistenten, hybriden Strategiekonzepte Unternehmen anwenden und was sie hierzu tun bzw. können müssen.

Gemeinsam mit der Business School der Plymouth University entsteht so die Forschungsarbeit mit dem Titel „The role of underlying mechanisms in achieving sustainable hybrid combinations of competitive advantage“. Nahe an diesem Thema ist auch eine Veranstaltung, die Herr Zellner durchführt.

**Empfehlungen**

Gerade von akademischen Wiedereinsteigern sollte die enorme Belastung durch die Umstellung am Anfang der Promotion nicht unterschätzt werden. Tipps geben dabei gerne die bereits im Programm befindlichen PhD Kandidaten. Aufgrund der im Munich Node gemachten Erfahrungen scheint eine berufsbegleitende Promotion nur dann sinnvoll, wenn sie sich mit der aktuellen Tätigkeit verzahnen

*„Für mich ist dieser PhD ein Weg zur persönlichen Weiterentwicklung und ein Abenteuer in die Welt der internationalen Wissenschaft“*



*The Interplay of Corporate Responsibility, Marketing Activities and Corporate Reputation - A Stakeholder Approach for Car Fleet Managing Companies*

Roland Vogt

lässt, so dass sowohl das Unternehmen als auch der Doktorand bereits vor dem Abschluss der Promotion von den neuen Erkenntnissen profitieren können.

Dies gewährleistet meist schon die Teilnahme und Präsentation auf einschlägigen Veranstaltungen und Kongressen. Wenn auch scheinbar der finanzielle Aufwand bei den meisten Kandidaten am Anfang als problematisch empfunden wird, so sind die rund 2.300 Pfund pro Jahr meist nicht das Problem und amortisieren sich auch schnell über Vorträge oder Lehraufträge. Viele Doktoranden stoßen eher zeitlich an Ihre Grenzen, da unter einer Promotion Partnerschaft, Familie, Beruf und Freunde leiden. So lässt die Begeisterung über die neuen Erkenntnisse des Doktoranden im privaten Umfeld meist schnell nach. Aber auch die vom Programm durchaus

sönlichen Schmerz- und Frustrationsgrenzen erweitert. Dies ist gerade am Anfang hoch frustrierend, jedoch wichtig um im gegenseitigen akademischen Schlagabtausch bestehen zu können und Rückschläge in Forschungsprojekten akzeptieren zu lernen.



*„An der Hochschule bieten wir vom Bachelor über Master bis hin zur höchsten Stufe - der Promotion - das gesamte wissenschaftliche Ausbildungsprogramm. Jede Stufe ist anspruchsvoller und jede Stufe erfordert stärkeren Einsatz und Willen. Der Lohn der Mühen: Jede Stufe steigert das Erfolgserlebnis und den Stolz über das Erreichte.“*

Prof. Dr. Jürgen Spitznagel  
Direktor des PhD Node München

erwünschte Veränderung der Persönlichkeit sollte nicht unterschätzt werden. Niemand geht aus einer Promotion heraus, wie sie oder er hineingegangen ist. Genau dies ist eine Zielsetzung des britischen Systems.

Im Fokus steht der Mensch der am Ende geformt wird und weniger die Lösung einer Fragestellung. Deshalb können die Briten auch wissenschaftliche Fehlschläge tolerieren. Solange der Weg sauber und richtig war, verhindert dies nicht den positiven Abschluss des Promotionsvorhabens. Allerdings werden im Rahmen des Programms auch die per-



Plymouth University

Jeder Interessent sollte vor dem Beginn seine wahren Motive prüfen. Wenn die Motivation eher von außen kommt, weil der Kollege, Vater oder Ex-Freund der Freundin einen Dokortitel hat, dann ist eine Promotion nicht zu empfehlen. Die nötige Motivation wird bei starkem Gegenwind sicherlich nicht aufrecht zu erhalten sein. Handelt es sich jedoch um eine intrinsische, implizite, tief innere, nicht oder nur schwer zu verbalisierende Motivation, so wird ein Promotionsverfahren die richtige Entscheidung sein.

AUSBILDUNG



Figure 188: Publication PhD and Implicit Decision



### Stardesigner unterstützt Doktorarbeit

Christian Chlupsa

Der renommierte Industriedesigner Jörg Wenisch der Isaria AG unterstützt derzeit eine Promotion an der Hochschule München. Dank seiner großzügigen Hilfe wurden die Experimente zur Studie erst möglich.

Für eine laufende Promotion zum Thema „Der Einfluss der impliziten Kommunikation auf das Entscheidungsverhalten von Mitarbeitern im Business to Business Bereich“ lieferte die Isaria Corporate Design AG mit dem Team um Jörg Wenisch wichtige Designs für die Experimente im Rahmen der Datenerhebung.



Scribbles des Designers Jörg Wenisch von der isaria AG zur quantitativen Datenerhebung eines PhD Experiments

Teil der Doktorarbeit ist eine Feldstudie mit rund 175 Mitarbeitern aus verschiedenen Industrien in Europa. Mit an der Studie beteiligt sind Unternehmen wie Audi, BMW, Lufthansa, MINI, Porsche, Siemens, der TÜV und die Intercontinental Hotels, in Frankfurt, München, Nürnberg und Prag.

### Absolvent als Manager beim Weltwirtschaftsgipfel Davos

Christian Chlupsa

Im vergangenen Januar fand in Davos das World Economic Forum statt. Mit dabei war neben Angela Merkel, David Cameron und Ehud Barak auch Sascha Jilko, Absolvent unserer Fakultät.

Dass ein Abschluss der Fakultät für Wirtschaftsingenieurwesen der Hochschule München viele Türen öffnet, war bekannt, doch Sascha Jilko beschleunigte gleich von Null auf Hundert. Noch vor wenigen Semestern als Student an unserer Fakultät aktiv, leitete er gemeinsam mit Klaus Demel im vergangenen Januar den Auftritt der Audi AG auf dem Weltwirtschaftsforum 2013 in Davos.



Sascha Jilko

Zu den Besuchern des Forums zählten namhafte Politiker und Wirtschaftsgrößen aus der ganzen Welt. Die Audi AG ist seit vielen Jahren einer von wenigen ausgewählten Partnern des World Economic Forums. Zu den Besuchern auf der Audi Aktionsfläche schweigt Jilko und verweist auf die nötige Diskretion. Nur so viel konnte man ihm entlocken: „Besucher mit Sondereinsatzkommandos und gepanzerten Limousinen sind keine Seltenheit auf dem WEF“, wie die Insider dazu sagen. Davos im Januar – eine Welt für sich und unsere Absolventen mittendrin statt nur dabei.

Figure 189: Publication Star Designer Supports PhD



Projekte und Forschung

- NEURO-PRICING
- BUSINESS PROCESS BENCHMARKING
- WISSENSCHAFTLICHE PROJEKTARBEIT
- BIOGASPROJEKTE IN KENIA
- SCHLUSS MIT SCHIMMEL
- EARACTION APP
- MYSTIK 2.0
- BEIFAHRERSITZ & KABELBAUM
- SENSOR & TEST 2012

*„Die direkte Messung der Hirnaktivität ermöglicht uns einen völlig neuen Einblick ins Kaufverhalten“*



### Studie zum Neuro-Pricing: Dem Wohlfühlpreis auf der Spur

Christian Chlupsa

Mit einem neuen Forschungsansatz sind Wissenschaftler der Hochschule München auf der Suche nach dem idealen Preis. Durch Neuro-Pricing – einem neuartigen Verfahren basierend auf EEG-Hirnschannaten und Reaktionszeitmessungen – nähern sich die Wissenschaftler dem Preis, den das menschliche Gehirn als fair beurteilt.

An der Fakultät für Wirtschaftsingenieurwesen der Hochschule München forschen Wissenschaftler interdisziplinär unter der Leitung von Prof. Dr. Wolfgang Döhl an der Preiswahrnehmung von Konsumenten. Die Verantwortlichen der Studie, Dr. Kai-Markus Müller und Christian Chlupsa, interessieren dabei, welchen Preis der potentielle Kunde dabei als fair einstuft. Auf die Frage was Kaufinteressen an einem Produkt wichtig ist, folgen meist Antworten wie Qualität und Preis. Doch beide Informationen lassen sich aufgrund der Informationsflut nicht mehr rational erfassen. Vielmehr verfügen wir über ein eher unbewusstes Marken- und Preisempfinden. So haben wir bei manchen Produkten das Gefühl, dass diese teuer oder andere eher günstig sind.

Aktuelle Forschungen über hybride Wettbewerbsstrategien an der Hochschule München haben gezeigt, dass Herstellungskosten und Verkaufspreise oft unabhängig voneinander sind. Dies belegen die aktuellen Verkaufszahlen von Apple & Co eindrucksvoll. In Zusammenarbeit mit dem Verpflegungsdienstleister des Studentenwerks München, der Firma Automaten Seitz, wurde deshalb eine neue Studie entwickelt. Sie besteht aus einer Kombination von EEG- und Reaktionszeitmessung sowie echten Absatzzahlen am Versorgungsautomaten der Hochschule.

*„Die direkte Messung der Hirnaktivität ermöglicht uns einen völlig neuen Einblick ins Kaufverhalten“*

- so der Hirnforscher Kai-Markus Müller.

Trotz der These Neuro + Pricing = Gewinn bleiben die Chancen der besseren Preisfindung meist völlig außer Acht. Dabei muss der „bessere“ Preis nicht automatisch ein höherer Preis sein: ein niedrigerer, aber als fair empfundener Preis kann über höhere Absatzmengen durchaus zu einer Win-Win-Situation führen.

Im Prinzip gibt es ganz einfache Spielregeln, die es einzuhalten gilt. Zum Beispiel können falsch gesetzte Preisvorstellungen – sogenannte Preisanker – beim Kunden fatale Folgen bei der Vermarktung von Produkten haben.

Noch wichtiger sind aber Erkenntnisse über die Empfindungen zum Thema Preis im menschlichen Gehirn. So konnten Wissenschaftler am kalifornischen Institute of Technology nachweisen, dass teurer Wein vermeintlich besser schmeckte als billiger. Der Wein blieb allerdings immer der Gleiche, nur der Preis wurde geändert! Andere Beispiele zeigen, dass Menschen auf harten Stühlen oft härtere Entscheidungen als auf weichen treffen oder Probanden, die einen warmen Kaffee in der Hand halten, ihr Gegenüber als sympathischer bewerten, als solche mit kalten Getränken.

Mehr als 95 Prozent unserer Wahrnehmung ist unbewusst. Warum sollte es mit unseren Entscheidungen also anders sein? Genau mit diesem Thema beschäftigt sich Christian Chlupsa im Rahmen seiner Promotion an der Hochschule München in Kooperation mit der University of Plymouth in Großbritannien.

Figure 190: Publication Neuro Pricing Study

# TITELTHEMA

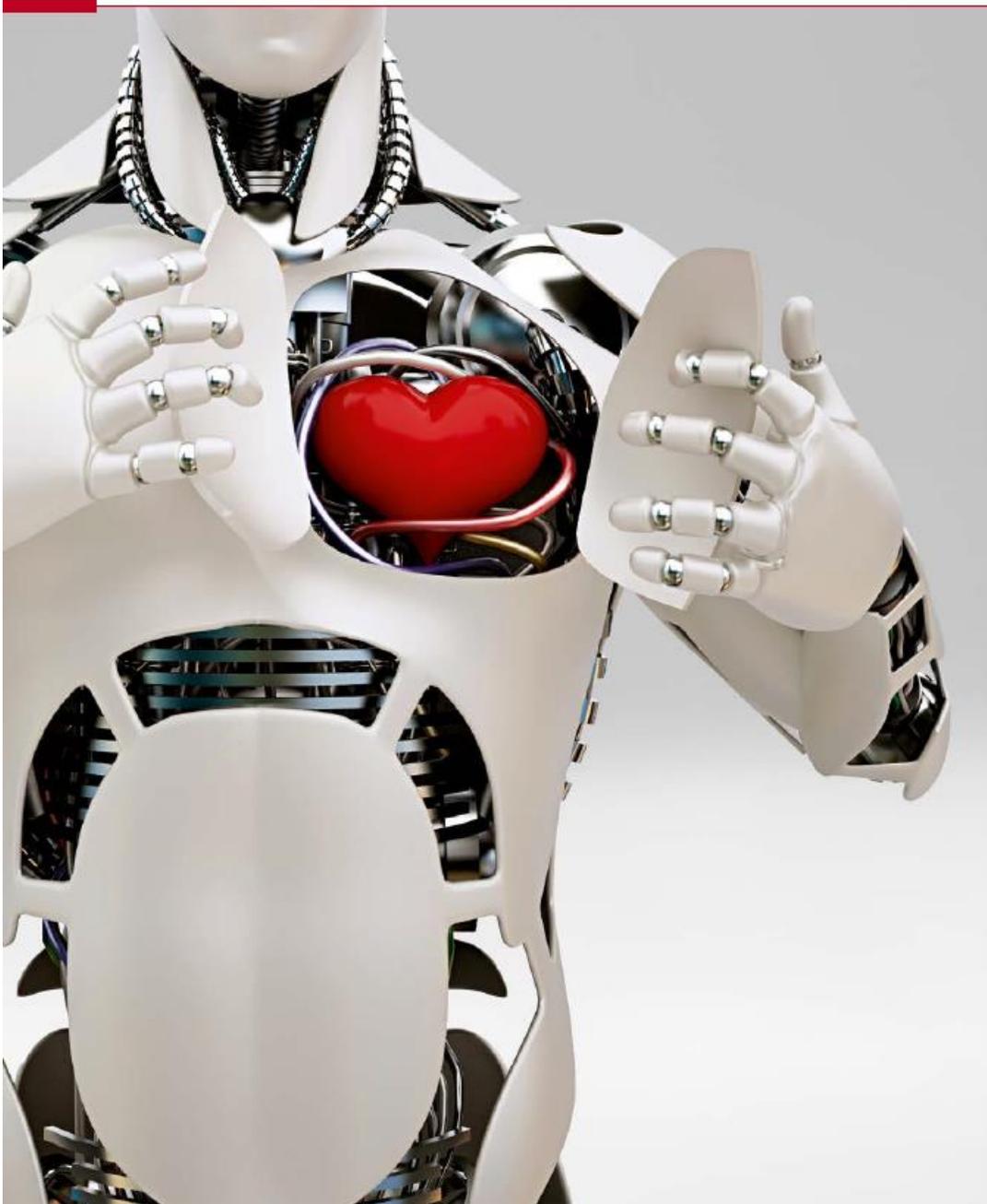


Photo: Deposit/ Shutterstock.com

## Ultima Ratio?

Der Homo Oeconomicus ist tot. Auch die B2B-Welt muss ohne ihn auskommen, denn gekauft wird nicht nur, weil lange nachgedacht wird. Vielmehr geht es um tiefer liegende Bedürfnisse, die befriedigt werden wollen. Die moderne Hirnforschung weiß, wie.

### Übersicht

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### Text \_ Stephanie Streif

James Bond prügelt sich mal wieder: Ein bulliger Asiate soll den Superagenten in »Stirb an einem anderen Tag« endgültig ausschalten. Zusammen mit einem baumhohen Roboter, der seine tödlichen Laserstrahlen kreuz und quer durch den Raum schießt. Fausthiebe gehen hin und her, mal geht Bond, mal der Asiate zu Boden. Am Ende der Szene bekommt die am Roboter festgekettete Agentin Jinx den Steuerkasten der Monstermaschine zu fassen und schießt Bonds Gegner einen feuerroten Strahl durch den Kopf. Während der Asiate tot aus dem Bild fällt, bleibt dem Zuschauer Zeit zum Lesen: Kuka steht auf dem Roboterarm im Hintergrund. Die Kuka Roboter GmbH ist Europas Marktführer für Industrieroboter. Ein klassisches B2B-Unternehmen also, das Roboter nach Bedarf baut und verkauft – und das über viele Branchen hinweg.

Dass in James-Bond-Filmen geworben wird, was geht, ist alles andere als neu.

02/2013 [www.aquisisa.de](http://www.aquisisa.de)

Nur – dass neben großen Markennamen wie Range Rover und Sony Ericsson plötzlich Kuka auftaucht, überrascht dann doch: Ein Industrieroboter ist schließlich kein Handy, das sich eben mal so in hoher Stückzahl verkauft. Die Entscheidung für oder gegen einen neuen Roboter dauert und fällt in der Regel innerhalb eines Buying-Centers, das Kosten und Nutzen einer solchen Anschaffung konsequent durchdenkt. Lustkäufe kommen im B2B-Bereich nicht vor. Oder etwa doch? Bei Kuka Roboter scheint man sich sicher zu sein. Denn die Maschinen sind orange, formschön und sympathisch. Klingt fast so, als sei das Märchen vom vernunftgesteuerten Homo Oeconomicus auserzählt.

### Systeme im Kopf

Ist es auch. Spätestens seit das Institut Forum Marktforschung in Kooperation mit der B2B-Agentur RTS Rieger Team herausgefunden hat, dass in Unternehmen immer wieder gegen die Ratio angekauft wird: 300 Entscheider aus Maschinen- und Anlagenbau, Elektronik

und Automatisierung wurden für die Studie »B2B insight« von 2010 befragt, davon gaben zwar 77 Prozent an, ihre Emotionen aus beruflichen Entscheidungsprozessen herauszuhalten, 54 Prozent räumten aber ein, dass sie eine Entscheidung trotz positiver Faktenlage auch mal kippen, wenn das Bauchgefühl nicht stimmt. Dass die Marke bei der Produktauswahl wichtiger ist als der Preis, räumen nur 13 Prozent der befragten Unternehmen ein. Für 88 Prozent war allerdings bei der letzten Anschaffung das Vertrauen in den Anbieter entscheidend. Und: Unternehmensintern werden Entscheidungen auch mit der Reputation des Anbieters gerechtfertigt, gleich nach der Qualität und dem Preis-Leistungs-Verhältnis. »Keiner entscheidet plötzlich emotionslos, nur weil er im Anzug ins Büro geht«, fasst Jörg Dambacher, Geschäftsführer des RTS Rieger Teams die Studienergebnisse zusammen. Allerdings gebe es einen elementaren Unterschied zwischen der privaten und der unternehmerischen Bedarfsbefriedigung, merkt Dambacher an. Die Umweltfaktoren seien ganz andere: »Wer den falschen Fernseher kauft, bekommt Ärger mit seiner Frau. Wer aber für sein Unternehmen die falsche Maschine anschafft, verliert möglicherweise den Job.« Das Risiko ist sehr viel größer. So wie die Unsicherheit, unter der eine Entscheidung zustande kommt, schließlich ist der Markt an Industriegütern nicht zu überblicken, und die werberische Rhetorik vieler B2B-Unternehmen kreist [...]

# 14\_15

TITELTHEMA \_ B2B-Marketing

**»WENN DER DIALOG AUS DEM BEWUSSTEN SELBSTVERSTÄNDNIS HERAUS GEFÜHRT WIRD, IST DAS BEREITS DER BESTE MARKENTRANSPORT. MARKETING KANN DANN BESTENFALLS NOCH FÜR DEN TAKTISCHEN FEINSCHLIFF SORGEN.«**

MARCO PETRACCA, Geschäftsführer Cuecon, Köln

immer wieder um die gleichen Begriffe: Qualität, Innovation und Effizienz. Es fehlt an einem eigenen Profil.

**Ratio versus Emotion**

Und Mut zum Anderssein haben nur wenige. »Aber genau das braucht es«, fordert Christian Scheier, Gründer und Geschäftsführer von Decode, einem Hamburger Beratungsunternehmen für implizites Marketing. Denn »nur durch ihre impliziten, also nicht ausdrücklichen Bedeutungsinhalte überzeugen Marken und werden für Konsumenten

‚Ratio versus Emotion‘ hat all das nichts zu tun«, so Scheier. »Das hat die Forschung längst ad acta gelegt.« Auch wenn in der werberischen Praxis noch immer die alten Grabenkämpfe geführt werden: Während die einen im Kundendialog auf textlastiges Material setzen, um jedes Produktdetail auszuführen, plädieren die anderen für mehr Image.

Mit Verweis auf den Psychologen und Verhaltensökonom Daniel Kahnemann, der 2002 mit dem Wirtschaftsnobelpreis ausgezeichnet wurde, erklärt Scheier, wie Entscheidungen im Gehirn tatsächlich zustande kommen. Kahnemanns Entscheidungsmodell besteht aus zwei Systemen – einem impliziten und einem expliziten. »Das erste ist eine Art Autopilot, der nie schläft und über den das menschliche Gehirn wahrnimmt, erinnert und routinierte Tätigkeiten wie Schuhe binden abwickelt. Das zweite System ist der Pilot. Den braucht es zum Nachdenken, Lernen und Planen.« Der Autopilot ist nicht mit Emotion gleichzusetzen, auch er beinhaltet viele Aspekte von Lernen, die Muttersprache zum Beispiel wird über ihn erworben. Er ist im Hier und Jetzt, der Pilot hingegen kann auch in die Zukunft denken.

Beide Systeme greifen ineinander, allerdings bevorzugt das Gehirn den Autopiloten, denn dieser arbeitet schnell und frisst längst nicht so viel Energie. Kurz: Nachdenken unerwünscht! Desinteresse, Zeitdruck, Komplexität und Überlastung können den Piloten noch träger machen. »Und mindestens drei dieser Faktoren gehören unbedingt zum Alltag eines B2B-Entscheidungers«, so Scheier. »Ohne ih-



ren Autopiloten können die darum gar nichts entscheiden. Dieser koordiniert auch alle sozialen Prozesse innerhalb von Teams, aber auch gegenüber von Vorgesetzten und Kunden.« Scheiers Rat: Endlich den Glauben aufzugeben, Marken einfach so in die Köpfe der Kunden pushen zu können. »Auf das Wie kommt es an, denn im Gehirn gilt das Pull-Prinzip. Belohnung führt zu Aufmerksamkeit, nicht umgekehrt.« Der Schlüssel dazu: beim Vermarkten die implizite Ebene sehr viel stärker zu bedienen.

**Markenkern als Basis**

Nur – wie soll ein mittelständischer Maschinenbauer plötzlich Fiktionswerte erschaffen, die im Gehirn professioneller Einkäufer die Belohnungssysteme stimulieren? Vor gut zwei Jahren hat die im nordrhein-westfälischen Kreuztal gelegene Georg Maschinenfabrik angefangen, mal genauer nachzufragen: »In mehreren bereichsübergreifenden Workshops haben wir mit externer Moderation herausgearbeitet, was uns in der Vergangenheit ausgezeichnet hat, wie uns unsere Kunden sehen, wofür wir stehen und künftig stehen wollen«, berichtet Thomas Kleb, Leiter für Personal, Marketing und Kommunikation (Fallbeispiele siehe rechts). Was dabei herauskam, ist ein Markenkern, der sich mit den Worten »m it uns technisch überlegen« umschreiben lässt und dem, um das Versprechen auch erfahrbar zu machen, unternehmensintern so ziemlich alles untergeordnet wird – die strategische Ausrichtung genauso wie die Sprache, die Bild- und Filmwelten sowie das Personalmarketing.



**»SOCIAL MEDIA IST NICHT FÜR JEDEN B2B-LER EIN MUSS. BESSER IST ES, ERST EINMAL DIE FÜSSE STILL ZU HALTEN UND SICH GANZ GENAU ZU ÜBERLEGEN, WIE UND BEI WEM ICH MIT FACEBOOK UND AUF XING PUNKTEN KANN.«**

JÖRG DAMBACHER, Geschäftsführer RTS Rieger Team, Leinfelden-Echterdingen

relevant, begehrtestenswert und differenzieren sich von der grauen Masse.« Zum Beispiel durch Schlüsselwörter, Farbkontraste oder durch Fotos, die den Belohnungswert eines Produktes eindrücklich zeigen. »Mit dem Entscheidungsmodell

Marco Petracca, Geschäftsführer der auf Markenberatung spezialisierten PSV Marketing-Tochter Cuecon, beschreibt diesen Prozess als »Trüffelsuche«. Wichtig dabei sei ein empathischer Blick auf das eigene Unternehmen. Darum ruhig auch bei Kunden, Lieferanten und Partnern nachfragen: Was macht das Unternehmen aus, womit erzeugt es Respekt, Sympathie und Vertrauen? Dazu Petracca: »Das erfordert Mut, doch die Fra-

ge lohnt sich, denn in den Antworten schlummern meist nicht nur Hinweise auf Optimierungspotenziale, sondern auch mögliche Kernbotschaften.« Je mehr Antworten zusammenkommen, desto besser. Und desto größer auch die Wahrscheinlichkeit, dass in der Quersumme der Markenkern steckt. Den gilt es freizulegen und mit wenigen Worten zu skizzieren. Bloß nicht zu viel hineinpacken. Das schärft das Profil. Ein

passendes Markenbild zu entwickeln, ist nach Meinung Petraccas aber längst nicht alles. Um seine Wirkung entfalten zu können, muss es auch innerhalb des Unternehmens implementiert werden – und zwar von oben nach unten. Ohne »Brand Behaviour«, also die Steigerung des Marken-Commitments bei den Mitarbeitern, geht es nicht. Gerade weil es sich im B2B-Bereich häufig um kostspielige Vertragsgeschäfte handelt, [...]

→ BEISPIELE IMPLIZITE MARKENFÜHRUNG

→ Beispiel 1:

Heinrich Georg GmbH Maschinenfabrik: Employer Branding



Für 2010 hatte sich die Georg Maschinenfabrik vorgenommen, ihre Kommunikation zu überdenken. Daraus wurde ein von der Unternehmensführung angeschobener Markenprozess, der bis heute andauert: Markenwerte und Positionierung wurden definiert, um darauf aufbauend die gesamte externe Kommunikation neu auszurichten. Von der Entwicklung eines neuen Corporate Design über den gesamten Offline- und Online-Auftritt wurde das neue Erscheinungsbild sukzessive umgesetzt und bedarfsgerecht aufbereitet – für Anzeigen

genauso wie für die PR, den Film sowie den Messe- und den Web-Auftritt. Auch die Mitarbeiter wurden in den Markenprozess integriert: Sie haben mitdiskutiert, als es um die Marke ging. Einige von ihnen agieren als Markenbotschafter und suchen nach Strategien, die die interne und die externe Kommunikation intelligent vernetzen. Dabei herausgekommen ist unter anderem eine Image-Anzeigenserie, die in regionalen Tageszeitungen geschaltet wurde. Das Schulungsangebot wurde ebenfalls angepasst, sodass es die Marke jetzt auch bis ins Verkaufsgespräch schafft.

→ Beispiel 2:

BPW Bergische Achsen KG: Event mit Emotion

BPW ist Spezialist in Sachen Fahrwerkssystem für gezogene Fahrzeuge. Das Jahr 2011 stand bei BPW ganz im Zeichen der BPW ECO Disc, einer in den Markt neu eingeführten Trailer-Scheibenbremse. Diese wurde ganz klassisch mit Anzeigen, Broschüren und Mailings beworben. Parallel dazu sollte das RTS Rieger Team für noch mehr Aufsehen für das Produkt sorgen. Das Ziel: Emotionalisierung der Marke und Erschließung neuer Kundengruppen. Im Fokus der Aktion standen die Werkstätten von Fuhrunternehmen. Schließlich sind sie es, die mit der neuen Trailer-Scheibenbremse arbeiten müssen. Wesentliche Produktvorteile der neuen BPW ECO Disc sind das einfache Handling und

die Zeitersparnis beim Scheibenwechsel. Und genau die galt es zu vermitteln: In allen zur Verfügung stehenden Medien (Anzeigen, Broschüren, Newsletter, Promofilme) wurde zur »BPW ECO Disc Challenge« aufgerufen. In die Endrunde schaffte es nur, wer die von BPW vorgegebene Zeitmarke von 9:28 Minuten knacken konnte. Viele Werkstätten zeigten sich von der Aktion begeistert. Das Presseecho war groß. Allein über die relevanten Fachmedien konnten rund 250.000 Kontakte generiert werden.



→ Beispiel 3:

Fronius International GmbH: Symbole sind der Schlüssel

Fronius International gilt in den Bereichen Batterieladesysteme, Schweißtechnik und Solarelektronik als Technologieführer. Der Claim »Grenzen verschieben« steht für den ausgeprägten Forschungsdrang des Unternehmens und sollte entsprechend inszeniert und kommuniziert werden. Zum neuen Symbol alter Markenwerte wie Mut, Dynamik, Leichtigkeit und Fortschritt wurde der Fronius-Sprung. Seither springen auf Broschüren, in Flyern, auf der Website oder in Imagefilmen Menschen über Hindernisse, die sich ihnen in Gestalt von Sätzen wie »Zu riskant« oder »Ob das gut geht« in den Weg stellen. Die Dachmarkenkampagne wurde auch bis in das Unternehmen hinein verlängert. Das Ergebnis: Jede Menge Bestätigung von internationalen Töchtern, Mitarbeitern und Kunden. Noch mehr Lob gab es von den Motivforschern des Wiener Karmasin Instituts, die die Kampagne als ein »rundum gelungenes Beispiel für eine hervorragende Umsetzung einer Markenkommunikation« beschreiben.



TITELTHEMA \_ B2B-Marketing

BUCHTIPPS

Christian Scheier und Dirk Held  
**Was Marken erfolgreich macht:** Neuropsychologie in der Markenführung  
 Haufe-Verlag 2012  
 (3. Aufl.)  
 29,95 Euro, 276 Seiten  
 ISBN 978-3-648-02954-1



**Marken wirken im Gehirn. Ohne Neuropsychologie kommt die werberische Praxis nicht mehr aus. Scheier und Held wollen die Praxis der Markenführung auf ein solides und nützliches Fundament stellen.**

Carsten Baumgarth (Hg.)  
**B-to-B-Markenführung:** Grundlagen – Konzepte – Best Practice  
 Gabler-Verlag 2010  
 84,95 Euro  
 761 Seiten  
 ISBN 978-3-8349-1738-6



**B2B-Unternehmen brauchen Marke. Dieses Buch analysiert die Relevanz von B2B-Marken, liefert theoretische Konzepte und jede Menge praktische Tipps, wie eine Marke nach innen und außen zu führen ist.**

Daniel Kahnemann  
**Schnelles Denken, langsames Denken**  
 Siedler-Verlag, 2011  
 26,99 Euro  
 622 Seiten  
 ISBN 978-3-88680-886-1



**Wirtschaftsnobelpreisträger Kahnemann macht Schluss mit dem Paradigma des »homo oeconomicus«. Den stets vernünftigen, unter Berücksichtigung aller verfügbaren Informationen kalkulierenden Nutzenmaximierer gibt es nicht.**

muss der Einkäufer die Gewissheit haben, dass er nichts falsch macht. »Selbst die Entscheidung, ob mit einer Schraube von Würth oder mit einer Schraube von Ejot gearbeitet wird, macht dieser doch an der menschlichen Qualität des Vertriebs fest. Und danach erst an Preis und Werbung«, glaubt Petracca. Denn das Markenerlebnis des B2B-Kunden basiert auf vielen Faktoren: der Laune der Sekretärin, dem Auftreten des Vertriebsmitarbeiters oder den Teppichflusen im Eingangsbereich. Das macht die Sache so komplex.

**Starke Markenperformance**

Kurz: Unternehmen und Mitarbeiter der B2B-Welt müssen halten, was ihre Marke verspricht. Nicht die Gestaltung des Dialoges sei bei der Optimierung und Nutzung des Markenpotenzials primär, sondern die natürliche Verankerung. Und Petracca weiter: »Wenn der Dialog aus dem bewussten Selbstverständnis heraus geführt wird, ist das bereits der beste Markentransport. Marketing kann dann bestenfalls noch für den taktischen Feinschliff sorgen.« Es gibt aber auch Experten, die dagegenhalten – der bereits eingangs zitierte Jörg Dambacher zum Beispiel: Für ihn ist Marke immer Kommunikation. »Eine Marke, egal, ob B2B oder B2C, lebt nicht aus sich selbst heraus. Wie auch?« Vielmehr müsse Marke durch Kommunikation performed werden. »Das ist wie Wackküssen«, so Dambacher.

Mit einem selbst entwickelten 3P-Markenmodell unterstützt sein RTS Rieger Team seine Kunden bei der Ausgestaltung von Markenbotschaften: Das erste P steht für Potenzialanalyse, das zweite für Positionierung und das dritte für Performance. Sind die ersten beiden erledigt, geht es daran, Zielgruppen zu selektieren und zu priorisieren, die Kanäle nach möglichen Brand Moments zu identifizieren (Wer tritt wann, wie und wo in Kontakt?) sowie das Zusammenspiel aller Maßnahmen zu organisieren. Wichtig dabei: nur alle relevanten Medien belegen. »Social Media ist nicht für jeden B2Bler ein Muss. Besser ist es, erst einmal die Füße still zu halten und

sich ganz genau zu überlegen, wie und bei wem kann ich mit Facebook und auf Xing punkten«, so der Rat Dambachers (siehe auch Studie rechts). Was die Kommunikation außerdem braucht, sind Symbole, die zu den Sprach- und Bildwelten der Marke passen. Beispiel: Fronius International, ein österreichisches Unternehmen, das in den Bereichen Batterieladesysteme, Schweißtechnik und Solarelektronik zu den Technologieführern zählt (Fallbeispiele S. 17). Die Formel zu diesem Bessersein lautet »Grenzen verschieben«, bebildert wird sie mit Menschen, die Hindernisse überspringen. »Der Sprung ist das passende Symbol«, erklärt Dambacher die von seiner Agentur entwickelten Kampagnenmotive. »Die Geste steht weltweit für Mut, Energie, Neugierde und Freude.«

**Codes der B2B-Welt**

Nur wer die wahre Motivlage seiner Kunden kennt, kommt auch an sie heran – sowohl im B2C- als auch im B2B-Bereich. Es lohnt sich also, genauer hinzuschauen: Ein Controller, der eine neue Software ordert, ist mehr als ein Zahlenmensch oder Kontrollfreak. Christian Chlupsa, Marketingdozent an der Münchner Hochschule für Angewandte Wissenschaften, hat die unterbewussten Motive von Entscheidern erforscht. Er unterscheidet drei Typen: die Sicherheits-, die Leistungs- und die Machtmotivierten. »Der Kundendialog muss mit dieser Typologie abgeglichen werden, sonst funktioniert er nicht. Unsere Kommunikationswahrnehmung funktioniert stark selektiv. Bei uns kommt nur an, was unserer persönlichen Lebensstruktur entspricht«, so Chlupsa. Studien haben ergeben, dass im Top-Management eines Unternehmens vor allem die Machtmotivierten

→ **STUDIE WEBAFFINITÄT VON B2B-ENTSCHEIDERN**

schen sitzen, im mittleren Management die Leistungsorientierten und in der Administration die Sicherheits- oder Anschlussmotivierten. Einen Manager zum Beispiel sollte man nicht mit technischen Details belastigen. Er will, dass es vorangeht – für das Unternehmen und für ihn. Darum ihm gegenüber besser mit Wettbewerbsvorteilen oder Wissensvorsprüngen argumentieren. Und die Werbemittel so edel wie möglich halten. Ganz anders der Leistungsmotivierte, er mag es sportlich. Optisch lässt er sich mit viel Farbe locken sowie mit Bildern, die ihm suggerieren: »Du schaffst das!«, zum Beispiel von einem Kajak in der Stromschnelle. Der Sicherheitsmotivierte mag hingegen erdige Farben und Motive von Landschaften und harmonisches Miteinander. Chlupsa hat auch das Buying-Center unter die Lupe genommen. Das sei alles andere als ein emotionsfreier Raum. »Häufig gibt es in der Runde einen informellen Treiber, der die Entscheidungsfindung maßgeblich beeinflusst. Und: Je teurer das Produkt, desto größer die Wahrscheinlichkeit, dass auf einer höheren Ebene entschieden wird.« Zumal das Buying-Center ohnehin häufig sehr viel kleiner sei als bisher angenommen

Die Suche nach dem passenden Produkt beginnt immer öfter im Web. Wie zwei Studien jüngst belegt haben, gilt das entgegen vieler Behauptungen auch für B2B-Entscheider. Sowohl der »Byersphere Report 2012« als auch die von der Deutschen Messe Interactive in Auftrag gegebene Studie »Information und Kommunikation im Kaufprozess von B2B Unternehmen« zeigen, dass das Internet die erste Quelle für ihre Informationsrecherche ist. Laut Report nutzen 71 Prozent der B2B-Entscheider Suchmaschinen. Vor allem, wenn es um Produkte oder Dienstleistungen geht, mit denen der Entscheider keine Erfahrungen hat, wird erst einmal im Netz danach gesucht. Dazu im Vergleich: 56 Prozent setzen bei der Infosuche auf Offline-Kontakte. Social Media nutzen immerhin 21 Prozent, allen voran die IT-Verantwortlichen (41 Prozent). Ist man erst einmal im Netz unterwegs, wird vor allem

auf Anbieter-Websites (73 Prozent) weitergesucht. Informationen werden aber auch anderswo gesammelt – in der gedruckten Fachpresse zum Beispiel (47 Prozent), über Hersteller-Mails (39 Prozent), Mailings (19 Prozent) und Whitepapers (17 Prozent). Spannend auch, was die andere Studie zu Tage gefördert hat: Nur 20 Prozent der befragten Unternehmensentscheider gaben an, dass Online-Werbung für ihre Recherchen eher häufig bis immer relevant sei. Die Hälfte der Befragten halten die derzeitigen Angebote für zu oberflächlich. Sehr viel persönlicher wird es, wenn es um Erfahrungen geht, die im Investitionsprozess gesammelt wurden. Diese werden vor allem im Gespräch oder per Mail weitergegeben. Ebenfalls wichtige Plattformen zum Austausch sind Messen und Verbände. Social Media und Blogs spielen eine eher untergeordnete Rolle.

wurde, auch das ist ein Ergebnis der oben zitierten Entscheiderstudie »B2B insight«: Meistens besteht es aus zwei Leuten, dem Fachmann aus der Abteilung und dem Geschäftsführer. Der Einkäufer sitzt zwar am Tisch, entscheidet

aber häufig nicht mit, sondern schafft lediglich die Rahmenbedingungen für den Kauf. Das immerhin macht den Kundendialog in der B2B-Welt weniger komplex. Präzision ist gefragt.  
redaktion@acquisa.de · 1

Figure 191: Publication Magazine aquisa 2013

# BSZ

GEGRÜNDET 1912

# Bayerische Staatszeitung

## und Bayerischer Staatsanzeiger

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UNABHÄNGIGE WOCHENZEITUNG FÜR POLITIK, WIRTSCHAFT, KOMMUNALES UND KULTUR

**Gehaltvolle Zuarbeit**

Staatliche Zuschüsse an Abgeordnete: Unter welchen Voraussetzungen und mit wie viel Geld der bayerische Landtag und der Bundestag die Abgeordnetentätigkeit unterstützen. | Seite 2

**Lukrative Wasserkraft**

Das österreichische Staatsunternehmen „Verbund“ wird einer der größten Energieerzeuger im Freistaat – und mischt damit auf beispiellose Weise den bayerischen Strommarkt auf. | Seite 13

**Überirdisches Licht**

Das neue Münchner Lenbachhaus ist ein Glücksfall. Was auch an der wundervollen Beleuchtung liegt, die Besucher geradezu entrückt durch die Räume schweben lässt. | Seite 23

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Freitag, 3. Mai 2013 | Nr. 18
www.bayerische-staatszeitung.de
Abzählpreis: € 1,85

Mit EEG-Hirnschneidungen und Reaktionszeitmessungen sollen die Gedanken der Konsumenten erforscht werden

## Welche Preise unser Gehirn als fair einstuft

Mit einem neuen Forschungsansatz sind Wissenschaftler der Hochschule München auf der Suche nach dem idealen Preis. Durch Neuro-Pricing – ein neuartiges Verfahren basierend auf EEG-Hirnschneidungen und Reaktionszeitmessungen – nähern sich die Wissenschaftler dem Preis, den das menschliche Gehirn als fair beurteilt. An der Fakultät für Wirtschaftswissenschaften der Hochschule München forschen Wissenschaftler an der Preiswahrnehmung von Konsumenten. Sie interessieren sich, welchen Preis der potentielle Kunde dabei als fair einstuft.

Auf die Frage, was Kaufinteressenten an einem Produkt wichtig ist, folgen meist Antworten wie Qualität und Preis. Doch beide Informationen lassen sich aufgrund der Informationsflut nicht mehr rational erfassen. Vielmehr verfügen wir über ein eher unbewusstes Marken- und Preisempfinden. So haben wir bei manchen Produkten das Gefühl, dass diese teuer oder anders eher günstig sind. Aktuelle Forschungen über hybride Wettbewerbsstrategien an der Hochschule München haben gezeigt, dass Herstellungskosten und Verkaufspreise oft unabhängig voneinander sind. Dies belegen die aktuellen Verkaufszahlen von Apple & Co eindrucksvoll.

Zu teuer – oder günstig? Das entscheiden wir in Sekunden. FOTO: BILDERBOX

Das ökonomische Potenzial der wissenschaftlichen Arbeit ist groß. Denn täglich arbeiten Unternehmen an Einsparungen, um ihre Unternehmen noch profitabler zu machen – doch die Chancen der besseren Preisfindung bleiben dabei meist völlig außer Acht. Hierbei muss der „bessere“ Preis übrigens nicht automatisch ein höherer Preis sein. Ein vielleicht sogar niedrigerer, aber als fair empfundener Preis kann über höhere Absatzmengen durchaus zu einer Win-Win-Situation führen.

Im Prinzip gibt es ganz einfache Spielregeln, die es einzuhalten gilt. Zum Beispiel können falsch gesetzte Preisvorstellungen fatale Folgen bei der Vermarktung von Produkten haben. Viel wichtiger sind aber die Erkenntnisse über die Empfindungen zum Thema Preis im menschlichen Gehirn. So konnten US-Wissenschaftler nachweisen, dass vermeintlich teurer Wein besser schmeckte als billiger. Der Wein blieb allerdings immer der Gleiche, in Wirklichkeit wurde nur der Preis geändert.

Unbewusste Effekte und damit Kaufentscheidungen gibt es zahlreich im menschlichen Verhalten. So treffen Menschen auf harten Stühlen härtere Entscheidungen als auf weichen. Probanden, die einen warmen Kaffee in der Hand halten, bewerten ihr Gegenüber als sympathischer als solche mit kalten Getränken und Investmentbanker schätzen die Zahl der Ärzte in einer Stadt in Abhängigkeit von den letzten Zahlen ihrer Handynummer nach der man sie gerade gefragt hat! Mehr als 95 Prozent unserer Wahrnehmung ist also unbewusst. Warum sollte es mit unseren Entscheidungen also anders sein?

> CHRISTIAN CHLUPSA

Figure 192: Publication Bavarian Governmental Newspaper

# VENDING MANAGEMENT

Ausgabe 03/2013

3. Juni 2013

www.vending-management.de

7

## Welcher Preis ist angemessen?

Welchen Betrag stuft der potenzielle Kunde am Automaten als angemessen ein? Mit einem neuen Forschungsansatz sind Wissenschaftler der Hochschule München auf der Suche nach dem idealen Preis. Die Vending-Automaten von Automaten Seitz helfen ihnen dabei.

Durch Neuro-Pricing – einem neuartigen Verfahren basierend auf EEG-Hirnsensordaten und Reaktionszeitmessungen – nähern sich die Wissenschaftler dem Preis, den das menschliche Gehirn als fair beurteilt. An der Fakultät für Wirtschaftsingenieurwesen der Hochschule München forschen Wissenschaftler interdisziplinär unter der Leitung von Prof. Dr. Wolfgang Döhl an der Preiswahrnehmung von Konsumenten. Die Verantwortlichen der Seitz, Dr. Kai-Markus Müller und Christian Chitpas, interessiert dabei, welchen Preis der potenzielle Kunde dabei als fair einstuft. Auf die Frage was Kaufinteressenten an einem Produkt wichtig ist, folgen meist Antworten wie Qualität und Preis. Doch beide Informationen lassen sich aufgrund der Informationsflut nicht mehr rational erfassen. Vielmehr verfügen wir über ein eher unbewusstes Marken- und Preisempfinden. So haben wir bei manchen Produkten das Gefühl, dass diese teuer oder zudeher eher günstig sind.

Aktuelle Forschungen über hybride Wettbewerbsstrategien an der Hochschule München haben gezeigt, dass Herstellungskosten und Verkaufspreise oft unabhängig voneinander sind. Dies belegen die aktuellen Verkaufszahlen von Apple & Co eindrucksvoll. In Zusammenarbeit mit dem Verpflegungsspendenleister des Studentenwerks München, der Firma Automaten Seitz, wurde deshalb eine neue Studie entwickelt. Sie besteht aus einer Kombination von EEG- und Reaktionszeitmessung sowie echten Absatzdaten am Versorgungsautomaten der Hochschule. „Die direkte Messung der Hirnaktivität ermöglicht uns einen völlig neuen Einblick ins Kaufverhalten“, so Kai-Markus Müller.

„Neuro + Pricing = Gewinn“

Der Hirnforscher Kai-Markus Müller bringt es auf eine simple Formel: Neuro + Pricing = Gewinn. Täglich arbeiten Unternehmen an Einsparungen, um ihre Unternehmen noch profitabler zu machen, doch die Chancen der besseren Preisfindung bleiben dabei



Dr. Kai-Markus Müller und Christian Chitpas sind für die Studie an der Hochschule München verantwortlich. Foto: Hochschule München

meist völlig außer Acht. Hierbei muss der „bessere“ Preis nicht automatisch ein höherer Preis sein. Ein vielleicht sogar niedrigerer, aber als fair empfundener Preis kann über höhere Absatzmengen durchaus zu einer Win-Situation führen. Im Prinzip gibt es ganz einfache Spielregeln, die es einzuhalten gilt. Zum Beispiel können

fälschlich gesetzte Preisvorstellungen – sogenannte Preisanker – beim Kunden fatale Folgen bei der Vermarktung von Produkten haben. Noch wichtiger sind die Erkenntnisse über die Empfindungen zum Thema Preis im menschlichen Gehirn. So konnten Wissenschaftler am kalifornischen Institute of Technology nachweisen, dass vornehmlich

teurer Wein besser schmeckte als billiger. Der Wein blieb allerdings immer der gleiche, nur der der Preis wurde geändert...

Unbewusste Effekte und damit Kaufentscheidungen gibt es zahlreich im menschlichen Verhalten. So treffen Menschen auf harten Stühlen härtere Entscheidungen als auf weichen. Preisbanden, die einen warmen Kaffee in der Hand halten, bewerten ihr Gegenüber als sympathischer als solche mit kalten Getränke und Investmentbanker schätzen die Zahl der Arzte in einer Stadt in Abhängigkeit von den letzten Zahlen ihrer Handnummer, nach der man sie gerade gefragt hat. Mehr als 99 Prozent unserer Wahrnehmung ist unbewusst. Warum sollte es mit unseren Entscheidungen also anders sein? Genau mit diesem Thema beschäftigt sich Christian Chitpas im Rahmen seiner Promotion an der Hochschule München in Kooperation mit der University of Plymouth in Großbritannien. In einer ersten Studie konnte er aufzeigen, dass dies nicht nur für den täglichen Einkauf am Supermarkt, sondern auch für die Entscheidungen von Managern im bisher als rational gefeierten Bereich der B2B-Entscheidungen gilt. (gso)



Figure 193: Publication Vending Management

## **Appendix U. Supervising**

### **The Impact of Emotions on the Organisational Buying Process**

Peter Stigler

Master Thesis

University of Applied Sciences Munich

29. September 2011

### **The Influence of Implicit Motives on the Group Decision Making Process in the Area of Investment Goods**

Christoph Garber

Master Thesis

University of Applied Sciences Munich

12. March 2012

### **Electro- and Hybrid Cars in the Premium Segment – Chances and Advantages for a supplier**

Sylvia Schanppberger,

Diploma Thesis

University of Applied Sciences Munich

07. November 2011

**Neuroeconomics**

Sara Nitsche,

Project Work

DHBW Ravensburg

04. October 2011

**The Impact of Employer Branding on the Employer Satisfaction on a Trading Company in the Car Industry**

Katharina Santner

Bachelor Thesis

University of Applied Sciences Munich

31. August 2012

**Analysing Current Marketing Concepts of Super Sports Cars for the Background of the Implicit Communication**

Atila Aktag,

Bachelor Thesis

University of Applied Sciences Munich

30. September 2012

**Development of a Marketing Concept for MINI Connected with regard to the Technical Background, the Competitive Environment and the Requirements for the Optimization of the Sales Argument in the Retail Organization.**

Verena Fischer

Bachelor Thesis

University of Applied Sciences Munich

14. March 2013

**Utilization of Open Innovation in the Automotive Industry on the Example of the Urban Driving Experience Challenge**

Patrick Koegel

Bachelor Thesis

University of Applied Sciences Munich

14. March 2013

**Essence of effective Advertisement - A Analysis of advertisement based on parameters for the optimization of the communication of o2 from a neuromarketing perspective.**

Joshua Scharf

Bachelor Thesis

Macromedia University Munich

16. July 2013

**Wie man sich junge Freunde schafft. Die Weiterentwicklung des Brands der Freunde. Empfehlung zur Entwicklung einer jungen Freundesgruppe.**

Lisa Willenberg

Bachelor Thesis

Baltic College - FHM Schwering

28. May 2013

**Brain based pricing - can neuro pricing reveal a new approach for consumer target pricing?**

Gerasimos Kourkoulus

Bachelor Thesis

University of Applied Sciences Munich

In Process

Table 55: Supervising of Bachelor and Master Theses

## Appendix V. Awards, Speaker and Instructor

### Awards

Silver Medal of Honours of the Chamber of Commerce

### Speaker

Academy of the Chamber of Commerce

Cantus Academy

### Instructor

Chamber of Commerce - Examinations Board Advertising

Chamber of Commerce - Instructor in Media Design

Table 56: Awards, Speaker and Instructor

## Appendix W. Selection of Industry Projects and References

City of Munich

COMARCH

Delegate Group

Exact

GKN Aerospace

Hofbraeu Munich Brewery

Kaspersky

KEK IT

Kempinski Hotels

PORSCHE

SIEMENS

SPANGLER Automation

Starwood Hotels

Webasto

Table 57: Selection of Industry Projects and References

## Appendix X. Pictures of the Data Collection



Figure 194: Data Collection Picture Lufthansa

**Appendix X. Pictures of the Data Collection**



Figure 195: Data Collection Picture Porsche



Figure 196: Data Collection Picture BMW

**Appendix X. Pictures of the Data Collection**



Figure 197: Data Collection Picture Siemens



Figure 198: Data Collection Picture TÜV

**Appendix X. Pictures of the Data Collection**



Figure 199: Data Collection Picture O2 Telefonica



Figure 200: Data Collection Picture Intercontinental Hotel