

**Cognitive and Affective Drivers of Customer Satisfaction and Loyalty**

by

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Submitted in accordance with the requirements for the degree

**Philosophiae Doctor**

(Psychology)

in the subject

Psychology

at the

University of South Africa

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February 2021

### Acknowledgements

Completing a PhD is an all-consuming endeavour that lasts for many years and affects the lives of many people. I would like to thank a number of people without whom I would not have been able to complete this thesis.

I want to thank my supervisor, Prof. Vasi van Deventer for providing invaluable supervision, support and tutelage during the course of this thesis. Your insight and recommendations have had an immense impact on the final product. My thanks are due to Dr Tinus Kühn for the language editing and commitment shown throughout the process. Thank you for scrutinising everything I wrote and for all your suggestions to improve the overall thesis. I want to thank Jannie Els for assisting me with the statistical analysis and for your messages of encouragement. My sincerest thanks go to you for an invaluable contribution.

I would like to thank my wonderful wife, Jemima for her continued love and support, especially during the last year and for taking on many of the responsibilities that I usually took care off. I also want to thank you for painstakingly capturing and collating all the references used in the thesis and finalising all the formatting. My sincere thanks go to my three very special daughters: Jemima, Anjoné and Rosalie for their love and support and for understanding that I could not spend as much time with you as usual. Thank you for all your hugs and all the notes of support left on my desk. I want to thank my extended family for their support and all the encouraging messages I received throughout this journey.

My heartfelt thanks go to everyone that was part of this journey. Without your understanding and encouragement in the past few years, it would not have been possible for me to complete my PhD.

### **Abstract**

To remain relevant in the current business environment, companies need to ensure that their customers are satisfied with the products and services on offer, and in turn, remain loyal to the company. Companies can obtain feedback from customers regarding their experiences, using either real-time transactional measures focused on measuring a specific interaction or reputational measures that focus on measuring the cumulative satisfaction of customers. The time difference between an interaction with a company and when customer satisfaction surveys are conducted impacts the feedback received from customers. The current study investigates the difference between these two methodological approaches and how cognitive and emotive features of a service engagement measured at different time intervals impact customer satisfaction and likelihood to recommend. A random sampling method was used and data was collected over a 13-month period using online self-completion questionnaires.

Firstly, the results indicate that emotions have a significant influence on customer satisfaction and likelihood to recommend and that the combination of cognitive and emotive measures predicts customer satisfaction and recommendation more accurately than any of these measures in isolation. Secondly, the intensity of negative emotions remains the same with the passage of time while the intensity of positive emotions decline. Thirdly, both positive and negative emotions have a significant influence on customer satisfaction and recommendation when measured after an extended time period. Organisations need to eliminate factors that cause intense negative emotions in customers while simultaneously increasing the intensity of positive emotional experiences to ensure that the effect of positive emotions is sustained for an extended time period. As products and services become more commoditised companies have to rethink their value proposition to differentiate themselves from their competitors. Management and employees intentionally have to focus on identifying and managing customer emotions lest the benefits of improving customers' emotional experiences be lost. If

companies can succeed in meeting or exceeding the cognitive and emotional needs and expectations of customers, it will positively affect satisfaction and loyalty, which in turn will have a positive influence on repurchase intention and organisational profits, and ensure the long-term sustainability of the company.

Experiential service design can create immersive experiences where customers feel an emotional connection with the company and co-create extraordinary experiences that go beyond the mere consumption of products or services.

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## Chapter 1: Introduction

For companies to sustain themselves in today's economy, it is essential to have satisfied customers that will remain loyal to the organisation. Most organisations talk about having "happy", "satisfied" or "delighted" customers and customer satisfaction is a standing agenda point in most corporate boardrooms. While these terms allude to an affective component of a customers' experience, the majority of organisations never directly ask customers about their emotional experiences; much less do they do anything to improve the emotional experience of customers. Customers are viewed as rational processors of information and the affective component of their psyche is completely ignored.

When organisations recognise the importance of customers' emotional experiences and endeavour to explore these, they quickly realise that emotions are a complex phenomenon; measuring, analysing and utilising these affective components is not a simple task. One of the fundamental difficulties in measuring emotional experiences is the fact that emotions fade over time. The intense anger and frustration or joy and excitement experienced during product/service consumption diminishes as time passes. Past research has shown that one's memory of events is not a carbon copy of what actually happened but a reconstruction of one's experiences impacted by many extraneous influences. Many theorists postulate that a customer's behavioural choices are not influenced by their actual experiences but what they remember from their experiences; actual and remembered experienced may not be one hundred per cent correlated.

Therefore, the question that arises is: If emotions drive a person's future behaviour but fade as time passes due to general memory decay, how does one quantify the impact of everyday emotional experiences on a person's future behaviour?

The overall aim of the current study was to investigate the impact of customers' emotions on their satisfaction and likelihood to recommend as well as to determine how the fading of emotions over time impacts customers' future decision making and behavioural intentions. This was accomplished by measuring customer emotions at two stages in their interaction journey with an organisation: within 24-hours after a service interaction and 3 to 5 months after any specific interaction. The measures were compared to identify differences in emotional recall, their valence and intensity and their effect on customer satisfaction and likelihood to recommend.

## **1.1 Background to the Current Study**

### ***1.1.1 Customer Satisfaction in the Banking Industry***

Financial services form the cornerstone of most economies and South Africa is no exception. The banking environment in South Africa has seen significant changes in the last couple of years with six new banks entering the market. These changes, coupled with the lack of differentiation between banking products and services, are creating a challenging environment for banks to operate in. New banks entering the market create a more competitive market place since customers are exposed to various new product/service value propositions that increase the variety of offers that consumers can choose from. Consequently, customers expect more from their banks that need to work harder to retain their customers. Hayes (2008) indicated that customer satisfaction and loyalty is a significant contributor to any bank's overall objectives of expanding its business and progressively capturing a larger market share that will lead to increased profits. Therefore, keeping track of customer satisfaction and the impact it has on customer loyalty is a fundamental component of any successful business. The current study investigates the service interaction between business owners or senior business executives with their personal business banker/financial

advisor to ascertain their satisfaction with and their likelihood to recommend the banker and the bank.

### *1.1.2 The Importance of Customer Satisfaction*

All organisations, irrespective of their size or the industry in which they operate, understand that their most important asset is their customers. Consumers have a myriad of options when choosing service providers; therefore, organisations are constantly competing against one another and have to do everything possible to ensure the retention of their customers. Hanan and Karp (1989) emphasised the importance of customer satisfaction: “Customer satisfaction is the ultimate objective of every business: not to supply, not to sell, not to service, but to satisfy the needs that drive customers to do business” (p. 49).

With ever-increasing competitiveness among companies, it is becoming progressively difficult for companies to differentiate themselves from their competitors and attract new customers. This, coupled with an increase in the purchasing power that consumers have, motivates most organisations to have a customer-focused strategy (Ryding, 2010). A fundamental component of this strategy is to retain current customers and continuously attract new customers to ensure their growth and increase their market share. The notion that all companies need customers to survive is commonly accepted and the importance of customer satisfaction to ensure company growth is supported by a proliferation of research in the past 70 years. Customer satisfaction is an important concept due to the influence it has on customer retention and loyalty (Maxham & Netemeyer, 2002; Karatepe, 2006) and on the commercial and financial outcome of organisations (Shapiro & Nieman-Gonder, 2006). Therefore, organisations need to understand the antecedents of customer satisfaction and develop strategies to improve customers’ experiences to obtain the advantages associated with having more satisfied customers.

A central construct of customer satisfaction is customers' emotional experiences. While there are still uncertainties about the exact relationship between emotions and satisfaction, it is now widely accepted that emotions may form a core component of the customer satisfaction construct (Oliver & Westbrook, 1993; Stauss & Neuhaus, 1997; Barsky & Nash, 2002). Satisfaction, therefore, contains an affective dimension without which customers' experiences cannot be fully understood.

The improvement of customers' experiences is a standing agenda point in most organisations. A study conducted among 148 financial services firms', senior executives ranked customer relations as the most important driver of the firms' long-term success (Ittner & Larcker, 2001). Most commercial banks have invested considerable time and resources in the past decade to improve their product and service offerings in an attempt to improve the satisfaction of their customers (Dean, 2002; Wang et al., 2003; Lopez et al., 2007). Pansari and Kumar (2017) indicate that the key to successful customer management lies in customer satisfaction and emotional engagement. Monferrer et al. (2019) who conducted research in the retail banking industry found that customer satisfaction was the most important driver of customer engagement and loyalty.

Numerous studies have proved that a satisfied customer is more likely to return than a non-satisfied one, confirming the link between customer satisfaction and loyalty (Oliver & Linda, 1981; Bitner 1990; Fornell, 1992; Anderson & Fomell, 1994; Oliver, 1996). Previous research confirms that customers have a tendency to return to a service provider where they had a pleasant and positive experience (Zauberman et al., 2009).

### ***1.1.3 The Importance of Customer Loyalty***

While there are numerous reasons why organisations should aim to improve their customer satisfaction, having satisfied customers is not the final objective since sustainable financial success is only possible if companies can maintain a large customer base over a

long period of time. This view is supported by Jacoby and Chestnut (1978) who wrote, “The success of a brand on the long-term is not based on the number of consumers that buy once, but on the number of consumers who become regular buyers of a brand” (p. 1). Berry and Parasuraman (1991) found that loyal customers purchase more, incur lower marketing costs and recommend the company more often.

Competition in the banking environment is especially fierce since banks are making it easier than ever before for customers to switch between banks, emphasising the importance of building and maintaining a loyal customer base. On a basic level, customer loyalty is categorised into two types: behavioural loyalty and attitudinal loyalty. The behavioural component refers to some type of action on the part of the customer – returning to the organisation, repurchase and referring other customers. Attitudinal loyalty refers to customers’ favourable disposition and relates to aspects like positive feelings, a psychological bond and a deeply held commitment to the organisation. Attitudinal loyalty implies an emotional bond between a customer and an organisation and emotions have been found to play a significant role in establishing and maintaining relationships with service providers (Bagozzi et al., 1999), influencing and predicting company loyalty (Yu & Dean, 2001) and future behavioural intentions, such as word-of-mouth recommendations (Oliver, 1997; Westbrook, 1987).

#### ***1.1.4 Word-of-Mouth Recommendations***

Word-of-mouth refers to the likelihood that customers will recommend the products and services of a company to friends, family and colleagues. When customers are loyal to a company, there is an inherent aspect of faithful trust that is demonstrated through the sharing of one’s experience with others that results in additional benefits to the company (Reichheld & Schefter, 2000). Numerous research studies have proved that willingness to recommend and repeat purchase intentions are reliable dimensions to use when measuring customer

loyalty (Roy et al., 2018). Many authors believe that referrals are not only a reliable metric to use when testing customer loyalty but that customer loyalty is defined by customers' willingness to recommend (Heskett et al., 1997).

Various studies conducted in the banking sector support the use of word-of-mouth recommendations as an important measure of customer loyalty (Reichheld & Sasser, 1990; Pont & McQuilken, 2005). Fisher (2001) indicated that when customers are loyal to their bank, they will remain a customer of that bank, are likely to purchase new products and recommend the bank's services to other people. One of the reasons why word-of-mouth is such a powerful metric for measuring loyalty in the banking environment is because it is based on mutual trust, which is an important driver when considering and choosing a bank. Trust forms the foundation of the relationship a customer has with their bank and is viewed by numerous authors as a major precursor of consumer loyalty (Harris & Goode, 2004; Jarvenpaa et al., 2000). People generally trust the opinion of close friends and relatives and follow their advice and recommendations. If there is a trusting relationship between two people and one of them recommends their bank to the other, it is most likely that the person will follow that recommendation, making word-of-mouth recommendations an effective measure of loyalty in the banking environment.

### *1.1.5 Measuring Customer Satisfaction and Loyalty*

**1.1.5.1 Transactional and Reputational Measures.** To improve customer satisfaction and loyalty companies need to obtain feedback from their customers about their experiences. This feedback has to be analysed, interpreted, and the insights gained through this process utilised to inform customer satisfaction programmes. Improvement initiatives have to be implemented and the improvement in terms of customer experience has to be monitored. In general terms customer satisfaction measures can be divided into two broad categories: transactional measures and reputational measures. Transactional measures are conducted in



real-time or near real-time (i.e. immediately after an interaction with an organisation) and focus on measuring specific aspects related to a single interaction and are primarily focused on the satisfaction with the interaction/transaction. This type of measure views satisfaction as a post-choice evaluative judgment of a specific purchase occasion (Hunt, 1977; Oliver, 1980). Typical examples of such measures are receiving an SMS (Short Message Service) or online survey directly after an interaction where a customer is asked to rate their most recent experience. Reputational measures are usually implemented once or twice a year and measure the cumulative satisfaction of customers. Customers are asked to think about any interactions they have had over an extended period and rate the organisation on an overall level in terms of their performance. From this perspective, satisfaction is viewed as an overall evaluation based on the total purchase and consumption experiences with a product or service over time (Fornell, 1992; Johnson & Fornell, 1991). Whereas transaction-specific satisfaction may provide specific diagnostic information about a particular product or service encounter, cumulative satisfaction is a more fundamental indicator of the firm's past, current and future performance.

The most fundamental difference between transactional and reputational measures is the passage of time between an interaction with the organisation and when the measurement takes place. Transactional measures are usually conducted within 24-hours after an experience while reputational measures are done 3 to 5 months after any specific interaction.

It is precisely this time difference that has become an area of great concern and debate in the customer satisfaction research fraternity. Since reputational measures are conducted months after a specific interaction with an organisation, customers are asked to recall any experience they might have had during this time period; such recall is more reliant on customers' long-term memory than transactional measures. In psychology, memory is defined as the ability of an organism to store, retain and subsequently recall information

(Eysenck & Keane, 2005). Loftus et al. (1978) indicated that the amount of time that passes between an event and the recall of the event has a significant effect on the rates of misremembering. From a psychological standpoint the main purpose of our memory is to prepare us for future events and not to recall past events one hundred per cent accurately (Levine et al., 2009).

Therefore, customers' memories of past experiences are not a direct reflection of their experiences but are partly reconstructed, based on how experiences are interpreted at the time of recall (Levine & Safer, 2002). This phenomenon has given rise to an area in psychology and memory research known as Fading Affect Bias (FAB). FAB is primarily focused on investigating how positive and negative emotions fade and transform with the passage of time.

The time difference between transactional measures and reputational measures and the impact that one's memory has on the recall of one's experiences has brought about a distinction between one's *experiencing-self* and *remembering-self*. Kahneman (2011) indicated that one's experiencing-self can access only the present and lives in the moment while one's remembering self does not live in the psychological present but is exclusively based on the memory of past experiences. The difference between how people experience life events and how they are remembered is important in the context of transactional measures that are executed immediately after an interaction (experiencing-self) and reputational measures that are implemented long after an interaction and require customers to recall those experiences (remembering-self).

Kahneman and Krueger (2006) make a distinction between experienced utility and remembered utility – the way people feel about experiences in real-time and the way they remember their experiences. Schreiber and Kahneman (2000) point out that for the purposes

of psychological analysis, it is useful to distinguish the two interpretations of experiences. Experienced utility is defined by the valence and intensity of emotions as it is experienced in a particular moment. Remembered utility is the overall evaluation that is retrospectively assigned to a past episode or collection of episodes (Schreiber & Kahneman, 2000).

The discrepancy between what customers experience and what they remember about their experiences (memory-experience gap) has a significant influence on the type of research method used by organisations, how results are analysed, interpreted and used within an organisation and provides the conceptual foundation for the current thesis.

**1.1.5.2 Cognition and Emotion.** Another contentious aspect in the area of customer satisfaction is the role of cognition and emotion. For hundreds of years philosophers and psychologists have debated the role of reason and emotion and often viewed the two aspects of the human psyche as antagonistic to each other. Kahlil Gibran (1923) wrote, “Your soul is oftentimes a battlefield, upon which your reason and your judgment wage war against your passion and your appetite” (p. 59). Human decision making has always been influenced by these two components. Regarding one’s cognitive, rational mind and one’s emotions, feelings and passions, it is the latter that remain more mysterious and elusive. Hence, the majority of consumer satisfaction research in the past primarily focused on the consumer as a rational processor of information, the cognitive nature of one’s decision making and the cognitive aspects of satisfaction, while the impact of emotions remained relatively unexplored. This ontological perspective is reflected in the way that consumer experiences are measured. McFadden (1986) indicated that customer satisfaction research uses measurement instruments that exclusively focus on items that record customers’ cognitive evaluations and disregard the emotions evoked during a service interaction.

Brady and Cronin (2001) found that customers' reported level of satisfaction is a poor predictor of their long-term loyalty and referral behaviour. Palmer and Koenig-Lewis (2010) hypothesised that one aspect that contributes to this poor predictability is the lack of affective components included when measuring customer satisfaction. Palmer and Koenig-Lewis (2011) indicated that there is a growing need to explicitly incorporate measures of emotion in predictive models of satisfaction.

**1.1.5.3 Emotions Within a Service Environment.** Service environments in particular are prone to eliciting emotions as a result of the interaction between customers and service staff. Numerous authors conducting research in service environments have subsequently begun to include emotional measures in their customer satisfaction models and there is mounting evidence that affective measures of satisfaction may be better predictors of customers' future behavioural intentions than cognitive ones (Zeelenberg & Pieters, 2004; White & Yu, 2005). It is also likely that cognitive measures of satisfaction may be more easily distorted over time than affective ones. In this regard, Allen et al. (1992) suggested that since emotions are more deeply seated, emotional measures of satisfaction may be more stable over time than cognitive measures and ultimately provide a truer reflection of customer satisfaction within a service environment. Oliver (1993) suggested that while service quality can be measured by simply using a cognitive evaluation of the service, satisfaction is based on both cognitive and affective dimensions.

Previous research in the field of customer satisfaction suggests that there is complex interplay between cognition and emotion and that the evaluation of consumption experiences is partly cognitive and partly emotional (Westbrook, 1987; Mano & Oliver, 1993). The complex interplay between cognition and emotion and its effect on satisfaction and loyalty opens up an opportunity for additional research in this area.



## 1.2 Important Considerations when Conducting Customer Satisfaction Research

The previous section emphasised some of the challenges and important aspects to consider when conducting customer satisfaction research. These, together with some additional considerations are discussed here.

Firstly, organisations that embark on a customer satisfaction programme and collect feedback from customers about their experiences need to be cognisant of the difference between transactional measures and reputational measures. The time difference between the customer-company interaction and when the measurement takes place and customers' increased reliance on memory when recalling experiences during reputational measures may have a significant impact on the research results and how they are interpreted.

Secondly, the interplay between cognition and emotion and their individual and combined impact on satisfaction and likelihood to recommend needs to be acknowledged and accounted for. While each construct can influence satisfaction and recommendation independently, current theory suggests that there is complex interplay between cognition and emotion and that the two aspects may have a reciprocal influence on each other (Zajonc, 1980; Bagozzi, 1982).

The third aspect that is highlighted by existing literature is the instruments used to measure customer emotions. Traditionally emotions are measured using emotional scales and numerous scales have been developed over the years. However, Richins (1997) indicated that these scales are not ideally suited for measuring consumer consumption emotions since they were primarily developed to measure interpersonal relationships, measure a limited number of emotions and they generally include emotional descriptors that are difficult for customers to understand. Another aspect that makes these scales inadequate to measure consumer emotions is firstly that each scale includes a set of basis emotions only. Secondly, the basic

emotions included in each scale differ from those included in other scales. Therefore, the results obtained by using any of these scales are influenced by the specific scale being used. Finally, using any of these models of basic emotions fails to explain the existence of more complex emotions found in consumer consumption experiences (Ortony & Turner, 1990).

The fourth contentious aspect in terms of the impact of customer emotions is emotional valence and emotional intensity. On the one hand some authors indicate that the emotional intensity of an event is a significant predictor of how vividly an event is recalled (Reisberg & Heuer, 2004; Talarico et al., 2009). Conversely, several studies have found that emotional valence (i.e. positive or negative emotions) affects one's ability to recall emotional experiences. Porter and Peace (2007) found that events containing negative emotional content are better remembered than positive emotional events. Kensinger (2011) indicated that both the arousal (intensity) and the valence (positive or negative) of emotions determine which aspects of an event are remembered.

### **1.3 Approach Taken in the Current Study**

The current study followed a novel approach to address some of the aforementioned challenges associated with customer satisfaction research.

Firstly, the study collected customer feedback at two stages during the customer interaction journey with an organisation. Transactional measures were conducted within 24-hours after a customer had had interaction with their personal banker. This measure represents customers' experienced utility. Reputational measures were conducted 3 to 5 months after any specific interaction and represent customers' remembered utility. The results of the two types of measure were compared to investigate the impact of the time delay and the associated reliance on memory to recall emotions on customer satisfaction and likelihood to recommend.

Secondly, the study incorporated both emotional and cognitive metrics to identify the individual and combined effect on customer satisfaction and likelihood to recommend.

Thirdly, the study diverged from using an emotional scale to measure customer emotions and utilised customers' verbatim responses about their experiences. Verbatim responses were analysed using sentiment analysis that provided an indication of the valence and intensity of customers' emotional experiences.

The current study is approached from an objective ontological perspective. The stance taken in the current study is that customers' experiences influences their satisfaction and likelihood to recommend and that these effects can be objectively measured and interpreted. This will allow the organisation to identify areas that should be improved and initiatives can be implemented to improve customers' experiences.

From an epistemological viewpoint the current study takes a positivistic outlook, believing that searching for the truth requires objectivity and evidence. Customers experience various service interactions and they evaluate the performance of the organisation from these experiences. These experiences, while subjectively interpreted by customers, reflect the reality of their engagement with an organisation and signify the definitive truth from a customer's perspective. A detailed explanation of the ontological and epistemological stance taken in the current study is provided in Chapter 6 (Research methodology).

#### **1.4 Study Hypotheses**

The hypotheses of the study are divided into four main groups:

1. Customers' recall of positive and negative emotions (Hypothesis 1 to hypothesis 3):

The first three hypotheses focus on investigating customers' recall of emotions on an



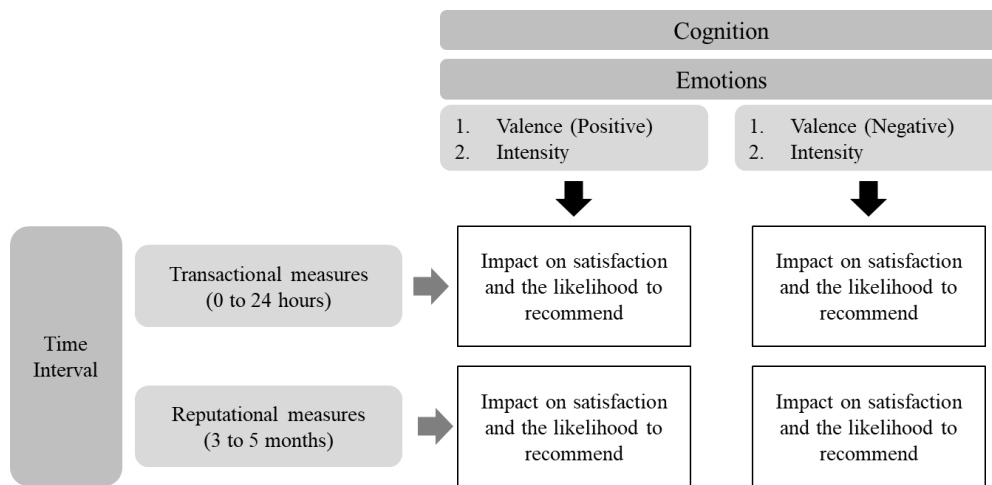
overall level and more specifically the difference between recalling positive and negative emotions during transactional and reputational measures. It is hypothesised that a larger proportion of customers will recall their emotions during transactional measures as opposed to reputational surveys.

2. Intensity of customer emotions (Hypothesis 4 to hypothesis 7): Hypothesis 4 to hypothesis 7 focus on the intensity of customer emotions and how emotional intensity transforms with the passage of time (i.e. the difference between emotional intensity reported during transactional measures compared to reputational measures). It is hypothesised that emotional intensity declines with the passage of time and that positive emotional intensity shows a more profound fading over time than negative emotional intensity.
3. The effect of positive and negative emotions on satisfaction and recommendation (Hypothesis 8 to hypothesis 15): Hypothesis 8 to hypothesis 15 test the effect of positive and negative emotions on customer satisfaction and the likelihood to recommend during transactional and reputational measures. This was accomplished by comparing customers that experienced a positive/negative emotion with those customers that did not experience any emotion but related an opinion about their experience. It is hypothesised that negative emotional experiences negatively impact satisfaction and recommendation and that positive emotions positively impact satisfaction and recommendation. It is also hypothesised that the impact of positive and negative emotions on satisfaction and recommendation is different during transactional measures as opposed to reputational measures.
4. The impact of cognition and emotion on satisfaction and recommendation The last hypothesis tested the impact of cognition and emotion on customer satisfaction and likelihood to recommend. Structural Equation Modelling was used to test these

relationships and was done separately for transactional and reputational measures. It is hypothesised that the combination of emotional and cognitive metrics (observed variables) better predict customer satisfaction and recommendation (latent variables) than cognition or emotion on their own. It is also hypothesised that the relationship between these variables is different during transactional measures and reputational measures.

### **1.5 Aims and Objectives of the Current Study**

The overall aim of the current study was to investigate the impact of customers' cognitive and emotional experiences on satisfaction and likelihood to recommend over time (summarised in Figure 1.1).

**Figure 1.1***Main Objectives of the Current Study*

The current study was guided by the following objectives:

1. To investigate the impact of time on customers' recall of their experiences and the associated impact on their satisfaction and likelihood to recommend a service experience.
2. To investigate the impact of cognition and emotion (individually and combined) on customers' satisfaction and the likelihood to recommend a service experience.
3. To investigate the impact of emotional valence (positive/negative) on satisfaction and the likelihood to recommend.
4. To investigate the impact of emotional intensity on satisfaction and likelihood to recommend.

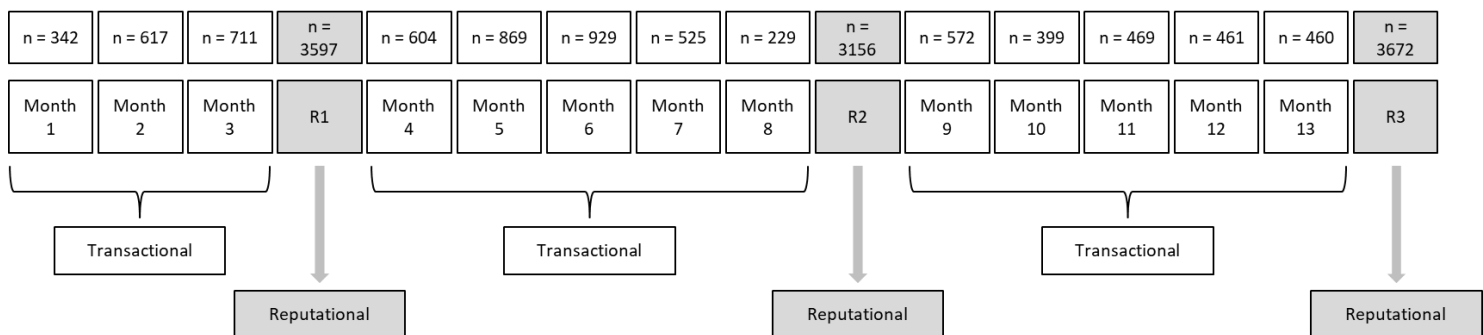
## 1.6 Research Methodology

A multiple cross-sectional research design was employed to reach the study objectives and the data were collected online. An e-mail invitation containing the survey link was sent to

all customers that interacted with their business banker. Customers that opted to complete the survey could click on the survey link and were directed to an online survey platform where they completed the questionnaire. Data was collected over a 13-month period as indicated in Figure 1.2. Transactional questionnaires were sent out on a daily basis and data was collated every month. Reputational questionnaires were sent out at three specific time intervals during the 13-month period and all customers that had interacted with their personal banker in the previous 3 to 5 months were invited to participate in the research. A random sample method was used since all customers that interacted with the bank could participate in the research. A total sample of 7 187 transactional responses and 10 425 reputational responses were collected.

**Figure 1.2**

*Data Collection Schedule*



## 1.7 Thesis Structure

The thesis consists of seven chapters in addition to the present introduction. A brief overview of each chapter is provided below.

## **Chapter 2: Customer satisfaction and customer loyalty**

The chapter firstly reviews current literature on customer satisfaction, defining what customer satisfaction is, describing the antecedents of customer satisfaction and previous models developed to measure customer satisfaction. This is followed by discussing the link between satisfaction and loyalty and the various constructs used to measure customer loyalty. The section focuses specifically on word-of-mouth recommendations as an ideal construct for measuring loyalty within the banking and financial sectors. The chapter concludes by highlighting the shortcomings and challenges of current methods used to measure customer satisfaction and loyalty and how these aspects are addressed in the current study.

## **Chapter 3: Customer emotions**

Chapter 3 starts by discussing the link between customer satisfaction, loyalty and customer emotions. This is followed by defining customer emotions and the difference between affect, emotion, mood, feeling and sentiment. Various models used to measure emotions are discussed with specific emphasis on consumer consumption emotions. The section also explores the difference between cognition and emotion and focuses specifically on cognitive appraisal theory as an ideal foundational framework for investigating customer emotions. The chapter also discusses the shortcomings of using basic and categorical approaches and existing emotions scales to measure consumer consumption emotions and why it was decided to use self-report verbal protocols to extract customer emotions.

## **Chapter 4: Sentiment analysis**

Chapter 4 discusses the use of sentiment analysis to analyse customer verbatim feedback about their emotional experiences. The first section focuses on the development of sentiment analysis and the various elements that constitute sentiment analysis. This is followed by explaining the difference between emotion, opinion and sentiment and the different methods

used for sentiment classification. Next a model is proposed that distinguishes between opinion mining and emotional mining as part of the broader area of sentiment analysis since the current study differentiates between customers that provided an opinion about their experience only and customers that relayed an emotional experience. The chapter is concluded by discussing the challenges associated with sentiment analysis and how these are addressed in the current study.

### **Chapter 5: Experiencing-self and remembering-self and Fading Affect Bias (FAB)**

Chapter 5 focuses on the difference between the experiencing-self and remembering-self and how this translates to transactional and reputational methods of data collection. It further discusses the purpose of memory, why misremembering occurs, the experience-memory gap and how the passage of time affects one's memory of experiences. The chapter also discusses the phenomenon of FAB and how positive and negative emotions transform with the passage of time. This chapter provides the underlying conceptual framework for investigating the difference between transactional and reputational methods and the effect that memory and misremembering has on customer satisfaction and likelihood to recommend.

### **Chapter 6: Research methodology**

Chapter 6 describes the research problem, research aims and objectives and the research approach. This is followed by discussing the ontological stance and epistemological perspective chosen as a basis for the current study. Next the chapter describes in detail the development of the questionnaire, the population and sample, the data collection method and adherence to ethical standards. The chapter concludes by discussing the steps and methods taken during qualitative and quantitative analysis and the reliability and validity of quantitative results.

Chapter 7 discusses the individual hypotheses, results and implications of the findings. Chapter 8 provides the conclusion, the managerial implications of the research findings, limitations of the current study and suggestions for future research.

## Chapter 2: Customer Satisfaction and Loyalty

In 1990 Yi wrote a well-structured critical review of literature on customer satisfaction and divided the debate on the topic into its definitions, antecedents, consequences and measurement (Yi, 1990). This distinction is made in the upcoming discussion.

### 2.1 Starting with the Customer

All organisations, irrespective of the industry in which they operate, understand that their most important asset is their customers. With ever-increasing competitiveness among companies, it becomes progressively difficult for companies to differentiate themselves from their competitors and attract new customers. This, coupled with an increase in the purchasing power that consumers have, motivates most organisations to have a customer-focused strategy (Ryding, 2010).

Any company, irrespective of whether it delivers a service, a product or both, cannot survive long-term without having a strong and sustainable customer base. This in turn implies that companies need to retain their current customers and continuously attract new customers to grow their market share. The importance of customer satisfaction to ensure this growth is supported by an abundance of research in the past 70 years:

- According to Drucker (1954) profit is essentially the return on customer satisfaction.
- Muller (1991) is of the opinion that customer satisfaction is the only meaningful metric for company success since customer satisfaction directly influences the company's brand reputation and word-of-mouth recommendations which has a positive effect on profits.
- Most companies treat customer satisfaction management as a necessity (Honomichl, 1993).



- Bernardt et al. (2000) indicated that a significant focus is placed on the link between satisfaction and profit.
- For companies to achieve cost effectiveness and higher market share, improving customer satisfaction is a priority (Mittal & Kamakura, 2001).
- Customer experience is viewed as the new battleground for organisations (Badgett et al., 2007) where organisations compete against each other for dominance and differentiation.
- Customer satisfaction is currently being used as a business strategy for companies to gain a competitive advantage over their rivals (Johnston & Kong, 2011).
- Satisfying their customers should be the ultimate objective of any organisation because of the impact that it has on customer loyalty, repeat purchase and the potential profit that can be generated by the organisation (Jani & Han, 2011; Ryu et al., 2012).
- It is extremely important for organisations to invest in customer satisfaction initiatives since it may result in increased customer-organization relational longevity, customer patronage behaviours, and firm profitability (Kim et al., 2014).
- Customer satisfaction is considered the main component of company success in service industries (Yusof et al., (2017).
- An extensive literature review on consumer satisfaction was published by Oh and Kim (2017) focussing on articles written between 2000 and 2015 where they concluded that satisfaction is the most proliferating concept in the areas of hospitality, tourism and general business research.

Numerous research studies have found a positive correlation between customer satisfaction and repurchase intention, operating performance, the company's overall financial performance and company profits (Anderson et al., 1994; Jones & Sasser Jr, 1995; Reichheld,

1996; Anderson & Mittal, 2000). Bolton and Lemon (1999) recognise the downstream benefits of customer satisfaction in terms of repeat usage, loyalty and profits.

However, customer satisfaction literature also demonstrates conflicting results in terms of customer satisfaction and behavioural intention. Mazursky and Geva (1989) and Mittal et al. (1999) found that there was no direct link between customer satisfaction and behavioural intention. Schneider (1991) found that the relationship between customer satisfaction and profits is not certain, while Keiningham et al. (2005) determined that the correlation between satisfaction and business profits exists only for certain customer segments. These conflicting findings indicate that customer satisfaction and the influence it has on an organisation is not a simple phenomenon and that there are numerous factors that influence business performance.

Irrespective of conflicting findings in the field of customer satisfaction and business performance, the notion that all companies need customers to survive is commonly accepted. Companies increasingly realise the importance of their customers and this has led to the development of the phrase *customer centricity* – putting the customer at the centre of everything that a company does. Customer centricity essentially places the focus on the customer and compels companies to redesign their internal structures, optimise their processes and procedures, innovate their products and services and develop their human resource capacity with the customer being the pivotal force guiding these changes.

While organisations can have a customer-focused strategy and make significant internal changes in line with this strategy, the only objective way to evaluate their success is to get feedback from their customers. This has given rise to an entire industry focusing on obtaining feedback from customers and improving the organisation in line with the insights gained through these customer feedback programs. The improvement of their customers' experiences is a standing agenda point in most organisational boardrooms and typically forms part of corporate balance scorecard performance. Nowadays, most organisations appoint C-

suite executives whose primary responsibility is the monitoring and improvement of their customer satisfaction. In a study conducted in the financial service industry among 148 financial organisations, senior executives ranked customer relations as the most important driver of a firm's long-term success (Ittner & Larcker, 2001). Most commercial banks have invested considerable time and resources in the past decade to improve their product and service offerings in an attempt to improve the satisfaction of their customers (Dean, 2002; Wang et al., 2003; Lopez et al., 2007). These investments and organisational initiatives include aspects like customer-service centres, dedicated customer segment desks, customer relationship managers, customer satisfaction research and reporting systems, real-time customer feedback, interactive insights reporting dashboards, automated customer complaint resolution processes, internal employee training, developing a customer-centric culture and building proprietary brand-customer communities. These initiatives aim to monitor and track customer satisfaction and identify and implement initiatives to improve products and services to increase customer satisfaction. Hanan and Karp (1989) emphasise the importance of customer satisfaction: "Customer satisfaction is the ultimate objective of every business: not to supply, not to sell, not to service, but to satisfy the needs that drive customers to do business" (p. 49).

During the industrial revolution and throughout the early 1900s, the primary focus of companies was to develop products of high quality. For many years it was believed that providing a quality product at an affordable price was the only prerequisite for success. Over the last century, driven by changes in consumer needs and the inauguration of service industries, companies have come to the realisation that it requires more to satisfy customers than merely providing quality products. Companies can no longer focus exclusively on manufacturing products without understanding the needs of customers, how to service them

effectively and how the company's overall value proposition meet customers' expectations and provide value to their lives.

Cardozo (1965) one of the first researchers to investigate customer satisfaction, indicated that customer satisfaction is a prerequisite for various loyal behaviours; retaining customers, repeat purchases and recommendations, which in turn improve the financial performance of the organisation. Providing customers with satisfactory experiences has become one of the main strategies for retaining customers. The following statement encapsulates the importance of customer satisfaction: "While there is no guarantee of a satisfied customer's repeat visit, it is nearly certain that a dissatisfied customer will not return" (Dube et al., 1994, p. 39).

This change in thinking motivates organisations to start thinking about how to create satisfactory experiences for their customers and understand the factors that drive customer satisfaction. Understanding the antecedents of customer satisfaction necessitates an examination of what is meant by the term *customer satisfaction*.

## **2.2 Defining Customer Satisfaction**

Most people have a general understanding of the concept *customer satisfaction* as a general phenomenon. However, a review of available literature indicates that most academics and researchers agree that the concept encompasses various perspectives and diverse definitions and is somewhat ambiguous. The following section firstly examines various perspectives on customer satisfaction and secondly focuses on how customer satisfaction is defined in the literature.

### ***2.2.1 Transactional Satisfaction and Cumulative Satisfaction***

Firstly, it is important to differentiate between transaction-specific satisfaction and a cumulative view of satisfaction. From a transaction-specific perspective, customer satisfaction is viewed as a post-choice evaluative judgment of a specific purchase occasion

(Hunt, 1977; Oliver, 1977, 1980, 1993). Cumulative customer satisfaction is an overall evaluation based on the total purchase and consumption experience with a product or service over time (Fornell, 1992; Johnson & Fornell, 1991). Whereas transaction-specific satisfaction may provide specific diagnostic information about a particular product or service encounter, cumulative satisfaction is a more fundamental indicator of the firm's past, current and future performance.

### ***2.2.2 Functional Elements and Performance Elements***

A second important differentiation made in the literature is between functional and performance elements of a product or service (Czepiel et al., 1985). The functional element refers to the main purpose of the product or service while the performance aspects refers to a secondary aspect of the product or service.

The following example from an in-branch banking experience illustrates this distinction. The functional element may be the availability of consultants to assist customers, while the performance element could be how friendly they are and how efficiently they service customers. Lewis (1987) made a similar distinction between essential and subsidiary services. The essential services correspond to Czepiel et al.'s (1985) functional aspects while the subsidiary service corresponds to their performance elements. Davis and Stone (1985) make a similar distinction between direct and indirect services. Direct service at the banking branch refers to the assistance customers get from the consultant to address their query while an indirect service can be to offer secure parking while the customer is inside the branch.

Although the above-mentioned authors use different terminology, they all acknowledge the fact that there is a fundamental difference between core services and auxiliary services. This is an important distinction, both from the viewpoint of customers evaluating their experiences and from the point of view of organisations that are tasked with improving their customers' experiences. Customers that are satisfied with the core service but not with

auxiliary services are overall more satisfied than customers that experience poor core services but the auxiliary services are satisfactory. Companies should focus more on improving their core service instead of adding numerous “bells and whistles” in an attempt to improve customers’ experiences.

### ***2.2.3 Satisfiers, Dissatisfiers and Critical Elements***

A further differentiation was made by Hume et al. (2006) who divide service offerings into satisfiers, dissatisfiers and critical elements. In visiting a banking branch, a satisfier can be the quick and effective service of staff, their friendliness and overall knowledge and competency. A dissatisfier may be waiting in long queues or the difficulty of finding parking close the branch. Critical elements may be that the banking system is online or that the consultant with whom one had an appointment is not available on the day that one visits. This differentiation explains why a customer may be satisfied with some aspects of their overall experience while they may be dissatisfied with other aspects of the experience.

### ***2.2.4 Definitions of Customer Satisfaction***

As a point of departure to understand the various components of customer satisfaction, it was decided to examine the most well-known definitions found in the literature. Different authors define customer satisfaction from different perspectives, providing a clarification of the essence of customer satisfaction. Customer satisfaction is mostly defined from two diverse but complementary perspectives. Firstly, from an organisational perspective focusing on the impact it has on the organisation, and secondly, from a customer’s perspective focusing more on the causes of customer satisfaction and how customers evaluate their experiences.

#### **Organisational perspective**

The following definitions and perspectives emphasise the impact of customer satisfaction and dissatisfaction on an organisation.

**Table 2.1**

*Customer Satisfaction Definitions – Organisational Perspective*

| Year | Author                | Definition   |
|------|-----------------------|--|
| 1965 | Cardozo               | The higher the level of customer satisfaction, the more likely customers are to make more repeat purchases and purchase other products.  |
| 1974 | Czepiel and Rosenberg | Customer satisfaction is an accumulating concept that summarises the satisfaction level of a certain product or service and the satisfaction level of different areas of an organisation.                          |
| 1992 | Fornell               | Customer satisfaction can directly predict overall perception; it is a company's asset that can bring repeated consumer behaviour, and therefore "customer satisfaction" can be used as an economic benefit index. |
| 2010 | Nemati et al.         | Customer satisfaction is a business term to assess how much a product or service provided by a company is able to meet customer satisfaction.  |
| 2011 | Sarkar and Batabyal   | In the present global scenario, customer satisfaction is the primary and most important factor in the survival and growth of any organisation from industry, academia or R&D institutions.                         |
| 2014 | Li and Liu            | From an organisational perspective, having satisfied customers is a strategic objective since it ensures customer retention and sustainable profits.   |
| 2016 | Bronnenmayer et al    | Client satisfaction is seen as the most important dimension in business consulting that helps companies grow, which related to consulting success  |
| 2017 | Morgan                | Customer satisfaction is one of the most valuable assets of an organisation. It is very difficult for competitors to imitate and it provides an organisation with a clear advantage over their competitors.        |
| 2020 | Bilan et al.          | To remain competitive, customer satisfaction and loyalty have become one of the main goals in all areas of business  |

Reviewing these definitions of customer satisfaction from an organisational perspective, it is clear that customer satisfaction has an enormous impact on any organisation. Phrases like *repeat purchase, a company's most valuable asset, the survival of the company, strategic objective and advantage over competitors* are an indication that the management and improvement of customer satisfaction should be a priority for any organisation.

### **Customer perspective**

The following definitions focus on customer satisfaction from the customer's point of view, what impacts their satisfaction and what is important to them.

**Table 2.2**

*Customer Satisfaction Definitions – Customer Perspective*

| <b>Year</b> | <b>Author</b>         | <b>Definition</b>   |
|-------------|-----------------------|---|
| 1974        | Czepiel and Rosenberg | Customer satisfaction is a holistic evaluative reaction that represents the sum of the customer's objective reaction to the different properties of products or services.   |
| 1984        | Day                   | Customer satisfaction or dissatisfaction is a result of the difference between what they expect and what they experience.   |
| 1985        | Parasuraman et al.    | Customer satisfaction is a consequence of the evaluation process, in other words, comparing customer expectations with experience.  |
| 1989        | Woodside et al.       | Customer satisfaction is the main factor that influences customer behaviour.  |
| 1992        | Fornell               | Customer satisfaction is a function of presale expectations and post-purchase perceived performance.  |
| 1994        | Anderson et al.       | Customer satisfaction reflects a consumer's total experience in the purchasing of a product or service, and is an overall evaluation built up over time.  |
| 1995        | Ostrom and Iacobucci  | Customer satisfaction is a way to evaluate the difference of a customer's expectations and actual perception of a certain product; its indexes include product price, service efficiency, service attitude, overall company performance and optimal level of company familiarity. |
| 1995        | Jones and Sasser Jr   | The willingness of a customer to make further purchases, basic behaviour (the most recent time of purchase, number and price) and derivative behaviour (open recommendation, word-of-mouth, introduction of customers, etc.) as a way to measure customer satisfaction.           |
| 1999        | Oliver                | The customer's perception of the extent to which their needs, goals and desires have been fully met.  |
| 2000        | Zineldin              | An emotional reaction to the difference between what the customer anticipates and what they receive.  |
| 2000        | Zeithaml and Bitner   | Customer's evaluation of services after purchase as opposed to their expectations.  |
| 2005        | Pajuodis              | Customer satisfaction is the result of a comparison process and is a true measure of the quality of a product or service.   |
| 2007        | Levy and Weitz        | Satisfaction is an evaluation about how much the retailer could meet or exceed customer expectations.   |
| 2008        | Bastos and Gallego    | Satisfaction is a post-choice evaluative judgment of a specific transaction that can be viewed directly as an overall feeling, best specified as a function of perceived quality.   |
| 2012        | Kotler and Armstrong  | The pleasure a customer experiences when comparing pre-purchase expectations with post-purchase perception.   |



|      |                            |  |
|------|----------------------------|--|
| 2017 | Cross                      | Customer experience is best defined as the perception of the company's customers, including customer service, personalised interactions, satisfaction or exceeding expectations. |
| 2019 | Bendaravičienė and Vilkytė | The satisfaction of a customer can essentially be defined as everything related to the purchase of a product or service.   |
| 2019 | Choi et al.                | Satisfaction can be conceived as a personal response used to evaluate and seek fulfilment from a consumption experience  |

Reviewing these definitions, it is clear that the satisfaction customers gain from an experience is an evaluative practice where their experiences are compared to pre-purchase expectations; it implies an emotional feeling of pleasure/displeasure as a result of their experience.

In addition to the above definitions, the European Primer on Customer Satisfaction Management (2010) did an extensive analysis on customer satisfaction as a phenomenon and concluded the following:

- Customer satisfaction changes over the time – experiences with other companies, marketing and increased awareness change the needs and expectations of customers in an ongoing way.
- Customer satisfaction is usually a composite that combines a customer's experience before, during, and after the specific experience being considered.
- The reasons for customer satisfaction are usually more difficult to identify than the reasons for dissatisfaction, especially in terms of less measurable aspects of a product, service or experience.
- Understanding the causes of customer satisfaction is very important in the long run.

## **2.3 Antecedents of Customer Satisfaction**

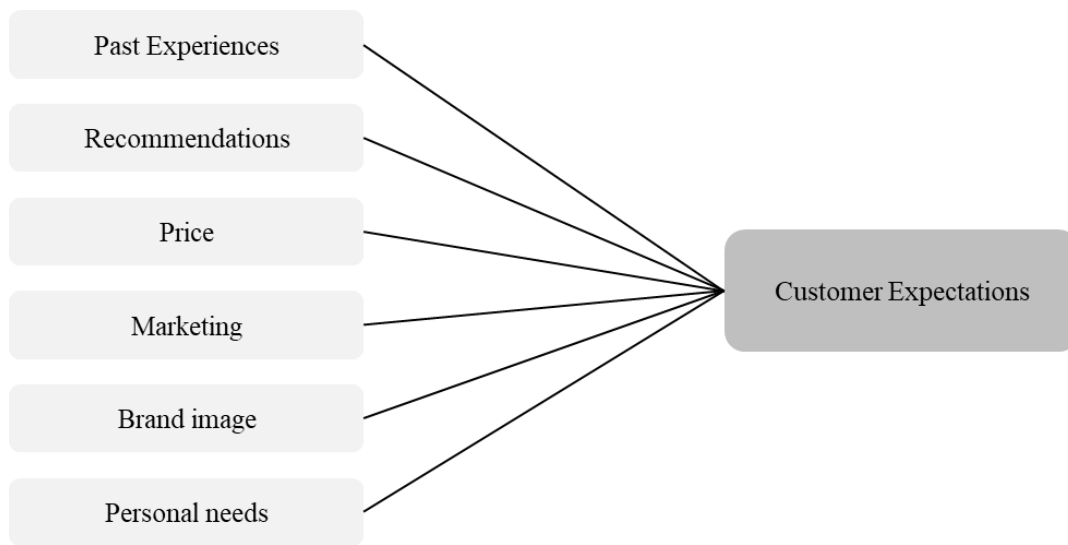
The above definitions emphasise the importance of customer satisfaction, from both a company and customer perspective. The following section focuses on the antecedents of customer satisfaction and identifies the most important constructs leading to and impacting the satisfaction of customers.

### ***2.3.1 Starting with Expectations***

According to Parasuraman et al. (1985) customer satisfaction is the consequence and outcome of the evaluative process where customers compare their experience with their expectations. Similarly, Stašys and Malikovas (2010) indicated that customer expectations have a comparative function, i.e. determining whether a customer is satisfied or not is a function of how well the expectations of a product or service are met. Gures et al. (2014) indicated that customer expectations are inseparable from customer satisfaction – the only way to achieve high levels of customer satisfaction is to recognise the needs and expectations of customers and delivering services and products in accordance with those expectations.

Stašys and Malikovas (2010) point out that there are a number of factors that influence customer expectations (Figure 2.1):

- The customer's past purchase experiences
- Informal and formal recommendations
- The price that a customer pays for the product or service
- The marketing and communication from the company that supplies the products/services (i.e. the promises it makes)
- The overall brand image of the company supplying the products/services
- The personal needs of the customer

**Figure 2.1***Influencers of Customer Expectations*

While most researchers concur that customer expectations influence their evaluation of the products or services they consume, the measurement of customer expectations is not as straightforward. In the original SERVQUAL instrument developed by Parasuraman et al., (1988) it is proposed that customers are asked explicitly what they expect from a service interaction before the service is evaluated to ensure that their evaluation is aligned with their expectation of that particular service interaction. In a later version of the SERVQUAL methodology, Parasuraman et al., (1988) suggested that customers should compare their service experience to their ideal service provider in the same industry instead of what they expect from their current service provider. This is a more demanding evaluation since it focuses on a “best in class” comparison instead of services experienced with their current service provider only.

Oliver (1993) provided a model of service quality and customer satisfaction that makes a distinction between customer expectations used to evaluate service quality, compared to overall satisfaction. He proposes that customer satisfaction be based on customers’ predictive

expectations (i.e. what customers expect *will* happen) while service quality is based on customers ideal or desired expectations (i.e. what customers expect *should* happen).

Grönroos (2004) indicated that there are certain validity concerns when incorporating customer expectations into customer satisfaction measurements. These concerns are related to *when* expectations are measured during the evaluation process and the influence that the actual service interaction has on the expectations of the service experience. He discussed this difficulty by focusing on three aspects of the expectation-experience process: firstly, when expectation is measured during or directly after an experience, which is often the case when customer surveys are conducted, the stated expectation is already influenced and biased by the experience; secondly, measuring expectation before the service interaction also has its own complications. The expectation customers have before the interaction may be unrealistic and may not be the final expectation used by customers when they eventually evaluate their experience. The actual experience may change the customer's expectation of the experience and it is these altered expectations that should be used when evaluating the experience to determine the actual quality perception of the customer. Thirdly, experiences are perceptions of reality and inherent in these perceptions are prior expectations. Consequently, if expectations are measured first, followed by measuring experiences, then expectations are in actual fact measured twice.

While the debate on the most appropriate method to measure customer expectation continues and how to incorporate it into customer satisfaction evaluations while addressing some of the concerns raised by Grönroos, it is clear from a theoretical point of view that expectations influence customers' experience and should be understood when evaluating customer satisfaction.

### 2.3.2 Overall Quality

As a general descriptor, the term *quality* refers collectively to the quality of products and services provided by an organisation and includes the quality of relationships that a customer can have with the staff of an organisation. On a fundamental level, the term *overall quality* represents and incorporates everything that a customer receives from an organisation that affects their satisfaction. The following section elaborates on the various types of quality and how they impact the satisfaction of customers.

The construct of service and product quality has been extensively researched in all types of business: banking sectors (Mahmood et al., 2013) manufacturing companies (Griffin et al., 1995; Arefi et al., 2010; Chou et al., 2014), electronic service (Parasuraman et al., 2005), health care (Kravitz, 1998; Reisberg, 1996) and catering (Liao & Cheung, 2008). The literature indicates that quality and satisfaction are unique and distinct across different industries and the aspects that drive and represent quality and satisfaction are different across industries. It is therefore important for managers and practitioners to investigate the findings that are relevant to their specific industry thoroughly. Although the quality constructs may differ from one industry to the next, there are some fundamental aspects that influence customer satisfaction that are universal across different industries and companies.

Providing customers with high-quality products and services is one of the fundamental deliverables if an organisation wants to be successful. Customers want products and service that add value to their lives. Products need to perform without failure as promised for an extended period of time while services have to enrich the customer's life by making life simpler, easier and more fulfilling. Customers do not necessarily purchase the product or the service as such, but the benefits and the outcomes of these products and service that will enrich and add value to their lives. As stated by Žnideršić et al. (2009) "consumers do not

look for goods and services per se; they look for solutions that serve their own value-generating processes” (p. 171).

From this perspective, the appraisal of whether a product or service is of high quality and adds value to the life of a customer lies with the customer who is the final adjudicator that determines the value of the products consumed. It is irrelevant whether a company believes that it delivers quality products and services while customers do not agree about those assertions. Therefore, companies in any industry have to have some form of customer satisfaction programme that allows them to receive feedback from customers to understand how satisfied they are with the quality of the products and services they receive.

### ***2.3.3 Product Quality***

For as long as products have been manufactured and sold to customers, companies and customers have been concerned with how good these products are. Research investigating the concept of quality was originally based on the evaluation of tangible products. The importance of product quality for customers cannot be denied. Product quality refers to the overall evaluation of products (Olshavsky & Miller, 1972) and numerous research studies confirm customers’ perception of product quality as an antecedent of customer satisfaction (Zeithaml & Bitner, 1996; Hoisington & Naumann, 2003; Babakus et al., 2004; Fecikova, 2004).

The Japanese have a very strong philosophy and culture surrounding product quality; according to their prevailing paradigm quality means zero defects, i.e. doing it right the first time (Parasuraman et al., 1985). Parasuraman et al. (1988) indicated that product quality should be based on the perspectives of consumers and not the company’s perspective and must therefore be defined as the *usefulness* of products for the consumer (Juran, 1988). Steenkamp (1990) indicated that customers evaluate a product’s quality by consciously or unconsciously comparing it to product attributes, using meaningful personal or situational

factors. In line with this view Crosby (1979) stated that quality refers to the conformance to requirements. Garvin (1983) measured quality from two dimensions:

1. **Internal failures** refer to any defects that are observed before the product leaves the factory.
2. **External failures** refer to breakdowns that occur at a later stage during product consumption.

Garvin (1983) extended this viewpoint to one of the most comprehensive perspectives of what product quality entails, identifying eight attributes that should be used when evaluating a product:

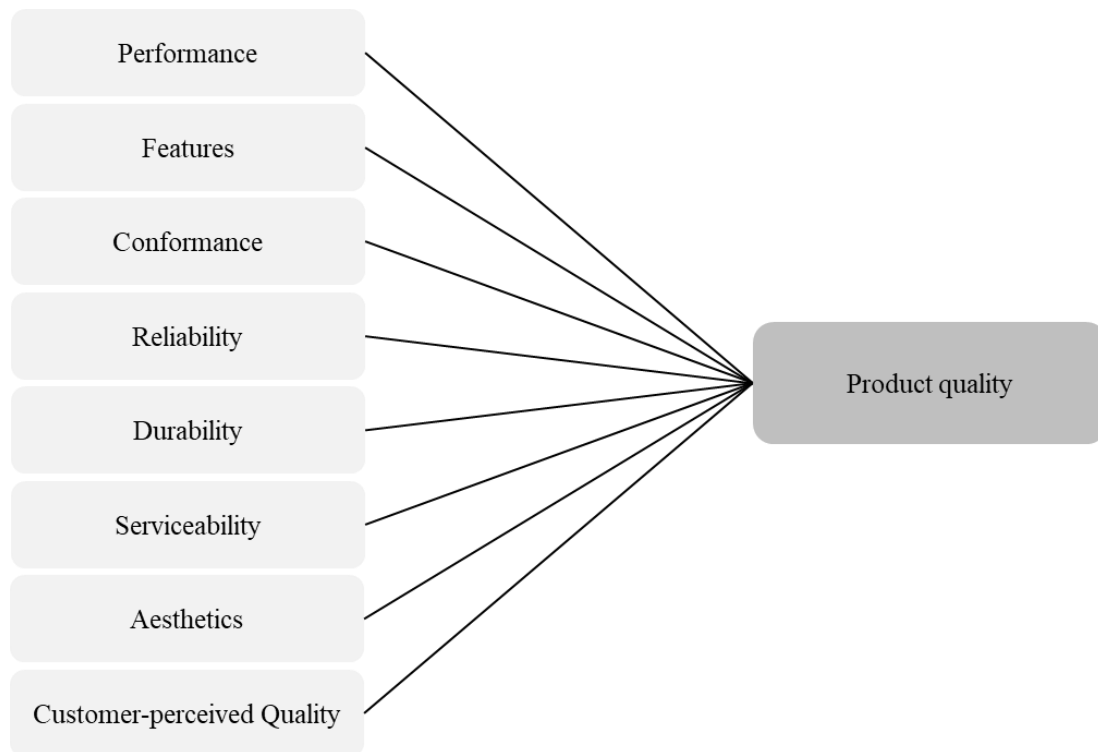
1. **Performance:** The product's primary operating features.
2. **Features:** Additional features or the bells and whistles that add to the appeal of the product.
3. **Conformance:** How well the product's design and operation meet specific standards.
4. **Reliability:** The performance of the product over a period of time under specific conditions.
5. **Durability:** The endurance of the product and how long the customer can use the product before it breaks down.
6. **Serviceability:** The organisation's performance when product repairs need to take place (competence, efficiency and courtesy).
7. **Aesthetics:** How a product is perceived and experienced through the customer's senses.
8. **Customer-perceived quality:** Customer perception of a product's quality based on the reputation of the company.

Yuen and Chan (2010) verified the relevance of Garvin's eight dimensions to be continuously used and adopted by researchers and organisations for defining and measuring

product quality. Figure 2.2 illustrates the eight attributes identified by Garvin as the most important aspects that need to be considered when measuring the quality of a product.

**Figure 2.2**

*Aspects that Influence Product Quality*



#### **2.3.4 Service Quality**

Prior to investigating the construct of service quality it is important to define what is meant by the concept *service*. Service is more difficult to define than a product since it refers to an activity, benefit or interaction offered “for sale” or provided in relation to the sale of goods (Mququ, 2005). One of the most published authors in the area of service quality and satisfaction, Christian Grönroos, defined service as follows: “A service is a process consisting of a series of more or less intangible activities that normally, but not necessarily always, take place in interactions between the customer and service employees and/or physical resources or goods and/or systems of the service provider, which are provided as solution to customer



problems” (p. 46). In general terms a service refers to some action or procedure together with some type of execution that is performed by service personnel.

Since most services are complex by nature and very unique from one service setting to the next, defining and measuring the quality of services is extremely complicated. While the concept of product quality is closely related to the technical specifications of the product, the concept of service quality is closely related to customer satisfaction. Service quality on an overall level can therefore be defined as a customer’s assessment of the overall excellence or superiority of the service (Mowen, 1993). Service quality, from the consumer’s perspective, is the satisfaction with the service based on the difference between the actual service and the expectations of the service (Churchill Jr. & Surprenant, 1982). Numerous authors confirm that service quality positively affects customer satisfaction and profits (Anderson et al., 1994; Dean, 2002; Wong & Sohal, 2003; Wong, 2004).

Most authors agree that evaluating services has two components:

1. Evaluating the *outcome* of the service (technical-outcome dimension)
2. Evaluating the *process* of the services (functional-process dimension)

Customers therefore evaluate two different aspects of a service interaction. Firstly, the outcome of the service, that which the customer receives, is easier to evaluate since it relates to the end product of the interaction and that which the customer ultimately obtains. This component of the service interaction can be evaluated more objectively by customers since the service provides a solution or outcome to a problem the customer faces. The more successfully the service addresses the problem the customer experiences, the more favourable the evaluation. Conversely, if the solution does not solve the customer’s problem successfully the less favourable the evaluation will be.

Secondly, process refers to internal processes, procedures, activities and operating methods followed by the service provider during service delivery. These aspects are complex

and less tangible and therefore more difficult for customers to evaluate. They focus on the *experience* the customer has during the delivery of the service instead of the outcome of the service. To evaluate the process effectively, the organisation needs to identify the critical junctures in the service delivery process (moments of truth) that will have the greatest impact on the customer's evaluation.

Another important distinction in the field of service delivery is the difference between utilitarian and hedonic services. Utilitarian services provide practical value to the customer and usually have a functional task that needs to be accomplished and tangible performance characteristics the customer can use to evaluate the service. These could include most services in the banking environment like opening a new account, receiving a new bank card, accessing one's account online or changing one's password. In other industries they might include aspects like the repair of equipment, the collection of physical goods and being serviced in a grocery store. These types of services are typically easier for customers to evaluate since they are concerned with how well the outcome of the service addresses their needs. The evaluation is primarily concerned with how well the service solves a problem or a need of the customer.

Hedonic services, however, refer to how the service makes the customer feel and the pleasant or unpleasant sensations associated with the experience. These services typically relate to the multi-sensory, fantasy and emotional aspects of the consumption experience (Hirshman & Holbrook, 1982). Hedonic services include experiences like dining at a restaurant, seeing a play at the theatre, visiting a museum or other forms of services with a high entertainment value. Since hedonic services have less tangible characteristics and are more difficult to quantify, the satisfaction with these types of service is fundamentally in the eye of the beholder and more difficult to evaluate objectively. Customers do not necessarily focus on any specific outcome of the service but evaluate the entire service experience in

terms of its experiential and affective benefits (pleasure, enjoyment, amusement and relaxation). Two customers can have the exact same service experience but their evaluation can differ significantly since the experience is very personal and a subtle difference in the experience can influence customers differently, making it difficult to quantify.

Consonant with these views, Lehtinen and Lehtinen (1991) indicated that process quality is judged by consumers *during* the service interaction while output quality is judged *after* the service has been performed, allowing customers to compare the total service experience to their expectations. Perceived service quality can therefore be defined as customers' general and overall subjective evaluation of the services they receive (Bateson & Hoffman, 2002).

One of the most influential articles on service quality was published in 1985 by Parasuraman et al. (1985) and contributes significantly to our understanding of service quality. They state that "while the substance and determinants of service quality may be undefined, its importance to firms and consumers is unequivocal" (p. 41) since customers are demanding higher quality products and services. Although the drive for improved quality originated in the product domain, Parasuraman et al. (1988) indicated that it is not sufficient to evaluate service quality since it does not account for three of the most important characteristics of services, namely intangibility, heterogeneity and inseparability.

### **Intangibility**

According to Parasuraman et al. (1985) most services are intangible since they are *performances* and not objects as is the case with products. They point out that services cannot be counted, measured, inventoried, tested and verified before the sale occurs to ensure the quality of the service.

### **Heterogeneity**

Services delivered by companies are extremely diverse and the experience of customers with different companies are dissimilar. The service delivery of one company can differ on a

day-to-day basis since it is dependent on the service personnel performing the service on a particular day. Booms and Bitner (1981) argued that it is almost impossible for companies to ensure consistency in behaviour by service personnel during service delivery (i.e. providing uniform service quality). The unique way in which staff members deliver services may therefore be very different in comparison to what was originally envisioned by the organisation.

### **Inseparability**

The *production* of services is inseparable from the delivery of these services. Services are not manufactured in a facility and then delivered to the consumer in a neat uncompromised package. The quality of the service delivery occurs *in the moment* during the interaction between the employee delivering the service and the customer receiving the service. In specific services where client involvement is high, the quality of the service is affected by the customers themselves because of the interaction between the customer and service employees.

The above characteristics emphasise the diversity and uniqueness of service encounters and the difficulty to evaluate service quality objectively on an overall level. The perception of service quality is determined by the unique experience of each customer. It is therefore very difficult for companies to assess their own service in absence of the customer's perspective on the service encounter.

Parasuraman et al. (1985) indicated that service encounters are defined by three themes:

1. Service quality is more difficult for the consumer to evaluate than goods quality since there are far fewer tangible criteria (i.e. style, functionalities, performance, colour, fit and feel) that the customer can use to evaluate the quality.
2. The perception of the quality of services is done by consumers through comparing the actual service performance with the expectations they had about the service.

Delivering quality service necessitates the conformance to customer expectations on a consistent basis (Lewis & Booms, 1983).

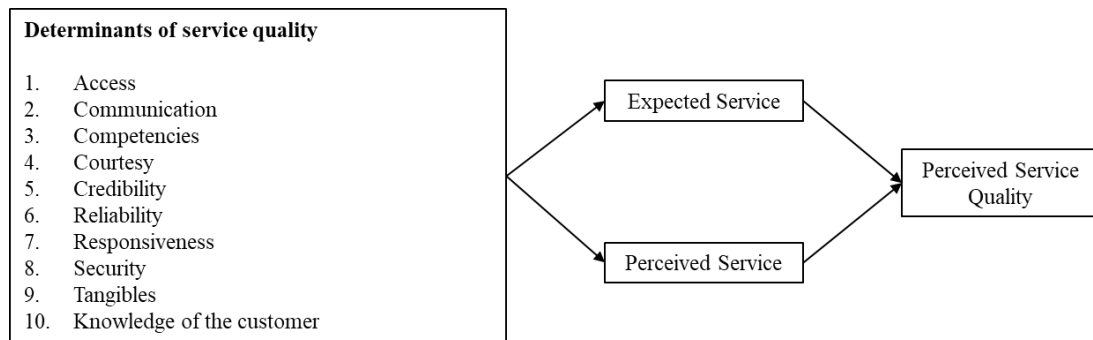
3. Quality assessments are not made solely on the outcome of a service; they also involve evaluations of the process and manner in which the service was delivered.

This notion is in line with the findings of Grönroos (1982) that identified two types of service quality: *Technical quality* that involves the aspects that the customer actually receives from the service, and *functional quality* that relates to the manner in which the service is delivered.

Lehtinen and Lehtinen (1982) proposed that service quality is produced in the interaction between the customer and three aspects of the organisation:

- **Physical quality:** Refers to the building, equipment and systems encountered during the service interaction.
- **Corporate quality:** Relates to the company image and profile.
- **Interactive quality:** Derived from the interaction between the staff and the customer, and in some instances between different customers.

Parasuraman et al. (1985) who conducted numerous studies with consumers across various industries conclude that regardless of the type of service, consumers use the same criteria when evaluating service quality. These criteria fall into ten broad categories that they label service quality determinants (Figure 2.3).

**Figure 2.3***Service Quality Determinants*

Adapted from Parasuraman et al. (1985)

Customers use these 10 determinants as criteria to compare the Perceived Service they received with their Expected Service that leads to their final assessment, namely Perceived Service Quality. It is important to mention that in instances where customers have unrealistic expectations, the overall perceived quality will be low even if the actual service quality (when measured objectively) is deemed to be good. It is the expectation lens through which the customer evaluates the service that influences their overall perception of the service.

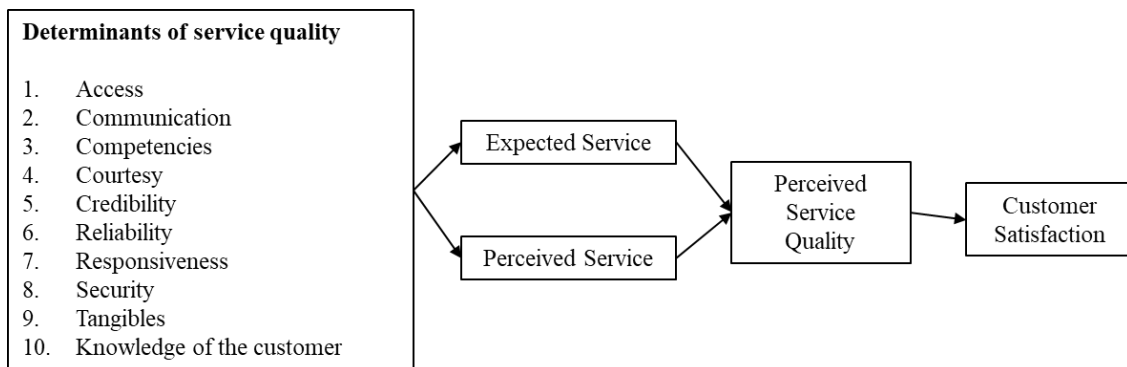
In everyday use, the concepts *service quality* and *satisfaction* are used interchangeably. While the two concepts are related, they have been studied as separate constructs without investigating the link between the two. Gwynne et al. (1998) indicated that while the concepts *service quality* and *satisfaction* are related, there are still gaps in our understanding of the exact relationship between the two constructs, their antecedents and consequences. Many authors have found evidence of service quality being strongly related to customer satisfaction and an antecedent of customer satisfaction (Oliver, 1993; Parasuraman et al., 1994; Patterson & Johnson, 1993; Spreng & Mackoy, 1996).

Gustafsson et al. (2005) indicated that in a service context overall satisfaction of customers is similar to the consequence of service quality. Numerous researchers have found

that higher levels of perceived service quality result in an increase in customer satisfaction (Cronin Jr & Taylor, 1992; Parasuraman et al., 1988; Dabholkar & Overby, 2005; Laroche et al., 2004; Mukherjee & Nath, 2005). In addition, many researchers have found that customer satisfaction is an antecedent of customer loyalty (Anderson & Sullivan, 1993; Dick & Basu, 1994; Griffin et al., 1995; Jones & Sasser Jr, 1995; Zeithaml et al., 1996). Figure 2.4 presents an expansion of the previous conceptual model, showing the relationship between Perceived Service Quality and Customer Satisfaction.

**Figure 2.4**

*Expanded Conceptual Model*



Over the last few decades the discussion on *the customer* has in general changed from focusing on products to a stronger focus on service, and finally the satisfaction of the customer and meeting their needs. Vargo and Lusch (2004) go as far as proposing a service-dominant logic, indicating that delivering products is not an end goal in itself but that products have become a medium for delivering services to customers and meeting their needs. The focus is less on what the organisation *delivers* (products and service) to what the customer *receives* (satisfaction and needs being met). Although quality has been investigated and extensively used over the last 50 years as a technique to improve customer satisfaction, “the tone of the debate has gradually shifted from a predominantly supply-side perspective of

quality, to one that increasingly aims to deliver customer value and satisfaction” (Forsythe, 2015, p. 19).

From a customer perspective, delivering products and services of high quality has almost become a prerequisite for being in business. Customers are less concerned about the input and the effort on the part of organisations in manufacturing products and delivering services and are more focused on the output, the benefits and value that they receive when consuming products and services. The perceived value that customers receive when they use products and services has become an important antecedent of customer satisfaction and is discussed in the following section.

### ***2.3.5 Perceived Value***

Following on the work of Garvin (1983) that focuses exclusively on the eight attributes of product quality, Madu et al. (1995) add price as one of the key determinants that affect customers’ perception of a product and their satisfaction with it. Most customers evaluate the quality of products and services they receive in relation to what they pay for the products or services. Customers intuitively draw a direct correlation between the price of goods and services and the end result that they receive – the more expensive something is, the higher the expected quality. This trade-off between what customers *get* in comparison to what they *give* is concerned with the concept of value – the importance, worth and usefulness of the products and services in their lives. The value that the customer receives has been increasingly researched and investigated as a construct affecting customer satisfaction. Johnson and Weinstein (2004) indicated that companies can gain a competitive advantage by continuously providing their customers with superior perceived value compared to their competitors. One of the most widely adopted models for measuring customer satisfaction, the ACSI (American Customer Satisfaction Index) includes perceived value as one of the antecedents of customer



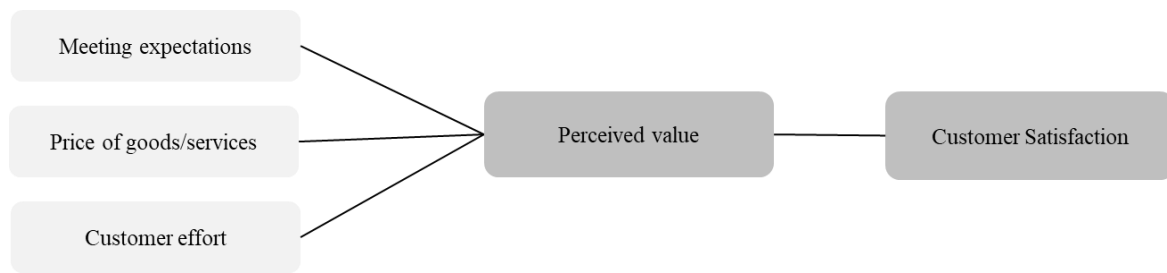
satisfaction; it has been shown through various projects to be one of the most significant aspects affecting customer satisfaction (ACSI, 2020).

Although perceived value is a construct closely related to the price that the customer pays for goods and services, price is not the only factor that affects perceived value. Zeithaml (1988) investigated the concept of perceived value and indicated that the construct is made up of two definitions:

- Value is a function of the *quality I get for the price that I pay*.
- Value is a function of what *I get for what I give*.

Zeithaml (1988) indicated that perceived value is not influenced by the price that customers pay only but everything the customer “offers up” to receive the product or service; the effort and inconveniences on the part of the customer. Many authors indicated that one of the most effective ways to increase customers’ perceived value is by exceeding their expectations (Sharabi & Davidow, 2010; Duodu & Amankwah, 2011; Dobre et al., 2013). Although Zeithaml (1988) originally used the concept of value in the product space, other researchers have effectively applied the concept of value in service encounters (Bolton & Drew, 1991). Rust and Oliver (1993) pointed out that similar to product and service quality, perceived value is an antecedent of customer satisfaction.

Incorporating these different perspectives, it is clear that customers evaluate perceived value by comparing the products or services they receive against what they expected, the price that they paid and the effort required on their part to acquire said products and services (Figure 2.5).

**Figure 2.5***Drivers of Perceived Value*

The expectations a customer has significantly influence their satisfaction; therefore anything that the customer expects can be a driver of value. It is vital that organisations understand the exact needs of their customers (i.e. their expectations) to offer them value. The inherent challenge lies in the fact that customers' needs are extremely personal and the needs of one customer can be significantly different from those of the next; therefore, what determines value for one customer may be vastly different from what drives value for the next customer.

Determining the drivers of value for a customer is complicated by the fact that customers' needs are constantly evolving as they progress through their life journey. Consider the relationship that a customer has with a bank. Most customers start banking when they are a student or when they first enter the labour market. Since their primary needs are centred on transferring funds, they are interested in ease and convenience only and are satisfied with a basic savings or transactional account. As the need for more complex products like vehicle finance or mortgages arises, access to these products and the interest rate that the customer pays become more important than the convenience factor. When they begin making investments, start a business or plan for their retirement, they may put more emphasis on developing a personal relationship with a proficient financial advisor to receive reliable financial advice. It is therefore important not only to understand the customers'

current needs that define value for them at that specific time but also to become more cognisant of how customers' needs and value drivers change over time. From an organisational perspective, with the aim of retaining their current customers, companies need to compare the value they deliver continuously to what competitors are offering to ensure that customers do not defect since they feel they can obtain more value elsewhere.

As simple algorithm for calculating Perceived value is provided below.

$$\text{Perceived value} = \text{Benefits} - \text{Cost}$$

Using this algorithm, it is clear that Perceived value increases when either the benefits increase or the cost is reduced:

$$\text{Perceived value} = \text{Benefits} \uparrow - \text{Cost} \downarrow$$

It is this interplay between benefits and cost that ultimately determines the perceived value that customers receive. For some customer segments that are extremely price sensitive, increasing value equates to lowering prices. Conversely, other customer segments may be willing to pay even more if it means that they will receive additional benefits.

Expanding on this algorithm, the following section focuses on various factors that 1) can be incorporated into a company's value offering in an attempt to increase the benefits customers receive, and 2) reduce the aspects that customers can interpret as increasing the cost.

The ACSI (American Customer Satisfaction Index) follows a similar approach when measuring customers' perceived value and uses two independent metrics to gauge perceived value:

1. Customers have to rate *the price that they pay, given the quality* that they receive. For these customers the important construct is the *value for money* principle and they are usually extremely price sensitive.
2. Customers have to rate the *quality that they receive given the price* that they pay. For these customers, the benefits they receive are more important and they are willing to pay more for these. For them it is more a function of *money for value* instead of *value for money*.

Benefits refer to any aspect that has a positive impact on a customer's life while costs refer to anything that a customer must give up, offer or sacrifice to receive said benefits.

The following tables summarise the various aspects that can affect customers' perception of benefits and costs.

**Table 2.3**

*Factors Affecting Customer's Perception of Benefits and Cost*

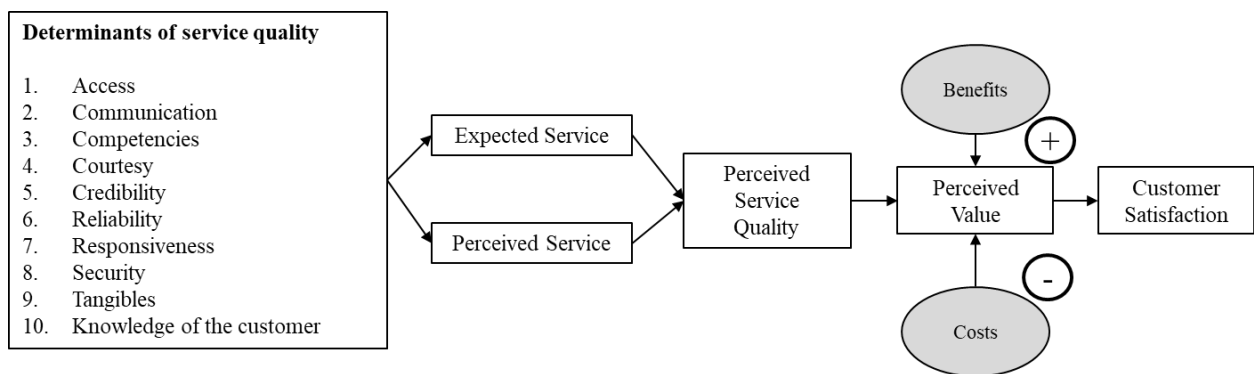
| Benefits   | Cost  |
|--|---|
| <ul style="list-style-type: none"> <li>- Company band and reputation</li> <li>- Product design of high quality</li> <li>- Advantages of using a service</li> <li>- Overall experience</li> <li>- Great relationship</li> <li>- Emotional benefits (respect, satisfaction, feeling valued)</li> <li>- Convenience, ease of use, time saving</li> <li>- Success in using the product or service</li> <li>- Exceeding expectations</li> </ul> | <ul style="list-style-type: none"> <li>- Monetary cost – Price, interest rates, repairs, etc.</li> <li>- Amount of time spend</li> <li>- Amount of customer effort</li> <li>- Energy expenditure</li> <li>- Negative interactions with company staff (disagreements, arguments)</li> <li>- Inconveniences and returns</li> <li>- Emotional strain (frustration, anger, disappointment)</li> </ul> |

The perceived value that customers receive is an extremely important driver of customer satisfaction and loyalty. Firstly, perceived value is the final trade-off between all the benefits a customer receives compared to the monetary and non-monetary sacrifices or costs on the

part of the customer. Secondly, it is not only a trade-off between benefits and cost but also a trade-off between current and potential value propositions. Kotler and Keller (2006) indicated that perceived value encapsulates the difference between the benefits and cost of the current value proposition that the customer decided to use compared with alternative value propositions available in the market. If customers perceive value to be low, or that alternative options from competitors may have more value, it may motivate them to use the products or services of competitors, which leads to a decrease in loyalty (Anderson & Srinivasan, 2003). It is, therefore, imperative that companies provide exceptional value and go beyond what customers expect. This is referred to as *unanticipated value*. The expanded model in Figure 2.6 indicates that perceived value is an antecedent of customer satisfaction and is positively influenced by the benefits the customer receives and negatively influenced by any costs on the part of the customer.

**Figure 2.6**

*Perceived Value as an Antecedent of Customer Satisfaction*



Perceived value is an important driver of customer satisfaction and companies need to develop to increase the value that customers receive; it can be improved by adding additional benefits to the customer offering or by reducing the costs to the customer. However, continually reducing the cost of delivering products and service to customers is not always a viable option since the cost of producing products and services is affected by other aspects in

the larger economic climate that make it almost impossible to continuously reduce the cost of producing and delivering products and services to customers.

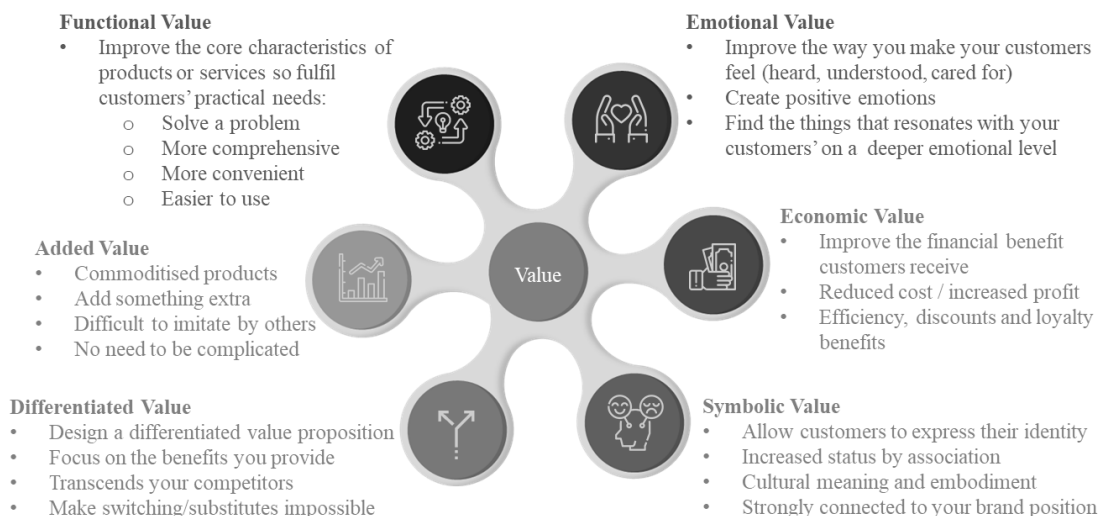
Instead of entering into a price war with competitors, companies can find innovative ways to increase value to their customers without increasing the costs of delivering improved value. While improved overall product quality and overall service quality can increase the perception of value, there are six value constructs that compromise total customer value; if improved, these directly affect customers' perception of the value they receive (Figure 2.7):

1. Functional value
2. Emotional value
3. Economic value
4. Symbolic value
5. Differentiated value
6. Added value

Increasing the value in any of these spheres will increase the overall value to customers.

**Figure 2.7**

*Dimensions of Total Customer Value*



### **2.3.6 Customer Satisfaction**

Customer satisfaction is the outcome and end result of understanding customer needs and delivering exceptional product quality, service quality and improved value aligned with customer expectations. The following section firstly outlines specific aspects that can enhance overall satisfaction from a customer point of view, and secondly considers some of the advantages of improved customer satisfaction.

**2.3.6.1 Improving the Experience of Customers.** Besides overall product and service quality, Gentile et al. (2007) suggested that there are six dimension of the purchase experience itself that companies need to focus on to improve the overall satisfaction of customers. These are closely aligned with the previous aspects discussed but describe them from the customer's perspective instead of an organisational perspective.

1. **Functional dimension:** Relates to the practical and rational component of the experience and refers to the utilitarian outcome of the experience.
2. **Sensory dimension:** The sensory dimension refers to the effect the experience has on the five human senses (vision, hearing, touch, taste and smell) and how these senses influence the customers' evaluation of the experience.
3. **Lifestyle dimension:** This refers to how closely the experience is aligned with a customer's attitude and values, and the internal factors that determine how satisfied a customer will be.
4. **Cognitive dimension:** Any aspect in the experience that has to do with thinking, conscious decision making or problem solving.
5. **Emotional dimension:** The affective component of the experience and the feelings evoked in the customer during the experience.
6. **Community/Relationship dimension:** Belonging to a specific social group or the association, membership and involvement with a specific social group.

Since customers' needs are continuously changing and their expectations are constantly increasing, satisfying these different dimensions in the customer experience is not an easy task. What makes it even more challenging, is that the solutions that work today may be obsolete tomorrow and therefore companies need to invest in and reinvent the experience customers have continuously. However, companies that manage to improve the overall satisfaction of their customers stand to gain several advantages. These are summarised in the next section.

**2.3.6.2 Organisational Advantages of Satisfying Customers.** Customers seek joy and fulfilment in their lives and tend to associate with people and organisations that increase this joy and fulfilment. When companies produce products and deliver services that enhance the overall satisfaction of customers, customers are willing to spend more time and money to obtain these products and services. While additional purchases can be viewed as an overall benefit that can be obtained by improving customer satisfaction, Fornell (1992) identified seven specific advantages of improved satisfaction for organisations:

1. Reducing transaction costs.
2. Reducing the cost of failure (recovering cost and rectifying mistakes when things go wrong).
3. Reducing customers' price flexibility (i.e. customers are not so sensitive to price increases).
4. Reducing the cost of attracting new customers (marketing initiatives to attract new customers).
5. Preventing customer loss when customers defect to competitors.
6. Increasing customer loyalty.
7. Improving the reputation and image of the organisation.



While these advantages can have a significant effect on the overall performance of an organisation, the ultimate goal of any organisation is to generate and sustain profits in the long run. This can only be achieved by retaining customers over a long period of time and ensuring that customers spend more of their financial resources with the company instead of with competitors. In his book, *The Practice of Management* Peter Drucker points out that the only true objective for any business is to make and keep a customer (Drucker, 1954). Improving customer satisfaction is therefore not an end in itself; the ultimate goal of improved customer satisfaction is to retain customers for years to come.

In the current business environment there is a need for companies to transform from a singular focus on customer satisfaction to include an overarching customer strategy that includes building and sustaining a loyal customer base. Loyal customers do not only spend more money with the organisation but also share their positive experiences with other people and attract new customers to the organisation. The following section investigates the linkage between customer satisfaction and customer loyalty.

## **2.4 Customer Loyalty**

### ***2.4.1 Customer Loyalty – The Ultimate Objective***

While there are numerous reasons why organisations should aim to improve their customer satisfaction, having satisfied customers is not the final objective since sustainable financial success is only possible if companies can maintain a large customer base over a long period of time, i.e. a large number of loyal customers. This view is supported by Jacoby and Chestnut (1978) who wrote, “The success of a brand on the long-term is not based on the number of consumers that buy once, but on the number of consumers who become regular buyers of a brand” (p. 1). Reichheld (1996) indicated that many organisations are so fixated on customer satisfaction scores that they completely forget to ensure customer retention by

creating a lifetime of purchases by a customer. This statement by Reichheld raises the question about the relationship between customer satisfaction and customer loyalty.

Most industries today are characterised by a large number of companies competing against one another for the favour of consumers; this has increased the purchasing power of consumers. Not only do consumers have a myriad of companies to choose from, the products and services offered by these companies are in many instances analogous, making it extremely difficult for companies to differentiate themselves in a crowded marketplace and ensure that customers remain with them for their entire lifetime. One of the most effective ways for companies to gain a competitive advantage is to ensure the loyalty of their customers (Pan et al., 2012). Competition in the banking environment is especially fierce since banks are making it easier than ever before for customer to switch between banks, emphasising the importance of building and maintaining a loyal customer base.

Similar views illustrating the importance of customer loyalty has permeated the research and academic field to such an extent that by the late 1970s more than 300 research papers had investigated the concept of loyalty in the consumer-buying process (Jacoby & Chestnut, 1978). Some authors go as far as saying that for business success, managing customer loyalty is a mandatory task of all organisations (Ngo & Nguyen, 2016).

While most academics, researchers and business practitioners concur that customer loyalty is important for business success, numerous perspectives exist on the nature and measurement of customer loyalty. The remainder of this chapter explores these aspects with specific focus on the following:

1. The link between customer satisfaction and loyalty.
2. Defining customer loyalty.
3. Advantages of having loyal customers.
4. Loyalty in the services sector.

5. Various loyalty constructs.
6. Measurement of customer loyalty.

#### ***2.4.2 The Satisfaction Loyalty Link***

While most researchers and academics agree that there is a correlation between satisfaction and loyalty, the exact relationship between the two constructs is unclear. This is even more pertinent in the services industry where services are characterised by a relationship between customers and service employees and where services can typically take place over an extended period of time. There are, however, numerous studies that indicated that customer satisfaction is the most important driver of customer loyalty (Oliver & Linda, 1981; Bitner, 1990; Fornell, 1992; Anderson et al., 1994; Oliver, 1997). In the services industries customer loyalty can be a vital asset for an organisation since it is one of the most effective ways to differentiate a company from its competitors (Gremler & Brown, 1996).

The general assumption that most companies rely on is quite straightforward; if customers are satisfied and their expectations are consistently met or exceeded, they will remain loyal. The direct relationship between satisfaction and loyalty are, however, somewhat ambiguous and not as simple as it may seem. Bloemer and Kasper (1995) attribute this complexity to the elaboration on the part of the customer that can be viewed as a mediator between satisfaction and loyalty. This is especially true in high involvement service settings where the role of the customer is amplified. Oliva et al. (1992) who specifically looked at satisfaction in service settings, expanded on the non-linearity of loyalty and satisfaction and indicated that when satisfaction increases beyond a certain level, loyalty will increase significantly. Below this critical level a large range of satisfaction and dissatisfaction levels have no influence on loyalty at all.

Current literature about the exact relationship between satisfaction and loyalty displays conflicting findings. While some studies found that there was a significant relationship

between satisfaction and loyalty, other studies found only a minor relationship or no relationship at all. The following discussion highlights the most prominent findings investigating the relationship between satisfaction and loyalty.

**2.4.2.1 Confirming the Satisfaction Loyalty Link.** While there are numerous factors that can influence customer loyalty, one of the most prominent drivers of loyalty is customer satisfaction (Mittal & Kamakura, 2001; Tsai et al., 2010; Flint et al., 2011). Customer satisfaction is the evaluation of the consumption experience against a standard of pleasure versus displeasure (Oliver, 1999). This psychological disposition experienced by the consumer has a direct effect on their loyalty. Bloemer and Lemmink (1992) found that customer satisfaction affects the buying intentions and the actual behaviour of customers, indicating the effect of satisfaction on both the psychological and behavioural component of loyalty.

According to Mascarenhas et al. (2006) customer loyalty is usually referred to as the consequence of all experiences a customer has with an organisation. These experiences include physical reactions, emotional involvement and any other key moments in the customer journey that can influence the loyalty of the customer. Numerous other studies also found that satisfaction impacts loyalty in various ways. Anderson and Sullivan (1993) showed that customer loyalty is the principal consequence of customer satisfaction while Myron (2005) also affirms that customer satisfaction is one of the most important predictors of loyalty. Kotler (1977) indicated that customers will repurchase a company's products in future if their needs are satisfied. Oliver (1999) points out that during all the interactions a customer has with an organisation, it is essential that they experience frequent and multiple episodes of satisfaction since all these episodes aggregate to affect customer loyalty.

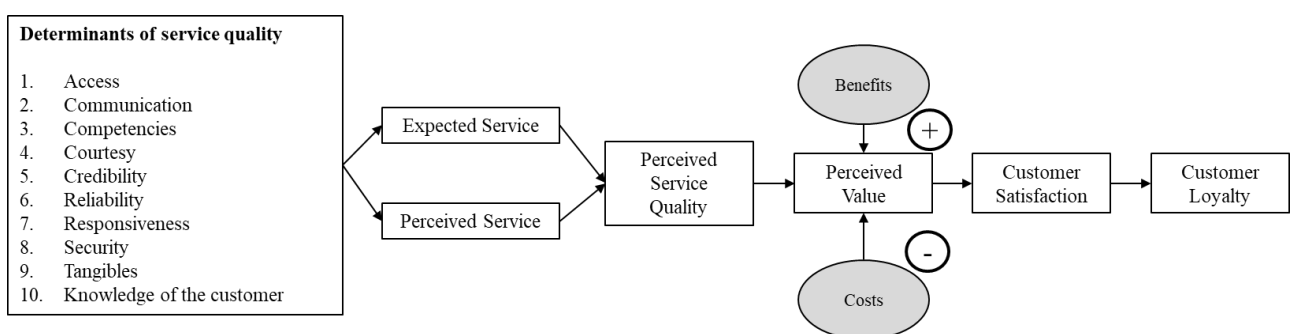
A positive correlation between satisfaction and loyalty has been found across various sectors and industries (Hadi et al., 2019); this affects various loyalty constructs like consumer

support, retention and repurchase (Hallowell, 1996; Oliver, 1997; Hennig-Thurau et al., 2002). Various studies specifically investigated the relationship between satisfaction and loyalty in the services sectors and found that satisfaction is an antecedent of loyalty (Lam et al., 2004; Coelho & Henseler, 2012).

Several studies have investigated the effect of customer satisfaction on loyalty in the banking industry and while they found that several aspects affect customer loyalty, customer satisfaction remained a core determinant of customer loyalty. Lewis and Soureli (2006) showed that perceived service quality, the corporate image of the bank, perceived value and customer satisfaction affect loyalty. Beerli et al. (2004) found that switching costs and customer satisfaction are the two main drivers of customer loyalty. Other prominent studies in the banking sector determined that customer satisfaction is commonly recognised as a predictor of customer loyalty in the banking sector (Devkota & Dahal, 2016; Bamfo et al., 2018). Customer satisfaction is therefore one of the most important precursors and drivers of customer loyalty (Figure 2.8).

### Figure 2.8

#### *Satisfaction as a Precursor of Loyalty*



Hallowell (1996) who investigated the link between satisfaction and loyalty in the banking industry found that customer satisfaction could explain 37 percent of the difference in customer loyalty levels, indicating that satisfaction is an excellent predictor of customers'

loyalty to a specific bank. However, this finding indicates that although satisfaction affects customer loyalty in the majority of instances, the relationship is not one hundred percent linear.

**2.4.2.2 Denouncing the Satisfaction Loyalty Link.** Although the majority of studies in academic literature have found a strong correlation between satisfaction and loyalty, there are a number of studies that did not find such strong links between the two constructs. Bae (2012) postulates that while numerous studies established a positive relationship between customer satisfaction and loyalty, there are several research studies that indicate that this relationship is not necessarily generalisable to all industries and all companies. Gremler and Brown (1996) draw a similar conclusion and indicated that previous studies resulted in varied results and that not all studies found evidence for the link between the two constructs. Shoemaker and Lewis (1999) found a weak link between customer satisfaction and loyalty; Bloemer and Kasper (1995) indicated that in certain circumstances customer satisfaction on its own is not sufficient to lead automatically to customer loyalty and that various other factors also play a role.

Customers' satisfaction level usually lies on a continuum between extremely dissatisfied and extremely satisfied; it is the differentiation between various satisfaction-dissatisfaction levels that influences customer loyalty in various ways. In this context, Heskett et al. (1997) show that only customers that are a 100 percent satisfied will show high repurchase likelihood while Bowen and Chen (2001) point out that customers need to be *extremely satisfied* to show brand loyalty. This view is supported by other researchers who indicated that customer loyalty improves significantly when customer satisfaction exceeds a specific level (Heskett et al., 2008).

These studies indicated that the relationship between satisfaction and loyalty may not always be linear and that having satisfied customers is not always a guarantee that they will

remain loyal. Reichheld (2001) found in certain cases that even as many as 65 to 85 percent of customers will switch, even if they are very satisfied.

Although there are conflicting results about the exact relationship between customer satisfaction and customer loyalty, the latter can also be affected by numerous other aspects; the bulk of research studies in the field indicate that having satisfied customers provides an organisation with a solid foundation in its quest for creating loyal customers. Conversely, companies will find it extremely difficult to create loyal customers if their customers are not satisfied with the products and services they receive. Generally, most consumers make rational decisions and want to avoid any unnecessary emotional turmoil in their lives. Customers are risk-averse and strive to avoid any unnecessary disappointment by remaining with a service provider that has provided them with a positive experience in the past. Therefore, if a customer is satisfied with a current service provider, they will remain loyal in an attempt to circumvent any negative experiences.

Although there are conflicting findings in the literature, the dominant position is that customer satisfaction is a necessary contributor to customer loyalty. The fundamental question that arises is why satisfied customers still defect and why customers that are not satisfied still remain with an organisation? The following section discusses some of the possible reasons why there is not a perfect linear correlation between satisfaction and loyalty.

**2.4.2.3 Why Satisfied Customers Still Defect.** Given the competitive nature of the current business environment and the multitude of competing brands in the market providing customers with unlimited choice, it stands to reason that customers do move from one company to another sometime during their lifetime. Customer churn rate is at an all-time high and there are various reasons why customers move from one service provider to another even if they are satisfied.

Colgate (1996) indicated that customer defection cannot always be regarded as the inverse of loyalty. Levesque and McDougall (1993) takes a similar stance and points out that even if customers' issues are not solved, they will still remain with an organisation.

According to Bitner (1990) and Ennew and Binks (1996) customers will remain with an organisation not because they are not satisfied or loyal but due to other factors, such as low switching costs, lack of differentiation, geographical challenges, time or money constraints and habit or inertia.

The following section summarises some of the reasons why customers will use other companies even if they are satisfied with their current provider:

- One of the biggest reasons is the multitude of options available to consumers in the marketplace. Customers may think that the products of a competitor are more appealing or that they can get better service elsewhere.
- Related to the previous reason is the fact that many products and services are not differentiated and the value proposition of one company is very similar to that of the next. This makes it relatively easy for customers to experiment and test the products and services of a competitor.
- Customers are becoming increasingly price sensitive and always look for the best deal. Therefore, one of the reasons why customers may choose alternative suppliers is because the products or services of their current supplier have become too expensive and they are exploring cheaper alternatives.
- Another reason may be the loyalty programme on offer from a competitor. Nowadays most companies offer some type of loyalty or rewards programme in an attempt to retain their existing customers and attract new ones. Even though customers may be satisfied with their current service provider, the loyalty programme of a competing company could appeal to them and motivate them to switch.



- The brand proposition of a competitor company may be attractive to a consumer. Customers are increasingly looking for value congruence between their own beliefs and what a company stands for; they will rather support a company that propagates some significant cause instead of only being in business for its own financial gain.
- Marketing and sales initiatives may motivate a customer to sample a product or service that they have not experienced before; as a result, such a customer may remain with the new company even though they are not dissatisfied with their previous provider.
- Customers may discontinue the usage of a product or service because they no longer have a need for the specific product or service category, and not because they are dissatisfied.

Given the competitive nature between companies and the myriad of reasons why customers may try alternative suppliers, increasing the loyalty of one's existing customers is a critical factor in obtaining and maintaining market share (Jarvis & Mayo, 1986). Numerous studies indicated that the sustained financial success of an organisation is ultimately dependent on having a loyal customer base, especially in the services sector where increased loyalty can significantly increase profits (Reichheld & Sasser Jr, 1990; Reichheld, 1996).

Investigating the various definitions of loyalty proposed in the last 50 years will facilitate an understanding of the importance, antecedents and consequences of customer loyalty.

### ***2.4.3 Defining Customer Loyalty***

The previous discussion indicates that the construct *loyalty* is not straightforward; authors have different perspectives on customer loyalty. Table 2.4 summarises the most important definitions of loyalty that facilitate one's understanding of the drivers and consequences of customer loyalty.

**Table 2.4***Definitions of Customer Loyalty*

| <b>Year</b> | <b>Author</b>       | <b>Definition</b>   |
|-------------|---------------------|---|
| 1969        | Day                 | Loyalty is an attitude; it refers to positive feelings towards a brand that encourages repurchasing time after time.  |
| 1973        | Jacoby and Kyner    | The biased non-random purchase (behavioural response) of a specific product, based on a conscious evaluative decision process, showing a preference for one product over a set of alternative choices over a long period of time.                         |
| 1977        | Jarvis and Wilcox   | A relational construct where repeat behaviour and a psychological bond are closely connected.   |
| 1992        | Tidwell et al.      | Brand loyalty is expressed as a proportion of repeat purchase behaviours based on brand related beliefs, stated affect and behavioural-based intentions.  |
| 1995        | Jones and Sasser Jr | Customer loyalty is when customers have the perception of faithful trust and a favourable impression of the store's employees, products or services.  |
| 1996        | Gremler and Brown   | The degree to which a repeat customer shows signs of re-patronage behaviour, possesses an affirmative temperament toward the service provider, and considers using only a single service provider when the intentions to re-purchase this service exists. |
| 1997        | Oliver              | A deeply held commitment to re-buy or re-patronise a preferred product consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behaviours.   |
| 1997        | Oliver              | A profound devotion to repurchase a favoured product or service regularly.  |
| 1998        | Bowen and Shoemaker | A higher possibility of introducing or recommending companies to others and establishing positive public word-of-mouth.   |
| 2000        | Edvardsson et al.   | Customer loyalty refers to a customer's intention or predisposition to buy products or services from the same firms or service providers again.   |
| 2000        | Zeithaml and Bitner | A means of economising decision effort by habitually using the same products or services instead of deliberately making new purchase decisions and therefore reducing decision risks.   |
| 2003        | Duffy               | Customer loyalty is a feeling of association that a customer has towards a brand that generates positive and measurable financial results.  |
| 2006        | Lewis and Soureli   | It includes both attitudinal and behavioural practices, such as repeat buying of a product and service, repurchasing a brand for a long period of time and non-sensitivity to price increases.  |
| 2006        | Palmatier et al.    | A combined reflection of intentions, attitudes and seller performance indicators.   |
| 2006        | Mascarenhas et al.  | Customer loyalty is the sum of all experiences encountered by the customers in using products and services from providers that drive repurchase behaviour.  |

|      |                         |  |
|------|-------------------------|--|
| 2010 | Yuen and Chan           | Customer loyalty occurs when customers repeatedly purchase goods or services over time and hold favourable attitudes towards and support the company supplying the goods or services.  |
| 2010 | Krumay and Brandtweiner | The degree to which a customer exhibits repeat purchasing behaviour from a service provider, possesses a positive attitudinal disposition toward the provider, and considers using only this provider when a need for this service arises. |
| 2015 | Abdelfattah et al.      | A composite construct by combining various behavioural and attitudinal factors.  |
| 2017 | Kangu et al.            | Customers' willingness to repeat purchases and refer new customers (positive word-of-mouth).   |

While different authors focus on different aspects of customer loyalty, examining the above definitions emphasises two shared perspectives commonly found in most definitions:

- **Attitudinal and emotional involvement** relates to a deep-seated affinity for a company and its products and services. This component of loyalty is described using words like favourable attitude, positive attitudinal disposition, positive feelings, psychological bond, stated affect, preference, favourable impression, faithful trust, affirmative temperament, deeply held commitment, profound devotion, intention and predisposition.
- The **Behavioural component** refers to some type of action on the part of the customer, motivates repurchasing, intention and predisposition to repurchase, repeat behaviour, re-buy and re-patronise, behavioural-based intentions, habitual use, referring new customers and positive word-of-mouth.

In the banking environment previous authors developed definitions that refer to similar constructs as indicated in the above definitions. Ladhari et al. (2011) defined customer loyalty as a customers repeated patronage of a specific bank over a long period of time. Bloemer et al. (1998) described bank loyalty as the biased behavioural response expressed over time by some decision-making unit with respect to one bank out of a set of banks, a function of psychological processes resulting in brand commitment. Heskett et al. (1997)

defined loyalty as characterised by repeat purchasing and persuading customers to refer the bank's products and services to other people.

As can be seen from the above definitions, there are two prevailing perspectives when defining and describing loyalty. The first addresses it from a customer's perspective and focuses on the attitudes and behaviours that should be present to classify a customer as being loyal. In this regard Khan and Fasih (2014) who conducted extensive research on the banking industry, indicated that customer loyalty is formed under six assumptions. While it is not necessary for all these assumptions to be met for customers to be classified loyal, some of them have to be present:

1. It is a function of psychological processes (mental or emotional interaction).
2. It involves some decision making unit (a customer's active choice).
3. It involves bias (prejudice or favouritism towards a brand).
4. It may relate to some alternative brands (trade-off between competitors).
5. It is expressed as a behavioural outcome (the final purchase action).
6. It is expressed over time (continuation of the attitude or behaviour).

From a customer's perspective, loyalty can therefore be summarised as a preference for a specific product or service driven by a cognitive or emotional predisposition that manifests as a reoccurrence of a particular behaviour over an extended period of time and the intention to tell other people about the experience.

The second perspective is from an organisational point of view that focuses on the importance of loyalty for an organisation – specifically, the advantages of having loyal customers for an organisation. The following section discusses the benefits that organisations receive when having a loyal customer base.

#### ***2.4.4 The Importance and Advantages of Customer Loyalty***

Although researchers and academics disagree about the exact definition of loyalty, “there is little dispute that the concept of loyalty is important” (Rundle-Thiele & Mackay, 2001, p. 530). In 2002 the US Marketing Science Institute identified customer loyalty measurement and valuation as a “top tier priority topic” of “greatest interest” for organisations. Customer loyalty is considered as one of the most important drivers of companies’ long-term success and sustainability over time (Keating et al., 2003).

Berry and Parasuraman (1992) found that loyal customers purchase more, incur lower marketing costs and spread more positive word-of-mouth. Hofmeyr and Rice (2000) found that companies must spend five times more to acquire a new customer compared to retaining their existing customers. Similarly, Griffin (1997) indicated that having a loyal customer base not only results in savings on operational and marketing expenses, but also brings continuous benefits for companies.

One of the most mentioned benefits that companies obtain is the financial benefit that loyal customers have for an organisation. Numerous research studies have found a link between customer loyalty and the financial performance of a company:

- Reichheld and Sasser Jr. (1990) conducted research across 14 industries and found that a 5 percent decrease in customer defection increases profits between 25 percent and 95 percent. Although the percentage increase in profits differed considerably between different organisations in different industries, the correlation between retaining customers and profit was consistent.
- Loyalty increases an organisation’s revenue by retaining current customers and reduces costs of acquiring new customers (Auka, 2012; Rapp et al., 2012; Reichheld, 1993; Reichheld & Sasser Jr, 1990).

- Similarly, Chen and Cheng, (2012) and Keiningham and Aksoy (2012) indicated that one of the most important functions of managers in service organisations is to develop strategies that will increase customer loyalty since it leads to revenue growth and ensures business sustainability.
- Casaló et al. (2008) focused on loyalty in the electronic banking environment and found that loyalty could significantly improve the future purchase intention of customers resulting in an increased financial performance for the company.
- Studies conducted in the financial service sectors have found that loyal customers help by increasing the income of the company, which leads to greater market share and profitability (Meidan, 1996; Al-Wugayan et al., 2008).
- In retail settings it was found that loyal customers make proportionally more purchase at their first-choice store compared to customers that switch to a second store (Knox & Denison, 2000). Jacoby and Chestnut (1978) take this one step further and indicated that for any company to succeed, the most important number is not first-time customers but those who are repeat purchasers:
  - Loyal customers spend more than less loyal customers (Baldinger & Rubinson, 1996).
  - Loyal customers are the main resource of profits to support competitive advantages for organisations (Chen & Myagmarsuren, 2011).

The above discussion indicates that from a financial performance perspective, loyalty is extremely important for organisations. Customers that are loyal to a specific company exclude alternative competitors from their consideration set, even if these competitors employ extensive marketing efforts. Profound devotion to a specific company that leads to the regular repurchase of products and services provides a significant benefit for the company in terms of its financial performance and overall market performance.

Customer loyalty can therefore be described as the link between customer attitudes, repeat purchasing and the financial performance of companies. Creating loyal customers has become a major objective of most companies, especially those businesses in the services sector (Bove & Johnson, 2000).

#### ***2.4.5 Loyalty in the Service Sector***

It is important to distinguish between product loyalty and service loyalty. Keaveney (1995) reveals that knowledge of and insight into loyalty related to the purchasing of products cannot be automatically generalised to the service industry. In the domain of the service industry, interpersonal relationship plays a significant role in fostering loyalty compared to the purchasing of tangible products (Berry, 1983). Numerous authors have shown the importance of personal relationships as a contributor to customer loyalty in service industries (Czepiel & Gilmore, 1987; Surprenant & Solomon, 1987). In fact, it has been suggested that loyalty is more prevalent in the service industries than with tangible products since the creation of personal relationships in the service industries makes it more difficult for customers to switch between service providers than switching between products.

Organisations that specialise in providing a service to customers can ensure the loyalty of their customers by building long-term relationships and meeting customers' needs and expectations and consequently create a competitive advantage for the organisation.

The banking environment in South Africa has seen significant changes in the last couple of years with six new banks entering the market. This, coupled with the lack of differentiation between banking products, is creating a challenging environment for banks to operate in. These new market entrants are creating a more competitive market place since customers are exposed to various new services, product and relationship propositions that increase the variety of offers that consumers can choose from. Consequently, customers are expecting more from their bank that need to work harder to retain their customers. As with

other service businesses, the intangibility of services in the banking sector emphasises the importance of building relationships with customers and developing a robust loyal customer base. Customer loyalty has therefore become a crucial component for any bank's future success. Hayes (2008) indicated that customer loyalty is a significant contributor to any bank's overall objectives of expanding its business and progressively capturing a larger market share that will lead to increased profits.

In the current volatile South African economy and the versatility of the banking environment, banks have a unique challenge in their endeavours to develop a sustainable loyal customer base. For banks to gain the competitive advantages produced by having a large loyal customer base – repurchase, increased spending, tolerance to price changes and resistance to competitor promotions – it is critical to understand not only what percentage of their customer base is loyal but also the degree of their loyalty. Measuring the loyalty of their customers on an ongoing basis is a priority for any management team and the first step in understanding how to influence and improve the loyalty of their customers. It is therefore important to understand the various loyalty constructs that can be used as a metric to measure customer loyalty.

#### ***2.4.6 Different Loyalty Constructs***

Given the numerous approaches to loyalty described above, the question that arises is what the best method to measure customer loyalty is. The simple answer is that the chosen approach is dependent on the specific organisation and the industry it operates in as well as the purpose of the research and how the results will be utilised. Given the assumption that different loyalty constructs can be used in different consumer settings, it is not surprising that conflicting evidence related to the use of various loyalty constructs when measuring customer loyalty exists.



In a study conducted in the retail banking industry Baumann et al. (2005) found that “The literature thus establishes a general relationship between attitude, satisfaction and loyalty, as measured by intentions, and suggests an association between intentions and behaviour” (p. 232). Conversely, countless studies in the past that attempted to measure customer loyalty (Pritchard et al., 1999; Chaudhuri & Holbrook, 2001; Jacoby & Chestnut, 1978) indicated that the measurement of loyalty as a construct is questionable. The difficulty in measuring loyalty, based on customer purchase decisions, is that customers do not always buy products or acquire services because they are loyal. Hofmeyr and Rice (2000) suggested that there may not be other alternatives available in the market or that customers may not be able to afford them.

Day (1969) was the first author to address this complexity and identified brand loyalty as being more than only repeat purchases. He introduced the notion that loyalty has two dimensions: a behavioural component and an attitudinal component. These two dimensions can be described in terms of two different approaches when investigating customer loyalty: a stochastic approach and a deterministic approach. The stochastic approach has as its main premise that loyalty is a *behaviour* while the deterministic approach essentially regards loyalty as an *attitude*. This distinction between the two components of loyalty is adopted by most authors when evaluating and measuring customer loyalty. The major differences between these two viewpoints are summarised in Table 2.5.

**Table 2.5***Attitudinal and Behavioural Dimension of Loyalty*

| Deterministic – Attitudinal dimension   | Stochastic – Behavioural dimension   |
|---|--|
| <ul style="list-style-type: none"> <li>– Commitment</li> <li>– Preferential attitude</li> <li>– Psychological bond</li> <li>– Emotional connection</li> <li>– Positive feelings</li> <li>– Intentions and predispositions</li> <li>– The likelihood to repurchase</li> <li>– The likelihood to recommend</li> </ul> | <ul style="list-style-type: none"> <li>– Repeat purchases</li> <li>– Purchase of new products</li> <li>– Proportions of purchases</li> <li>– Increased usage / increased visits</li> <li>– Share of wallet</li> <li>– Not actively investigating competitor offers</li> <li>– Price tolerance</li> </ul> |

While most authors agree that these two dimensions exist, there are less consensus about what each means, how they should be used and integrated in the measurement of loyalty.

Taking a purely stochastic approach and focusing on the actual purchase behaviours only, presents some challenges. This approach considers loyalty behaviours as inherently inexplicable (Odin et al., 2001) since the large number of variables that influences purchase behaviour makes explaining this behaviour impossible (McAlister & Pessemier, 1982). The disadvantage of this view is that it implies that a company cannot pinpoint the actual cause of repeat purchase behaviours and can therefore not influence the purchase behaviour of customers.

A purely deterministic approach, on the other hand, postulates that there is a limited number of explanatory factors that influence loyalty. In this approach, loyalty is primarily seen as an attitude and psychological commitment on the part of the consumer and does not necessarily take the actual purchase behaviours of the customer into consideration. It is therefore easier for an organisation to investigate and measure the attitude of consumers and influence their attitude to create more loyal customers. Unfortunately, this view presents certain challenges, the most prominent being that not much empirical evidence exists about

the way attitudes and intentions translate into actual behaviour. This dual view of loyalty has subsequently caused a great debate on the actual use of these dimensions to measure customer loyalty.

However, customers' attitude and intentions are often used as a substitute to measure actual purchase behaviour (Fishbein & Ajzen, 1975; Chaudhuri, 1998). While customer purchase behaviour can be regarded as an explicit action, intention and preference are successively more ambiguous (Reich et al., 2006). Intention generally refers to a customer's expressed likelihood to purchase while preference refers to a customer's attitude to a company and an affinity with a specific brand compared to other available brands.

Oliver (1993) takes a broader view of loyalty and indicated that besides the attitudinal and behavioural dimension, loyalty includes a cognitive dimension. This refers to a consumer's conscious decision-making process in evaluating various alternatives before making a final purchase decision. Loyalty can therefore be regarded as a combination of cognitive processes, affective processes, conative processes (i.e. wishes and intentions) and action (Oliver, 1999).

These divergent views of how loyalty can be measured indicate how the conceptualisation of loyalty has evolved over the years. Traditionally loyalty was discussed and measured in the field of packaged consumer goods where behavioural loyalty (repeat purchase behaviour) featured prominently. As markets changed and service industries gained prominence, loyalty evolved into a multi-dimensional construct that includes attitudinal and cognitive dimensions.

An extension to this is proposed by Rust and Oliver (2000) who emphasise the role of emotions in the formation of behavioural intentions. Their research shows that positive and negative emotions have corresponding positive and negative effects on satisfaction and loyalty. Similar findings by Westbrook (1987) indicated that emotions have a direct and

indirect effect on loyalty. He found that positive emotions should increase repurchase intentions while negative emotions should decrease repurchase intentions.

Kotler and Keller (2006) who conducted extensive research in the field of marketing management and customer loyalty posit three major indicators of customer loyalty:

- **Repeat purchase:** A customer's preference continuously to buy a specific product or make use of a specific service.
- **Retention:** Remaining with a specific service provider even in the face of negative experiences or negative publications in the media.
- **Referrals:** Recommending the services and products of a specific company to others and encouraging them to use them.

Behavioural measures, like repeat purchasing, have been criticised in the past for having a very strong outcome-focused view of a process (i.e. final purchase) that is usually instigated by a psychological predisposition or attitude of the customer. A low degree of repeat purchases may be influenced by situational factors (stock availability, variety seeking, competitive marketing) while a high degree of repeat purchases may be influenced by the lack of alternative options available in the market or the costs of switching in the service sectors. In addition, when employing behavioural approaches like repeat purchase to measure loyalty, research could find it difficult to provide insight into the underlying reasons why customers are loyal.

Conversely, understanding a customer's disposition in terms of preferences and intentions plays an important role in understanding customer loyalty (Jain et al., 1987; Bloemer & Kasper, 1995). This highlights the use of attitudinal constructs like recommendation as a more indicative measure of customer loyalty.

**2.4.6.1 Word-of-Mouth Recommendations.** Word-of-mouth refers to the likelihood that customers recommend the products and services of a company to friends, family and

colleagues. The following section investigates the use of word-of-mouth recommendations and why it has become such a popular and effective metric for measuring customer loyalty in organisations.

Dr Philip Kotler, one of the most prominent figures in the marketing fraternity, is recognised for his statement “word-of-mouth will either make you or break you”. This type of statement shows the increase in importance of word-of-mouth in today’s society. When customers are loyal to a company, there is an inherent aspect of faithful trust that is demonstrated through the sharing of one’s experience with others that results in additional benefits to the company (Reichheld & Schefter, 2000).

Customer loyalty is concerned with the likelihood of a customer returning, making business referrals, providing strong word-of-mouth references and publicity (Bowen & Shoemaker, 1998). Numerous research studies have proved that willingness to recommend and repeat purchase intentions are reliable dimensions to use when testing customer loyalty (Kotler & Keller, 2006). Many authors believe that referrals are not only a reliable metric to use when testing customer loyalty but that customer loyalty is defined by customers’ willingness to recommend (Heskett et al., 1997).

Various studies conducted in the banking sector support the use of recommendations as a reliable measure of customer loyalty. Fisher (2001) indicated that when customers are loyal to their bank, they will remain a customer of that bank, are likely to purchase new products and recommend the bank’s services to other people. Kaynak and Kucukemiroglu (1992) who investigated the Hong Kong banking market, found that customers primarily use convenience, long associations with the service provider and recommendations of friends and relatives when choosing a bank. Anderson and Mittal (2000) indicated that loyal customers increase a bank’s profitability by remaining with the bank and passing on positive word-of-mouth. Hung-Hsin (2009) who researched the role of commitment in the banking industry,

found that customers can play a significant role in the performance of a bank by providing information on service improvements and spreading positive word-of-mouth.

One of the reasons why word-of-mouth is such a powerful metric for measuring loyalty in the banking environment is because it is based on trust, which is an important driver when considering and choosing a bank. Customers need to trust the knowledge and advice of banking staff and trust the bank with the safeguarding of accounts and personal information. Trust forms the foundation of the relationship customers have with their bank and is viewed by numerous authors as a major precursor of consumer loyalty (Harris & Goode, 2004; Jarvenpaa et al., 2000). Word-of-mouth is essentially based on trust. People generally trust the opinion of close friends and relatives and follow their advice and recommendations. No one indiscriminately recommends a product or service to someone close to them since they put their own credibility and social currency in jeopardy by doing so. If the referent is disappointed when using the product or service, they will blame it on the one who made the recommendation, which could tarnish their relationship. However, if a customer hears something positive about a product or service from someone that they trust, they are more likely to follow the recommendation and use the product or service since they believe that the recommendation comes from a credible source.

Word-of-mouth is an extremely effective marketing tool that many organisations choose to utilise as a loyalty metric. Loyal customers are regarded as a company's best advertising media that can attract more customers to a company and increase the use of its products and services (Liu et al., 2017). Recommendations from satisfied, loyal customers lowers a company's cost of attracting new customers and enhances its overall reputation (Danaher & Rust, 1996). Conversely, negative recommendations or disapproval from dissatisfied customers can tarnish a company's reputation and convince other people not to use the products or service of a particular company. Therefore, customers' willingness to recommend

the products or services of a company is a reflection of their overall attitude towards the company.

In essence, the concept of word-of-mouth is about the narrative that customers share with the people close to them; it is about the conversations between people relating to the products or services of a company (Sernovitz, 2006). The correlation between satisfaction and word-of-mouth recommendations is well established (Putri & Suhariadi, 2013). The more satisfied customers are, the higher their levels of positive word-of-mouth behaviour (Brown et al., 2005).

From an organisational perspective, word-of-mouth marketing is characterised by actions taken by a company (producing exceptional products and service) that motivate their customers to share their experiences and actively recommend said products and services. Word-of-mouth behaviour is characterised by customers talking to one another about specific topics. Most organisations realise that just as advantageous as positive word-of-mouth can be for an organisation, so destructive negative word-of-mouth can be for the organisation. Ying and Chung (2007) indicated that customer interest in buying a specific product or using a specific service is affected by the level of debate between positive and negative word-of-mouth information.

One of the main reasons why word-of-mouth has become so important for companies in today's age is because of the reach that people have through social media. In the past, positive or negative word-of-mouth could reach one or two people in one's immediate circle of friends or family. With the exponential growth in communication made possible by online social platforms, viral dialogue is characterised by hundreds of people reading, evaluating and commenting on a topic at the same time. With the proliferation of social media platforms available to consumers, customer comments about an experience, whether positive or negative, could reach thousands if not millions of consumers in a matter of minutes.

Nowadays, with so much conflicting information available in the media and companies unscrupulously using the media to market their products and services, people close to one are becoming an important source of credible information since it is a source that one feels one can trust. What these sources lack in terms of formal authority they make up for in trustworthiness. In a study conducted by Nielsen (Global Trust in Advertising report, 2012) that surveyed 28 000 consumers in 56 countries, it was found that 92 percent of consumers indicated that they trusted recommendations from family and friends more than other forms of advertising.

As indicated in the previous section, the relationship between satisfaction and loyalty is complex and there are various perspectives on this relationship. Some authors regard satisfaction as a core component of loyalty while others view satisfaction as the starting point for loyalty (Munari et al., 2013). Although satisfaction and loyalty are distinct constructs and not correlated one hundred percent, there is a very high correlation between them (Silvestro & Cross, 2000; Gelade & Young, 2005). Most authors agree that satisfaction or dissatisfaction impacts customer loyalty that is considered to be the final consequence or outcome of the overall and cumulative experiences a customer has with an organisation (Brunner et al., 2008).

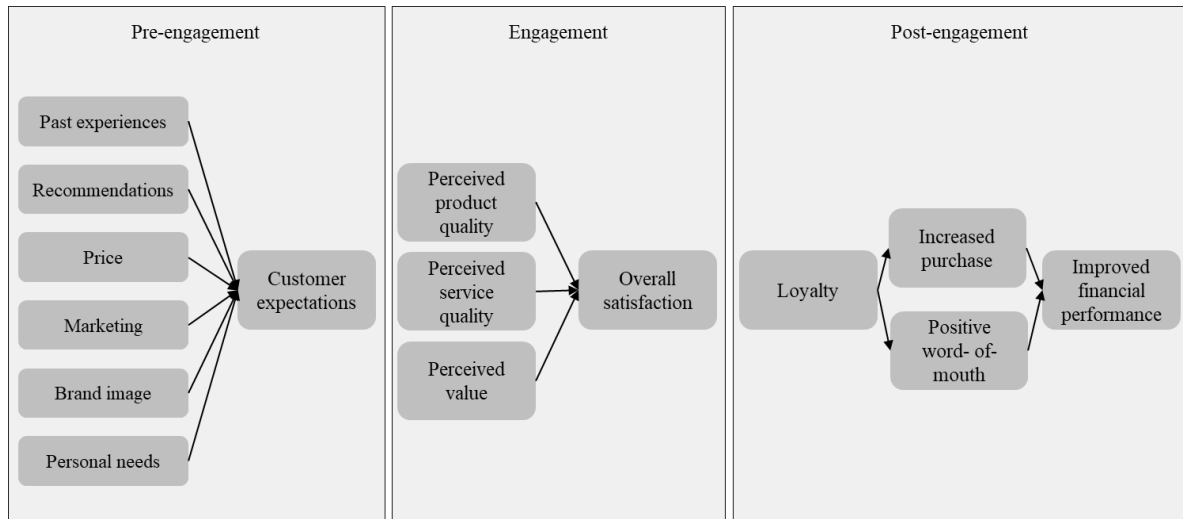
From a cumulative customer experience viewpoint, customer loyalty is viewed as the outcome and final objective of the previously discussed constructs. Loyalty is a consequence of the products and services used, the value customers receive through their engagement with the organisation and their overall satisfaction with the cumulative experiences that they have with the organisation. Loyalty is therefore dependent on all the factors previously discussed. Loyal customers are characterised by the positive effect that they have on a company through increased purchases and word-of-mouth marketing that ultimately improve the company's



financial performance. Figure 2.9 includes loyalty and its consequences in the previous conceptual framework as part of the post-engagement phase.

**Figure 2.9**

*Loyalty – The Final Outcome of all Experiences*



Having a large loyal customer base has numerous advantages for an organisation; it is important that loyal customers are viewed as a vital and valuable asset of the organisation. The financial performance of a company is predominantly driven by an increase in the number of loyal customers (Reichheld, 2003). The aim would be to maintain this loyal customer base over an extended period of time by providing them with exceptional experiences, products and services that address their needs and add value to their lives.

An important distinction highlighted in the literature addresses the difference between person-to-person loyalty and person-to-company loyalty. This is especially true in settings where the salesperson, advisor, consultant or relationship manager plays an important role in the sale of the product or the delivery of the service. Iacobucci and Ostrom (1993) have found that relationships with firms are relatively short-lived and faint compared to relationships that customers have with a person. Oliver (1997) has found that interpersonal loyalty is more

important than company or brand loyalty. It is important to note that loyalty to a person is sometimes a precursor of loyalty to an organisation. Beatty et al. (1996) argue that the relationship starts with the sales executive or consultant who in turn has a positive impact on the loyalty to the company. This finding is supported by research conducted by Macintosh and Lockshin (1997) who indicated that loyalty to a sales associate or service employee is an antecedent of company loyalty.

In the context of the current research in the business banking environment, customers have a very close relationship with their personal banker that extends over a long period of time. Customers primarily engage with the bank through the personal banker who therefore plays a significant role in how customers view their satisfaction with and their loyalty to the bank. In the banking environment it is vital for the personal banker to develop and sustain a superlative relationship with customers. Providing customers with support, sound advice and exceptional service builds trust between the customer and the personal banker and in turn generates long-lasting loyalty to the organisation.

## **2.5 Models and Measurement – Product, Service and Satisfaction**

Similar to the previously discussed constructs of product quality, service quality and satisfaction, the measurement of these constructs has a long history in the marketing and research literature. The aim of the current study is not to discuss and evaluate all the various measurements previously developed for measuring these constructs extensively. However, a discussion of the most prominent models and methods used for measuring these constructs is necessary to facilitate understanding of the various aspects that do influence the measurement of these constructs.

The upcoming section focuses on the following measurement models:

1. Kano model for evaluating product quality

2. SERVQUAL for evaluating service quality
3. GAPS model identifying the gaps between customer expectations and service experience
4. Confirmation-disconfirmation paradigm for evaluating customer satisfaction
5. Transactional and Reputational measures

### ***2.5.1 Measuring Product Quality – the Kano Model***

One of the most well-known methods to measure product quality is based on the theory of attractive quality developed by Kano in the early 1980s (Kano et al., 1984). Dr Noriaki Kano, who was the professor of quality management at the Tokyo University of Science at the time, developed this model that identifies the desired product attributes that customers require; therefore the measurement focuses on the most prominent product needs of customers. The theory of attractive quality proposes five dimensions of perceived quality: attractive, one-dimensional, must-be, indifferent and reverse quality. Kano presented a two-dimensional model of quality attributes where each of the five dimensions is evaluated on the degree of fulfilment of the quality attribute and customer satisfaction with each attribute. The different quality elements are described below.

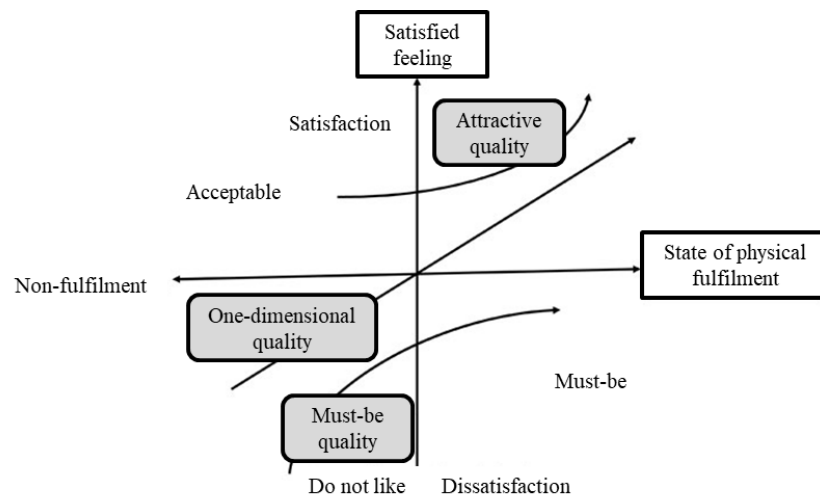
1. **Must-be requirements:** As the name suggests, these aspects are non-negotiable. If these requirements are not fulfilled the customer will be extremely dissatisfied and will not consider purchasing the product at all. Although products in the banking environment are somewhat more ambiguous, an example of a *must-be* requirement is that one's bank card should work when one wants to purchase something or draw money from an ATM. This would be the minimum expectation that the customer has. Since customers expect these features as a minimum requirement, the presence of these attributes will not increase satisfaction but their absence or poor performance will lead to immense dissatisfaction and the product could be excluded entirely from a

customer's consideration set. Other examples in the banking environment may be that the online banking platform is available and accessible when one wants to do one's banking or that the branch is open during the stated operating hours. These are the rudimentary requirements customers expect the bank to have.

2. **One-dimensional requirements:** These requirements are the aspects that customers explicitly insist on having since they directly address their fundamental needs. These are the aspects that competitors typically compete for; they have a direct correlation with customer satisfaction. If these aspects are present customers will be satisfied; if they are absent customers will be dissatisfied. From a banking perspective they include aspects such as a sufficient number of tellers in the branch to assist customers quickly, or the availability of the necessary functionalities on the online banking platform allowing customers to complete all their required transactions.
3. **Attractive requirements:** These aspects are usually not explicitly required by customers or not expected by customers. Customers may not even be aware that this is something that they would like. The presence of these aspects has a significant positive effect on customer satisfaction but customers will not be dissatisfied if they are not present since customers do not expect these aspects. These aspects, if they are present, proportionally have a greater positive effect on customer satisfaction than the one-dimensional aspects. In the bank branch this may be something like a priority queue for the elderly or coffee and tea while one waits, the online banking platform providing one with tips on how to use certain functionalities or offering products aligned with one's profile and needs at discounted rates. These aspects are not expected by customers but have a significant positive impact on satisfaction when experienced.

4. **Indifferent requirements:** As the name suggests, customer do not really care whether these aspects are present or not; they are regarded as mediocre and unremarkable. These aspects are not really good or bad per se and do not result in greater satisfaction when they are present or dissatisfaction when they are absent. In a bank branch this could be something like the consultant calling one by one's name instead of the number that one receives while waiting in line. During an online banking transaction this may be the visual attractiveness and the colour scheme of the website. These aspects do not significantly influence customer satisfaction or dissatisfaction.
5. **Reverse requirements:** These are the aspects that are the opposite of what customers expect. They have a significant negative effect on customer satisfaction, these aspects are proportionally more negative than their mere absence since customers essentially expect the opposite of these attributes. An example in the banking environment is being told that the transaction one wants to perform cannot be done at that specific branch and that one has to go to another branch. Another example is a time limitation on the on-line transaction one wants to perform and being logged out automatically after a couple of minutes. Customers expect to perform the transaction at their chosen branch and the online system to allow them enough time to complete a transaction. These aspects have a significant negative effect on customer satisfaction.

The original Kano model depicted in Figure 2.10 illustrates where a customer can be plotted in a two-dimensional space, moving on a horizontal level from non-fulfilment on the left to completely fulfilled on the right, and moving in a vertical space from dissatisfaction to satisfaction.

**Figure 2.10***Representation of Kano's Model*

Source: Kano et al., (1984)

Since this model was developed and published, it has been used extensively to guide organisations in the development and evaluation of their products. It has played a significant role in how companies think about their product development, product compliance, innovation and how differentiated their product will be in the market place compared to competitors.

Various aspects of Kano's model make it unique and extremely useful compared to other models developed in the past:

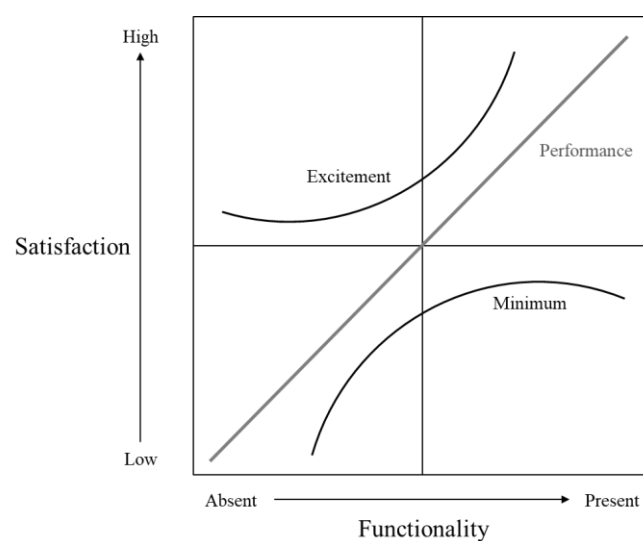
- Firstly, it can easily be used in a service environment to identify must-have, one dimensional and attractive attributes of the service experiences.
- Secondly, it addresses the non-linear relationship between performance and satisfaction. The presence of certain aspects will have a greater influence on satisfaction than their absence (attractive qualities) while other aspects will not have any effect on increasing satisfaction but their absence will have a significantly negative effect on customer satisfaction (must haves).

- The third aspect that sets this model apart from other models is the fact that it not only focuses on the functionality of products and services but recognises the effect of customer emotions on the evaluation of products and services. Customers expect banking staff to be friendly and helpful but will be delighted if staff are knowledgeable and competent, understand their needs, show empathy and solve their problem immediately.
- Fourthly, the model encourages service staff, managers and designers to think differently about products and services and primarily focus their attention on the needs of customers. Introducing a range of new features to products or services – a more is better approach – can be very costly and less satisfying than introducing one attractive aspect that addresses a fundamental need that customers have.

An alternative view of Kano's model is to develop a matrix with four quadrants, each depicting a different combination between the functionality of the product or service and customer satisfaction with the product or service (Figure 2.11).

**Figure 2.11**

*Interrelationship – Satisfaction and Functionality*



Minimum attributes refer to the basic features that are expected from a product or service. If products or services fall in the bottom right-hand quadrant they do not reach an average satisfaction level, even if there are a large number of these attributes present.

To achieve higher levels of satisfaction, products and services need to be positioned above the average satisfaction line and move into the top two quadrants. The presence of performance attributes (top right quadrant) takes a customer's evaluation from below satisfied to higher levels of satisfaction and increases a customer's enjoyment of products or services. These are the attributes that customers are aware of and expect, and the attributes that they use to compare different competitors with one another.

To delight customers and provide them with products and services that surpass their expectations, products and services need to be positioned in the top left-hand quadrant. This quadrant is not populated with performance or functional attributes only but moves into the space of providing excitement, enjoyment and unanticipated delight (aligned with Kano's attractive requirements).

Ultimately, companies need to develop products and services that excite and delight customers. Customers are often not even aware that they want these aspects but are delighted when they experience these product or service features. These are the features that surprise customers and provide the "wow" factor that differentiates a company from its competitors and encourages and inspires customers to spread positive word-of-mouth.

### ***2.5.2 Measuring Service Quality – the SERVQUAL Model***

Arguably one of the most influential pieces of work done in the area of customer service and customer satisfaction measurement was done by Parasuraman et al. in a systematic research programme carried out between 1983 and 1988. They describe service quality as the discrepancy between what customers expect and their perception of the service performance



(Parasuraman et al., 1985) and developed the SERQUAL model to measure the discrepancy between expectations and performance (Parasuraman et al., 1988).

The original model incorporated 10 determinants of service quality: reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the customer and tangibles. Parasuraman et al. conducted various studies using their model and reduced the 10 determinants to the following five:

1. **Tangibles:** The physical characteristics of the service encounter that can be perceived through the five human senses and include aspects like the layout, atmosphere, appearance of service employees and anything else related to the facilities, equipment and material used by the company.
2. **Reliability:** The ability of the service provider to execute the service in a safe and efficient way. It refers to consistently delivering what was promised, doing it right the first time without any mistakes and instilling trust into the consumer.
3. **Responsiveness:** The service provider having adequate resources and staff to provide the service promptly, service employees' willingness to help, informing customers when services will be delivered and then responding promptly to queries, requests and complaints.
4. **Assurance:** The extent to which employee behaviour instils confidence into the company and makes customers feel safe. It includes the knowledge and competence of employees and the confidence and certainty it instils into the abilities of the service provider.
5. **Empathy:** The understanding of customer issues and putting customers first in everything that they do. It incorporates aspects such as providing service in a personalised and individual manner, understanding customer needs, having

customers' best interests at heart and providing them with individual personal attention.

From these constructs Parasuraman et al (1988) developed the well-known and widely used SERVQUAL survey instrument. The survey instrument asks customers to rate their experience using 22 standardised statements on a Likert scale; the 22 items are distributed across five dimensions. Each statement is rated twice: once by providing a rating for their expectation followed by a rating for the perception of the experience. A gap score is calculated by subtracting the perception score from the expectation score. This is done for each statement and then for each of the five dimensions, resulting in an overall service quality score.

Although the instrument was criticised by various authors in the past (Carman, 1990; Babakus & Boller, 1992; Brown et al., 1993; Cronin Jr & Taylor, 1992) – the detail of their critique being beyond the scope of the current study – it had a widespread impact on businesses and academics and is recognised as a one of the most frequently used survey instruments for measuring service quality (Khatibi et al., 2002).

Two very interesting findings using the SERVQUAL instrument address the validity of asking customers about their expectations and perceptions in the same survey. Wall and Payne (1973) postulate that when customers are asked to indicate their “desired level” of service (expectations) and their “existing level” of service (perceptions), there is a psychological constraint in that they tend to rate the expectations higher than the perceptions. Babakus and Boller (1992) found that the SERVQUAL measure relies significantly more on the perception score of customers than on the expectation score. It was also found that customers may confuse the scores of the expectation and perception constructs, which could affect the quality of the data.

Most researchers and practitioners generally agree that the 22 items included in the SERVQUAL instrument are good predictors of overall service quality (Saravana & Rao, 2007) and the importance of the five underlying constructs cannot be denied.

Over the years many authors have used SERVQUAL as a basis for developing other service quality measures:

- Cronin Jr and Taylor (1994) felt that customer expectations are less important and developed the SERVPERF model that is based purely on customer perceptions of performance and exclude customer expectations.
- Syed and Amiya (1994) investigated customers' perceptions of service quality in the automotive industry and together with reliability, responsiveness and empathy identified convenience and perceived fairness as additional predictors of satisfaction. Perceived fairness was found to have a significant impact on customers' evaluation, especially in areas where the service tasks are complex and customers feel that service employees are not knowledgeable enough.
- Drew et al. (2003) investigated four different types of service and in addition to tangibles, reliability, responsiveness and assurance included access to services and knowledge of the customer.
- Sureshchandar et al. (2002) developed an instrument measuring five critical factors of which the human element of service and tangibles were primarily based on SERVQUAL. They added core service offering, systematisation of service delivery and social responsibility.

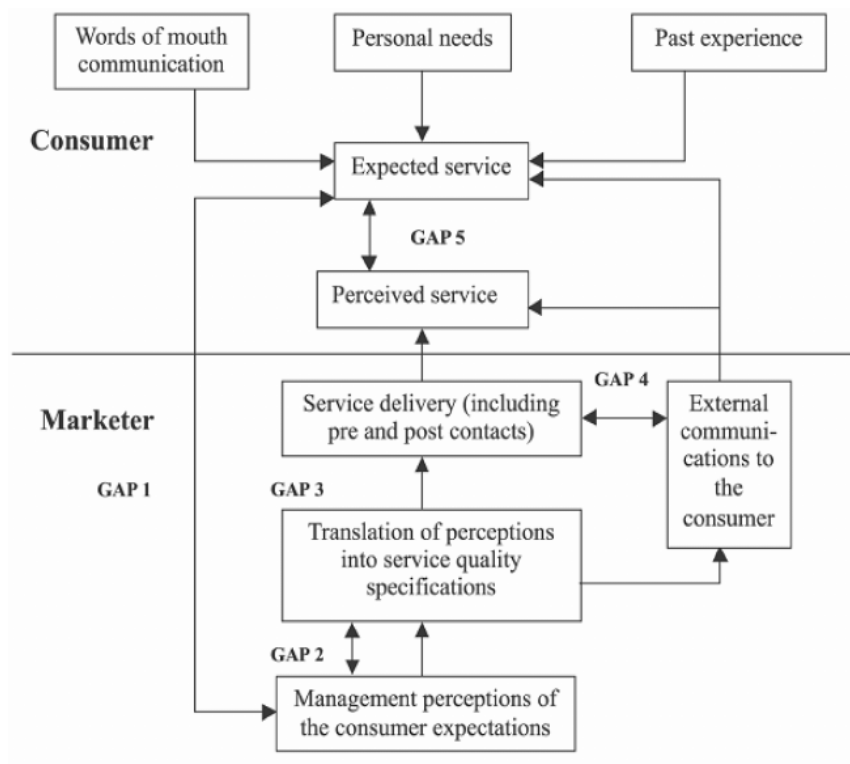
Another important limitation of SERVQUAL is highlighted by Meirovich and Bahnan (2008) who indicated that the model does not have the ability to pinpoint the impact of the quality dimensions on different emotions. In trying to incorporate and understand customer emotions, the best outcome that can be achieved is that positive disconfirmation leads to

positive emotions while negative disconfirmation leads to negative emotions. It is therefore unclear whether the different determinants of service quality generate emotions of various intensity. SERVQUAL is therefore unable to provide insight into specific emotions evoked during the product/service consumption.

### ***2.5.3 Identifying Service Gaps – the Gaps Model***

One of the outcomes of the work done by Parasuraman et al. (1985) is the identification of various gaps between what customers expect and the performance of the company. They conducted interviews with executives in four different industries: retail banking, credit card, securities brokerage and product repair and maintenance; they noted that “While some perceptions about service quality were specific to the industries selected, commonalities among the industries prevailed” (p. 4). These commonalities prompted them to develop a general model of service quality. They indicated that the most important insights gained from analysing the responses were that “a set of key discrepancies or gaps exists regarding executive perceptions of service quality and the tasks associated with service delivery to consumers. These gaps can be major hurdles in attempting to deliver a service which consumers would perceive as being of high quality” (p. 4).

From these findings they developed the well known GAPS model (Figure 2.12) that illustrates the various areas where a discrepancy may occur between what customers expect and what the organisation delivers.

**Figure 2.12***GAPS Model*

Source: Parasuraman, Zeithaml and Berry (1985:44)

The five gaps that they identified are summarised below:

1. Consumer expectation-management perception gap (GAP 1): The gap between what customers expect and management's perception of what customers expect.
2. Management perception-service quality specification gap (GAP 2): The second gap relates to the setting of service quality specifications and standards that are aligned with the perceptions of customer expectations that relate to the difficulties in matching or exceeding consumer expectations.
3. Service quality specifications-service delivery gap (GAP 3): This relates to the gap between recommended specification guidelines and the organisation's ability to deliver to those standards. Even when guidelines and specification are established for

delivering exceptional services, meeting these guidelines is sometimes extremely difficult.

4. Service delivery-external communications gap (GAP 4): During marketing and communication initiatives, companies sometimes overpromise what they can deliver in reality and create unrealistic expectations in the mind of consumers, which causes a gap between what was communicated and what can be delivered.
5. Expected service-perceived service gap (CAP 5): The final gap exists between what customers expect and what is ultimately delivered to them.

Parasuraman et al. (1985) summarised their findings by stating that consumers' perception of quality is influenced by various gaps that occur on the side of the organisation and that different companies in different industries need to find reliable ways of measuring the gaps in their specific business. They allude to the fact that certain gaps may be more critical than others in certain industries or certain companies and that the most important gaps need to be identified for each unique company. They point out that more work needs to be done in understanding customer expectations. Although responses were quite consistent among respondents in identifying the criteria that they used to evaluate service quality, they differed in terms of the relative importance of these criteria, which in turn affected their expectations. As previously discussed, customer expectations influenced by customer needs, previous experience, word-of-mouth and marketing initiatives form a critical part of how customers judge the service they receive.

#### ***2.5.4 Measuring Satisfaction – Expectancy Confirmation Theory***

Most authors agree that customer satisfaction is the outcome of the discrepancy between what customers expect of a product or service and their final perception of the product or service after consumption (Oliver, 1977; Tse & Wilton, 1988; Yi, 1990). Customer expectations therefore act as a standard of comparison for making satisfaction evaluations.

This evaluation is generally known as Expectancy Confirmation Theory (ECT) or the expectancy-disconfirmation model and originated in the consumer behaviour literature (Oliver & Swan, 1989).

The model suggests that the satisfaction process is a series consisting of three steps:

1. A customer develops an expectation of the likely performance of a product or service.
2. The customer then evaluates the actual performance of the product or service.
3. Finally, the customer compares this performance to their expectations.

The concept (*dis*)confirmation refers to a (mis)match between the customer's level of expectation of a product or a service and the perceived actual performance of the product or the service. According to ECT, whether customers are satisfied or not is determined by their expectations before using a service and the (dis)confirmation of their expectations.

This is known as the disconfirmation paradigm and is very similar to the Gap model discussed earlier. This disconfirmation of expectations was developed by Oliver (1980a; 1980b) and has guided the debate on the measurement of satisfaction for the past 40 years (Magnini et al., 2012). Szymanski and Henard (2001) indicated that it is the dominant theory when predicting overall customer satisfaction. When the perceived service or product performance is better than what the customers expected, it is known as positive disconfirmation. When the perceived performance is lower than expected, it is referred to as negative disconfirmation. Confirmation is when the service or product performance is exactly as expected.

Oliver (1993) indicated that satisfaction is based on a disconfirmation of pre-purchase expectations and post-purchase perceptions, being a comparative evaluation that influences the strength and direction of customer satisfaction and dissatisfaction. According to Oliver (1981) this evaluation focuses on an affective or emotional response by the customer.

Although the concept *disconfirmation* makes practical sense, some confounding results are found in the literature. In some studies it was found that customer expectation had a direct effect on customer satisfaction (Bearden & Teel, 1983; Oliver, 1980; Westbrook & Reilly, 1983) but not in other studies (Oliver & Bearden, 1983; Churchill & Surprenant, 1982). Most studies found that disconfirmation is a significant predictor of customer satisfaction. In contrast, Churchill and Surprenant (1982) found in a study on durable goods that neither expectations nor disconfirmation had an effect on customer satisfaction and that customer satisfaction was influenced only by perceived performance. Although some conflicting findings exist in the literature, various reviews indicate an increasing acceptance of this theory when predicting overall satisfaction (Yi, 1990; Erevelles & Leavitt, 1992).

According to Yi (1990) these conflicting findings indicate that the influence of expectations and disconfirmation is more complex than postulated in the original expectation-disconfirmation model and that subsequent research is necessary to determine the moderating effects of these constructs.

### ***2.5.5 Transactional and Reputational Measures***

On a practical level, the measurement of customer satisfaction is based on the use of research surveys to collect customer feedback. For many years customer feedback was collected at a specific point in time by conducting telephonic or face-to-face surveys with customers. Since these methods were quite labour-intensive and costly, many of these surveys were conducted once or twice a year and asked customers to evaluate their cumulative satisfaction with an organisation. Advances in computer and mobile technology in the last 30 years have provided researchers with an abundance of new methods to collect customer feedback; online surveys, SMS (Short Message Service) and USSD (Unstructured Supplementary Service Data) based surveys and Interactive Voice Response (IVR) technology have made it possible for companies to collect customer feedback at a fraction of



the cost and therefore much more frequently than traditional customer feedback methodologies used in the past.

The major advantage of these technologies is their ability to collect customer feedback directly after an interaction compared to traditional methods that were characterised by a time delay between the customer interacting with the organisation and the collection of customer feedback. Nowadays it is quite normal to receive an SMS or online invitation asking customers to evaluate their most recent interaction by completing a survey. Some systems allow the respondents to rate the service of the call centre agent they spoke to directly after the interaction by selecting certain options on their phone. These types of data collection method have become known as real-time or near-real-time methodologies since they collect customer feedback immediately after an interaction.

While both real-time and more traditional methods are aimed at collecting feedback from customers, there are some fundamental differences between the two methods. The most important difference between the two methods is the aspect of time, i.e. when the surveys take place. Real-time methodologies are focused on measuring the specific, most recent interaction between the customer and the organisation and usually happens within 24 hours of the interaction. Conversely, traditional surveys are done after an extended period of time that can range between a couple of weeks up to six months after a specific interaction with the organisation. Customers are usually asked to think back about a specific interaction that happened in the past and to rate the interaction. Since these surveys happen long after any specific interaction, other factors besides the interaction itself may influence a customer's perception of the organisation. These could include other interactions that have taken place during that time, exposure to marketing and communication received from the organisation, events in the media and what other people say about the organisation.

As an example, consider two customers that are asked to evaluate their most recent interaction with a call centre agent. The one customer receives an online survey directly after the interaction while the other customer receives it one month after the interaction. During the last month, however, there was a data breach at the organisation and millions of customers' personal details were stolen. Although the customer that completes the survey one month after the interaction is instructed to think about the specific interaction with the call centre agent, the recent data breach could affect their perception of the organisation and could subsequently influence the feedback.

Surveys that happen immediately after an interaction that is focused on measuring the specific interaction are referred to as transactional or operational surveys since they are focused on measuring the most recent transaction between the customer and the organisation. Surveys that take place long after a specific interaction are often referred to as reputational, overall or strategic measures since they measure a wide variety of aspects related to the organisation and not only one specific interaction. For the purpose of the current study, surveys that happen in real-time or near-real-time and measure only a specific interaction are referred to as transactional measures since they focus exclusively on one specific interaction/transaction. Surveys that happen long after a specific interaction are referred to as reputational measures since they provide more of an overall view the customer has of the organisation. Table 2.6 summarises the most important differences between transactional and reputational surveys.

**Table 2.6***Differences Between Transactional and Reputational Surveys*

|                             | Transactional surveys  | Reputational surveys  |
|-----------------------------|--|---|
| <b>Time delay</b>           | Within 24-hours of the interaction                                     | Between a couple of weeks up to six months after an interaction |
| <b>Frequency</b>            | Very frequent; daily and weekly data collection                        | Less frequently, once or twice per year                         |
| <b>Questionnaire length</b> | Shorter surveys; 1-5 questions   | Longer surveys; 10-60 minutes                                   |
| <b>Number of surveys</b>    | Large amounts of data; hundreds to thousands of surveys per week/month | Limited data points; fewer than 1000 surveys per project        |
| <b>Reporting</b>            | Immediate reporting; usually weekly or daily                           | Time delay to reporting; couple of weeks after data collection  |
| <b>Results distribution</b> | Typically uses real-time dashboards to disseminate results             | Formal presentations conducted in the organisation              |
| <b>Focus</b>                | Measures the very short-term, the momentary experience                 | Measures the long-term or the memory of the experience          |

Since transactional and reputational surveys are methodologically different with different focus areas, many organisations that employ both types of measurement often find that different methodologies produce different results. In the context of understanding customers' experiences, these contradictory results and differing perspectives on the use of transactional and reputational surveys create a methodological challenge for organisations and have become an area of debate within the research industry. Proponents of transactional surveys believe they provide a truer reflection of a customer's experiences since these evaluations measure *transactional satisfaction* based on the most recent interaction (Hunt, 1977; Oliver, 1977, 1980, 1993). Reputational measures collecting data after an extended period (following any specific interaction) measure the *cumulative satisfaction* of customers that is influenced by numerous other factors during this extended period (Fornell 1992; Johnson & Fornell,

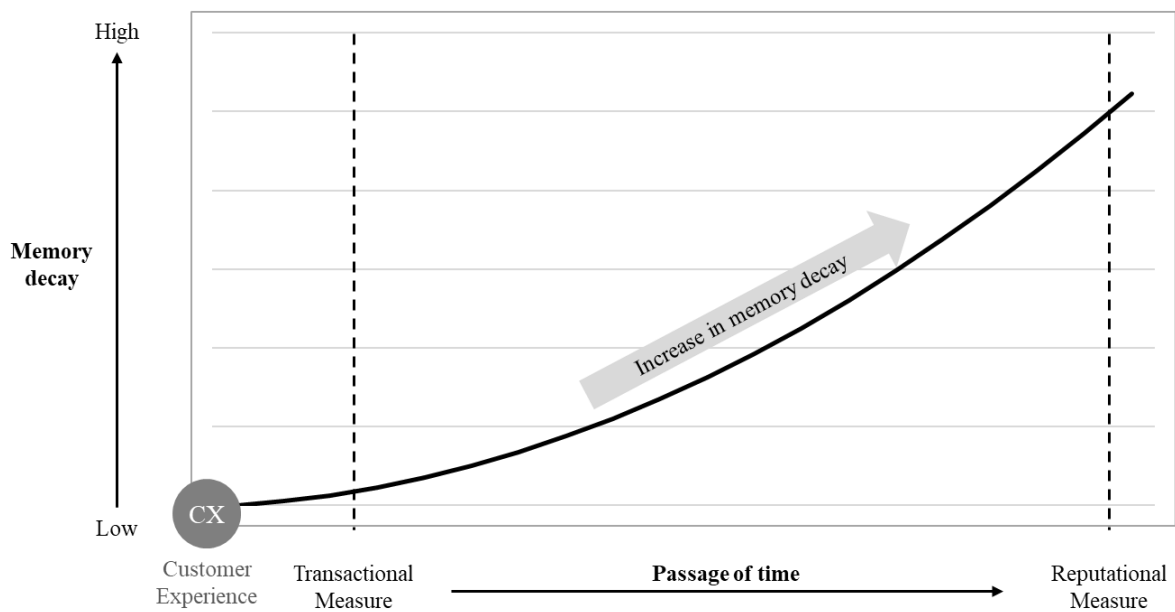
1991). The implications of these opposing perspectives and the challenges they create for customer satisfaction researchers are discussed in the following section.

## **2.6. Challenges and Shortcomings of Current Customer Satisfaction Research**

The following section summarises some of the shortcomings identified in the previous sections and some of the challenges faced when conducting customer satisfaction research. These challenges and proposed solutions will be addressed in the upcoming chapters.

### ***2.6.1 Customers' Perception Change Over Time***

Organisations that want to improve their customer satisfaction have to obtain feedback from their customers about their experiences. Quantitative feedback is obtained through the use of customer satisfaction surveys; organisations can employ either transactional or reputational type surveys to obtain customer feedback. Since there is always a time lapse between the consumption of a product or service and when customers evaluate their experience through a research survey, customers are expected to recall their experience to evaluate them. The longer the period of time between the experience and the recall of the experience, the more customers have to rely on their memories when evaluating an interaction. While both transactional and reputational surveys are conducted post-interaction, the time interval between the customer's product/service experience and reputational measures is much longer than the time interval between the customer experience and transactional measures; therefore the customer's memory of an experience plays a more prominent role when conducting reputational surveys (Figure 2.13).

**Figure 2.13***Memory Decay Increases with the Passage of Time*

O'Neill and Palmer (2004) stated that typically customer feedback on their experience takes place at a single point on the customer journey, ignoring evidence that customers' perception might change over time. Loftus et al. (1978) indicated that the amount of time that passes between an event and the recall of the event has a significant effect on the rates of misremembering. Porter et al. (2010) who conducted research on the vulnerability of memory and how participants deal with misinformation, found that the passage of time impairs the recollection of experiences. They found a general decay in memory and that the accuracy of recall decreases over time. Another aspect that needs to be taken into account is the concept of *perceptual distortion* over time that refers to the occurrence that customers tend to promote or forget certain aspects of a service encounter selectively as time passes (Koenig-Lewis & Palmer, 2008).

The time delay between a customer's experience and when a research survey is conducted, and the associated dependence on memory to recall the experience, emphasise the

challenge faced by mainstream researchers and organisations that want to collect customer feedback using transactional or reputational methods. If the ability of customers to recall information accurately decreases over time, and they selectively forget certain aspects of their service interaction, reputational surveys are impacted to a greater extent compared to transactional surveys and this may impact research results significantly.

To investigate how recalling an experience at different times affects customers' likelihood to recommend a product or service, Koenig-Lewis and Palmer (2008) conducted research with students at two time intervals: directly after their graduation ceremony (transactional) and six months after the graduation ceremony (reputational) to investigate how the time difference and recalling the experience affected their likelihood to recommend the university. They hypothesised that there is a difference between customer feedback measures that happen directly after the event compared to measures taken long after the event (i.e. closer to the next service interaction) and their effect on customers' likelihood to recommend. Three outcomes of their research is relevant to the current study: firstly, satisfaction measures taken after six months (i.e. reputational surveys that are closer to the next purchase engagement) are better predictors of future behavioural intention (recommendation) than measures taken directly after the service encounter (transactional surveys); secondly, the level of emotions evoked has changed over time and the originally evoked emotions are no longer adequate to explain their current behavioural intention. Thirdly, emotional measures are more stable over time than cognitive measures of the experience and are better predictors of future behavioural intention (recommendations).

The predicament faced by researchers and organisations that have to employ a transactional or reputational survey to measure customers' experiences goes beyond customers' ability to recall their experiences. It is a methodological consideration since the focus and objectives of transactional surveys differ from those of reputational surveys.

Proponents of transactional surveys state that perceptions of service quality that impacts satisfaction and thus intended behaviour is a function of the level of service obtained during the *most recent service encounter* (Boulding et al., 1993) that is measured using transactional surveys. Proponents of reputational surveys state that customer satisfaction is a reflection of a customer's *total experience* in the consumption of a product or service, and that it is an overall evaluation built up over time (Anderson et al., 1994) that is typically measured using reputational surveys.

Kahneman (2011) refers to this as the difference between the “experiencing-self” and the “remembering-self”. The experiencing-self is the “me” that lives in the moment and knows and experiences the present. The remembering-self is the “me” that keeps track of the story of my life and collates all my lessons and experiences into a sensible whole. The experiencing-self can only access the present and is exclusively focused on living day-by-day, in the moment. Conversely, the remembering-self has no interest in the present and makes all its decisions based on what it remembers from the past. The distinction between the experiencing-self (measured using transactional surveys) and the remembering-self (measured using reputational surveys) is significant. When a customer makes a purchase decision and bases this decision on the memory of past experiences (remembering-self), it is inconsequential what actually happened during those interactions (experiencing-self). Whatever the customer remembers about those experiences is what is true for the customer (whether it happened that way or not) and will guide their future behaviour. (The experiencing-self and remembering-self and their impact on a customer's decision making is discussed in Chapter 5.

Various authors indicated that cognitive and affective measures of performance transform at different rates with the passage of time (Mazursky & Geva, 1989; Verhoef et al., 2002). White (2010) proposes that “more research is necessary to understand the impact of

emotions over time on specific dimensions of service quality and behavioural intentions, as this may show interactions that are not apparent with overall measures” (p. 391).

“Longitudinal studies that focus on actual customer behaviour, as well as intentions, are needed to progress knowledge in this area” (White, 2010, p. 392).

Koenig-Lewis and Palmer (2014) indicated that customers experience emotions before and during consumption; these emotions may subsist in their memory long after the experience. They indicated that the role of timing in the assessment of customer experiences has received little attention in consumer consumption literature and that more research is needed to understand this phenomenon.

### ***2.6.2 The Role of Cognition and Emotion in Customer Satisfaction Evaluation***

Since antiquity, philosophers and psychologists have debated the role of reason and emotion and often viewed the two aspects of the human psyche as antagonistic to each other. Epictetus, a Greek Stoic philosopher born in 50 AD viewed emotion as an obstacle to reason and stated that “passions make it impossible for us to even listen to reason” (Oldfather, 1928 p. 23). Similarly, Kahlil Gibran (1923) wrote, “Your soul is oftentimes a battlefield, upon which your reason and your judgment wage war against your passion and your appetite” (p. 59). In today’s day and age people often refer colloquially to “following your heart or gut (emotion) instead of your head (reason)”.

While human decision making has always been influenced by these two components of one’s psyche; one’s cognitive, rational mind and one’s emotions, feelings and passions, it is the latter that remain more mysterious. Hence, the majority of consumer satisfaction research in the past primarily focused on the consumer as a *rational processor of information* and predominantly focused on the cognitive nature of one’s decision making and the cognitive aspects of satisfaction, while the impact of emotions remained relatively unexplored. This ontological perspective is reflected in the way that consumer experiences are measured.



McFadden (1986) indicated that customer satisfaction research uses measurement instruments that exclusively focus on items that record customers' cognitive evaluations and disregard the emotions evoked during the service process.

Lately however, this assumed rationality as the driving force of customers' decisions has been challenged by numerous authors. Hands (2010) indicated that consumers' evaluation processes are too complex to be modelled by observable, rational indicators alone. Supporting this notion, several authors have indicated that cognitive models on their own perform very poorly in predicting customers' behavioural intentions (Brady & Cronin Jr, 2001; Phillips & Baumgartner, 2002; Ladhari, 2007; Bigné et al., 2008). While some of this poor predictability may be explained by situational factors (customers no longer need a product or service, or products and services become too expensive and therefore customers discontinue their usage) it is believed that the majority of this poor predictability is due to the fact that cognitive measures on their own completely ignore the complexity of human emotions and their effect on consumers' purchasing behaviour. Palmer and Koenig-Lewis (2011) indicated that there is a growing need explicitly to incorporate measures of emotion in predictive models of satisfaction.

Previous research in the field of customer satisfaction suggests that there is complex interplay between cognition and emotion and that the evaluation of consumption experiences is partly cognitive and partly emotional (Westbrook, 1987; Mano & Oliver, 1993; Smith & Bolton, 2002). Oliver (1993) suggested that while service quality can be measured by simply using a cognitive evaluation of the service, satisfaction is based on both cognitive and affective dimensions. Several other authors agree with the statement made by Oliver, that satisfaction includes both cognitive (evaluative) and emotional dimensions (Cronin Jr et al., 2000; Ladhari et al., 2008) and that a purely cognitive approach may be inadequate to explain and manage customer satisfaction. Satisfaction is therefore a combination of evaluative and

emotion-based responses to a service encounter and consequently both valuable and necessary to separate cognitive and emotional antecedents when modelling consumer behaviour. It is therefore imperative that emotional variables be included in satisfaction research (Liljander & Strandvik, 1997; Wirtz & Bateson, 1999).

Numerous organisations refer to having *happy* customers or focusing on *delighting* customers. These anecdotal references and initiatives like the World Happiness Index that rate countries on how happy their citizens are, imply the existence of an affective component in customer satisfaction. While a large number of authors agree that both cognition and emotion have an influence on how one experiences and evaluates one's interactions, it is still debatable exactly how these two constructs interact and influence each other in terms of one's final satisfaction judgement of an experience. This has subsequently led to diverse views about the process and sequence of events leading to the final evaluation of one's experiences.

Currently there are two dominant views on how this interaction occurs. The one view relates to the difference between intuition and reason while the other focuses on automatic versus deliberative decision-making. These views, although not mutually exclusive, are discussed separately in the following section.

### **Intuition versus reason**

Oliver (2010) suggested that emotions are evoked in conjunction with various cognitive evaluations in producing satisfaction. This view corresponds with Kahneman's System 1 and System 2 thinking that proposes two modes of cognitive functioning: intuition and reason. According to Kahneman (2003, 2011), System 1 thinking is intuitive and thoughts happen quickly and automatically without any mental effort, while System 2 can be described as *deliberate reasoning* that is more intense and takes more time and effort. Bagozzi (2006) agrees on this viewpoint and also proposes two modes of information processing, the one being automatic and preconscious while the other is more deliberative and reflective in

nature. Bagozzi proposes that the cognitive appraisal of a situation can lead to two outcomes: emotions that are experienced automatically, quickly and effortlessly (System 1), and deliberative in-depth cognitive evaluations that require significantly more time and effort (System 2).

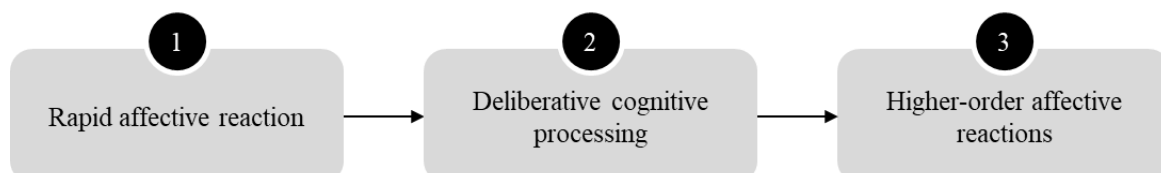
### **Automatic versus deliberative**

In line with the views of Kahneman (2003) and Bagozzi (2006), Berkowitz (1993) proposes a three-step process that occurs on exposure to any stimulus (Figure 2.14):

- Firstly, one reacts automatically and these pre-attentive processes happen before appraisals, attributions and interpretations. This refers to the typical fight or flight response that is based on a rapid assessment of the affective significance of the stimuli.
- Secondly, one enters a more deliberative, higher-order cognitive processing phase that either strengthens or weakens the action tendencies arising from the lower-order affective reactions.
- Thirdly, the affective significance of the cognitive evaluation may lead to higher-order affective reactions and emotions. These occur considerably more slowly than the lower-order affective reactions since they are reliant on the deliberate cognitive evaluation process that precedes it.

**Figure 2.14**

*Sequential Processing when Exposed to a Stimulus*



The view that basic emotional reactions can happen independently of cognitive evaluation is supported by Epstein (1993), Leventhal (1984, 1993) and Zajonc (1980). The three-stage process (low-road affective reaction, high-road cognitive processes and high-road affective reactions) is supported by work done in the field of neuropsychology (LeDoux, 1987, 1995, 1996, Lang, 1993).

Service environments in particular are prone to eliciting emotions as a result of the interactions between customers and service staff. Numerous authors conducting research in service environments have subsequently begun to include emotional measures in their customer satisfaction models and there is mounting evidence that affective measures of satisfaction may be better predictors of customer future behavioural intentions than cognitive measures (Zeelenberg & Pieters, 2004; White & Yu, 2005; Koenig-Lewis & Palmer, 2008). It is also likely that cognitive measures of satisfaction may be more easily distorted over time than affective measures. In this regard Allen (1992) suggest that since emotions are more deeply seated, emotional measures of satisfaction may be more stable over time than cognitive measures and ultimately provide a truer reflection of customer satisfaction.

It is, therefore, imperative to include both cognitive and affective measures when investigating customer satisfaction (Bigné et al., 2005). While cognition plays an important role in customer satisfaction, the totality of a customer's experience cannot be completely understood without including an affective component in customer satisfaction measurements. Affective influences on customer experience are regarded as partly outside of the customer's conscious control. Therefore, cognitive and affective responses can be viewed as distinct, and having a separate influence on satisfaction formation (Oliver, 1989).

While there has been an increase in the number of studies that includes an affective component when measuring customer satisfaction, several authors have identified the need for customer research to go beyond focusing on the cognitive component only and to provide

empirical evidence of the role that emotions play in the formation of satisfaction judgement (Dubé-Rioux, 1989; Westbrook, 1987). There is also a need for further exploring the effects of emotions on different aspects of the service experience (Hume & Sullivan-Mort, 2010; White, 2010). Liljander and Bergenwall (2002) indicated that there is a lack of research that investigates the linkage between emotions and post-consumption variables like satisfaction and future behavioural intentions (repurchase and word-of-mouth recommendations).

The following chapter explores the role of emotions in customer satisfaction and loyalty and the various ways in which emotions can be included as a construct in customer satisfaction research.

### ***2.6.3 Relevance to the current study***

The current chapter firstly investigated the various aspects related to customer satisfaction and its measurement and the importance of improving customer satisfaction for the long-term sustainability for organisations. The distinction between transaction-specific satisfaction and cumulative satisfaction is of particular interest to the current study since it alludes to the difference in the two methods of data collection used (i.e. transactional methods collecting data of a specific interaction and reputational methods that measures the cumulative satisfaction of customers). These differences will be discussed in detail in the methodology chapter. This was followed by investigating the link between customer satisfaction and loyalty with specific reference to word-of-mouth recommendations as a loyalty construct. Customer satisfaction and word-of-mouth recommendations are the two dependent variables used during analysis.

### **Chapter 3: Emotions, Emotional Theory and Their Relevance to Consumer Satisfaction and Loyalty**

Most people agree that events prompt emotions that provide significance and purpose to our lives. Russell (2003) indicated that our lives are not characterised by long episodes of non-emotional “normal” life but by continuous fluctuations in core affect. Emotions therefore permeate all aspects of our daily existence. Morrison and Crane (2007) indicate that most theorists agree that emotions exist, that they alter how people perceive their environment and that they play a significant role in motivating and driving our behaviour. Emotions determine an individual’s relationship with the environment by establishing, maintaining or disrupting it and they influence our actions considerably (Mattsson et al., 2004).

This is not only true for individuals in their daily personal lives but also for customers interacting with organisations. Customers appraise every interaction they have with an organisation in terms of how satisfied they are with the experience. The emotions experienced during the interaction play a significant role in the final evaluation. Customers strive to experience positive emotions and avoid negative ones. While positive emotions increase customers’ willingness to maintain a relationship with service providers, negative emotions increase their desire to leave an organisation and find alternative companies that can provide them with the necessary products and services (Eroglu & Machleit, 1990; Chebat & Michon, 2003).

It is therefore important for organisations to understand how customers’ emotions impact the evaluation of their experiences. This insight enables organisations to craft emotional experiences that will ultimately improve customer satisfaction and consequently improve their loyalty to the organisation.

The following section focuses on various aspects related to how emotions impact customer satisfaction and loyalty.

Firstly, the role of emotions on customer satisfaction is discussed with specific focus on the following:

- The effect of Confirmation or Disconfirmation of expectations on emotions.
- Satisfaction or Dissatisfaction in contrast to Positive or Negative emotions.
- The link between emotion and satisfaction in service industries.

Secondly, the influence of emotions on customer loyalty and behavioural intention is discussed with specific reference to word-of-mouth recommendations.

Thirdly, the researcher discusses emotions and the measurement of emotions focusing on the following:

- Defining emotions and differentiating between affect, emotions, feelings, moods, attitudes and sentiment.
- Discussing the most prominent theories of emotions culminating in the current view held by appraisal theorists and its relevance to the current research.
- The measurement of emotions, differentiating between the measurement of basic and complex emotions and focusing on the two main components of emotional measurement, namely emotional intensity and emotional valence.
- Consumer consumption emotions and their measurement, highlighting some of the limitations and challenges when measuring consumer consumption emotions and how these are addressed in the current research.

The final section focuses on the relevance of emotions and their measurement.

### **3.1 Emotions and Their Impact on Customer Satisfaction**

Customer satisfaction is an important concept due to the influence it has on customer retention and loyalty (Maxham & Netemeyer, 2002; Karatepe, 2006) and on the commercial and financial outcome of organisations (Shapiro & Nieman-Gonder, 2006). Therefore,

organisations need to understand the antecedents of customer satisfaction and develop strategies to improve customers' experiences to obtain the advantages associated with having more satisfied customers.

Customer satisfaction has been extensively researched to better understand the drivers of customer satisfaction and their influence on customers' future behavioural intentions. Conventional methods of collecting data about customers' experiences and measuring customer satisfaction focus on customer satisfaction as a "cognitive state viewing the consumer as a rational elaborator of information" (Legrenzi & Troilo 2005, p. 2) and predominantly use quantitative techniques to measure customer satisfaction. Liljander and Bergenwall (2002) indicate that there is a lack of research on the linkage between emotions and post-consumption variables, such as satisfaction and future behaviour intentions.

However, recently many authors have recognised the role of emotions in the measurement of customer satisfaction. Bigné and Andreu (2004) are of the opinion that emotions form a central and integral part of customer satisfaction. They state that "the service experience influences the generation of consumer emotions, and these in turn affect consumer satisfaction and behavioural intentions" (Bigné & Andreu, 2004, p. 683). Brady and Cronin Jr (2001) indicate that cognitive measures of service quality and relationship strength are poor predictors of future behaviour. Bigné et al., (2005) indicate that both cognitive and affective components of satisfaction should be included in customer satisfaction modelling. In this regard, Liljander and Strandvik (1997) point out that while there are gaps in our understanding of the cognitive part of post-purchase evaluations, there are even wider gaps in our knowledge of the role of the affective components of satisfaction evaluations. While there are still uncertainties about the exact relationship between emotions and satisfaction, it is now widely accepted that emotions form a core component of the customer satisfaction construct (Oliver & Westbrook, 1993; Stauss & Neuhaus, 1997; Barsky & Nash, 2002). Satisfaction



therefore contains an affective dimension without which customers' responses cannot be fully accounted for.

In addition to the impact emotions have on customer satisfaction, they have been found to play a significant role in establishing and maintaining relationships with service providers (Bagozzi et al., 1999; Witkowski & Thibodeau, 1999), influencing and predicting company loyalty (Yu & Dean, 2001; Barsky & Nash, 2002; Cronin Jr et al., 2000) and future behavioural intentions, such as word-of-mouth recommendations (Oliver, 1997; Morris et al., 2002; Westbrook, 1987; Nyer, 1997).

Bigné et al., (2005) indicated that specifically in service industries there is a lack of research that investigates how emotions affect customer satisfaction and behavioural intention. Service environments are prone to elicit more emotions than the purchasing of a product since customers interact with the service staff and the service environment around them. It is therefore important to understand the impact of customers' affective responses during service consumption experiences (Szymanski & Henard, 2001; Wirtz et al., 2000; Zins, 2002).

In this regard Palmer and Koenig-Lewis (2011) indicate that methods used to measure customer satisfaction have focused on the cognitive and causal or functional dimensions of service quality and have given little attention to the emotional or affective dimension. They state that "there has been growing recognition of the need to more explicitly incorporate measures of emotions in predictive models of satisfaction" to better understand the role of emotions in consumer decision-making and customer loyalty (Palmer & Koenig-Lewis, 2011, p. 169). Liljander and Strandvik (1997) also underscore the fact that "while the comparison processes in disconfirmation judgements require deliberate processing of information, the affective processes are thought to be partly outside the customers' conscious control" (p.

148). Therefore, cognitive and affective processes are discreet and influence satisfaction separately and independently.

Research findings to determine the role of emotions in terms of customer satisfaction are diverse in nature. Phillips and Baumgartner (2002) found that both positive and negative emotions influence satisfaction when the effects of confirmation, expectations and performance are controlled. Conversely, Smith and Bolton (2002) who studied emotions in the context of service failures found that emotional responses influenced satisfaction only in certain circumstances and that the effects varied across different industries.

The findings of previous studies in the field of emotions and satisfaction have revealed three important considerations when evaluating the impact of emotions on satisfaction:

Firstly, the effect of customers' expectations (confirmation or disconfirmation) of satisfaction. Secondly, regarding the similarities and differences between satisfaction or dissatisfaction and other positive or negative emotions. Thirdly, the unique way in which emotions influence customers during service consumption experiences. These aspects are discussed in the following section.

### ***3.1.1 Confirmation-Disconfirmation and Customer Emotions***

Customer satisfaction with experience in the expectancy-disconfirmation paradigm is predominantly a cognitive process where customers form expectations about an upcoming experience (whether product or service consumption) and compare the product or service performance to the predefined expectations. However, emotions evoked during the consumption experience have an important influence on customer satisfaction.

Phillips and Baumgartner (2002) point out that there are two schools of thought in terms of the influence of customer expectations on their emotional experience. The first school of thought claims that consumption emotions are a direct result of the consumption experience;

if customers perceive the performance of a product or the service to be good, they experience positive emotions; if they perceive the performance to be bad, they exude negative emotions (Westbrook, 1987). The second school of thought states that disconfirmation plays a role in the formation of consumption emotions, i.e. emotions generated during the consumption experience are not affected by the performance alone but also by the expectations that customers have.

Phillips and Baumgartner (2002) state that “the distinction between the two possibilities of how consumption emotions arise is a critical one” (p. 245). On the one hand, if consumption emotions rely on the performance of the product or service only, good or bad products or services lead to positive or negative emotional experiences. Alternatively, if consumption emotions are a result of disconfirmation, the emotions experienced by customers depend on whether the performance of products and service are better or worse than what customers expect. Therefore, even if the product or service performance is sub-standard, customers can experience positive emotions if they had very low expectations to start off with. Conversely, if customers had unrealistic expectations at the outset, they may experience negative emotions even if the performance of products or services is exceptional. Table 3.1 below provides an example of how the interplay between customer expectations and product or service performance can elicit different emotions using the following formula: Expectations x Performance = Satisfaction emotion.

**Table 3.1***The Combined Effect of Expectations and Performance on Satisfaction Emotions*

| <b>Expectations</b>      | <b>Performance</b> | <b>Satisfaction Emotion</b> |
|--------------------------|--------------------|-----------------------------|
| Low Expectations         | Low Performance    | Happy                       |
| Low Expectations         | High Performance   | Delighted                   |
| High Expectations        | High Performance   | Happy                       |
| High Expectations        | Low Performance    | Very unhappy                |
| Unrealistic Expectations | High Performance   | Unhappy                     |

Customer expectations have a compounding effect on the emotions that customers experience. The performance of the product or service produces a baseline emotional response that is then magnified or minimised by the specific expectation that the customer had. In this regard, Phillips and Baumgartner (2002) found that the actual performance of the product or service has a more profound impact on customer emotions than the confirmation-disconfirmation of expectations. They underscore the fact that “a more differentiated consideration of particular kinds of discrete emotions may show that some are more strongly related to performance while others are more strongly related to disconfirmation” (Phillips & Baumgartner, 2002, p. 251). They also state that the emotions experienced by customers may be different in varying contexts and circumstances. There may be contexts in which emotions experienced by customers are primarily a function of performance and in other contexts or environments emotions may primarily be influenced by disconfirmation. It is therefore important to understand how the influence of expectations and performance on customers’ emotions differs in varying circumstances.

### ***3.1.2 Satisfaction or Dissatisfaction and Positive or Negative Emotions***

Bagozzi et al., (1999) indicate that the study of emotions and their impact on purchase satisfaction is an important development in the field of consumer behaviour and satisfaction research. However, they indicate that it is not clear whether satisfaction or dissatisfaction is phenomenologically distinct from other positive or negative emotions. According to leading theories on emotion (Smith & Ellsworth, 1985; Lazarus, 1991; Roseman, 1991; Oatley, 1992), satisfaction is neither a basic emotion nor a central emotional category. However, it was found that satisfaction shares common variance with other positive emotions like joy, elation, happiness and delight (Shaver et al., 1987). Koelemeijer et al. (1995) also indicate that emotions, satisfaction and service quality are perceived to be different constructs.

Previous research conducted by Oliver (1999) found that positive emotions – pleasant surprise, interest and joy – and negative emotions – hostility, anger, disgust, contempt, shame, guilt, fear and sadness – influence satisfaction during consumption experiences. However, it is assumed that the emotions that cause satisfaction may be completely different from the emotions that cause dissatisfaction. Bagozzi et al., (1999) indicate that there is a need for further research in this area to test the construct validity of measures of satisfaction, joy and other positive emotions.

### ***3.1.3 Emotions and Satisfaction in Services Industries***

For organisations in the service sectors, achieving high levels of customer satisfaction is potentially more difficult than for companies that manufacture and distribute products. Firstly, customers' expectations of the service they require are usually very personal and unique to their current circumstances and are therefore constantly changing. This makes it difficult to have specific guidelines and standard operating procedures in place that guarantee that customers experience positive emotions. Secondly, the service delivery process is complicated because of the simultaneous production and consumption of the experience. The

continuous interplay and collaboration between staff and customers co-create the final outcome and customers therefore influence the final experience and the associated emotions they experience. Thirdly, service situations and circumstances are very unique because of the extensive human involvement in the distribution and consumption of services. These requirements create a myriad of unique and distinctive customer-staff interactions during the service delivery process and are difficult to standardise because of the large number of potential emotions that can be evoked. It is therefore difficult for organisations to have a one-size-fits-all approach to ensure that customers are satisfied with the experience. The above-mentioned factors reduce the control that service organisations have over the customer-staff-interaction; managing these interactions to the satisfaction of customers becomes difficult and unpredictable.

One aspect that has not been extensively researched is how emotional experiences differ in different types of service encounter. It is assumed that the quantity and intensity of emotional responses are directly related to the type of service encounter between customers and the organisation. For example, one might expect someone who engages with their banker to experience far fewer emotions than someone who attends a Broadway theatre show. Price et al., (1995) point out that one may expect service encounters that last longer or encounters that take place in intimate proxemic spaces to yield higher levels of emotional responses. They suggest that for many types of service encounter there may be low levels of either positive or negative emotions.

An interesting finding by Westbrook and Oliver (1991) is that in the service environment there is a difference between failing to elicit negative emotions versus producing positive emotions. Interactions may not cause consumers to experience any negative emotions but they will also not experience any positive emotions like joy, pleasure and elation. Price et al., (1995), suggested that “by looking at those service encounters that do generate positive

emotions, we may get improved insight into how to move service encounters from merely ‘not dissatisfying’ to pleasurable consumer experiences” (p. 35).

Bailey et al., (2001) developed the Service Encounter Emotional Value instrument (SEEVal) that defines the “net emotional value” as the emotional benefits minus the emotional cost. Emotional benefits are associated with positive emotional experiences, and meeting the emotional needs and emotional expectations of customers. Emotional costs are associated with negative emotions: emotional labour exerted, unmet emotional needs and unmet emotion-related expectations of service experiences.

### ***3.1.4 The Need for Additional Research***

Numerous studies have found a strong correlation between customer satisfaction and loyalty. In contrast, Brady and Cronin Jr (2001) found that customers’ reported level of satisfaction is a poor predictor of their long-term loyalty and referral behaviour. Palmer and Koenig-Lewis (2010) hypothesise that one aspect that contributes to this poor predictability is the lack of including affective components when measuring customer satisfaction. They further underscore the fact that “while some models of satisfaction have evolved to incorporate affective components, emotions have remained relatively unexplored as a link between measures of satisfaction and future behaviour/referral” (Palmer & Koenig-Lewis, 2010, p. 1202).

It is therefore important to investigate the role of emotions in different service settings, how positive and negative emotions influence customers’ perception of their experiences and how emotions affect customers’ behavioural intentions (repurchase and increased purchases) and customers’ loyalty (retention and word-of-mouth recommendations).

While many researches in the past two decades investigated the role of emotions in customer satisfaction, the need for further research to understand how emotions affect different aspects of the service offer has been recognised by several authors (Hume &

Sullivan, 2010; White, 2010). Bigné et al., (2005) indicate that although emotions are recognised as an important contributor to post-purchase behaviour, there are no conclusive findings regarding this relationship.

### **3.2 The Link Between Emotions and Customer Loyalty**

The following section outlines the impact of customer emotions on customer loyalty with specific focus on customers' behavioural intentions and customers' word-of-mouth recommendations as a loyalty construct.

#### ***3.2.1 Emotions and Behavioural Intentions***

While customer satisfaction forms an important part of the customer-company interaction, the secret to the success of service organisations, such as the hospitality, travel, insurance and financial sectors is the loyalty of customers (Pullman & Gross, 2004). Increasing the percentage of customers that return to an organisation has a significant effect on the profitability and overall value of the organisation (Holbrook, 1994; Heskett et al., 1997). Clark and Isen (1982) indicated that customers want to experience positive emotions and avoid negative ones. Therefore, negative emotions increase customers' desire to leave the organisation and not return (Eroglu & Machleit, 1990; Chebat & Michon, 2003). However, Pullman and Gross (2004) state that "when companies succeed in not only satisfying certain needs but also making the interactions pleasurable, people are more inclined to stay loyal" (p. 557-558). It can therefore be inferred that a correlation exists between customers' emotional experiences and their loyalty to an organisation. When customers experience positive emotions one can expect that they will strive to repeat the service experience that caused the positive emotions and become loyal to the service provider. Conversely, if they experience negative emotions they will want to avoid similar experiences in future and subsequently find



alternative suppliers to deliver the service and satisfy their needs. Table 3.2 summarises this finding.

**Table 3.2**

*Correlation Between Emotions, Behavioural Intent and Loyalty*

| <b>Emotions Experienced</b> | <b>Customer Actions</b>   | <b>Loyalty</b>               |
|-----------------------------|---------------------------|------------------------------|
| Positive                    | Repeat experience         | Remain with the company      |
| Negative                    | Avoid similar experiences | Find an alternative supplier |

Bloemer and De Ruyter (1999) investigated high-involvement service settings where customers spend considerable time in contact with the service provider and the service environment. They view emotions experienced during the service delivery process as a factor that is independent of the affective elements comprising the satisfaction formation process. They found that interpersonal relationships play a pivotal role in these service settings compared to tangible product environments. Snyder (1986) indicated that customer loyalty is more prevalent and more important among service organisations than organisations that supply only tangible products. Bloemer and De Ruyter (1999) found that in high involvement service situations, the relationship between satisfaction and loyalty is moderated by positive emotions. Customers therefore become more loyal when the service experience elicits positive emotions.

In this regard Mattila (2001) indicated that “emotionally bonded customers tend to invest more in their relationships than do customers lacking affective commitment” (p. 75). Various authors suggest that customers’ emotional bonding is a better predictor of future behavioural intention (repurchase and word-of-mouth) than the cognitive components of quality and satisfaction measures (Arnould & Price, 1993; Price et al., 1995). O’Shaughnessy and O’Shaughnessy (2003) stated that emotional displays may reflect one’s “true self” since one gets emotional about the things that have a significant impact on one’s life.

The majority of service providers fail to elicit any strong positive or negative emotions while servicing customers; often service providers are blasé, leaving customers indifferent to the organisation. Strong positive emotions are elicited only when interactions are exceptional, exceed the expectations of customers, have a positive impact on their lives and touch them on a deeper psychological level. Conversely, strong negative emotions occur only when the service experience is extremely disappointing and has a lasting negative effect on the future well-being of an individual. Organisations that want to retain their customers should ensure that the service experience elicits positive emotions and circumvent any negative emotions.

### ***3.2.2 Emotions and Word-of-Mouth Recommendations***

Referrals or word-of-mouth recommendations are a valuable form of marketing for any business. Research has proven that many companies obtain new customers through the referrals of existing customers (Bergholz & Nickols, 2001; Silverman 2001; Boles et al., 1997). Consumers seek referrals from friends and family because they consider them to be trustworthy sources of information (Misner 1994; Cates, 2004). A formal definition of word-of-mouth is suggested by Buttle (1998): “Commercially oriented, positive or negative, personal communication that is initiated by a sender who a receiver perceives as being independent of corporate influence” (p. 243).

Word-of-mouth recommendations as a loyalty construct consist of person-to-person communication between a customer of an organisation and other people, usually friends, family and colleagues. Positive or negative word-of-mouth is directly related to how satisfied customers are with the experiences that they have with an organisation. Affective elements of satisfaction are important for evoking word-of-mouth communications (Ladhari, 2007; Nyer, 1997). Emotions do not affect only word-of-mouth but customers’ loyalty behaviour in general (Bigné et al., 2008; Jaiswal & Niraj, 2011) and customer complaint behaviour (Soscia, 2007). Research conducted in the consumer marketing domain identified various

factors that influence customers' willingness to recommend; the two most important factors are satisfaction with the service and affective commitment to the service provider (Brady & Robertson, 2001; Harrison-Walker, 2001; Bloemer & Odekerken-Schröder, 2002; Verhoef et al., 2002). Satisfaction refers to a customer's acknowledgment of effective and exceptional services received, while affective commitment relates to a customer's positive feelings of affiliation and commitment that create a psychological attachment to the service provider.

Generally affective commitment is driven by the experience of positive emotions during engagements with the organisation that then elicits positive word-of-mouth recommendations. An important aspect of word-of-mouth is the valence associated with it, i.e. whether the valence is positive (endorsed or recommended) or negative (eschewed or complaining).

Current literature about the impact of positive and negative word-of-mouth contains conflicting research results. Some studies have found that negative word-of-mouth has a more significant impact on satisfaction than positive word-of-mouth (Herr et al., 1991; Yang & Mai, 2010). Conversely other studies have found a positive bias where the impact of positive word-of-mouth is more significant (Gershoff et al., 2003; Xue & Zhou, 2010; Sweeney et al., 2008). Some studies suggest that the impact of positive versus negative word-of-mouth cannot be universally applied and is driven by contextual factors (Ahluwalia, 2002; Zhang et al., 2010; Kim & Gupta, 2012). Anderson (1998) indicated that the valence of word-of-mouth can be positive or negative; negative word-of-mouth could involve complaining about the company and any related unpleasant experiences while positive word-of-mouth includes compliments and sharing of a pleasant experience.

Ladhari (2007) indicated that the effect of consumption emotions on word-of-mouth has been systematically investigated in only a small number of studies (Westbrook, 1987; Nyer, 1997; Derbaix & Vanhamme, 2003; Zeelenberg & Pieters, 2004; White & Yu, 2005).

Various other studies have also found a relationship between emotions and word-of-mouth recommendation. Table 3.3 summarises the most important findings in the literature related to the impact of emotions on word-of-mouth and recommendation behaviour.

**Table 3.3**

*Impact of Emotions on Word-of-Mouth*

| Year | Authors                | Findings  |
|------|------------------------|---|
| 1987 | Westbrook              | Positive and negative emotions influence the quantity of word-of-mouth instances.   |
| 1997 | Nyer                   | Emotional responses (joy, anger and sadness) contribute to positive and negative word-of-mouth intentions (separately from the predictive ability of satisfaction); affect variables explained 58% of the variance in positive word-of-mouth. |
| 1999 | Maute and Dube         | Customers that experienced emotions labelled as calm or tolerant were less likely to engage in negative word-of-mouth behaviour.  |
| 2001 | Yu and Dean            | Positive emotions significantly influenced word-of-mouth intentions but no such relationship existed with negative emotions.  |
| 2002 | Barsky and Nash        | Emotions like experiencing comfort, being relaxed, secure and sophisticated play a strong role in decision-making and loyalty behaviour among hotel segments.   |
| 2003 | Derbaix and Vanhamme   | Negative and positive emotions as well as surprise all correlate with the likelihood of talking to others.  |
| 2004 | Zeelenberg and Pieters | Correction between emotions like regret and disappointment to negative word-of-mouth.   |
| 2005 | White and Yu           | Strong positive relationship between positive emotions and positive word-of-mouth and a negative relationship between regret and positive word-of-mouth.  |
| 2006 | Yanamandram and White  | Dimensions of positive and negative emotions were both significantly associated with word-of-mouth intentions for respondents in good and bad moods.  |
| 2007 | Ladhari                | Support for a valence congruent relationship between emotions and customers' behavioural intentions.  |
| 2008 | De Matos and Rossi,    | Emotion-based measures can be stronger predictors of word-of-mouth compared to traditional cognitive measures   |
| 2012 | Berger and Milkman     | Experiences that evoke emotions that are high in intensity and arousal that evokes positive and negative emotions are more likely to be shared  |
| 2016 | Standing et al.        | Provides empirical evidence that emotional connectivity can increase word of mouth  |
| 2016 | Hofmann et al.         | Positive emotions displayed in social media marketing communication are a driver of customers' positive emotions and consequently of their word-of-mouth  |

|      |                   |   |
|------|-------------------|---|
| 2018 | Keiningham et al. | The most effective way to drive positive word-of-mouth is through affective commitment and positive emotions while the most effective way to minimize negative word-of-mouth is by minimizing negative emotions, and ensuring that customers are satisfied. |
| 2020 | Cantallops et al  | Providing memorable positive emotional experiences constitute a powerful review-generating factor and fosters positive e-word-of-mouth  |
| 2020 | Wijaya and Yulita | Positive emotional experience has a positive effect on electronic word of mouth   |

### 3.3 Defining Emotions

#### 3.3.1 Defining Affect, Emotions, Feelings, Moods, Attitudes and Sentiment

Emotions are difficult to define. Fehr and Russell (1984) indicate that “everyone knows what an emotion is, until asked to give a definition” (p. 464). Emotions are part of a wider group of psychological constructs that one often uses to describe human emotive experiences and behaviour. In psychology literature and even more so in everyday communication, terms like mood, feeling, emotion and attitude are used interchangeably. However, there are important differences between these concepts that are highlighted in the subsequent discussion.

#### **Affect**

The concept *affect* is considered an overall umbrella term that includes various psychological processes like emotion, mood, feeling and attitude. The word *affect* originated from the Latin words *affectus* meaning disposition and *afficere* that means to influence. The word *affect*, therefore, literally means a certain character, temperament or outlook that has a specific influence.

## Emotion

The concept *emotion* has been studied and defined by numerous authors, each focusing on specific components and specific interpretations of an emotion. The objective of the following discussion is to foreground some of the most prominent definitions of *emotion* to obtain a collective understanding of what an emotion is. Izard (1991) defined emotion as “a feeling that motivates, organises, and guides perception, thought, and action” (p. 14). Oatley and Jenkins (1996) proposed that an emotion is a mental state that causes bodily changes, facial and vocal expressions and usually leads to some type of action.

According to Desmet et al. (2003) an emotion is a “multifaceted phenomenon” that consists of behavioural reactions, expressive reactions, physiological reactions and subjective feelings. Aligned with this view, Bourne and Russo (1998) defined an emotion as a “subjective internal state that has biological, cognitive and social components” (p. 364).

Another view is that an emotion is a strong and uncontrollable feeling that is usually triggered by outside events (Haksever et al., 2000). De Rivera (1977) distinguishes between three main attributes of emotion:

- An emotion is a psychological state related to instinct.
- An emotion is a perception of value as a response to an incident.
- An emotion is a transformation that enhances one’s understanding of an incident or event.

This view corresponds with that of Lazarus (1991) who posits that an emotion serves as a coping mechanism with two main purposes. Firstly, an emotion attempts to preserve a deeply-held belief and value and secondly indicates a need for change. One of the most important characteristics of an emotion that distinguishes it from other affective expressions is that it is provoked by particular incentives and is directed at someone or something specific.

One of the most descriptive and well-received definitions is provided by Bagozzi et al., (1999, p. 194). Their definition is compartmentalised to display the most important constructs of an emotion. According to them an emotion:

- is a mental state of readiness that arises from cognitive appraisals of events or thoughts,
- has a phenomenological tone,
- is accompanied by physiological processes,
- is often expressed physically (facial expression, posture, and gesture),
- may result in specific actions to affirm or cope with the emotion depending on the meaning that it has for the person experiencing the emotion.

### **Feeling**

The concept *feeling* is often used interchangeably with emotion and in certain circumstances it can be very difficult to differentiate between the two. A feeling is often described as an *emotional state or reaction* while in other circumstances emotions are described as a *specific feeling* that one experiences. There are, however, important differences between the two constructs.

Firstly, an emotion differs from a feeling on a physiological level. An emotion originates in the subcortical region of the brain as opposed to a feeling that is exclusively generated in the neocortical region. According to LaBar and Cabeza (2006) an emotion originates in the amygdala, which is part of the limbic system and located in the temporal lobe of the brain. The amygdala receives all its input directly from the five senses where all the information converges. On the output side, the amygdala is connected to all the systems involved in emotional reactivity: blood pressure, breathing and the release of adrenalin that help in controlling our responses. An emotion is also generated in the neocortex (part of ventromedial prefrontal cortices), that is involved in higher-order brain functions, such as

sensory perception, conscious thought, generation of motor commands, reasoning and decision making and language (Bechara et al., 2000).

From the description it is clear that an emotion is essentially a physiological and neurological reaction to an outside stimulus observed through one's senses. A feeling, on the other hand, is exclusively generated in the neocortical regions of the brain. Unlike an emotion, which is associated with a bodily reaction activated through neurotransmitters and hormones released by the brain, a feeling is the conscious experience of an emotional reaction. On some basic level, a feeling can be seen as a manifestation of the brain; the brain perceives a specific emotion and the feeling is the meaning assigned to the emotion (LeDoux, 2012). While an emotion is a neuro-physiological reaction to an external or internal stimulus (physical), a feeling is a subjective self-perception of emotion (mental). A feeling is therefore a more cognitive and socially learnt sensation that is compared to previous experiences and is essentially personal and biographic (Shouse, 2005).

Secondly, on an experiential level, a feeling can be described as subtler and differentiated from an emotion such as feeling suspicious, feeling enthusiastic, feeling in awe compared to a basic raw emotion like fear, anger, sadness, joy and love. Accordingly, an emotion can manifest either consciously or subconsciously and can be felt only through an emotional experience. Although an emotion can manifest consciously or unconsciously, some emotions can remain unconscious for years and be discovered only through extensive psychotherapy. In contrast, a feeling is an exclusively conscious experience and is most often expressed as learnt behaviour.

### **Mood**

The concept *mood*, as is the case with feeling, is difficult to distinguish from an emotion and many people use the two concepts interchangeably. Gardner (1985) who conducted an extensive study on mood, states that within the context of consumer behaviour mood can



have a wide range of uses and meanings. Usually *mood* is used to describe a “phenomenological characteristic of a person’s subjectively perceived affective state” (Gardner, 1985, p. 282); someone may be in a cheerful or unpleasant mood. Mood is therefore an affective state or feeling state that is subjectively perceived by an individual.

Mood is distinguished from emotion in various ways. Clark and Isen (1982) indicated that an emotion is generally more intense, attention-getting and tied to a specific behaviour while a mood is more general in nature and cannot always be associated with a specific event. A mood usually lasts longer than an emotion – from a couple of hours up to a few days – and is less intense than an emotion. Frijda (1993) distinguished mood from an emotion, indicating that a mood is global and diffused and usually nonintentional (having more ambiguous causes) whereas an emotion is very intentional and usually has an object or referent (i.e. directed at something specific). In contrast with most emotions, a mood usually transcends contexts and does not always lead to specific actions.

### **Attitudes**

An *attitude* is also considered an instance of affective states and the same semantic differential items used to evaluate an emotion (e.g. pleasant-unpleasant, or interested-bored) are used to measure an attitude (Bagozzi et al., 1999). Some authors take a much narrower view of an attitude and define it as an evaluative judgement rather than an emotional state (Fishbein & Ajzen, 1975). Cohen and Areni (1991) use *affect* sparingly to refer only to “valenced feeling states” that include emotions and moods but not attitudes.

### **Sentiment**

The term *sentiment* is defined by Cattell (2006) as “an acquired and relatively permanent major neuropsychic disposition to react emotionally, cognitively, and conatively toward a certain object (or situation) in a certain stable fashion, with awareness of the object and the manner of reacting.” (p.16). Similarly, Murray and Morgan (1945) described sentiment as an

enduring disposition in a personality to respond with a positive or negative affect to a specific situation. Liu (2015) described sentiment as the underlying feeling attitude, evaluation, or emotion associated with an opinion. The Merriam-Webster dictionary defines sentiment as an attitude, thought or judgement prompted by a feeling (Merriam-Webster Online, 2020) while the Collins dictionary defines sentiment as an idea or feeling that someone expresses in words (Collins dictionary Online, 2020).

Therefore, sentiment refers to how a person expresses their feelings and emotions. According to Liu (2015) the two aspects that is important when investigating people's sentiment is firstly the sentiment the orientation (whether positive or negative) and secondly the intensity of the expression.

From a practical research perspective, it is important to understand how the different affective constructs are defined, which measures are used to collect information about them and how the data is analysed. The definition that is used affects the meaning that one assigns to these constructs and the way in which they are operationalised. In the literature some authors define a variable as an emotion, mood or attitude and then operationalise it very specifically and have different measures for each of the constructs. Other authors operationalise it more universally and use one single metric to measure several of these constructs.

Below is an example of how a person saying *I am sad* could have different meanings depending on whether it is viewed as an emotion, feeling, mood, attitude or sentiment.

- **Emotion:** The person could have had a recent emotional experience (someone close passing away) and is now experiencing the raw emotion of sadness.
- **Feeling:** The person could have heard about someone else going through a difficult time and feels sad for them. This is complex feeling driven by empathy for the other

person and is accentuated by how grateful the individual is for not going through the same experience.

- **Mood:** The person could also be in a sad mood, without knowing exactly what caused it. It could just be one of those days where one just wakes up feeling unhappy and teary.
- **Attitude:** Feeling sad can also be closely related to negative attitudes like people feeling they are not good enough, i.e. lacking the confidence to achieve something. In other circumstances people might interpret another person's sadness as an attitudinal problem since that person is not as positive and cheerful as others around them.
- **Sentiment:** Refers to the actual words a person uses to express how they feel and can provide additional meaning to the sentence as well as emphasise the intensity of the emotion or feeling. The person could have said that they are "extremely sad" or that they are feeling "miserable and depressed" which will emphasise the intensity of the sad feeling they are experiencing.

It is clear from the examples above that *affect*, *emotion*, *feeling*, *mood*, *attitude* and *sentiment* can be used interchangeably, especially in everyday usage. Using a standard dictionary to analyse the meaning of words reveals that each of these concepts is often used as synonyms for one another. Table 3.4 summarises the definition and synonyms of each of these constructs (Merriam-Webster Online, 2020).

**Table 3.4**

*Affective Constructs, Definitions and Synonyms*

| Construct | Definition   | Synonym                       |
|-----------|--|-------------------------------|
| Affect    | The conscious emotion that occurs in reaction to a thought or experience; also a set of observable manifestations of a subjectively experienced emotion. | Feeling                       |
| Emotion   | A conscious mental reaction subjectively experienced as a strong feeling usually directed toward a specific  | Feeling, Affection, Sentiment |

|           |  |                             |
|-----------|--|-----------------------------|
|           | object and typically accompanied by physiological and behavioural changes in the body.   |                             |
| Feeling   | An emotional state or reaction, any identifiable sensation, perception or thought; often unreasoned opinion or belief.   | Sentiment, Emotion          |
| Mood      | A conscious state of mind or predominant emotion, an emotional state of mind or feeling, a prevailing attitude.  | Feeling, Emotion, Attitude  |
| Attitude  | A mental position, feeling or emotion toward a fact or state; a bodily state of readiness to respond in a characteristic way to a stimulus.  | Opinion, Feeling, Mood      |
| Sentiment | An attitude, thought or judgment prompted by feeling; the emotional significance of a passage or expression as distinguished from its verbal context; an idea coloured by emotion. | Affection, Emotion, Feeling |

These constructs, their definitions and synonyms as presented in Table 4 illustrate the confusion when they are used in everyday language as indicated by the repetition of shared synonyms. In general terms most people do not always distinguish between the different meanings a word can have, depending on the affective construct it is defined as (Scherer, 2001). For example, when one says, *My sentiment exactly* they often mean *My feelings exactly*. Another example is the emotion of love. Love, as one of the basic emotions, could give rise to various amorous feelings like fondness, adoration, affection and joy but also negative feelings like grief, longing and jealousy. One can be described as generally being a loving person or mostly being in a loving and caring mood.

Another important aspect that differentiates an emotion from mood and attitude is in the way that an emotion arises. An emotion is said to have a specific referent, some type of encounter or incident that provides the impetus for the emotion. Bagozzi et al., (1999) indicated that “emotions arise in response to appraisals one makes of something of relevance to one’s well-being” (p. 185). Appraisal refers to an evaluative judgement or an interpretation of a specific incident or episode that happens to an individual and that has some type of personal meaning.

While a certain emotion is typically associated with a specific event it is important to note that it is not the event itself that causes the emotion but one's unique psychological appraisal that is evaluating the event that causes a specific emotion. Different people will experience different emotions (or no emotion at all) to exactly the same event. This is one of the findings in the current research. Some customers indicated that banking by nature is a non-emotional event and that they did not experience any emotions at all. Appraisal theorists that are discussed in detail in a following section fundamentally believe that the emotion experienced by a person is entirely dependent on the appraisal made by the individual when comparing an actual state with a desired state. Lazarus (1991) indicated that an individual appraises an event in terms of goal relevance and goal congruence, which gives rise to a specific emotion. Therefore, whether an experience is emotional or not depends on how it is appraised by the individual; these appraisals can occur consciously or unconsciously.

### ***3.3.2 Perspectives on the Study of Emotions***

A literature review indicates that in general terms there are two distinct schools of thought about the nature of emotions, namely the cognitive school and the physiological school.

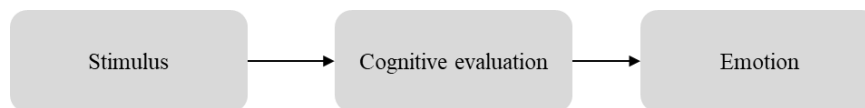
#### **Cognitive approach**

Researchers and theorists supporting the cognitive processing perspective argue that any emotion is the result of a cognitive evaluation of an event or stimulus. According to Lazarus (1984) this cognitive evaluation is steeped in the history and cognitive mind-set of the individual. Lazarus (1991) indicated that "appraisal of the significance of the person-environment relationship is both necessary and sufficient; without a personal appraisal (i.e. of harm or benefit) there will be no emotion; when such an appraisal is made, an emotion of some kind is inevitable" (p. 177). Cognitive appraisal theories are therefore based on the

notion that cognitive evaluation or appraisal is necessary for an emotion to occur (Figure 3.1). During the appraisal process, situations and stimuli are evaluated in terms of their significance and effect on the well-being of the individual. This approach is aligned with the confirmation-disconfirmation model of satisfaction discussed earlier. The event is appraised in relation to the expectation that one has of the experience, which then leads to a specific emotion.

**Figure 3.1**

*Cognitive Approach Sequence*



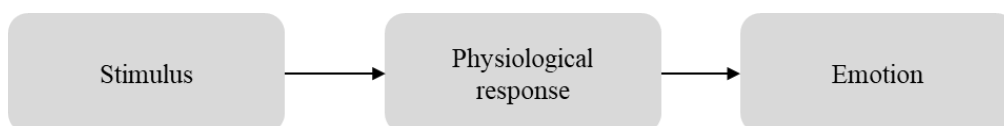
**Physiological approach**

In contrast, the physiological approach to emotions states that an emotion is purely a physiological response to an event or stimulus. Although this results in certain cognitions, the emotion itself is entirely separate from the cognitive process (Zajonc, 1980).

According to Schachter and Singer (1962), outside stimulus causes physiological arousal, which in turn is the catalyst for cognitive interpretation, but emotions are not mediated or influenced by cognitions or appraisals (Figure 3.2).

**Figure 3.2**

*Physiological Approach Sequence*



Support for this view is based on research indicating that merely the exposure to an object can create a liking for the object (Zajonc, 1968) and that emotions and cognitions are processed in different areas of the brain (LeDoux, 2003). According to the proponents of this theory, physiological arousal is the only precursor that is necessary for the generation of emotions. According to Zajonc and Markus (1984) the experience of a specific emotion is simply the cognition of having the emotion.

An important distinction between these two approaches and how they affect human behaviour and decision-making is related to the speed at which decision is processed. Shiv and Fedorikhin (1999) indicated that when emotion is involved, a decision is likely to occur automatically while by contrast, when cognition is involved, the decision is more controlled and deliberate. This view corresponds with the view of Kahneman (2011) who refers to it as System 1 and System 2 thinking. System 1 thinking is intuitive and happens automatically (emotion) while System 2 is deliberate reasoning or mental effort (cognition) and takes more time.

Whether emotions occur exclusively as a physical response to stimuli or whether conscious appraisal is a prerequisite for emotions will undoubtedly be debated for many years to come. On an overall level both arguments probably hold some degree of truth. What is important, is that most theorists and researchers agree that emotions are a part of everyday life, that we experience emotions as a result of our interaction with the environment and that emotions influence and motivate our behaviour.

### **3.4 Most Prominent Theories of Emotions**

Various contesting theories of emotion have been developed over the last decade. To better understand the various views of emotion, it is important to briefly discuss the most prominent theories developed in the past. These theories typically have contrasting views

about the “sequence of events” (i.e. causes and consequences of emotional arousal), the various components that constitute emotion and how each theory deals with some fundamental questions about emotion (Weiten, 1989).

The concept *emotion* was first used in the seventeenth century and translated from the French term *émotion*. Dixon (2012) indicated that it was not regarded as “a category of a mental state that might be systematically studied until the mid-nineteenth century” (p. 338). However, emotion as presently defined has been studied by classical philosophers like Plato, Aristotle, Spinoza and Descartes using alternative labels, such as passion, sentiment, affection, affect and appetite long before it was labelled emotions.

There is general consensus among most theorists that an emotion constitutes various components that represent an emotional episode. In the following section the metaphor of encountering a venomous snake is used to describe these components and the sequence of events that gives rise to the emotion of fear. The various components are the following:

- Evaluative component (assessing the snake to be dangerous).
- Physiological component (increase in heart rate and blood pressure, trembling).
- Phenomenological component (an unpleasant feeling).
- Expressive component (wide eyes, open mouth).
- Behavioural component (the urge to turn around and run away).
- Mental component (singular attention on the object).

The question faced by all emotion theorists is which of these components are essential to label something as an emotion. Printz (2004) referred to this as a “problem of parts” and theorists throughout history had dissimilar views about which components are essential for an emotion to be experienced. Scarantino (2016) indicated that in general terms most theories can be categorised into one of three groups:



1. **Feeling tradition:** Defines emotion as a conscious experience and emphasises the way an emotion makes one feel.
2. **Evaluative tradition:** Focuses on the evaluation of the circumstances or stimuli and one's interpretation of the world around one as the core element of an emotion.
3. **Motivational tradition:** Focuses on the motivational influence and the effect an emotion has on behaviour.

Throughout history emotion theorists have been faced with four theoretical challenges when defining and describing what constitutes an emotion. Most theories of emotion can be distinguished from one another in terms of how each addresses these questions:

- **Differentiation:** Does the theory allow for the differentiation between various emotions and other constructs that are not defined as emotions?
- **Intentionality:** Are emotions only possible when directed at a specific object?
- **Motivation:** Does an emotion always result in a specific behaviour, and if so, how does this happen?
- **Phenomenology:** Can an emotion be interpreted only from a first-person point of view, being a subjective and idiosyncratic experience?

The following section highlights the most prominent theories on emotion. The theories are ordered chronologically to provide an understanding of how the views on emotion evolved over time and how certain theories influenced the development of subsequent theories. The objective is not to investigate each of the theories extensively but to highlight how different theorists define emotion, their assumptions about emotion and how each contributes to our present-day understanding of emotion. Each of these theories seems to capture some important element of an emotional experience; one's current understanding of emotion as a phenomenon is shaped by collating the various insights across these theories.

This provides an overall framework of how emotion is studied and how the different perspectives are integrated in the current research.

### ***3.4.1 Darwin – Evolutionary Theory of Emotion***

Darwin (1872) believed that emotions developed because of their adaptive nature and value. Several evolutionary theories of emotion were developed based on Darwin's theory of evolution that states that emotions are largely inborn and instinctive reactions to certain environmental stimuli. Darwin firmly believed that facial expression of emotions are innate and "hard-wired" to allow us to communicate and quickly judge a person's intent (e.g. friendly versus aggressive). Therefore, emotions are instantaneously recognisable without much thought on the part of the person.

Evolutionary theorists believe that emotions evolved before reason and downplay the influence of thought, reasoning and learning on emotions. They do, however, acknowledge that learning and cognition play a very small role. These theorists propose that evolution equips one with a small set of primary emotions (happiness, surprise, disgust, anger, fear and sadness) that are shared by different cultures; these emotions help us to adapt to our current circumstances. According to them, the many varied emotions that we experience are a result of a blend of various primary emotions and variations in their intensity. Terror, for example, is a more intense form of the primary emotion *fear*.

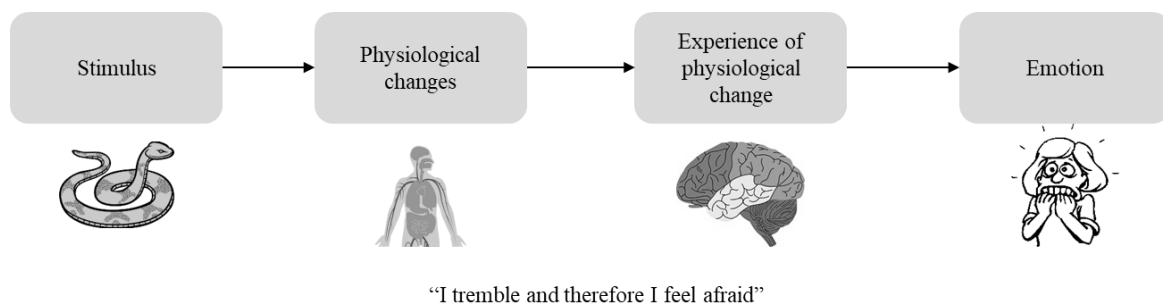
### ***3.4.2 James-Lange Theory***

During the late 1800s James (1884) and Lange (1912) independently worked on aspects related to emotion and developed theories that are still relevant today. Lange (1912) argued that an emotion is a result of changes in physiological conditions related to the autonomic and motor functions. Both James and Lange propose that the conscious experience of emotion results from one's perception of autonomic arousal, i.e. we become aware of bodily

sensations and our awareness of these changes constitutes an emotion. James firmly states that “our feeling of bodily changes as they occur *is* the emotion” (James 1884, p. 189-190). While one may think that one’s heart is beating because one is fearful, the James-Lange theory proposes the opposite: the perception of visceral arousal (beating heart) leads to the conscious experience of fear. In the hypothetical example of encountering a venomous snake, one’s heart will start beating and it is this change in one’s autonomic system that causes the emotion of fear (Figure 3.3). The James-Lange theory focuses on the physiological elements of emotion; different patterns of autonomic activation lead to the experience of different emotions. James indicated that one’s common interpretation of the direction and causation of emotion is incorrect. One feels sorry because one cries, angry because one strikes, and afraid because one trembles; one does cry because one feels sorry, strike because one feels angry and tremble because one is afraid.

**Figure 3.3**

*James-Lange Theory of Emotion*



The James-Lange theory received much criticism from other theorists, mainly because it undermines the importance of emotions in our everyday lives. Arnold (1960) indicated that one first needs to understand *why* the emotion was elicited in the first place. What is it about

the experience (encountering a snake) that causes the bodily change (increased heart rate) in the first place?

Cannon (1927) a prominent physiologist and chairman of the Department of Physiology at Harvard Medical School, also criticised this view, especially in terms of its inability to differentiate between different types of emotion.

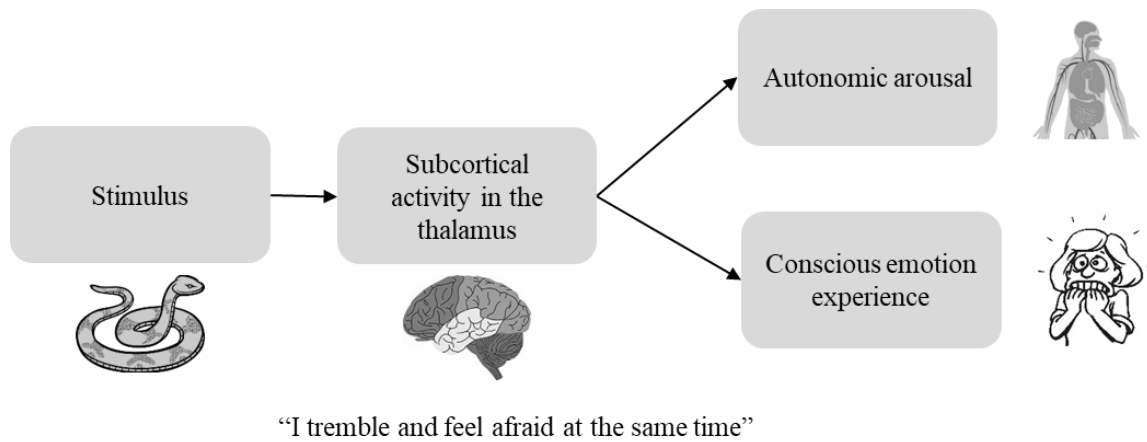
### ***3.4.3 Cannon-Bard Theory***

Cannon (1927) who is credited for developing the “fight or flight” response to dangerous stimuli disagreed about the James-Lange theory in respect of three areas. Firstly, Cannon argues that the James-Lange theory lacks the ability to differentiate between different emotions. He indicated that visceral reactions as a result of an experience are insufficient to distinguish emotions from one another. These instinctive, primal reactions alone cannot be used to tell emotions apart since people with different emotional experiences can have the same autonomic arousal. Fear and anger both cause an increased heart rate. Similarly, people can cry when they are happy and when they are sad. Secondly, Cannon indicated that physiological arousal can happen independently of having an emotional reaction, like running a marathon that will increase one’s heart rate without any emotional response. Thirdly, he indicated that physiological arousal happens too slowly to elicit emotional experiences that occur very rapidly. When someone is walking alone in an alley at night and hears a sound close by, he/she immediately experiences fear while the physical reactions to fear (rapid breathing, trembling and racing heart) usually follows the feeling.

Bard (1928) developed his theory and the Cannon-Bard theory was born. Their theory states that emotions originate in subcortical brain structures like the optic thalamus that contains the neural organisations for different emotional expressions. An individual’s sensory organs receive information from the outside world and the information is relayed to the

cerebral cortex. Here the information is associated with conditioned processes, the direction of the response is determined and the thalamic processes are stimulated.

More importantly, the theory states that emotion happens at the same time as the physiological arousal and that the one is not caused by the other (Figure 3.4). Therefore, when one encounters the venomous snake one experiences fear at the same time as the fight or flight physiological response. Although it occurs simultaneously, the emotional reaction is separate from and independent of the physiological arousal.

**Figure 3.4***Cannon-Bard Theory of Emotion*

The Cannon-Bard theory was accepted for many years until recent investigators found that there are subtle differences in visceral arousal that accompanies one's basic emotions of fear, anger, happiness and sadness (Ekman et al., 1983; Schwartz et al., 1981). Since people are not very good at recognising these small fluctuations in their autonomic responses, the Cannon-Bard theory is not regarded as sufficient to distinguish between different emotions.

As indicated by Weiten (1989) "there must be some other explanation for how we differentiate various emotions" (p. 373.)

#### **3.4.4 Schachter-Singer Two-Factor Theory**

The next big development in theories of emotion came in the early 1960s and was started by Stanley Schachter and Jerome Singer who propose that people use situational clues to differentiate between different emotions. According to the Schachter-Singer theory, emotions are made up of two factors: "physiological arousal" and our "cognitive interpretation" of that arousal. Physiological reactions are interpreted in a specific context to produce an emotional experience. Continuing with the snake metaphor, encountering the snake activates the

sympathetic nervous system and in the context of “snakes are dangerous” one experiences fear (Figure 3.5).

Schachter and Singer (1962) believed that our physiological arousal is very similar across the different types of emotion, and consequently the cognitive appraisal of the situation is critical to experiencing a specific emotion. They even propose that it is possible to “misattribute” arousal to an emotional experience under specific circumstances (Schachter & Singer, 1962).

To test and prove their theory, Schachter and Singer (1962) developed an interesting experiment. They randomly assigned college students to different groups and injected them with either a placebo or with epinephrine that causes bodily changes similar to the fight-or-flight response of the sympathetic nervous system. Some of the students who received the epinephrine were told to expect side effects, such as a racing heart and increased breathing while others were told to expect unrelated side effects, like itching feet or headaches. After receiving their injections participants were placed in a waiting room with another participant who unknown to participants, was one of the experimenters. The participant-experimenter was either in a jovial or angry mood as a result of the injection.

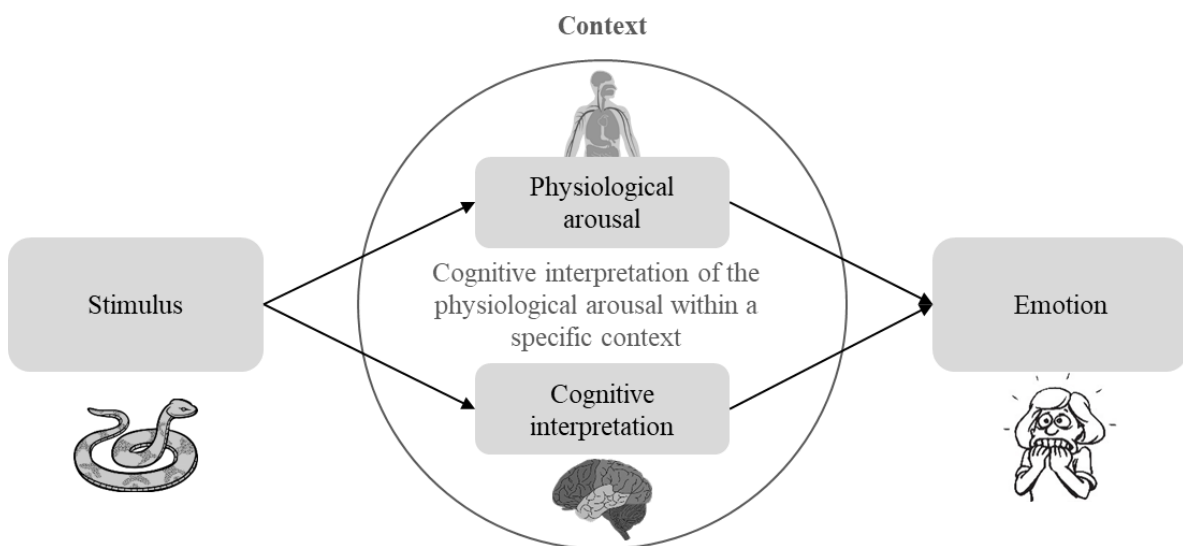
Informed subjects, who expected to feel symptoms of physiological arousal, showed few signs of emotion in their behaviour or self-reports. However, misinformed subjects, who were not expecting physiological arousal as a function of the injection, tended to feel euphoric or angry, depending on the emotion displayed by the participant-experimenter. These participants displayed emotions in accordance with the situational manipulations; they distinguished specific emotions based on their cognitive explanation of their arousal. While all the participants who received an injection of epinephrine experienced the same physiological arousal, only those who were not expecting the arousal used their context (the

feelings of the participant-experimenter) to interpret their arousal as a change in emotional state.

Schachter and Singer (1962) ultimately combined various aspects of the James-Lange and Cannon-Bard theories. They agreed on the James-Lange theory with respect to emotions being inferred by arousal and also on Cannon-Bard that different emotions are sometimes indistinguishable if one uses arousal only. They reconciled the two theories and concluded that physiological arousal is cognitively interpreted in the context of each situation based on one's past experiences, which ultimately produces the emotional experience (Figure 3.5). People therefore label an emotion based on what they find in their environment.

**Figure 3.5**

*Schachter-Singer Theory of Emotion*



"My heart is racing, that is a dangerous snake, I feel afraid"

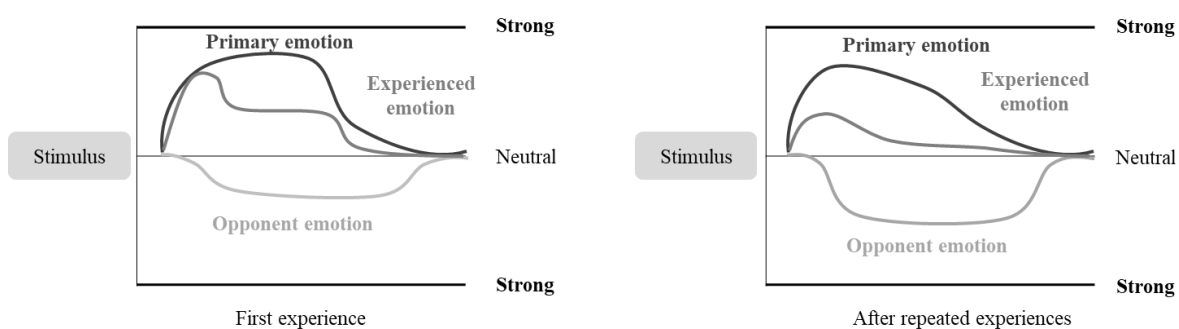


### 3.4.5 Solomon's Opponent Process Theory

Solomon and Corbit (1974) developed what is known as the opponent process theory of emotion or motivation. His theory states that emotions are always encountered as pairs of opposites or opponents. Pleasure is always paired with pain, joy with sadness, fear with relief, etc. Solomon describes emotions as having *hedonic* value and each emotional experience is followed by its hedonic opposite shortly thereafter. Fear is followed by relief, euphoria by depression, anger is followed by calm and interest is followed by boredom. With repeated stimulation of one emotion, the opposing stimulation becomes stronger, thus weakening the primary emotion (Solomon & Corbit, 1974). Solomon and Corbit (1974) conducted research in which they analysed the emotions of skydivers. They found that beginner skydivers experienced higher levels of fear than experienced skydivers and lower levels of pleasure upon landing. Over time, as they jumped more and more, their levels of fear diminished and their levels of pleasure increased (Figure 3.6).

**Figure 3.6**

*Solomon's Opponent Process Theory*



Source: Solomon and Corbit (1974)

They concluded that when a specific emotion is experienced, the opposite or opponent emotion is suppressed. Solomon's findings contributed greatly to advance our understanding of drug addiction. According to the opponent process theory, addiction is the result of

emotional pairing of pleasure and the emotional symptom that is associated with withdrawal (unpleasant). When a substance is used for the first time, there are high levels of pleasure with very low levels of withdrawal. Over time as resistance to the drug develops, the user experiences decreased levels of pleasure from using the drug and increased levels of withdrawal resulting in the user being forced to use more of the drug to achieve the same level of pleasure.

### ***3.4.6 Richard Lazarus's Cognitive-Mediational Theory***

Lazarus (1991) developed his cognitive-mediational theory based on the earlier work done by Arnold (1960) an American psychologist who is credited with coining the term *appraisal* to refer to the cognitive process that precedes the elicitation of an emotion. This was the start of a long series of appraisal theories on emotion that essentially state that one's appraisal of a situation causes an emotion or affective response.

Arnold's cognitive theory states that an emotion is the result of the cognitive appraisal of a situation. The appraisal of the situation gives rise to both the physiological reaction and the emotional experience. Arnold identified the physiological reaction as important during the experience but that it does not initiate the emotional experience.

Lazarus built on the work of Arnold and proposes that emotional experiences are determined by one's appraisal of stimuli and they are often immediate and unconscious. While Schachter-Singer (1962) proposes that emotions are the outcome of the interaction between physiological arousal and cognition, Lazarus believes that the appraisal of the situation precedes the cognitive labelling. The appraisal, therefore, is the impetus for both the physiological arousal and the emotional experience. Lazarus argues that the intensity of the emotional experience is mediated by cognitive processes that become the intermediary

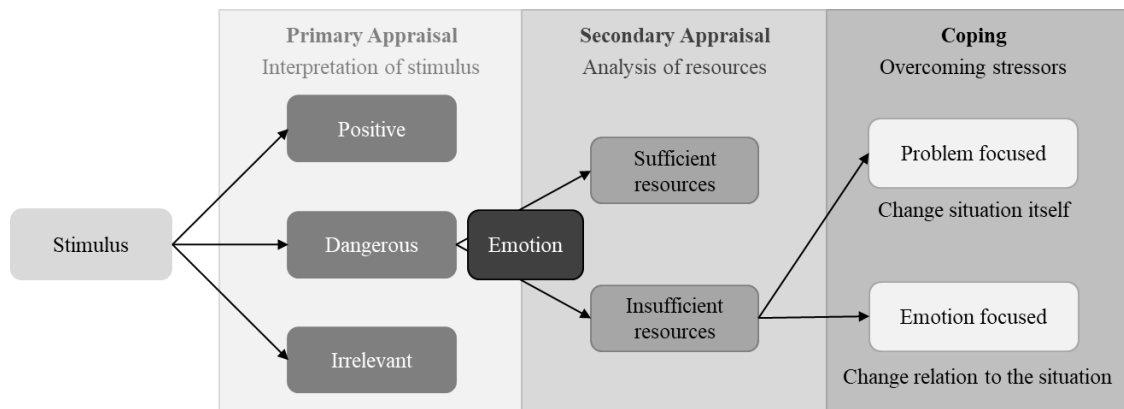
between the person and the environment. These cognitive processes can be regarded as coping mechanisms that in turn give rise to one's emotional experiences.

Lazarus developed a structural model of appraisal that explains the relationship between appraisal and emotion. According to Lazarus (1991), theories of emotion contain a relational, motivational and cognitive aspect.

- **Relational:** This aspect is concerned with the relationship and interaction between a person and the environment.
- **Motivational:** This aspect involves customers' assessment of their goals and how relevant a specific experience is to achieving the personal goals.
- **Cognitive:** Relates to the appraisal of a situation and evaluating how relevant and significant a situation is in a person's life.

According to Lazarus (1991) situations are evaluated (appraised) according to these three categories that then cause different emotions in the individual. Lazarus specifies two distinct appraisal methods (Figure 3.7):

1. **Primary appraisal:** Is focused on establishing the meaning and significance of the event to the person. It includes the possible threat to the well-being of the individual.
2. **Secondary appraisal:** Focuses on the individual's ability to cope with the consequences of the event and the various options available to the individual to deal with the situation.

**Figure 3.7***Primary and Secondary Appraisal*

During the primary appraisal the individual appraises two aspects of a situation: the motivational relevance and the motivational congruence (Smith & Kirby, 2009). The motivational relevance is concerned with how important the situation is to the well-being of the individual and influences the intensity of the emotional experience. The more relevant a situation is to the well-being of an individual, the more intense the emotional experience. The evaluation of motivational congruence is concerned with how aligned or misaligned (congruent or incongruent) a situation is in accordance with an individual's goals.

Secondary appraisal focuses on a person's ability, resources and options to cope with a situation and this influences the emotions experienced by an individual. An individual's ability to cope with a specific situation can be divided into problem-focused coping and emotional-focused coping (Smith & Kirby, 2009).

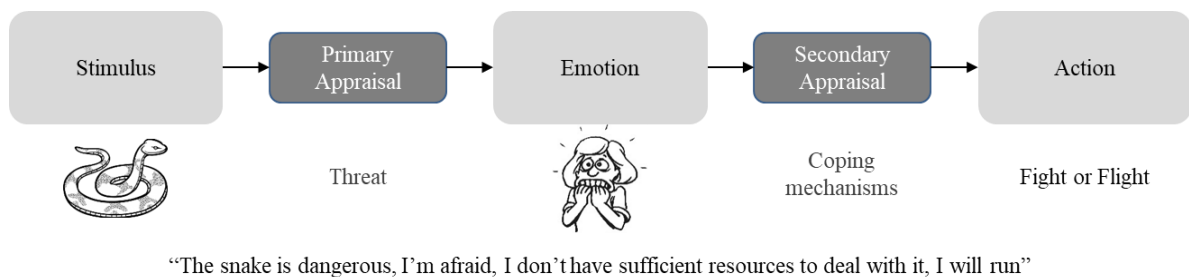
According to Lazarus (1991) emotions have implications for actions and goal achievement. When one experiences a negative emotion (e.g. fear, anger, distress, sadness) one finds oneself in a state of disequilibrium; the main goal is to return to a normal state. This can be achieved in one of two ways. Firstly, problem-focused coping can be used where one

attempts to remove or change the source of the emotional distress; problem-focused coping refers to the individual’s ability to change the situation to be more congruent with their goals. Alternatively, one can do emotion-focused coping where one can either change the meaning of the situation by denying that the source of distress exists at all, or distance oneself from the source of distress by not thinking about the issue. Emotion-focused coping refers to individuals’ ability to adjust to the situation if they are unable to change it to be more congruent with their goals. Therefore, the emotions that people experience are influenced by their perceived ability to perform emotion-focused coping. In contrast to negative emotional experiences, positive emotions are often accompanied by tendencies and actions to prolong the experience in an attempt to continue or increase the positive rewards that one gains from the experience.

Returning to the example of encountering a snake in the forest: primary appraisal reveals that the situation is a threat to the well-being of the individual, possible death being incongruent with a person’s ultimate goal of survival. This creates an intense emotional experience of fear that is followed by secondary appraisal (problem-focused coping) that elicits the flight-or-flight response to deal with the situation (Figure 3.8).

**Figure 3.8**

*Richard Lazarus’s Cognitive-Mediational Theory*



### 3.4.7 Roseman's Theory of Appraisal

Roseman (1991) developed his appraisal theory of emotions in the early 1990s and proposed that there are certain appraisal components that interact with one another to elicit different emotions. Roseman (1991) indicated that distinct emotional reactions are constructed as a function of a three-way interaction between 1) motive consistency-inconsistency; 2) appetitive-aversive and 3) self-other agency conditions that result in 16 unique emotions (Figure 3.9).

**Figure 3.9**

*Roseman's Theory of Appraisal*

|         |                            | Positive          |          | Negative            |                     |        |        |
|---------|----------------------------|-------------------|----------|---------------------|---------------------|--------|--------|
|         |                            | Motive-Consistent |          | Motive-Inconsistent |                     |        |        |
|         |                            | Appetitive        | Aversive | Appetitive          | Aversive            |        |        |
| Agency  | <i>Circumstance-Caused</i> |                   | Surprise |                     |                     |        |        |
|         | Unknown                    | Hope              |          | Fear                |                     |        |        |
|         | Uncertain                  | Joy               | Relief   | Sorrow              | Discomfort, Disgust | Weak   |        |
|         | Certain                    | Hope              |          | Fear                |                     |        |        |
|         | Uncertain                  | Joy               | Relief   | Sorrow              | Discomfort, Disgust | Strong |        |
|         | Certain                    | Liking            |          | Disliking           |                     | Weak   |        |
|         | <i>Other-Caused</i>        | Uncertain         | Liking   |                     | Disliking           |        | Weak   |
|         | Certain                    | Uncertain         | Liking   |                     | Anger               |        | Strong |
|         | <i>Self-Caused</i>         |                   | Pride    |                     | Shame, Guilt        |        | Weak   |
|         | Uncertain                  | Pride             |          | Shame, Guilt        |                     | Weak   |        |
|         | Certain                    | Pride             |          | Shame, Guilt        |                     | Weak   |        |
|         | Uncertain                  | Pride             |          | Regret              |                     | Strong |        |
| Certain | Pride                      |                   | Regret   |                     | Strong              |        |        |

Source: Roseman (1991:193)

Firstly, similar to Lazarus's primary appraisal stage, *motive consistency* refers to whether the situation is consistent with one's goals. When a situation is consistent with one's goals one experiences positive emotions: liking, pride, joy and relief. When a situation is being

evaluated as inconsistent with one's goals, it elicits negative emotions, such as anger or regret (Roseman, 1996).

Secondly, the *appetitive or aversive* nature of motive consistency also influences the emotions that one experiences. *Appetitive* refers to the presence of rewards (reward-maximising) while *aversive* refers to the absence of punishment (punishment-minimising). Roseman (2001) indicated that if other appraisals are kept constant, the emotions experienced are influenced by whether the goal or motive is appetitive or aversive. For example, the inability to obtain something desired (an appetitive motive) will produce sadness while the inability to avoid something undesired (an aversive motive) will result in distress.

The third aspect of an appraisal that influences emotions is agency – the evaluation of *responsibility or accountability*. This component evaluates whether oneself or someone else is responsible for the situation being evaluated and influences the emotions that will be experienced. For example, negative emotions caused by other people are labelled as dislike or anger while negative emotions caused by oneself are labelled as guilt or regret.

Subsequent to Roseman's model that is based on the assumption that cognitive appraisal of a situation is imperative for experiencing emotions, many other theorists and researchers adopted an appraisal approach to their understanding and investigation of emotions. The following section focuses exclusively on the measurement of emotions and explores the application of different emotional theories to the measurement of emotions and foregrounds the use of appraisal theory in the context of consumer behaviour.

In summarising the main emotional theories, it becomes apparent that James-Lange views emotions based on physiological change while Cannon-Bard states that physiological change and emotions are experienced simultaneously. The Schachter-Singer (1962) two-factor theory states that emotions are a result of the cognitive evaluation of one's

physiological responses while Solomon's opponent process theory states that emotions are experienced in pairs of primary and secondary emotions. Richard Lazarus's cognitive-mediational theory states that people go through three stages: primary appraisal, secondary appraisal and then a coping stage that includes emotional adaptation if one cannot change the circumstances surrounding a specific emotion. Roseman (2001) proposed that emotions are the outcome of a three-way interaction between motive consistency-inconsistency, appetitive-aversion and self-other agency.

Within the context of the current research, customers' satisfaction is viewed as a cognitive process that contains affective elements. According to cognitive appraisal theories, emotions experienced by customers are the result of the cognitive evaluation of a service interaction. The standpoint taken in the current research is aligned with the views held by cognitive appraisal theorists; cognition is a vital aspect necessary for the experience of emotion and that satisfaction judgement is an amalgamation between cognition and emotion

The above mentioned theories provide the foundation for understanding emotions, their antecedents, motivations, purpose and consequences. The following section expands on this theoretical framework and explores the various ways in which emotions can be categorised, structured, modelled and measured to understand their impact on one's decision-making and behaviour.

### **3.5 The Measurement of Emotions – Models and taxonomies**

The following section focuses on the various views and models developed to measure emotions and emotional experiences, starting with understanding the distinction between basic and more complex emotions before investigating the circumplex emotional models of Plutchik and Russell; it finally describes in detail why appraisal theories serve as an ideal framework for the measurement of consumer emotional experiences.



### ***3.5.1 Basic and Complex Emotions***

In operationalising emotions as a behavioural response to events or stimuli, various researchers distinguish between basic emotions and more complex secondary emotions (Izard, 1971; Ekman, 1972; Plutchik, 1991).

On the most basic level emotions can be classified into positive and negative emotions; it is suggested by various authors that positive and negative emotions may be distinct constructs as opposed to polar extremes of a single construct (Bagozzi, et al 1999); Phillips & Baumgartner, 2002). Negative emotions include emotions like irritation, frustration, fear, anger, disappointment and anxiety. Positive emotions include emotions like happiness, pleasure, contentment, joy, hope and love. A review of the literature on the measurement of emotions has revealed that there are two distinct approaches that can be followed: the basic emotion approach, and a dimensional approach.

#### **Basic emotion approach**

The basic emotion approach regards all emotions as originating from a relatively small set of basic emotions. Ekman (1992) identified six primary emotions: anger, disgust, fear, happiness, sadness and surprise. Izard (1977) identified 10 discrete emotions: anger, contempt, disgust, fear, guilt, interest, joy, sadness, shame and surprise. Plutchik (1980) based his theory on the adaptive nature of emotions and identified eight primary emotions: anger, anticipation, disgust, fear, joy, sadness, surprise and trust. A summary of the basic emotions proposed by Ekman, Izard and Plutchik is provided in Table 3.5. The basic emotional approach suggests that all other emotions are regarded as a combination of these primary emotions.

**Table 3.5***Basic Emotions Proposed by Ekman, Izard and Plutchik*

| <b>Ekman</b> | <b>Izard</b> | <b>Plutchik</b> |
|--------------|--------------|-----------------|
| Anger        | Anger        | Anger           |
| Disgust      | Disgust      | Disgust         |
| Fear         | Fear         | Fear            |
| Sadness      | Sadness      | Sadness         |
| Surprise     | Surprise     | Surprise        |
| Happiness    | Happiness    |                 |
|              | Joy          | Joy             |
|              | Contempt     | Anticipation    |
|              | Guilt        | Trust           |
|              | Interest     |                 |
|              | Shame        |                 |

**Dimensional approach**

According to the dimensional approach, all emotions can be plotted on three independent dimensions commonly referred to by the acronym PAD: Pleasure, Arousal and Dominance (Mehrabian & Russell, 1974; Russell, 1980). This model focuses on the bipolarity of the three dimensions: pleasure-displeasure, arousal-non-arousal, and dominance-submissiveness.

The following section describes each of the aforementioned models and provides a description of the most significant critiques of each model. It provides a basic understanding of how the measurement of emotions has evolved over time and how each model contributes to one's understanding of the measurement of emotions.

**3.5.2 Ekman – Six Basic Emotions**

Paul Ekman, a clinical psychologist, is mostly known for his work on studying human facial expressions. His interest in the field started while investigating the difficulty of

measuring non-verbal behaviour; he devoted his life's work to developing techniques for measuring non-verbal communication. During the early 1950s there were two main philosophical viewpoints regarding the motive for emotional experiences. The first was the evolutionary perspective of Darwin that proposed that emotions were *evolved traits* that are universal to the human species. Secondly, a contrasting view proposed by many anthropologists was that emotions and their facial expressions were determined through behavioural learning processes. Through a series of studies Ekman found that facial expressions related to specific emotions were universal across different cultures, which gave rise to Ekman's basic set of emotions. Ekman (1999) indicated that the term *basic emotion* describes three different perspectives on emotions:

- Emotions are uniquely different from one another in terms of physiological and behavioural responses.
- Emotions are learnt responses to help deal with fundamental life tasks and situations and have evolved as a result of our cumulative experiences of the past.
- Basic emotions are elemental and combine to form complex emotions.

Ekman believed that emotions have an evolutionary basis (i.e. emotions are innate and have a biological origin) and that they are adaptive in nature (i.e. they help an individual to engage in inter- and intrapersonal activities). Ekman indicated that “emotions evolved for their adaptive value in dealing with fundamental life tasks” (Ekman, 1999, p. 46). Ekman believed that emotions have distinctive universal physiology and signals and that they are an “expression of distinctive thoughts and experiences that is the result of automatic appraisals that have a homologous presence in other primates” (Ekman 1999, p. 5). Based on this definition, Ekman argued that there exist positive and negative emotions that are universal to all humans and that there is sufficient empirical evidence for six basic emotions: happiness, sadness, anger, fear, disgust and surprise.

Over the years Ekman has changed his original view considerably and indicated that there are four meanings of the term *basic*. The first is that basic emotions differ in terms of their appraisal, antecedent events, physiology and behavioural response and not only in terms of their intensity or pleasantness. The second meaning of the concept of *basic* emotions has to do with their adaptive nature in dealing with fundamental life tasks. Ekman (1999) believed that the primary function of emotions is to mobilise a person to deal with interpersonal encounters quickly, selecting the behaviour that was the most successful in the past (learning from past experiences). Each emotion prompts one in a direction that has through evolution, provided better outcomes than other solutions in achieving one's desired goals. Thirdly, Ekman contends that basic emotions contain elements that are combined to form more complex emotions. As an example he indicated that *smugness* could be considered a combination of two basic emotions: happiness and contempt. Finally, Ekman indicated that there are fundamental characteristics that distinguish basic emotions from one another and from other affective phenomena:

- Distinctive universal signals
- Distinctive physiology
- Automatic appraisal
- Distinctive universal antecedent events
- Distinctive appearance developmentally
- Presence in other primates
- Quick onset
- Brief duration
- Unbidden occurrence
- Distinctive thoughts, memories and images
- Distinctive subjective experiences

### ***3.5.3 Carroll Izard – 10 Basic Emotions***

Carroll Izard, an American research psychologist, defined an emotion as “a feeling that motivates, organises, and guides perception, thought, and action” (Izard, 1991, p. 14). He developed a model of basic emotions by focusing on the role that facial muscles play in terms of improving one’s chances of survival. Izard (1991) focuses on the identification of emotions that are universally associated with unique facial expressions. Izard identified 10 fundamental emotions: interest, enjoyment, surprise, distress (sadness), anger, disgust, contempt, fear, shame/shyness and guilt. Izard points out that most of these emotions and their facial expression are in-born and can be examined in children from an early age. Izard (1992) indicated that “because expressive behaviours served critical communicative functions and were crucial for the evolution of emotions, they may be considered essential components of prototypical emotions” (p. 562). Like Ekman, Izard argues that more complex emotions are the result of combinations of these basic emotions.

Izard (1992) developed the Differential Emotions Scale (DES) that can be used to measure the 10 basic emotions. The DES-II is used most frequently in consumption emotion research. It contains 30 adjective items, three to measure each of Izard’s 10 fundamental emotions. However, several authors have critiqued Izard’s scale because of the predominance of negative emotions and indicate that there is a need for a broader sampling of emotions that includes positive emotions (Oliver 1992; Laverie et al., 1993; Mano & Oliver, 1993).

### ***3.5.4 Robert Plutchik – Wheel of Emotions***

Similar to Izard, the psychologist Robert Plutchik based his theory of emotions on the human species’ instinct for survival or psycho-evolutionary theory (Plutchik, 1980) and identified eight primary emotions: anger, fear, sadness, disgust, surprise, anticipation, trust and joy. Plutchik (1980) indicated that these emotions have “adaptive significance in the struggle for survival” and can be identified in various forms throughout the animal kingdom

(p. 138). As a species evolves it performs various adaptive functions that help it to survive in each stage of the evolutionary process. Plutchik identifies eight adaptive functions that are associated with a specific basic emotion and a behavioural expression (Table 3.6).

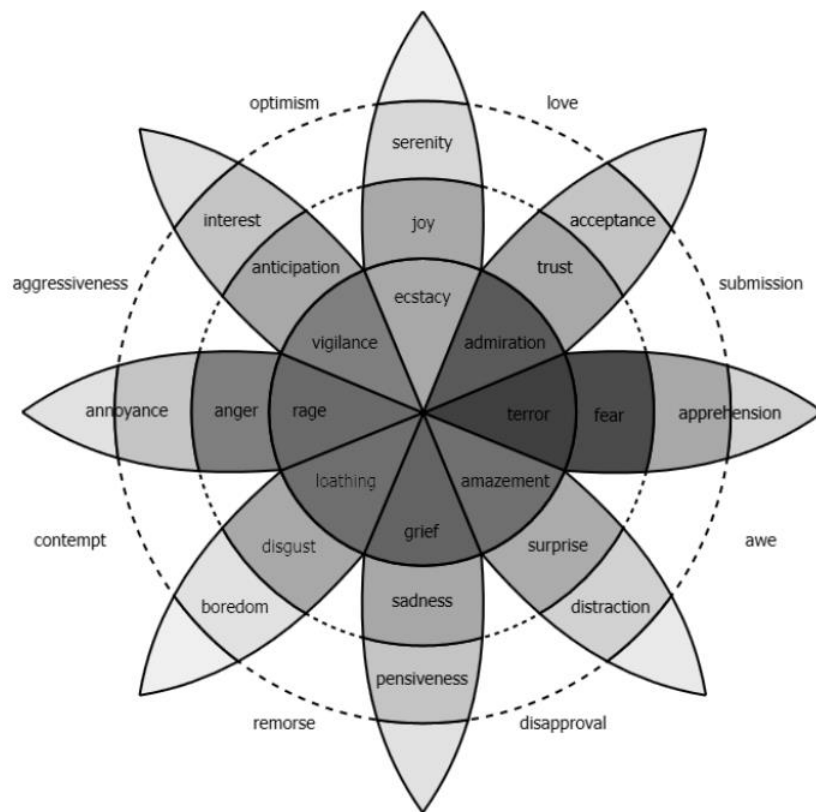
**Table 3.6**

*Plutchik's Basic Emotions, Adaptive Function and Behavioural Expression*

| <b>Adaptive function</b> | <b>Basic emotion</b> | <b>Behavioural expression</b> |
|--------------------------|----------------------|-------------------------------|
| Incorporation            | Acceptance           | Affiliating                   |
| Rejection                | Disgust              | Repulsing                     |
| Protection               | Fear                 | Escaping                      |
| Destruction              | Anger                | Attacking                     |
| Reproduction             | Joy                  | Cooperating                   |
| Reintegration            | Sadness              | Crying for help               |
| Orientation              | Surprise             | Stopping                      |
| Exploration              | Expectancy           | Exploring                     |

Source: Plutchik (1980)

Plutchik used this view to develop a “wheel of emotions” (Figure 3.10) that illustrates the eight basic emotions and the various ways they relate to one another. The wheel is structured to indicate which emotions are regarded as opposites and how the eight basic emotions can change into more complex descriptors of emotional experience.

**Figure 3.10***Plutchik's Wheel of Emotions*

Source: Plutchik (1980)

Plutchik and Kellerman (1974) developed the Emotions Profile Index that uses 62 forced-choice emotional descriptor pairs that measure each of the eight emotions. Both Plutchik and Izard contend that complex emotions are merely the result of a mixture of basic emotions proposed in their models. However, they fail to explain clearly how everyday emotions like love, hate, envy, relief and pride are identified using their models and associated scales (Richins, 1997).

Using these models of basic emotions presents a challenge when studying consumer experiences since they limit the number of emotional categories that can be identified to a small set of emotions contained in the specific model that is used. Since different basic emotions were identified by Ekman, Izard and Plutchik, the use of any of these models yields

different patterns of emotions and subsequently also different dimensionalities and relationships to satisfaction.

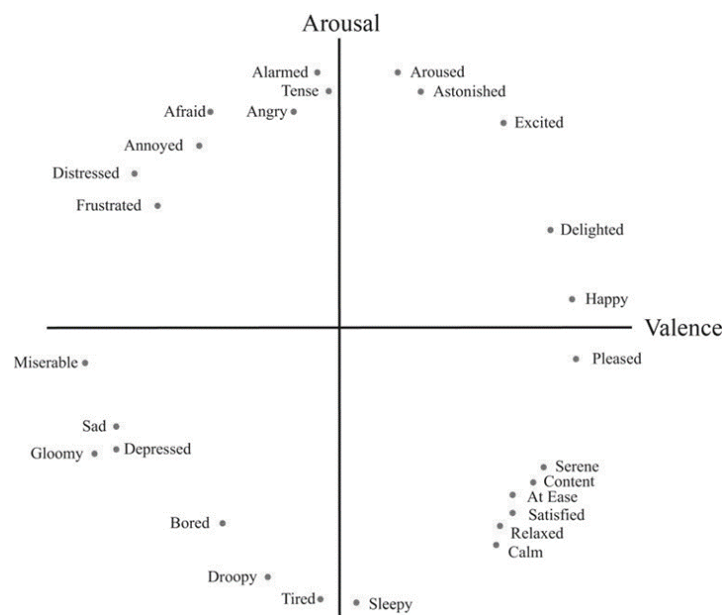
Another critique that questions the validity of the use of basic emotions is offered by Ortony and Turner (1990). After completing an extensive study on relevant literature related to the paradigm of basic emotions, they concluded that "there is no coherent nontrivial notion of basic emotions as the elementary psychological primitives in terms of which other emotions can be explained" (Ortony & Turner, 1990, p. 315)

### 3.5.5 Russell's Circumplex Model of Affect

One of the most well-known and widely used models in studying emotions is the circumplex model of emotions proposed by Russell (1980). Russell uses a spatial model to describe the different types of emotion and organises them into a circular arrangement of pleasure–displeasure (misery), arousal–sleepiness, excitement–depression, and contentment–distress as in Figure 3.11.

**Figure 3.11**

*Russell's Circumplex Model of Affect*



Source: Russell (1980)



On a horizontal dimension (pleasure-displeasure), emotions range from one extreme (e.g. agony) on the left through a neutral point (or adaptation level) to the other extreme of ecstasy on the right (Russell, 2003). On a vertical level, arousal ranges from sleepy and tired at the bottom through various stages of alertness to “frenetic excitement” at the top (Russell, 2003, p. 148). Russell indicated that some of the names used in the model can be described as emotions (depressed and upset) while others are not (tense, calm, serene, bored and drowsy).

Similarly, the names also differ in the degree to which they indicate core affect. “At one end of a continuum are names that denote nothing else (feeling good or bad, sleepy or wide awake); at the other end are names that merely hint at core affect” (Russell, 2003, p. 148). Russell indicated that while the emotions and the emotional words themselves might differ according to where they are located in the model, the dimensions used can be regarded as universal and valid in a wide variety of contexts.

Russell conducted various studies to investigate how emotions are described in different languages and found that both the valence component (feeling good or feeling bad) as well as arousal (sleepy or aroused) are universal semantic dimensions found across various cultures (Russell, 1991). Similarly Osgood et al., (1975) found dimensions that are comparable to those of Russell. They investigated a large sample of languages and identified three affective factors: evaluation, activity and potency that were implicit in all the languages studied and are comparable to the valence and arousal components of Russell. This model was used extensively in the past and has been found to be appropriate to a wide variety of service and consumption settings (Mano & Oliver, 1993; Oliver, 1997; Liljander & Bergenwall, 2002).

Mehrabian and Russell (1974) developed the PAD scale for measuring emotions by asking participants to rate physical environments using various adjectives. The acronym PAD represents three constitutive dimensions of emotions: Pleasure-displeasure, Arousal-non-arousal, and Dominance-submissiveness. Russell (1980) and Russell et al., (1989) have

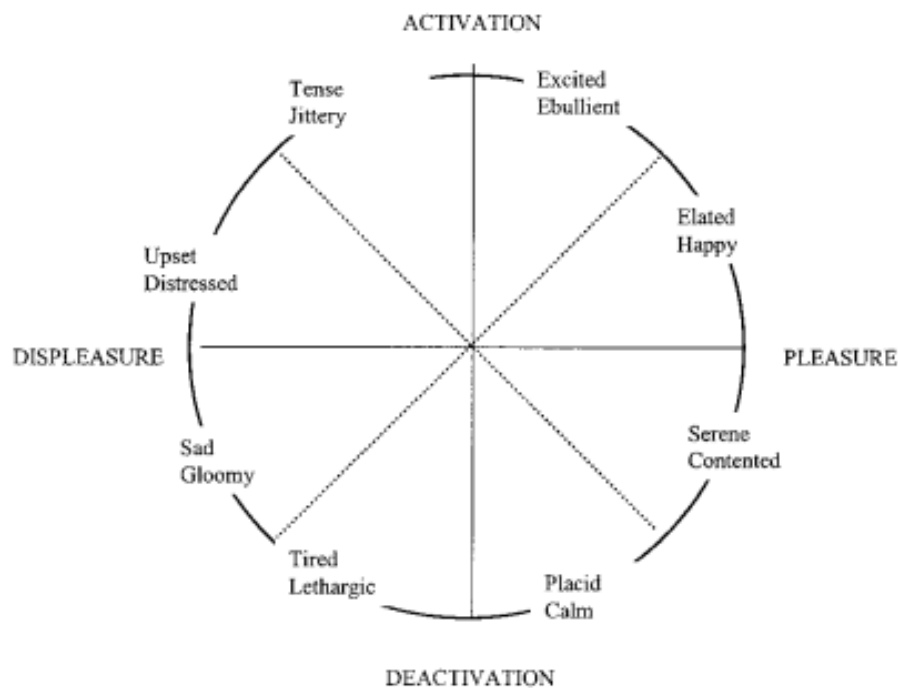
suggested that the dominance-submissiveness dimension can be eliminated when measuring emotions. Various authors have confirmed the bi-dimensional character of emotions and in recent studies emotions are represented by only two dimensions: pleasure and arousal (PA model) (Wirtz & Bateson, 1999; Mattila & Wirtz, 2000; Chebat & Michon, 2003; Bigné et al., 2005; Yüksel, 2007). Mehrabian and Russell (1974) defined pleasure as the degree to which one feels good, happy, content or joyful while arousal is represented by the extent to which one feels excited, alert, stimulated and active.

Richins (1997) indicated that the PAD scale differs from other emotional measures in the sense that it was not designed to capture the entire domain of emotional experiences and that it differs in context and content from other emotional measuring instruments. The scale does not intend to measure emotions per se, and is therefore best suited if a researcher wants to measure the underlying dimensions that cause specific emotions and not to identify the specific emotions that participants experience. Although Russell's model is widely used in the industry, there is some criticism that should be taken into account:

1. It is not a model of emotions since it includes deactivation states like sleepy, tired and placid.
2. The model fails to differentiate between discrete emotions. Emotions like anger, fear, disgust, contempt, guilt, stress, grief and envy are all unpleasant, high-activation states that are positioned very close to one another on the diagram and are therefore difficult to differentiate.
3. The horizontal dimension is extremely ambiguous and described using different names: evaluation, liking, positive–negative, approach-avoidance, utility and valence that are completely different constructs and mean different things to different people. Positive versus negative might refer to being morally right or wrong, advantageous or not and proper or improper.

Russell (2003) took these criticisms to heart and updated the assessment of his original model and developed a new theoretical stance that he refers to as “core affect”. Core affect is defined as “A neurophysiological state that is consciously accessible as a simple, non-reflective feeling that is an integral blend of hedonic (pleasure-displeasure) and arousal (sleepy-activated) values” (Russell, 2003, p. 147). He indicated that over the last 40 years many new sophisticated multivariate techniques have been used to develop empirically-based structural models of emotions. The results using various models point to two broad dimensions that are consistently found in most studies to the extent that “the word consensus is now appearing in writings on this topic” (Watson & Tellegen, 1985). Various prominent models of emotions have now empirically shown to be different descriptors of the same “space” (Yik et al., 1999). Russell and Barrett (1999) summarised the similarities between these models and called it core affect (Figure 3.12):

1. The number of dimensions required
2. Possible rotation of the axes
3. The circular ordering
4. The bipolarity of the axes

**Figure 3.12***Core Affect*

Source: Russell (2003)

Russell (2003) described core affect as “primitive, universal, and simple (irreducible on the mental plane). It can exist without being labelled, interpreted or attributed to any cause” (p.148). Russell indicated that one always has core affect in any situation.

### ***3.5.6 Cognitive Appraisal Theory of Emotions***

As discussed earlier, from a theoretical standpoint, researchers like Zajonc (1980) and Izard (1993) indicated that cognition may not always be necessary for a customer to experience an emotion and that affective arousal may be triggered without a cognitive evaluative process. Conversely, Lazarus (1991) takes a cognitive appraisal approach and asserts that emotions are the consequence of consumers’ interaction with their environment and that it is the interpretation of these encounters (appraisal) that elicits a specific emotion. According to Lazarus and Folkman (1984) the function of cognition is evaluative in nature

and focuses on the meaning and significance of events. From this perspective, emotions are not dependent on the events themselves but the meaning that an individual associates with the event in terms of their own well-being (Frijda, 1993).

The following section provides an explanation of cognitive appraisal theory and focuses on the following aspects:

- Firstly, investigate some of the characteristics of cognitive appraisal.
- Secondly, cognitive appraisal as a means to understand consumers' desire to achieve their goals and how the attainment and non-attainment of goals leads to specific emotions and subsequent actions.
- Thirdly, investigate why a cognitive appraisal approach is appropriate for understanding consumer consumption emotions.

**3.5.6.1 Characteristics of a Cognitive Appraisal Approach.** There are several characteristics and advantages of appraisal theories that make them appropriate for investigating customer emotions.

Firstly, appraisal theorists state that while specific circumstances are often associated with very specific emotions, it is not the event itself that produces the emotion but rather the *psychological appraisal by the person that interprets the event* that produces the emotion. This explains why 1) the same event will yield different emotional experiences for different people (i.e. why two people can have varied emotional reactions while they are exposed to the same emotional stimuli) and 2) why the same event could yield different emotions in the same individual, depending on the impact it has on them at a specific time in their life.

Secondly, appraisal theories posit that the final emotion experienced by an individual is highly dependent on the achievement of specific goals. An individual will evaluate their "current state" compared to their "desired state" (achievement of a desired goal), which will

then lead to a specific emotion. If they attain the goal that they set out to achieve it leads to positive emotions while failure in attaining the desired goals leads to negative emotions.

Thirdly, the type of emotion that one experiences is highly dependent on how important the situation or experience is. Events and experiences are judged in accordance with the personal stake for the individual and the impact it will have their well-being. If the situation is extremely important for an individual, if the outcome will have a significant effect on their well-being, the emotions they experience will be more intense and motivating compared to a situation where the outcome of the encounter is inconsequential.

Various authors have contributed to the understanding of cognitive appraisal (Ortony et al., 1988; Roseman, 1984; Scherer, 1993) and identified appraisal dimensions that influence the emotions experienced by an individual. These include the following:

- **Expectations:** What the person expects of a specific situation or interaction. This includes unexpected incidents for which the person was not prepared.
- **Motive consistency:** Whether the events contribute to or detract from the achievement of the individual's goals.
- **Coping:** The person's resources to cope with the event and the subsequent sense of control over the situation.
- **Agency:** Who is responsible for the event – the individual themselves or someone else.
- **Consequences:** Certainty and uncertainty about the consequences and final outcome of the event.

**3.5.6.2 Cognitive Appraisal of Goals and Action Motivation.** One of the characteristics of cognitive appraisal theory that makes it an ideal approach for investigating people's interaction with organisations is the focus on the attainment of personal goals. In the

majority of instances when customers interact with an organisation, they usually do so because they have a specific goal that they want to achieve. Whether the goal is to purchase a specific product, use a service, resolve an issue or receive advice, there is always a specific goal that they expect to achieve. Goals can be defined as “internal representations of desired states, where states are broadly defined as outcomes, events or processes” (Austin & Vancouver, 1996, p. 338). According to Oatley (1992), the self-regulation of goals is the main function of emotions. Internally, the cognitive system is continuously monitoring events relevant to the achievement of one’s personal goals. When there is a change in the probability of achieving a specific goal, the monitoring mechanism broadcasts a signal to the cognitive system that makes it ready to respond to this change. These signals and subsequent states of readiness are experienced as emotions. Oatley and Johnson-Laird (1987) indicated that emotions are evoked “at a significant juncture of a plan, typically when the evaluation (conscious or unconscious) of the likely success of a plan changes” (p. 35). Positive emotions like happiness, elation and joy are associated with the attainment of a goal and the individual will therefore continue with the original plan. Problems, setbacks and difficulties in the pursuit of personal goals lead to emotions like anxiety, frustration and disappointment that motivate the individual to take alternative action to restore the equilibrium.

While one of the main functions of emotions is to help people cope with specific situations, the second important aspect is that they cause and stimulate specific actions. In this regard Bagozzi (1992) pointed out that many coping responses to emotion are volitional: the cognitive process where an individual decides and commits to a specific course of action. Frijda et al., (1989) maintained that action tendencies refer to one’s “readiness to engage or disengage from interaction with some goal object and include moving towards, moving away or moving against” (p. 213). Frijda (1986) believed that emotions are not only reactions to the

appraisal of events but that the main goal of experiencing emotions is to drive one to specific actions.

Bagozzi (1992) indicated that emotions are a result of appraisal in terms of outcome desires and the achievement of specific goals. In this regard Bagozzi identified four appraisal classes. The first two classes focus on outcomes that are in the past or present while the second two outcomes focus on events in the future:

- 1. Outcome desire conflict:** When an individual fails to achieve their goal or experiences any unpleasantness during the pursuit of a goal it causes emotions like anger, sadness, frustration, disappointment, regret, shame or guilt. These emotions lead to specific actions, depending on the emotion the individual is experiencing and can include actions like re-evaluation of the goal, additional effort to achieve the goal, obtaining help from others, moving away from or removing the source of the unpleasant emotions.
- 2. Outcome desire fulfilment:** This occurs when 1) personal goals are achieved; 2) when the individual experiences a pleasant event, or 3) manages to avoid an unpleasant event. Typical emotions experienced when one's goals are achieved are joy, pleasure, elation, pride, relief and love. These emotions lead to actions that are focused on prolonging the experience to maintain or increase these positive emotions or to share these experiences and emotions with other people.
- 3. Outcome desire avoidance:** When one anticipates that one will fail in terms of reaching one's goals (planned outcomes) one typically experiences emotions like worry, anxiety, angst or fear. These anticipated negative emotions motivate one to take action to avoid these outcomes, redefine one's goals or reinterpret the predicted threat.



**4. Outcome desire pursuit:** This is an anticipatory stance where one focuses on experiencing positive emotions in the future, such as hope, excitement and optimism. One's actions are driven by the anticipation to realise these positive emotions and sustain one's commitment to achieve these desired outcomes.

Table 3.7 summarises the appraisal class (past, present and future) outcome desire, experience in relation to the goal objective, possible emotions experienced and the typical actions the person will engage in.

**Table 3.7**

*Appraisal Classes, Emotions and Actions*

| Class           | Outcome desire            | Experience  | Emotions  | Outcome or Action   |
|-----------------|---------------------------|---|---|---|
| Past or present | Outcome desire conflicts  | <ul style="list-style-type: none"> <li>– Failing to achieve the goal</li> <li>– Unpleasantness experienced</li> </ul> | Anger, sadness, frustration, disappointment, regret, shame or guilt | <ul style="list-style-type: none"> <li>– Re-evaluation of the goal.</li> <li>– Additional effort to achieve the goal.</li> <li>– Obtain help from others.</li> <li>– Remove the source of the unpleasant emotions.</li> </ul> |
|                 | Outcome desire fulfilment | <ul style="list-style-type: none"> <li>– Personal goals are achieved</li> <li>– Pleasantness experienced</li> </ul>   | Joy, satisfaction, pleasure, elation, pride, relief and love        | <ul style="list-style-type: none"> <li>– Actions that will prolong the experience.</li> <li>– Share the experience and/or emotions with others.</li> </ul>  |
| Future          | Outcome desire avoidance  | <ul style="list-style-type: none"> <li>– Anticipate failure</li> </ul>  | Worry, anxiety, angst and fear                                      | <ul style="list-style-type: none"> <li>– Actions to avoid negative outcomes.</li> <li>– Reinterpret the predicted threat.</li> <li>– Redefine goals.</li> </ul>   |
|                 | Outcome desire pursuits   | <ul style="list-style-type: none"> <li>– Anticipate success</li> </ul>  | Hope, excitement and optimism                                       | <ul style="list-style-type: none"> <li>– Sustained commitment to achieve the desired goals.</li> </ul>  |

One evaluates one's current circumstances and experiences in terms of the outcome desire or goals one wants to achieve. These in turn cause specific emotions that become the

driving force and impetus to change one's behaviour and actions to obtain positive outcomes or avoid negative ones. Therefore, one's emotions are the primary drivers that motivate one to take action to reach one's desired goals.

### **3.6 Consumer Consumption Emotions**

#### ***3.6.1 Introducing Consumption Emotions***

Consumer behaviour has been studied since the early 1960s in an attempt to understand its effect as a fundamental contributor to customer satisfaction, retention, recommendation and commitment to a specific service provider (Choraria, 2013). According to Kuhl (1986) emotions constitute a primary source of human motivation and have a substantial influence on memory and thought processes. Related specifically to the study of emotions in service industries, Mudie et al., (2003) indicated that "the distinctive characteristics of services suggest that it is particularly apt that consumers' emotional responses are now also being considered" (p. 85). Another important characteristic of emotions is that they need to be experienced. Similarly, services need to be experienced and emotions form a critical component of what is experienced during service delivery interactions and also how the specific experience is subsequently evaluated.

Modern consumers are no longer interested in just buying products and consuming services; they are more interested in acquiring the pleasing and delightful emotional experiences embedded in what is being sold (Brembeck & Ekstrom, 2004). This is especially true in the service industries where there is no physical product to evaluate and customer satisfaction is solely based on the evaluation of the service that is received (O'Shaughnessy & O'Shaughnessy, 2003). In the domain of consumer research, behavioural responses are influenced by the customer's emotional state that develops during the interaction and by the consumption of services and are now commonly referred to as "consumption emotions"

(Maiyaki & Mokhtar, 2011). It is, therefore, important to understand the effect that consumption emotions have on the satisfaction judgement of consumers and how these concepts contribute to one's understanding of consumer behaviour.

### ***3.6.2 Defining Consumption Emotions***

Customers enter a service situation with a specific expectation and the confirmation of this expectation yields positive emotions like happiness, joy, confidence and trust.

Conversely, disconfirmation of their expectations yield negative emotions like frustration, irritation, dissatisfaction, anger and sadness.

Consumption emotions are distinguished from other types of emotion in terms of their specific characteristics and their intensity. Han and Back (2006) indicated that compared to emotions experienced in everyday life, consumption emotions are much more specific and less intense. Westbrook and Oliver (1991) indicated that consumption emotions can be easily differentiated from mood as emotions have greater psychological urgency, motivational potency and situational specificity. Hou et al. (2013) indicated that consumption emotions are the psychological response derived from interacting with products and services during consumption experiences.

According to Westbrook and Oliver (1991) consumption emotions can be defined as a "set of emotional responses elicited during product usage or consumption experiences" (p. 85). These emotions can be described in one of two ways: firstly, in terms of the distinctive categories of emotional experience and expression (frustration, anger, joy, happiness) and secondly by their underlying structural dimensions or emotional categories (pleasant or unpleasant, relaxation or action, or calmness or excitement). This view corresponds with the previously disused distinction between the two major types of emotion theories, namely basic emotional theories and dimensional theories.

### ***3.6.3 Consumption Emotions, Customer Satisfaction and Customer Loyalty***

The emotion experienced by a customer is a result of the interaction between a customer and the characteristics of the organisation they engage with that include company culture, organisational processes, product consumption and service engagements with staff. Richins (1997) indicated that while traditional models of consumption behaviour are still prevalent, the role that emotions play during the consumption process and the effect they have on customer satisfaction and loyalty is being elevated as an important driver that should be acknowledged. Bigné and Andreu (2004) were of the opinion that emotions form a central and integral part of customer satisfaction and that many organisations do not possess adequate information about this relationship.

On an elementary level, Westbrook (1987) indicated that if consumers experience a product or service to be good it results in positive emotions; if they experience a product or service to be bad, they experience negative emotions. These positive or negative emotions have a direct effect on customer satisfaction and behavioural intentions like repurchasing and word-of-mouth recommendations. In addition, Cohen and Areni (1991) indicated that emotions evoked during consumption experiences are believed to leave strong affective traces in the episodic memory of customers; they remember emotions elicited during an experiences far longer than non-emotional experiences and they have a greater effect on future behaviour.

With specific reference to service industries, Bigné et al., (2005) indicated that the interaction between staff and customers typically found in service settings are prone to a multitude of emotions compared to purchasing a product. It is, therefore, vital for companies in service industries to understand the impact of emotions on customer satisfaction and loyalty. This understanding should enable companies to design service experiences that elicit positive emotions from customers since they directly affect their satisfaction with the service,

the organisation as a whole and customers' future behaviour that is vital for the long-term sustained success of organisations.

Menon and Dubé (1999) suggested that a repertoire of emotional information can assist companies to develop employee training courses and design services that not only align with customers' expectations but, more importantly, delight customers and ensure positive word-of-mouth. This type of information can assist companies to develop and refine their customer satisfaction strategies and policies to improve the satisfaction of their customers. Employees will understand 1) which emotions are associated with higher levels of satisfaction and positive recommendations, and should be pursued and cultivated, and 2) which emotions are detrimental to customer satisfaction and recommendations and should be reduced and avoided.

If customers experience certain positive emotions during their interaction with organisations they are more likely to return to the organisation, purchase additional products and actively tell other people about their experiences. In contrast, negative emotions experienced during customer-company interaction will drive customers away or cause negative word-of-mouth and should be avoided. Implementing these initiatives across the entire organisation will ensure that customers have consistent positive experiences that will have a beneficial effect on their purchase behaviour and loyalty.

The current research is aimed at providing additional insight into the effect that specific positive and negative emotions have on the satisfaction and loyalty of customers. These insights will assist companies to better understand the emotional drivers of satisfaction and word-of-mouth recommendations.

#### ***3.6.4 Consumption Emotions and Cognitive Appraisal***

The dominant framework for evaluating customer satisfaction is the expectancy-disconfirmation theory discussed earlier. This framework is ideally suited for understanding

customer satisfaction response when evaluating product categories where the functional components of the interaction and their subsequent cognitive evaluation are the most important drivers of satisfaction. In addition, the link between the affective dimension and satisfaction with tangible products is well documented (Westbrook, 1987; Oliver, 1993).

While cognition has been studied using predominantly the disconfirmation paradigm, other studies have recognised the importance of emotions and their effect on customer satisfaction judgement (Mano & Oliver, 1993; Westbrook, 1987; Westbrook & Oliver, 1991). However, in the field of credence services (professional services where the quality of the service is difficult to evaluate) the role of affect needs to be explored further; several researchers have proposed that consumption emotions should also be included in a conceptual model for investigating service experiences (Westbrook, 1987; Westbrook & Oliver, 1991; Mano & Oliver, 1993). Gardner (1985) indicated that service encounters are the ideal settings to investigate the interaction between cognition and emotions since the interaction between customers and service staff has the potential to evoke various emotional and cognitive responses.

Many consumer researchers have recognised the importance of emotions in consumption experience and highlight the need for more research in the area (Bagozzi et al., 1999, Gardner, 1985; Phillips & Baumgartner, 2002; Price et al., 1995). Zaltman (1997) indicated that consumer marketing needs “research methods that enable both reason and emotion to surface, and to do so in a way that reflects their comingling” (p. 426).

When consumption emotions are included as a component of measuring customer satisfaction, “the assumption is that satisfaction is, at its core, a cognitive process that also contains affective elements” (Phillips & Baumgartner, 2002, p. 243). Alford and Sherrell (1996) who investigated the role of affect in evaluating satisfaction in the context of credence

services suggest that customers use two sources of information when making satisfaction judgements:

1. The first is intuitive logic (cognition) that focuses specifically on the consistency with which the service is performed (functional attributes).
2. The second is customers' affective reaction (consumption emotions) to the service encounter and the service provider.

This view is supported by research conducted by Homburg et al., (2006) who confirmed the existence of both cognitive and affective components of satisfaction judgement. Oliver (1997) viewed satisfaction judgement as a hybrid between cognition and emotion and indicated that in some instances satisfaction is driven primarily by cognition while in other circumstances affect plays a more prominent role. It is ultimately the interplay between cognition and emotion that provides the final judgement on satisfaction.

While the debate on the necessity of cognition for the experience of emotions may continue for many years, the standpoint taken in the current research is that cognition is a vital aspect of the experience of emotion. This is also the stance taken in cognitive appraisal theories, namely that emotions are the result of the cognitive evaluation of a situation (Frijda, 1986; Ortony et al., 1988; Roseman, 1984; Scherer, 1993).

The main objective of the current research is to better understand the interplay between cognition and emotion and how each of them influences the satisfaction derived from the services provided by a personal banker and the subsequent effect on word-of-mouth recommendations.

### **3.7 The Measurement of Consumer Emotions**

#### ***3.7.1 The use of Self-Reporting and Emotional Scales***

As described earlier, an emotion is a difficult phenomenon to define and also difficult to measure. According to Larsen and Fredrickson (1999) an emotion can be measured using one of three ways: self-report, facial expression and autonomic response. The use of self-reporting is extremely popular since it provides an effective and efficient method that allows customers to report the emotion that they felt as well as the intensity of the emotion through the use of rating scales (Seva et al., 2010).

In most self-report studies, researchers focus on measuring broad general dimensions of emotions instead of discreet emotions. Bagozzi (1993) indicated that there are two main reasons for this: firstly, because discriminant validity between measures of related emotions has been lacking; secondly, there exists an extremely large number of emotions that can be studied. Laros and Steenkamp (2005) reported over 300 emotion words that were used in 10 separate studies and Ortony and Turner (1990) indicated that emotion theorists cannot agree on what is to be considered to be a set of basic emotions that can account for all emotions. Emotion theorists also disagree in terms of the number of dimensions that should be measured. While authors like Russell focus on only two dimensions, Richins (1997) found as many as 16 dimensions.

In most research focusing on affect-related consumption, emotions are measured using scales developed in psychological studies. The models of emotions discussed earlier each gave rise to a specific way of measuring customer emotions. Both Izard (1977) and Plutchik (1980) who followed a biological perspective and focused on the importance of emotions in terms of survival, developed their own methods of measuring emotions. Izard who examined the facial expressions of people developed the Differential Emotions Scale (DES) that measured 10 emotions. Izard used different facial expressions that were then categorised and



subsequent emotions were enumerated. The DES-II has been used extensively in consumption emotion research. It uses 30 adjective items to measure the 10 fundamental emotions. Izard's scale has been criticised for having too many negative emotions and other authors suggest that a broader range of emotions should be used when measuring consumption emotions (Oliver 1992, Laverie et al., 1993; Mano & Oliver, 1993).

Plutchik identified eight primary emotions and together with Kellerman developed the Emotions Profile Index (Plutchik & Kellerman, 1974). The scale measures the eight emotions using 62 forced-choice emotion descriptor pairs that represent the eight basic emotions. Holbrook and Westwood (1989) developed a shortened version of the scale that contains three adjectives for each emotion; respondents indicate the intensity of each of the three adjectives. As in the case of Izard, this basic emotions approach has been criticised since it fails to explain how basic emotions give rise to more complex ones.

Russell (1979) defined affect as "emotion as represented in language" (1979, p. 345). His conceptualisation is based on the semantic differential technique developed by Osgood (1969). Mehrabian and Russell (1974) developed the PAD (Pleasure-Arousal-Dominance) scale that does not measure emotions per se, but instead measures the perceived pleasure, arousal and dominance elicited by a set of environmental stimuli. It uses 18 semantic differential items, six each for pleasure, arousal and dominance. The scale is predominantly used to measure emotions in non-consumption situations; the major critique of the scale is that one cannot infer the existence of specific emotions from a customer's PAD scores. The scale is relevant when studying the underlying dimensions of emotional states and not necessarily the specific emotions that customers experience.

Richins (1997) suggested that the nature of emotions elicited during customer consumption experiences is different from the emotional frameworks developed by psychologists. Richins conducted research in the automotive, recreational and sentimental

product industries and developed a Consumption Emotion Set (CES) that consists of 43 emotions. Although the model was specifically developed to be used in consumer research, Richins indicated that some of the emotions may still be irrelevant for specific consumption situations. In this regard Mudie et al. (2003) pointed out that very little empirical investigation has taken place in the service sectors where customers' emotional experiences in the consumption of services have been measured.

### ***3.7.2 Differentiating Between Positive and Negative Emotions***

There are a number of studies that indicated that positive and negative emotions contribute to defining satisfaction and that they form an important part of predicting behavioural intentions (Oliver, 1993; Barsky & Nash, 2002; Yu & Dean, 2001). However, a central aspect of the measurement of emotions is the differentiating effect of positive and negative emotions. Oliver (1993) found that positive and negative emotions directly affect satisfaction. Koenig-Lewis and Palmer (2014) raised the question whether positive and negative emotions must be regarded as extremes on a bipolar continuum or whether they are separate constructs that are structurally different in their effects. Previous research in the field of advertising and buying behaviour found that positive and negative emotions are quite different and can influence satisfaction in very distinct ways (Chaudhuri, 1998; Petzer et al., 2012).

It is therefore possible that positive emotions may influence certain aspects of satisfaction and recommendation while negative emotions affect totally separate and distinct aspects of satisfaction and referral behaviour.

### ***3.7.3 Basic and Dimensional-Based Methods***

Numerous pan-cultural taxonomic schemes have been developed to measure basic emotions (Izard, 1977; Plutchik, 1980). Westbrook and Oliver (1991) indicated that very often researchers have to develop ad hoc measures and classification schemes since

taxonomies based on the basic emotional approach do not account for more “complex patterns of emotional response that often characterize contemporary experience (e.g. sentimentality, affection, confidence)” (Westbrook & Oliver, 1991, p. 85).

However, various studies have shown a correlation between specific basic emotions (happy, pleased, contented) and high satisfaction of customers (Russell, 1979; Plutchik, 1980). Shaver et al., (1987) proposed an opposing view where they place satisfaction in a distinct grouping (separate from prototypical basic emotions like joy and sadness) based on its more differentiated semantic content.

Westbrook and Oliver (1991) indicated that previous studies focused exclusively on identifying 1) *types of emotion* and 2) *emotional dimensions* and do not consider emotional combinations or affective patterns across consumer emotional experiences. They indicate that such *patterns of emotional experiences* can be extremely valuable in understanding customer emotional experiences for two reasons:

1. They allow researchers to describe a customer’s overall emotional experience instead of “partitioning it into separate basic emotion types (e.g. joy, anger, guilt) or reducing it to emotion dimensions (e.g. pleasure, arousal)” (Westbrook & Oliver 1991, p. 86). They indicate that consumption experiences may involve more complex affective experiences and that analysis of emotional patterns may assist in identifying these higher-order affects.
2. A classification of the most important, naturally occurring emotional patterns provides an alternative basis for determining the “dimensionality of the psychological space of consumption emotion”. Once specific emotional patterns have been identified and translated to a corresponding dimensional space, their position in accordance with the satisfaction continuum can be established.

### ***3.7.4 Mediator Versus Independent Contributor***

Complicating the study of affect and its influence on satisfaction during consumption experiences is the fact that affect has been introduced in cognitive satisfaction models in one of two ways: either as a mediator or as an independent contributor (Liljander & Strandvik, 1997).

#### **Affect as a mediator**

Affect can act as a mediator between cognitive evaluations, such as service or product performance, conformation or disconfirmation of expectations or any other evaluative criterion and satisfaction. Oliver (1993) pointed out that several attributes in a service experience can be evaluated in terms of their impact on satisfaction. It is quite possible that some attributes may be regarded as potential sources of negative affect while others may cause positive affective responses. Similarly, Bradburn (1969) indicated that it is possible to experience both positive and negative emotions at the same time and that both contribute independently to satisfaction/dissatisfaction.

#### **Affect as an independent contributor**

Conversely, affect can be viewed as an independent contributor to satisfaction and the effect of satisfaction can be separated from other cognitive influencers of satisfaction. In this regard cognitive factors (disconfirmation of expectation, attribute performance) and affect can contribute independently to satisfaction. It is therefore important to understand whether emotions on their own independently influence satisfaction and recommendation.

### ***3.7.5 Categorical, Dimensional and Appraisal Theory***

In consumer behaviour studies, Watson and Spence (2007) indicated that there are three main approaches to the research and measurement of consumer emotions.

1. **Categorical approach:** Emotions are grouped into categories and different measurements are created to measure them (Emotion Profile Index; Plutchik &

Kellerman, 1974, (DES); Izard, 1977, (CES); Richins, 1997). One of the main criticisms of the categorical method is that these theories do not provide any explanation for different categories of emotion having different impacts on consumer behaviour.

2. **Dimensional approach:** A very common approach is to classify emotions in accordance with specific dimensions as identified by Russell (1980) (pleasure or unpleasantness; activation or deactivation). The main criticism of this method is that it provides insufficient differentiation between emotions that are positioned in the same dimensional space.
3. **Appraisal theory approach:** Theorists using the appraisal approach indicate that emotional differences are based on how one appraises a specific stimulus in the surrounding environment. In this regard Smith and Ellsworth (1985, p. 817) state that “the experience of emotion is closely associated with an organism’s appraisal of its environment”. Each individual appraises every situation in a unique way, which gives rise to emotions and behaviours that are specific to the individual and their current circumstances. While the appraisal approach is especially relevant to studying consumer consumption emotions (Johnson & Stewart, 2005) “there is no single stance, ambiguous constructs, terminology and methodology used” (Paunksnienė & Banytė, 2012, p. 283).

According to Roseman and Smith (2001) there are several reasons why appraisal theory is ideally suited to measuring consumer emotions:

1. Different appraisal sets of a situation yield different emotions.
2. The interpretation of an event (not the event itself) will yield different emotions in different people. If an individual evaluates the same situation differently it will also yield different emotions.

3. In all situations with the same appraisal sets, the same emotions will occur (i.e. situations in which the same emotions are elicited share some common features).
4. Appraisal starts the emotional process and precedes the emotion itself.
5. The appraisal process determines whether the resulting emotions are appropriate for the specific situation.

### ***3.7.6 Limitations of Existing Measures***

Although the previously discussed measures have been used extensively, they have some general limitations in terms of measuring consumption-related emotions. The first limitation is that they ignore everyday emotions that people experience. For instance, *love* is not measured and recognised in any of the aforementioned scales. Secondly, many of the scales include words like *revulsion*, *brooding* and *melancholy* that do not form part of people's everyday language and are difficult for customers to understand and rate. Thirdly, the appropriateness of these scales in measuring consumption emotions is debatable. These scales were primarily developed to measure emotions in interpersonal relationships that typically elicit emotions that are different from emotions experienced in a consumer purchasing environment.

## **3.8 Relevance of Emotions and Their Measurement for the Current Study**

### ***3.8.1 The Effect of Emotions on Satisfaction and Recommendation***

The current research focuses on the influence of customer emotions in a service setting and the impact of emotions on satisfaction and recommendation. Results from previous studies support the notion that customers' emotions have a direct effect on their evaluation of the service experience. According to Westbrook and Oliver (1991) customer emotions are a mental reaction to the use of a product or a specific consumer experience. In the context of service environments Gardner (1985) noted that emotions are easily affected by interpersonal

relations; therefore emotions have a significant impact in service industries where staff members communicate and interact with customers.

Numerous researchers have found a strong relationship between emotions and customer satisfaction and behavioural intention. Caruana (2002) indicated that customers evaluate the service provider in their mind and that customer satisfaction is the emotional reaction to this evaluation. Oliver (1993) claimed that positive and negative emotions directly affect satisfaction. Westbrook (1987) found that emotions elicited during consumption experiences are significant predictors of complaining behaviour and word-of-mouth interaction. The results from these studies demonstrate that emotions have a significant influence on consumers' satisfaction and behaviour on various levels.

The current research aims to identify specific emotions experienced by customers in a service setting and their impact on customer satisfaction and word-of-mouth recommendations. This information should assist organisations in designing service experiences that will elicit specific positive emotions and limit the occurrence of negative emotions to improve customer satisfaction and increase positive word-of-mouth recommendations.

### ***3.8.2 Operational Definition of Emotions***

Various definitions of emotions have been proposed over the years, each focusing on a particular component of emotions. Oatley and Jenkins (1996) focused their definition on the fact that emotions cause biological changes in a person while Izard (1991) defines emotion in terms of its motivating characteristics. Bourne and Russo (1998), and Desmet (2003) define emotions as a subjective internal state with biological and cognitive components. De Rivera (1977) and Lazarus (1991) focus on the transformational abilities of emotions, indicating a need for change in a person.

One of the most descriptive and well-received definitions is provided by Bagozzi et al., (1999, p. 194). According to them emotions can be defined as:

- a mental state of readiness
- that arises from cognitive appraisals of events or thoughts
- has a phenomenological tone
- is accompanied by physiological processes
- is often expressed physically (facial expressions, posture, and gestures)
- and may result in specific actions to affirm or cope with the emotions depending on the meaning that it has for the person experiencing the emotion.

For the purposes of the current research emotions are defined as:

- an evaluative judgement of a specific experience
- with a strong valence component (positive and negative sentiment) and various levels on intensity
- that influences a customer’s evaluation of the experience (overall satisfaction) and
- influences their intended future behaviour (word-of-mouth recommendations).

### ***3.8.3 Different Influence of Positive and Negative Emotions***

Koenig-Lewis and Palmer (2014) indicated that a critical question in measuring customers’ emotions evoked during consumption experiences is whether positive and negative emotions are “extremes on a bipolar continuum, or whether positive and negative emotions are separate constructs and structurally different in their effects” (p. 438). Research conducted in the advertising domain indicates that positive and negative emotions are quite distinct and could evoke structurally different responses (Chaudhuri, 1998; Petzer et al., 2012). It is possible that negative emotions affect one aspect of satisfaction and recommendations while positive emotions may affect other components. In this regard some authors suggest that negative emotions have a larger impact on overall customer satisfaction



and predicting behavioural responses than positive emotions, especially when investigating responses to poor service delivery. Varela-Neira et al., (2008) who investigated customers' negative emotions and their cognitive evaluations during service failures, found that negative customer emotions have an indirect effect on overall satisfaction.

In the current research it is postulated that positive and negative emotions have significant effects on customer satisfaction and the likelihood to recommend. The current research aims to better understand the differentiated influence of positive and negative emotions experienced by customers on their overall satisfaction and likelihood to recommend, and in addition aims to identify the specific emotions that are highly correlated with negative and positive satisfaction and word-of-mouth intentions.

#### ***3.8.4 Mediator Versus Independent Contributor***

Affect can be viewed as a mediator or as an independent contributor to satisfaction and recommendation. As stated by Bradburn (1969) it is possible to experience both positive and negative emotions at the same time and that both contribute independently to satisfaction or dissatisfaction.

#### **Investigating affect as a mediator**

It is possible for a customer to experience both positive and negative emotions during interaction with the banker. The recall of the emotions experienced during the interaction can contain both positive and negative valence. The sentiment analysis conducted in the current research (discussed in the next chapter) identifies both positive and negative emotions and then blends the intensity of each to provide an indication of the overall valence experienced by the customer. It is this overall valence that is used to determine the emotional impact on satisfaction and recommendation, thus taking both positive and negative valence into account to investigate the mediation effect of emotions.

**Affect as an independent contributor**

Affect can also be viewed as an independent contributor to satisfaction; the effect on satisfaction can be separated from other cognitive influencers of satisfaction. One of the main objectives of the current research is to understand both the impact of cognitive evaluations as well as the emotional evaluations of a customer's experience. Firstly, the two constructs (affect and cognition) are analysed as separate drivers of satisfaction, and secondly, their combined influence on satisfaction and recommendation is investigated.

As indicated, the relationship between cognition and emotion is relatively complicated. The approach taken in the current research acknowledges the complex interplay between cognition and emotions and that the two concepts are interwoven and may influence each other in terms of their impact on satisfaction and recommendation. While cognitive evaluations and emotional feedback are separated in the analysis in an attempt to identify which aspect has the greater impact on satisfaction evaluation, the possibility exists that their impact on each other may cause the two constructs to be highly correlated. It is further postulated that the combined use of cognitive and affective antecedents could provide the best predictive ability of overall satisfaction compared to each of these constructs on their own.

***3.8.5 The Interplay Between Cognition and Emotion***

The current research specifically focuses on the correlation between specific emotions experienced by customers and their impact on overall satisfaction and likelihood to recommend (word-of-mouth). Furthermore, it is proposed that there is a complex interplay between pure cognitive evaluations of the interaction and the emotions experienced during the interaction and that these collectively influence a customer's experience. This is aligned with the view proposed by Zajonc (1980) that affect and cognition are only "partially independent" (p. 151) of each other because they have complementary roles in human

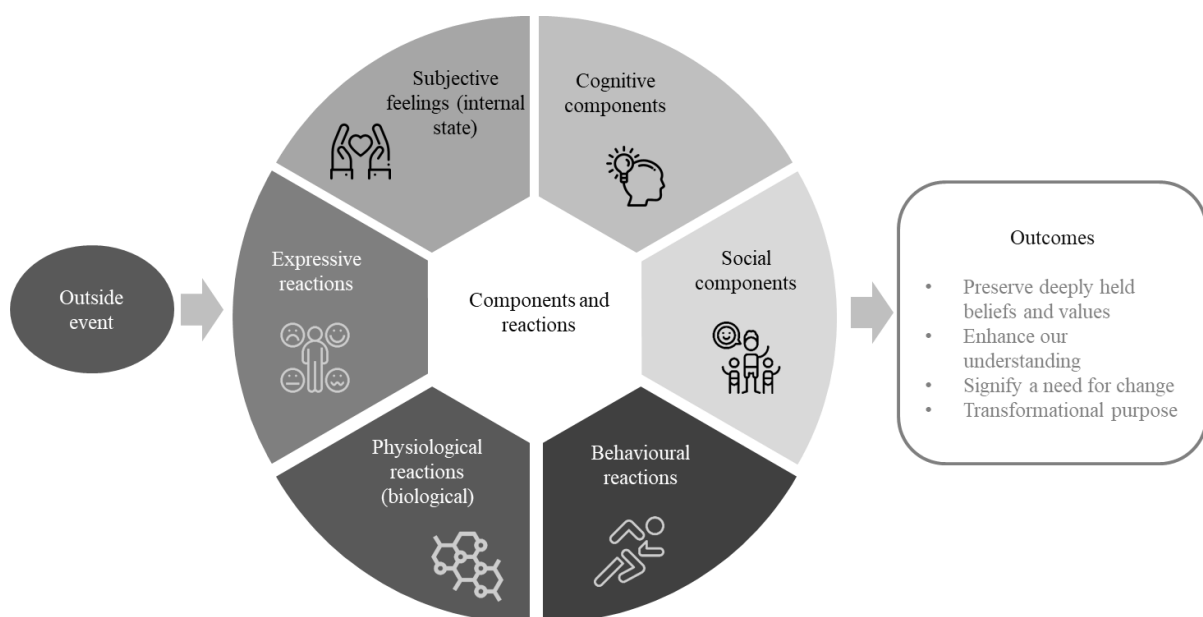
decision making. Bagozzi (1982) indicated that cognitive evaluations and emotional experiences diverge from each other in a parallel manner and that they act in concert to determine specific behaviours.

The aim of the current research is to better understand the interplay between emotion and cognition and how it influences a customer's experience. This information should assist managers and customer experience specialists to understand the impact of cognitive and emotive drivers of the service experience and enable them to develop strategies to manage and improve these service interactions to increase overall satisfaction and subsequently increase positive word-of-mouth recommendations.

The stance taken in the current research is similar to that of Bagozzi et al., (1999). Initially, emotions are triggered by some outside event (service interaction). The emotions experienced consist of subjective feelings, cognitive and social components and behavioural, physiological and expressive reactions. These emotions are characterised by having some type of functional and transformational outcome for the individual (Figure 3.13).

**Figure 3.13**

*Emotional Components and Outcomes*



### ***3.8.6 Cognitive Appraisal Approach as a Basis for the Current Study***

One of the main objectives of the current research is to investigate cognition and emotion simultaneously and better understand the interplay between cognition and emotion and their effect on satisfaction and recommendation. There are several characteristics and advantages of appraisal theory that make it an ideal approach for investigating customer's interactions with organisations.

Firstly, appraisal theorists state that while specific circumstances are often associated with very specific emotions, it is not the event itself that produces the emotion but rather the *psychological appraisal by the person that interprets the event* that produces the emotion.

A second characteristic of cognitive appraisal theory that makes it ideal for investigating customer emotions in a service setting, is the focus on the attainment of personal goals. In the majority of instances customers that interact with an organisation usually do so because they have a specific goal that they want to achieve. The focus on the attainment of personal goals and the subsequent emotions that are experienced, is one of the main reasons why a cognitive appraisal theory is ascribed to in the current research. Customers made an appointment to visit their personal banker for a specific reason and a specific goal they wanted to achieve; this can be seen as an important juncture in their business operations. The emotions that they experience as a result of this interaction influence their satisfaction with the experience and their future behavioural intention (i.e. likelihood to recommend).

A third aspect of cognitive appraisal theory that makes it appropriate for investigating customer emotions is that it acknowledges that emotions are driven by cognitive antecedents and therefore have predictive ability. Furthermore, the stance taken in the current research is that appraisal of the situation and its relevance for the individual is a necessary component of emotional experiences.

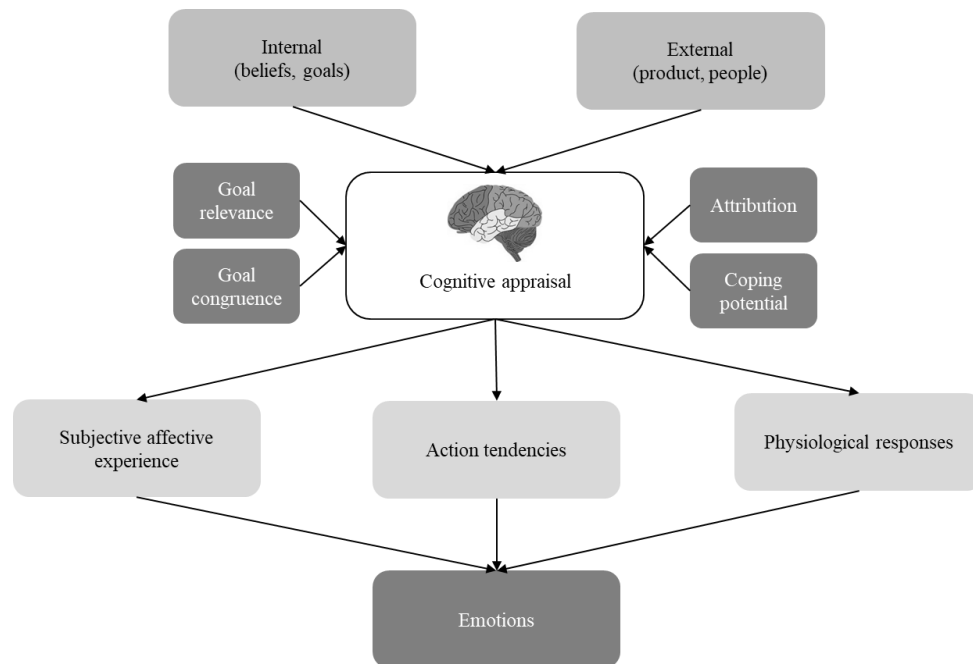
The current thesis supports the view taken by Lazarus (1974) that it is not the stimulus itself or the characteristics of the event that cause an emotional response but the individual's *subjective appraisal* of the event in the context of needs and goals. According to Lazarus, the emotions experienced by a customer are an interplay between the internal drivers of the customer (beliefs, goals) and external influences (product performance or service interactions).

The cognitive appraisal performed by the customer is influenced by various aspects:

- **Goal relevance:** The extent to which a situation is of personal significance to the customer.
- **Goal congruence:** The extent to which the situation is aligned with the needs and desires of the customer. Positive outcomes lead to positive emotions while negative outcomes lead to negative emotions.
- **Attribution:** An evaluation of the person that is responsible for the situation. This can be internal (self) or external (other people).
- **Coping potential:** The individual's own evaluation of their coping potential and the consequence of engaging in a coping activity.

The cognitive appraisal of these influences leads to a physiological response (increased heart rate), subjective experiences (affect) and action tendencies (discussions with service personnel). It is the combination of these three aspects that determines the specific emotions that the customer experiences.

Combining these various aspects into a conceptual model provides the basis for explaining the emotions that a customer could experience in a given situation (Figure 3.14).

**Figure 3.14***Cognitive Appraisal as the Originator of Emotional Experiences*

The following example demonstrates on a practical level how the model can be utilised. Consider a hypothetical scenario where the customer's business is struggling financially and he/she visits the personal banker (external person) with a request to increase the overdraft of the company (internal goal). During the discussion the personal banker denies the request by the business owner. The cognitive appraisal of the situation is influenced by the following:

- The goal relevance (the importance of acquiring an overdraft).
- The goal incongruence (personal banker rejecting the request).
- The owner blaming the personal baker (external attribution).
- The owner not feeling confident about the ability to change the situation (coping potential).

The subjective affective experience (dread, disappointment), the accompanying physiological experience (pale expression) and the owner's desire to change the situation

(action tendencies) may result in an emotional outburst of anger towards the banker (emotion). The same situation may result in excessive sadness, crying and depression if the owner feels that the banker is not responsible (attribution) or that he/she does not have the necessary skills and resources (coping potential) to argue with the banker and change the decision.

The proposed conceptual model (Figure 3.14) is very similar to the model developed by O'Shaughnessy and O'Shaughnessy (2003) that showed the link between emotions and consumer behaviour (the corresponding constructs are indicated in brackets). According to them, emotions are the end result of a quasi-causal process consisting of five aspects:

1. **Value system:** This includes key concerns the consumer may have and could be a result of evolutionary or cultural influences (similar to internal beliefs).
2. **Emotive stimulus:** The object that gave rise to the emotion that can be an event, person, action or attribute (similar to an external event).
3. **Appraisal:** Of the emotive stimulus (similar to cognitive appraisal).
4. **Desires:** Beliefs, wishes or wants (similar to internal beliefs and goals).
5. **Emotional response:** This includes all aspects of the emotion, i.e. cognitive effects, arousal, feelings, behavioural expressions or displays, actions guided by the emotion and choice processes (emotions experienced).

According to O'Shaughnessy and O'Shaughnessy, the primary function of emotions is to help the consumer decide between two equal choices when reason on its own cannot differentiate between the two choices. In the consumer market, understanding customer emotions is not the *raison d'être* and is of no value to organisations on their own. The ultimate objective is to understand how emotions drive consumer decision behaviour and how managing customers' emotions can be to the advantage of the organisation. The ultimate goal is to understand how specific customer emotions influence overall satisfaction with the

service experience and the likelihood to recommend the bank as a result of the experience. By identifying the effect that specific emotions have on satisfaction and word-of-mouth, organisations have the knowledge to design experiences that will elicit the desired emotions and that will ultimately improve customer satisfaction and lead to positive word-of-mouth recommendations.

### **3.9 Measurement of Emotions in the Current Study**

There are several limitations to existing measurement of emotions; these are addressed in the current research. The next section firstly summarises these critiques and secondly provides a summary of the approach taken in the current research.

#### ***3.9.1 Limitations of Psychological Emotion Scales***

Different approaches can be followed when measuring emotions. While numerous scales have been developed in the psychological domain to measure emotion, Richins (1997) indicated that these scales are not ideally suited for measuring consumer consumption emotions for several reasons:

- They were primarily developed to measure interpersonal relationships that elicit emotions that are different from emotions experienced in a consumer purchasing environment. Therefore, many of the emotions measured in these scales are irrelevant to consumption situations (i.e. they do not capture everyday emotions experienced by customers).
- They measure a limited number of emotions and do not include the very specific emotions elicited during customer interactions (i.e. a broader range of emotions is required).
- Many of these scales include words that are difficult for customers to understand and rate (e.g. *revulsion*, *brooding* and *melancholy*).



- They contain too many negative emotions.

### ***3.9.2 Limitations of Using a Basic Emotion Approach***

The use of a model that includes only basic emotions has some limitations for studying consumer emotions. Firstly, the different models developed by Ekman, Izard and Plutchik yield different patterns of emotions since they are based on different sets of basic emotions. Each of these models differs in terms of the dimensions identified and produces different results when the impact on satisfaction and recommendation is determined. Secondly, it limits the number of emotional categories that can be identified to the small set of emotions contained in the specific model that is used. Thirdly, it fails to explain the existence of more complex emotions found in consumer consumption experiences (Ortony & Turner, 1990).

### ***3.9.3 Limitations of Using Categorical and Dimensional Approaches***

#### **Categorical**

Using a categorical approach starts by grouping a limited number of emotions into different categories from the onset. The measurement tool is then used to identify the various categories. The most prominent critiques of the categorical approach are firstly, it measures only a small number of specific emotions included in the model; therefore, the results are impacted by the chosen model being used; secondly, it fails to explain why different categories (groups) of emotions have different impacts on consumer behaviour.

#### **Dimensional**

The dimensional approach classifies emotions into different dimensions, of which the PAD model by Mehrabian and Russell (1974) is the most prominent. It classifies and organises emotions according to three constructs: Pleasure-displeasure, Arousal-non-arousal, and Dominance-submissiveness. The main criticism of the dimensional approach is firstly, it provides insufficient differentiation between discreet emotions that are grouped in the same

dimensional space. Secondly, some of the emotions represented by the arousal or non-arousal dimension are not *real* emotions (e.g. sleepy, tired, placid).

### ***3.9.4 Approach Followed in the Current Study***

The approach followed in the current study was inspired by the statement of Westbrook and Oliver (1991) who indicated that in many instances emotion researchers have to develop ad hoc measures and classification schemes to measure complex emotions found in contemporary consumption experiences, with specific reference to the sentimentality of customer experiences. It was decided to follow a unique approach in measuring customer emotions based on sentiment analysis of verbatim feedback from customers.

The following section broadly describes the foundational approach followed in the current study with specific reference to the following aspects:

- Appraisal approach using self-reported questionnaires
- Using a large array of emotional descriptors instead of a limited number of emotions as with the traditional categorical or dimensional approaches
- A two-dimensional approach; categorising and analysing emotions in terms of their valence and arousal
- Identifying patterns of emotional experiences
- The use of sentiment as a method to analyse customer emotions

**3.9.4.1 Appraisal Approach Using Self-Reported Questionnaires.** An appraisal-based approach was followed to elicit customers' emotions by asking them to evaluate the interaction with their personal banker and then explain in their own words which emotions they experienced. A self-report questionnaire was used to collect customer responses that included emotional and more cognitive evaluations of their experience and ratings of overall satisfaction and the likelihood to recommend.

**3.9.4.2 Utilising a Large Array of Emotional Descriptors.** The current research aims to compensate for the shortcomings of only using a specific subset of basic emotions (i.e. basic emotional models) by using the full array of emotional descriptors reported by customers. The decision not to base the emotional classification on any of the basic emotional models discussed previously is motivated by reasons.

Firstly, these basic emotional models are limited to a very small set of basic emotions that is measured using structured predefined scales. Customers that report their emotions during consumption experiences by means of open-ended unstructured feedback generally use a wide variety of words and phrases to describe their emotions. In many instances some these descriptors cannot be classified as pure basic emotions included in any of the basic emotional models.

Secondly, emotional models developed by previous theorists were each developed in very specific contexts that cannot be directly related to the current study. Izard (1977) investigated customer emotions only in the automobile industry while Plutchik (1991) exclusively used an evolutionary lens focusing on the role of emotions in terms of human adaptation and survival. These contexts are very dissimilar to the personal banking experience investigated in the current study.

Instead of starting with a narrow view of basic emotions and attempting to assimilate the emotional experiences of customers to previously limited models that focus on basic emotions only, it was decided to start with a very broad view of emotional descriptors and categorise them independently of the basic emotional sets. These emotional clusters are used to develop emotional patterns and an emotional model specifically focused on and relevant to the personal banking industry. However, the main emotional clusters identified using this approach are compared to the emotions used in these basic models in an attempt to identify the relevance and functional value of these models in other contexts.

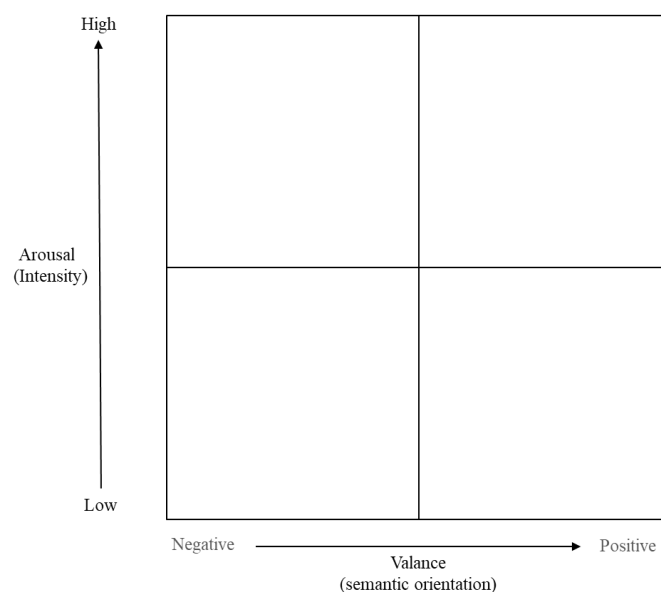
**3.9.4.3 Two-Dimensional Approach to Identify Core Affect.** The current study follows the same approach as proposed by Russell (2003) using a two dimensional approach (Figure 3.15) to identify core affect for two main reasons:

Firstly, most of the previously developed models of emotion show empirical evidence of the two spatial dimensions (arousal and valence). Research in this regard was conducted by Westbrook (1987) who found that emotions can be characterised by independent dimensions of affect (negative and positive) and that these dimensions and their reported intensity correlate with the satisfaction experienced by consumers.

Secondly, the meaning of most mood-, feeling-, sentiment- and emotion-related words can be accounted for using these two dimensions. The pleasure-displeasure or valence component is represented by the negative and positive differentiation (i.e. the semantic classification of the verbatim feedback of customers) while the arousal component is represented by the intensity of the emotional experience reported by customers. Patterns of emotional descriptors are plotted in the two-dimensional space (Figure 3.15). The approach is described in detail in the methodology chapter.

**Figure 3.15**

*Two-Dimensional Spatial View of Emotions*



**3.9.4.4 Identifying Patterns of Emotional Experiences.** The current study follows the suggestion by Westbrook and Oliver (1991) that instead of focusing on either identifying specific types of emotion or emotional dimension, patterns of emotional experiences can provide more insight into customers' consumption emotions. Firstly, this approach allows researchers to identify the overall emotional state of customers instead of focusing on discrete emotions only. These emotional patterns and subsequent dimensions are identified utilising semantic content analysis of customers' emotional descriptors. Secondly, unique patterns of emotions are identified by clustering discrete emotions in correlation with their position on the satisfaction continuum, which is similar to the approach followed by Westbrook and Oliver (1991). Furthermore, patterns of emotions are identified in relation to their impact on overall satisfaction and recommendation. These satisfaction-driven and recommendation-driven patterns became the foundation of the emotional impact model developed in the current study.

#### **3.9.4.5 Customer Sentiment as a Basis for Categorising Emotional Experiences.**

##### **The use of language to convey emotions**

Customers use language to communicate and share their experiences and emotions. The emotion that customer's experience is often conveyed at a lexical level. Customers that describe their experience as *fantastic*, *wonderful* or *amazing* indicates an emotion of joy and happiness. However, customers' can describe their disappointment or dissatisfaction with an experience by using words like *frustrated*, *impersonal* or *disgusting*.

Most research in the area of customer satisfaction that incorporates the measurement of customer emotions is aimed at detecting explicit expression of emotions (i.e. happy, angry, frustrated or disappointed). However, customers do not always use emotion-bearing words to describe their emotions (Pennebaker et al., 2003) but rather express them indirectly, using words and sentences that can be interpreted affectively (Balahur & Montoyo, 2008; Balahur

& Steinberger, 2009). Maia and Santos (2018) indicate that “language expresses all kinds of emotions, sentiments, and opinions at every level of communication, and not just in clearly evaluative words like evil or beautiful” (p. 11). Written language presents customers with a wide range of implicit and explicit linguistic features and patterns to express their sentiment (Gopaldas, 2014). Disregarding these linguistic means of sentiment expression reduces the insight that can be gained by analysing customer verbatim feedback (Ludwig et al., 2013).

### **Sentiment of verbatim feedback**

Emotions are a complex phenomenon and authors cannot agree on one accepted definition for what emotions entail. Izard (2010b) conducted interviews with leading emotional experts concluding that the concept *emotion* is ambiguous and that there is no consensus about its meaning. Izard (2010b) indicates that “the problem is not that the term *emotion* has no clear meaning but that it has many meanings” (p. 385). Although the concept *emotion* is extensively used by psychologists, academics and research practitioners, capturing, measuring and analysing customer emotions during consumption experiences remains a challenge for researchers (Izard 2010a; Mulligan & Scherer 2012). Emotions are considered by many researchers as an inner experience of subjective feelings and it is this subjectivity that makes it difficult to study (Hockenbury & Hockenbury, 2007).

Customer sentiment – customer opinions based on their underlying feelings and emotions – (Liu, 2015) provides an effective way to measure and analyse customer emotions. *Sentiment* refers to how customers’ expresses their opinions and emotions through the use of language while semantic content analysis refers to the process of automatically distilling customer sentiments from text (Pang & Lee, 2008). The following chapter explains the approach followed in the current study using sentiment analysis to evaluate customer emotional feedback.

### Chapter 4: Sentiment Detection and Analysis

Emotions form an integral part of one's existence and affect how one perceives and communicates with the world around one. One conveys one's emotions through speech, body language, facial expressions and written text. This is not only true for individuals in their personal lives but also relevant in a consumer consumption environment since customer emotions affect customers' purchase behaviour and word-of-mouth recommendations (Yu & Dean, 2001, Dolan, 2002).

Customer emotions represent customers' intrinsic evaluation and feelings about a product, service, or company; therefore, it is valuable to understand emotional tendency (positive or negative) at any given time (Ortigosa et al., 2014). Understanding customer emotions is critical for organisations that want to improve the experience of their customers (Westbrook & Oliver, 1991; Bagozzi et al., 1999; Gracia et al., 2011).

It is unlikely that *all* emotions felt by customers will have the same impact on their experience and it is, therefore, important for organisations to quantify the effect of emotions on satisfaction and word-of-mouth recommendations. In this regard Bustillos et al. (2019) indicated that the extraction and processing of customer opinions is a complex and difficult task; analysing free-response data in a quantitative statistical manner remains a challenge (Scherer, 2005).

This chapter explains how sentiment analysis can be used to identify and analyse customer opinions and emotions and is structured as follows:

1. The construct of sentiment as a proxy for emotions is explained and defined.
2. The rise of sentiment analysis as a method to analyse unstructured data is reviewed.
3. Sentiment analysis is defined and its position within the larger fields of Artificial Intelligence (AI), Machine Learning (ML), Affective Computing (AC) and Natural Language Processing (NLP) is examined.

4. The various types of sentiment analysis are described.
5. Some of the challenges faced when conducting sentiment analysis are investigated.

## **4.1 Customer Sentiment**

### ***4.1.1 Sentiment Representing Emotions***

Customer sentiment provides an effective approach to measure customers' underlying emotions regarding their experiences. According to the Merriam-Webster Dictionary "sentiment suggests a settled opinion reflective of one's feelings" (Merriam-Webster online, 2020); the concept *feeling* is defined as "the conscious subjective experience of emotion" (Van den Bos, 2006). Therefore, the expression of sentiment is directly related to the expression of emotion in text (Balahur et al., 2012). Stieglitz and Dang-Xuan (2012) indicated that the concept *sentiment* generally refers to the emotional state (judgement or evaluation) that someone has about a person or topic or to the intended associated emotional communication. Sentiment, therefore, contains an evaluative component and provides a means to identify the underlying emotional state of the person.

Sentiment can be expressed in one of three ways: directly (e.g. "I'm very happy with the service I received"), indirectly (e.g. "My banker is very professional and assisted me quickly") or implicitly by using words that are reflective of a specific sentiment (e.g. "They were very rude and I won't go back there"). In each of these situations the sentiment expressed by the customer can be used to identify underlying emotions.

### ***4.1.2 Defining Sentiment***

The Cambridge Dictionary defines sentiment in its most basic sense as a general feeling, attitude or opinion about something. It represents a thought, opinion or idea based on a feeling about a situation or a way of thinking about something (Cambridge Dictionary, 2020).



Therefore, one's sentiment about something represents one's thoughts, judgements and attitudes about a specific topic and is prompted by one's feelings about the topic.

According to Chaudhuri (2006), consumer research classifies sentiment into two broad categories: rational sentiment and emotional sentiment. "Rational sentiments are from rational reasoning, tangible beliefs, and utilitarian attitudes and consequently express no emotions" (Liu, 2017, p.15). Customers might express rational sentiment by referring to general aspects of their service experience (e.g. "The consultant was very friendly" or "Their service is extremely efficient"). Conversely, emotional sentiment is based on intangible and emotional aspects and represents customers' personal feelings about an experience and embodies their psychological state of mind. Examples of emotional sentiment may be, "I'm extremely happy about the way they solved my issue" or "They made me so angry I wanted to shout at them". Emotional sentiment is stronger than rational sentiment and is usually more important in practice (Liu 2015). From an organisational perspective it is important to understand the emotional association customers possess about the company, its products and services. Connecting with customers emotionally and satisfying them on a deep emotional level can generate brand congruence that is sustainable and long-lasting.

Norricks (1978) indicated that sentiment communicated by customers represents an emotional response to a specific situation. The strength and intensity of their underlying emotions can be deduced from the words and phrases that they use to convey their sentiment. Customers providing feedback on their experiences and using words like "wonderful", "fantastic" and "splendid" will undoubtedly be more satisfied than customers describing their experience as "good" or "adequate". Ordenes et al. (2017) indicated that most consumer research using sentiment analysis neglects the inherent strength aspect of customer feedback and that consumer intentions cannot be accurately and sufficiently inferred without acknowledging the inherent strength and intensity conveyed in customer feedback.

Sentiment, therefore, represents customers' opinion about a certain topic and is reflective of their underlying feelings and emotions. Customer sentiment is illustrative of the intensity of underlying feelings and emotions.

## **4.2 The Rise of Sentiment Analysis**

### ***4.2.1 Proliferation of Customer Data***

Before the emergence of the internet individuals primarily engaged directly with the people who shared their personal and professional lives. Most of one's interactions were either talking to someone face to face or telephonically. The emergence and ever-increasing use of the internet has changed the way people communicate. With the growing popularity of media-sharing services in what is known as Web 2.0, millions of people share their opinions, sentiments and emotions over the web. A multitude of online platforms (Facebook, Facebook Messenger, YouTube, WhatsApp, Telegram, WeChat, Tumblr, Twitter, Instagram, LinkedIn, etc.) have been developed over the last two decades to facilitate communicating with one another and are used to share views and opinions. Internet and online activities like chatting, conferencing, blogging, online transactions and e-commerce are used on a daily basis by millions of people. Companies create online forums and communities to collect customer feedback while social media platforms like Hello Peter, Trip Advisor, Trustpilot, PowerReviews, Google My Business, Amazon, and Yelp provide customers with the means to post reviews and share their experiences and opinions with other people. Consequently, all of this online activity has created huge amounts of structured and unstructured data. A recent study published by Frobes (Marr, 2018) estimated that 3,7 billion people have access to the internet and that 2,5 quintillion bytes of data are created every day. To put this in perspective, it is estimated that 90 per cent of the data in the world was created in the last two years.

While all these platforms are used by customers to express their opinion, Liu (2017) indicated that sentiment and opinion are different from factual information because of their subjective nature. The subjectivity stems from the fact that different people have different ideologies, different interest and passions and different experiences. Individuals interpret their experiences in a very unique and personal way. Two people experiencing the same situation may have vastly different sentiments about the experience. Within a customer experience environment this subjectivity denotes and represents the opinion of only one individual. While the opinions of customers can be extremely valuable and insightful for organisations, organisations need to collect and analyse the opinions and sentiments of large samples of customers to gain insights that is representative of their entire customer base.

#### ***4.2.2 The Need for Organisations to Analyse Data***

Most of the feedback from customers on online platforms is in the form of written text. Customers write what they think in reviews, blogs, company web pages and social media feeds; other people comment on their views in writing.

Large organisations with millions of customers are inundated by the sheer volume of customers using these channels to comment on their experiences with the organisations they engage with. As described by Kho (2010), “publishing is now in the hands of the public, who have a vexing tendency to post with blunt honesty in unstructured formats via blogs, tweets, e-mails, forums and reviews about products and services that delight or disappoint them, and those opinions hold weight” (p.10). Since customers share their experiences with millions of existing and potential customers, it may affect the suitability of the company (Valdivia et al., 2017). The importance of analysing sentiment in cognitive, evaluative, behavioural and commercial settings has been recognised by consumer research (Baumeister et al., 2007; Richins, 1997). Gopaldas (2014) indicated that sentiment fuels institutional change, market dynamics and economic transformation.

Companies need to develop methods to extract insights from all the reviews and opinions available to them but achieving this is quite cumbersome (Ravi & Ravi, 2015). Today's information society challenges individuals and organisations to develop and employ mechanisms to search and retrieve relevant data from the huge quantity of available information and mine it to transform it into knowledge that they can use to make the most appropriate decisions (Montoyo et al., 2012).

The high quantity of constantly incoming data that needs to be processed in real time to make informed decisions requires the use of automatic information mining techniques and an important shift in research – from data-constrained to data-enabled paradigms (Gopal et al., 2011). Customers can use either single words, sentences or complete paragraphs to express their opinions. Sentiment strength is conveyed through discourse patterns of explicit and implicit sentiment expression (Ordenes, 2017). Sentiment analysis provides an effective automated method for organisations to extract meaning effectively from the large quantities of unstructured data available to them (Liu 2012). It has been widely adopted by businesses as a method to extract and analyse unstructured feedback from customers. It is primarily used in the areas of social media analytics and customer experience programs to determine customer's opinions about products and service, allowing the company to respond quickly to issues and create a competitive advantage (Liu, 2012).

#### ***4.2.3 Sentiment Analysis – A Method to Analyse Unstructured Data***

Unstructured data refers to any type of information that does not have a pre-defined data model or is not organised in a pre-defined manner; typically it is not a good fit for mainstream relational databases. Unstructured data exists in many forms and includes images, audio and video files. However, one of the most used forms of unstructured data is written text. The rise in social media usage and customers' ability to use these platforms as

prominent channels of communication have contributed to the use of informal language used to express customers' views and opinions, typically in the form of written text.

Sentiment analysis has been the focus of academics, organisations and research practitioners over the last two decades as a method to analyse public and customer opinions presented in an unstructured format. Sentiment analysis – also known as opinion mining, appraisal extraction and attitude analysis – refers to the computational task of extracting, analysing and classifying comments, opinions and attitudes expressed in textual format (Balahur, 2011; Montoyo et al., 2012). “Sentiment analysis aims to reveal the settled feeling or emotion behind textual data and to identify favourable and unfavourable attitudes, opinions, and emotions” (Eletter, 2020, p. 1664) and has been propagated as a fruitful method to discover valuable insights from the large volume of unstructured data (Philander & Zhong, 2016). Sentiment analysis is specifically used in the area of customer satisfaction for understanding customer opinion about product and services (Kang & Park, 2013); it has evolved from classifying the valence of written text to measuring sentiment strength (very negative to very positive), specifying individual discreet emotions (Pang & Lee, 2008).

Sentiment analysis transforms qualitative information in the form of written text into numeric values like a sentiment score (Thelwall et al., 2011) and these sentiment scores can be utilised as a measure of customer attitude and satisfaction (Mostafa, 2013; Xiang et al., 2017). The insight and knowledge gained by analysing unstructured data using sentiment analysis is invaluable for organisations since it provides organisations with an effective method to analyse customer opinions about services and products and can be utilised to improve said products and service and ensure that they meet customer expectations.

### 4.3 Sentiment Analysis

#### 4.3.1 *What Sentiment Analysis Is*

Sentiment analysis is a form of interpretative subjective analysis that identifies positive and negative opinions, emotions and evaluations expressed in natural language (Wilson et al., 2009); it is a text mining technique that analyses the semantic expressions in a corpus of text and classifies them into different categories (e.g. positive, negative or neutral) based on the semantic orientation of the words (Pang & Lee, 2008). The main aim of sentiment analysis is to detect the polarity of text – whether a piece of writing expresses a positive, negative, or neutral opinion. Sentiment analysis is commonly used to refer to the goal of determining the valence and polarity in written text. In more general terms it is focused on determining the attitude and emotion – or affectual attitude, like joy, anger, frustration and excitement – aimed at a specific target or topic (Liu, 2015).

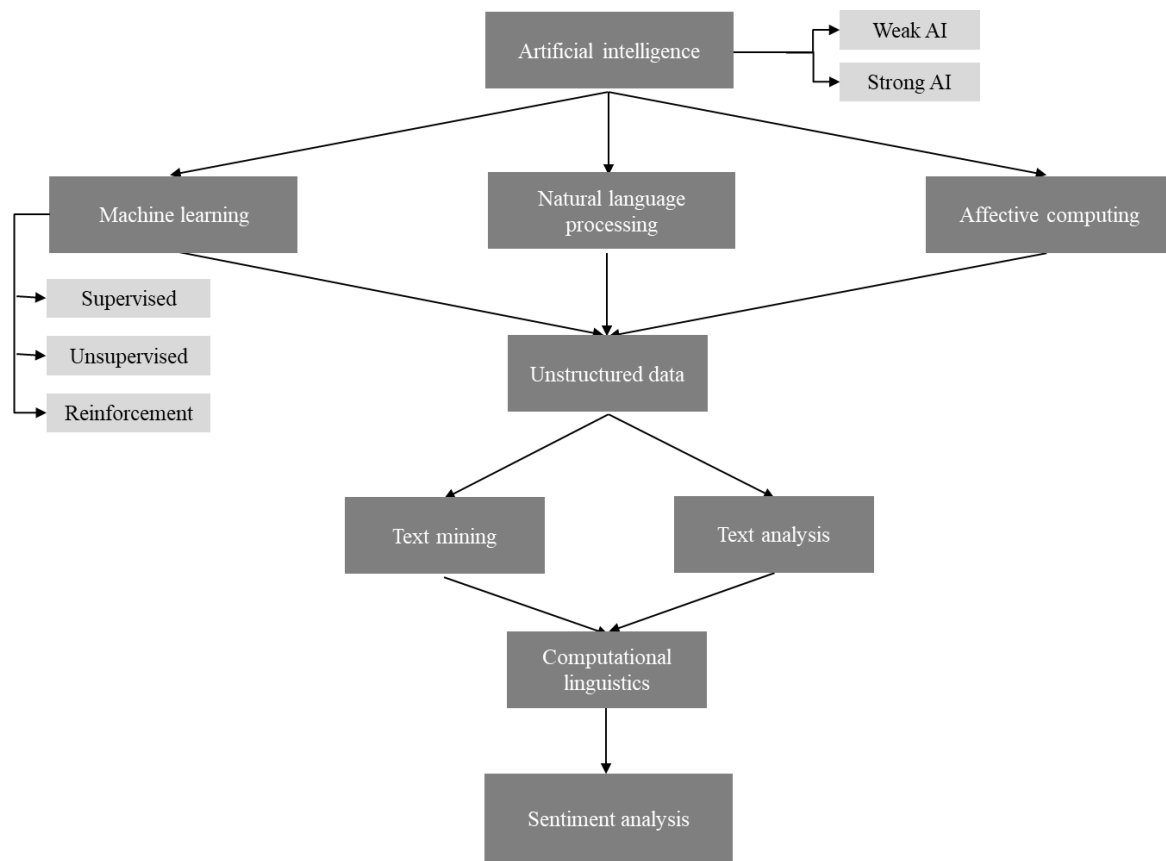
As a scientific method sentiment analysis has been developed to make quantitative sense of qualitative data and generally refers to the use of Natural Language Processing (NLP), text analysis and Computational Linguistics (CL) to identify and extract subjective information from text (Pitt et al., 2018). The concept *sentiment analysis* is used interchangeably with concepts like; opinion mining, opinion extraction, sentiment mining, subjectivity analysis, affect analysis, emotion analysis and review mining (Micu et al., 2017). Within the consumer research environment sentiment analysis or coarse-grained emotion analysis is used to study the perceptions and opinions of customers regarding products and services (Balabantaray et al., 2012). “Sentiment analysis is an approach for analysing people’s opinion, sentiment, attitude, evaluation and emotions towards an entity. An opinion is an individual’s belief and is the source of an individual’s assessment, judgment and evaluation of any event or idea” (Rout et al., 2018, p. 182).

The opinions of others have an enormous impact on one's choices and decisions since one listens to the reviews and recommendations of friends and family members when purchasing a product or considering a service provider. Organisations with the ability to analyse customer sentiment about their products and services have a competitive advantage since it enables them to act on the views and opinions of customers in a timely fashion and address substandard product features or unsatisfactory service experiences.

While the field of sentiment analysis in the area of customer satisfaction management is relatively new, it is increasingly being adopted by academics, researchers and practitioners due to the exponential growth in the large amount of online data available to organisations. However, its origins in the areas of Artificial Intelligence (AI), Machine Learning (ML), Natural Language Processing (NLP) and Affective Computing (AC) are well established. The following section reviews the field of sentiment analysis in the wider framework of these disciplines.

#### ***4.3.2 Sentiment Analysis in Context***

The fields of Artificial Intelligence (AI), Machine Learning (ML), Natural Language Processing (NLP) and Affective Computing (AC) is vast and it is beyond the scope of the current thesis to explore any of these fields in detail. However, a rudimentary understanding of the foundational building blocks of sentiment analysis and how it is continuously being influenced by these fields will facilitate one's understanding of how sentiment analysis is applied within a business environment. Machine learning (ML), Natural Language Processing (NLP) and Affective Computing (AC) are three sub-fields of Artificial Intelligence (AI) while sentiment analysis is a new sub-field in these multi-disciplinary fields that use NLP to analyse unstructured data (Consult Figure 4.1).

**Figure 4.1***The Foundations of Sentiment Analysis*

The following section briefly explains each of these areas and how it contributes to and influences the area of sentiment analysis.

**4.3.2.1 Artificial Intelligence (AI).** Artificial intelligence (AI) is the simulation of human intelligence processes by machines, especially computer systems. These processes include learning (the acquisition of information and rules for using the information), reasoning (using rules to reach approximate or definite conclusions) and self-correction (Rouse et al., 2020).

AI refers to the ability of machines to learn from their experiences and adjust to new inputs. Making use of technologies like deep learning and NLP, computers can be trained to perform specific tasks, specifically the processing of large amounts of data and finding



patterns in the data. AI can be categorised as either weak or strong. Weak AI refers to any computer system that is designed to perform only one specific task. An everyday example of such a program would be a chess playing computer. Conversely, strong AI, also known as artificial general intelligence, is an AI system with generalised human cognitive abilities. When presented with an unfamiliar task, a strong AI system is able to find a solution without human intervention.

There are, however, many concerns for using AI. One of the most important concerns relevant to the field of sentiment analysis is that deep learning algorithms that form the foundation of most advanced AI are only as smart as the data they are given in training. Since humans select which training data should be provided to the program there is the inherent risk of human bias.

**4.3.2.2 Machine Learning (ML).** Machine learning (ML) forms an integral part of AI. As the term implies, ML is the ability of algorithms not only to analyse data but to learn and improve through the use of the data without additional guidance (Mitchell, 1997). Machine learning is the scientific study of algorithms and statistical models that computer systems use to perform a specific task without using explicit instructions but by relying on patterns and inference instead (Koza et al., 1996). ML is regarded as a subset of AI that is based on the notion that computer systems can learn from data that they are given, identify patterns and make decisions without any additional input from humans. These algorithms use sample data, also known as training data, to build mathematical models that enable them to make predictions, forecasts and decisions without being explicitly programmed to perform these tasks.

There are three types of ML algorithm that affect how ML programs are used in the context of sentiment analysis: supervised, unsupervised and reinforcement learning.

Supervised learning refers to ML where data sets are labelled so that *patterns can be detected* (own emphasis) and used to label new data sets. In unsupervised learning data sets are not labelled and are sorted according to *similarities or differences* (own emphasis). In the field of statistics, cluster analysis is a good example of unsupervised learning since commonalities in the data are identified and each new piece of data is analysed in terms of the presence or absence of these commonalities. Reinforcement learning refers to programs where data sets are not labelled but after performing several actions the AI system is provided with feedback. Most computer software games use unsupervised learning since there are generally too many possible outcome states to use hard-coded rules. Software programs simply learn by playing the game repetitively and being rewarded for good decisions and penalised for bad ones.

**4.3.2.3 Affective Computing (AC).** Affective Computing (AC), sometimes referred to as artificial emotional intelligence or Emotion AI (Kaliouby, 2017), is the study and development of systems and devices that can recognise, interpret, process and simulate human affect. It is an interdisciplinary field spanning computer science, psychology and cognitive science (Tao & Tan, 2005).

While AC forms part of the broader field of AI it has a supplementary and contrasting role in the field of sentiment analysis. The role of AC in the field of sentiment analysis is to identify emotional content within a section of text, allowing sentiment analysis programs to identify the valence (polarity) and emotional intensity imbedded in the text. AC is a relatively new area in the field of AI and needs to be developed to increase its usage in commercial environments.

**4.3.2.4 Natural Language Processing (NLP).** Natural Language Processing (NLP) in its broadest sense is the processing of human language by a computer program – assisting computers to understand human’s natural language. It is a branch of AI that attempts to

bridge the gap between humans and computers with specific focus on the use of human language. More specifically, applying ML techniques to written language, NLP algorithms have the ability to process written text and learn to read and interpret language (LaPlante & Coleman, 2017).

NLP is a form of linguistic and textual assessment with the ultimate aim of deciphering and understanding human language and then applying it in a way that is useful and valuable. Two of the most used and earliest forms of NLP are the identification of spam e-mails by analysing the words used in the subject line and the ability of word processors like Microsoft Word to identify grammatical errors in a text document. NLP was developed in response to the fact that much of the information used in capital markets are unstructured. However, teaching machines to understand how humans communicate is quite difficult since most human language is formatted and designed for humans and not for computers (Dumont, 2017).

NLP applies algorithms to identify and extract the natural language rules in such a manner that the unstructured language data is converted into a form that computers can understand (Garbade, 2018). NLP performs this function by observing the words being used in a sentence together with the sentence structure and then identifying the meaning conveyed in a sentence. However, mastering language is a difficult task for computers because of the ambiguity and imprecise characteristics imbedded in language. The rules that we have created to pass information from one person to another is not systematic and straightforward and difficult for computers to overcome. One of the best examples of this is the use of sarcasm. To understand sarcasm, one has to deconstruct contradictions between intended meanings. Furthermore, sarcasm is usually conveyed through tone of voice and body language and can very easily be misinterpreted when communicated using written language (Parker & Ng, 2005).

For computers to understand human language requires more than an understanding of words. They also need to understand how words and concepts are connected to deliver an intended message. Traditional methods of NLP stemmed from the need to enable computers to extract and make sense of information in the form of unstructured text (Montoyo et al., 2012).

**4.3.2.5 Unstructured Data.** Unstructured data typically refers to data that is not organised in a pre-defined manner (i.e. traditional rows and columns in a database), meaning that it cannot be used in a typical mainstream relational database and that it does not comply with conventional data models. Although there are many types of unstructured data (images, audio and video recording, and machine generated data) the most common form is data consisting of large volumes of text. These are typically generated through business documents, social media, blog posts, e-mail messages, call centre transcriptions and survey responses. Although it is impossible to calculate, it is estimated that 80 to 90 per cent of all data in an organisation is unstructured. Analysing these large amounts of unstructured data is a research and business intelligence challenge.

**4.3.2.6 Text Mining and Text Analysis.** Text mining and Text analysis are often used as synonyms and several authors use these terms interchangeably to refer to the extraction of insights from unstructured text (Ittoo et al., 2016; Redmore, 2015; Li et al., 2018). Conversely, other authors make a definitive distinction between the two concepts and indicate that text mining always precedes text analysis (Keiser, 2015).

Kobayashi et al. (2018) indicate that while text mining focuses on extracting patterns by counting words and term frequencies, text analysis takes advantage of other textual properties like grammar and sentence structure and uses additional techniques, like computational linguistics, corpus linguistics and machine learning.

In the current study I do not differentiate between text mining and text analysis since the ultimate aim in the current study is not affected by differing viewpoints regarding the two concepts. The current study uses NLP methods to perform sentiment analysis at sentence level (unstructured text), using computational linguistics.

**4.3.2.7 Computational Linguistics (CL).** In its broadest sense Computational Linguistics (CL) is the interdisciplinary field concerned with understanding written and spoken language from a computational perspective, i.e. looking at ways that a machine would treat natural language. More specifically, computational linguistics is the application of computer science to the analysis, synthesis and comprehension of written and spoken language (Rouse, et al., 2020). CL is a relatively new field and investigates that automated processing and interpretation of human language. It focuses on the mathematical and logical characteristics of natural language and develops algorithms and statistical models to process and interpret language automatically.

CL is the scientific and engineering discipline concerned with understanding written and spoken language from a computational perspective (Schubert, 2020). “To the extent that language is a mirror of mind, a computational understanding of language provides insight into thinking and intelligence. In computational linguistics, evaluative language is used as an umbrella term that covers a variety of phenomena, including opinion, sentiment, attitude, appraisal, affect, point of view, subjectivity, belief, desire and speculation” (Schubert, 2020, p.1). Evaluative language is defined as “being a subjective piece of language expressed by a holder (a person, a group or an institution) towards a topic or target (an object, a person, an action or an event)” (Benamara et al., 2017, p. 209). Evaluative expression is always associated with a polarised scale identifying something as good or bad, like versus dislike, positive or negative and is associated with the valence conveyed through text. Computational linguistics observes the character of language (i.e. its morphology, syntax and use) and

develops models that enable machines to understand language. The overall objective is to make computers linguistically more competent to better facilitate our interaction with machines and software.

Human language is processed by computers in almost every sector of contemporary society: instant machine translation, search engines, speech recognition, text to speech software, Interactive Voice Response (IVR) systems and text editors. In a business environment the goals of CL include translating text from one language to another, retrieving text related to a specific topic, extracting and summarising text from large data sets and creating chat bots that can more intelligently communicate with humans. CL is focused on developing methods that improve and facilitate these applications in everyday life. Improvements in these areas are typically focused on better identifying the meanings of words and recognising the grammatical structure of sentences.

In the field of sentiment analysis, most of the work in CL is focused on optimising predictive algorithms to detect sentiment in text (Chen & Golab, 2020). “Unlike social science studies that rely on survey data or sentiment analysis work in computational linguistics that focuses on improving sentiment detection accuracy, our goal is to understand mood triggers through text mining” (Chen & Golab, 2020, p. 1228). In the field of CL, considerable focus is placed on sentiment analysis. Most of this work is focused on identifying the underlying sentiment contained in product and service reviews from customers. The current study employs computational linguistics for its effectiveness in formulating grammatical and semantic frameworks, enabling the software to analyse text for context, sentiment and affective qualities.

#### **4.4 Sentiment, Opinion Mining and Emotional Mining**

The most important characteristic of both sentiment and opinion is that they are subjective, private states “not open to objective observation or verification” (Pang & Lee, 2008, p. 8). The emotional and affective character of sentiment enables researchers and practitioners to measure the emotions of customers through sentiment analysis (Thelwall, 2011).

Similar to the use of the concepts *text mining* and *text analysis*, concepts such as *sentiment analysis*, *opinion mining* and *emotional mining* are used interchangeably to describe the same concepts (Nair, 2017). Rout et al. (2018) used these concepts interchangeably as indicated by the following statement: “Sentiment analysis, also referred to as opinion mining, is an approach for analysing people’s opinion, sentiment, attitude, evaluation and emotions towards an entity” (Rout et al., 2018, p. 182.) However, Yadollahi et al. (2017) indicated that there is a difference between opinion and emotion on a lexical and semantic level. The difference between opinion mining and emotional mining is discussed in the following section.

##### ***4.4.1 The Difference Between Opinion and Emotion***

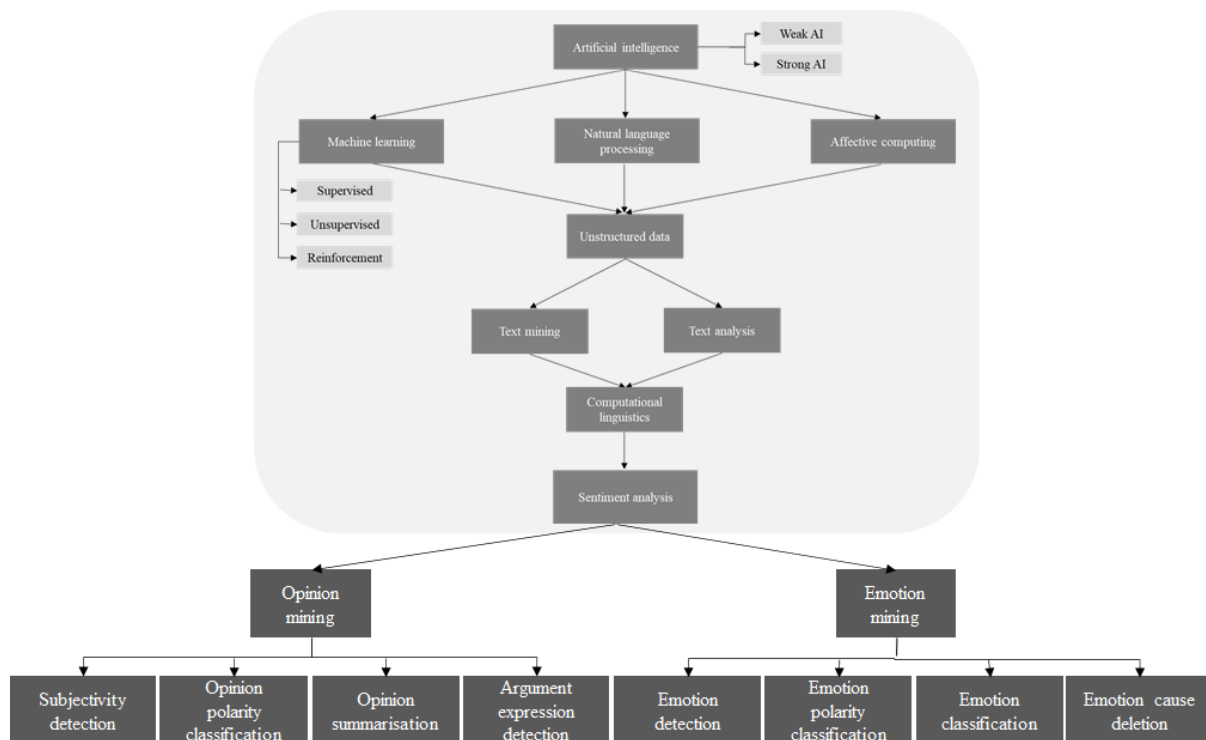
As early as the 1960s researchers were made aware that emotions are associated with the cognitive processing of a situation, resulting in an internal judgement about the situation (Arnold, 1960). People have to evaluate a situation or experience in terms of being good or bad to be able to feel positive or negative about the situation. While some feelings might be considered to be “opinionless” – like longing or surprise – most feelings correspond to an opinion (Santos & Maia, 2018). If one longs for something it reflects a positive opinion about the subject of the yearning. The same can be said for surprise. Surprise always has a positive or negative connotation and typically not a neutral sentiment.

Yadollahi et al. (2017) point out that opinion and emotion have a very strong correlation and that it is easy to confuse the two concepts. Emotions that one experiences during a specific situation or about a specific person drives the opinions that one has about the situation or person. Conversely, opinions that one has about a particular topic will result in certain emotions about the topic. However, the two concepts are not always correlated, which is one of the difficulties when analysing text containing opinions versus emotions. Consider the following feedback from a customer: “The staff at the branch are great and they try their best, but their knowledge of certain topics is very disappointing.” This statement reflects a positive opinion and a negative emotion about the branch staff.

Yadollahi et al. (2017) developed a taxonomy of sentiment tasks in which they categorised the field of sentiment analysis into two distinctive areas: 1) opinion mining that deals with the expression of opinions, and 2) emotional mining that focuses on the articulation and extraction of emotions. Opinion mining is focused on the expression of an opinion that can be negative, neutral or positive while emotional mining is the study of emotions (anger, disappointment, joy etc.) that appear in a specific section of text.

Figure 4.2, adapted for the current study from Yadollahi et al. (2017) depicts the different areas that form part of opinion and emotional mining. This is an expansion of Figure 4.1, incorporating opinion mining and emotional mining into the previously discussed framework of Artificial Intelligence, Machine Learning, Natural Language Processing, Affective Computing and sentiment analysis.



**Figure 4.2***Opinion Mining and Emotion Mining – Sub-Tasks of Sentiments Analysis*

Adapted from Yadollahi et al., (2017)

The following section describes the difference between opinion mining and emotional mining and their respective constituents.

#### **4.4.2 Opinion Mining**

Usually, an opinion is articulated by an individual – the opinion holder – who conveys a perception (positive, negative or neutral) about an entity (target object, e.g. person, item, organisation, event, product or service) (Rout, et al., 2018). An opinion is the belief that one has about something and forms the basis of one’s assessment, judgement and evaluation of a person or a situation. The opinions of other people greatly influence and provide guidance for individuals, organisations and social communities during a decision-making process (Liu, 2012). Opinion mining refers to the computational analysis of opinions and feelings in

documents or sentences (Zhang & Liu, 2016). In the field of opinion mining there are four sub-tasks (Yadollahi et al., 2017): 1) subjectivity detection, 2) opinion polarity classification, 3) opinion summarisation, and 4) argument expression detection. These sub-tasks are discussed below.

1. **Subjectivity detection:** Identifying whether a section of text is subjective or objective. Objective text contains some facts that everyone knows are true while subjective text contains the personal view of someone.
  - Objective text: The bank opens at 09:00.
  - Subjective text: The bank opens too late.
2. **Opinion polarity classification:** Classifying whether a section of text is positive, negative or neutral. In many instances “sentiment analysis” and “opinion mining” are used as synonyms for “polarity classification”. The aim with analysing textual feedback in an organisational setting is to uncover whether the section of text has a positive, negative or neutral sentiment.
3. **Opinion summarisation:** This task is focused on summarising a large number of opinions about the same topic. Opinion summarisation is useful within an organisational context when important decisions are based on the opinions of employees or customers. A representative sample of opinions needs to be collected, analysed and summarised to provide insightful recommendations to base decisions on.
4. **Expression detection:** Identifying whether there are opposing opinions in a document or section of text. This is accomplished through the identification of argumentative structures and the relationship between these arguments in a section of text.

#### ***4.4.3 Emotion Mining***

The task of emotion mining is to evaluate a section of text and detect any emotional expressions and the nature of these. Four sub-tasks are identified in emotion mining: 1) emotion detection, 2) emotional polarity classification, 3) emotion classification, and 4) emotion cause detection. These are discussed below.

1. **Emotion detection:** Identifying whether text contains any type of emotion or not. This is in contrast to opinions or general statements voiced by someone that do not necessarily contain any emotion. The area of emotion detection has several applications in disciplines such as psychology, social sciences, computer science, communication, linguistics, health, education, and the business environments. The detection of emotions in text is a merger of cognitive science and neurology, enabling sentiment analysis programs to identify the emotions contained in textual feedback received from customers (Yang et al., 2016).
2. **Emotion polarity classification:** Similar to opinion polarity classification, emotion polarity classification identifies and categorises emotions in textual feedback as positive or negative.
3. **Emotion classification:** Further to emotion polarity classification above, emotion classification focuses on a more precise and fine-grained classification of the emotion into a set of definitive emotions.
4. **Emotion cause detection:** Identifying the factors in a section of text that gave rise to the emotion that was experienced by an individual.

Within the sub-tasks of both opinion mining and emotion mining there is a clear distinction between detection and classification. Detection is solely concerned with identifying whether a piece of text contains an opinion or emotion, while classification is focused on classifying the opinions or emotions as being positive, neutral or negative.

It is important to recognise the relational component between opinion and emotion since polarity classification can be applied to both. Opinions and emotions are semantically-related concepts. If one has a positive or negative opinion about something it would imply that one will also experience positive or negative emotions. Similarly, experiencing positive or negative emotions would imply a positive or negative opinion about something.

Since both opinion and emotion can contain a semantic polarity classification (valence) and an associated intensity, the current study differentiates between opinions and emotions expressed verbatim. These distinctions are discussed in the methodology chapter.

#### **4.5 Types of Sentiment Analysis**

Peng and Park (2011) identified two main approaches to sentiment analysis: lexicon-based and machine learning. These are discussed in the following section.

##### ***4.5.1 Supervised Machine Learning Methods***

Supervised machine learning methods rely on human coders for annotation of polarity (positive, negative or neutral). This information is then used to train an algorithm to distinguish between text elements with positive, negative or neutral sentiment. The algorithm is used to analyse new text documents and predict the polarity of the text.

These classifiers use unigrams, bigrams and also longer pieces of text to assign sentiments (Wiegand et al., 2013). The most common algorithms used to perform sentiment analysis are Naive Bayes, Maximum Entropy or Support Vector Machines (Pang et al., 2002). These algorithms use a variety of approaches to assign sentiments; some look for specific emotion denoting words, some focus on the propensity of terms to appear together with seed words whose emotions are known, some use machine learning and emotion denoting words while others make use of hand-coded rules (Mohammad, 2012).

#### ***4.5.2 Lexicon-Based Approaches***

Lexicon-based approaches use a dictionary of words or lexicon (corpus or thesaurus) that contains large lists of words pre-coded for polarity (positive, negative or neutral) to assign a specific sentiment to words and sentences. Such approaches are generally referred to as lexicon-based (Feldman, 2013). These dictionaries can be created manually or automatically. During the analysis process each word in the target text is compared with the dictionary and a sentiment polarity score for the word is assigned. The sentiment polarities of all the words in the targeted text are added to produce a total sentiment polarity score for the text (sentence or paragraph) (Annett & Kondrak, 2008). These linguistic-based analysis approaches use the grammatical structure of text in conjunction with lexicons to predict the polarity. Using a lexicon-based approach has major disadvantages: Firstly, new trendy words and slang may not be included in the dictionary. Secondly, the polarity assigned to words in the dictionary may be domain specific. Thirdly, the use of the dictionary is limited to the specific language in which it was compiled.

#### **4.6 Challenges when Conducting Sentiment Analysis**

Researchers and practitioners around the world are in agreement about the advantages of using automated sentiment analysis for evaluating customer feedback (Rylander et al., 1995). Firstly, sentiment analysis is non-intrusive since data can be collected from various online sources instead of using primary data collection methods. Secondly, large volumes of data can be analysed in real-time, thereby eliminating recall bias. Thirdly, it is more time and cost effective than primary data collection and analysis and can be used in several environments and contexts.

However, text-based sentiment analysis faces some important challenges. The following section briefly discusses some of the current challenges faced by practitioners using

sentiment analysis. The challenges are discussed with reference to the various areas of sentiment analysis:

1. Creation of resources for sentiment analysis
2. Classification of text according to polarity
3. Direct and indirect expression of emotion

#### ***4.6.1 Creation of Resources for Sentiment Analysis***

Supervised sentiment analysis relies on a corpus of words in which opinions are annotated according to their polarity. There are several challenges that creators and users of lexica databases face: 1) the ambiguous nature of words, 2) multilinguality, 3) the granularity of sentiments, and 4) the multitude of textual genres. These challenges are discussed below.

1. The ambiguous nature of words and phrases can lead to much vagueness and confusion and miss-classification. While humans have the ability to eliminate misunderstandings by interpreting a word or phrase within the context that it is used, machines do not have this ability and strictly use the assigned polarity and sentiment for a specific word.
2. Multilinguality refers to the challenge that most lexica are created in one language only, which makes them impractical for analysing text in another language.
3. The granularity with which sentiment must be assigned is also a challenge. Opinions can be expressed using a single word, a sentence, or a phrase, which makes it challenging to analyse.
4. There are also a multitude of textual genres in which customers can express their opinions: surveys, reviews, blogs, company web pages, community forums, social media postings and newspaper articles. Since customers use vastly different words and phrases when they provide their feedback on these various platforms, researchers

prefer to use a linguistic corpus specifically developed for the type of textual genre being analysed.

#### ***4.6.2 Classification of Text According to Polarity***

Polarity refers to the classification of text in terms of its valence (i.e. negative, neutral or positive). This classification can be performed on a word, sentence or phrase level. The three most noticeable challenges in terms of polarity classification are 1) binary classification of sentiments, 2) dealing with negating words, and 3) the use of informal language. These challenges are discussed below.

1. Binary classification of sentiment refers to classification of text as either an overall positive or an overall negative sentiment (sometimes including neutral) (Pang & Lee, 2008). Reducing sentiment to only two or three categories is problematic, given the psychological complexity of emotions. Assigning sentiments to affective responses is not a simple task and reducing emotional sentiment to a limited number of categories negates the complex nature of emotions being expressed (Ahmed, 2004). While most classification software programs can accurately identify the extremes in emotions (positive or negative), this is not always sufficient (Bouazizi & Ohtsuki, 2019). However, accurately identifying the wide range of emotional nuances in between presents a challenge. Kho (2010) refers to this as “classifying the messy middle” (Kho, 2010, p.11), which refers to the range of sentiment between entirely positive and entirely negative. A typical example is the extremes of love and hate and all the possible emotions in between. Lately these challenges have been circumvented by using the intensity expressed in a verbatim comment to classify it on a more granular level. The first of these approaches classifies sentiment polarity into sub-classes (e.g. “very positive”, “somewhat positive”, “neutral”, “somewhat negative” and “very negative”). The second multi-class classification method attributes sentiment intensity scores to text (Manuel et al., 2010;

Srivastava & Bhatia, 2012) and assigns sentiment using a Likert scale approach (i.e. sentiments can be scored on a range from “-5” (very negative) to “+5” (very positive) where “0” represents a neutral sentiment).

2. The inclusion of negating words in a sentence like “no” and “not” reverses the meaning of the sentence. It is important that all the words in a sentence are analysed in relation to the accompanying words and that negating words are identified and dealt with to ensure the correct classification of sentiments.
3. The use of informal language, slang, creative expressions, abbreviations and misspelled words makes sentiment analysis extremely difficult (Thelwall et al. 2010). Since the corpuses used to identify sentiment bearing words cannot accurately identify these words they are either analysed incorrectly or not analysed at all, which will have a negative effect on the accuracy of results.

#### ***4.6.3 Direct and Indirect Expression of Sentiment***

A further challenge is that sentiment can be expressed directly, indirectly or conveyed implicitly. Direct or explicit expressions of affect refer to situations where the narrator clearly expresses how he feels and nothing is implied. However, in real-life situations emotions are not always expressed using emotional-bearing words (Pennebaker et al., 2003). Customers can also express emotions implicitly by describing a situation where emotions can be inferred by the reader. The following example demonstrates the difference between the three types of expression:

Directly – “I like my banker”

Indirectly – “My banker is a great person”

Implicit – “My banker has an accounting degree from Harvard”



All of these sentences allude to the fact that the customer has a positive opinion and sentiment of the banker, but expresses emotion directly in one instance only; in the other two examples their sentiment and associated emotion should be inferred.

Most of the research conducted in the field of sentiment analysis is aimed at detecting direct and indirect expression of sentiment and does extremely well in this regard by identifying specific words or word combinations that are reflective of emotional valence and intensity using different sentiment classification methods.

#### **4.7 Methods of Sentiment Classification**

Current sentiment and emotion classification techniques can be categorised into four main categories (Cambria et al., 2013): 1) keyword spotting, 2) lexical affinity, 3) concept-based, and 4) statistic machine learning.

1. **Keyword spotting:** Assigns sentiment categories based on words that have unmistakable sentiments. They rely exclusively on the meaning of individual words and are not completely robust when sentences contain reversed meanings or when negating words like “not” and “no” are used.
2. **Lexical affinity:** Similar to key word spotting, lexical affinity uses words but in addition assigns arbitrary words – a probable affinity based on how they are used in a sentence. Overall sentiment is assigned by combining clearly identified sentiments together with the probability affinity of arbitrary words. In most instances these types of method are developed for usage in specific domains and are extremely effective when used in this manner.
3. **Concept-based:** This approach uses semantic networks as a knowledge base to analyse the affective information found in a section of text. The accuracy of these methods is based on the quality (depth and breadth) of the knowledge base that is used.

4. Statistic machine learning: This approach makes use of features such as unigrams, bigrams, parts of speech, affect words, information gain and term frequency to classify text. These methods work well only when they are exposed to sufficient and balanced training data and are not ideal for semantic classification when text contains implicit sentiments or emotional information.

The preceding chapter discussed customers' sentiment as being reflective of their subjective emotional experience. Sentiment analysis is considered by researchers and practitioners as an effective method to analyse customers' verbatim feedback about their service experience and identifies the emotional polarity and intensity associated with their experience. The sentiment analysis method used in the current study as well as the steps taken to address some the concerns when conducting sentiment analysis is discussed in the methodology chapter.

### **Chapter 5: The Effect of Time on the Recall of Emotional Experiences**

In the preceding chapters I argued that it is vital for organisations to focus on improving the satisfaction of their customers to be successful in the current competitive environment they operate in; improved satisfaction should have a positive effect on customers' loyalty to the organisation. I indicated that customer satisfaction and loyalty are driven by cognitive as well as emotional factors and that the interaction between emotion and cognition is complex.

The majority of customer satisfaction studies require customers to evaluate their experiences using post-event surveys; customers are required to recall their experiences to evaluate them. The major difference between transactional surveys and reputational surveys is the time difference between the interaction with a service provider and recalling and evaluating the interaction; transactional surveys occur within 24 hours after an interaction while reputational surveys are conducted between 3 to 4 months after an interaction. Therefore, customers' evaluation of their experiences is dependent on their ability to recall their experiences accurately.

One of the major critiques of existing customer satisfaction research is that it ignores the fact that customers' perceptions might change over time and disregards the increase in memory decay as time passes. This issue is considered in more detail. I am particularly interested in how the passage of time affects customers' ability to recall positive and negative emotional experiences and how this may influence customer satisfaction evaluation of the organisation and their likelihood to recommend the organisation.

The well-researched phenomenon of Fading Affect Bias (FAB) provides a helpful framework to guide this discussion. The discussion is conducted in four parts. In the first part I discuss the difference between the experiencing-self and remembering-self and the difference between experienced utility and remembered utility and how these relate to transactional and reputational survey methodologies.

The second part of the discussion focuses on the experience-memory gap, how the passage of time affects the recall of experience and the differentiating effect of recalling positive and negative emotions.

The third part of the discussion focuses on Fading Affect Bias (FAB). I review existing research on FAB, describing the FAB phenomenon, the factors that impact emotional change over time and how the constructs that form the foundation of FAB can be applied in the current study.

Lastly, the impact and consideration of these issues are discussed in the context of organisations that conduct customer satisfaction research. This is followed by a discussion of the relevance of these issues in the context of the current study. I conclude this section with the main research questions that an empirical study has to address and present hypothetical answers to these questions.

### **5.1 Experiencing-Self and Remembering-Self**

In his book *Thinking Fast and Slow* Daniel Kahneman refers to the difference between the “experiencing-self” and the “remembering-self” (Kahneman, 2011). The difference between how people *experience* life events and how they are *remembered* is important in the context of transactional surveys that happen very close to an interaction (experiencing-self) and reputational surveys that happen long after an interaction and require customers to recall those experiences (remembering-self).

To understand the difference between the experiencing-self and the remembering-self, Kahneman uses the construct of the “psychological present” that is around three seconds long; in an average lifetime one has approximately 600 million of these three-second “time slices”. The experiencing-self lives life continuously and has millions of moments of experience, one after the other. However, most of these moments are completely forgotten by

the remembering-self and one recalls only a very small percentage of these moments – the ones that have a significant impact on one’s life. Kahneman explains the difference between the two selves as follows:

### **The experiencing-self**

The experiencing-self knows the present and lives in the present. It has the ability to relive the past but can experience only the present. The experiencing-self is, therefore, the part of one’s being that *lives in the moment*, and that cognitively and affectively and behaviourally responds to life as it comes.

### **The remembering-self**

The remembering-self, however, is the part of our being that maintains the story of one’s life and keeps track of all one’s experiences. The remembering-self does not live in the psychological present but is exclusively based on the *memory of one’s experiences*. The remembering-self is the one that looks back and reflects on the things that one experienced in the past (Kahneman & Riis, 2005).

Kahneman uses the example of someone visiting the doctor to explain in a simple way the difference between the two selves. The experiencing-self is activated when the doctor asks, “Does it hurt when I touch you here?” while the remembering-self is activated when the doctor asks, “How have you been feeling lately?”

Kahneman and his colleagues conducted various experiments to test their hypothesis:

1. The experiencing-self and remembering-self have very different accounts of the same event.
2. The remembering-self has more decision-making power regarding one’s future decisions than the experiencing-self.

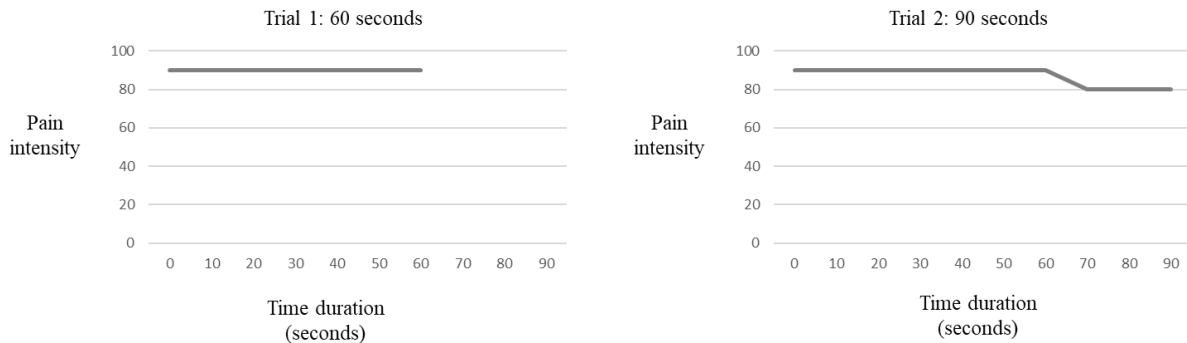
Below is a summarised rendition of two experiments conducted by Redelmeier and Kahneman (1996) to illustrate how the experiencing-self and the remembering-self differ in terms of how they interpret the same experiences.

### **Experiment 1: Cold compressor**

Participants were asked to keep their hand in a bucket of very cold water; it was explained to them that they would repeat the experiment three times. Participants used control arrows on a keyboard to provide a continuous record of the pain they were enduring – direct communication by the experiencing-self.

Firstly, all the participants were asked to do the experiment twice, using different hands (Figure 5.1):

- The first trial lasted 60 seconds and then participants were instructed to remove their hand from the bucket of water.
- The second trial lasted 90 seconds and thus prolonged the experience of pain. The first 60 seconds were identical to the first trial; however, during the remaining 30 seconds the temperature of the water was raised by 1°C, just enough for most participants to detect a slight decrease in the intensity of pain, making the ending to the experience more bearable.

**Figure 5.1***Pain Intensity Comparison of Trial 1 and Trial 2*

The experiment was designed to create a conflict between the interests of the experiencing-self and the remembering-self and between experienced utility and decision utility. From the perception of the experiencing-self, Trial 2 was worse because of the longer period of pain participants had to endure. However, when participants were asked which experiment they would like to repeat for their third trial, 80% of participants chose the longer, more painful trial. What participants remembered from the experience was that the ending was less painful; therefore, they chose to repeat the trial of which they had the less aversive memory. Their decision was based on choosing the option they liked the most, or in this specific case disliked the least. The experiment revealed the discrepancy between decision utility and experienced utility; customers chose to repeat the trial with the longer pain duration.

**Experiment 2: Colonoscopy patients**

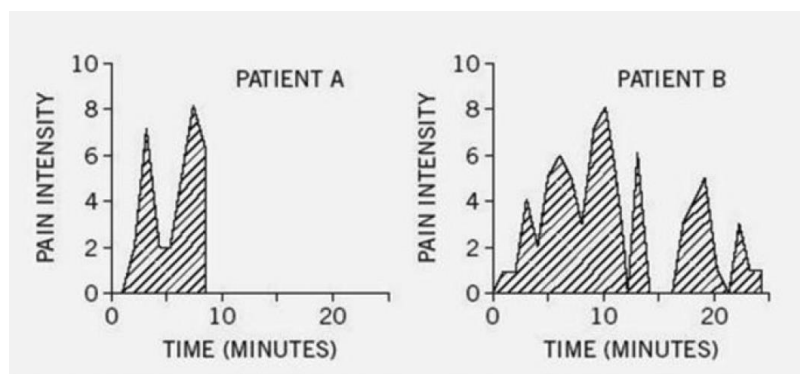
Redelmeier and Kahneman (1996) conducted an experiment with 154 patients undergoing a colonoscopy; the shortest procedure lasted 4 minutes and the longest procedure lasted 69 minutes. Patients were asked to indicate the level of pain they endured during the

procedure on a scale of 0 to 10 where 0 indicated “no pain at all” and 10 indicated “intolerable pain”.

As an example, the experience of two types of patient (Patient A and Patient B) are compared (Figure 5.2). The experience of the two patients were vastly different; patient A’s procedure lasted 8 minutes while patient B’s procedure was 24 minutes long. Most people will agree that Patient B had a far worse experience than Patient A, since Patient B experienced a longer period of pain and also a greater sum of total pain.

### Figure 5.2

*Patients’ Assessment of Pain Experienced During Colonoscopies*



Source: Kahneman (2011, p. 379)

Following the experiments patients were asked to rate “the total amount of pain” they had experienced during the procedure. Patients with a pain profile similar to that of Patient A remembered the experience to be much worse than patients whose pain profile looked like that of Patient B. Their analysis indicated two findings: Firstly, the average pain remembered by participants was in line with the pain at the height of the procedure and the pain experienced at the end of the procedure. Secondly, the duration of the procedure had no effect on patients’ total pain ratings. Patient A’s recall of the experience was much worse than the pain recalled by patient B. The major reason for this was that the experience ended very



painfully for Patient A compared to Patient B who endured less pain as the experience ended. Kahneman and his colleagues tested this phenomenon by extending patients' experiences and gradually ensuring that their experience ended less painfully. While the procedure was extended and patients endured more total pain, patients' memory of the experiences was improved considerably since the experiences ended less negatively.

Kahneman indicated that the accuracy with which one assesses pain and pleasure depends entirely on whether one's assessment is done in the moment (experiencing-self) or retrospectively (remembering-self) (Kahneman, 2011). Kahneman refers to this as one's *experience utility*, i.e. the value or usefulness of the experience. Various authors have indicated that the experiencing-self and the remembering-self calculate this utility in very different ways (Kahneman, 2011; Conner & Barrett, 2012)

Kahneman used these experiment to demonstrate the difference between actual experiences of pain and how the pain was recalled by patients. Although patients like Patient B in reality experienced more pain than Patient A, they recalled the experience as less painful because of the way the experience ended. Kahneman states that "Memories are all we get to keep from our experience of living, and the only perspective that we can adopt as we think about our lives is that of the remembering-self" (Kahneman, 2011, p. 381).

The implications of Kahneman's finding are far-reaching since the experiencing-self and the remembering-self differ radically in terms of their interpretation of the same event. The way something feels when it is experienced (experiencing-self) can be significantly different from what is remembered about the experience (remembering-self). In relation to the difference between transactional data collection that happens within 24 hours after an interaction (experiencing-self) and reputational data that is collected between two to four months after an interaction (remembering-self) it is not surprising that organisations that

employ both methods of data collection may find that the two types of mythology provide dissimilar results. As indicated by the experiments conducted by Kahneman, what participants remember about an experience may be very different from their actual experience.

According to Kahneman there are some fundamental differences between the experiencing-self and the remembering-self. Table 5.1 below summarised these differences.

**Table 5.1**

*Differences Between the Experiencing-self and the Remembering-self*

| <b>Experiencing-self</b>                          | <b>Remembering-self</b>                                      |
|---|--|
| Lives in the moment                               | Lives from memory  |
| Experiences the now                               | Rationalises and socialises past experiences                 |
| Experiences 600 million time slices in a lifetime | Forgets most time slices, remembers only significant moments |
| Knows and cares about the present                 | Knows the past and cares about the future                    |
| Reacts emotionally                                | Reacts sensibly  |
| Enjoys every moment of every day                  | Tracks and maintains the story of one's life                 |

To explain the difference between the two selves in more detail Kahneman shares the story of one of his audience members at a conference who was listening to a symphony on a disc for forty minutes and at the end of the symphony there was an awful screeching sound. The audience member said that the bad ending to the symphony “ruined the whole experience”. But the statement is not entirely true since he already had had forty minutes of glorious symphony music; it was only the memory of the experience that was ruined, not the experience itself.

Kahneman asks the question: “Do our actual experiences count for nothing if the only thing that we have left is the memory of our experiences?” Kahneman states that “Confusing experience with the memory of the experience is a compelling cognitive illusion – and it is

the substitution that makes us believe a past experience can be ruined (Kahneman, 2011, p. 381). To understand this cognitive illusion better, it is necessary to differentiate between experienced utility and remembered utility.

## 5.2 Experienced Utility and Remembered Utility

The concept *experience utility* refers to the affective valuation of one's experiences and was coined by Jeremy Bentham in *Introduction to the Principles of Morals and Legislation* where he discusses one's "two sovereign masters, pain and pleasure" (Bentham, 1789, p. 1). Bentham indicated that "the role of pain and pleasure is to point out what we ought to do, as well as to determine what we shall do" (Bentham, 1789, p. 1). Schreiber and Kahneman (2000) point out that "For the purposes of psychological analysis, it is useful to distinguish two interpretations of experienced utility. *Instant utility* is defined by the valence and intensity of affect as it is experienced at a particular moment. *Remembered utility* is the global evaluation that is retrospectively assigned to a past episode, or collection of episodes" (p. 27). Instant utility answers the question, "How are things now?" while remembered utility answers the question "How was it?"

Schreiber and Kahneman (2000) indicated that the building blocks of analysis of experienced utility is the positive or negative affect associated with a *specific moment*. Conversely, the data for analysis of remembered utility is the affective components of an experience as it is *recalled* by an individual. Kahneman and Krueger (2006) indicated that "The results of these experiments provide some insights into more standard measures of satisfaction, and lend support for the usefulness of making a distinction between experienced utility and remembered utility; that is, the way people feel about experiences in real-time and the way they remember their experiences after they are over" (Kahneman & Krueger, 2006, p. 5)

Customer satisfaction feedback collected during a specific experience (experienced utility) provides information in terms of the hedonic quality and value of the experience in real-time. In contrast, remembering the experience and recalling it afterwards (remembered utility) essentially asks an individual to aggregate various moments of experiences and in a sense provide a “weighted average” of selected moments (Fredrickson & Kahneman, 1993). Remembered utility therefore represents a gestalt impression constructed from various experiences and interactions that occurred over time.

Transactional measures conducted in real time capture the experienced or instant utility of customers while reputational surveys focus on the remembered utility or overall utility of a collection of experiences. The most important difference between transactional surveys and reputational surveys is the duration of time that passes between a customer’s interaction with an organisation and the completion of the two types of survey. Customers therefore rely more on their memory of the experience when conducting reputational surveys compared to when they complete transactional surveys. The following section outlines, from psychological perspective, how one’s memory is influenced by different affective experiences and the role that emotions play in one’s ability to recall experiences.

### **5.3 Experience-Memory Gap**

In psychology, memory is defined as the ability of an organism to store, retain and subsequently recall information (Eysenck & Keane, 2005). Miron-Shatz et al. (2009) define the memory-experience gap as “a discrepancy between the average of experienced emotions and the overall evaluation of the experience” (Miron-Shatz et al., 2009, p. 885). They indicated that the emotions elicited during the experience are usually more intense than the “averaged” emotions that are recalled; therefore, the average of experienced emotions as

recalled by the remembering-self diverged from the amplified emotionality experienced during single instances as recorded by the experiencing-self.

Discrepancies between what one experiences and what one remembers about one's experiences (experience-memory gap) have been documented for short experiences and extended experiences (Hsee & Hastie, 2006; Wirtz et al., 2003). Miron-Shatz et al. point out that "positive and negative affect may be differentially impacted by memory processes, which could lead to different gap predictions for the two affect types" (Miron-Shatz et al., 2009, p. 885).

Although the gap between memory and experience has been documented in various settings, Miron-Shatz et al. (2009) indicated that these measures generally focus on only one specific emotion at a time – usually the evaluation of pain or pleasure. Various reasons have been proposed by different authors to explain how one's memories of experiences could be distorted relative to the experiences themselves. Some plausible explanations of this discrepancy include associative networks (Ingram, 1984) the relevance of goal orientated tasks (Singer & Salovey, 1991), the peak-end theory (Fredrickson & Kahneman, 1993) and the salience memory heuristic (Stone et al., 2005).

#### **5.4 Memory of Emotional Experiences**

One's life is filled with experiences that elicit various kinds of emotion – from really positive emotional experiences like celebrations and entertainment to negative emotional experiences that can range from something as extreme as the death of a loved one to an unpleasant experience at a retail store. While some experiences will be remembered vividly for many years to come, other experiences are forgotten moments after the event occurred. Therefore, the majority of research in the field of memory and emotions attempts to establish

which details of one's experiences are remembered and which details are forgotten, and the factors that influence the recall of one's emotions.

While there are numerous factors that can influence what one remembers and forgets, affect experienced during an event seems to be an important contributor (Kensinger, 2011). William James understood the impact of one's emotions on memory and indicated that "some events are so emotional as to leave a scar upon the cerebral tissues" (James, 1890, p. 670).

Brown and Kulik (1977) postulate that events of emotional significance are more likely to be recalled than mundane experiences. This view is supported by research in neurobiology that confirms that the occurrence of affective responses increases the likelihood that an event will be stored in memory (McGaugh, 2004; LaBar & Cabeza, 2006). Kensinger (2011) indicated that both the arousal (intensity) and the valence (positive or negative) of emotions determine which aspects of an event are remembered.

To understand how people's recall ability is impacted by emotional experiences, researchers have studied the effect of one's emotions on memory in a wide variety of settings – from ordinary vacations, unpleasant medical procedures, expeditions, students preparing for examinations to recalling traumatic life experiences, like interviewing holocaust survivors and the shooting of John F. Kennedy. These studies primarily explore the relationship between memory and emotion, how emotions influence one's memory of events and how the passage of time influences one's memory and its implications in everyday life (Winograd & Neisser, 1992; Stein et al., 1997; Williams & Banyard, 1999; Eich et al., 2000). The majority of these studies indicate that one's memory of an emotional experience is an inaccurate reflection of one's real-time experience (i.e. one's recall of events is often not the same as what actually happened) (Wilson et al., 2001; Wirtz et al., 2003; Christensen et al., 2003).

One area in which an extensive amount of research has been conducted is the area of eyewitness recall of criminal events to assess the reliability of eyewitness testimony (Loftus

& Palmer, 1974; Loftus & Hoffman, 1989; Christianson & Loftus, 1991). Loftus (1992) explained that the passage of time makes memories weaker and more vulnerable to post-event contamination; therefore, what one remembers about an experience is often not the way it actually occurred. A large body of previous research indicates that human memory is malleable and prone to fabrication and often deviates greatly from the objective reality of the experience (Loftus, 2003; Schacter, 2001). These findings correspond with general psychological theory that one's memories are not a direct copy of one's past but are reconstructed, using a variety of methods (Schacter, 1996). In this regard, Porter et al. indicated that "contrary to the traditional conceptualisation of memory as a virtual reproduction of the original perception, memory is highly constructive and is affected in powerful ways by exposure to information following an event" (Porter et al., 2010, p. 55).

Individuals are often required to recall past events. These events can include anything from just thinking about one's past and mundane experiences, to significant personal experiences and interactions, like therapeutic settings and criminal investigations. The distortion of memory over time or "misremembering" can have significant implications in these situations. The following section investigates how the passage of time affects one's ability to recall emotional experiences accurately.

### **5.5 How the Passage of Time Affects One's Memory of Experiences**

One aspect that is central to the investigation of recalling past experiences is the passage of time. Loftus et al. (1978) indicated that the amount of time that passes between an event and the recall of the event has a significant effect on the rates of misremembering.

Previous studies focusing on emotional events and their retention and recall have provided contradictory results (Loftus & Burns, 1982; Christianson, 1984; Deffenbacher, 1983; Heuer & Reisberg, 1990). Porter et al. (2010) who conducted research on the

vulnerability of memory for positive and negative emotional scenes with specific emphasis on how participants deal with misinformation during an experiment, found that the passage of time impaired recollection. They found a general decay of memory and that the accuracy of recall decreases over time for both misleading and non-misleading questions across emotional types. In contrast, research investigating real-world experiences indicates that emotional events are relatively well retained in memory (Brown & Kulik, 1977; Rubin & Kozin, 1984; Bohannon, 1988).

### ***5.5.1 Memories are Partly Reconstructed***

As one's memory of emotional and non-emotional experiences fades with the passage of time, people generally rely on their current appraisal of past emotion-eliciting events and reconstruct how they must have felt during those experiences (Levine et al., 2001; Levine et al., 2009). Therefore, one's emotions related to past experiences are not a direct reflection of the experiences but are partly reconstructed, based on how one interprets the emotion-eliciting experience at the time of recall (Levine, 1997; Levine & Safer, 2002). Other aspects that contribute to the changes in how one recalls past events are post-event information that one is exposed to, changes in one's goals and attitudes and one's appraisal of events (Loftus, 1992; Ross, 1989).

### ***5.5.2 The Main Purpose of Memory***

While the reconstruction of one's memories can be regarded as problematic (people do not remember events exactly as they occur) psychological theory indicates that the function of one's memory may not be to keep an exact record of all one's experiences; the main purpose of one's memory may be to better prepare one for future events instead of recalling past events one hundred per cent accurately (Levine et al., 2009). This enables one to have a gut feeling about something that will guide one's decisions without the need to remember all the intricate details of past events. If people remember certain experiences as being positive



they are more likely to repeat them. In contrast, if they recall the experience as being very negative, they will more likely avoid similar situations in future (Loewenstein, 1999; Redelmeier et al., 2003; Wirtz et al., 2003). In this regard, Levine (1997) indicated that if the primary function of emotions is to guide one's future decisions, one should be able to update one's memories, allowing one to incorporate new information from new experiences.

### ***5.5.3 Experience and memory and its relevance to transactional and reputational measures***

Incorporating the notion of the experiencing-self and the remembering-self, Wirtz et al. (2003) indicated that decisions about one's future are influenced less by the emotions that one experiences in the moment (experiencing-self) than by one's memory of those experiences and their associated emotions (remembering-self). In general life, people make decisions about which situations should be avoided and which situations would be conducive to their overall well-being, based on their *memory* of how they felt during similar experiences in the past (Wirtz et al., 2003). As indicated by Kahneman et al. (1997) individuals attempt to maximise *remembered utility* (defined as a retrospective report of total pleasure or displeasure associated with past outcomes) rather than *experienced utility* (defined as the actual experience in the moment).

The difference between experienced utility and remembered utility has caused a dispute in the research industry. Proponents of transactional surveys (that focus on experienced utility) hold firm that since the evaluation is very close to the interaction, it reduces memory decay and provides a truer reflection of customer experience. However, proponents of reputational surveys (that focus on remembered utility) indicate that what one remembers about one's experience is the main driving force for future decisions, which include which products and services one will choose. Therefore, it is not necessary for the remembering-self to recall every little detail of specific past events since future decisions are based on the collation of all past experiences and not a specific single experience.

#### ***5.5.4 Reasons why Misremembering Occurs***

Previous research in the field of memory indicates that there are several factors that influence memory bias: psychological coping with past events, current appraisal of events, one's personality and the final outcome of one's experiences as well as the general fading of one's memories over time. These biases occur for intense emotional experiences and non-emotional everyday events as well as positive and negative emotional experiences. Van der Kolk and Fisler (1995) indicated that stressful events impair one's ability to recall events accurately. Another explanation is that the decay in recollections is a function of distortion that happens because of post-event influences (Laney & Loftus, 2005; McNally & Geraerts, 2009).

Two important aspects that impact memory bias is the intensity and valence of one's emotional experiences. Firstly, while memories are vulnerable to fading and distortion over time, memories of one's emotional reactions to events are vivid, longer lasting and easier to retrieve than non-emotional events (LeDoux, 1996). In this regard various studies have proven that the emotional intensity of an event is a significant predictor of how vividly an event is recalled (Reisberg & Heuer, 2004; Talarico et al., 2009). Talarico et al. (2004) found that negative and positive emotions enhance memory in similar ways and that the differentiating factor is the intensity of emotions instead of their valence. Conversely, several studies have found that emotional valence (i.e. positive or negative emotions) affects one's ability to recall emotional experiences. Porter and Peace (2007) found that events containing negative emotional content are better remembered than positive emotional events while Taylor (1991) found that negative emotional events lose their intensity as time passes.

Since the valence of an emotional experience is a fundamental construct in understanding the impact of emotions on one's behaviour, the following section investigates the difference between the recall of positive and negative emotions.

## **5.6 Difference Between Recalling Positive and Negative Emotions**

While it has been shown that emotion recall bias occurs with the passage of time, an important distinction is whether this distortion is the same for good and bad memories, or whether positive and negative emotions are remembered equally well. Numerous research studies have investigated the link between positive and negative emotions and the memory of those emotions when recalled.

Research conducted by Conway et al. (1994) indicated that memories of emotional experiences remain unchanged with the passage of time. Conversely, Thomas and Diener (1990) found that over time, peoples' evaluations of emotion become more unipolar, providing either more positive or negative assessments of their emotions. The majority of studies in the field of memory and emotions have found that there are substantial changes in one's memories of experiences (Neisser & Harsch, 1992; Southwick et al., 1997) indicating a differential effect between how positive and negative emotions are remembered. The findings are, however, inconsistent.

On an overall level the findings can be divided into two broad categories. Firstly, the memory of an experience can be worse than the actual experience. One's brain has a tendency sometimes to recall bad experiences more vividly than good experiences (negativity bias). In contrast one can also have a "rosy view" of past experiences where events are recalled more favourably than what actually occurred (positivity bias). These findings are discussed in the following section.

### **5.6.1 Negativity Bias**

Various authors point out the existence of what is generally referred to as negativity bias, i.e. that negative experiences have a substantially larger impact on one's life; therefore, one remembers them better (Baumeister et al., 2001). Rozin and Royzman (2001) indicated that

when combinations of positive and negative experiences are evaluated simultaneously they typically yield evaluations that are more negative than the algebraic sum of the individual subjective valence would produce.

One proposed argument in support of this notion is that negative emotions are often processed more thoroughly than positive emotions since one firstly ruminates more about unpleasant events than pleasant ones; secondly one tends to use more vivid emotional descriptors when describing these negative events. This is also true in everyday life. Losing money, being abandoned by friends, receiving harsh criticism are usually remembered more vividly and have a more profound influence on one than gaining a friend, winning money or being praised for something one accomplished. Negative events tend to have a more significant impact on one than positive events and create a more profound memory-experience gap.

Similarly, Miron-Shatz et al. (2009) found that the memory-experience gaps of participants were more noticeable for unpleasant emotions than what they reported through the measuring of their actual experiences. This amplification of unpleasant emotions in retrospect corresponds with the findings of Baumeister et al. (2001) and Rozin and Royzman (2001) who indicated that negative events have a stronger impact than positive events. Miron-Shatz et al. (2009) summarise their findings by indicating that “the gap between experienced emotions and their representations in memory is a constant presence, one that is more pronounced for negatively valenced emotions. Thus, one’s recollections may be inaccurate representations of one’s experiences because they accentuate experienced disutility; perhaps one’s memories are designed to favour prudence over accuracy” (Miron-Shatz et al., 2009, p. 891).

A specific subset of research on emotion and memory focuses on how traumatic life events are recalled. Byrne et al. (2001) investigated the differences and similarities between

memory ratings for traumatic negative and positive life experiences and found that negative experiences are recalled more poorly with regard to some sensory information of the event. In contrast, several other research studies indicate that trauma enhances memory (Porter & Birt, 2001; Shobe & Kihlstrom, 1997). Porter and Peace (2007) investigated real-life traumatic experiences and found that negative emotions were recalled more consistently over a five-year period than positive experiences by the same participants. Often referred to as the “trauma superiority argument” research in this regard indicates that traumatic experiences are not recalled in fragments but are recalled very clearly and in a continuous narrative (Berntsen, 2001).

### **5.6.2 Positivity Bias**

In contrast, previous research indicates that in some instances the recall of emotions becomes more positive and less negative than the actual experiences (Gilbert et al., 1998). This positive bias is caused by the fact that while negative emotional experiences may reduce the enjoyment in the moment, they are fleeting and are oftentimes forgotten (Mitchell et al., 1997). Similarly, Walker et al. (1997) found that ratings of previous pleasant or unpleasant events fade faster for negative experiences than affective fading for positive events. This is often referred to as the positivity bias and refers to the notion that the *unpleasantness* of negative events fades faster over time while the *pleasantness* of positive events remains stable. Numerous studies have shown that the emotional intensity of negative events fades faster than the emotional intensity of positive events (Skowronski et al., 2014; Walker & Skowronski, 2009).

This differential bias when recalling positive and negative emotional experiences is collectively referred to as the Fading Affect Bias (FAB) and has been the focus of numerous psychological studies. These studies as well as some of the most probable reasons why this bias may occur are discussed in the following section.

## 5.7 The Fading Affect Bias (FAB) Effect

### 5.7.1 What is FAB?

The bias between negative (unpleasant) and positive (pleasant) emotions was first investigated by Cason (1932). Cason used a retrospective recall methodology and participants were asked to describe how events in the previous week made them feel. After several weeks, participants were asked to recall those events and describe how the events made them feel at the time of recall. Carson found that negative events faded more from the time the event occurred to the time that they were recalled compared to positive events. This differential fading of affect over time has been termed the Fading Affect Bias (FAB). Put differently, the intensity of positive emotions prompted by the recall of positive life events exceeds the intensity of negative emotions prompted by the recall of negative events. This bias is essentially related to time: negative affect fades faster than positive affect from event occurrence to the recall of the event (Gibbons et al., 2011; Ritchie & Batteson, 2013; Skowronski, 2011).

Since its initial discovery by Cason (1932) the FAB effect has been studied by numerous authors (Walker et al., 1997; Skowronski et al., 2004; Ritchie et al., 2006; Walker & Skowronski, 2009). Landau and Gunter (2009) found that FAB occurs in both within-subject and between-subject event types and irrespective of the order in which emotional ratings are obtained. Another significant finding is that FAB occurs in both active emotional events (elated, angry) and passive emotional events (calm, sad) (Ritchie et al., 2009). It is important to note that FAB does not refer to the content of memories; it refers to how recalling a memory makes one feel at the time when the event is recalled.

Ritchie et al. (2009) investigated more than 1 200 autobiographical events recalled over a one-year period and identified four possible outcomes of FAB:

1. **Fixed affect:** Refers to situations where the affect of an event does not change at all. An event that was negative or positive will retain its emotional intensity across time.
2. **Fading affect:** An event will diminish in its intensity over time. This is in line with the original conceptualisation of FAB.
3. **Flourish affect:** Refers to situations where the intensity of emotions will increase as time passes as a result of the consequences of the event becoming more prominent. Events that were mildly positive or negative may become more intense as time passes.
4. **Flexible affect:** This occurs where the emotional valence of an event may be reversed as time passes. For instance, a negative event may be viewed as positive when later recalled since it had a positive influence on one's life. Experiences of hardship may have a transformative effect on one's life and can later be viewed as being liberating and providing the impetus for personal growth.

Ritchie et al. (2009) indicated that on an overall level Fading Affect (47% of all events) is more prevalent than Fixed Affect (37%), Flourishing Affect (12%) and Flexible Affect (4%).

While FAB focuses on how people feel about events at the time of recalling the events, the same processes that contribute to Fading Affect Bias can contribute to the effects observed when investigating the content of emotional recall. There is evidence that positive memories are recalled better than negative memories (Skowronski et al., 1991; Breslin & Safer, 2011). Similarly, evidence suggests that memories could be recalled to be more positive than when they actually occurred (D'Argembeau & Van der Linden, 2008). These memory content effects do not fall within the strict definition of FAB although the processes that contribute to these effects may also contribute to FAB.

The following section investigates some possible reasons for the occurrence of FAB.

### ***5.7.2 Factors That Impact Emotional Change over Time***

Since the current study is primarily concerned with how emotions and emotional recall change over time, it is important to discuss some of the psychological mechanisms that may be involved in this change. Although the current study does not attempt to investigate how some of these aspects cause a change in emotional recall, it does provide some insight into the reasons why these changes occur.

One aspect that could influence the recall of emotions is private reflection. An individual may brood longer over a negative experience than a positive one; this continuous ruminating over the negative experience may imbed it in the person's memory for a longer period.

A second aspect may be that the "updating" of memories in light of new information or circumstances may cause one to re-appraise a previous event (Levine & Bluck, 2004). For instance, a customer may have been very frustrated during a service interaction because the banking system was off-line. However, a staff member may call the customer the next day and inform them that the bank has completed the transaction on the customer's behalf. While the original experience may have been very negative, the customer's memory of the overall experience will be updated with new information, which could change their original perception to a more positive one.

A third aspect that could change one's interpretation of an experience is related to social interaction and sharing positive or negative experiences with people around one. Other people sharing their own negative experiences may make one re-evaluate one's experience as "not that bad" or "it could have been worse". Conversely, their reactions and comments while one narrates one's negative experience ("that is awful", "you should have insisted on speaking to the manger", "I will not go back there if I was you") may prompt one to reevaluate one's experience as worse than what one originally thought and that one should actually be even more upset.



Lastly, negative events may lose their intensity since maintaining an intense negative emotion over a long period may place an unnecessary cognitive and affective burden on the individual and may cause long-term psychological damage to the person (Taylor, 1991). Therefore, the deterioration of emotional intensity of negative experiences over time has an important self-preservation function. This view is echoed by Szpunar et al. (2012) who indicated that forgetting unpleasant events is a psychological coping mechanism that benefits personal adjustment.

Memory bias, as explained by FAB, is in most cases viewed as problematic since one cannot with one hundred per cent certainty say that what someone recalls is the “absolute truth”. However, the primary function of memory may not be to keep a meticulous record of past events and the emotions associated with those events, but to aggregate experiences over time to inform one’s current situation and help one plan for the future (Levine, 1997; Levine et al., 2009).

## **5.8 Relevance to the Current Study**

The preceding sections identified various aspects that are central constructs in the current study. The following aspects are discussed in the succeeding section:

- The importance for organisations to improve the satisfaction of their customers.
- The passage of time – a methodological challenge for organisations.
- Overall objectives to address these challenges.

### ***5.8.1 The Importance of Improving Customer Satisfaction for Organisations***

Firstly, it is vital for the long-term survival of organisations to measure and improve the satisfaction of their customers; the emotional experiences of customers play a vital role in their overall satisfaction. It is also evident that there are two elements to any experience:

firstly the experience itself and the memory of the experience; the experiencing-self and remembering-self interpret events very differently.

Consumers have a myriad of options when choosing service providers. Organisations are constantly competing against one another and have to do everything possible to ensure the retention of their customers. Numerous studies have proved that a satisfied customer is more likely to return than a non-satisfied one, confirming the link between customer satisfaction and loyalty (Oliver & Linda, 1981; Bitner 1990; Fornell, 1992; Anderson et al., 1994; Oliver, 1997). Previous research confirms that customers have a tendency to return to a service provider where they had a pleasant and positive experience (Zauberman et al., 2009).

Customers rely on their memory of past experiences, recalling and seeking out their most positive and memorable experiences and using these as a guide when choosing specific products or service providers to engage with (Park & Stoel, 2005). Therefore, creating and crafting memorable experiences should be the ultimate goal of any organisation since it leads to repeat visits and purchases (Hudson & Ritchie, 2009). Oliver (1999) indicated that one's memory of past experiences plays a vital role since it allows consumers to access all of their past experiences to choose the best experiences to repeat. If consumers retain a positive perception of a brand, product or service provider it influences their purchase intention in a positive way (Keller, 1993).

Schmitt (1999) indicated that it is important for marketers to maximise consumers' real-time (ongoing in the moment) and remembered enjoyment of consumption experiences. The more enjoyable these experiences are, the more satisfied customers will be and the more likely they will be to repeat them and recommend them to others (Moore, 2012). Well-known organisations like Disney and Starbucks understand the importance of ensuring that customers enjoy their experiences and spend significant organisational and monetary resources to create consumption experiences that are exceptionally pleasurable (Michelli,

2007; Cockerell, 2008). Understanding how customers' emotions impact their satisfaction with service experiences will enable organisations to create positive consumption experiences that will differentiate them from their competitors, protect them from commoditisation and increase their profits (Pine & Gilmore, 2011).

### ***5.8.2 The Passage of Time – A Methodological Challenge for Organisations***

In the context of measuring customer experience, previous findings on memory decay and the different perspectives of experienced utility and remembered utility create a methodological challenge for organisations. Companies generally rely on post-event surveys to collect feedback from customers about their experiences. Since there is always a time lapse between the product/service consumption and conducting customer feedback surveys, customers are expected to recall their experiences to provide their feedback. While both transactional and reputational surveys are conducted after an interaction with the organisation occurred, the time gap between the interaction and reputational surveys is much longer than the time gap between the interaction and transactional surveys.

The question that arises is, *How does the longer time gap between the two types of methodology affect customers' recall of their experiences?* It is hypothesised that customers' ability to recall their emotional experiences will be different between transactional and reputational surveys and this difference will significantly affect their satisfaction with the experience.

The recall bias caused by the passage of time, the effect it has on customers' ability to recall their experiences and the associated impact on their satisfaction evaluation are important considerations for organisations that want to improve the satisfaction of their customers. Customers may not remember *exactly* how they felt during a specific interaction; therefore, they base their evaluation on how they currently feel or how they think they might have felt during the specific interaction. Therefore, their appraisal of the interaction is likely

to be biased towards their current perception of the company's products or service instead of how they actually felt at the time of consumption. The critical question for organisations is whether to base their customer satisfaction improvement initiatives on the results of customers' experienced utility or remembered utility.

While numerous research studies have been conducted in the field of recalling emotional experiences, more research is required to understand the effect of consumption emotions on customers' experiences and their likelihood to recommend.

Porter et al. (2010) point out that more research is necessary to understand the relative impact of positive and negative events with similar intensity on memory and how these influences are manifested over periods that are longer than a single testing session. Miron-Shatz et al. (2009) indicated that although the gap between memory and experience has been documented in various settings, these measures generally focus on one specific emotion at a time only – usually the evaluation of pain or pleasure and that there is very limited research that compares the memory-experience gap for positive and negative emotions. They also hypothesise that the gap may not be identical for differentially valenced emotions since positive and negative emotions have different effects on cognition, memory and motivation.

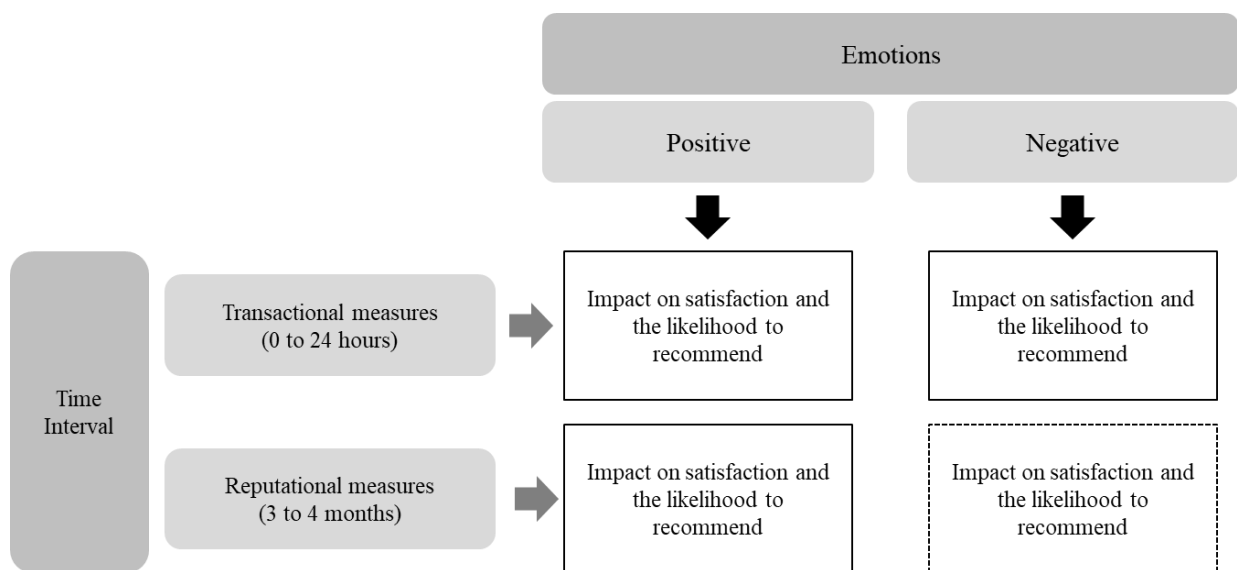
Most research conducted on emotions and memory is conducted in clinical and laboratory settings, primarily focusing on traumatic life events or investigating only a limited number of emotions. Relatively little empirical research has focused on how customers' recollection of emotional experiences is impacted by change over time. To the best of my knowledge this is the first empirical study that investigates the effect of time on customers' ability to recall emotional experiences and the differential effect that positive and negative emotions have on their satisfaction and loyalty; the study collected emotional and cognitive feedback at various stages in the customers' interaction journey with a financial service provider.

### 5.8.3 Overall Objectives to Address These Challenges

The overall objectives of the current study are summarised in Figure 5.3. Firstly, to investigate the impact of positive and negative emotions experienced by customers on their satisfaction and likelihood to recommend. Secondly, to investigate the impact of time on customers' recall of positive and negative emotions by collecting customer feedback at different times – within 24 hours after their experience (transactional methodology – accessing the experiencing-self) and between 2 to 4 months after an experience (reputational methodology – accessing the remembering-self).

**Figure 5.3**

*Main Objectives of the Current Study*



While the current research does not focus specifically on investigating Fading Affect Bias (i.e. the difference between how customers feel at the time of recall compared to how they felt during the interaction with the banker), the same constructs that form the basis of FAB impact the current study:

- How the passage of time affects customers' ability to recall emotions.
- The fading of emotional intensity over time.

- The differential effect on satisfaction and recommendation when recalling positive and negative emotions.

These fundamental characteristics of FAB and the associated hypotheses in the current study are discussed in the following section.

**5.8.3.1 The Time Difference Between Transactional Surveys and Reputational Surveys.** The first of these constructs is the impact that time has on the recall of emotions. The fading of affect that happens over time is central to FAB. Similarly, the effect of time between an experience and recalling the experience is a central construct in the current study.

Miron-Shatz et al. (2009) indicated that the gap between experienced emotions and recalled emotions is consistent with Construal Level Theory that describes the relation between psychological distance and the extent to which people's thinking is abstract or concrete. In this regard Trope and Liberman (2003) postulate that temporal remoteness (reputational surveys) causes representation of an event to be characterised by a few abstract elements, whereas temporal proximity (transactional surveys) leads to representation by multiple-incidental details. Miron-Shatz et al. (2009) indicated that when participants were asked to recall how happy they were during a previous experience, their recollections contained the “distilled essence” of the event rather than the “milder flavours” of the actual happiness experienced during the specific episode (2009, p. 890).

It is hypothesised that recalling emotions within 24 hours after an interaction (transactional methodology) compared to recalling emotions 3 to 4 months after an interaction (reputational methodology) will affect how customers recall the emotions they experienced.

The first hypothesis indicates that the passage of time will reduce customers' ability to recall specific emotions and that fewer customers will be able to recall the emotions they

experienced during reputational research (recall 3 to 4 months after their interaction) compared to transactional research (recall within 24 hours after the interaction).

**5.8.3.2 Intensity of Emotional Experiences.** Secondly, the current study attempts to explore whether the intensity of emotions remains the same over a long period of time or whether it fades as time passes. Put differently, do customers recall emotions as vividly 3 to 4 months after the interaction (reputational methodology) compared to within 24 hours of an experience (transactional methodology). If the fading of intensity occurs over time, what effect does this have on customers' evaluation of their satisfaction and the likelihood to recommend the service? The intense anger or frustration evoked in a service experience may provoke a milder response when the customer is asked to recall the event months later. Similarly, the intense joy that might have accompanied a service experience at the time may diminish in intensity when the experience is recalled later or when a customer shares the experience with someone else.

The second and third overall hypothesis focuses on the intensity of emotions. It is hypothesised that the intensity of emotions that customers recall will diminish or fade as time passes. Emotions recalled during transactional surveys (within 24 hours) will be more intense than emotions recalled during reputational surveys (3 to 4 months after an interaction).

**5.8.3.3 Bias of Positive and Negative Emotions.** The third aspect of FAB related to the current study is the bias between the recall of positive and negative emotions. A central construct of the current study is the differential effect of recalling positive and negative emotions. Baumeister et al. (2001) investigated numerous research studies related to the effect of positive and negative emotions and came to the conclusion that "bad is stronger than good". They indicated that negative events and negative emotions associated with these events have a greater impact on an individual and subsequently conclude that the intensity of

negative emotions should persist longer over time than the intensity of positive emotions. The rationale for this phenomenon is that negative experiences are more important than positive experiences for the long-term survival of an individual since it emphasizes situations that should be avoided in the future.

In contrast to this view Walker et al. (1997) found that positive event-prompted emotions last longer in the memory of individuals than emotions caused by negative events. Viewing this from a human adaptation perspective, autobiographical memory may function to promote a positive view of the self, promoting a positive view of the world and helping individuals adapt and prepare for the future (Conway & Pleydell-Pearce, 2000). However, several studies support the idea that high arousal and negative affect enhance the recall of events and their details (Berntsen, 2001; Kensinger & Corkin, 2003; Christianson & Loftus, 1991; Reisberg & Heuer, 2004). Kensinger et al. (2006) found that experiences that elicit negative affect are remembered more vividly than experiences with a positive or neutral valence. Their findings, therefore, confirm that the valence of an experience can influence the way that an event is initially encoded into memory and therefore affects the details of the event that is remembered. These findings are important in the context of the current study since they imply that experiences that elicit negative emotions combined with heightened emotional states are better remembered by customers with the passage of time.

The current study attempts to understand whether negative emotions would be easier to recall within 24 hours of an interaction (transactional surveys) compared to 3 to 4 months after an interaction (reputational surveys) or whether negative emotions last longer in the memory of customers and are just as easily recalled after 3 to 4 months, compared to positive or neutral emotions. If the resentment caused by a negative emotional experience persists in the memory of customers, it implies that a negative experience can have a detrimental effect



on customers' future decisions since customers do not forget these negative experience so easily.

It is hypothesised that negative emotions recalled during reputational surveys (3 to 4 months after a service interaction) affect customers' overall satisfaction and recommendation more than positive emotions recalled during reputational surveys.

These hypotheses are tested in the empirical chapter.

## **Chapter 6: Research Methodology**

In today's economy it is vital for organisations to improve the satisfaction of their customers to create a sustainable loyal customer base. Therefore, many organisations have a customer satisfaction programme where they obtain feedback from customers to gauge how satisfied and loyal they are. This information is utilised to improve their products and services. Organisations predominantly use customer satisfaction surveys to obtain relevant information about a product or service experience. There are two important aspects that organisations need to consider when conducting customer satisfaction surveys: 1) when to conduct customer satisfaction surveys; 2) what the content of these surveys should be. Companies can make use of transactional or reputational surveys. Transactional surveys are conducted within 24 hours after a customer has had an interaction with the organisation. Conversely, reputational surveys are typically conducted once or twice a year, usually after an extended period following an interaction (3 to 5 months). In terms of the content contained in the surveys, organisations generally focus on measuring the cognitive, operational aspects of the interaction and neglect the emotional experience of the customer.

The decision about the type of survey (transactional or reputational) and whether the survey should measure the cognitive and/or emotional experience of the customers is important. It is hypothesised that both these aspects have an influence on customer satisfaction and customers' likelihood to recommend ratings.

### **6.1 Research Problem**

#### ***6.1.1 Deciding Between Transactional and Reputational Surveys***

In most customer satisfaction surveys customers are asked to evaluate a product or service experience and provide an indication of their overall satisfaction (Bickart & Schwarz, 2001). According to some theorists, the perception of service quality is a function of the level

of service experienced during a customer's most recent service experience (Boulding et al., 1993). Contrarily, some authors are of the opinion that a more accurate measure of customer satisfaction is the cumulative satisfaction of customers over an extended period of time that is impacted by multiple service encounters and other factors during the period (Fornell, 1992).

Because of cost associated with customer satisfaction surveys and to avoid the risk of over surveying customers, organisations that want to conduct customer satisfaction surveys are generally forced to choose between measuring a single interaction using transactional surveys and measuring the aggregated, cumulative satisfaction of customers using reputational surveys (Fredrickson & Kahneman, 1993). Companies that employ both methodologies or change from one survey type to another often find that the results of these two types of survey do not always correlate. The discrepancy between these results is perplexing and customer satisfaction practitioners are faced with a conundrum: which of these two types of survey provides a true reflection of customer satisfaction and which initiatives should be implemented, based on the results of the different surveys?

The most noticeable difference between transactional and reputational surveys is the time delay between the customer-company interaction and when customers provide their feedback. The time delay has a significant impact on the feedback provided by customers. Research conducted in the field of Fading Affect Bias (FAB) indicates that recalling autobiographical experiences at different times following an experience influences customers' ability to recall details about their experience. The amount of time that passes between an event and the recall of the event has a significant effect on the rate of misremembering (Loftus et al., 1978). Furthermore, previous studies indicated that the passage of time has a differential effect on how positive and negative emotions are remembered (Neisser & Harsch, 1992; Southwick et al., 1997). The current study collected customer feedback at two different time intervals following an interaction with the organisation (transactional survey and reputational survey)

to ascertain how the time difference influenced customers' ability to recall emotions experienced during the interaction.

### *6.1.2 Measuring Cognitive or Emotional Aspects of the Service Interaction*

Another contentious aspect within the field of customer experience is the interplay between emotion and cognition. Previous research in the field of consumer behaviour indicates that both affect and cognition can have an effect on consumer-satisfaction judgments (Pham, 1998; Westbrook, 1987; Westbrook & Oliver, 1991). There exists a complex interplay between cognition and emotion and the two aspects are only partially independent (Zajonc, 1980). Satisfaction judgement is therefore a combination of cognition and emotion (Oliver, 1997). In some instances, satisfaction is driven primarily by cognition while in other circumstances affect plays a more prominent role.

While customer satisfaction research in the past exclusively focused on the consumer as rational decision maker, many authors have indicated that cognitive models on their own perform very poorly in predicting customers' behavioural intentions (Brady & Cronin, 2001). There is a growing need to go beyond focusing on the cognitive component of satisfaction (Dubé-Rioux, 1989; Westbrook, 1987) and explicitly incorporate measures of emotion in predictive models of satisfaction (Palmer & Koenig-Lewis, 2011).

A significant number of studies indicate that affective measures of satisfaction may be better predictors of customer satisfaction and future behavioural intentions than cognitive measures (White & Yu, 2005; Koenig-Lewis & Palmer, 2008). In addition, Allen (1992) suggested that affective measures of satisfaction might be more stable over time than cognitive measures because of their deep-seated nature. While this may be true, research in field of Fading Affect Bias indicates that positive and negative emotions fade differently as time passes, which further complicates the influence of emotions on satisfaction and

recommendation. The current study aims to investigate the combined and individual effect of emotion and cognition on satisfaction and recommendation while investigating how positive and negative emotions influence the experience of customers.

## **6.2 Aims and Objectives**

### ***6.2.1 Research Aims***

The current study intended to investigate the combined and individual effect of emotion and cognition on satisfaction and recommendation while investigating how positive and negative emotions influence the experience of customers.

This information should assist organisations in terms of their decision to employ transactional or reputational survey methods and the relevance of including both cognitive and affective measures.

The research aims were the following:

5. To investigate the impact of cognition and emotion on the satisfaction and recommendation of customers.
6. To investigate the impact of time on customers' ability to recall emotions and the impact of their emotions on overall satisfaction and recommendation.
7. To investigate the impact of positive and negative emotional experiences on customer satisfaction and their likelihood to recommend the company.
8. To develop an emotional model that will identify specific emotions and their impact on satisfaction and recommendations.

### **6.2.2 Research Objectives**

Given the aforementioned aims the objectives were the following:

1. To conduct online interviews with customers to evaluate their service experience at two time intervals: 1) transactional surveys were administered within 24 hours after customers had an interaction with the company; 2) reputational surveys were conducted within 3 to 5 months after customers had any specific interaction with the company.
2. To collect feedback about customers' emotional experiences as well as measuring cognitive operational aspects of their experience.
3. To conduct qualitative and quantitative analysis:
  - Qualitative analysis was conducted by analysing verbatim feedback from customers regarding the emotions they experienced during their service interaction. Sentiment analysis was used to identify and analyse the valence (positive and negative) as well as the intensity of emotions experienced.
  - Quantitative analysis was conducted on questions relating to the intensity of emotions, service attributes, overall satisfaction and the likelihood to recommend; these were measured using a Likert scale.
4. To correlate qualitative (emotional) and quantitative (cognitive) feedback with overall satisfaction and the likelihood to recommend to identify the most important drivers of satisfaction and recommendation.
5. To investigate cognitive and emotional feedback from customers simultaneously to better understand the interplay between cognition and emotion and their individual and combined effect on the overall satisfaction and the likelihood to recommend the organisation.
6. Finally, to correlate sentiment scores of discreet emotions with satisfaction and recommendation scores to develop an emotional model that will provide an indication

of the impact of specific negative and positive emotions on the satisfaction and recommendation of customers.

### **6.3 Research Approach**

#### ***6.3.1 Ontological Stance***

Ontology is defined as “the study of being” (Crotty, 2003, p.10). It is concerned with the nature of existence and how one understands the world that we live in. In its broadest terms it concerns one’s view of the world as either objective or subjective. One’s ontological assumptions of the world should answer the question, “What is there that can be known?” or, “What is the nature of reality?” (Guba & Lincoln, 1989, p. 83).

The current study is approached from an objective ontological perspective that originates from the belief that the experiences of customers have a direct effect on their satisfaction and recommendation and that these experiences can be measured and analysed to improve one’s understanding of this effect. Customer experiences directly affect their view of products and services and influence their current perception and future decisions about the consumption of products and services. This ontological approach concurs with the view of Snape and Spencer (2003) who indicated that the nature of the world around us can be measured and the information obtained during this process can be analysed and turned into knowledge that will improve one’s understanding of the world we live in.

While this objectivist viewpoint about the world allows one to investigate the interaction between the customer and the banker and gather data to interpret the cause and effect of specific variables, the social interaction between the customer and the banker creates meaning that is socially constructed. This subjective reality created by the interaction needs to be acknowledged.

Individual customers participating in the current study had their own unique perception and interpretation of their emotional experiences and it was their interpretation of the experience that formed the basis of their feedback. Customers essentially construct their own experience with the banker and the reality of one customer is completely different from the reality of another customer. Bryman (2008) defines social ontology as the constructions built from the actions, perceptions and interpretations of individuals in society. While the current study is based on an objectivist viewpoint, the subjectivity of customers' emotional experiences has to be acknowledged.

### ***6.3.2 Epistemological Perspective***

In general terms epistemology relates to the assumptions one makes about the nature of knowledge (Richards, 2003) and the methods one uses to investigate and acquire knowledge about the world (Snape & Spencer, 2003). Crotty (1998) described it as the understanding of what knowledge entails and the distinction between the knowledge that can be obtained and the knowledge that cannot be obtained. Cohen et al. (2007) indicated that epistemology reflects the assumptions one makes about the very foundations of knowledge, how it is acquired and communicated to others.

The current study is firmly rooted in a positivistic epistemology, believing that searching for the truth requires objectivity and evidence. According to Snape and Spencer (2003) meaningful realities and objective truths already reside in the situations and people that one investigates and are waiting to be discovered.

One of the foundational assumptions of a positivistic outlook is that knowledge about the world originates in one's experiences and is derived through one's senses (Bryman, 2008; Ormston et al., 2014). The experience that customers have becomes their truth and the truth for them influences how they evaluate and perceive the organisation and its service delivery.



While their judgements might be subjective, their experience, interpreted through their senses, influences their perception of the organisation and their future behavioural intentions.

Taking an epistemological stance, the aim of the current study was to use valid and reliable methods to uncover objective, tangible and replicable truths that elucidate the experience of customers.

While this holds true for the methods being used in the current study, the subjective nature of emotions and the fact that feedback received from customers is entirely based on the interpretations of their unique experience, care should be taken when interpreting the research results. Their construction of their experiences might not be representative of the “absolute reality” of all customers. However, this is the nature of social research: one has to believe that the feedback one receives from customers represents their reality and what is true for them. Ultimately “their truth” is what guides and motivates their decisions and behaviour. If we do not believe this, then research within the social and psychological domain needs to be abandoned.

#### **6.4 Research Design**

A combination of a cross-sectional and correlational research design was used to address the research questions and test the hypothesised relationship between variables.

##### **Cross-sectional design**

A multiple cross-sectional research design was used in the current study. According to Malhotra (1993), a multiple cross-sectional design involves the collection of data from two or more representative samples of respondents; information from each sample is collected only once at a specific point in time. Levin (2006) summarises the most important characteristics of a multiple cross-sectional design as follows:

- Data is often collected at different times for the two sample groups.
- The variables remain constant throughout the cross-sectional study.
- Variables are not manipulated.
- The research investigates numerous variables at once.
- It provides information about what is happening in a current population.

There are a number of advantages to a cross-sectional design. Firstly, a cross-sectional design allows practitioners to collect actionable data in a short space of time that assists in decision-making regarding product or service offerings. Since the current study was conducted in a commercial setting, a cross-sectional design was the ideal approach to provide actionable insights to the origination. Secondly, a cross-sectional design allows for investigating the impact of multiple independent variables on the dependent variable in a well-defined population at a specific moment in time (Bangdiwala, 2019). Thirdly, it allows for the investigation of multiple outcomes from a single study and is therefore useful for studying common outcomes. Lastly, it is easily replicated in other contexts.

A cross sectional design can be either descriptive or analytical. The current study uses an analytical design since it aims to investigate the association between two or more related or unrelated parameters (Question-Pro, 2020).

When conducting cross-sectional research care should be taken in the way that the research is executed in terms of the sample design and the questionnaire being used. The sample should be representative of the target population and it is therefore necessary to use probability or random samples. It requires large robust samples to estimate the prevalence of the conditions of interest and the distribution of the variables of interest with adequate precision (Bangdiwala, 2019). Since data is collected retrospectively using a questionnaire, it is important to minimise response bias.

One of the disadvantages of a cross-sectional design is that outside variables and outcomes are simultaneous and the variables measured are not isolated. Other variables that could influence the research results are not controlled. Therefore, the design cannot be used to test causality since the independent variables cannot be manipulated during the research to test the associated change in the dependent variable.

### **Correlational design**

Correlational research is a type of non-experimental design that facilitates the prediction and explanation of the relationships between two or more variables in the same population or between the same variables in two populations (Leedy & Ormrod, 2010). This type of research design is aimed at measuring two or more variables to investigate the extent to which the variables are related. Exploring the relationship among variables is a significant part of research in the social sciences. Understanding the associations and relationships that exist among “human phenomena is an abiding impetus for scientific enquiry in all of the social science disciplines, and that impetus transcends even the most polarised paradigmatic distinctions between various research methods” (Fitzgerald et al., 2004, p. 143). In his book *Experimental Psychology* Woodworth (1938) emphasised the importance of correlation research in measuring two or more variables from the same person or group of people and then calculating the correlation between characteristics. Similarly, Cronbach (1957) in his article, *The Two Disciplines of Scientific Psychology* emphasises the importance of establishing correlations between two or more variables. Correlational designs are often used in social research where, similar to cross-sectional designs, it is not possible to manipulate the variables being studied. When conducting correlational research, careful consideration should be given to the chosen variables included in the research as well as the selection of samples for the research.

Two variables may co-exist but it is only through empirical research that it is possible to demonstrate the direction and strength of the relationship between the variables. The aim of a correlational design is to understand how differences in the independent variable are associated with differences in the dependent variable. It was therefore important before the commencement of the study to identify the variables that should be included in the study and why the variables might be related. The variables included in the research should be clearly defined and to determine the correlation between variables the level of measurement had to be ordinal, interval or ratio.

Quantitative research designs with the aim of establishing a correlation usually require large samples that have been attained following a precise process. This is important to produce statistically representative data that permits generalisation of findings to the target population (Norwood, 2010).

Similar to the disadvantages of cross-sectional research designs, a correlational design cannot prove causation. While correlational design can prove the existence of a relationship between two variables it cannot predict that a change in the independent variable will cause an associated change in the dependent variable.

The decision of using a multiple cross-sectional and correlation research design for the current study was based on a number of factors. The cross-sectional design primarily relates to the collection of data while the correlational design specifically relates to the statistical methods used to test the current hypotheses.

Firstly, a multiple cross-sectional design was chosen since data was primarily collected at two specific points in time. Transactional data was collected within 24 hours following an interaction with the bank while reputational data was collected within 3 to 5 months after an interaction. Secondly, the variables would remain stable and were not manipulated during

the course of the study. Thirdly, the main aim of the research was to collect data about the actual experience of the current population of banking customers following their interaction with the bank. Lastly, the research was conducted in an actual commercial environment and it was important to collect actionable data relatively quickly to assist in decision making.

A correlational design was chosen since it is an ideal method to investigate the relationship between several variables during analysis. Firstly, the impact of cognitive and affective variables (separately and in combination) on satisfaction and recommendation had to be investigated. Secondly, the relationship between positive and negative emotions experienced during an interaction and their effect on overall satisfaction and the likelihood to recommend had to be established.

## **6.5 Data Collection**

### ***6.5.1 Population and Sample***

According to Fraenkel and Warren (2002), population refers to the complete set of individuals (subjects or events) having common characteristics in which the researcher is interested. The population of the current study consisted of all business owners or senior representatives that had interaction with their personal banker over a 13-month period. A random sampling method was used, ensuring that each member of the population (business owners or representatives) had an equal chance to participate in the research. Only customers that completed more than 80 per cent of the survey were included in the analysis.

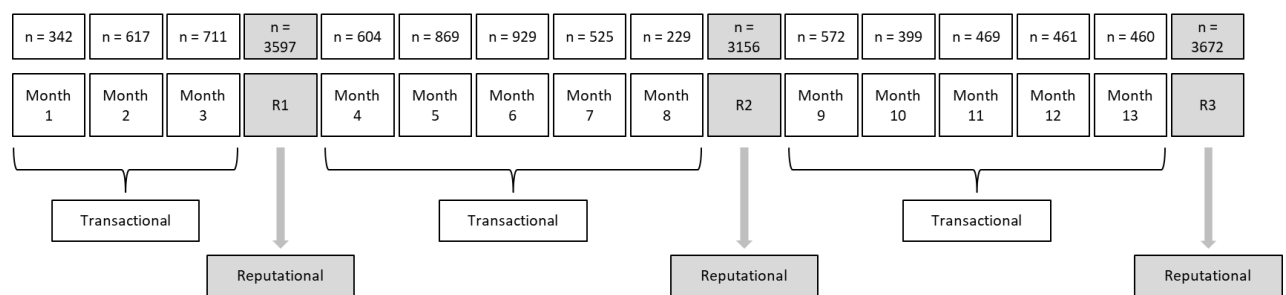
A total of 7 187 transactional surveys and 10 425 reputational surveys were completed. The total sample size of 17 612 responses was found to be satisfactory to be representative of the overall population of business banking customers and to conduct the statistical analysis.

**6.5.2 Data Collection Procedure**

To compare the cognitive and affective feedback from customers between transactional and reputational surveys, it was necessary to implement the data collection process over a 13-month period. Figure 6.1 illustrates the data collection process and the total sample collected during each data collection phase.

**Figure 6.1**

*Data Collection Schedule*



**6.5.3 Online Data Collection Method**

An online data collection method was chosen for the current study. Verint, an Enterprise Feedback Management (EFM) system, was used to send e-mail invitations to customers. The survey invitation contained a link that directed customers to the same online EFM platform where they completed the questionnaire.

**Advantages of an online data collection method**

An online data collection method was the most appropriate for several reasons:

Firstly, customers’ e-mail addresses form part of their profile at the bank and they have given the bank permission to use their e-mail address for communication and research purposes. E-

mail addresses were therefore available for all customers that had interacted with their personal banker.

Secondly, it was an effective method to administer the two types of survey:

- Transactional surveys: The aim was to conduct these surveys within 24-hours after a customer had had an interaction with a personal banker. A system was developed that automatically sent out e-mail invitations to all customers that had interacted with their personal banker the previous day, inviting them to participate. Since these surveys had to be completed daily an online automated method was the most practical and efficient.
- Reputational surveys: At three separate time points during the project (after the first three months, after month seven and after month eleven) survey invitations were sent to all customers that had an interaction with their personal banker during that time period. This ensured that the time gap between their interaction and the completion of the survey was 3 to 5 months. Details of these customers were received on a once off basis and invitations were sent to all customers that interacted during that time. Since these surveys had to reach a large number of customers at once an online method was the most suitable.

Thirdly, within the business and research environment, online data collection is one of the most preferred method for collecting data because of the low cost and effectiveness associated with this method. Since the current study consisted of a large sample of customers an online method was the most cost-effective. The study therefore replicates what happens currently in commercial environments when companies embark on collecting feedback from customers.

Fourthly, online data collection is the most appropriate method for the target population. Business owners and senior business representatives are extremely busy and using an online data collection method allowed them to complete the survey at a time that was convenient for them.

Pilot surveys were conducted and reliability and validity analysis was performed before the commencement of the actual data collection process.

### **Limitations of the data collection method**

It was possible that customers that had had an interaction with their personal banker could have completed the transactional and reputational surveys since they were invited for both surveys: once during the transactional survey 24-hours after their interaction and 3 to 5 months later during the reputational survey.

Since the surveys did not contain any personal identifiable data, one of the limitations of the current study is that it is not possible to know which customers completed a transactional or a reputational survey. One of the stipulations of many projects in the banking industry is that no personal information will be asked of customers during the survey. In addition, the POPI act (Protection of Personal Information) does not allow the bank to extract any personal information of customers and share it with a third party (the researcher).

While this is not a concern for the current study since data is analysed on an aggregated level and not on an individual level, this information could have been useful in terms of understanding customers' participation frequency/tendency and additional insight could have been gained by comparing customers' feedback on an individual level over time.

One consideration is the possibility of sample dependency between the transactional and reputational sample, and multiple transactional measures over time. While it is possible that one customer could have completed the transactional as well as the reputational survey or



multiple transactional surveys, there are several reasons why sample dependency between the different samples was not a concern. Firstly, it was highly unlikely that a large proportion of the sample would have completed both the transactional and reputational surveys based on the large population size and the random sampling method used in the study. Secondly, a 3-month “cool down” period was implemented in the study, which prohibited customers from completing a survey if they had done so in the preceding three months. Thirdly, the transactional surveys were aimed at measuring a singular service experience; therefore, even if the same customer took part in multiple transactional surveys they would have provided feedback about two different and unique service experiences.

#### ***6.5.4 Adherence to Ethical Standards***

Permission was obtained from the bank to use the customer data collected during the study for the purposes of the current thesis. The purpose of the study was explained to respondents and they were informed that all the information they provided was confidential, that no personal information would be collected during the study and that their identities would not be revealed. Informed consent was obtained from each participant.

A number of steps were taken to adhere to ethical standards. Customer profile information at a bank indicates whether the customer gives the bank permission to use personal contact details for marketing, communication and research purposes. Only customers that gave permission to be contacted received invitations to participate in the research. Participation was completely voluntary and customers had the option to opt-out and refuse to participate in the study.

To ensure that ethical standards were adhered to as per the regulations of SAMRA (South African Market Research Association) and ESOMAR (European Society for Opinion

and Marketing Research) the following information was provided to customers in the e-mail invitation:

- The purpose of the research: To collect feedback about their experience with the sole purpose of improving the services delivered to them.
- Participation was completely voluntary.
- The survey would be completed anonymously and no personal details would be collected during the survey.
- All information provided would be confidential and used for research purposes only.
- Responses would not be analysed on an individual level but aggregated with the responses of other customers.
- The expected time that it would take to complete the survey.

The e-mail invitation included the following:

- The contact details of the researcher. This allowed customers to contact the researcher if they had any questions about the research project or if they wanted to provide any additional feedback that was not captured during the structured questionnaire.
- As per the Consumer Protection Act (CPA) and the Electronic Communications and Transactions Act, an unsubscribe link was provided in the e-mail invitation. The unsubscribe link provided customers with the opportunity to unsubscribe from receiving any future surveys.
- Survey link. By clicking on the survey link customers were directed to the online survey platform where they could complete the survey.

The survey invitation is included in Appendix A.

## **6.6 Questionnaire Development and Considerations**

The questionnaire was developed in collaboration with experts in the banking industry, specifically with relation to the personal banking environment. Two main considerations in developing the questionnaire were: 1) ensuring the construct validity of the questionnaire; 2) ensuring that the results addressed the strategic objectives of the bank in terms of operational improvement.

To address the key research objectives the current study measured quantitative and qualitative aspects of the customer-banker interaction. A structured questionnaire was used to ensure data uniformity and comparability and all customers completed the same questionnaire. Questions were designed to be clear and easy to understand.

Before commencement of the study a pilot survey was conducted to test the validity and reliability of the questionnaire. A total of 200 surveys –100 transactional and 100 reputational – were conducted during the pilot study. The analysis indicated that the questionnaires were reliable and valid and no changes were made to the questionnaires after the pilot study.

To ensure the construct validity of the questionnaire, several important decisions had to be made in terms of operationalising the research constructs, i.e. deciding on the variables to be included in the questionnaire to address the research objectives and hypothesis. The following considerations were important in developing the questionnaire:

- Including cognitive and affective measures
- Using open-ended verbal protocols to capture customer emotions
- The use of self-reporting questionnaires
- Measuring emotional intensity
- Word-of-mouth as a loyalty construct
- Differences between transactional and reputational surveys

- Summary of variables included in the questionnaire

### ***6.6.1 Including Cognitive and Affective Measures***

Research in the area of customer satisfaction indicated that besides a cognitive component, customer satisfaction is concurrently influenced by an affective component (Liljander & Strandvik, 1997; Oliver, 1993; Westbrook & Oliver, 1991). When combined, cognitive and affective measures explain a substantial part of satisfaction formation (Van Dolen et al., 2001). While affect has been identified as an important contributor to satisfaction, the relationship between cognition and satisfaction has been investigated far more often (Liljander & Strandvik, 1997; Wirtz & Bateson, 1999). Therefore, cognitive operational attributes and an affective question were included in the study. The current study follows a novel approach to examine consumption emotions; it uses customers' verbatim feedback (verbal protocols) about their emotional experience, collects both cognitive and affective feedback and relates it to customers' overall satisfaction and the likelihood to recommend – executed in a commercial banking environment using large sample sizes.

### ***6.6.2 Using Verbal Protocols to Capture Emotions***

While standardised emotional scales can be used to measure customer emotion, the current study used an open-ended verbatim question to obtain customer feedback about their emotions for several reasons. Richins (1997) indicated that generalised emotion scales (scales developed by Izard, 1977; Mehrabian & Russel, 1974; Plutchik, 1980) are often not suitable to measure customer consumption emotions for two reasons: firstly, these scales were originally developed to measure interpersonal relationships, and secondly, they measure only a limited number of emotions. One of the biggest challenges using these emotional scales is that they contain a predetermined set of emotions that are rated by consumers. Although this method provides a quantitative indication of the degree to which a customer experienced each

emotion, there are two limitations to these methods. Firstly, it assumes that all the emotions that form part of the scale were experienced by customers, and secondly, it does not afford customers the opportunity to recall or rate emotions that are not part of the evaluative set. Liljander and Strandvik (1997) stated that “So far, standardised general emotion scales have been used in the few published studies concerning services. There is a need for a more qualitative approach to emotions in services in order to generate an in-depth understanding of emotional dimensions in service episodes and relationships” (Liljander & Strandvik, 1997, p. 164).

As an alternative to using standardised scales, open-ended verbatim questions can be used to measure consumption emotions. The measurement of emotions via content analysis of open-ended verbatim protocols has been successfully used by other researchers (Fiebig & Kramer, 1998). Weber (1985) indicated that content analysis of open-ended questions yields more unobtrusive measures than analysis of close-ended questions since the act of measurement does not confound the data.

The above-mentioned reasons were the motivation for using verbal protocols, allowing customers to express their emotions in their own words instead of using a predetermined set of emotions as contained in emotional rating scales.

A major advantage of this method is that it allows the researcher to extract and analyse the entire spectrum of emotions that customers might experience. Mittal, Ross and Baldasare (1998) provided evidence that positive and negative affect can have asymmetric effects on customers' judgements. In this regard, Homburg et al. (2006) who investigated the role of cognition and affect in the formation of customer satisfaction, indicated that future research should focus on examining both positive and negative affect simultaneously. Using open-ended verbal protocols allowed customers to express both positive and negative emotions,

which are correlated with their satisfaction judgement and likelihood to recommend during analysis.

Using open-ended verbal protocols to capture customers' emotional experience did, however, present its own challenges. Firstly, a substantial number of customers described their general experience instead of providing feedback about specific emotions they experienced. While this provided a challenge in terms of analysis (as is discussed in the analysis section) it confirmed that the use of an open-ended verbatim question to capture customers' emotions was the correct method. If an emotional scale had been used to capture emotions, customers might have felt obliged to rate the emotions presented in the scale while in reality they could not recall any specific emotions. The second challenge was transforming verbatim responses into a numerical value that represents the strength and orientation (positive, neutral or negative) of the emotional feedback. This was achieved using sentiment analysis and is discussed in detail in the analysis discussion.

### ***6.6.3 Self-Reporting Questionnaire***

The study employed a self-reported method to collect feedback about customer emotions. Self-reporting emotions is a method that has successfully been used in previous research investigating customer emotions. Russel (2003) used self-report successfully to study core affect and indicated that it is an effective method in areas where customers do not have any incentive to lie. "Ultimately, self-report is no more defining than any other indicator, because scientists are relying on someone to tell them about something subjective (at a phenomenological level) or inaccessible to them (at a neutral level)" (Russel, 2003, p. 154). Similarly, Mano and Oliver (1993) who examined the underlying dimensionality of three aspects of customers' post-consumption experiences stated that "self-reports provide an effective and efficient method of assessment (Mano & Oliver, 1993, p. 456).

#### ***6.6.4 Measuring Emotional Intensity***

Similar to Mano and Oliver (1993), the intensity of customers' emotions was measured using a Likert scale question. However, while they used a 5-point Likert scale (1 = "not at all," 5 = "very much") the current study used an 11-point scale (0 = slightly felt, 10 = strongly felt) to correspond with the scale range of other questions in the questionnaire, making it more consistent and easier for customers to answer. The "slightly felt" anchor was used in the current study since customers had already indicated that they did experience an emotion in the previous question and therefore had to indicate the intensity (i.e. "not at all" was therefore not applicable in this scenario).

#### ***6.6.5 Word-of-Mouth as a Loyalty Construct***

One of the key considerations in the current study was deciding which loyalty construct to include. From a pragmatic point of view, it is not always possible to use multiple constructs in a customer survey to measure customer loyalty. This is especially true for the transactional survey that contained a total of 11 questions.

Several researchers divide customer loyalty into two types: behavioural loyalty and attitudinal loyalty (Kumar & Shah, 2006; Lam et al., 2004; Fullerton, 2005). Behavioural loyalty refers to actions on the part of the customer that will result in actual purchase behaviours; behavioural loyalty is usually measured using constructs like repeat purchase or increased usage. Attitudinal loyalty, on the other hand, will not lead to actual purchase behaviours but describes a psychological and attitudinal disposition of the customer. Attitudinal loyalty is measured by constructs such as the likelihood to remain with the company and word-of-mouth recommendations.

One of the critiques of behavioural measures like repeat purchase is that they are primarily outcome focused (i.e. final purchase), which can be influenced by numerous factors other than customer loyalty, such as stock availability, variety seeking, competitive marketing

and price increases. Conversely, customers' psychological disposition in terms of preferences and intentions plays an important role in understanding customer loyalty (Jain et al., 1987; Bloemer & Kasper, 1995). Coulson (1966) and Day (1969) make a distinction between spurious loyalty as captured by behavioural patterns and true/intentional loyalty that extends beyond the regular purchasing of a brand.

Specifically, within a service context, attitudinal measures of loyalty seem more prudent than behavioural measures. Edvardsson et al. (2000) indicated that in a service context loyalty is more likely to be earned compared to a product context where physical goods often have guarantees and warranties. In addition, services are intangible and difficult to standardise and often carry higher risks without any guarantees (Bansal & Voyer, 2000; Zeithaml et al., 2006). Since services are more complex and difficult to evaluate (Money et al., 1998), word-of-mouth seems like a more important measure of loyalty, particularly in the context of professional services (File et al., 1994). Specifically, within a banking environment, which is characterised by complex professional service interactions, Heskett et al. (1997) included word-of-mouth recommendations as a loyalty construct.

Word-of-mouth is based on mutual trust between the person doing the recommending and the receiver of the recommendation. Since trust is an extremely important concept in the banking environment, word-of-mouth is an effective measure for customer loyalty. In lieu of these findings and perspectives it was decided to include word-of-mouth in the current study as a measurement of customers' attitudinal loyalty.

#### ***6.6.6 Difference Between Transactional and Reputational Surveys***

Transactional and reputational surveys were designed to collect feedback about the customers' affective (emotional) and cognitive (operational) aspects of their experience. The differences and similarities between the two questionnaires are discussed below.



Reputational questionnaire: The reputational questionnaire was designed to measure all aspects of the interaction between the customer and the personal banker as well as various overall aspects related to the engagement. The survey included a total of 44 questions and took on average 15 minutes to complete. These included the emotions experienced during the interaction, the degree to which these emotions were experienced and the reason for these emotions. The questionnaire measures 18 cognitive/operational attributes related to the product, relationship and service experience using an 11-point Likert scale. In addition, information was collected about any problems that the customer might have experienced during this time, the channels used to report the problems, the nature of these problems and how effectively problems were resolved. Finally, it measured various loyalty and overall satisfaction constructs.

Transactional questionnaire: The transactional questionnaire was considerably shorter than the reputational questionnaire and included a total of 11 questions and took on average 4 minutes to complete. These questions were obtained from the reputational survey, ensuring that the two surveys were aligned in terms of the aspects measured and the format of the questions. These included the emotions experienced during the interaction and the degree to which these emotions were experienced and the reason for these emotions. The questionnaire contained only six cognitive/operational attributes compared to the 18 attributes included in the reputational survey. Similar to the reputational survey, the transactional survey included two loyalty questions and an overall satisfaction question.

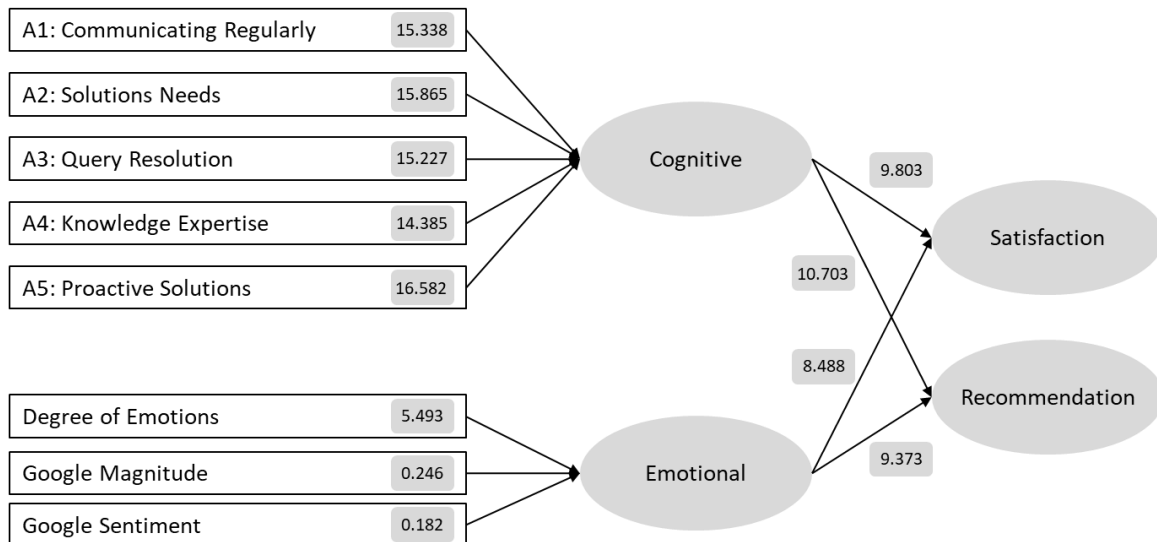
While a total of 18 cognitive/operational attributes were measured during the reputational surveys only the six attributes that were measured in the transactional survey were included in the analysis. Table 6.1 illustrates each of the questions as well as the question format. The complete questionnaires can be viewed in Appendix B).

### 6.6.7 Summary of Variables Used in the Current Study

**Table 6.1**

*Variables Used in the Current Study*

| <b>Question type</b>  | <b>Affective (Emotional)</b>   |
|---|--|
| Open-ended verbatim   | Q1. Please describe any emotion you experienced as vividly as possible in your own words.  |
| <b>11-point Likert scale:</b><br>0 = Slightly felt<br>10 = Strongly felt                        | Q2. Please indicate the degree to which you experienced the emotion (only asked to customers that experienced an emotion in Question 1). |
| Open-ended verbatim   | Q3. What was the reason why you experienced these emotions? (Asked to customers that experienced an emotion in Question 1 only).         |
| <b>Question type</b>  | <b>Cognitive (Operational)</b>   |
|   | <b>Please indicate how well your personal banker performed on each of the following aspects compared to your expectations:</b>           |
| <b>11-point Likert scale:</b><br>0 = Much worse than expected<br>10 = Much better than expected | Q4.1. Being available to you by communicating and interacting regularly.   |
|   | Q4.2. Solutions provided matched your financial requirements   |
|   | Q4.3. Effectively channelling your queries through to resolution.  |
|   | Q4.4. Having adequate knowledge, information and expertise to meet your business banking needs.  |
|   | Q4.5. Proactively preparing solutions to address your business banking needs.  |
| <b>Question type</b>  | <b>Likelihood to recommend</b>   |
| <b>11-point Likert scale:</b><br>0 = Not likely at all<br>10 = Extremely likely                 | Q5. The likelihood that you would recommend your personal banker to other business counterparts.   |
|   | Q6. The likelihood that you would recommend the bank to other business counterparts.   |
| <b>Question type</b>  | <b>Overall Satisfaction</b>  |
| <b>11-point Likert scale:</b><br>0 = Very dissatisfied<br>10 = Very satisfied                   | Q7. Overall, how satisfied are you with the experience with your personal banker?  |



Question 1 and Question 2 represent the affective components of the survey:

- Question 1 was used to extract the emotions experienced by customers.
- Question 2 was used to measure the intensity of the emotion.

Questions 4.1 to 4.6 are the operational variables that were measured and represent the cognitive evaluation of the customers' experience.

Q5 and Q6 are the dependent variables used to measure customers' word-of-mouth recommendations.

Q7 is the dependent variable used to measure customer's overall satisfaction with the experience.

## 6.7 Reliability and Validity

### 6.7.1 Reliability

Reliability refers to the instrument being without bias (error free) and ensures consistent measures across time and across various items in the questionnaire (Sekaran & Bougie, 2010). Reliability analysis was performed on the data to ensure stability and consistency. Reliability was determined through Cronbach's alpha, a measure of internal consistency (i.e.

how closely related a set of items are as a group) (Cronbach, 1951). Cronbach's alpha is "one of the most important and pervasive statistics in research involving test construction and use" (Cortina, 1993, p. 98) and its use in research "with multiple-item measurements is considered routine" (Schmitt, 1996, p. 350). Cronbach's alpha reliability coefficient ranges from 0 to 1.

Cronbach's alpha coefficient was evaluated using the guidelines proposed by George and Mallery (2003) where  $\geq .9$  excellent,  $\geq .8$  good,  $\geq .7$  acceptable,  $\geq .6$  questionable,  $\geq .5$  poor, and  $< .5$  unacceptable. Table 6.2 shows the results of the reliability analysis for the transactional method while Table 6.3 indicates the results for the reputational method.

**Table 6.2***Reliability Analysis for Transactional Methodology*

| Transactional method        | Summary for scale: Mean = 455.789 Std. Dev.= 79.9894<br>Valid N:6,683 (Transactional Data)<br>Cronbach's alpha: 0.9658 Standardised alpha: 0.9664<br>Average inter-item corr.: 0.8541 |                 |                      |                  |                  |                  |
|-----------------------------|---|-----------------|----------------------|------------------|------------------|------------------|
| Attribute                   | Mean if deleted   | Var. if deleted | Std. Dev. if deleted | Itm-Totl Correl. | Squared Multp. R | Alpha if deleted |
| A1: Communicating Regularly | 365.544   | 4129.657        | 64.262               | 0.870            | 0.770            | 0.963            |
| A2: Solutions Needs         | 364.850   | 4080.671        | 63.880               | 0.922            | 0.853            | 0.954            |
| A3: Query Resolution        | 363.988   | 4167.653        | 64.557               | 0.912            | 0.838            | 0.956            |
| A4: Knowledge Expertise     | 363.401   | 4274.845        | 65.382               | 0.905            | 0.836            | 0.958            |
| A5: Proactively Solutions   | 365.375   | 3993.796        | 63.196               | 0.909            | 0.839            | 0.957            |

**Table 6.3***Reliability Analysis for Reputational Methodology*

| Reputational method                 | Summary for scale: Mean=763.773 Std. Dev.=258.748 Valid N:8,197 (Reputational Data)<br>Cronbach's alpha: 0.9586 Standardised alpha: 0.9590<br>Average inter-item corr.: 0.7033 |                 |                      |                  |                  |                  |
|-------------------------------------|--|-----------------|----------------------|------------------|------------------|------------------|
| Attribute                           | Mean if deleted  | Var. if deleted | Std. Dev. if deleted | Itm-Totl Correl. | Squared Multp. R | Alpha if deleted |
| A1: Professionalism                 | 682.190  | 56309.870       | 237.297              | 0.789            | 0.675            | 0.956            |
| A2: Extra mile regarding requests   | 684.929  | 54714.300       | 233.911              | 0.824            | 0.718            | 0.954            |
| A3: Frequency of contact            | 691.249  | 53956.420       | 232.285              | 0.801            | 0.664            | 0.955            |
| A4: Availability                    | 685.842  | 55053.350       | 234.635              | 0.803            | 0.665            | 0.955            |
| A5: Getting back on credit          | 689.511  | 54110.200       | 232.616              | 0.794            | 0.659            | 0.955            |
| A6: Getting back on enquiries       | 687.254  | 54412.310       | 233.265              | 0.819            | 0.706            | 0.954            |
| A7: Accurate feedback               | 685.271  | 54727.640       | 233.939              | 0.840            | 0.723            | 0.953            |
| A8: Understanding business needs    | 686.925  | 54076.050       | 232.543              | 0.847            | 0.751            | 0.953            |
| A9: Proposing appropriate solutions | 689.588  | 53898.770       | 232.161              | 0.834            | 0.753            | 0.954            |
| A10: Being proactive                | 691.202  | 53468.960       | 231.234              | 0.828            | 0.724            | 0.954            |

The transactional methodology included five attributes and it was found to be excellent ( $\alpha = 0.9658$ ). The reputational methodology included 10 attributes and was also found to be excellent ( $\alpha = 0.9586$ ).

### **6.7.2 Validity**

Validity expresses the degree to which a measurement instrument (questionnaire) measures what it purports to measure. Various types of validity measure exist: face validity, construct validity, content validity and criterion validity. The most important considerations for the current study were construct validity and content validity.

Construct validity refers to the degree to which the questionnaire measures the trait or theoretical construct that it is intended to measure. Construct validity does not have a criterion for comparison and therefore utilises a hypothetical construct for comparison (Strauss & Smith, 2009; Wong, et al., 2012). It measures the meaningfulness of a scale or research instrument when it is in practical use and therefore encompasses many of the validity concepts instead of being viewed as a separate definition.

Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were performed for transactional and reputational measures. A principal component analysis (PCA) with varimax rotation was initially conducted to examine the validity of the construct. PCA was chosen as a data extraction method because the primary objective was to summarise and reduce data as well as define the factors needed to represent the structure of a variable. PCA takes the data set and extracts the maximum variance from each component. Varimax rotation, which can load variables to factors clearly, was conducted to maximise the variance of factor loadings and minimise the number of variables that had high loadings on each other. The results for both data sets are displayed below.

### Transactional survey

All five variables used in the transactional survey that operationally represented the cognitive service experience construct were included in the analysis. The results are displayed in Table 6.4 and 6.5.

**Table 6.4**

*Transactional Survey – Exploratory Factor Analysis*

| Transactional Survey | Eigenvalues of correlation matrix and related statistics |                  |                       |              |
|----------------------|--|------------------|-----------------------|--------------|
| Eigenvector          | Eigenvalue   | % Total variance | Cumulative Eigenvalue | Cumulative % |
| Factor 1             | 4.409  | 88.172           | 4.409                 | 88.172       |
| Factor 2             | 0.221  | 4.413            | 4.629                 | 92.586       |
| Factor 3             | 0.147  | 2.947            | 4.777                 | 95.533       |
| Factor 4             | 0.124  | 2.489            | 4.901                 | 98.022       |
| Factor 5             | 0.099  | 1.978            | 5.000                 | 100.000      |

**Table 6.5**

*Transactional Survey – Factor Loadings*

| Communalities, based on correlations (Transactional Survey) |               |
|---|---------------|
| Variable  | From 1 factor |
| A1: Communicating regularly                                 | 0.838484      |
| A2: Solutions needs   | 0.903467      |
| A3: Query resolution  | 0.893056      |
| A4: Knowledge expertise                                     | 0.883678      |
| A5: Proactively solutions                                   | 0.889936      |

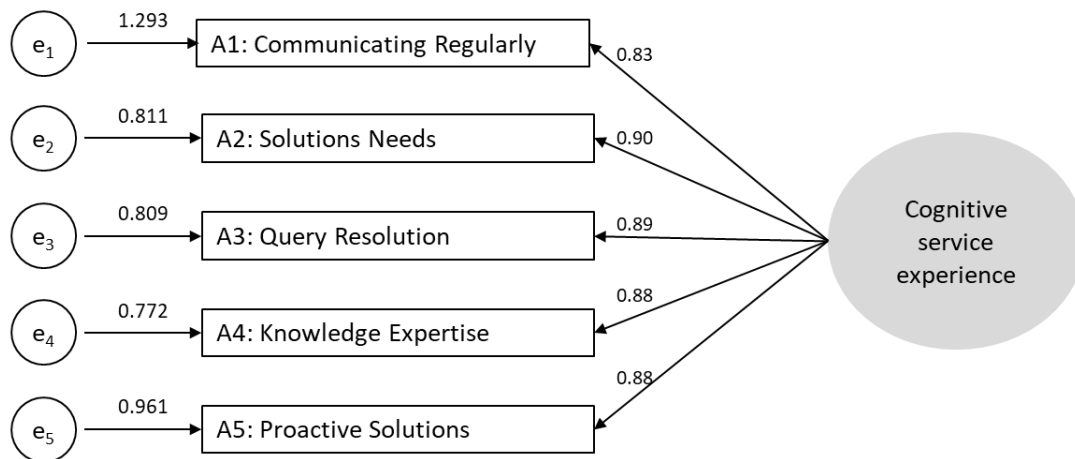
The eigenvalues and scree plot indicated a single component solution (loadings .83, .90, .89, .88 and .88 respectively) accounting for 88 per cent of the explained variance. The EFA

results provided valuable insights into the dimensionality of the latent variables and confirmed the reliability of the measurement scales underpinning the model constructs.

Confirmatory factor analysis was performed to test the model fit. The results are displayed in Figure 6.2. The model indicates the correlations between each questionnaire item and the underlying latent construct; Cognitive service experience. It also displays the component of error or uncertainty for each questionnaire item, labelled  $e_1$  to  $e_5$ .

**Figure 6.2**

*Transactional Survey – Confirmatory Factor Analysis*



The model estimation terminated normally and the factor loadings for each indicator were significant. The Bentler Comparative Fit Index was used to assess the model fit. It measures the relative improvement in fit going from the baseline model to the postulated model. A Bentler Comparative Fit Index  $< .90$  is considered poor, between  $.90$  and  $.95$  is marginal and  $\geq .95$  is considered good (Hu & Bentler, 1999; West et al., 2012).

A Bentler Comparative Fit Index of 0.984 was achieved indicating a good model fit. All path values are significant at  $p = < .001$ .



### Reputational survey

All 10 variables used in the reputational survey that operationally represented the cognitive service experience construct were included in the analysis. The results are displayed in Table 6.6 and 6.7.

**Table 6.6**

*Reputational Survey – Exploratory Factor Analysis*

| Reputational Method | Eigenvalues of correlation matrix and related statistics |                  |                       |              |
|---------------------|--|------------------|-----------------------|--------------|
| Eigenvector         | Eigenvalue   | % Total variance | Cumulative Eigenvalue | Cumulative % |
| Factor 1            | 7.309  | 73.091           | 7.309                 | 73.091       |
| Factor 2            | 0.501  | 5.014            | 7.810                 | 78.104       |
| Factor 3            | 0.446  | 4.465            | 8.257                 | 82.569       |
| Factor 4            | 0.390  | 3.903            | 8.647                 | 86.472       |
| Factor 5            | 0.281  | 2.806            | 8.928                 | 89.278       |
| Factor 6            | 0.260  | 2.602            | 9.188                 | 91.881       |
| Factor 7            | 0.219  | 2.191            | 9.407                 | 94.071       |
| Factor 8            | 0.212  | 2.124            | 9.620                 | 96.196       |
| Factor 9            | 0.208  | 2.083            | 9.828                 | 98.279       |
| Factor 10           | 0.172  | 1.721            | 10.000                | 100.000      |

**Table 6.7**

*Reputational Measure – Factor Loadings*

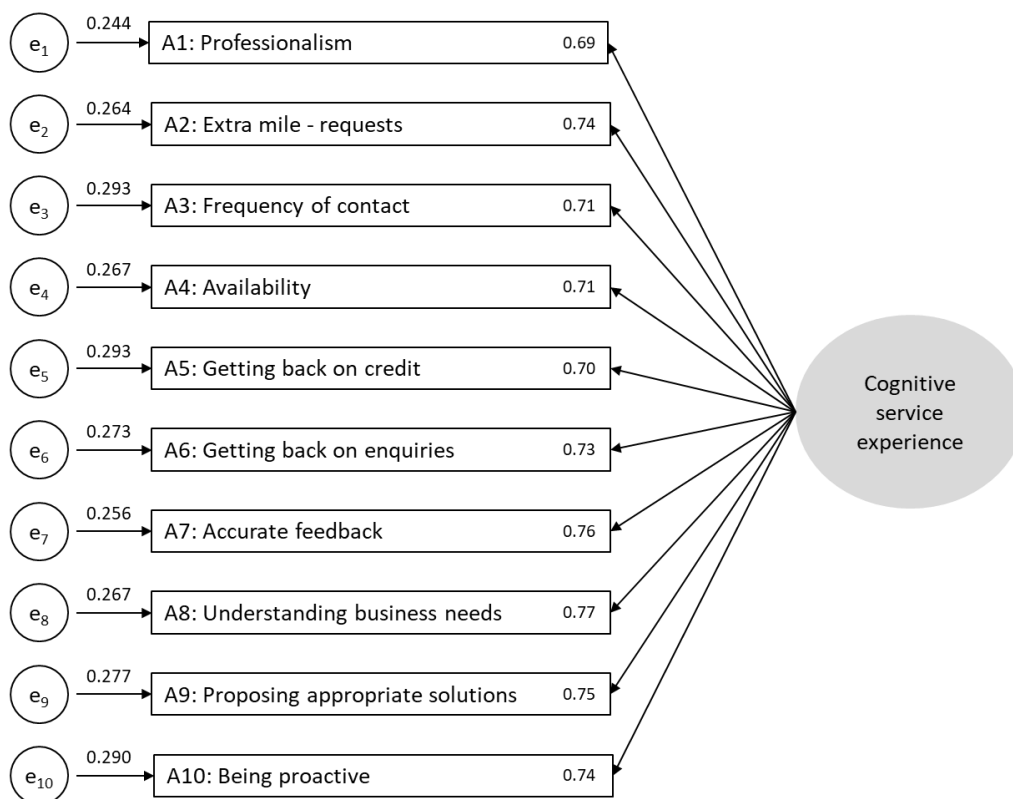
| Communalities, based on correlations (Transactional Method) |               |
|---|---------------|
| Variable  | From 1 factor |
| A1: Professionalism   | 0.094490      |
| A2: Extra mile regarding requests                           | 0.101600      |
| A3: Frequency of contact                                    | 0.096706      |
| A4: Availability  | 0.096887      |
| A5: Getting back on credit                                  | 0.095236      |
| A6: Getting back on enquiries                               | 0.100185      |
| A7: Accurate feedback                                       | 0.104392      |
| A8: Understanding business needs                            | 0.105792      |
| A9: Proposing appropriate solutions                         | 0.102973      |
| A10: Being proactive  | 0.101738      |

The eigenvalues and scree plot indicated a single component solution (loadings as indicated above) accounting for 73% of the explained variance.

Confirmatory factor analysis was performed to test the model fit. The results are displayed in Figure 6.3. The model indicates the correlation between each questionnaire item and the underlying latent construct; Cognitive service experience. It also displays the component of error or uncertainty for each questionnaire item, labelled e<sub>1</sub> to e<sub>10</sub>.

**Figure 6.3**

*Reputational Survey – Confirmatory Factor Analysis*



A Bentler Comparative Fit Index of 0.94 was achieved, indicating a marginal model fit.

All path values are significant at  $p = < .001$ .

## **6.8 Analysis of Data**

The data was analysed using qualitative and quantitative approaches. The analysis required for addressing each hypothesis is presented in more detail in the following chapter.

### **6.8.1 Qualitative Analysis**

The current research followed an innovative approach in terms of studying consumer emotions in a service context by using customer qualitative feedback related to their emotional experiences and quantifying it, using sentiment analysis. Sentiment analysis, conducted using Natural Language Processing (NLP), refers to the process of computationally identifying and extracting evidence of subjective and emotionally toned evaluations from a verbatim response (Pang & Lee, 2004). The output produces quantitative data for each verbatim response (customer emotion) that is correlated with 1) customers' overall satisfaction with their experience, and 2) their likelihood to recommend the service.

### **Machine-learning methods versus lexical-based methods**

When conducting sentiment analysis there are two types of approach: 1) machine-learning-based methods, and 2) lexical-based methods. Machine-learning methods make use of a classification approach and require labelled data to train classifiers. Lexical-based methods use a predefined list of words where each word is associated with a specific sentiment. There are two types of lexicon-based approaches: dictionary- and corpus-based. The dictionary based approach finds opinion seed words and then searches an online dictionary for synonyms and antonyms. The corpus-based approach begins with a seed list of opinion words and then finds other opinion words with context-specific orientations in a large corpus.

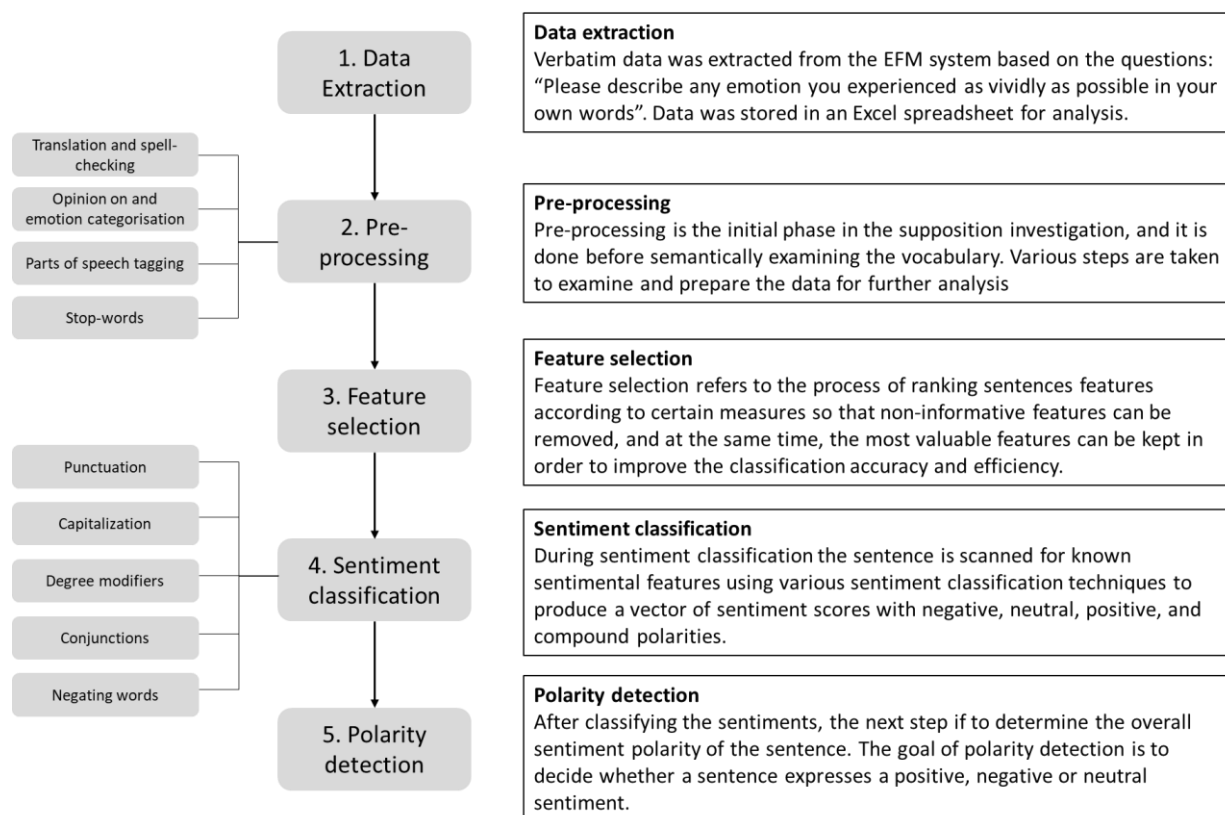
During the analysis process each word in the target text is compared to the corpus and a sentiment polarity score for the word is assigned. The sentiment polarities of all the words in

the targeted text are added together to produce a total sentiment polarity score for the text (Annett & Kondrak, 2008).

### **VADER (Valence Aware Dictionary for sEntiment Reasoning)**

The current study used VADER (Valence Aware Dictionary for sEntiment Reasoning) to conduct sentiment analysis. VADER is an open source NLP algorithm that blends a sentiment lexicon approach as well as grammatical rules and syntactical conventions for expressing sentiment polarity and intensity. VADER performed better or equally well when compared to seven other sentiment analysis lexicons (Gilbert, 2014). VADER incorporates several heuristic rules to adjust the text sentiment: modifiers, intensifiers and negating words, punctuation, capitalisation, adverbs and contrastive conjunctions. VADER's lexicon dictionary contains more than 7 500 sentiment features in total and any word not listed in the dictionary will be scored as "0", i.e. neutral. The VADER sentiment lexicon is considered a gold-standard quality and has been validated by humans (Hutto & Gilbert, 2014).

**6.8.1.1 Sentiment Analysis Process.** The process followed during qualitative analysis is depicted in Figure 6.4. On an overall level the process consists of data extraction, data pre-processing, feature selection, sentiment classification and polarity detection. The detailed process is discussed in the following section.

**Figure 6.4***Sentiment Analysis Process*

**6.8.1.2 Data Extraction.** Verbatim data was extracted from the Enterprise Feedback Management (EFM) system (Verint) and stored in an Excel spreadsheet for further cleaning, processing and analysis.

**6.8.1.3 Pre-Processing.** Pre-processing is the initial phase in the supposition investigation and is done before semantically examining the verbatim comments of customers. It consists of various steps and functions that are performed to clean the data in preparation for the sentiment analysis. The first two steps in the process, translation and spell-checking, and emotion-opinion categorisation were a manual process conducted by a team of researchers. Part-of-speech tagging (tokenisation) and stop-word identification are automated

processes conducted using the VADER sentiment analysis software. These steps and their purpose are described below.

### **Translation and spell-checking**

The corpus used for sentiment analysis was developed for English. While most customers provided feedback in English there were some customers that provided feedback in their home language. South Africa has 11 official languages and therefore the first step was to translate comments in any of the other languages into English. A team of researchers proficient in each of the official languages as well as English was identified and performed the translation into English. The next step was to back-translate the translations into the original language to ensure that the meaning of the verbatim response remained the same. In areas where anomalies were detected, the team collaboratively reviewed the translations and re-translated them to ensure the correct meaning of the sentence was maintained.

After translation the entire set of verbatim responses was spell-checked using Microsoft Word and all spelling errors were corrected. Ensuring that there were no misspelled words in the data-set significantly improved the sentiment analysis of verbatim responses.

### **Opinion and emotion categorisation**

While customers were asked to provide verbatim feedback of any emotions they experienced during the interaction with the personal banker, numerous customers did not recall any emotion but instead provided an opinion of their experiences. This was an unforeseen outcome of the research and necessitated an additional step in the analysis, namely differentiating between customers that reported a specific emotion and those that provided only an opinion of their experience. Yadollahi et al. (2017) indicated that while there is a strong correlation between opinion and emotion the two concepts are distinct.

Consider the following example:

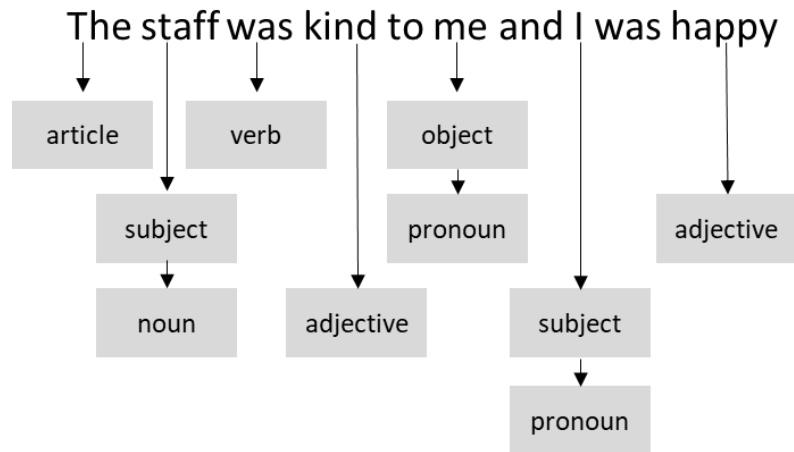
Opinion: “The staff was great and very efficient.”

Emotion: “The staff was very efficient and I enjoyed the experience.”

The process of sentiment analysis provides a sentiment classification for each verbatim response, irrespective of whether the customers related an emotion or only an opinion about their experience. While the opinion in the example above will receive a positive sentiment classification (i.e. because of words like “great” and “efficient”) the customers did not relate any emotions that they experienced. Since the purpose of the current study was to test the effect of emotions on satisfaction and recommendation, it was important to distinguish between customers that specifically provided emotional feedback compared to those that related an opinion only. I read through each of the verbatim responses and identified emotional-bearing words. If the text contained any emotional bearing words, it was categorised as an emotion while text that did not reflect any emotion was coded as an opinion. An independent researcher conducted quality control to ensure that opinion-coded sentences did not contain emotional-bearing words. Any anomalies that were identified were collectively reviewed and consensus reached about whether the text was an emotion or an opinion.

### **Parts-of-speech tagging or tokenisation**

Before analysis each sentence must be broken down into its component parts. Part-of-speech tagging (also known as tokenisation) is a Natural Language Processing (NLP) function that identifies the structural elements of a text document, such as verbs, nouns, adjectives and adverbs, depending on the definition of the word and its context. Consider the example in Figure 6.5.

**Figure 6.5***Parts-of-Speech Tagging*

Part-of-speech tagging is an important pre-processing function that describes the characteristic structure of lexical terms within a sentence, which are later used during sentiment analysis for making assumptions about semantics.

### Stop-word identification

Stop-words are words that are frequently used in a sentence but do not have any significant meaning. These are words like *the*, *and*, *a*, *of*, etc. These words do not affect the meaning of the sentence and will not affect the understanding of the sentence if removed. Removing stop-words lowers the dimensional space between words and assists the model to focus only on the root words that provide meaning to the sentence. Care was taken not to affect the context of the sentence by removing these words.

**6.8.1.4 Feature Selection.** Following the pre-processing of the data set the next step was feature selection. Feature selection is useful for text classification during sentiment analysis (Liu & Hu, 2005). It is one of the most important and difficult tasks during sentiment analysis



since it requires Natural Language Processing techniques to automatically identify the features in the text being analysed (Hu & Liu, 2004). During this process sentence features were ranked to remove non-informative features while the most valuable features in the sentence were kept to improve the classification accuracy and efficiency of sentiment classification.

**6.8.1.5 Sentiment Classification.** Sentiment classification is the process of identifying the overall sentiment of the sentence as positive, negative or neutral. Sentiment analysis also calculates the strength of the sentiment and provides an overall sentiment score for the verbatim response. Sentiment analysis software uses certain semantic rules to perform the classification and intensity calculations; punctuation, capitalisation, conjunctions, degree modifiers and negating words. The following section firstly explains these rules with some examples and secondly describes how the final sentiment scoring is performed.

### **Punctuation**

Punctuation refers to the use of an exclamation mark (!). The use of an exclamation mark increases the magnitude of the intensity without modifying the semantic orientation. For example, “I was upset!” is more intense than “I was upset.” An increase in the number of exclamation marks used (!! ) increases the magnitude accordingly.

### **Capitalisation**

Using uppercase letters to emphasise a sentiment-relevant word in the presence of other non-capitalised words increases the magnitude of the sentiment intensity. For example, “The staff here is GREAT!” conveys more intensity than “The staff here is great!”

### **Conjunctions**

The use of conjunctions like “but” signals a shift in sentiment polarity, with the sentiment of the text following the conjunction being dominant. “The staff here is very friendly, but the service is terrible” has a mixed sentiment, prompted by the conjunction “but”. Typically, the latter half of such a sentence dictates the overall sentiment rating.

### **Degree modifiers**

Degree modifiers or intensifiers have an impact on the intensity of the sentiment, either increasing or decreasing the intensity. For example, “The staff is extremely efficient” is more intense than “The staff is efficient”, while “The staff is relatively efficient” reduces the intensity.

### **Negating words**

Negating words refer to words that change the meaning of the sentence to its opposite. These are words like *not*, *never*, *was not* and *does not*. For example, “The staff was not very nice to me” will receive a positive sentiment if the word “not” is ignored, i.e. “The staff was very nice to me”. Negating words are considered within the context they appear in in a sentence.

### **Sentiment scoring**

During sentiment analysis the software performs various functions. Firstly, the sentence is scanned for known sentiment features and each sentiment-bearing word in the text is scored according to the sentiment classification in the lexicon database. The more sentiment bearing the word, the higher the sentiment score. For example, different degrees of comparison for “friendly” will have different sentiment scores (Consult Table 6.8).

**Table 6.8***Sentiment Score – Degrees of Comparison*

| Word        | Sentiment score |
|-------------|-----------------|
| Friendly    | 0.6             |
| Friendlier  | 0.63246         |
| Friendliest | 0.91652         |

The overall sentence is analysed and sentiment scores are assigned to sentiment-bearing words. For example, the sentence, “The staff is friendly but inefficient” will be scored as indicated in Table 6.9.

**Table 6.9***Sentiment Score – Individual Words*

| Word        | Sentiment score |
|-------------|-----------------|
| Friendly    | 0.6             |
| Inefficient | -0.5            |

The next step is to modify the intensity of the sentiment score, using the rules described above, which will either increase or decrease the overall sentiment of the words and the sentence as a whole. The intensity of each word is determined based on its co-occurrence frequency with a set of core words reflective of a given affect (Ravi & Ravi, 2015). Sentiment intensifiers increase the intensity of the positive/negative term while sentiment diminishers decrease the intensity of the term. Some examples of intensifiers are *very*, *extremely*, *dreadfully*, *really*, *awfully*, *terribly*, while diminishers are words like *slightly*, *a little bit*, *a bit*, *somewhat*, *barely*. The final outcome of the sentiment analysis is twofold: firstly, the software returns the percentage of positive, negative and neutral sentiment features for the sentence. The total of the positive, neutral and negative sentiment features will sum to “1”. The second output is an overall compound score for the sentence that is normalised to a

final score between -1 to +1 using the following function: The value for alpha is a constant and usually chosen as 15 which approximates the maximum expected value of x (the sum of polarity scores of all the words):

$$\text{Compound score} = \frac{x}{\sqrt{x^2 + \alpha}}$$

Table 6.10 illustrates four verbatim comments from respondents, their negative, neutral and positive sentiment percentages as well as an overall compound score and polarity.

**Table 6.10**

*Sentiment Score – Negative, Neutral, Positive and Compound Score*

| Sentence  | Negative % | Neutral % | Positive % | Compound Score | Overall Polarity |
|---|------------|-----------|------------|----------------|------------------|
| 1. Frustrated, disappointed and annoyed.  | 0.901      | 0.099     | 0          | -0.8442        | Very Negative    |
| 2. The service I got there was fine, but the queue was terrible. I was very disappointed. | 0.457      | 0.495     | 0.048      | -0.55225       | Negative         |
| 3. It was fine, she did what I asked her to do.   | 0          | 0.833     | 0.167      | 0.2023         | Neutral          |
| 4. Her service was good because she helped us and I was satisfied.                        | 0          | 0.612     | 0.388      | 0.6908         | Positive         |
| 5. Comforting, reassuring and happy.  | 0          | 0.099     | 0.901      | 0.8442         | Very positive    |

These examples display the final outcome of the sentiment analysis and are interpreted as follows:

- The percentages of negative, positive and neutral sum to “1” for each verbatim response and provide an indication of the overall sentiment polarity of each verbatim response. The higher the percentage for negative, neutral or positive, the more polarised the sentiment towards that category.

- Verbatim 1 has a negative percentage of 0.901 and is therefore also the lowest compound score (-0.8442) and has the most negative polarity (Very negative).
- Verbatim 5 has the highest positive percentage (0.901) and is therefore the highest compound score (0.8442) and has the most positive polarity (Very positive).
- Most verbatim responses contain some neutral elements while some, like verbatim 2 contain negative, neutral and positive aspects.

### **Google API sentiment analysis**

Google Cloud Natural Language API was used in addition to the VADER sentiment analysis to calculate the sentiment of customer emotional feedback. Google API sentiment analysis provides two outputs: sentiment score and sentiment magnitude. Similar to VADER, the Google sentiment score provides an indication of the overall polarity of a verbatim response. The score ranges from -1.0 (negative) to 1.0 (positive) and corresponds to the overall emotional leaning of the text. The Google magnitude score provides an indication of the overall strength of emotion (intensity), both positive and negative, within the given text. Unlike the VADER compound score, Google magnitude considers the overall intensity of an emotion and is not normalised. Each expression of emotion within the text (both positive and negative) contributes to the text's magnitude and the score ranges from 0.0 (low intensity) to infinite positive (+ inf.) (high intensity) that represents the overall intensity of the verbatim response.

An overall neutral sentiment might be caused by two different scenarios: 1) the text can have relatively little emotional content and therefore be classified as neutral, or 2) there may be high positive and high negative emotional content that cancels each other out and therefore creates an overall neutral sentiment intensity. The Google magnitude value disambiguates these cases as truly neutral documents will have a low magnitude value, while mixed

documents will have higher magnitude values (Table 6.11). For this reason, Google magnitude was considered a more robust calculation of overall emotional intensity and was therefore used in some of the hypotheses.

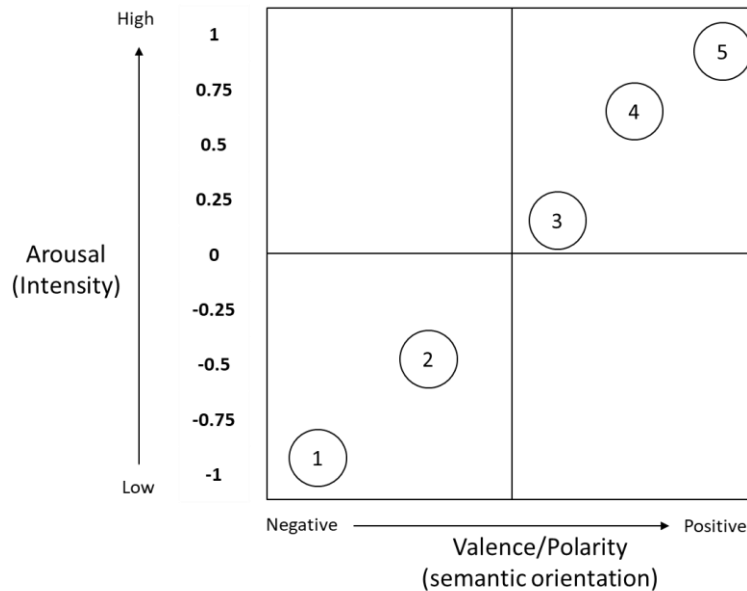
**Table 6.11**

*Google Score and Magnitude*

| Emotional Sentiment | Score | Magnitude |
|---------------------|-------|-----------|
| Clearly positive    | 0.8   | 3.0       |
| Clearly negative    | -0.6  | 4.0       |
| Neutral emotion     | 0.1   | 0.0       |
| Mixed emotion       | 0.0   | 4.0       |

VADER and Google Natural Language API software was used to assign quantitative scores to customer verbatim feedback. These quantitative scores that represent the customers' emotional experience were used to correlate each customer's emotional experience with the overall satisfaction and the likelihood to recommend. Correlating the quantitative scores associated with customers' qualitative feedback with their satisfaction and likelihood to recommend scores is a novel approach in the field of customer satisfaction research.

**6.8.1.6 Polarity Detection.** The polarity percentage as well as the compound was used to calculate the overall polarity of each verbatim response, from very negative to very positive as indicated in Table 6.10. Polarity represents the overall valence or sentiment orientation of the verbatim. Figure 6.6 provides an example of the influence of polarity and intensity if the five verbatim responses in Table 6.10 are plotted on a two-dimensional grid according to their valence and intensity.

**Figure 6.6***Valence and Intensity Plotted on a Two-Dimensional Grid*

**6.8.1.7 Addressing Sentiment Analysis Challenges.** The accuracy of sentiment detection is currently a key concern for researchers and there is not one specific sentiment analysis solution that provides absolute accurate results. This is due to the complex nature of emotions, the way in which humans communicate using sarcasm, irony and humour and also the way in which humans interpret and agree on sentiment that is expressed in text. Accuracy, in principle, refers to how well the system agrees with human judgement. The accuracy is measured by variant measures based on the precision with which text is categorised as positive and negative. However, research in the field indicates that human evaluators agree only 80 per cent of the time (Ogneva, 2012). In the research domain, a program that achieves a 70 per cent accuracy in classifying sentiment is considered to be acceptable since it performs almost as well as a human would (Roebuck, 2012). Previous studies comparing VADER with other sentiment analysis programs have found that the VADER's accuracy ranges between 70 per cent and 80 per cent (Adarsh et al. 2019).

One of the biggest advantages of using computers instead of humans to assign sentiment is the consistency achieved when using the same system. A computer system that uses an algorithm based on specific rules to assign sentiment will consistently apply the same rules and “mistakes” that are made in one iteration will be made consistently over time. Since the current study collected data for commercial purposes over a 13-month period, the consistency in the results was one of the main considerations for using an automated system as the same consistency is impossible for human coders to achieve over time.

To improve the accuracy of the sentiment analysis results a number of measures were taken. One of the key components to improve the accuracy of the analysis is the cleanliness of data. During the pre-processing phase all spelling mistakes were corrected and any characters (&, %, #, @) and emoticons (☺, ☹ etc.) in the verbatim text that could confound the data were removed. Since the current study involved the feedback from business customers the use of slang was not very prevalent in customer feedback, which improved the accuracy of the analysis.

### **6.8.2 Quantitative Analysis**

The quantitative statistical techniques used in study are explained in detail in the analysis section in conjunction with each of the hypotheses. The statistical techniques employed in the study are addressed next.

**6.8.2.1 Z-Tests.** One-sided, two sample proportions Z-tests were extensively used to compare two independent groups with respect to their mean scores on a continuous outcome. The means of independent groups were tested to determine whether the observed difference (increase, decrease or difference) was statistically significant or not.

Z-tests were chosen for the following reasons:



- Participants were selected using a randomised sample technique.
- The sample size of each group was larger than 30 (transactional sample;  $n = 7\,187$  and reputational sample  $n = 10\,425$ ) and therefore the Central Limit Theorem could be applied.
- The data points in each case were independent.

The independent groups tested in most cases were the following:

- The sample of customers that completed the transactional survey and the sample that completed the reputational survey.
- Customers that experienced any type of emotion compared to customers that expressed an opinion only without experiencing any emotion.
- Customers that experienced positive emotions compared to customers that experienced negative emotions.

### **Effect size**

While effect sizes are calculated and reported in the current study it is important to review the interpretations of the effect sizes. Cohen (1988) state "The terms 'small,' 'medium,' and 'large' are relative, not only to each other, but to the area of behavioural science or even more particularly to the specific content and research method being employed in any given investigation" (p.25). A detailed explanation about the debate around the use of standardised effect sizes and their interpretation is beyond the scope of the current thesis. However, certain considerations in interpreting the effect sizes found in the current study is necessary. Effect size provides a quantitative measure of the magnitude of differences between groups (Balow, 2017). Lipsey et al. (2012) analysed 124 randomized controlled trials and found a much lower average effect size and indicate that decreasing average effect sizes suggest that the benchmark values need updating. Cheung and Slavin (2016) indicate that sample size has

a significant influence on effect size. They found that average effect size in studies with sample sizes up to 100 was about 3.5 times larger than in studies with large samples (2000+): 0.38 vs 0.11. It is widely suggested that effect size should be compared to similar studies to assist with the interpretation of the findings. Unfortunately, no similar studies with reported effect size could be found for comparison purposes. As an alternative, Bakker et al., (2019) suggest that effect size need to be interpreted in light of the goals of the specific study.

Since the current study did not make use of an experimental design or are intended to be applied in clinical interventions, the standard interpretation suggested by Chohen (1988) will be used (small;  $d = 0.2$ , medium;  $d = 0.5$ , large;  $d = 0.8$  and very large;  $d = 1.3$ ). Accordingly, even a small effect size indicates that there is a real and significant difference between the groups being compared.

**6.8.2.2 Correlation Analysis.** Correlation is a bivariate analysis technique that measures the strength of association between two quantitative variables and provides an indication of the direction of the relationship. The association between the variables is assumed to be linear, i.e. if one variable increases or decreases by a certain amount, the associated variable will also increase or decrease by a fixed amount.

A correlation coefficient ( $r$ ) is used to indicate the strength of relationship and the value of the correlation coefficient varies between +1 and -1. A value of  $\pm 1$  indicates a perfect degree of association between the two variables. The closer the correlation coefficient value is to 0, the weaker the relationship between two variables. The direction of the relationship is indicated by the sign of the coefficient; a “+” sign indicates a positive relationship and a “-” sign indicates a negative relationship.

The two most widely used methods to test the strength of the correlation are the Pearson coefficient or Spearman's rank. Pearson coefficient is used with parametric data while Spearman's rank is used for non-parametric data.

**6.8.2.3 Structural Equation Modelling (SEM).** Structural Equation Modelling (SEM) is a multivariate technique that is often used in the social sciences to test hypotheses about multivariate causal relationships. They often invoke a measurement model that defines latent variables using one or more observed variables and a structural model that imputes relationships between unobserved constructs (latent variables) and observable variables (Kaplan, 2008). The relationship between the theoretical constructs is represented by regression or path coefficients between the factors.

SEM is a combination of two statistical methods: confirmatory factor analysis and path analysis. Confirmatory factor analysis is a multivariate statistical procedure that is used to test how well the measured variables represent the number of constructs while path analysis is used to quantify the relationships among these variables (Wright, 1921).

The two primary goals when using SEM are 1) to understand the patterns of correlation/covariance among a set of variables, and 2) to explain as much of their variance as possible with the model specified (Kline, 1998).

SEM was used in the current study to determine the relationship between cognitive and affective measures (latent variables) and their single and combined ability to predict customer satisfaction and recommendation.

## Chapter 7: Results and Discussion

The analysis and discussion is broken down into four main sections:

1. Customers' recall of emotions
2. Intensity of customer emotions
3. The effect of positive and negative emotions on satisfaction and recommendation
4. Cognition and emotion and their impact on satisfaction and recommendation

### 7.1 Customers' Recall of Emotions

The first three hypotheses focused on investigating customers' recall of emotions and specifically the difference between recalling emotions during transactional and reputational measures. Customers were asked to recall any emotions they might have experienced during the interaction with the banker. Their verbatim feedback was analysed to indicate whether they recalled any emotions or expressed only an opinion about their service experience. The following three hypotheses were used to test for the proportional difference between customers that expressed an emotion during transactional measures and those who expressed an emotion during reputational measures:

- H1 – Customers' overall recall of emotions
- H2 – Customers' recall of negative emotions
- H3 – Customers' recall of positive emotions

The section firstly describes the results of each hypothesis individually followed by the conclusions and implications.

#### *7.1.1 Hypothesis 1: Customer Overall Recall of Emotions*

The hypothesis aimed to determine whether the same proportion of respondents recalled an emotion in transactional measures ( $\pi_t$ ) compared to reputational measures ( $\pi_r$ ).

$H_0$ . The same proportion of customers recalled an emotion in transactional measures compared to reputational measures.

$H_a$ . A larger proportion of customers recalled their emotions in transactional measures compared to reputational measures.

$$H_0: \pi_t = \pi_r$$

$$H_a: \pi_t > \pi_r$$

### Chosen statistics

A one-sided, two sample proportions Z-test was chosen to test the hypothesis due to the large samples and that the alternative hypothesis being a one-sided test. The proportion of customers that recalled an emotion during transactional measures were compared to the proportions of customers that recalled an emotion during reputational research.

The test statistic:

$$z = \frac{p_t - p_r}{\sqrt{p(1-p)\left(\frac{1}{n_t} + \frac{1}{n_r}\right)}}$$

where

$p_t$  is the proportion of sample that recalled an emotion in transactional measures ;

$p_r$  is the proportion of sample that recalled an emotion in reputational measures ;

$n_{te}$  is the number of respondents that recalled an emotion in transactional measures ;

$n_{re}$  is the number of respondents that recalled an emotion in reputational measures ;

$n_t$  is the sample size of the transactional measures ;

$n_r$  is the sample size of the reputational measures , and

$$p = \frac{(n_{te} + n_{re})}{(n_t + n_r)}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .

## Results

$$z = \frac{p_t - p_r}{\sqrt{p(1-p)\left(\frac{1}{n_t} + \frac{1}{n_r}\right)}}$$

$$z = \frac{0.698 - 0.695}{\sqrt{0.696(1 - 0.696)\left(\frac{1}{7,169} + \frac{1}{10,425}\right)}}$$

$$z = 0.425, \quad p \text{ (adjusted)} = 0.681, \quad h = 0.004$$

Given  $z = 0.425$  with  $p = 0.681$  and  $h = 0.004$  (no effect), there is not sufficient evidence to reject the null hypothesis; therefore, I conclude that the proportion of customers that recalled their emotion during transactional measures was not significantly different from the proportion of customers that recalled their emotion during reputational measures.

### 7.1.2 Hypothesis 2: Customers' Recall of Negative Emotions

All customers that expressed an emotion during their feedback were categorised into three groups according to the sentiment polarity: positive, neutral or negative, using the outcome of the sentiment analysis. The hypothesis aimed to determine whether the same proportion of respondents expressed negative emotions during transactional measures ( $\pi_t$ ) compared to reputational measures ( $\pi_r$ ).

$H_0$ . The same proportion of customers recalled a negative emotion in transactional measures compared to reputational measures.

$H_a$ . A larger proportion of customers recalled a negative emotion in transactional measures compared to reputational measures.

$$H_0: \pi_t = \pi_r$$

$$H_a: \pi_t > \pi_r$$

### Chosen statistics

To compare the proportion of customers that recalled a negative emotion during transactional measures to the proportion of customers that recalled a negative emotion during reputational measures a one-sided, two sample proportion Z-test was chosen to test the hypothesis, due to the large samples and since the alternative hypothesis was a one-sided test.

The test statistic:

$$z = \frac{p_t - p_r}{\sqrt{p(1-p)\left(\frac{1}{n_t} + \frac{1}{n_r}\right)}}$$

where

$p_t$  is the proportion of sample expressing a negative emotion in transactional measures ;

$p_r$  is the proportion of sample expressing a negative emotion in reputational measures ;

$n_{te}$  is the number of respondents that expressed a negative emotion in transactional measures ;

$n_{re}$  is the number of respondents that expressed a negative emotion in reputational measures ;

$n_t$  is the number of respondents that expressed an emotion in transactional measures ;

$n_r$  is the number of respondents that expressed an emotion in reputational measures , and

$$p = \frac{(n_{te} + n_{re})}{(n_t + n_r)}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .

## Results

$$z = \frac{p_t - p_r}{\sqrt{p(1-p)\left(\frac{1}{n_t} + \frac{1}{n_r}\right)}}$$

$$z = \frac{0.052 - 0.183}{\sqrt{0.130(1 - 0.870)\left(\frac{1}{5,006} + \frac{1}{7,245}\right)}}$$

$$z = -21.209, \quad p \text{ (adjusted)} = 1.000, \quad h = 0.424$$

Given  $z = -21.209$  with  $p = 1.000$  and  $h = 0.424$  (small effect) there is not sufficient evidence to reject the null hypothesis. There is, however, sufficient evidence to conclude that the proportion of negative emotions expressed by respondents in reputational measures is significantly larger than the proportion of negative emotions expressed in transactional measures.

### 7.1.3 Hypothesis 3: Customers' Recall of Positive Emotions

Hypothesis 3 aims to determine whether the same proportion of respondents recalled a positive emotion in transactional measures ( $\pi_t$ ) compared to reputational measures ( $\pi_r$ ).

$H_0$ . The same proportion of customers recalled a positive emotion in transactional measures compared to reputational measures.



$H_a$ . A larger proportion of customers recalled a positive emotion in transactional measures compared to reputational measures.

$$H_0: \pi_t = \pi_r$$

$$H_a: \pi_t > \pi_r$$

### Chosen statistics

A one-sided, two sample proportion Z-test was chosen to test the hypothesis due to the large samples being tested, and the alternative hypothesis being a one-sided test.

The test statistic:

$$z = \frac{p_t - p_r}{\sqrt{p(1-p)\left(\frac{1}{n_t} + \frac{1}{n_r}\right)}}$$

where

$p_t$  is the proportion of sample expressing a positive emotion in transactional measures ;

$p_r$  is the proportion of sample expressing a positive emotion in reputational measures ;

$n_{te}$  is the number of respondents that expressed a positive emotion in transactional measures ;

$n_{re}$  is the number of respondents that expressed a positive emotion in reputational measures ;

$n_t$  is the number of respondents that expressed an emotion in transactional measures ;

$n_r$  is the number of respondents that expressed an emotion in reputational measures , and

$$p = \frac{(n_{te} + n_{re})}{(n_t + n_r)}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .

### Results

$$z = \frac{p_t - p_r}{\sqrt{p(1-p)\left(\frac{1}{n_t} + \frac{1}{n_r}\right)}}$$

$$z = \frac{0.935 - 0.801}{\sqrt{0.855(1 - 0.145)\left(\frac{1}{5,006} + \frac{1}{7,245}\right)}}$$

$$z = 20.728, \quad p \text{ (adjusted)} = 0.000, \quad h = 0.409$$

Given  $z = 20.728$  with  $p = 0.000$  and  $h = 0.409$  (small effect), there is sufficient evidence to reject the null hypothesis; therefore, the proportion of positive emotions recalled in transactional measures is greater than that the proportion of positive emotions recalled in reputational measures.

#### **7.1.4 Summary of Results**

Hypothesis 1 to 3 centres on customers' recalling emotional experiences during transaction and reputational measures. Hypothesis 1 investigated customers' general recall of emotions while hypothesis 2 and hypothesis 3 investigated the recall of positive and negative emotions respectively.

The result of hypothesis 1 indicated that there was no significant difference between the proportion of customers that recalled emotions during transactional and reputational measures. Therefore, the same proportion of customers recalled their emotions during each of the measures.

The results of hypothesis 2 indicated that a significantly larger proportion of customers recalled negative emotions during reputational measures while hypothesis 3 indicated that a

significantly larger proportion of customers recalled positive emotions during transactional measures.

### *7.1.5 Discussion and Conclusions*

**7.1.5.1 Customers' Recall of Emotions.** One of the aims of the current research was to investigate customers' recall of emotions during transactional measures (within 24 hours after an interaction) and reputational measures (3 to 4 months after an interaction). Customers were divided into two groups: those that recalled an emotion and those that only related an experience without recalling any specific emotion. Hypothesis 1 focused on customers' overall recall of emotions directly after an interaction compared to three to five months after an interaction. The findings indicate that the proportion of customers that expressed an emotion (as opposed to only an opinion about their experience) during transactional measures is the same as the proportion of customers that expressed an emotion during reputational measures and therefore provide evidence to support the null hypothesis.

Previous research in the area of recalling emotions indicated that the passage of time impaired participants' recollection (Porter et al., 2010). Loftus et al. (1978) also found that the length of time that passes between an event and recalling the event increases the rates of misremembering. While this may be true for non-emotional experiences, previous research indicated that emotional experiences are extremely well maintained in the memory of customers (Brown & Kulik, 1977; Rubin & Kozin, 1984; Bohannon, 1988). Similarly, Le Doux (1996) indicated that one's memories of emotional reactions to events are vivid, longer lasting and easier to retrieve than those of non-emotional events.

This finding has profound implications for organisations since it indicates that customers' recall of their emotions is as effective three to five months after an interaction as directly after the interaction. Customers' emotions are therefore long-lasting, remain in their

memory and can easily be recalled for an extended period following an experience. This finding also sheds some light on the research conducted by Kahneman et al. (1997) who found that people want to maximise their remembered utility instead of experienced utility. Since people remember emotional experiences for a long time, it is more important for them that their experiences generate positive emotions instead of negative ones.

Organisations can use this knowledge to their advantage by ensuring that firstly, customers have emotional experiences when interacting with the organisation, and secondly, that these experiences elicit positive emotions since they are remembered interminably.

**7.1.5.2 Customers' Recall of Positive and Negative Emotions.** Hypothesis 2 and hypothesis 3 investigated customers' recall of positive and negative emotions specifically. The results indicate that customers recalled significantly more negative emotions (as a proportion of all emotions) during reputational measures compared to transactional measures. This finding indicates that customers recalled proportionally more negative emotional experiences than positive one's three to five months after an interaction with the bank, and that the passage of time did not decrease customers' recall of negative emotions. This finding corresponds with the findings of Porter and Peace (2007) who indicated that events containing negative emotional content are better remembered than positive emotional events. Previous research in the area of Fading Affect Bias that specifically focused on negativity bias found that negative experiences and events have a substantially larger impact on one's life than positive events and are therefore better remembered (Baumeister et al., 2001; Rozin & Royzman, 2001).

There are several reasons why customers may recall negative emotions so well. Customers might ruminate for longer periods about the experience or share the negative experience with others, which cements it in their memory. Another more congenial reason

that corresponds with the views of evolutionary theorists like Darwin (1872) and Ekman (1999) is that the core function of one's emotions is to help one adapt and survive. As humans we learn from previous experiences and our emotions guide us to make decisions that would provide us with better outcomes and solutions in terms of our desired goals. As stated by Plutchik (1980), "emotions have adaptive significance in the struggle for survival" (p. 138). Negative experiences and associated emotions may be more important than positive emotions for human survival. From an evolutionary perspective, encountering a dangerous animal in the wild that can easily kill one will elicit emotions of fear, terror and panic and produce the fight-or-flight response. These negative emotions may be more important in terms of our survival than experiencing positive emotions.

Similarly, Baumeister et al. (2001) concluded that negative events and their associated negative emotions have a greater impact on an individual (i.e. bad is stronger than good) and should persist longer over time than positive emotions. This notion is also true for customers and their consumption experiences. For example, in the retail environment eating a bad meal, buying a defective product or receiving bad service will leave a lasting negative impression on an individual. The same is true for the banking environment: waiting in a queue for 30 minutes, receiving detrimental financial advice, losing money or one's account being hacked will be remembered much longer than receiving good service or good advice. Nowadays, good experiences are expected and have become the norm.

Customers that had a bad experience in the past are more likely to avoid similar experiences and situations in future (Loewenstein, 1999; Redelmeier et al., 2003). Wirtz et al. (2003) indicated that decisions about one's future are influenced less by the emotions that one experiences in the moment (experiencing-self) than by one's memory of those experiences and their associated emotions (remembering-self). This is the dilemma faced by organisations: customers' future decisions are driven by what they remember from their past.

A customer that had one poor experience with a company will want to avoid a similar negative experience in future and might therefore refrain from using that service provider. A customer that had a negative experience with a bank may start looking for alternatives to avoid similar experiences in future.

The primary focus of companies should not be to create good experiences but to do everything possible to avoid and eliminate negative ones. Organisations should focus on identifying customer pain points and put strategies in place to improve these negative aspects instead of identifying additional auxiliary services or value-added benefits in an attempt to improve their products or services. As stated by Dixon et al. (2010) customers are more likely to punish organisations for bad service than rewarding them for good service.

## **7.2 Intensity of Customer Emotions**

The following hypotheses were used to investigate the intensity of emotions experienced by customers and made use of two distinct methods.

Hypothesis 4 was used to test the intensity of customer emotions using the “Degree of emotions experienced” variable. Customers were asked to express the intensity of their emotional experience by indicating the degree to which they experienced an emotion, using an 11-point Likert scale (0 = slightly felt to 10 = strongly felt). Values were converted to a 0 to 100 scale for comparability to other scales in the survey.

Hypotheses 5 to 7 involved the verbatim feedback from customers about the emotions they experienced during a service interaction. Sentiment analysis was used to calculate the intensity of customer emotions. Intensity was measured using Google’s sentiment analysis API. Emotional intensity was represented by the “magnitude” variable that provides an indication of the overall strength of emotion (intensity). Magnitude is presented on a

continuous scale between 0 and + infinite. The lower the emotional intensity, the closer to “0” the magnitude score will be.

The aim of these hypotheses was to determine whether there is a difference in emotional intensity between customers’ responses during transactional measures (within 24-hours after an interaction) compared to reputational measures (3 to 5 months after an interaction).

The following four hypotheses were used to test the difference in emotional intensity between transactional measures and reputational measures:

- H4 – Degree of emotions experienced
- H5 – Overall emotional intensity
- H6 – Intensity of negative emotions
- H7 – Intensity of positive emotions

#### ***7.2.1 Hypothesis 4: Degree of Emotions***

Hypothesis 4 was used to test whether the degree of the emotion experienced by customers was the same for transactional measures (within 24-hours after an experience) ( $\mu_t$ ) compared to reputational measures (3 to 5 months after any specific experience) ( $\mu_r$ ). The degree of emotional intensity was captured using an 11-point Likert scale.

$H_{4_0}$ . Customers rate the degree to which they experienced an emotion the same in transactional measures as in reputational measures.

$H_{4_a}$ . Customers rate the degree to which they experienced an emotion more intensely in transactional measures compared to reputational measures.

$$H_0: \mu_t = \mu_r$$

$$H_a: \mu_t > \mu_r$$

### Chosen statistics

A one-sided, two sample Z-test was chosen to test the hypothesis due to the large sample size, means being tested, and the alternative hypothesis being a one-sided test.

The test statistic:

$$z = \frac{\bar{x}_t - \bar{x}_r}{s_p \sqrt{\left(\frac{1}{n_t} + \frac{1}{n_r}\right)}}$$

where

$\bar{x}_t$  is the average degree of emotion experienced in transactional measures ;

$\bar{x}_r$  is the average degree of emotion experienced in reputational measures ;

$n_t$  is the sample size of the transactional measures ;

$n_r$  is the sample size of the reputational measures ;

$s_t^2$  is the sample variance of degree of emotion for transactional measures ;

$s_r^2$  is the sample variance of degree of emotion for reputational measures , and

$$s_p = \sqrt{\frac{(n_t - 1)s_t^2 + (n_r - 1)s_r^2}{n_t + n_r - 2}}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .

### Results

$$z = \frac{\bar{x}_t - \bar{x}_r}{s_p \sqrt{\left(\frac{1}{n_t} + \frac{1}{n_r}\right)}}$$



$$z = \frac{89.567 - 78.177}{21.491 \sqrt{\left(\frac{1}{7,092} + \frac{1}{10,425}\right)}}$$

$$z = 37.156, \quad p = 0.000, \quad d = 0.530$$

Given  $z = 37.156$  with  $p = 0.000$  and  $d = 0.530$  (medium effect), there is sufficient evidence to reject the null hypothesis; therefore, I conclude that the degree of emotion expressed by customers is greater in transactional measures (within 24-hours after an experience) than in reputational measures (3 to 5 months after an experience). This indicates that the intensity of customer emotions decreases significantly with the passage of time.

### 7.2.2 Hypothesis 5: Overall Emotional Intensity

Hypothesis 5 was used to test whether the intensity of customers' emotions was the same in transactional measures (within 24-hours after an experience) ( $\mu_t$ ) compared to reputational measures (3 to 5 months after any specific interaction) ( $\mu_r$ ). Sentiment analysis was used to analyse customers' verbatim feedback and emotional intensity was represented by Google's API emotional magnitude calculation.

$H5_0$ . The intensity of customer emotions is the same in transactional measures compared to reputational measures.

$H5_a$ . The intensity of customer emotions is greater in transactional measures compared to reputational measures.

$$H_0: \mu_t = \mu_r$$

$$H_a: \mu_t > \mu_r$$

#### Chosen statistics

A one-sided, two sample Z-test was chosen to test the hypothesis due to the large sample size, means being tested, and the alternative hypothesis being a one-sided test.

The test statistic:

$$z = \frac{\bar{x}_t - \bar{x}_r}{s_p \sqrt{\left(\frac{1}{n_t} + \frac{1}{n_r}\right)}}$$

where

$\bar{x}_t$  is the average emotion intensity experienced in transactional measures ;

$\bar{x}_r$  is the average emotion intensity experienced in reputational measures ;

$n_t$  is the sample size of the transactional measures ;

$n_r$  is the sample size of the reputational measures ;

$s_t^2$  is the sample variance of emotion intensity for transactional measures ;

$s_r^2$  is the sample variance of emotion intensity for reputational measures , and

$$s_p = \sqrt{\frac{(n_t - 1)s_t^2 + (n_r - 1)s_r^2}{n_t + n_r - 2}}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .

## Results

$$z = \frac{\bar{x}_t - \bar{x}_r}{s_p \sqrt{\left(\frac{1}{n_t} + \frac{1}{n_r}\right)}}$$

$$z = \frac{0.925 - 0.820}{0.462 \sqrt{\left(\frac{1}{7,169} + \frac{1}{10,425}\right)}}$$

$$z = 14.886, \quad p = 0.000, \quad d = 0.227)$$

Given  $z = 14.886$  with  $p = 0.000$  and  $d = 0.227$  (small effect), there is sufficient evidence to reject the null hypothesis; therefore, I conclude that the intensity of emotions expressed by customers is greater in transactional measures (within 24-hours after an experience) than in reputational measures (3 to 5 months after any specific experience).

### 7.2.3 Hypothesis 6: Intensity of Negative Emotions

Hypothesis 6 was used to test whether the intensity of negative emotions experienced by customers was the same in transactional measures (within 24-hours after an experience) ( $\mu_t$ ) compared to reputational measures (3 to 5 months after any specific interaction) ( $\mu_r$ ). To test the current hypothesis only customers whose overall sentiment was predominantly negative (as opposed to neutral or positive) were considered in the analysis. The intensity of emotions was represented by Google's emotional magnitude calculation.

$H_{6_0}$ . The intensity of customer emotions (negative sentiment) that they express is the same in transactional measures as in reputational measures.

$H_{6_a}$ . The intensity of customer emotions (negative sentiment) that they express is more intense in transactional measures compared to reputational measures.

$$H_0: \mu_{t-} = \mu_{r-}$$

$$H_a: \mu_{t-} > \mu_{r-}$$

#### Chosen statistics

A one-sided, two sample Z-test was chosen to test the hypothesis due to the large sample size, means being tested, and the alternative hypothesis being a one-sided test.

The test statistic:

$$z = \frac{\bar{x}_{t-} - \bar{x}_{r-}}{s_p \sqrt{\left(\frac{1}{n_{t-}} + \frac{1}{n_{r-}}\right)}}$$

where

$\bar{x}_{t-}$  is the average negative emotion intensity experienced in transactional measures ;

$\bar{x}_{r-}$  is the average negative emotion intensity experienced in reputational measures ;

$n_{t-}$  is the sample size of those with greater negative emotion proportions in the transactional measures ;

$n_{r-}$  is the sample size of those with greater negative emotion proportions in the reputational measures ;

$s_{t-}^2$  is the sample variance of negative emotion intensity for transactional measures ;

$s_{r-}^2$  is the sample variance of negative emotion intensity for reputational measures , and

$$s_p = \sqrt{\frac{(n_{t-} - 1)s_{t-}^2 + (n_{r-} - 1)s_{r-}^2}{n_{t-} + n_{r-} - 2}}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .

## Results

$$z = \frac{\bar{x}_{t-} - \bar{x}_{r-}}{s_p \sqrt{\left(\frac{1}{n_{t-}} + \frac{1}{n_{r-}}\right)}}$$

$$z = \frac{0.881 - 0.893}{0.572 \sqrt{\left(\frac{1}{329} + \frac{1}{1,856}\right)}}$$

$$z = -0.335, \quad p \text{ (adjusted)} = 0.631, \quad d = 0.021$$

Given  $z = -0.335$  with  $p = 0.631$  and  $d = 0.021$  (no effect), there is not sufficient evidence to reject the null hypothesis; therefore, I could not conclude that the intensity of negative emotions expressed by customers was greater in transactional measures (within 24-hours after their experience) than in reputational measures (3 to 5 months after any specific experience). The intensity of customers' negative emotions therefore, remains the same with the passage of time.

#### 7.2.4 Hypothesis 7: Intensity of Positive Emotions

Hypothesis 7 was used to test whether the intensity of positive emotions experienced by customers is the same in transactional measures ( $\mu_t$ ) compared to reputational measures ( $\mu_r$ ). To test the current hypothesis only customers whose overall sentiment was predominantly positive (as opposed to neutral or negative) were considered in the analysis. The intensity of emotions was represented by Google's emotional magnitude calculation.

$H7_0$ . The intensity of customer emotions (positive sentiment) that they express is the same in transactional measures as in reputational measures.

$H7_a$ . The intensity of customer emotions (positive sentiment) that they express is more intense in transactional measures compared to reputational measures.

$$H_0: \mu_{t+} = \mu_{r+}$$

$$H_a: \mu_{t+} > \mu_{r+}$$

### Chosen statistics

A one-sided, two sample Z-test was chosen to test the hypothesis due to the large sample size, means being tested, and the alternative hypothesis being a one-sided test.

The test statistic:

$$z = \frac{\bar{x}_{t+} - \bar{x}_{r+}}{s_p \sqrt{\left(\frac{1}{n_{t+}} + \frac{1}{n_{r+}}\right)}}$$

where

$\bar{x}_{t+}$  is the average positive emotion intensity experienced in transactional measures ;

$\bar{x}_{r+}$  is the average positive emotion intensity experienced in reputational measures ;

$n_{t+}$  is the sample size of those with greater positive emotion proportions in the transactional measures ;

$n_{r+}$  is the sample size of those with greater positive emotion proportions in the reputational measures ;

$s_{t+}^2$  is the sample variance of positive emotion intensity for transactional measures ;

$s_{r+}^2$  is the sample variance of positive emotion intensity for reputational measures , and

$$s_p = \sqrt{\frac{(n_{t+} - 1)s_{t+}^2 + (n_{r+} - 1)s_{r+}^2}{n_{t+} + n_{r+} - 2}}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .

### Results

$$z = \frac{\bar{x}_{t+} - \bar{x}_{r+}}{s_p \sqrt{\left(\frac{1}{n_{t+}} + \frac{1}{n_{r+}}\right)}}$$

$$z = \frac{0.787 - 0.627}{0.286 \sqrt{\left(\frac{1}{6,475} + \frac{1}{7,922}\right)}}$$

$$z = 34.708, \quad p \text{ (adjusted)} = 0.000, \quad d = 0.559$$

Given  $z = 34.708$  with  $p = 0.000$  and  $d = 0.559$  (medium effect) there is sufficient evidence to reject the null hypothesis; therefore, I conclude that the intensity of positive emotions expressed by customers is greater in transactional measures (within 24-hours after their experience) than in reputational measures 3 to 5 months after any specific experience). The results indicate that the intensity of positive emotions fades with the passage of time.

### 7.2.5 Summary of Results

The aim of hypothesis 4 to 7 was to test whether the intensity of customer emotions fades with the passage of time by comparing the emotional intensity reported in transactional measures with the emotional intensity reported during reputational measures.

**7.2.5.1 Overall Intensity with the Passage of Time.** Hypothesis 4 and 5 investigated the overall intensity of customers' emotions. Hypothesis 4 used the results of the 11-point Likert scale where customers reported the degree to which they experienced an emotion while hypothesis 5 used the overall sentiment intensity of each verbatim response.

The results of both hypotheses (degree of emotional intensity as well as overall emotional intensity from customer verbatim feedback) yielded the same results; the intensity of customer emotions was significantly higher in transactional measures compared to

reputational measures and therefore I conclude that emotional intensity decreases with the passage of time.

**7.2.5.2 Positive and Negative Emotional Intensity with the Passage of Time.** The aim of hypothesis 6 and 7 was to investigate the differential effect of positive and negative emotional intensity over time. The negative and positive polarity percentage of each verbatim response was used to categorise it as being primarily positive or negative while the intensity of customers' emotions was represented by Google's magnitude calculation.

**Negative emotions** - The results of hypothesis 6 indicated that the intensity of negative emotions remained the same with the passage of time; no significant difference was found between the intensity of customers' emotions recalled during transactional measures compared to reputational measures.

**Positive emotions** - The result of hypothesis 7 indicated that the intensity of positive emotions decreased with the passage of time; the intensity of positive emotions recalled during transactional measures was significantly higher than the intensity of emotions recalled in reputational measures.

## ***7.2.6 Discussion of Findings***

**7.2.6.1 Change in Overall Emotional Intensity.** One of the main aims of the current study was to determine whether the intensity of customer emotions remains the same over a period of time or whether emotional intensity fades as time passes. The intent was to compare the intensity of customer emotions reported in transactional measures with the intensity of customer emotions reported in reputational measures. Do customer recall emotions as vividly 3 to 4 months after an interaction (reputational measures) as supposed to directly after an interaction (transactional measures)? Do the intense anger and frustration associated with a



negative experience or the elation caused by exceptionally positive experiences remain the same or do they languish as time passes?

The first of these measures, an 11-point Likert scale question, was used to test the change in intensity between emotions reported during transactional and reputational measures. According to Seva et al. (2010) the use of self-reporting is an extremely effective and efficient method to use for obtaining customer emotional feedback, especially when using rating scales. The second measure that was used to test the change in emotional intensity was the magnitude score of customers' emotional sentiment.

In line with previous studies in the field of emotions it was hypothesised that the intensity of customer emotions decreases as time passes. Loftus et al. (1978) found that the length of time between an event and recalling the event has a significant effect on the rates of misremembering, while Porter et al. (2010) found a general decay of memory and that the accuracy of recall decreases over time. Walker et al. (1997) who conducted research at different time intervals following an event (3,5 months, 1 year and 4,5 years) found that the older the memory, the greater the decrease in emotional intensity. Good experiences seemed less good while bad experiences seemed less bad. Similarly, Koenig-Lewis and Palmer (2008) found that customers selectively forgot certain aspects of an experience, which reduces the intensity associated with the experience at the time of recall.

In line with these findings the current study found that the intensity of customers' emotions decreased with the passage of time as indicated by the degree of emotions experienced and the overall emotional sentiment. The intensity of customer emotions reported in transactional measures was significantly higher than the intensity of emotions reported in reputational measures.

**7.2.6.2 Change in Positive and Negative Emotional Intensity.** A further aim of the current study was examining the change in positive and negative emotional intensity over

time. Does the intensity of positive and negative emotions remain the same or does it transform at different rates with the passage of time?

With reference to the intensity of negative emotions, the current study found that the intensity of emotions in transactional measures was the same as the intensity of emotions recalled in reputational research; therefore, the passage of time did not have any significant impact on the intensity of customers' negative emotions. In terms of the intensity of positive emotions, the current research found a significant decrease in emotional intensity between transactional and reputational measures. The intensity of customers' positive emotions was significantly higher in transactional measures compared to reputational measures, indicating a general decay in positive emotional intensity with the passage of time.

Previous research in the field of Fading Affect Bias (FAB) indicated that positive and negative emotions transform at different rates with the passage of time, similarly to the findings of the current study. While research in the area of FAB is primarily concerned with how emotions change over time, becoming either more or less positive or more or less negative, certain constructs and findings in the area of FAB research elucidates the results of the current study. Within the field of FAB research there are two perspectives related to the change in emotional intensity over time: negativity bias and positivity bias. In both instances previous research produced contradicting results.

### **Negativity bias**

Negativity bias refers to the perspective that negative experiences have a substantially larger impact on one's life and subsequently the intensity of negative emotions persists longer over time than the intensity of positive emotions (Baumeister et al., 2001). Porter and Peace (2007) found that negative emotions – related to traumatic life events – were recalled more consistently over a five-year period than positive experiences by the same participants. The

main premise for negativity bias is that negative events wear off more slowly than positive ones (Brickman et al., 1978).

Conversely, other studies have found that the emotional intensity of negative events fades faster than the emotional intensity of positive events (Skowronski et al., 2014; Walker & Skowronski, 2009). Taylor (1991) indicated that negative events lose their intensity since maintaining an intense negative emotion over a long period may place an unnecessary cognitive and affective burden on the individual.

### **Positivity bias**

Research conducted by Gilbert et al. (1998) indicated that in some instances the recall of emotions becomes more positive and less negative than the actual experience. Walker et al. (1997) found that recalling positive experiences remains more stable over time than that of negative experiences. They concluded that the “unpleasantness” of negative events fades faster over time while the “pleasantness” of positive events remains stable. Opposing this view, Baumeister et al. (2001) concluded that the intensity of positive emotions would fade faster as time passes when compared to the intensity of negative emotions.

Research in the area of FAB first predicted that the intensity of emotions accompanying negative events should persist longer in the memory of individual than the intensity of the emotions accompanying positive events. It was believed that negative emotions contain information that is more important for our long-term survival than positive ones. However, numerous studies have provided empirical evidence to suggest that the intensity of positive emotions rather than negative ones will persist over time (Walker et al., 1997).

The current study exhibited some similarities and also some differences compared to previous findings. In general, it was found that the intensity of emotions on an overall level and specifically the intensity of positive emotions declined with the passage of time. This

corresponds with previous research in the area of customer emotions (Walker et al., 1997; Baumeister et al., 2001; Skowronski et al., 2014). However, an interesting finding of the current study was that the intensity of negative emotions remained the same with the passage of time.

From customers' perspective these findings intuitively make sense. Customers that had a negative experience might engage in several actions that would ensure that the intensity of the negative experience is maintained over time. They might complain about the experience in an attempt to get the issue resolved, they might ruminate over the experience for a long period and share it with other people or they might even consider changing service providers. All of these actions increase the amount of mental time devoted to the negative experience and cements it in the customers' memory, thereby increasing the probability that it might be recalled with the same intensity at a later stage.

However, customers that had a positive emotional experience will generally not perform any of these actions. They might evaluate a positive experience as being consistent with their expectations and therefore not something special that needs to be remembered. Unless customers had an exceptional experience that delighted them in numerous ways, they will probably perceive a positive experience as equated to the service provider doing what the provider promised to do and not reminisce over the experience, which could explain the decline in positive emotional intensity when the experience is recalled at a later stage.

The results of the current study emphasise the challenge faced by companies. If the emotional experiences of customers have a significant impact on their satisfaction and recommendation (discussed in the following section) the current finding, namely that negative intensity persists longer than positive intensity, has to be taken into account. Companies need to do everything in their power to ensure that customers do not experience

negative emotions during service interactions since the intensity of these negative emotional experiences persists over time. Similarly, if the intensity of positive emotions decreases with the passage of time companies have to ensure that experiences are exceptional and delight customers, exceed their expectations, elicit intense positive emotions and ensure that customers share their experiences with other people to maintain positive emotions over an extended period.

Several authors have indicated that customers' future behavioural intentions (i.e. repurchase of a product, remaining with a service provider or telling others about their experience) is driven more by what customers remember about an experience than by the actual experience itself (Schmitt, 1999; Wirtz et al., 2003; Kahneman et al., 1997). Therefore, the emotional intensity of the remembered experience has a significant influence on customers' future decisions.

The biggest challenge faced by companies is that they need to eliminate negative experiences while consistently maintaining positive experiences across time and interactions. A sustained positive perception of a company cannot be created with one single experience; unfortunately, it can be destroyed by a single bad experience.

### **7.3 The Effect of Positive and Negative Emotions on Satisfaction and Recommendations**

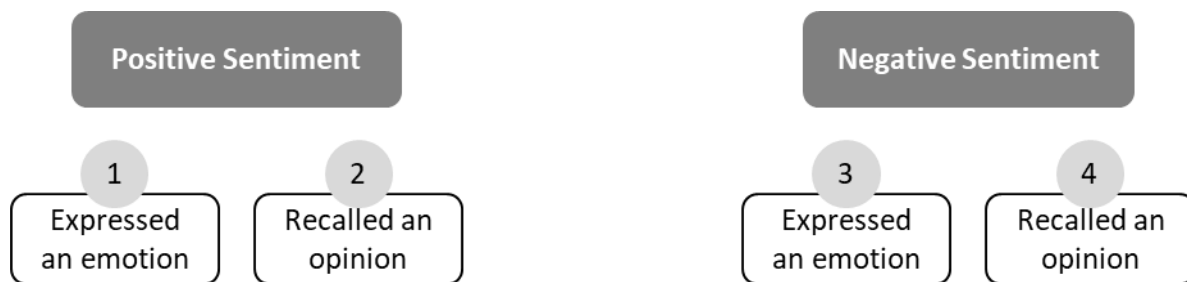
Hypotheses 8 to 15 were used to test the effect of positive and negative emotions on customer satisfaction and the likelihood to recommend by comparing customers that experienced an emotion with those customers that did not experience any emotion but related only an opinion about their experience.

Firstly, customer verbatim feedback was analysed and divided into two categories: 1) feedback of customers that expressed an emotion, and 2) feedback of customers that did not express any emotion and provided only an opinion about their experience.

Secondly, sentiment analysis was used to divide customers into two groups depending on the sentiment orientation of their verbatim feedback: positive and negative. This analysis created four distinct groups of customers as displayed in Figure 7.1.

**Figure 7.1**

*Four Groups of Customers*



Overall satisfaction was measured using an 11-point Likert scale (0 = “not satisfied at all” and 10 = “extremely satisfied”).

The likelihood to recommend was measured using an 11-point Likert scale (0 = “not likely at all” and 10 = “extremely likely”).

The analysis was done separately for transactional and reputational measures and for positive and negative emotions. Figure 7.2 graphically depicts these hypotheses.

Transactional measures:

- H8: Positive emotions’ effect on satisfaction
- H9: Positive emotions’ effect on recommendation
- H10: Negative emotions’ effect on satisfaction

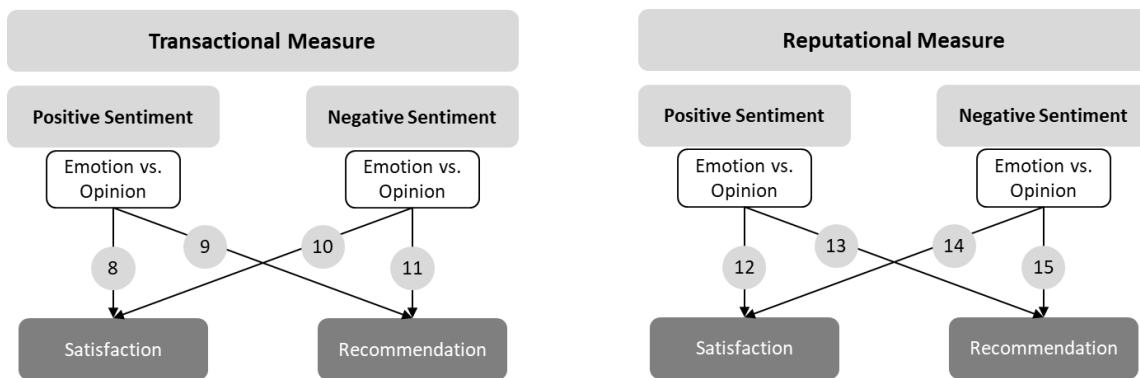
- H11: Negative emotions' effect on recommendation

Reputational measures:

- H12: Positive emotions' effect on satisfaction
- H13: Positive emotions' effect on recommendation
- H14: Negative emotions' effect on satisfaction
- H15: Negative emotions' effect on recommendation

**Figure 7.2**

*Graphical Display of Hypotheses 8 to 15*



### 7.3.1 Hypothesis 8 - Effect of Positive Emotions on Satisfaction in Transactional Measures

The hypothesis was used to test the impact of positive emotions experienced by customers on their level of satisfaction in transactional measures. It was used to test whether customers that experienced a positive emotion had the same levels of satisfaction ( $\mu_{+e}$ ) compared to customers that provided only an opinion about their experience without mentioning any emotions they experienced ( $\mu_{0e}$ ).

$H8_0$ . Customers that experienced a positive emotion have the same level of satisfaction as customers that recalled a positive experience.

$H_{8a}$ . Customers that experienced a positive emotion have a higher level of satisfaction than customers that recalled a positive experience.

$$H_0: \mu_{+e} = \mu_{0e}$$

$$H_a: \mu_{+e} > \mu_{0e}$$

### Chosen statistics

A one-sided, two sample Z-test was chosen to test the hypothesis due to the large sample size, means being tested, and the alternative hypothesis being a one-sided test.

The test statistic:

$$z = \frac{\bar{x}_{+e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{+e}} + \frac{1}{n_{0e}}\right)}}$$

where

$\bar{x}_{+e}$  is the average satisfaction for respondents expressing positive emotion;

$\bar{x}_{0e}$  is the average satisfaction for respondents expressing no emotion;

$n_{+e}$  is the sample size of respondents expressing positive emotion;

$n_{0e}$  is the sample size of respondents expressing no emotion;

$s_{+e}^2$  is the sample variance of satisfaction for respondents expressing positive emotions;

$s_{0e}^2$  is the sample variance of satisfaction for respondents expressing no emotion, and

$$s_p = \sqrt{\frac{(n_{+e} - 1)s_{+e}^2 + (n_{0e} - 1)s_{0e}^2}{n_{+e} + n_{0e} - 2}}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .



## Results

$$z = \frac{\bar{x}_{+e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{+e}} + \frac{1}{n_{0e}}\right)}}$$

$$z = \frac{93.496 - 93.675}{11.786 \sqrt{\left(\frac{1}{4,668} + \frac{1}{1,785}\right)}}$$

$$z = -0.531, \quad p \text{ (adjusted)} = 0.702, \quad d = 0.015$$

Given  $z = -0.531$  with  $p = 0.702$  and  $d = 0.015$  (no effect), there is not sufficient evidence to reject the null hypothesis. Therefore, it cannot be concluded that expressing positive emotion by respondents results in significantly higher levels of satisfaction than when no emotion is expressed (i.e. only recalling an experience).

### ***7.3.2 Hypothesis 9 - Effect of Positive Emotions on Recommendation in Transactional Measures***

The hypothesis was used to test the impact of positive emotions experienced by customers on their likelihood to recommend in transactional measures. This was achieved by testing whether customers that experienced a positive emotion had the same levels of recommendation ( $\mu_{+e}$ ) compared to customers that provided only a positive opinion about their experience without any emotional connection mentioned ( $\mu_{0e}$ ).

$H9_0$ . Customers that experienced a positive emotion have the same level of recommendation as customers that recalled a positive experience.

$H9_a$ . Customers that experienced a positive emotion have a higher level of recommendation than customers that recalled a positive experience.

$$H_0: \mu_{+e} = \mu_{0e}$$

$$H_a: \mu_{+e} > \mu_{0e}$$

### Chosen statistics

A one-sided, two sample Z-test was chosen to test the hypothesis due to the large sample size, means being tested, and the alternative hypothesis being a one-sided test.

The test statistic:

$$z = \frac{\bar{x}_{+e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{+e}} + \frac{1}{n_{0e}}\right)}}$$

where

$\bar{x}_{+e}$  is the average likelihood to recommend for respondents expressing positive emotion;

$\bar{x}_{0e}$  is the average likelihood to recommend for respondents expressing no emotion;

$n_{+e}$  is the sample size of respondents expressing positive emotion;

$n_{0e}$  is the sample size of respondents expressing no emotion;

$s_{+e}^2$  is the sample variance of likelihood to recommend for respondents expressing positive emotions;

$s_{0e}^2$  is the sample variance of likelihood to recommend for respondents expressing no emotion,

and

$$s_p = \sqrt{\frac{(n_{+e} - 1)s_{+e}^2 + (n_{0e} - 1)s_{0e}^2}{n_{+e} + n_{0e} - 2}}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .

## Results

$$z = \frac{\bar{x}_{+e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{+e}} + \frac{1}{n_{0e}}\right)}}$$

$$z = \frac{92.435 - 92.646}{14.206 \sqrt{\left(\frac{1}{4,658} + \frac{1}{1,780}\right)}}$$

$$z = -0.529, \quad p \text{ (adjusted)} = 0.702, \quad d = 0.015$$

Given  $z = -0.529$  with  $p = 0.702$  and  $d = 0.015$  (no effect) there is not sufficient evidence to reject the null hypothesis. Therefore, it cannot be concluded that expressing positive emotion results in significantly higher levels of recommendation than when no emotion is expressed (i.e. only recalling an experience).

### 7.3.3 Hypothesis 10 - Effect of Negative Emotions on Satisfaction in Transactional

#### Methods

The hypothesis was used to test the impact of negative emotions experienced by customers on their level of satisfaction in transactional methods. This was achieved by testing whether customers that experienced a negative emotion had the same levels of satisfaction ( $\mu_{-e}$ ) compared to customers that had only a negative opinion about their experience without mentioning any emotions they experienced ( $\mu_{0e}$ ).

$H_{10_0}$ . Customers that experienced a negative emotion have the same level of satisfaction as customers that recalled a negative experience.

$H_{10_a}$ . Customers that experienced a negative emotion have a lower level of satisfaction than customers that recalled a negative experience.

$$H_0: \mu_{-e} = \mu_{0e}$$

$$H_a: \mu_{-e} < \mu_{0e}$$

### Chosen statistics

A one-sided, two sample Z-test was chosen to test the hypothesis due to the large sample size, means being tested, and the alternative hypothesis being a one-sided test.

The test statistic:

$$z = \frac{\bar{x}_{-e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{-e}} + \frac{1}{n_{0e}}\right)}}$$

where

$\bar{x}_{+e}$  is the average satisfaction for respondents expressing negative emotion;

$\bar{x}_{0e}$  is the average satisfaction for respondents expressing no emotion;

$n_{+e}$  is the sample size of respondents expressing positive emotion;

$n_{0e}$  is the sample size of respondents expressing no emotion;

$s_{+e}^2$  is the sample variance of satisfaction for respondents expressing negative emotions;

$s_{0e}^2$  is the sample variance of satisfaction for respondents expressing no emotion, and

$$s_p = \sqrt{\frac{(n_{-e} - 1)s_{-e}^2 + (n_{0e} - 1)s_{0e}^2}{n_{-e} + n_{0e} - 2}}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .

## Results

$$z = \frac{\bar{x}_{-e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{-e}} + \frac{1}{n_{0e}}\right)}}$$

$$z = \frac{41.916 - 66.462}{33.831 \sqrt{\left(\frac{1}{261} + \frac{1}{65}\right)}}$$

$$z = -5.732, \quad p \text{ (adjusted)} = 0.000, \quad d = 0.726$$

Given  $z = -5.732$  with  $p = 0.000$  and  $d = 0.726$  (medium effect) there is sufficient evidence to reject the null hypothesis. Therefore, it can be concluded that expressing negative emotion by respondents results in significantly lower levels of satisfaction compared to expressing only an opinion about their experience without recalling any specific emotions.

### ***7.3.4 Hypothesis 11 - Effect of Negative Emotions on Recommendation in Transactional***

#### ***Methods***

The hypothesis was used to test the impact of negative emotions experienced by customers regarding their likelihood to recommend in transactional methods. The hypothesis was used to test whether customers that experienced a negative emotion had the same levels of recommendation ( $\mu_{-e}$ ) compared to customers that expressed only a negative opinion about their experience without recalling any emotions ( $\mu_{0e}$ ).

$H_{11_0}$ . Customers that experienced a negative emotion have the same level of recommendation as customers that recalled a negative experience.

$H_{11_a}$ . Customers that experienced a negative emotion have a lower of recommendation than customers that recalled a negative experience.

$$H_0: \mu_{-e} = \mu_{0e}$$

$$H_a: \mu_{-e} < \mu_{0e}$$

### Chosen statistics

A one-sided, two sample Z-test was chosen to test the hypothesis due to the large sample size, means being tested, and the alternative hypothesis being a one-sided test.

The test statistic:

$$z = \frac{\bar{x}_{-e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{-e}} + \frac{1}{n_{0e}}\right)}}$$

where

$\bar{x}_{+e}$  is the average likelihood to recommend for respondents expressing negative emotion;

$\bar{x}_{0e}$  is the average likelihood to recommend for respondents expressing no emotion;

$n_{+e}$  is the sample size of respondents expressing positive emotion;

$n_{0e}$  is the sample size of respondents expressing no emotion;

$s_{+e}^2$  is the sample variance of likelihood to recommend for respondents expressing negative emotions;

$s_{0e}^2$  is the sample variance of likelihood to recommend for respondents expressing no emotion,

and

$$s_p = \sqrt{\frac{(n_{-e} - 1)s_{-e}^2 + (n_{0e} - 1)s_{0e}^2}{n_{-e} + n_{0e} - 2}}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ , meaning that the test-statistic would be rejected for  $z > 2.326$ .

## Results

$$z = \frac{\bar{x}_{-e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{-e}} + \frac{1}{n_{0e}}\right)}}$$

$$z = \frac{39.183 - 64.286}{36.215 \sqrt{\left(\frac{1}{257} + \frac{1}{63}\right)}}$$

$$= -5.463, \quad p \text{ (adjusted)} = 0.000, \quad d = 0.693$$

Given  $z = -5.463$  with  $p = 0.000$  and  $d = 0.693$  (medium effect) there is sufficient evidence to reject the null hypothesis. Therefore, it can be concluded that expressing negative emotion by respondents results in significantly lower levels of recommendation than when no emotion is expressed (i.e. only recalling an experience).

### 7.3.5 Hypothesis 12 - Effect of Positive Emotions on Satisfaction in Reputational Methods

The hypothesis was used to test the impact of positive emotions experienced by customers on their level of satisfaction in reputational methods. This was done by testing whether customers that experienced a positive emotion had the same levels of satisfaction ( $\mu_{+e}$ ) compared to customers that provided only an opinion about their experience without recalling any emotion ( $\mu_{0e}$ ).

$H_{12_0}$ . Customers that experienced a positive emotion have the same level of satisfaction as customers that recalled a positive experience.

$H_{12_a}$ . Customers that experienced a positive emotion have a higher level of satisfaction than customers that recalled a positive experience.

$$H_0: \mu_{+e} = \mu_{0e}$$

$$H_a: \mu_{+e} > \mu_{0e}$$

### Chosen statistics

A one-sided, two sample Z-test was chosen to test the hypothesis due to the large sample size, means being tested, and the alternative hypothesis being a one-sided test.

The test statistic:

$$z = \frac{\bar{x}_{+e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{+e}} + \frac{1}{n_{0e}}\right)}}$$

where

$\bar{x}_{+e}$  is the average satisfaction for respondents expressing positive emotion;

$\bar{x}_{0e}$  is the average satisfaction for respondents expressing no emotion;

$n_{+e}$  is the sample size of respondents expressing positive emotion;

$n_{0e}$  is the sample size of respondents expressing no emotion;

$s_{+e}^2$  is the sample variance of satisfaction for respondents expressing positive emotions;

$s_{0e}^2$  is the sample variance of satisfaction for respondents expressing no emotion, and

$$s_p = \sqrt{\frac{(n_{+e} - 1)s_{+e}^2 + (n_{0e} - 1)s_{0e}^2}{n_{+e} + n_{0e} - 2}}$$



Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .

## Results

$$z = \frac{\bar{x}_{+e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{+e}} + \frac{1}{n_{0e}}\right)}}$$

$$z = \frac{82.271 - 77.074}{21.208 \sqrt{\left(\frac{1}{5,800} + \frac{1}{2,122}\right)}}$$

$$z = 8.784, \quad p \text{ (adjusted)} = 0.000, \quad d = 0.245$$

Given  $z = 8.784$  with  $p = 0.000$  and  $d = 0.245$  (small effect), there is sufficient evidence to reject the null hypothesis. Therefore, it can be concluded that customers that expressed a positive emotion had significantly higher levels of satisfaction compared to customers that did not express any emotion.

### ***7.3.6 Hypothesis 13 - Effect of Positive Emotions on Recommendation in Reputational Methods***

The hypothesis was used to test the impact of positive emotions experienced by customers on their likelihood to recommend in reputational methods. The hypothesis was used to test whether customers that experienced a positive emotion had the same levels of recommendation ( $\mu_{+e}$ ) compared to customers that provided only a positive opinion about their experience without recalling any emotion ( $\mu_{0e}$ ).

$H_{13_0}$ . Customers that experienced a positive emotion have the same level of recommendation as customers that recalled a positive experience.

$H_{13_a}$ . Customers that experienced a positive emotion have a higher level of recommendation than customers that recalled a positive experience.

$$H_0: \mu_{+e} = \mu_{0e}$$

$$H_a: \mu_{+e} > \mu_{0e}$$

### Chosen statistics

A one-sided, two sample Z-test was chosen to test the hypothesis due to the large sample size, means being tested, and the alternative hypothesis being a one-sided test.

The test statistic:

$$z = \frac{\bar{x}_{+e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{+e}} + \frac{1}{n_{0e}}\right)}}$$

where

$\bar{x}_{+e}$  is the average likelihood to recommend for respondents expressing positive emotion;

$\bar{x}_{0e}$  is the average likelihood to recommend for respondents expressing no emotion;

$n_{+e}$  is the sample size of respondents expressing positive emotion;

$n_{0e}$  is the sample size of respondents expressing no emotion;

$s_{+e}^2$  is the sample variance of likelihood to recommend for respondents expressing positive emotions;

$s_{0e}^2$  is the sample variance of likelihood to recommend for respondents expressing

no emotion, and

$$s_p = \sqrt{\frac{(n_{+e} - 1)s_{+e}^2 + (n_{0e} - 1)s_{0e}^2}{n_{+e} + n_{0e} - 2}}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .

## Results

$$z = \frac{\bar{x}_{+e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{+e}} + \frac{1}{n_{0e}}\right)}}$$

$$z = \frac{83.998 - 79.637}{21.652 \sqrt{\left(\frac{1}{3,619} + \frac{1}{1,461}\right)}}$$

$$z = 6.027, \quad p \text{ (adjusted)} = 0.000, \quad d = 0.201$$

Given  $z = 6.027$  with  $p = 0.000$  and  $d = 0.201$  (small effect), there is sufficient evidence to reject the null hypothesis. Therefore, it can be concluded that expressing positive emotion by respondents results in significantly higher levels of recommendation than when no emotion is expressed (i.e. only recall of the experience).

### 7.3.7 Hypothesis 14 - Effect of Negative Emotions on Satisfaction in Reputational Methods

The hypothesis was used to test the impact of negative emotions experienced by customers on their level of satisfaction in reputational methods. This was accomplished by testing whether customers that experienced a negative emotion had the same levels of satisfaction ( $\mu_{-e}$ ) compared to customers that provided only a negative opinion about their experience without any emotional connection mentioned ( $\mu_{0e}$ ).

$H_{14_0}$ . Customers that experienced a negative emotion have the same level of satisfaction as customers that recalled a negative experience.

$H_{14_a}$ . Customers that experienced a negative emotion have a lower level of satisfaction than customers that recalled a negative experience.

$$H_0: \mu_{-e} = \mu_{0e}$$

$$H_a: \mu_{-e} < \mu_{0e}$$

### Chosen statistics

A one-sided, two sample Z-test was chosen to test the hypothesis due to the large sample size, means being tested, and the alternative hypothesis being a one-sided test.

The test statistic:

$$z = \frac{\bar{x}_{-e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{-e}} + \frac{1}{n_{0e}}\right)}}$$

where

$\bar{x}_{+e}$  is the average satisfaction for respondents expressing negative emotion;

$\bar{x}_{0e}$  is the average satisfaction for respondents expressing no emotion;

$n_{+e}$  is the sample size of respondents expressing positive emotion;

$n_{0e}$  is the sample size of respondents expressing no emotion;

$s_{+e}^2$  is the sample variance of satisfaction for respondents expressing negative emotions;

$s_{0e}^2$  is the sample variance of satisfaction for respondents expressing no emotion, and

$$s_p = \sqrt{\frac{(n_{-e} - 1)s_{-e}^2 + (n_{0e} - 1)s_{0e}^2}{n_{-e} + n_{0e} - 2}}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .

## Results

$$z = \frac{\bar{x}_{-e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{-e}} + \frac{1}{n_{0e}}\right)}}$$

$$z = \frac{39.684 - 51.231}{29.663 \sqrt{\left(\frac{1}{1,328} + \frac{1}{528}\right)}}$$

$$z = -7.421, \quad p \text{ (adjusted)} = 0.000, \quad d = 0.389$$

Given  $z = -7.421$  with  $p = 0.000$  and  $d = 0.389$  (small effect), there is sufficient evidence to reject the null hypothesis. Therefore, it can be concluded that expressing negative emotion by respondents results in significantly lower levels of satisfaction than when no emotion is expressed (i.e. providing only an opinion of their experience).

### ***7.3.8 Hypothesis 15 - Effect of Negative Emotions on Recommendation in Reputational***

#### ***Methods***

The hypothesis was used to test the impact of negative emotions experienced by customers on their likelihood to recommend in reputational methods. This was accomplished by testing whether customers that experienced a negative emotion had the same levels of recommendation ( $\mu_{-e}$ ) compared to customers that provided only a negative opinion about their experience without any emotional expression ( $\mu_{0e}$ ).

$H_{15_0}$ . Customers that experienced a negative emotion have the same level of recommendation as customers that recalled a negative experience.

$H_{15_a}$ . Customers that experienced a negative emotion have a lower level of recommendation than customers that recalled a negative experience.

$$H_0: \mu_{-e} = \mu_{0e}$$

$$H_a: \mu_{-e} < \mu_{0e}$$

### Chosen statistics

A one-sided, two sample Z-test was chosen to test the hypothesis due to the large sample size, means being tested, and the alternative hypothesis being a one-sided test.

The test statistic:

$$z = \frac{\bar{x}_{-e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{-e}} + \frac{1}{n_{0e}}\right)}}$$

where

$\bar{x}_{+e}$  is the average likelihood to recommend for respondents expressing negative emotion;

$\bar{x}_{0e}$  is the average likelihood to recommend for respondents expressing no emotion;

$n_{+e}$  is the sample size of respondents expressing positive emotion;

$n_{0e}$  is the sample size of respondents expressing no emotion;

$s_{+e}^2$  is the sample variance of likelihood to recommend for respondents expressing negative emotions;

$s_{0e}^2$  is the sample variance of likelihood to recommend for respondents expressing no emotion, and

$$s_p = \sqrt{\frac{(n_{-e} - 1)s_{-e}^2 + (n_{0e} - 1)s_{0e}^2}{n_{-e} + n_{0e} - 2}}$$

Given the sample size, the critical value was set at  $\alpha = 0.01$ ; therefore, the test-statistic would be rejected for  $z > 2.326$ .

## Results

$$z = \frac{\bar{x}_{-e} - \bar{x}_{0e}}{s_p \sqrt{\left(\frac{1}{n_{-e}} + \frac{1}{n_{0e}}\right)}}$$

$$z = \frac{30.052 - 41.709}{32.597 \sqrt{\left(\frac{1}{764} + \frac{1}{316}\right)}}$$

$$z = -5.137, \quad p \text{ (adjusted)} = 0.000, \quad d = 0.358$$

Given  $z = -5.137$  with  $p = 0.000$  and  $d = 0.358$  (small effect), there is sufficient evidence to reject the null hypothesis. Therefore, it can be concluded that customers that experienced negative emotions have significantly lower levels of recommendation than customers that expressed only an opinion about their experience without any emotional connection.

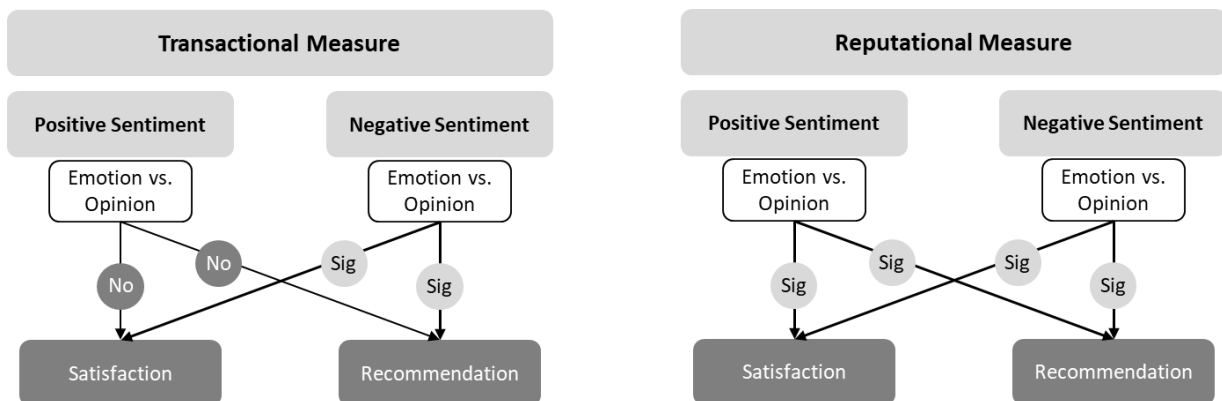
To verify the results for each hypothesis, an ANOVA was performed on the reputational and transactional data separately. Due to the non-normality of the independent variables a Kruskal-Wallis ANOVA test was performed. The p-values estimated for all hypotheses were 0.000, indicating a statistical significant difference. The results of the multiple comparisons on all hypotheses are similar to the z-tests performed above.

### 7.3.9 Summary of Results

Hypotheses 8 to 15 were used to investigate the linkages between emotions, satisfaction and the likelihood to recommend, across time. This was accomplished by comparing the satisfaction and recommendation scores for two groups of customers: 1) customers that experienced a positive or negative emotion during their interaction, and 2) customers that had a positive or negative interaction but did not experience any emotion. This was done separately for customers that completed the transactional survey and customers that completed the reputational survey. The results are summarised in Figure 7.3.

**Figure 7.3**

*Outcomes of Hypotheses 8 to 15*



#### Transactional method

The results indicate that there is a difference between customers that experienced positive emotions compared to customers that experienced negative ones.

**Positive emotions** - There was no significant difference between customers that experienced a positive emotion and customers that had a positive experience without experiencing any emotion.



**Negative emotions** – Customers that experienced negative emotions had significantly lower scores for satisfaction and recommendation compared to customers that had a negative experience without experiencing negative emotions. Of additional interest is the finding of a medium effect size for negative emotions for both satisfaction and recommendation.

### **Reputational method**

In contrast to the results obtained in the transactional measure, the results of the reputational measure indicate that positive and negative emotions are similar in their impact on satisfaction and recommendation.

**Positive emotions** – Customers that experienced a positive emotion had significantly higher scores on satisfaction and recommendation compared to customers that had positive interaction without experiencing any positive emotion.

**Negative emotions** – Similar to the results found using the transactional method it was found that customers that experienced negative emotions had significantly lower satisfaction and recommendation scores than customers that had a negative interaction without experiencing any negative emotion.

### **7.3.10 Discussion of Findings**

**7.3.10.1 Rational and Emotional Sentiment.** Consumer research classifies customer sentiment into two broad categories: rational sentiment and emotional sentiment (Chaudhuri, 2006). According to Liu (2017), “Rational sentiments are from rational reasoning, tangible beliefs, and utilitarian attitudes and consequently express no emotions” (p. 15). Therefore, the current study divided customers into two groups: 1) customers that had a positive or negative sentiment regarding their interaction without experiencing any emotion (rational sentiment), and 2) customers that experienced specific emotions during their experience (emotional sentiment). Table 7.1 displays some examples of the differences in sentiment expression.

**Table 7.1***Expression of Positive and Negative, and Rational and Emotional Sentiment*

|                     | Positive sentiment   | Negative sentiment                                       |
|---------------------|--|--|
| Rational sentiment  | The staff is very knowledgeable and the service was quick. | The queues at the branch were very long.                 |
| Emotional sentiment | I'm extremely happy, they assisted me quickly.             | I'm very frustrated and angry about the lack of service. |

While there is a strong correlation between customers' emotions and rational opinions, the two concepts are dissimilar (Yadollahi et al., 2017). Customers that reflected on their experience using emotional sentiment provided a glimpse into their emotional and psychological state. Their emotions represent their innermost thoughts and feelings. Because of the deep-seated nature of emotions, they have a profound effect on us and motivate us to perform some sort of action (Izard, 1991; Jenkins, 1996). Conversely, customers that reflected on their experience using rational sentiment did not display any emotional connection to or association with their experience.

It is therefore hypothesised that an emotional experience (as represented by emotional sentiment) will have a more profound impact on customer satisfaction and recommendation than a rational, non-emotional experience.

With the exception of hypothesis 8 and 9, the results of the study confirm this hypothesis on two fronts:

1. Firstly, customers' emotions have a significant impact on their satisfaction and likelihood to recommend (compared to customers that did not experience any emotion).
2. Secondly, the influence of emotions is directional, i.e. experiencing negative emotions will significantly diminish satisfaction and recommendation while experiencing

positive emotions will significantly increase satisfaction and the likelihood to recommend.

**7.3.10.2 Emotional Impact During Transactional Measures.** Of most interest is the finding that positive and negative emotions differ in terms of their impact on satisfaction and recommendation during transactional methods. While the experience of negative emotions had a significant impact on the levels of satisfaction and recommendation, the same is not true for positive emotions. There was no significant difference between customers that experienced a positive emotion compared to customers that had a positive experience without any associative positive emotions.

One explanation why positive emotions may not have a significant effect on satisfaction or recommendation directly after an experience may be that positive emotions reflect the status quo. Customers do not expect that something will go wrong and a positive experience, however emotional, could be an affirmation that “all is well” and as expected. Conversely, negative emotions alert the individual that things are not as they are supposed to be (i.e. not what was expected) and motivate the person to address this imbalance. This finding corresponds with the findings of Schwarz (1990) and Schwarz and Bless (1991) who found that negative emotions generate more systematic processing than positive emotions, have a stronger effect on customers and emphasise the necessity for change.

As products and services are commoditised, companies in all industries are focusing on improving the experience of their customers to create a competitive advantage. To remain relevant in this competitive environment it has become the norm rather than the exception for companies to deliver good experiences. If good experiences are expected, the finding of the current study signifies the challenge faced by companies: to differentiate themselves and stand out from the rest, providing positive experiences alone will not suffice. To have a

positive effect on satisfaction and recommendation, customers will have to experience exceptional positive experiences that elicit profound positive emotions. If customers are not pleasantly surprised, elated, amazed, excited and delighted it will not influence them in a significant way.

The opposite was found for negative emotions experienced during transactional surveys. Customers that experienced negative emotions scored significantly lower on satisfaction and recommendation than customers that had a negative experience without associated negative emotions. Companies need to identify the reasons for negative emotions and put initiatives in place to eliminate their causes. Frontline employees need to be endowed with the skills to identify customers' negative emotions and should have the ability to address the cause of the negative emotions as well as the negative emotions themselves.

On a transactional engagement level, it seems like the experiencing-self is affected more by negative emotions than by positive emotional experiences.

**7.3.10.3 Emotional Impact During Reputational Measures.** In contrast to the results obtained in transactional methods, negative and positive emotions influenced satisfaction and recommendation in similar ways during reputational methods. Customers that related a positive emotional experience had significantly higher scores on satisfaction and recommendation while customers that experienced negative emotions had significantly lower levels of satisfaction and recommendation compared to their counterparts that did not experience any emotion. Wirtz et al. (2003) indicated that customers' future behavioural intention is impacted more by what they remember from an experience (reputational measure) than by the experience itself (transactional measure). Similarly, Kahneman and Riis (2005) denoted that the remembering-self has more decision-making power regarding one's future decisions than the experiencing-self.

Since positive emotions have a profound effect on satisfaction and recommendation when measured 3 to 5 months after an experience, the challenge for organisations is how to sustain positive emotions over an extended period of time. To accomplish this, companies have to change the way they view customer experience and realise that the service experience does not end directly after an interaction. Companies have to create an extended positive emotional attachment that lasts longer than the actual consumption experience.

There are numerous ways in which companies can engage with customers following the initial experience than can create prolonged positive emotional attachments. Firstly, companies can use various forms of communication to engage with customers following a service interaction. If customers have had a positive experience, this communication can take the form of thanking them for their patronage or enquiring if they have an additional need or requirement. If customers have experienced any issues during their interaction, the communication can be used to establish whether the customer is satisfied with the outcome or the proposed solution offered. Secondly, companies can provide customers with some sort of endowment to apologise for negative experiences or sub-standard and faulty products. Thirdly, companies can connect with customers using various forms of engagement that will create and/or prolong a sustained emotional association with the company; examples are thank you notes, birthday wishes, discount vouchers, relevant gifts, invitations to events or any unique and useful memorabilia. These initiatives will remind customers of their positive experiences or give them an opportunity to engage with the company again and consequently prolong and sustain the positive emotional connection with the organisation.

Negative experiences had a significant negative effect on customer satisfaction and recommendation even when recalled months after the experience. This finding corresponds with the findings of Baumeister et al. (2001), and Rozin and Royzman (2001) who found that negative emotional experiences have a substantially larger impact on one's life and are

therefore remembered better. The challenge faced by companies is that if a customer experienced a negative emotional event it will remain with them for an extended period and affect their future behaviour – in this case satisfaction and recommendation. It also affects other aspects of their future behaviour that will be discussed in the following section.

**7.3.10.4 Emotional Impact on Satisfaction.** In terms of the impact of emotions on satisfaction the current results correlate with the findings of Westbrook (1987) who states that emotions can be characterised by independent dimensions of affect (negative and positive) and that these dimensions correlate with the satisfaction experienced by consumers. Consistent with the findings of Dube and Menon (2000) the current study determined that positive and negative emotions influenced satisfaction in a positive and negative direction respectively; positive emotions have a positive effect on satisfaction while negative emotional experiences reduce the level of satisfaction.

This finding has important implications for organisations. Previous studies in the field of customer satisfaction have found a positive correlation between customer satisfaction, repurchase intention, operating performance, the company's overall financial performance, company profits and market share (Anderson et al., 1994; Jones & Sasser, 1995; Reichheld, 1996; Anderson & Mittal, 2000). Keller (1993) indicated that if customers can retain a positive perception of a brand, product or service provider, it influences their repurchase intention in a positive way. Since positive and negative emotional experiences significantly impact customer satisfaction, customers' emotions have far-reaching and a direct impact on the long term sustainability of organisations. Organisations that can design service and product consumption experiences to increase positive emotions and eliminate negative emotions can reap the long-term benefits of managing customer emotions.

**7.3.10.5 Emotional Impact on Recommendation (Loyalty).** In relation to word-of-mouth recommendations Yu and Dean (2001) found that while positive emotions

significantly influenced word-of-mouth intentions, no such relationship existed with negative emotions. However, White (2006) found that positive and negative emotions were both significantly associated with recommendation. The results of the current study indicate that negative emotions significantly impact word-of-mouth recommendations during transactional and reputational measures, supporting the finding of White (2006).

Word-of-mouth recommendations are extremely important for organisations. They reduce marketing costs since customers do the bidding for the organisation (Berry & Parasuraman, 1991) and are an effective way for companies to gain a competitive advantage (Pan et al., 2012). This is especially true for companies in the financial sector since customers want a financial service provider than they can trust with their financial assets. As such, recommendations from trusted friends or family carry much weight.

Customers' likelihood to recommend is also a reflection of their loyalty towards an organisation; this is regarded as one of the most important aspects that organisations should focus on. The link between customer loyalty and the financial performance and sustainability of companies is well established (Reichheld & Sasser, 1990; Chen & Cheng, 2012; Jacoby & Chestnut, 1978). This is especially true for organisations in the service industries where customer loyalty is regarded as an important differentiator between competitors (Gremler & Brown, 1996). Hayes (2008) indicated that customer loyalty is a significant contributor to any bank's overall objectives of expanding its business and progressively capturing a larger market share that will lead to increased profits.

As such, ensuring a loyal customer base has become a strategic objective for most companies and especially for businesses operating in the services sector (Bove & Johnson, 2000). Pullman and Gross (2004) indicated that the secret to success for firms in the service and financial sectors is the repeat patronage of customers. The reason for this concerted effort in creating loyal customers is based on three fundamental characteristics of loyal customers:

they remain with a company for longer, they continue to make use of the company's products and services, and they also tell other people about the company (Kotler & Keller, 2006).

Loyal customers are often described as having a deep-seated affinity for and a psychological bond with an organisation. They are characterised by a deeply held commitment and profound devotion to the organisation. Descriptions like these reflect the emotional connection that loyal customers have with an organisation. It is therefore not surprising that the findings in the current study illustrate that customers' emotions have a significant effect on customer recommendations and therefore on customer loyalty.

### ***7.3.11 Implication for Organisations***

On an overall level the results of the current study confirm the importance of emotions in terms of customer satisfaction and the likelihood to recommend, specifically regarding the impact of emotions over time. These findings correspond with the findings of Oliver (1997) who indicated that positive consumption emotions increase customer satisfaction and recommendation while negative consumption emotions decrease satisfaction and customers' likelihood to recommend.

Organisations need to take note of the importance of customers' emotional experiences and the influence they have on customer satisfaction with service engagements and their likelihood to recommend the company, its products and services. Within the services sector there has been an increased effort to manage the service experience to maximise customer satisfaction and loyalty (Morrison & Crane, 2007).

While many organisations have customer experience programmes in place or conduct customer satisfaction research, these initiatives seldom focus on measuring customer emotions or on managing those emotions. The valuable insights that can be gained by better understanding customers' emotions will be lost if a concerted effort is not made to capture, analyse and act on customers' emotional experiences that could have long-term negative



consequences for the organisation. Moreover, identifying customer emotions and their causes could lead to organisational initiatives that can be extremely valuable for the organisation. Management and frontline staff have to be empowered to recognise and deal with customer emotions in an effective and constructed way.

While it was beyond the scope of the current thesis to conduct an in-depth analysis of the reasons that drive different emotions, a preliminary analysis provided some meaningful findings. Predominantly, negative emotions were elicited by service-related aspects: long waiting times, poor communication, lack of feedback, staff being unhelpful or incompetent. These experiences led to emotions like frustration, anger, being annoyed, disappointed and irritated. However, high positive sentiment was created by making customers feel special, treating them like an individual, showing respect, providing personalised service and going beyond the call of duty. These actions and attitudes of staff produced emotions like excitement, jubilation, amazement, being thankful and feeling cared for. Whilst negative emotions were predominantly caused by *what* was done, positive emotions were elicited by *how* it was done. This corresponds with the findings of Chaudhuri (1998) and Petzer et al. (2012) who indicated that positive and negative emotions are quite distinct and could evoke structurally different responses.

While negative emotions can be avoided by delivering services in line with customer expectations, positive emotions are created by going beyond what is expected in terms of service delivery and making customers feel special, unique and treasured. Although organisations will have to design their own positive emotional experiences that are relevant for their context, aspects that could contribute to creating positive emotions relate to creating personalised experiences, showing understanding and empathy for customers' challenges and making them feel special. Affective assimilation may require of organisations to go beyond

the functional aspects of the service process and identify emotional benefits that customers could gain as a result of their service interactions.

#### **7.4 Impact of Cognition and Emotion on Satisfaction and Recommendation**

The hypothesis tests the individual and combined effect of cognition and emotions on satisfaction and recommendation. Cognitive experience was measured using various operational attributes while emotions were measured using customers' verbatim responses and the degree to which they experienced an emotion. The hypotheses were tested by fitting two Structural Equation Models (SEMs) to the data (one for the transactional measures and one for the reputational measures).

##### **Proposed conceptual model**

The conceptual model represents the impact of cognitive and emotional aspects on satisfaction and recommendation (Figure 7.4). The measurement variables in the model are defined below.

##### **Observed independent variables**

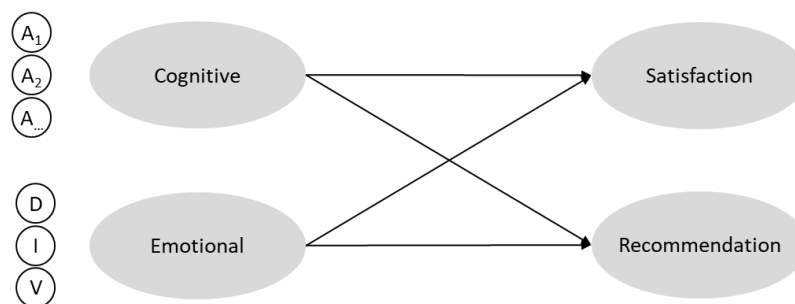
- Cognitive attributes ( $A_1$  to  $A_n$ ) were measured using an 11-point Likert scale (0 = “much worse than expected”, 10 = “much better than expected”).
- Degree of emotions (D) was measured using an 11-point Likert scale (0 = “slightly felt” to 10 = “strongly felt”).
- Emotional Intensity (I) is presented on a continuous scale between 0 and + infinite.
- Emotional Valence (V) is presented by scores ranging from -1 (negative) to +1 (positive).

**Latent variables**

- Cognition
- Emotion

**Dependent variables**

- Overall satisfaction was measured using an 11-point Likert scale (0 = “not satisfied at all” and 10 = “extremely satisfied”).
- The likelihood to recommend was measured using an 11-point Likert scale (0 = “not likely at all” and 10 = “extremely likely”).

**Figure 7.4***Conceptual Model***Transactional measure**

The transactional measure includes the following constructs: cognitive operational aspects (five attributes), emotional aspects; degree of emotions, emotional intensity, emotional valence and satisfaction and the likelihood to recommend.

## Reputational measure

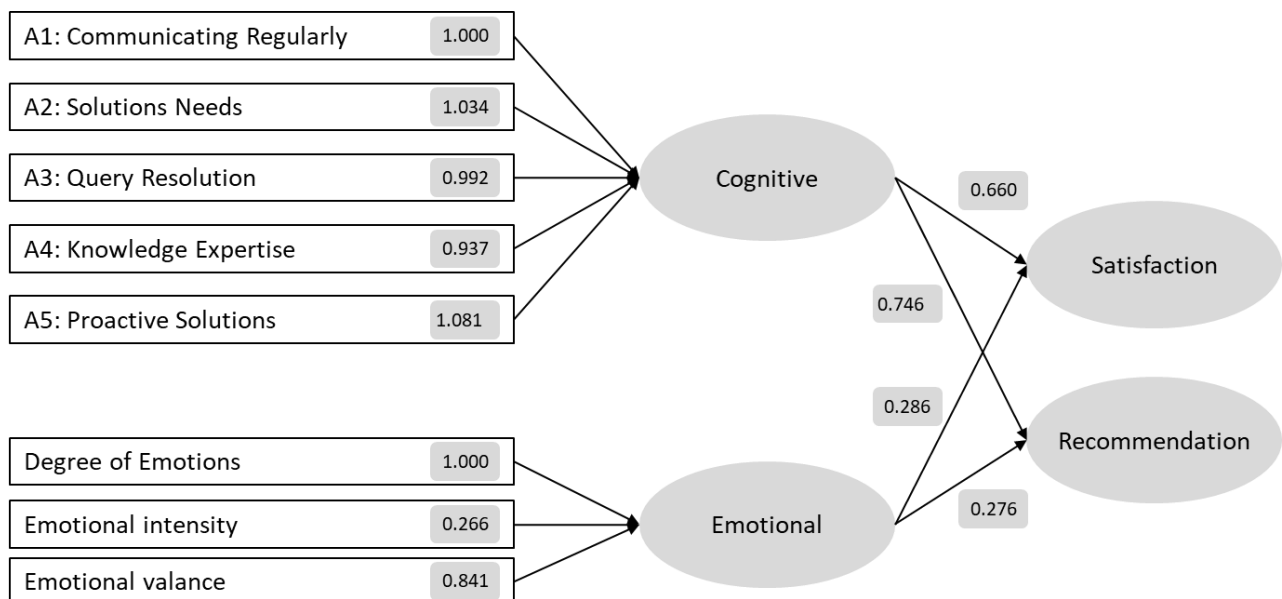
The reputational measure includes the following constructs: cognitive operational aspects (10 attributes), emotional aspects; degree of emotions, emotional intensity, emotional valence and satisfaction and the likelihood to recommend.

### 7.4.1 Results - Transactional Method

The structural model represents the explanatory relationships between the constructs of the study. The results of the transactional model are displayed below. Figure 7.5 illustrates the relationships between the constructs and the path loadings. Table 7.2 displays the fitted model parameters estimates and Table 7.3 displays the model indices.

**Figure 7.5**

*Transactional SEM Model*



**Table 7.2***Transactional Fitted Model*

| Model Component                  | Parameter Estimate | Standard Error | z-Value | Probability Level |
|----------------------------------|--------------------|----------------|---------|-------------------|
| Emotive-1-> [Degree of emotions] | 1                  |                |         |                   |
| Emotive-2-> [Intensity]          | 0.266              | 0.004          | 59.551  | 0.000             |
| Emotive-3-> [Valence]            | 0.841              | 0.012          | 67.394  | 0.000             |
| Cognitive-4-> [A_1]              | 1                  |                |         |                   |
| Cognitive-5-> [A_2]              | 1.034              | 0.008          | 123.58  | 0.000             |
| Cognitive-6-> [A_3]              | 0.992              | 0.008          | 120.808 | 0.000             |
| Cognitive-7-> [A_4]              | 0.937              | 0.008          | 118.802 | 0.000             |
| Cognitive-8-> [A_5]              | 1.081              | 0.009          | 121.337 | 0.000             |
| Emotive-21-> (Satisfaction)      | 0.286              | 0.01           | 27.602  | 0.000             |
| Cognitive-22-> (Satisfaction)    | 0.66               | 0.011          | 60.34   | 0.000             |
| Emotive-23-> (Recommendation)    | 0.276              | 0.013          | 22.085  | 0.000             |
| Cognitive-24-> (Recommendation)  | 0.746              | 0.013          | 56.393  | 0.000             |

**Table 7.3***Transactional Model Fit Indices*

| Model Fit Index             | Value | Cut-off for good fit |
|-----------------------------|-------|----------------------|
| Comparative Fit Index (CFI) | 0.988 | $\geq .90$           |
| Tucker-Lewis Index (TLI)    | 0.983 | $\geq 0.95$          |
| RMSEA                       | 0.064 | $< 0.08$             |
| SRMR                        | 0.016 | $< 0.08$             |

The model fits the data well with statistically significant parameter estimates on all model components. The model fit indices are within the suggested cut-off values on the model indices.

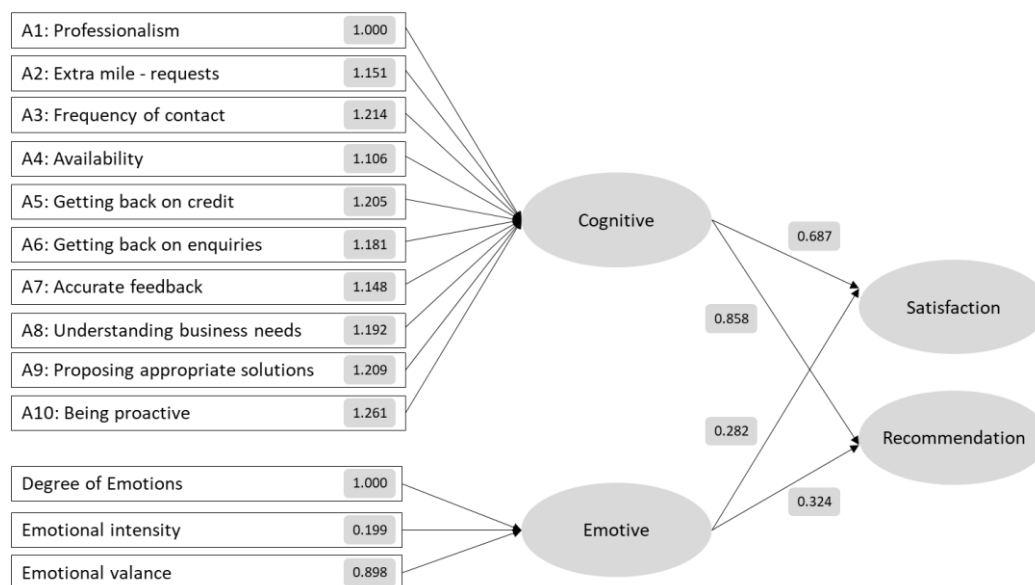
**7.4.2 Results - Reputational Method**

The structural model measures the explanatory relationships between the constructs of the study. The results of the reputational model are displayed below. Figure 7.6 illustrates the

relationships between the constructs and the path loadings. Table 7.4 displays the fitted model parameters estimates and Table 7.5 displays the model indices.

**Figure 7.6**

*Reputational SEM Model*



**Table 7.4**

*Reputational Model Fit Indices*

| Model Component                   | Parameter Estimate | Standard Error | z-value | Probability Level |
|-----------------------------------|--------------------|----------------|---------|-------------------|
| Emotive-1-> [ Degree of emotions] | 1                  |                |         |                   |
| Emotive-2-> [ Intensity]          | 0.199              | 0.003          | 78.199  | 0.000             |
| Emotive-3-> [ Valence]            | 0.898              | 0.011          | 80.212  | 0.000             |
| Cognitive-4-> [ A_1]              | 1                  |                |         |                   |
| Cognitive-5-> [ A_2]              | 1.151              | 0.014          | 82.333  | 0.000             |
| Cognitive-6-> [ A_3]              | 1.214              | 0.016          | 75.578  | 0.000             |
| Cognitive-7-> [ A_4]              | 1.106              | 0.015          | 75.087  | 0.000             |
| Cognitive-8-> [ A_5]              | 1.205              | 0.016          | 75.032  | 0.000             |
| Cognitive-9-> [ A_6]              | 1.181              | 0.015          | 80.019  | 0.000             |
| Cognitive-10-> [ A_7]             | 1.148              | 0.014          | 81.984  | 0.000             |
| Cognitive-11-> [ A_8]             | 1.192              | 0.014          | 83.53   | 0.000             |
| Cognitive-12-> [ A_9]             | 1.209              | 0.015          | 80.932  | 0.000             |
| Cognitive-13-> [ A_10]            | 1.261              | 0.016          | 81.172  | 0.000             |
| Emotive-31-> ( Satisfaction)      | 0.282              | 0.016          | 17.972  | 0.000             |
| Cognitive-32-> ( Satisfaction)    | 0.687              | 0.019          | 36.027  | 0.000             |
| Emotive-33-> ( Recommendation)    | 0.324              | 0.015          | 21.251  | 0.000             |
| Cognitive-34-> ( Recommendation)  | 0.858              | 0.019          | 44.915  | 0.000             |

**Table 7.5***Reputational Model Fit Indices*

| <b>Model Fit Index</b>      | <b>Value</b> | <b>Cut-off for good fit</b> |
|-----------------------------|--------------|-----------------------------|
| Comparative Fit Index (CFI) | 0.950        | $\geq .90$                  |
| Tucker-Lewis Index (TLI)    | 0.939        | $\geq 0.95$                 |
| RMSEA                       | 0.094        | $< 0.08$                    |
| SRMR                        | 0.028        | $< 0.08$                    |

The model fits the data fairly well with statistically significant parameter estimates on all model components. The model fit indices are within the suggested cut-off values for CFI and SRMR with LTI and RMSEA slightly outside the suggested cut-off values, indicating an acceptable fit, but one that should be treated with caution.

**7.4.1 Discussion of Findings**

One of the main objectives of the current study was to investigate the interplay between cognition and emotion and its individual and combined impact on customer satisfaction and likelihood to recommend. A secondary objective was to test the impact for transactional measures and reputational measures separately to identify any differences between the two measures.

As hypothesised, the models indicate that both cognitive and emotive constructs impact customer satisfaction and the likelihood to recommend. These findings are in line with previous research in the area of customer satisfaction within service environments. Gardner (1985) indicated that service encounters are the ideal settings to investigate the interaction between cognition and emotions since the interaction between customers and company staff evokes various emotional and cognitive responses. Homburg et al. (2006) confirmed the existence of both cognitive and affective components of satisfaction judgement.

For both the transactional method and reputational method the models indicate that cognitive operational aspects have a greater impact on satisfaction and recommendation than customer emotions. Alford and Sherrell (1996) suggested that customers use two sources of information when making satisfaction judgements: firstly, intuitive logic (cognition) that focuses specifically on the consistency with which the service is performed (functional attributes), and secondly, customers' affective reaction (consumption emotions) to the service encounter and the service provider.

From a theoretical perspective, the current findings make intuitively sense. From a cognitive appraisal perspective, customers first evaluate a situation in relation to specific goals they want to achieve that is followed by an emotional reaction as a result of the outcome of the event. Appraisal theorists assert that it is not the event itself that produces the emotion but rather the psychological appraisal by the customer that interprets the event that produces the emotion (Lazarus, 1991; Frijda, 1993). From this perspective the final emotion experienced by an individual is highly dependent on the achievement of specific goals. Lazarus and Folkman (1984) postulate that the function of cognition is evaluative in nature and focuses on the meaning and significance of events. Lazarus (1991) pointed out that emotions are the consequence of a consumer's interaction with their environment and that it is the interpretation of these encounters (appraisal) that elicits a specific emotion.

A customer evaluates their "current state" compared to their "desired state" (achievement of a desired goal) that then leads to a specific emotion; a customer who visits their personal banker does so because they want to achieve a very specific goal. The attainment of this goal is evaluated and the outcome of the evaluation leads to a specific emotional response. If the customer achieves the desired goal it leads to positive emotions while the non-achievement of the goal leads to negative emotions. This sequence of events is aligned with the statement of



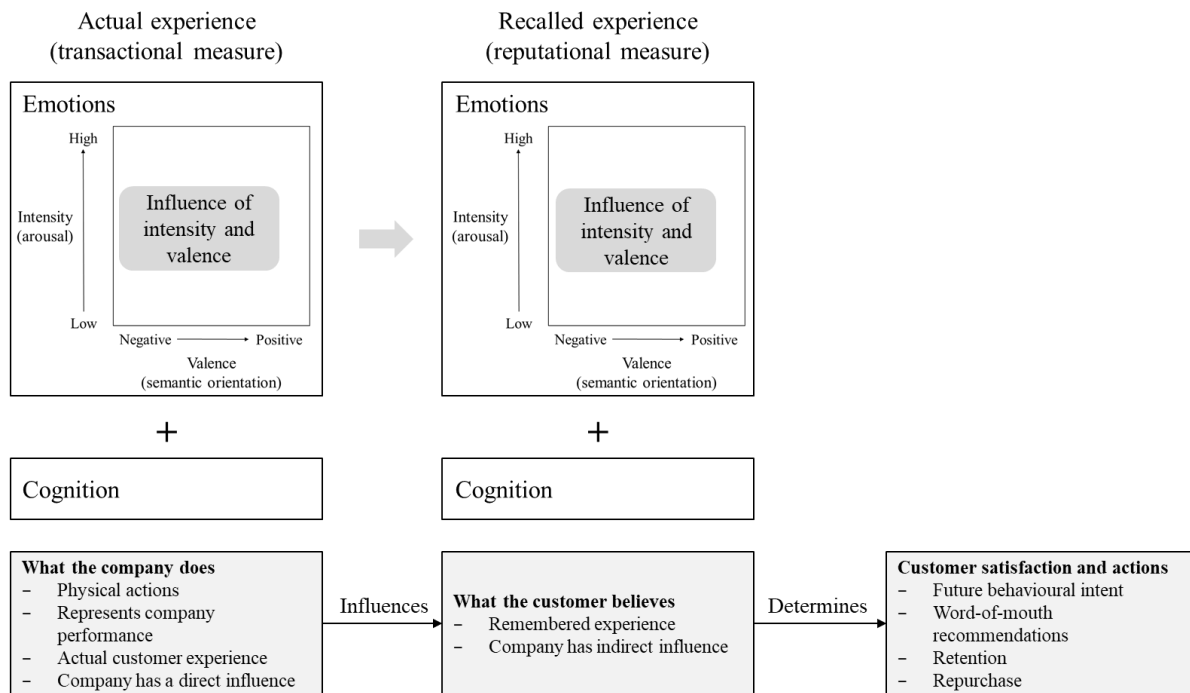
Bagozzi (1992) who indicated that emotions are a result of appraisal in terms of outcome desires and the achievement of specific goals.

A customer's final satisfaction judgement is firstly influenced by the practical, functional attributes of an engagement and their emotion, as a result of the outcome of these events, provides additional affective input in terms of the final satisfaction. From a company perspective, this finding indicates that the functional operational aspects of a service interaction have to function well. For example, if a customer has to wait excessively long before being assisted, experiences system failures or if staff members are incompetent, it will undoubtedly lead to negative emotions. Conversely, if processes and operations are efficient and staff members are competent and knowledgeable, positive emotions are a natural outcome of the experience.

### **Chapter 8: Conclusion and Recommendations**

Russel (2003) states, “The concept of emotion presents many puzzles, beginning with James’s (1884) still unanswered (but interminably asked) question: What is an emotion? There is little convergence on an answer and therefore little agreement on where emotion stops and its causes and consequences begin (another perennial question). There are no formal criteria for what is and what is not an emotion” (p. 145). While the exact nature of emotions is still debated, its effect on people and those around them cannot be discounted. In line with Russel’s statement, the findings of the current research reveal a more complex pattern of relationship than suggested by current theory and inform the debate about the impact of emotions on satisfaction and recommendation.

The current research project investigated an emotion-laden service episode between business executives and their personal banker. The aim was to examine the impact of emotions – measured as valence and intensity – and cognition on customer satisfaction and word-of-mouth recommendations over time. Figure 8.1 illustrates this conceptual framework. The actual experience of customers (transactional measure) represents the performance of the company and the area the company has direct control over (i.e. what the company does). The recalled experience of customers (reputational measure) represents what the customer remembers from the experience (what the customer believes) and the company has only an indirect influence at this stage. Emotions and cognition have a combined effect on customer satisfaction, customers’ behavioural intentions (word-of-mouth) and actions.

**Figure 8.1***Research Project Conceptual Framework*

The following section focuses on some of the most important findings and its managerial implications, describes some of the study limitations and concludes with recommendations for future research.

### 8.1 Cognition and Emotion

For a very long time customer satisfaction was considered exclusively as a cognitive state and the consumer viewed as a rational elaborator of information (Legrenzi & Troilo 2005). However, recently this view has changed and many authors are of the opinion that emotions and cognition should be included in predictive models of satisfaction (Palmer & Koenig-Lewis, 2011). Agapito et al. (2014) indicated that customer satisfaction is a complex, multisensory and holistic outcome that is driven by both cognitive and affective factors. Coetzee et al. (2019) indicated that “Affective engagement referred to a participant’s

experiences concerning feeling and emotions, preferences, and values. Cognitive engagement referred to experiences related to awareness, perception, memory, learning, judgement, and understanding or making sense of the experience” (p. 304).

Previous studies have indicated that emotions and cognition influence satisfaction in different ways. Mc Neely et al., (2020) found that the novelty and authenticity of the experience were affective drivers of satisfaction while value for money were cognitive drivers of satisfaction.

Bagozzi et al. (1999) referred to emotion as “a mental state of readiness that arises from cognitive appraisals of events or thoughts” (p. 184). Lazarus (1991) asserted that emotions are the consequence of a consumer’s interaction with their environment and that it is the interpretation (appraisal) of these encounters that elicits a specific emotion. These statements epitomise the experience of customers and signify the complex interplay between emotions and cognition. According to Lazarus and Folkman (1984), the function of cognition is evaluative in nature and focuses on the meaning and significance of events. Bagozzi et al. (1999) indicated that emotions are the driving force that leads to explicit actions on the part of the consumer. While cognition influences customers’ appraisal of events, emotions can provide the impetus and motivation that influence customers’ actions and future decision making.

The results of the current project support these statements to a large extent. Firstly, it indicates that emotions have a significant influence and that the combination of cognitive and emotive measures predicts customer satisfaction and recommendation better than any of these could do in isolation. Secondly, the findings suggest that there is a complex interplay and interrelationship between cognition and emotion and that the evaluation of consumption experiences is partly cognitive and partly emotional. This corroborates the findings of several previous studies (Westbrook, 1987; Mano & Oliver, 1993; Smith & Bolton, 2002).

Furthermore, it indicates that cognition and emotions play a vital role in customer satisfaction and likelihood to recommend. Therefore, it supports the findings of Giese and Cote (2000) who illustrated that consumer satisfaction is a combination of emotional and cognitive responses.

Although the present study attempted to investigate the effects of cognition and emotion independently, in reality the two constructs are interconnected and separating their effects completely is not possible. Zajonc (1980) also recognised this interrelationship by stating that affect and cognition are only “partially independent” of each other because they have complementary roles in human decision making (p. 151).

Hands (2010) indicated that consumers’ evaluation processes are too complex to be modelled by observable, rational indicators alone and that models of satisfaction should include an affective component. Kim et al. (2015) indicated that experiential marketing is based on the assumption that consumers are frequently driven by cognition as well as emotions when making purchase decisions while Kim et al. (2012) found that for companies to gain a competitive advantage they should meet or exceed consumers’ cognitive, emotional, and sensory expectations of products or services.

Organisations that employ both cognitive and emotive evaluation criteria in their customer satisfaction measures will obtain a more holistic view of the experience of their customers and be better equipped to develop interventions that will satisfy customers on a rational, cognitive level as well as on a deeply-held and profound emotional level.

## **8.2 Emotional Valence and Intensity**

An ongoing debate exists among emotional theorists regarding the differential impact of emotional valence and emotional intensity on customer satisfaction. Emotional valence refers to whether emotions are positive or negative, while intensity refers to the strength of the

emotional descriptors (i.e. happy vs. ecstatic and angry vs. livid). For this reason, many authors are of the opinion that both valence and intensity play a vital role in customer satisfaction orientations. According to Liu (2015) the two aspects that are important when investigating people's sentiment are firstly sentiment orientation (whether positive or negative), and secondly the intensity of the expression. Menon and Dubé (2000) state that "by capturing only the intensity of emotion, we believe these measures ignore the experiential, interactive, and dynamic nature of customer emotions" (p. 286).

The debate about valence and intensity is firstly centred around its influence on the recall of emotional experiences, and secondly its effect on satisfaction and recommendation. On the one hand some theorists propose that it is emotional valence that is most important. Research conducted by Porter and Peace (2007) found that negative emotions were recalled more consistently over a 5-year period than positive ones by the same respondents while Skowronski et al. (2014) found that positive emotions are remembered better than negative ones. Contrary to these findings, Talarico et al. (2004) found that positive and negative emotions enhance memory in similar ways and that it is the intensity of emotions rather than their valence that improved the quality of memory. Mudie et al. (2003) found that it is the specific emotions consumers experience rather than the intensity of emotions that influence variations in satisfaction. Since previous research has provided contradictory results, Mudie et al. (2003) indicated that more research is necessary to understand whether emotional involvement is the product of emotional descriptors (valence) or emotional intensity. Meirovich and Bahnan (2008) found a significant relationship between quality of design and quality of conformance and customer emotions in terms of their valence and intensity. Bindroo et al (2015) found that customers differ in terms of their satisfaction judgement. Some customers rely on the property of valence while other customers emphasise the degree of arousal (intensity). They indicated that their findings highlight the important role of

individual differences between valence- versus arousal-focus and that this difference can explain the difference between customer satisfaction and loyalty outcomes.

Meirovich et al. (2013) found that there is a significant relationship between the combinations of two quality dimensions and customers' affective responses with regards to their valence and arousal (intensity). They found that in some instances consumers display high intensity and neutral or negative valence while in other instances consumers displayed low intensity coupled with high unpleasantness. They indicate that services provided by originations could elicit mixed emotions that influence the intensity of affective response and should be investigated in future research.

The current research contributes to industry knowledge in this regard and found that both valence and intensity have an effect on customer satisfaction and customers' likelihood to recommend. Firstly, the current study indicates that the intensity of negative emotions remains the same over time while the intensity of positive emotions declines; secondly, that both positive and negative emotions have a significant influence on customer satisfaction and recommendation when measured long after an interaction.

On a practical level these findings are important for organisations that want to improve customer satisfaction and ensure positive word-of-mouth recommendations. If customers have experienced intense negative emotions during an interaction, they will last for an extended period of time and influence satisfaction and recommendation significantly. However, organisations need to ensure that customers experience intense positive emotions during their service interactions since positive emotions have a significant effect on satisfaction and recommendation; however, the intensity of positive emotions declines with the passage of time.

While the debate about the impact of emotional valence and intensity may continue for many years to come, the importance of emotions and their impact on customers' beliefs and

decisions cannot be disputed. Ruth (2001) proposed that “in addition to product- and brand-related knowledge, consumers systematically utilize nonmarket types of knowledge such as knowledge of emotions in evaluating products and prospective consumption experiences” (p. 100). Emotions are, therefore, represented in memory as a type of categorical knowledge (Conway & Bekerian, 1987). The findings of the current research corroborate this viewpoint. Firstly, positive and negative emotions remain in the memory of customers long after a specific experience and are easily recalled by customers. Secondly, both positive and negative emotions have a significant effect on customer satisfaction and likelihood to recommend. The viewpoint that emotions become knowledge that is imbedded in the psyche of the consumer has significant implications for organisations. Organisations that acknowledge the effect of emotions on consumer behaviour and actively measure and manage customer emotions can create a differentiated advantage compared to their competitors.

### **8.3 Managerial Challenges Faced by Organisations**

It is clear from the research results that customer emotions play a key role during consumption experiences as well as long after a specific experience; they have a significant influence on customer satisfaction and loyalty. This is important for the long-term suitability of organisations since numerous studies have proven the positive effect of satisfaction and loyalty on organisational profits and market share. Effectively managing customer emotions can ultimately lead to increased profitability for organisations.

One of the challenges faced by customer experience practitioners and organisational management is how to sustain intense positive emotions during and after consumption experiences and how to avoid or eliminate negative ones. As indicated by the findings of the research, the intensity of negative emotions is sustained over a long period while the intensity



of positive emotions decreases over time. If employees do not intentionally focus on identifying and managing customer emotions, emotions will remain hidden and the advantages of managing customer emotions will be lost. However, if organisations can meet or exceed the emotional needs and expectations of customers, it will positively affect satisfaction and loyalty, which in turn will have a positive influence on repurchase intention and organisational profits.

Not only will emotional management have a positive effect on the downstream effect of organisational profits; it can also be an effective marketing tool for organisations. Customers express their emotions and psychological state through vocal reflections (Lazarus, 1991). Previous research has found that customers that are more emotional share their stories more often than customers that are less emotional (López-López et al., 2014). However, word-of-mouth recommendations can be a double-edged sword for organisations as indicated by the findings of the current research; positive emotions have a positive effect on recommendation while negative emotions have an adverse effect. Customers that experience negative emotions and share these with others can damage the reputation of an organisation. Contrastingly, customers that experience positive emotions become an extension of the organisation's marketing plan since they share their positive message with those around them. Customer satisfaction practitioners, marketing and service managers are urged to measure and manage customer emotions since they become an effective marketing tactic (Bhadane et al., 2015).

#### **8.4 Emotional Impact in the Financial Services Industries**

Walker (2005) indicated that for financial service providers and financial advisors the development and preservations of trust and commitment in the advisor-client relationship is extremely important. This alludes to the emotional component of the relationship between customers and financial practitioners. Financial advisors and personal bankers have to

maintain good personal relations with clients over time to instil trust and commitment. Prati and Prati (2009) indicated that knowledge of customer emotions and the proficient management thereof by practitioners will assist in developing and maintaining advisor-client relationships over time. The findings of the present study corroborate this notion. Developing an emotional connection with customers can enhance the trust relationship between the advisor and the customer and have a significant impact on the satisfaction with the engagement and loyalty over time.

Hareli and Rafaeli (2008) proposed that emotions are not unidirectional but reciprocal and that the emotions expressed by one person influence the thoughts, behaviours and emotions of the people they interact with. This necessitates the need for personal bankers and financial advisors to have the necessary skills and competence to understand and manage the emotions of customers. Sharma and Patterson (1999) indicate that financial service providers offer high credence services that are highly technical and therefore very difficult for customers to ascertain the quality of these services. They found that if a customer perceives the advisor to have their best interest at heart, treat them with respect and courtesy and are focused on their overall well-being, it strengthens the trust between the advisor and customer and improves the advisor-customer relationship. These aspects allude to the sentimental characteristic of the advisor-customer relationship and denotes that addressing customers' emotional needs are just as important as providing sound financial advice. Rychalski et al. (2016) found emotions play a significant role in customers' satisfaction in utilitarian services.

The findings of the present study support these notions. It indicated that cognitive experiences (the practical financial advice and support) and emotional experiences (emotional connection with the financial advisor) influences customer satisfaction and loyalty. Financial practitioners need the skills to understand the emotional context of the customer and evaluate and manage their emotions during the service interaction. One approach that companies can

employ is to actively engage with customers during the service interaction and focus on developing a collaborative relationship. Lawler (1992) indicated that providing customers with a level of control over problem solving and decision-making will increase the level of affective commitment to the financial advisor.

### **8.5 Experiential Service Design**

As products and services become more commoditised businesses will have to rethink what they offer their customers in terms of experiences to differentiate themselves from their competitors. LaSalle and Britton (2003) defined customer experience as “an interaction, or series of interactions between a customer and a product, a company or its representative that leads to a reaction” (p. 30). The findings of the current study indicate that cognition and emotions play a central role during individual interactions (transactional measure) and when measured afterward using reputational measures. It indicated that throughout various customer-company interactions it is essential to manage the cognitive and emotional characteristics of these interactions. The following section provides some practical suggestions to achieve this.

In the early 1990s Pine and Gilmore (1999) presented the experience economy as a new paradigm for approaching customer experience that goes beyond the usual product and service orientation. They indicated that companies should refrain from selling products and services and start selling experiences. Pine and Gilmore (1999) proposed that the main difference between ordinary and extraordinary experiences is the emotional connection that is created between the company and the customer. Arnould and Price (1993) defined extraordinary experiences as ones where customers experience high levels of emotional intensity that persist over time. The findings of the current research support this notion as

indicated by the impact of positive and negative emotions on customer satisfaction and loyalty.

Companies need to create an immersive experience where customers feel an emotional connection with the company and a personal involvement that goes beyond mere consumption of the products or services. Pullman and Gross (2004) indicated that immersive emotional experiences created by a company significantly improve customer loyalty by creating emotional connections that are engaging and compelling. Once an emotional connection is created customers will experience improved levels of satisfaction and will want to revisit the organisation continuously in future. This emotional bond that is created between the company and its customers will be almost impossible for competitors to imitate.

For companies to create this emotional bond, all aspects of the environment in which products and services are consumed have to be carefully designed. These include everything the customers interacts with, the physical surroundings, the staff as well as other customers (Gupta & Vajic, 1999). Collaboratively all these will ensure that customers' cognitive and emotional needs and expectations are met or exceeded. Experiential service design goes beyond the design of effective and efficient service interactions and primarily focuses on creating an emotional connection between customer and company. To create these emotional experiences two aspects have been identified that are of paramount importance; the first of these relates to the role that employees play while the second has to do with the customers themselves.

First of all, employees play a vital role in experiential design and it is important that they understand the contribution they need to make in this area. Without the support of employees to create the desired experience, the emotional connection necessary to transform an ordinary service encounter into an emotional and memorable experience may never be achieved. Price et al. (1995) indicated that staff should be competent, show civility, empathy, mutual

understanding, be authentic and give customers extra attention. These aspects need to be consciously designed and embedded in service experiences since they could generate intense positive emotions that could last for an extended period of time. This is important within the context of the current research findings since the intensity of positive emotions declined significantly with the passage of time.

The second aspect that has been identified is the role that customers themselves can play during an interaction. Previous research indicated that companies can create memorable experiences by exceeding customers' expectations (cognitive and emotional) but more importantly, by allowing customers to co-create their own unique experiences (Carù & Cova, 2003). Schmitt (1999) indicated that for customers to have a memorable satisfactory experience they need to be engaged in the experience on various levels: cognitive, emotional, sensorial, physical and spiritual. As indicated by the present study, both cognitive and emotional aspects of customers' experiences significantly impact their satisfaction and loyalty. While cognitive experiences engage a customer mentally and include problem solving and creativity, emotional experiences appeal to a customer's inner most feelings and passions.

## **8.6 Study Contributions and Implications**

The following section discusses some of the overall contributions of the current research, followed by the practical implications based on the results of the study.

### ***8.6.1 Contributions of the Current Study***

On an overall level the research contributes to industry knowledge regarding the linkages between emotions, cognition, satisfaction and behavioural intentions (likelihood to recommend). More specifically, the current study expands industry knowledge in the following areas:

Firstly, the present study contributes to the existing literature on customer satisfaction and recommendation in a credence service environment. It illustrates the value of a dynamic perspective on customer satisfaction by measuring cognitive as well as affective aspects of a service engagement.

Secondly, the results indicate that cognitive and affective aspects collectively influence satisfaction and recommendation; by including both constructs in customer satisfaction measures a more complete and holistic view of customers' experiences can be attained.

Thirdly the study makes a methodological contribution by examining emotions and cognition at different stages in the customer-company interaction journey (i.e. within 24-hours of an experience and 3 to 5 months after an experience). This approach provided valuable insights regarding the fading of emotional intensity over time and the extent to which positive and negative emotions linger in the memory of customers and influence satisfaction and recommendation after an extended time period. Organisations that embark on a customer satisfaction programme that measures emotions at different times following an interaction with a customer need to be cognisant of these effects and incorporate them into the interpretation of research results.

Fourthly, the study followed a unique approach in examining customer emotions by collecting customers' verbatim responses and utilising sentiment analysis to analyse emotions. This approach proved to be effective in eliciting customers' authentic emotions and an approach that could be recommended for future research.

Finally, the present study investigates the effect of emotional valence and intensity. The results indicate that the intensity of customer emotions influences the extent to which emotions are recalled and that emotional valence has a significant impact on satisfactions and recommendation.

### ***8.6.2 Practical Implications of the Current Study***

The findings of this study have general implications for all service firms and a number of actionable implications for firms in industries providing extended services, such as banking and insurance.

Firstly, organisations can benefit from including both cognitive and affective constructs into their satisfaction measures since both contribute to customer satisfaction and recommendation. By including only one of these constructs organisations omit an important aspect of the customers' experience and fail to obtain a holistic view of the antecedents of satisfaction and recommendation.

Secondly, it is vital that service experience design should focus on eliminating negative emotions. Negative emotions are recalled considerably better than positive emotions after an extended period of time (i.e. they remain imbedded in the memory of customers) and have a significant adverse impact on satisfaction and recommendation.

Thirdly, positive emotions had a significant effect on satisfaction and recommendation when recalled 3 to 5 months after an interaction. However, the intensity of positive emotions declines significantly over time. Therefore, companies should focus on cultivating positive emotions of high intensity to ensure that they remain in the memory of customers and impact satisfaction and recommendation favourably.

Fourthly, the study indicates that both cognition and emotion impact customer satisfaction and recommendation, reflecting the complex interplay between cognition and emotion. Cognitive attributes measured in the study had a significant impact on satisfaction and recommendation. According to cognitive appraisal theory, customers evaluate experiences based on the significance of events. A central construct in the evaluation of events is the attainment of personal goals. Customers that had an interaction with their bank had specific outcomes in mind and the cognitive attributes used in the study represented these

functional goals. It therefore stands to reason that if these goals were not achieved in line with customers' expectations that it would negatively affect satisfaction and recommendation. The basic practical requirements of a service engagement must be achieved to create satisfactory experiences. Customers will undoubtedly experience negative emotions if the basic, essential aspects and requirements of the service are not in place. Moreover, if the basic services expected by the customer are delivered well they provide the platform for organisations to design and deliver a positive emotional experience.

Finally, the current study alludes to the importance of employees and the role they play in customer interaction. Not only do staff need the skills and competencies to deliver the functional requirements expected by customers; they also need to be able to identify and manage customer emotions. It is therefore imperative that employee training programs empower staff to be able to fulfil the utilitarian and emotional needs of customers.

### **8.7 Limitations of the Current Study**

Notwithstanding its contributions, this study has some limitations that open up avenues for further research.

Firstly, the present research focuses on a high-involvement service interaction that could contribute to accurate and effective recall of emotions over time compared to other low-involvement retail service encounters. The findings and conclusions may therefore not be applicable to other service encounters.

Secondly, although self-report questionnaires have been effectively used in other similar studies, this approach may lead to the under- or over-reporting of customer emotions. A combination of emotional scales adapted to measure consumer consumption emotions as well as verbal protocols could be employed in future research.



Thirdly, similar to the findings of previous research in the field of emotions it is almost impossible to completely separate cognition and emotion. For customers to experience and recall emotions it implies that at least some form of cognitive processing must take place. Although the study attempted to distinguish between the effect of the rational cognitive evaluations and emotions experienced, the possibility remains that the two constructs are conflated.

### **8.8 Suggestions for Future Research**

The current research calls attention to certain aspects that could be addressed in future research to expand industry knowledge of the effect of emotions and cognition on customers' service experiences.

Firstly, the project was executed in a high-involvement service interaction that could have contributed to the effective recall of emotions after an extended time period. Repeating the current study in other service areas that are less involved (i.e. retail consumption experiences) could provide useful insights in terms of the effect of emotions, how they change over time and how they influence customer satisfaction and recommendation.

Secondly, current literature indicates that customers evaluate their experiences in relation to their expectations. While numerous studies include a measure of customers' functional, practical expectations relatively few studies investigate customers' emotional expectations. Future research could focus on identifying customers' anticipated emotions and the effect they have on satisfaction and recommendation if those emotions are confirmed or refuted. If customers expect an experience to be arduous and elicit emotions of anxiety, frustration or anger, the experience of these emotions might not have a negative influence on satisfaction or recommendation since they were expected. Similarly, the expectation of a happy, joyful

experience may not have any significant effect on satisfaction and recommendation either, since it was anticipated.

Thirdly, similar to Miron-Shatz et al. (2009) the *experienced emotions* in the present study were recalled retrospectively, albeit within 24-hours after the experience, compared to 3 to 5 months after an experiences (reputational measure). Future research may focus on eliminating the time lapse between the experience and collecting customer feedback and interview customers immediately after an interaction to reflect their actual real-time experience better in the moment.

Fourthly, while the current research investigated the effect of positive and negative emotions and the intensity of customer sentiment it did not investigate the effect of specific discreet emotions on satisfaction and recommendation. Useful insights could be gained by investigating the effect of specific emotions on satisfaction and recommendation.

Finally, while the results of the current study found that both cognition and emotion impacts customer satisfaction and recommendation the intercorrelation between these constructs might have confounded some of the findings. Previous research has indicted that both satisfaction and recommendation as well as cognition and emotion are highly correlated. Future research could endeavour to define these constructs differently, use alternative measures to quantify these constructs or separate them during measurement in an attempt to reduce the multicollinearity. However, on a practical level it might not be possible to completely separate these construct and reduce the confounding effect it has on results.

### References

- Abdelfattah, F., Rahman, M., & Osman, M. (2015). Assessing the antecedents of customer loyalty on healthcare insurance products: Service quality; Perceived value embedded model. *Journal of Industrial Engineering and Management*, 8(5), 1639-1660.
- Abdou, M., Kulmizev, A., & Ametllé, G. J. (2018). AffecThor at SemEval-2018 Task 1: A cross-linguistic approach to sentiment intensity quantification in tweets. In *Proceedings of The 12th International Workshop on Semantic Evaluation* (p. 210). New Orleans, Louisiana: Association for Computational Linguistics.
- Adarsh, R., Patil, A., Rayar, S., & Veena, K. M. (2019). Comparison of VADER and LSTM for sentiment analysis. *International Journal of Recent Technology and Engineering*, 7(66), 2277-3878.
- Agapito, D., Valle, P., & Mendes, J. (2014). The sensory dimension of tourist experiences: Capturing meaningful sensory-based themes in Southwest Portugal. *Tourism Management*, 42, 224-237.
- Ahluwalia, R. (2002). How prevalent is the negativity effect in consumer environments. *Journal of Consumer Research*, 29(2), 270-279.
- Ahmed, S. (2004). *The cultural politics of emotion*. New York: Routledge.
- Albu, V. (2015). Measuring human emotions with modular neural networks and computer vision based applications. *Computer Science Journal of Moldova*, 23(1), 67.
- Alford, B. L., & Sherrell, D. L. (1996). The role of affect in consumer satisfaction judgments of credence-based services. *Journal of Business Research*, 37(1), 71-84.
- Allen, C. (1992). A comparison of attitudes and emotions as predictors of behavior at diverse levels of behavioral experience. *Journal of Consumer Research*, 18(4), 493-504.
- Al-Wugayan, A. A., Pleshko, L. P., & Baqer, S. M. (2008). An investigation of the relationships among consumer satisfaction, loyalty, and market share in Kuwaiti loan services. *Journal of Financial Services Marketing*, 13(2), 95-106.
- Anderson, E. W. (1998). Customer satisfaction and word of mouth. *Journal of Service Research*, 42(6), 5-17.

- Anderson, E. W., Fornell, C., & Lehmann, D. R. (1994). Customer satisfaction, market share, and profitability: Findings from Sweden. *Journal of Marketing*, 58(3), 53-66.
- Anderson, E., & Mittal, V. (2000). Strengthening the satisfaction-profit chain. *Journal of Service Research*, 3(2), 107-120.
- Anderson, E., & Sullivan, M. (1993). The antecedents and consequences of customer satisfaction for firms. *Marketing Science*, 12(2), 125-143.
- Anderson, R. E., & Srinivasan, S. S. (2003). E-satisfaction and e-loyalty: A contingency framework. *Psychology & Marketing*, 20(2), 123-138.
- Andrejevic, M. (2011). The work that affective economics does. *Cultural Studies*, 25(4-5), 604-620.
- Annett, M., & Kondrak, G. (2008). A comparison of sentiment analysis techniques: Polarizing movie blogs. *Advances in Artificial Intelligence*, 25-35.
- Appel, O., Chiclana, F., Carter, J., & Fujita, H. (2016). A hybrid approach to the sentiment analysis problem at the sentence level. *Knowledge-Based Systems*, 108, 110-124.
- Araque, O., Corcuera-Platas, I., Sánchez-Rada, J. F., & Iglesias, C. A. (2017). Enhancing deep learning sentiment analysis with ensemble techniques in social applications. *Expert Systems with Applications*, 77, 236-246.
- Arefi, M., Amini, A., & Fallahi, K. (2010). Drivers of customer satisfaction in an industrial company from marketing aspect. *International Journal of Economics and Management Engineering*, 4(6).
- Arnold, M. B. (1960). *Emotion and personality*. New York: Columbia University Press.
- Arnould, E., & Price, L. (1993). River magic: Extraordinary experiences and the extended service encounter. *Journal of Consumer Research*, 20(1), 24-45.
- Arvidsson, A. (2011, April 19). *General Sentiment - How value and affect converge in the information economy*. In: SSRN. Retrieved from [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_idD1815031](http://papers.ssrn.com/sol3/papers.cfm?abstract_idD1815031)
- Asghar, M. Z., Khan, A., Bibi, A., Kundi, F. M., & Ahmad, H. (2017). Sentence-level emotion detection framework using rule-based classification. *Cognitive Computation*, 9, 868-894.

- Auka, D. (2012). Service quality, satisfaction, perceived value and loyalty among customers in commercial banking in Nakuru Municipality, Kenya. *African Journal of Marketing Management, 4*(5), 185-203.
- Austin, J., & Vancouver, J. (1996). Goal constructs in psychology: Structure, process, and content. *Psychological Bulletin, 120*(3), 338–375.
- Babakus, E., & Boller, G. W. (1992). An empirical assessment of the SERVQUAL scale. *Journal of Business Research, 24*(3), 253-268.
- Babakus, E., Bienstock, C., & Scotter, J. (2004). Linking perceived quality and customer satisfaction to store traffic and revenue growth. *Decision Sciences, 35*(4), 713-737.
- Babbie, E. (2010). *The practice of social research* (12th ed.). Belmont, CA: Wadsworth.
- Badgett, M., Boyce, M., & Kleinberger, H. (2007). *Turning shoppers into advocates*. New York: IBM Institute for Business Value.
- Bae, Y. (2012). Three essays on the customer satisfaction customer loyalty association (Unpublished PhD thesis). Iowa: University of Iowa Graduate School of Business Administration.
- Bagheri, A., Saraee, M., & de Jong, F. (2013). Care more about customers: Unsupervised domain-independent aspect detection for sentiment analysis of customer reviews. *Knowledge-Based Systems, 52*, 201-213.
- Bagozzi, R. (1982). A field investigation of causal relations among cognitions, affect, intentions, and behaviour. *Journal of Marketing Research, 19*(4), 562-583.
- Bagozzi, R. (1992). The self-regulation of attitudes, intentions, and behaviour. *Social Psychology Quarterly, 55*(2), 178-204.
- Bagozzi, R. P. (1993). An examination of the psychometric properties of measures of negative affect in the PANAS-X scales. *Journal of Personality and Social Psychology, 65*(4), 836-851.
- Bagozzi, R. P. (2006). Consumer action: Automaticity, purposiveness, and self-regulation. In Malhotra, N.K. (Ed), *Review of Marketing Research, Vol. 2* (pp. 3-42). Armonk, New York: Sharpe.

- Bagozzi, R., Gopinath, M., & Nyer, P. (1999). The role of emotions in marketing. *Journal of the Academy of Marketing Science*, 27(2), 184-206.
- Bagozzi, R., Wong, N., & Yi, Y. (1999). The role of culture and gender in the relationship between positive and negative affect. *Cognition and Emotion*, 13(6), 641–672.
- Bailey, J., Gremler, D., & McCollough, M. (2001). Service encounter emotional value: The dyadic influence customer and employee emotions. *Services Marketing Quarterly*, 23(1), 1-24.
- Bakker, A., Cai, J., English, L., Kaiser, G., Mesa, V., & Van Dooren, W. (2019). Beyond small, medium, or large: points of consideration when interpreting effect sizes. *Educational Studies in Mathematics*, 102, 1-8. <https://doi.org/10.1007/s10649-019-09908-4>.
- Balabantaray, R. C., Mohammad, M., & Sharma, N. (2012). Multi-class Twitter emotion classification: A new approach. *International Journal of Applied Information Systems*, 4(1), 48-53.
- Balahur, A. (2011). *Methods and resources for sentiment analysis in multilingual documents of different text types*, PhD thesis. Spain: University of Alicante.
- Balahur, A., & Montoyo, A. (2008). Applying a culture dependent emotion triggers database for text valence and emotion classification. Proceedings of the AISB 2008 Convention “Communication, Interaction and Social Intelligenc”.
- Balahur, A., & Steinberger, R. (2009). Rethinking opinion mining in newspaper articles: From theory to practice and back. *Proceeding of WOMSA*, 9.
- Balahur, A., Hermida, J. M., & Montoyo, A. (2012). Detecting implicit expressions of emotion in text: A comparative analysis. *Decision Support Systems*, 53, 742-753.
- Baldinger, A., & Rubinson, J. (1996). Brand loyalty: The link between attitude and behavior. *Journal of Advertising Research*, 36(6), 22-34.
- Balow, C. (2017, June 15). *The “effect size” in educational research: What is it and how to use it?* *Illuminate Education*. Retrieved July 14, 2019, from <https://www.illuminateed.com/blog/2017/06/effect-size-educational-research-use/>

- Bamfo, B. A., Dogbe, C. S., & Osei-Wusu, C. (2018). The effects of corporate rebranding on customer satisfaction and loyalty: Empirical evidence from the Ghanaian banking industry. *Cogent Business & Management*, 5(1), 1-11.
- Bangdiwala, S. I. (2019). Basic epidemiology research designs I: Cross-sectional design. *International Journal of Injury Control and Safety Promotion*, 26(1), 124-126.
- Bann, E. Y., & Bryson, J. J. (2013). The conceptualisation of emotion qualia: Semantic clustering of emotional tweets. Proceedings of the 13th Neural Computation and Psychology Workshop.
- Bansal, H. S., & Voyer, P. A. (2000). Word-of-mouth processes within a service purchase decision context. *Journal of Service Research*, 3(2), 166-77.
- Bard, P. (1928). diencephalic mechanism for the expression of rage with special reference to the sympathetic nervous system. *American Journal of Physiology*, 84(3), 490-516. doi:10.1152/ajplegacy.1928.84.3.490.
- Barrett, L. (2006). Valence is a basic building block of emotional life. *Journal of Research in Personality*, 40, 35-55.
- Barrett, L., & Russell, J. (1998). Independence and bipolarity in the structure of current affect. *Journal of Personality and Social Psychology*, 74, 967-984.
- Barsky, J., & Nash, L. (2002). Evoking emotion: Affective keys to hotel loyalty. *Cornell Hotel and Restaurant Administration Quarterly*, 43(1), 39-46.
- Bastos, J. A., & Muñoz-Gallego, P. A. (2008). Pharmacies customer satisfaction and loyalty – a framework analysis. Working Papers "New Trends on Business Administration".
- Bateson, H., & Hoffman, K. (2002). *Essential of service marketing: Concepts, strategy, and cases*. Orlando: Harcourt Inc.
- Batra, R., & Holbrook, M. B. (1990). Developing a typology of affective responses to advertising. *Psychology & Marketing*, 7(1), 11-25.
- Baumann, C., Burton, S., & Elliott, G. (2005). Determinants of customer loyalty and share of wallet in retail banking. *Journal of Financial Services Marketing*, 9(3), 231-248.

- Baumeister, R. F., Vohs, K. D., DeWall, C. N., & Zhang, L. (2007). How emotion shapes behavior: Feedback, anticipation, and reflection, rather than direct causation. *Personality and Social Psychology Review, 11*(2), 167–203.
- Baumeister, R., Bratslavsky, E., Finkenauer, C., & Vohs, K. (2001). Bad is stronger than good. *Review of General Psychology, 4*, 323-370.
- Bearden, W. O., & Teel, J. E. (1983). Selected determinants of consumer satisfaction and complaint reports. *Journal of Marketing Research, 20*(1), 21-28.
- Beatty, S. E., Mayer, M., Coleman, J. E., Reynolds, K. E., & Lee, J. (1996). Customer-sales associate retail relationships. *Journal of Retailing, 72*(3), 223-247.
- Bechara, A., Damasio, H., & Damasio, A. (2000). Emotion, decision making and the orbitofrontal cortex. *Cerebral Cortex, 10*(3), 295-307.
- Becker-Asano, C. W. (2009). Affective computing with primary and secondary emotions in a virtual human. *Autonomous Agents and Multi-Agent Systems, 20*(1), 32.
- Bedi, M. (2010). An integrated framework for service quality, customer satisfaction and behavioural responses in Indian banking industry: A comparison of public and private sector banks. *Journal of Service Research, 10*(1), 157-172.
- Berli, A., Martin, J., & Quintana, A. (2004). A model of customer loyalty in the retail banking market. *European Journal of Marketing, 38*(1), 253-275.
- Belás, J., & Gabčová, L. (2016). The relationship among customer satisfaction, loyalty and financial performance of commercial banks. *E&M Economics and Management, 19*(1), 132–147.
- Bell, H. (2011). A contemporary framework for emotions in consumer decision making process: Moving beyond traditional models. *International Journal of Business and Social Science, 2*(17), 12-16.
- Benamara, F., Taboada, M., & Mathieu, Y. (2017). Evaluative language beyond bags of words: Linguistic insights and computational applications. *Computational Linguistics, 43*(1), 201-264.



- Bendaravičienė, R., & Vilkytė, B. (2019). Measurement of customer satisfaction with service quality: Study of fashion chain stores in Lithuania. *International Journal of Management, Accounting and Economics*, 6(2), 113-128.
- Bentham, J. (1789). *An introduction to the principles of morals and legislation*. New York: Hafner Publishing Co.
- Ben-Ze'ev, A. (1990). Describing emotions: A review of the cognitive structure of emotions by Ortony, Clore & Collins. *Philosophical Psychology*, 3(2/3), 305-317.
- Bergholz, H., & Nickols, F. (2001). Building your consulting practice through referrals: (Part 1) the value of referrals. *Consulting to Management*, 12(September), 25-26.
- Berkowitz, L. (1993). Towards a general theory of anger and emotional aggression: Implications of the cognitive-neoassociationistic perspective for the analysis of anger and other emotions. In R. Wyer Jr, & T. Srull (Eds.), *Perspectives on Anger and Emotion: Advances in Social Cognition* (Vol. 6, pp. 1-46). Hillsdale: NJ: Lawrence Erlbaum.
- Bernhardt, K., Donthu, N., & Kennett, P. (2000). A longitudinal analysis of satisfaction and profitability. *Journal of Business Research*, 47(2), 161-171.
- Berntsen, D. (2001). Involuntary memories of emotional events: Do memories of trauma and extremely happy events differ. *Applied Cognitive Psychology*, 15(7), 135-158.
- Berridge, K., & Kringelbach, M. (2008). Affective neuroscience of pleasure: reward in humans and animals. *Psychopharmacology (Berl)*, 199(3), 457-480.
- Berry, L. L. (1983). Relationship marketing. In L. L. Berry, G. L. Shostack, & G. Upah (Eds.), *Emerging Perspectives on Services Marketing* (pp. 25-28). Chicago: American Marketing Association.
- Berry, L. L., & Parasuraman, A. (1992). Marketing services: Competing through quality. *Journal of Marketing*, 56(2), 132-134.
- Beverland, M., Chung, E., & Kates, S. (2009). Exploring consumers' conflict styles: Grudges and forgiveness following marketer failure. *Advances in Consumer Research*, 36, 438-443.

- Bhadane, C., Dalal, H., & Doshi, H. (2015). Sentiment analysis: Measuring opinions. *Procedia Computer Science*, 45, 808-814. doi:10.1016/j.procs.2015.03.159.
- Bickart, B., & Schwarz, N. (2001). Service experiences and satisfaction judgments: The use of affect and beliefs in judgment formation. *Journal of Consumer Psychology*, 11(1), 29-41.
- Bigné, J. E., Andreu, L., & Gnoth, J. (2005). The theme park experience: An analysis of pleasure, arousal and satisfaction. *Tourism Management*, 26(6), 833-844.
- Bigné, J. E., Mattila, A. S., & Andreu, L. (2008). The impact of experiential consumption cognitions and emotions on behavioural intentions. *Journal of Services Marketing*, 22(4), 303-315.
- Bigné, J., & Andreu, L. (2004). Emotions in segmentation. An empirical study. *Annals of Tourism Research*, 31(3), 682-696.
- Bilan, Y., Mishchuk, H., Roshchuk, I., & Kmecova, I. (2020). An analysis of intellectual potential and its impact on the social and economic development of european countries. *Journal of Competitiveness*, 12(1), 22.
- Biong, H. (1993). Satisfaction and loyalty to suppliers within the grocery trade. *European Journal of Marketing*, 27(7), 21-38.
- Bitner, M. J. (1990). Evaluating service encounters: The effects of physical surroundings and employee responses. *Journal of Marketing*, 52(2), 69-82.
- Bloemer, J. M., & Lemmink, J. G. (1992). The importance of customer satisfaction in explaining brand and dealer loyalty. *Journal of Marketing Management*, 8, 351-364.
- Bloemer, J., & de Ruyter, K. (1999). Customer loyalty in high and low involvement service settings: The moderating impact of positive emotions. *Journal of Marketing Management*, 15(4), 315-330.
- Bloemer, J., & Kasper, H. (1995). The complex relationship between consumer satisfaction and brand loyalty. *Journal of Economic Psychology*, 16(2), 311-329.
- Bloemer, J., & Odekerken-Schröder, G. (2003). Antecedents and consequences of affective commitment. *Australasian Marketing Journal*, 11(3), 33-43.

- Bloemer, J., de Ruyter, K., & Peeters, P. (1998). Investigating drivers of banking loyalty, the complex relationship between image, service quality and satisfaction. *International Journal of Bank Marketing*, 16(7), 276-286.
- Bohannon, J. N. (1988). Flashbulb memories for the Space Shuttle disaster: A tale of two theories. *Cognition*, 29, 179-196.
- Boles, J. S., Barksdale, H. C., & Johnson, J. T. (1997). Business relationships: An examination of the effects of buyer-salesperson relationships on customer retention and willingness to refer and recommend. *The Journal of Business & Industrial Marketing*, 12(3/4), 248-258.
- Bolton, R. N., & Lemon, K. N. (1999). A dynamic model of customers' usage of services: Usage as an antecedent and consequence of satisfaction. *Journal of Marketing Research*, 36(2), 171-186.
- Bolton, R., & Drew, J. (1991). A multi-stage model of customers' assessments of service quality and value. *Journal of Consumer Research*, 17(4), 375-384.
- Booms, B., & Bitner, M. (1981). Marketing strategies and organization structures for services firms. In *Marketing of Services* (pp. 47-51). Chicago: American Marketing Association.
- Bouazizi, M., & Ohtsuki, T. (2019). Multi-class sentiment analysis on Twitter: Classification performance and challenges. *Big data mining and analytics*, 2(3), 181-194.
- Bougie, J. R., Pieters, R., & Zeelenberg, M. (2003). Angry customers don't come back, they get back: The experience and behavioral implications of anger and dissatisfaction in services. *Journal of the Academy of Marketing Science*, 31(4), 377-393.
- Boulding, W., Kalra, A., Staelin, R., Kaira, A., & Zeithaml, V. A. (1993). A dynamic process model of service quality: From expectations to behavioural intentions. *Journal of Marketing Research*, 30(February), 7-27.
- Bourne, L. E., & Russo, N. F. (1998). *Psychology-behavior in context*. New York: W.W. Norton and Company, Inc.
- Bove, L. L., & Johnson, L. W. (2000). A customer-service worker relationship model. *International Journal of Service Industry Management*, 11(5), 491-511.

- Bowen, D., & Clarke, J. (2002). Reflections on tourist satisfaction research: Past, present and future. *Journal of Vacation Marketing*, 8, 297-308.
- Bowen, J., & Chen, S. (2001). The relationship between customer loyalty and customer satisfaction. *International Journal of Contemporary Hospitality Management*, 13(5), 213-317.
- Bowen, J., & Shoemaker, S. (1998). Loyalty: A strategic commitment. *Cornell and Hotel Restaurant Administration Quarterly*, 39(1), 12-25.
- Bradburn, N. (1969). *The structure of psychological wellbeing*. Chicago: Aldine.
- Bradley, M., & Lang, P. (1994). Measuring emotion: The self-assessment manikin and the semantic differential. *Journal of Behaviour Therapy and Experimental Psychiatry*, 25(1), 49-59.
- Brady, M. K., & Cronin Jr, J. J. (2001). Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *Journal of Marketing*, 65(3), 34-49.
- Brady, M. K., & Robertson, C. J. (2001). Searching for a consensus on the antecedent role of service quality and satisfaction: An exploratory study. *Journal of Business Research*, 51(1), 53-60.
- Brembeck, H., & Ekstrom, K. (2004). *Elusive consumption*. Oxford: Berg Publishers.
- Breslin, C. W., & Safer, M. A. (2011). Effects of event valence on long-term memory for two baseball championship games. *Psychological Science*, 22(11), 1408-1412. <http://dx.doi.org/10.1177/0956797611419171>.
- Brickman, P., & Campbell, D. T. (1971). Hedonic relativism and planning the good society. In M. Appley (Ed.), *Adaptation level theory: A symposium* (pp. 287-302). New York: Academic Press.
- Brody, S., & Elhadad, N. (2010). An unsupervised aspect-sentiment model for online reviews, in: Proceedings of annual conference of the North American Chapter. Stroudsburg, PA: Association for Computational Linguistics.
- Bronnenmayer, M., Wirtz, B., & Göttel, V. (2016). Determinants of perceived success in management consulting: An empirical investigation from the consultant perspective.

- Management Research Review*, 39(6), 706-738. <https://doi.org/10.1108/MRR-06-2014-0145>.
- Brown, R., & Kulik, J. (1977). Flashbulb memories. *Cognition*, 5, 73-99.
- Brown, T., Barry, T., Dacin, P., & Gunst, R. (2005). Spreading the word: Investigating antecedents of consumers' positive word-of-mouth intentions and behaviors in a retailing context. *Journal of the Academy of Marketing Science*, 33(2), 123-138.
- Brown, T., Churchill Jr, G., & Peter, J. (1993). Research note: Improving the measurement of service quality. *Journal of Retailing*, 69(1), 127.
- Brunner, T., Stöcklin, M., & Opwis, K. (2008). Satisfaction, image and loyalty: New versus experienced customers. *European Journal of Marketing*, 42(9-10), 1095-1105.
- Bryman, A. (2008). *Social research methods*. Oxford: Oxford University Press.
- Burke, M., & Edell, J. (1989). The impact of feelings on ad-based affect and cognition. *Journal of Marketing Research*, 26(1), 69-83.
- Bustillos, R. O., Cabada, R. Z., Estrada, M. L., & Pérez, Y. H. (2019). Opinion mining and emotion recognition in an intelligent learning environment. *Computer Applications in Engineering Education*, 27, 90-101.
- Buttle, F. (1998). Word of mouth: Understanding and managing referral marketing. *Journal of Strategic Marketing*, 6(3), 241-254.
- Byrne, C., Hyman, I., & Scott, K. (2001). Comparisons of memories for traumatic events and other experiences. *Applied Cognitive Psychology*, 15(7), 119-133.
- Cabanac, M. (1992). Pleasure: The common currency. *Journal of Theoretical Biology*, 155(2), 173-200.
- Cambria, E., Schuller, B., Xia, Y., & Havasi, C. (2013). New avenues in opinion. *IEEE Intelligent Systems*, 28(2), 15-21.
- CambridgeDictionary. (2019). *Sarcasm*. Retrieved from <https://dictionary.cambridge.org/dictionary/english/sarcasm>
- CambridgeDictionary. (2020). *Sentiment*. Retrieved from <https://dictionary.cambridge.org/dictionary/english/sentiment>

- Cannon, W. B. (1927). The James-Lange theory of emotions: A critical examination and an alternative theory. *The American Journal of Psychology*, 39(1/4), 106-124. doi:10.2307/1415404. JSTOR 1415404.
- Cardozo, R. (1965). An experimental study of customer effort, expectation, and satisfaction. *Journal of Marketing Research*, 2(3), 244-249.
- Carman, J. M. (1990). Consumer perceptions of service quality: An assessment of the SERVQUAL dimensions. *Journal of Retailing*, 66(1), 33-55.
- Carù, A., & Cova, B. (2003). Revisiting consumption experience: A more humble but complete view of the concept. *Marketing Theory*, 3(2), 267-286.
- Caruana, A. (2002). Service loyalty: The effects of service quality and the mediating role of customer satisfaction. *European Journal of Marketing*, 36(7/8), 811-828.
- Carver, C., & Harmon-Jones, E. (2009). Anger in an approach-related affect: evidence and implications. *Psychological Bulletin*, 135(2), 183-204.
- Casaló, L., Flavián, C., & Guinalíu, M. (2008). Towards loyalty development in the e-banking business. *Journal of Systems and Information Technology*, 10(2), 120-134.
- Cason, H. (1932). The learning and retention of pleasant and unpleasant activities. *Archives of Psychology*, 134, 1-96.
- Cates, B. (2004). *Get more referrals now*. New York: McGraw-Hill.
- Cattell, R. B. (2006). Sentiment or attitude? The core of a terminology problem in personality research. *Journal of Personality*, 9(1), 6-17.
- Chadha, S., & Kapoor, D. (2009). Effect of switching cost, service quality and customer satisfaction on customer loyalty of cellular service providers in Indian market. *The IUP Journal of Marketing Management*, 8(1), 23-37.
- Charland, L. (2005). The heat of emotion: Valence and the demarcation problem. *Journal of Consciousness Studies*, 12, 82-102.
- Chattopadhyay, A., & Alba, J. W. (1988). The situational importance of recall and inference in consumer decision making. *Journal of Consumer Research*, 15(1), 1-12.
- Chaudhuri, A. (1998). Product class effects on perceived risk: The role of emotion. *International journal of Research in Marketing*, 15(2), 157-168.

- Chaudhuri, A. (2006). *Emotion and reason in consumer behaviour*. Oxford: Elsevier Butterworth-Heinemann.
- Chaudhuri, A., & Holbrook, M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. *The Journal of Marketing*, 65, 81-93.
- Chebat, J., & Michon, R. (2003). Impact of ambient odours on mall shoppers' emotions, cognition, and spending: a test of competitive causal theories. *Journal of Business Research*, 56(7), 529-539.
- Chen, C., & Cheng, L. (2012). A study on mobile phone service loyalty in Taiwan. *Total Quality Management & Business Excellence*, 23(7-8), 807-819.
- Chen, C., & Myagmarsuren, O. (2011). Brand equity, relationship quality, relationship value, and customer loyalty: Evidence from the telecommunications services. *Total Quality Management & Business Excellence*, 22(9), 957-974.
- Chen, L., & Golab, L. (2020). Micro-journal mining to understand mood triggers. *Computing*, 102, 1227-1244. <https://doi.org/10.1007/s00607-019-00777-6>.
- Cheung, A. C., & Slavin, R. E. (2016). How methodological features affect effect sizes in education. *Educational Researcher*, 45(5), 283-292.
- Choi, L., Lawry, K., & Miran, K. (2019). Contextualizing customer organizational citizenship behaviors: The changing nature of value cocreation and customer satisfaction across service settings. *Psychology & Marketing*, 36(1).
- Choraria, S. (2013). Exploring the role of negative emotions on customer's intention to complain. *Vision*, 17(3), 201-211.
- Chou, P., Lu, C., & Chang, Y. (2014). Effects of service quality and customer satisfaction on customer loyalty in high-speed rail services in Taiwan. *Transportmetrica A: Transport Science*, 10(10), 917-945.
- Christensen, T., Wood, J., & Barrett, L. (2003). Remembering everyday experience through the prism of self-esteem. *Personality and Social Psychology Bulletin*, 29(1), 51-62.
- Christianson, S. (1984). The relationship between induced emotional arousal and amnesia. *Scandinavian Journal of Psychology*, 25, 147-160.

- Christianson, S., & Loftus, E. (1991). Remembering emotional events: The fate of detailed information. *Cognition and Emotion*, 5(2), 81-108.
- Churchill Jr, G., & Surprenant, C. (1982). An investigation into the determinants of customer satisfaction. *Journal of Marketing Research*, 19(4), 491-504.
- Clark, M., & Isen, A. (1982). Toward understanding the relationship between feeling states and social behaviour. In A. Hastorf, & A. Isen (Eds.), *Cognitive social psychology* (pp. 73–108). New York: Elsevier-North Holland.
- Cockerell, L. (2008). *Creating magic: 10 Common sense leadership strategies from a life at Disney*. New York: Doubleday.
- Coelho, P., & Henseler, J. (2012). Creating customer loyalty through service customization. *European Journal of Marketing*, 46(3/4), 331-356.
- Coetzee, W., Lee, C., & Faisal, A. (2019). Predicting intentions to revisit and recommend a sporting event using the event experience scale (EES). *Event Management*, 23(3), 303-314. <https://doi.org/10.3727/152599518X15403853721457>.
- Cohen, J. (1968). Multiple regression as a general data analytic system. *Psychological Bulletin*, 70(6), 426-443.
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences*. New York: Routledge Academic.
- Cohen, J., & Areni, C. (1991). Affect and consumer behavior. In T. S. Robertson, & H. H. Kassirjian (Eds.), *Handbook of Consumer Behavior* (pp. 188-240). Englewood Cliffs, N.J.: Prentice-Hall.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education*. London: Routledge.
- Colgate, M., Stewart, K., & Kinsella, R. (1996). Customer defection: A study of the student market in Ireland. *International Journal of Bank Marketing*, 14(3), 23-29.
- Colombetti, G. (2005). Appraising valence. *Journal of Consciousness Studies*, 12, 8-10.
- Conner, T. S., & Barrett, L. F. (2012). Trends in ambulatory self-report: The role of momentary experience. *Psychosomatic Medicine*, 74(4), 327-337.



- Conway, M. A., & Bekerian, D. A. (1987). Situational knowledge and emotion. *Cognition and Emotion, 1*, 145-191.
- Conway, M., & Pleydell-Pearce, C. (2000). The construction of autobiographical memories in the self memory system. *Psychological Review, 107*(2), 261-288.
- Conway, M., Anderson, S., Steen, F., & Donnelly, C. (1994). The formation of flashbulb memories. *Memory and Cognition, 22*, 326-343.
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology, 78*(1), 98-104. doi:10.1037/0021-9010.78.1.98.
- Coulson, J. S. (1966). Buying decisions within the family and the consumer-brand relationship. In J. Newman (Ed.), *On Knowing the Consumer*. New York: Wiley and Sons.
- Coyle, M. K. (2012). Depressive symptoms after a myocardial infarction and self-care. *Archives of Psychiatric Nursing, 26*(2), 127-134.
- Cresswell, J. W., & C., G. T. (2018). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (6th ed.). New York City, NY: Pearson Education Inc.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*, 297-334.
- Cronbach, L. J. (1957). The two disciplines of scientific psychology. *American Psychologist, 12*(11), 671-684.
- Cronin Jr, J. J., & Taylor, S. A. (1992). Measuring service quality: A re-examination and extension. *Journal of Marketing, 56*(2), 55-68.
- Cronin Jr, J. J., Brady, M. K., & Hult, G. T. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing, 76*(3), 193-216.
- Cronin Jr, J., & Taylor, S. (1994). SERVPERF versus SERVQUAL: Reconciling performance-based and perceptions-minus-expectations measurement of service quality. *Journal of Marketing, 58*(1), 125-131.
- Crosby, P. (1979). *Quality is free: The art of making quality certain*. New York: New American Library.

- Cross, A. (2017, October 2). *What is customer experience? A definition of CX, challenges, best practices, and more*. Retrieved from <https://www.ngdata.com/what-is-customer-experience/>
- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process* (3rd ed.). London: Sage Publications.
- Czepiel, J. A., & Gilmore, R. (1987). Exploring the Concept of Loyalty in Services. In J. A. Czepiel, C. A. Congram, & J. Shanahan (Eds.), *The Services Marketing Challenge: Integrating for Competitive Advantage* (pp. 91-94). Chicago: AMA.
- Czepiel, J. A., & Rosenberg, L. J. (1974). Perspective on customer satisfaction. In: AMA educators' proceedings. Chicago: American Marketing Association.
- Czepiel, J., Solomon, M., Suprenant, C., & Gutman, E. (1985). *The service encounter: Managing employee customer interaction in service businesses*. Lexington, MA: Lexington Books.
- D'Argembeau, A., & Van der Linden, M. (2008). Remembering pride and shame: Self enhancement and the phenomenology of autobiographical memory. *Memory*, 16, 538-547. <http://dx.doi.org/10.1080/09658210802010463>.
- Dabholkar, P., & Overby, J. (2005). Linking process and outcome to service quality and customer satisfaction evaluations. *International Journal of Service Industry Management*, 16(1), 10-27.
- Dalgleish, T., & Power, M. J. (1999). *Handbook of cognition and emotion* (Basic Emotions, pp. 45-60 ed.). New York: John Wiley and Sons Ltd.
- Damasio, A. (1994). Descartes' error: Emotion, reason, and the human brain. In *Putnam Publishing* (p. 336). New York: Putnam Publishing.
- Danaher, P. (1998). Customer heterogeneity in service management. *Journal of Service Research*, 1(November), 129-139.
- Danaher, P., & Rust, R. (1996). Indirect financial benefits from service quality. *Quality Management Journal*, 3(2), 63-75.
- Darwin, C. (1872). *The expression of emotions in man and animals*. New York: D. Appleton and Company.

- Davis, B., & Stone, S. (1985). *Food and beverage management*. Oxford, England: Butterworth-Heinemann.
- Day, G. (1969). A two dimension concept of brand loyalty. *Journal of Advertising Research*, 9(3), 29-36.
- Day, R. (1984). Modeling choices among alternative responses to dissatisfaction. In W. D. Perreault (Ed.), *Advances in Consumer Research* (pp. 496-499). Atlanta, GA: Association for Consumer Research.
- de Albornoz, J. C., Plaza, L., & Gervás, P. (2010, July). A hybrid approach to emotional sentence polarity and intensity classification. In *Proc. of the 14th Conference on Computational Natural Language Learning (CoNLL 2010)*, pp. 153–161.
- De Rivera, J. (1977). *A structural theory of the emotions*. New York: International Universities Press.
- De Rojas, C., & Camarero, C. (2008). Visitors' experience, mood and satisfaction in a heritage context: Evidence from an interpretation center. *Tourism Management*, 29(3), 525-537.
- Dean, A. (2002). Service quality in call centres: Implications for customer loyalty. *Managing Service Quality*, 12(6), 414-423.
- Deffenbacher, K. A. (1983). The influence of arousal on reliability of testimony. In S. Lloyd-Bostock, & B. Clifford (Eds.), *Evaluating witness evidence* (pp. 235-252). New York: John Wiley & Sons.
- Derbaix, C., & Vanhamme, J. (2003). Inducing word-of-mouth by eliciting surprise: A pilot investigation. *Journal of Economic Psychology*, 24(1), 99-116.
- Desmet, P. M., Monk, A., Overbeeke, K., & Wright, P. (2003). Measuring emotion: Development and application of an instrument to measure emotional responses to products. Dordrecht: Kluwer.
- Devkota, N., & Dahal, J. (2016). An empirical study of service quality dimensions on customer satisfaction and customer loyalty in Nepalese commercial banking sector (Published master thesis). *University of Agder, Kristiansand, Norway*.
- Dick, A., & Basu, K. (1994). Customer loyalty: Toward an integrated conceptual framework. *Journal of the Academy of Marketing Science*, 22(2), 99-113.

- Dixon, M., Freeman, K., & Toman, N. (2010). Stop trying to delight your customers. *Harvard Business Review*, 88(7), 1-7.
- Dixon, T. (2012). Emotion: The history of a keyword in crisis. *Emotion Review*, 4(4), 338-344.
- Dobre, C., Dragomir, A., & Milovan-Ciuta, A. (2013). A marketing perspective on the influences of waiting time and the service scape on perceived value. *Management & Marketing*, 8(4), 683-698.
- Dolan, R. J. (2002). Emotion, cognition, and behavior. *Science*, 298(5596), 1191-1194.
- Donabedian, A. (1980). *The definition of quality and approaches to its assessment: Explorations in quality*. Ann Arbor: Ann Arbor Publishers.
- Drew, R., Karwan, K., & Scribner, L. (2003). Service quality measurement and the disconfirmation model: Taking care in interpretation. *Total Quality Management and Business Excellence*, 14(1), 3-14.
- Drucker, P. (1954). *The practice of management*. New York: Harper & Row.
- Drucker, P. (1974). *Management: Tasks, responsibilities, practices*. New York: Harper & Row.
- Dube, L., Renaghan, L. M., & Miller, J. M. (1994). Measuring customer satisfaction for strategic management. *Cornell Hotel and Restaurant Administration Quarterly*, 35(1), 39-47.
- Dubé-Rioux, L. (1989). The power of affective reports in predicting satisfaction judgements. *Advances in Consumer Research*, 17, 571-576.
- Duffy, D. L. (2003). Internal and external factors which affect customer loyalty. *Journal of Consumer Marketing*, 20(5), 480-485.
- Dumont, N. H. (2017). Sentiment analysis & natural language: Processing techniques for capital markets & disclosure. *The Corporate Governance Advisor*, 25(6), 16-23.
- Duodu, F., & Amankwah, T. (2011). An analysis and assessment of customer satisfaction with service quality in insurance industry in Ghana (Master thesis). *Lulea University Of Technology*.
- Dyer, M. (1987). Emotions and their computations: Three computer models. *Cognition*, 1(1), 323-347.

- Dzhurenko, T., Myakshylo, O., & Cherednichenko, G. (2015). Analysis of text mining methods in web search. *Ukrainian Food Journal*, 4(3), 508-519.
- Edell, J. A., & Burke, M. C. (1987). The power of feelings in understanding advertising. *Effects Journal of Consumer Research*, 14(3), 421-433.
- EDUCBA. (2019). *Text Mining vs Text Analytics*. Retrieved October 16, 2019, from <https://www.educba.com/text-mining-vs-text-analytics/>
- Edvardsson, B., Johnson, M., Gustafsson, A., & Strandvik, T. (2000). The effects of satisfaction and loyalty on profits and growth: Products versus services. *Total Quality Management*, 11(7), 919-927.
- Eich, E., Kihlstrom, J., Bower, G., Forgas, J., & Niedenthal, P. (2000). *Cognition and emotion*. New York: Oxford University Press.
- Ekman, P. (1972). *Emotions in the human face*. New York: Pergamon Press.
- Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion*, 6, 169-200.
- Ekman, P. (1999). Basic emotions. In T. Dalgleish, & M. Power (Eds.), *Handbook of Cognition and Emotion* (pp. 45-60). Sussex, U.K.: John Wiley & Sons, Ltd.
- Ekman, P., Levenson, R., & Friesen, W. (1983). Autonomic nervous system activity distinguishes among emotions. *Science*, 221(4616), 1208-1210.
- Eletter, S. F. (2020). Sentiment analysis towards actionable intelligence via deep learning. *TEM Journal*, 9(4), 1663-1668.
- Ellis, P. D. (n.d.). *Thresholds for interpreting effect sizes*. Retrieved from The Hong Kong Polytechnic University: [https://www.polyu.edu.hk/mm/effectsizefaqs/thresholds\\_for\\_interpreting\\_effect\\_sizes\\_2.html](https://www.polyu.edu.hk/mm/effectsizefaqs/thresholds_for_interpreting_effect_sizes_2.html)
- Ennew, C., & Binks, M. (1996). The impact of service quality and service characteristics on customer retention: Small businesses and banks in the UK. *British Journal of Management*, 7, 219-230.
- Epstein, S. (1993). Emotion and self-theory. In M. Lewis, & J. Haviiand (Eds.), *Handhook of Emotions* (pp. 313-326). New York: Guilford.

- Erevelles, S. (1998). The role of affect in marketing. *Journal of Business Research*, 42, 199-215.
- Erevelles, S., & Leavitt, C. (1992). A comparison of current models of consumer satisfaction/dissatisfaction. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 5, 104-114.
- Eroglu, S. A., & Machleit, K. A. (1990). An empirical study of retail crowding: Antecedents and consequences. *Journal of Retailing*, 66(2), 201-221.
- Eroglu, S., Machleit, K., & Davis, L. (2003). Empirical testing of a model of online store atmospherics and shopper responses. *Psychology and Marketing*, 20(2), 139-150.
- Esuli, A., & Sebastiani, F. (2005). Determining the semantic orientation of terms through gloss classification. (pp. 617-624). Bremen, Germany: CIKM '05: Proceedings of the 14th ACM international conference on Information and knowledge.
- European Primer on Customer Satisfaction Management. European Institute of Public Administration (EIPA)*. (2010). Retrieved from <http://docplayer.net/13481144-European-primer-on-customer-satisfaction-management.html>
- Eysenck, M. W., & Keane, M. T. (2005). Memory. In M. W. Eysenck, & M. T. Keane (Eds.), *Cognitive psychology: a student's handbook* (pp. 57-65). Psychology Press.
- Fares, M., Moufarrej, A., Jreij, E., Tekli, J., & Grosky, W. (2019). Unsupervised word-level affect analysis and propagation in a lexical knowledge graph. *Knowledge-Based Systems*, 165, 432-459.
- Fecikova, I. (2004). An index method for measurement of customer satisfaction. *The TQM Magazine*, 16(1), 57-66.
- Fehr, B., & Russell, J. (1984). Concept of emotion viewed from a prototype perspective. *Journal of Experimental Psychology: General*, 113(3), 464-486.
- Feldman, L. (1995). Variations in the circumplex structure of mood. *Personality and Social Psychology Bulletin*, 21, 806-817.
- Feldman, R. (2013). Techniques and applications for sentiment analysis. *Communications of the ACM*, 56(4), 82-89.
- Festinger, L. (1957). *A theory of cognitive dissonance*. California: Stanford University Press.

- Fiebig, G. V., & Kramer, M. W. (1998). A framework for the study of emotions in organizational contexts. *Management Communication Quarterly*, 11(4), 536-572.
- File, K. M., Cermak, D. S., & Prince, R. A. (1994). Word-of-mouth effects in professional services buyer behaviour. *The Service Industries Journal*, 14(3), 301-314.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behaviour: An introduction to theory and research*. MA: Addison-Wesley: Reading.
- Fisher, A. (2001). Winning the battle for customers. *Journal of Financial Services Marketing*, 6(2), 77-83.
- Fitzgerald, S. M., Rumrill, P. D., & Schenker, J. D. (2004). Correlational designs in rehabilitation research. *Journal of Vocational Rehabilitation*, 20(2), 143-150.
- Flint, D., Blocker, C., & Boutin, P. (2011). Customer value anticipation, customer satisfaction and loyalty: An empirical examination. *Industrial Marketing Management*, 40(2), 219-230.
- Fornell, C. (1992). A national customer satisfaction barometer: The Swedish experience. *The Journal of Marketing*, 56(1), 6-21.
- Forsythe, P. (2015). Monitoring customer perceived service quality and satisfaction during the construction process. *Construction Economics and Building*, 15(1), 19-42.
- Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of Consumer Research*, 24(4), 343-373.
- Fournier, S., & Mick, D. (1999). Rediscovering satisfaction. *Journal of Marketing*, 63(4), 5-23.
- Fraenkel, F. J., & Warren, N. E. (2002). *How to design and evaluate research in education* (4th ed.). New York: McGrawHill.
- Fredrickson, B. L., & Kahneman, D. (1993). Duration neglect in retrospective evaluations of affective episodes. *Journal of Personality and Social Psychology*, 65, 45-55.
- Frijda, N. (1986). *The emotions*. Cambridge: Cambridge University Press.
- Frijda, N. (1993). Appraisals and beyond. *Cognition and Emotion*, 7(3/4), 225-231.

- Frijda, N. H. (1993). Moods, emotion episodes, and emotions. In M. Lewis, & J. M. Haviland (Eds.), *Handbook of emotions* (pp. 381–403). New York: Guilford Press.
- Frijda, N. H., & Scherer, K. R. (2009). Affect (psychological perspective). In D. Sander, & K. Scherer (Eds.), *The Oxford Companion to Emotion and the Affective Science* (p. 10). Oxford: Oxford University Press.
- Frijda, N., Kuipers, P., & ter Schure, E. (1989). Relations among emotion, appraisal, and emotional action readiness. *Journal of Personality and Social Psychology*, *57*(2), 212-228.
- Fu, X., Liu, G., Guo, Y., & Wang, Z. (2013). Multi-aspect sentiment analysis for Chinese online social reviews based on topic modeling and HowNet lexicon. *Knowledge-Based Systems*, *37*, 186-195.
- Fullerton, G. (2005). The impact of brand commitment on loyalty to retail service brands. *Canadian Journal of Administrative Sciences*, *22*(2), 97-110.
- Garbade, M. J. (2018, October 15). *A simple introduction to Natural Language Processing*. Retrieved from <https://becominghuman.ai/a-simple-introduction-to-natural-language-processing-ea66a1747b32>
- Gardner, B. (1985). Market-oriented agricultural policy: Its relevance for 1985. *Agribusiness*, *1*(3), 219-225.
- Gardner, M. (1985). Mood states and consumer behavior: A critical review. *Journal of Consumer Research*, *12*(3), 281-300.
- Garvin, D. (1987). Competing on the eight dimensions of quality. *Harvard Business Review*, *65*(6), 101-109.
- Garvin, D. A. (1983). Quality on the line. *Harvard Business Review*, *61*(September-October), 65-73.
- Gelade, G., & Young, S. (2005). Test of a service profit chain model in the retail banking sector. *Journal of Occupational and Organizational Psychology*, *78*(1), 1-22.
- Gentile, C., Spiller, N., & Noci, G. (2007). How to sustain the customer experience: An overview of experience components that co-create value with the customer. *European Management Journal*, *25*(5), 395-410.



- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference 11.0 update* (4th ed.). Boston: Allyn & Bacon.
- Gershoff, A., Mukherjee, A., & Mukhopadhyay, A. (2003). Consumer acceptance of online agent advice: Extremity and positivity effects. *Journal of Consumer Psychology*, 13(1/2), 161-170.
- Gibbons, J., Lee, S., & Walker, W. (2011). The fading affect bias begins within 12 hours and persists for 3 months. *Applied Cognitive Psychology*, 25(4), 663-672.
- Gibran, K. (1923). *The prophet*. New York: Alfred A. Knopf.
- Giese, J. L., & Cote, J. A. (2000). Defining consumer satisfaction. *Academy of Marketing Science Review*, 1, 1-24.
- Gilbert, D. T., Pinel, E. C., Wilson, T. D., Blumberg, S. J., & Wheatley, T. P. (1998). Immune neglect: A source of curability bias in affective forecasting. *Journal of Personality and Social Psychology*, 75(1), 617-628.
- Gilbert, E., & Hutto, C. J. (2014). VADER: A parsimonious rule-based model for sentiment analysis of social media text. In *Eighth International Conference on Weblogs and Social Media* (pp. 216-225. <http://comp.social.gatech.edu/papers/icwsm14.vader.hutto.pdf>). Ann Arbor, Michigan: AAAI.
- Glenwright, M., & Pexman, P. M. (2010). Development of children's ability to distinguish sarcasm and verbal irony. *Journal of Child Language*, 37(2), 429-451.
- Gopal, R., Marsden, J. R., & Vanthienen, J. (2011). Information mining - Reflections on recent. *Decision Support*, 51, 727-731.
- Gopaldas, A. (2014). Marketplace sentiments. *Journal of Consumer Research*, 41(4), 995-1014.
- Gracia, E., Bakker, A. B., & Grau, R. M. (2011). Positive emotions the connection between customer quality evaluations and loyalty. *Cornell Hospitality Quarterly*, 52(4), 458-465.

- Gremler, D., & Brown, S. (1996). Service loyalty: Its nature, importance, and implications. In B. Edvardsson, S. Brown, R. Johnston, & E. Scheuing (Eds.), *Advancing Service Quality: A Global Perspective* (pp. 171-181). New York, NY: ISQA.
- Griffin, A., Gleason, G., Preiss, R., & Shevenaugh, D. (1995). Best practice for customer satisfaction in manufacturing firms. *Sloan Management Review*, 36(2), 87-98.
- Griffin, J. (1997). *Customer loyalty: How to earn it, how to keep it*. San Francisco, CA: Jossey-Bass Publishers.
- Gronholdt, L., Martensen, A., & Kristensen, K. (2000). The relationship between customer satisfaction and loyalty: Cross-industry differences. *Total Quality Management*, 11(4-6), 509-516.
- Grönroos, C. (1982). *Strategic management and marketing in the service sector*. Helsinki: Swedish School of Economics and Business Administration.
- Grönroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, 18(4), 36-44.
- Grönroos, C. (2001). *Service management and marketing: A customer relationship management approach*. New York: John Wiley & Sons Ltd.
- Guba, E. G., & Lincoln, Y. S. (1988). Do inquiry paradigms imply inquiry methodologies. In D. M. Fetterman (Ed.), *Qualitative approaches to evaluation in education: The silent scientific revolution* (pp. 89-115). London: Praeger.
- Guba, E. G., & Lincoln, Y. S. (1989). What is this constructivist paradigm anyway. In *Fourth Generation Evaluation* (pp. 79-90). London: Sage Publications, Inc.
- Gupta, N., Gilbert, M., & Di Fabrizio, G. (2013). Emotion detection in email customer care. *Computational Intelligence*, 29(3), 489-505.
- Gupta, S., & Vajic, M. (1999). The contextual and dialectical nature of experiences. In J. Fitzsimmons, & M. Fitzsimmons (Eds.), *New service development* (pp. 33-51). Thousand Oaks, CA: Sage Publications.
- Gures, N., Arslan, S., & Tun, S. (2014). Customer expectation, satisfaction and loyalty relationship in Turkish airline industry. *International Journal of Marketing Studies*, 6(1), 66-74.

- Gursoy, D., Spangenberg, E. R., & Rutherford, D. G. (2006). The hedonic and utilitarian dimensions of attendees' attitudes toward festivals. *Journal of Hospitality & Tourism Research, 30*(3), 279–294.
- Gustafsson, A., Johnson, M., & Roos, I. (2005). The effects of customer satisfaction, relationship commitment dimensions, and triggers on customer retention. *Journal of Marketing, 69*(4), 210-218.
- Gwynne, A. L., Devlin, J. F., & Ennew, C. T. (1998). Service quality and customer satisfaction: A longitudinal analysis, The British Academy of Marketing Annual Conference, pp. 186-191. Sheffield: Sheffield Hallam University.
- Hadi, N., Aslam, N., & Gulzar, A. (2019). Sustainable service quality and customer loyalty: The role of customer satisfaction and switching costs in the Pakistan cellphone industry. *Sustainability, 11*(8), 1-17.
- Haksever, C., Render, B., Russell, R., & Murdick, R. (2000). *Service management and operations* (2nd ed.). Upper Saddle, New Jersey: Prentice Hall.
- Hallowell, R. (1996). The relationships of customer satisfaction, customer loyalty, and profitability: An empirical study. *International Journal of Service Industry Management, 7*(4), 27-42.
- Han, H., & Back, K. (2006). Investigating the effects of consumption emotions on customer satisfaction and repeat visit intentions in the lodging industry. *Journal of Hospitality and Leisure Marketing, 15*(3), 5-30.
- Hanan, M., & Karp, P. (1989). *Customer satisfaction: How to maximise, measure and market your company's ultimate product*. New York: AMACOM.
- Hands, W. (2010). Economics, psychology and the history of consumer choice theory. *Cambridge Journal of Economics, 34*(4), 633-648.
- Hareli, S., & Rafaeli, A. (2008). Emotion cycles: On the social influence of emotion in organizations. *Research In Organizational Behavior, 28*, 35-59.
- Harlow, L. L., & Oswald, F. L. (2016). Big data in psychology: Introduction to the special issue. *Psychological Methods, 21*(4), 447-457.

- Harris, L., & Goode, M. (2004). The four levels of loyalty and the pivotal role of trust: A study of online services dynamics. *Journal of Retailing*, 80(2), 139-158.
- Harrison-Walker, L. (2001). The measurement of word-of-mouth communication and an investigation of service quality and customer commitment as potential antecedents. *Journal of Service Research*, 4(1), 60-75.
- Hartnett, J., & Skowronski, J. (2008). Tragic to hilarious: Why do some negative autobiographical memories become funny. Chicago, IL: 80th Annual Meeting of the Midwestern Psychological Association.
- Hausknecht, D. R., Sweeney, J. C., Soutar, G. N., & Johnson, L. W. (1998). After I had made the decision: Toward a scale to measure cognitive dissonance. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behaviour*, 11, 119-127.
- Hayes, B. (2008). The true test of loyalty. *Quality Progress*, 41(6), 20-26.
- Healy, M. (2007). School choice, brand loyalty and civic loyalty. *Journal of Philosophy of Education*, 41(4), 743-756.
- Hennig-Thurau, T., & Klee, A. (1997). The impact of customer satisfaction and relationship quality on customer retention: A critical reassessment and model development. *Psychology & marketing*, 14(8), 737-764.
- Hennig-Thurau, T., Gwinner, K., & Gremler, D. (2002). Understanding relationship marketing outcomes: An integration of relational benefits and relationship quality. *Journal of Service Research*, 4(3), 230-247.
- Herr, P., Kardes, F., & Kim, J. (1991). Effects of word-of-mouth and product attribute information on persuasion: An accessibility-diagnostics perspective. *Journal of Consumer Research*, 17(4), 454-462.
- Heskett, J. L., Jones, T. O., Loveman, G. W., Sasser Jr., W. E., & Schlesinger, L. A. (2008). Putting the service-profit chain to work. *Harvard Business Review*, 86(7/8), 118-129.
- Heskett, J. L., Sasser Jr, W. E., & Schlesinger, L. A. (1997). *The service profit chain: How leading companies link profit and growth to loyalty, satisfaction, and value*. New York: Free Press.

- Heuer, F., & Reisberg, D. (1990). Vivid memories of emotional events: The accuracy of remembered minutiae. *Memory and Cognition, 18*, 496-506.
- Hirshman, E., & Holbrook, M. (1982). Hedonic consumption: Emerging concepts, methods, and propositions. *Journal of Marketing, 46*(3), 92-101.
- Hockenbury, D. H., & Hockenbury, S. E. (2007). *Discovering psychology*. New York: Worth Publishers.
- Hofmann, V., Schoner-Schatz, L., & Stokburger-Sauer, N. (2016). Emotional Contagion and Word-of-Mouth in Social Media Communication - The Role of the Message's Source (An Abstract). Las Vegas: AMA Winter Marketing Educators' Conference.
- Hofmeyr, J., & Rice, B. (2000). *Commitment-led marketing: The key to brand profits is in the customer's mind*. New York: John Wiley & Son.
- Hogenboom, A., Boon, F., & Frasinca, F. (2012). A statistical approach to star rating classification of sentiment. *Management Intelligent Systems, 251-260*.
- Hoisington, A., & Naumann, E. (2003). The loyalty elephant. *Quality Progress, 36*(2), 33-41.
- Holbrook, M. (1994). The nature of customer value. In R. Rust, & R. Oliver (Eds.), *Service quality: New directions in theory and practice* (pp. 21-71). Thousand Oaks, CA: Sage.
- Holbrook, M. B., & Westwood, R. A. (1989). The role of emotion in advertising revisited: Testing a typology of emotional responses. In P. Cafferata, & A. M. Tybout (Eds.), *Cognitive and Affective Responses to Advertising* (pp. 353-371). Lexington, MA: Lexington Books.
- Holbrook, M., & Batra, R. (1987). Assessing the role of emotions as mediators of consumer responses to advertising. *Journal of Consumer Research, 14*(3), 404-420.
- Homburg, C., Koschate, N., & Hoyer, W. (2006). The role of cognition and affect in the formation of customer satisfaction: a dynamic perspective. *Journal of Marketing, 70*(3), 21-31.
- Honomichl, J. (1993). Spending on customer satisfaction continues to rise. *Marketing News, 12*(5), 17-18.
- Hou, M., Xiaoding, W., & Hu, Z. (2013). Personnel service, consumption emotion, and patronage intention in department stores. *International Business Research, 6*(3), 6-21.

- Hsee, C. K., & Hastie, R. (2006). Decision and experience: Why don't we choose what makes us happy. *Trends in Cognitive Sciences, 10*, 31–37.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55. <https://doi.org/10.1080/10705519909540118>.
- Hu, M., & Liu, B. (2004). Mining opinion features in customer reviews. In *AAAI'04: Proceedings of the 19th national conference on Artificial intelligence* (pp. 755-760). Chicago: AAAI Press.
- Hudson, S., & Ritchie, J. R. (2009). Branding a memorable destination experience. The case of "Brand Canada". *International Journal of Tourism Research, 11*(2), 217-228.
- Hume, M., & Sullivan, M. G. (2010). The consequence of appraisal emotion, service, quality, perceived value and customer satisfaction on repurchase intent in the performing arts. *Journal of Services Marketing, 24*(2), 170-182.
- Hume, M., Sullivan, M., Liesch, P., & Winzar, H. (2006). Understanding service experience in non-profit performing arts: Implications for operations and service management. *Journal of Operations Management, 24*(4), 16-42.
- Hung-Hsin, H. (2009). The role of commitment in the relationship between customer satisfaction and customer loyalty in banking industry: Mediating effect of commitment (Published doctoral dissertation). Adelphi, Maryland: University of Maryland University College.
- Hunt, H. (1977). CS/D—Overview and future research directions. In H. K. Hunt (Ed.), *Conceptualization and Measurement of Customer Satisfaction and Dissatisfaction* (pp. 455-488). Cambridge: Marketing Science Institute.
- Iacobucci, D., & Ostrom, A. (1993). Gender differences in the impact of core and relational aspects of services on the evaluation of service encounters. *Journal of Consumer Psychology, 2*(3), 257-286.
- Ingram, R. E. (1984). Toward an information-processing analysis of depression. *Cognitive Therapy and Research, 8*, 443-478.

- Ittner, C., & Larcker, D. (2001). Assessing empirical research in managerial accounting: A value-based management perspective. *Journal of Accounting and Economics*, 32, 349-410.
- Ittoo, A., Nguyen, L. M., & Van den Bosch, A. E. (2016). Text analytics in industry: Challenges, desiderata and trends. *Computers in Industry*, 78, 96-107.
- Izard, C. (1971). *The face of emotion*. New York: Appleton-Century Crofts.
- Izard, C. (1991). *The psychology of emotions*. New York: Plenum Press.
- Izard, C. (1992). Basic emotions, relations among emotions, and emotion-cognition relations. *Psychological Review*, 99(3), 561-565.
- Izard, C. (1993). Four systems for emotion activation: Cognitive and noncognitive processes. *Psychological Review*, 100(1), 68-90.
- Izard, C. E. (1977). *Human emotions*. New York: Springer.
- Izard, C. E. (2010). More meanings and more questions for the term "emotion". *Emotion Review*, 2, 383-385.
- Izard, C. E. (2010). The many meanings/aspects of emotion: Definitions, functions, activation, and regulation. *Emotion Review*, 2, 363-370.
- Izquierdo, C. C., & Samaniego, M. J. (2011). Strengthening members' relationships through cultural activities in museums. *Journal of Leisure Research*, 43(4), 560-588.
- Jacoby, J., & Chestnut, R. (1978). *Brand loyalty: Measurement and management*. New York: John Wiley.
- Jacoby, J., & Kyner, D. B. (1973). Brand loyalty vs. repeat purchasing behavior. *Journal of Marketing Research*, 10(1), 1-9.
- Jain, A., Pinson, C., & Malhotra, N. (1987). Customer loyalty as a construct in the marketing of banking services. *International Journal of Bank Marketing*, 5, 49-72.
- Jaiswal, A., & Niraj, R. (2011). Examining mediating role of attitudinal loyalty and nonlinear effects in satisfaction-behavioural intentions relationship. *Journal of Services Marketing*, 25(3), 165-175.
- James, W. (1884). What is an emotion? *Mind*, 9(34), 188-205. doi:10.1093/mind/os-IX.34.188.

- James, W. (1980). *The principles of psychology*. New York: Dover Publications.
- Jang, S., & Namkung, Y. (2009). Perceived quality, emotions, and behavioral intentions: Application of an extended Mehrabian–Russell model to restaurants. *Journal of Business Research*, 62(4), 451–460.
- Jani, D., & Han, H. (2011). Investigating the key factors affecting behavioural intentions: Evidence from a full-service restaurant setting. *International Journal of Contemporary Hospitality Management*, 23(7), 1000-1018.
- Jarvenpaa, S., Tractinsky, N., & Vital, M. (2000). Consumer trust in an Internet store. *Information Technology and Management*, 1, 45-71.
- Jarvis, L., & Mayo, E. (1986). Winning the market-share game. *Cornell Hotel Restaurant Administrative Quarterly*, 27(3), 73-79.
- Jarvis, L., & Wilcox, J. (1977). True vendor loyalty or simply repeat purchase behaviour. *Industrial Marketing Management*, 6(1), 9-14.
- Johnson, A. R., & Stewart, D. W. (2005). A reappraisal of the role of emotion in consumer behavior. In N. K. Malhotra (Ed.), *Review of Marketing Research* (pp. 3-33). Armonk, NY: ME Sharpe.
- Johnson, M., & Fornell, C. (1991). A framework for comparing customer satisfaction across individuals and product categories. *Journal of Economic Psychology*, 12(2), 267-286.
- Johnson, W., & Weinstein, A. (2004). *Superior customer value in the new economy: Concepts and cases*. Boca Raton, FL: CRC Press.
- Johnston, R., & Kong, X. (2011). The customer experience: a road-map for improvement. *Managing Service Quality*, 21(1), 5-24.
- Jones, T. O., & Sasser Jr, W. E. (1995). Why satisfied customers defect. *Harvard Business Review*, 73, 88-99.
- Juran, J. (1988). Managing for quality. *The Journal for Quality and Participation*, 11(1), 8-13.
- Kahneman, D. (2003). Association maps of bounded rationality: Psychology for behavioural economics. *The American Economic Review*, 93(5), 1449-1475.
- Kahneman, D. (2011). *Thinking fast and slow* (1st ed.). London, United Kingdom: Penguin Books Ltd.



- Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *Journal of Economic Perspectives*, 20(1), 3-24.
- Kahneman, D., & Riss, J. (2005). Living, and thinking about it: Two perspectives on life. *The Science of Well-Being*, 285-.
- Kahneman, D., Wakker, P., & Sarin, R. (1997). Back to Bentham? Explorations of experienced utility. *Quarterly Journal of Economics*, 112(2), 375-405.
- Kaliouby, R. (2017). We need computers with empathy. *Technology Review*, 120(6), 8.
- Kancir, R. (2004). *Marketing usluga*. Belgrade: Beogradska poslovna škola.
- Kang, D., & Park, Y. (2013). Review-based measurement of customer satisfaction in mobile service: Sentiment analysis and VIKOR approach. *Expert Systems with Applications*, 41(4), 1041-1050. <http://dx.doi.org/10.1016/j.eswa.2013.07.101>.
- Kangu, M., Wanjau, K., & Kosimbei, G. (2017). Technology infrastructure: A customer relationship management dimension in maintaining customer loyalty. *International Journal of Economics, Commerce and Management*, V(5), 88-106.
- Kano, N., Seraku, K., Takahashi, F., & Tsuji, S. (1984). Attractive quality and must be quality. *Journal of the Japanese Society for Quality Control*, 14(2), 39-48.
- Kao, A., & Poteet, S. R. (2007). *Natural language processing and text mining*. New York: Springer.
- Kaplan, D. (2008). *Structural equation modeling: Foundations and extensions* (2nd ed.). London: SAGE Publications, Inc.
- Karatepe, O. (2006). Customer complaints and organizational responses: The effects of complainants' perceptions of justice on satisfaction and loyalty. *Hospitality Management*, 25(1), 69-90.
- Kaynak, E., & Kucukemiroglu, O. (1992). Bank and product selection: Hong Kong. *The International Journal of Bank Marketing*, 10(1), 3-17.
- Keating, B., Rugimbana, R., & Quazi, A. (2003). Differentiating between service quality and relationship quality in cyberspace. *Managing Service Quality*, 13(3), 217-232.
- Keaveney, S. M. (1995). Customer switching behaviour in service industries: An exploratory study. *Journal of Marketing*, 59, 71-82.

- Keiningham, T. L., & Aksoy, L. (2012). Linking customer loyalty to growth. *MIT Sloan Management Review*, 49(4), 51-57.
- Keiningham, T., Perkins-Munn, T., Aksoy, L., & Estrin, D. (2005). Does customer satisfaction lead to profitability? The mediating role of share-of-wallet. *Managing Service Quality*, 15(2), 172-181.
- Keiningham, T., Rust, R., Lariviere, B., Aksoy, L., & Williams, L. (2018). A roadmap for driving customer word-of-mouth. *Journal of Service Management*, 29(1), 2-38. <https://doi.org/10.1108/JOSM-03-2017-0077>.
- Keiser, B. E. (2015). *Still feeling our way toward sentiment analysis - ONLINE SEARCHER*. Retrieved from <http://www.onlinesearcher.net>
- Keller, K. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57(1), 1-22.
- Kennedy, H. (2012). Perspectives on sentiment analysis. *Journal of Broadcasting & Electronic Media*, 56(4), 435-450.
- Kensinger, E. A. (2011, October). *What we remember (and forget) about positive and negative experiences*. Retrieved from <https://www.apa.org/science/about/psa/2011/10/positive-negative>
- Kensinger, E. A., & Corkin, S. (2003). Memory enhancement for emotional words: Are emotional words more vividly remembered than neutral words. *Memory & Cognition*, 31, 1169-1180.
- Kensinger, E. A., Garoff-Eaton, R. J., & Schacter, D. L. (2006). Memory for specific visual details can be enhanced by negative arousing content. *Journal of Memory and Language*, 54, 99-112.
- Khan, M., & Fasih, M. (2014). Impact of service quality on customer satisfaction and customer loyalty: Evidence from banking sector. *Pakistan Journal of Commerce and Social Sciences*, 8(2), 331-354.
- Khatibi, A., Ismail, H., & Thyagarajan, V. (2002). What drives customer loyalty: An analysis from the telecommunications industry. *Journal of Targeting, Measurement and Analysis for Marketing*, 11(1), 34-44.

- Kho, N. D. (2010). *KMWorld*. Retrieved from [www.kmworld.com](http://www.kmworld.com)
- Kim, H., & Gupta, S. (2012). Investigating customer resistance to change in transaction relationship with an Internet vendor. *Psychology & Marketing, 29*(4), 257-269.
- Kim, H., Chua, B., Lee, S., Boo, H., & Han, H. (2015). Understanding airline travelers' perceptions of well-being: The role of cognition, emotion, and sensory experiences in airline lounges. *Journal of Travel & Tourism Marketing, 33*(9), 1-22. <https://doi.org/10.1080/10548408.2015.1094003>.
- Kim, J., Magnusen, M., & Kim, Y. (2014). A critical review of theoretical and methodological issues in consumer satisfaction research and recommendations for future sport marketing scholarship. *Journal of Sport Management, 28*(3), 338-355.
- Kim, J., Ritchie, J., & McCormick, B. (2012). Development of a scale to measure memorable tourism experiences. *Journal of Travel Research, 51*(1), 12-25. <https://doi.org/10.1177/0047287510385467>.
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York: The Guilford Press.
- Knox, S., & Denison, T. (2000). Store loyalty: Its impact on retail revenue. An empirical study of purchasing behaviour in the UK. *Journal of Retailing and Consumer Services, 7*(1), 33-45.
- Kobayashi, V. B., Mol, S. T., Berkers, H. A., Kismiho'k, G., & Den Hartog, D. N. (2018). Text mining in organizational research. *Organizational Research Methods, 21*(3), 733-765.
- Koelemeijer, K., Prevo, O., Pieters, R., & Roest, H. (1995). Service evaluation process: An investigation into hierarchies-of-effects, presented at Workshop on Quality Management in Services V. Tilburg, The Netherlands: organized by Tilburg University and European Institute for Advanced Studies in Management.
- Koenig-Lewis, N., & Palmer, A. (2008). Experiential values over time: A comparison of measure of satisfaction and emotion. *Journal of Marketing Management, 24*(1), 69-85.
- Koenig-Lewis, N., & Palmer, A. (2014). The effects of anticipatory emotions on service satisfaction and behavioural intention. *Journal of Services Marketing, 28*(6), 437 – 451.

- Kolb, B., & Whishaw, I. Q. (1990). *Fundamentals of human neuropsychology* (3rd ed.). New York: W.H. Freeman and Company.
- Kotler, P. (1977). From sales obsession to marketing effectiveness. *Harvard Business Review*, 55(6), 67-75.
- Kotler, P., & Armstrong, G. (2012). *Principles of marketing* (13th ed.). Jakarta: Erlangga.
- Kotler, P., & Keller, K. (2006). *Marketing management*. Upper Saddle River, New Jersey: Prentice Hall.
- Koza, J. R., Bennett, F. H., Andre, D., & Keane, M. A. (1996). Automated design of both the topology and sizing of analog electrical circuits using genetic programming. *Artificial Intelligence in Design '96*, 151–170.
- Kravitz, R. (1998). Patient satisfaction with health care: Critical outcome or trivial pursuit. *Journal of General Internal Medicine*, 13(4), 280-282.
- Kring, A., Barrett, L., & Gard, D. (2003). On the broad applicability of the affective circumplex: Representations of affective knowledge among schizophrenia patients. *Psychological Science*, 14(3), 207-214.
- Krumay, B., & Brandtweiner, R. (2010). Are customer service offerings influencing e-loyalty? A graphical chain model approach in the Austrian mobile phone service provider industry. *Bled eConference*, 23, 346-363.
- Kuhl, J. (1986). Motivation and information processing. In R. Sorrentino, & T. Higgins (Eds.), *Handbook of Motivation and Cognition* (pp. 404-434). New York: Guilford.
- Kumar, V., Shah, D., & Venkatesan, R. (2006). Managing Retailer Profitability-One Customer at a Time. *Journal of Retailing*, 82(4), 277-294.
- La Barbera, P., & Mazursky, D. (1983). A longitudinal assessment of consumer satisfaction/dissatisfaction: The dynamic aspect of the cognitive process. *Journal of Marketing Research*, 20(4), 393-404.
- LaBar, K., & Cabeza, R. (2006). Cognitive neuroscience of emotional memory. *Nature Reviews Neuroscience*, 7(1), 54-64.
- Ladhari, R. (2007). The effect of consumption emotions on satisfaction and word-of-mouth communications. *Psychology and Marketing*, 24(12), 1085-1108.

- Ladhari, R. (2007). The movie experience: A revised approach to determinants of satisfaction. *Journal of Business Research, 60*(5), 454-462.
- Ladhari, R., Bruna, I., & Morales, M. (2008). Determinants of dining satisfaction and post-dining behavioural intentions. *International Journal of Hospitality Management, 27*(4), 563-573.
- Ladhari, R., Ladhari, I., & Morales, M. (2011). Bank service quality: Comparing Canadian and Tunisian customer perceptions. *International Journal of Bank Marketing, 29*(3), 224-246.
- Lam, S., Shankar, V., Erramilli, M., & Murthy, B. (2004). Customer value, satisfaction, loyalty, and switching costs: An illustration from a business-to-business service context. *Journal of the Academy of Marketing Science, 32*(3), 293-311.
- Landau, J., & Gunter, B. (2009). Don't worry, you'll get over it: Methodological investigations of the fading affect bias. *American Journal of Psychology, 122*(2), 209-217.
- Laney, C., & Loftus, E. (2005). Traumatic memories are not necessarily accurate memories. *Canadian Journal of Psychiatry, 50*(13), 823-828.
- Lang, P. (1993). The network model of emotion: Motivational connections. In R. Wyer, & T. Srull (Eds.), *Advances in Social Cognition. Vol. 6* (pp. 109-133). Hillsdale, NJ: Erlbaum.
- Langacker, R. W. (1990). Subjectification. *Cognitive Linguistics, 1*(1), 5-38.
- Lange, C. G. (1912). The mechanism of the emotions. In B. Rand (Ed.), *The classical psychologists* (pp. 672-684). Copenhagen: B. Rand, Trans.
- LaPlante, A., & Coleman, T. F. (2017, January 15). *Teaching computers to understand human language: How natural language processing is reshaping the world of finance*. Retrieved from <https://globalriskinstitute.org/publications/natural-language-processing-reshaping-world-finance/>
- Laroche, M., Ueltschy, L. C., Abe, S., Cleveland, M., & Yannopoulos, P. P. (2004). Service quality perceptions and customer satisfaction: Evaluating the role of culture. *Journal of International Marketing, 12*(3), 58-85.

- Laros, F., & Steenkamp, J. (2005). Emotions in consumer behaviour: A hierarchical approach. *Journal of Business Research*, *58*(10), 1437-1445.
- Larsen, R., & Fredrickson, B. (1999). Measurement issues in emotion research. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 40-60). New York: Russell Sage Foundation.
- LaSalle, D., & Britton, T. A. (2003). *Priceless: Turning ordinary products into extraordinary experiences*. Boston: Harvard Business School Press.
- Laverie, D., Kleine III, R., & Kleine, S. (1993). Linking emotions and values in consumption experiences: An exploratory study. In L. McAlister, & M. Rothschild (Eds.), *Advances in Consumer Research Volume 20* (pp. 70-75). Provo, UT: Association for Consumer Research.
- Lawler, E. J. (1992). Affective attachment to nested groups: A choice-process theory. *American Sociological Review*, *57*(3), 327-339.
- Lazarus, R. (1974). *The riddle of man: An introduction to psychology*. Englewood Cliffs, N.J.: Prentice-Hall.
- Lazarus, R. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist*, *46*(8), 819-834. doi:10.1037/0003-066X.46.8.819.
- Lazarus, R. S. (1984). On the primacy of cognition. *American Psychological*, *39*(2), 124-129.
- Lazarus, R. S. (1991). *Emotion and adaption*. New York: Oxford University Press.
- Lazarus, R., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer Publishing.
- LeDoux, J. (1987). Emotion. In F. Plum (Ed.), *Handbook of Physiology. Section I: The Nervous System. Vol. 5, Higher Functions of the Brain* (pp. 419-460). Bethesda, MD: American Physiological Society.
- LeDoux, J. (1995). Emotion: Clues from the brain. *Annual Review of Psychology*, *46*, 209-305.
- LeDoux, J. (1996). *The emotional brain: The mysterious underpinnings of emotional life*. New York: Simon & Schuster.

- LeDoux, J. (2003, December 11). *Management wisdom from a neuroscientist*. Retrieved from <https://news.gallup.com/businessjournal/9844/management-wisdom-from-neuroscientist.aspx>
- LeDoux, J. (2012). Rethinking the emotional brain. *Neuron*, 73(4), 653-676. doi: 10.1016/j.neuron.2012.02.004.
- Lee, Y. K., Lee, C. K., Lee, S. K., & Babin, B. J. (2008). Festivalscapes and patrons' emotions, satisfaction, and loyalty. *Journal of Business Research*, 61(1), 56-64.
- Leedy, P. D., & Ormrod, J. E. (2010). *Practical research: Planning and design* (9th ed.). Upper Saddle River, NJ: Merrill.
- Legrenzi, L., & Troilo, G. (2005). The impact of exhibit arrangement on visitors' emotions: A study at the Victoria and Albert museum. Montreal, Canada: in 8th International Conference on Arts and Cultural Management.
- Lehtinen, U., & Lehtinen, J. (1982). Service quality: A study of quality dimensions, unpublished working paper. Helsinki: Service Management Institute, Finland OY.
- Lehtinen, U., & Lehtinen, J. (1991). Two approaches to service quality dimensions. *The Service Industries Journal*, 11(3), 287-303.
- Leventhal, H. (1984). A perceptual-motor theory of emotion. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology*, Vol. 17 (pp. 118-182). Orlando, FL: Academic Press.
- Leventhal, H. (1993). A componential, self-regulative systems view of Berkowitz's cognitive-neoassociationistic model of anger. In R. Eribaum, & T. Srull (Eds.), *Advances in Social Cognition*, Vol. 6 (pp. 135-146). Hillsdale, NJ: Erlbaum.
- Levesque, T. J., & McDougall, G. H. (1993). Managing customer satisfaction: the nature of service problems and customer exit, voice and loyalty. *Asia Pacific Journal of Quality Management*, 2(2), 40-58.
- Levesque, T., & McDougall, G. H. (1996). Determinants of customer satisfaction in retail banking. *International Bank Marketing*, 14(7), 12-20.
- Levin, K. A. (2006). Study design III: Cross-sectional studies. *Journal of Evidence-Based Dental Practice*, 7(1), 24-25.

- Levine, L. (1997). Reconstructing memory for emotions. *Journal of Experimental Psychology: General*, *126*(2), 165-177.
- Levine, L., & Bluck, S. (2004). How emotions fade: Valence, appraisals, and the emotional impact of remembered events. In S. Shohov (Ed.), *Advances in psychology research*, Vol. 30 (pp. 3-20). Hauppauge, NY: Nova Science Publishers.
- Levine, L., & Safer, M. (2002). Sources of bias in memory for emotions. *Current Directions in Psychological Science*, *11*(5), 169-173.
- Levine, L., Lench, H., & Safer, M. (2009). Functions of remembering and misremembering emotion. *Applied Cognitive Psychology*, *23*(8), 1059-1075.
- Levine, L., Prohaska, V., Burgess, S., Rice, J., & Laulhere, T. (2001). Remembering past emotions: The role of current appraisals. *Cognition and Emotion*, *15*(4), 393-417.
- Levy, M., & Weitz, B. (2007). *Retailing management*. New York: McGraw-Hill Education.
- Lewin, K. (1951). *Field theory in social science*. New York: Harper & Brothers.
- Lewis, B., & Soureli, M. (2006). The antecedents of consumer loyalty in retail banking. *Journal of Consumer Behaviour*, *5*(1), 15-31.
- Lewis, R. (1987). The measurement of gaps in the quality of hotel services. *International Journal of Hospitality Management*, *6*(2), 83-88.
- Lewis, R., & Booms, B. (1983). The marketing aspects of service quality. In L. Berry, G. Shostack, & G. Upah (Eds.), *Emerging Perspectives on Services Marketing* (pp. 99-107). Chicago: American Marketing.
- Li, H., & Liu, Y. (2014). Understanding the post-adoption behaviors of e-service users in the context of online travel services. *Information & Management*, *51*(8), 1043-1052.
- Li, J., Wu, Z., Zhu, B., & Xu, K. (2018). Making sense of organization dynamics using text analysis. *Expert Systems With Applications*, *111*, 107-119.
- Liao, Z., & Cheung, M. (2008). Measuring consumer satisfaction in Internet banking: A core framework. *Communications of the ACM*, *51*(4), 47-51.
- Liljander, V., & Bergenwall, M. (2002). Consumption-based emotional responses related to satisfaction. Helsinki: occasional paper, Department of Marketing, Swedish School of Economics and Business Administration.



- Liljander, V., & Strandvik, T. (1997). Emotions in service satisfaction. *International Journal of Service Industry Management*, 8(2), 148-169.
- Lipsey, M. W., Puzio, K., Yun, C., Hebert, M. A., Steinka-Fry, K., Cole, M. W., . . . Busick, M. D. (2012). *Translating the statistical representation of the effects of education interventions into more readily interpretable forms*. Washington, DC: National Center for Special Education Research.
- Liu, B. (2010). Sentiment analysis and subjectivity. *Handbook of Natural Language Processing*, 2, 627-666.
- Liu, B. (2012). Sentiment analysis and opinion mining. *Synthesis Lectures on Human Language Technologies*, 5(1), 1-167.
- Liu, B. (2015). *Sentiment analysis: Mining opinions, sentiments, and emotions* (1st ed.). Cambridge: Cambridge University Press.
- Liu, B. (2017). *A practical guide to sentiment analysis (Socio-affective computing (5))* (1st ed., Vol. 5). Springer International Publishing.
- Liu, B., Hu, M., & Cheng, J. (2005). Opinion observer: Analyzing and comparing opinions on the web. In *WWW '05: Proceedings of the 14th international conference on World Wide Web* (pp. 342-351). New York, NY: ACM.
- Liu, L., & Zhang, L. (2012). A survey of opinion mining and sentiment analysis. *Mining Text Data*, 415-463.
- Liu, W., Lee, Y., & Hung, L. (2017). The interrelationships among service quality, customer satisfaction, and customer loyalty: Examination of the fast-food industry. *Journal of Foodservice Business Research*, 20(2), 146-162.
- Ljubojević, C. (2002). *Marketing usluga*. Novi Sad: Stylos.
- Loewenstein, G. (1999). Because it is there: The challenge of mountaineering...for utility theory. *Kyklos*, 52, 315-344.
- Loftus, E. (1992). When a lie becomes memory's truth: Memory distortion after exposure to misinformation. *Current Directions in Psychological Science*, 1(4), 121-123. <https://doi.org/10.1111/1467-8721.ep10769035>.

- Loftus, E. (2003). Our changeable memories: Legal and practical implications. *Nature Reviews Neuroscience*, 4(3), 231-234.
- Loftus, E. F., & Burns, T. E. (1982). Mental shock can produce retrograde amnesia. *Memory and Cognition*, 10, 318-323.
- Loftus, E., & Hoffman, H. (1989). Misinformation and memory: The creation of new memories. *Journal of Experimental Psychology*, 118(1), 100-104.
- Loftus, E., & Palmer, J. (1974). Reconstruction of automobile destruction: An example of the interaction between language and memory. *Journal of Verbal Learning and Verbal Behavior*, 13(5), 585-589.
- Loftus, E., Miller, D., & Burns, H. (1978). Semantic integration of verbal information into a visual memory. *Journal of Experimental Psychology: Human Learning and Memory*, 4(1), 19-31.
- Lopez, J., Hart, L., & Rampersad, A. (2007). Ethnicity and customer satisfaction in the financial services sector. *Managing Service Quality*, 17(3), 259-274.
- López-López, I., Ruiz-de-Maya, S., & Warlop, L. (2014). When sharing consumption emotions with strangers is more satisfying than sharing them with friends. *Journal of Service Research*, 17(4), 475-488. doi:10.1177/1094670514538835.
- Ludwig, S., de Ruyter, K., Friedman, M., Brüggem, E. C., M., W., & Pfann, G. (2013). More than words: The influence of affective content and linguistic style matches in online reviews on conversion rates. *Journal of Marketing*, 77(1), 87-103.
- Macintosh, G., & Lockshin, L. (1997). Retail relationships and store loyalty: A multi-level perspective. *International Journal of Research in Marketing*, 14(5), 487-497.
- Madu, C., Kuei, C., & Lin, C. (1995). A comparative analysis of quality practice in manufacturing firms in the US and Taiwan. *Decision Science*, 26(5), 621-635.
- Magnini, V., Kara, D., Crotts, J., & Zehrer, A. (2012). Culture and service-related positive disconfirmations. An application of travel blog analysis. *Journal of Vacation Marketing*, 18(3), 251-257.

- Maguire, L. (2015). Capturing consumption emotions in service encounters: Why immediacy matters when studying service-related emotions. *International Journal of Market Research*, 58(2), 227-252.
- Mahmood, C., Khalil, T., & Al-Hattami, A. (2013). Competitive study of service quality based on the perception of customers and management of Islamic banks in Pakistan. *IOSR Journal of Business and Management*, 9(3), 73-78.
- Maia, B., & Santos, D. (2018, May 28). *Language, emotion, and the emotions: The multidisciplinary and linguistic background*. Retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1111/inc3.12280>
- Maiyaki, A., & Mokhtar, S. (2011). Determinants of customer behavioural responses: A pilot study. *International Business Research*, 4(1), 193-197.
- Malhotra, N. K. (1993). *Marketing research: An applied orientation*. New Jersey, USA: Prentice-Hall International, Inc.
- Maltby, J., Williams, G., McGarry, J., & Day, L. (2010). *Research methods for nursing and healthcare*. London: Pearson Education Ltd.
- Mano, H., & Oliver, R. L. (1993). Assessing the dimensionality and structure of the consumption experience: Evaluation, feeling, satisfaction. *Journal of Consumer Research*, 20(December), 451-466.
- Manuel, K., Indukuri, K. V., & Krishna, P. R. (2010). Analysing internet slang for sentiment mining. In *Proceeding 2010 Second Vaagdevi International Conference on Information Technology for Real World Problems* (pp. 9-11). Warangal, India: IEEE.
- Marr, B. (2018). *How much data do we create every day? The mind-blowing stats everyone should read*. Retrieved from <https://www.forbes.com/sites/bernardmarr/2018/05/21/how-much-data-do-we-create-every-day-the-mind-blowing-stats-everyone-should-read/#55c5e4b360ba>
- Mascarenhas, O., Kesavan, R., & Bernacchi, M. (2006). Lasting customer loyalty: A total customer experience approach. *Journal of Consumer Marketing*, 23(7), 397-405.
- Mattila, A. S. (2001). Emotional bonding and restaurant loyalty. *Cornell Hotel and Restaurant Administration Quarterly*, 42(6), 73-79.

- Mattila, A., & Wirtz, J. (2000). The role of preconsumption affect in postpurchase evaluation of services. *Psychology & Marketing, 17*(7), 587-605.
- Mattsson, J., Lemmink, J., & Mccoll, R. (2004). The effect of verbalized emotions on loyalty in written complaints. *Total Quality Management, 15*(7), 941-958.
- Maute, M., & Dube, L. (1999). Patterns of emotional responses and behavioural consequences of dissatisfaction. *Applied Psychology: An International Review, 48*(3), 349-366.
- Maxham III, J., & Netemeyer, R. (2002). Modeling customer perceptions of complaint handling over time: The effects of perceived justice on satisfaction and intent. *Journal of Retailing, 78*(4), 239-252.
- Mazursky, D., & Geva, A. (1989). Temporal decay in satisfaction–intention relationship. *Psychology and Marketing, 6*(3), 211-227.
- McAlexander, J., Kaldenberg, D., & Koenig, H. (1994). Service quality management. *Journal of Health Care Marketing, 14*(3), 34-40.
- McAlister, L., & Pessemier, E. (1982). Variety seeking behavior: An interdisciplinary review. *Journal of Consumer Research, 9*(3), 311-322. <https://doi.org/10.1086/208926>.
- McFadden, D. (1986). The choice theory approach to market research. *Marketing Science, 5*(4), 275-297.
- McGaugh, J. L. (2004). The amygdala modulates the consolidation of memories of emotionally arousing experiences. *Annual Review of Neuroscience, 27*, 1-28.
- McLeod, S. A. (2018, January 14). *Correlation definitions, examples & interpretation*. Retrieved from <https://www.simplypsychology.org/correlation.html>
- McNally, R., & Geraerts, E. (2009). A new solution to the recovered memory debate. *Perspective on Psychological Science, 4*(2), 126-134.
- McNeely, L., Burton, J., & Pennington, J. (2020). Emotional and cognitive drivers of customer satisfaction in adventure travel. *Tourism Review International, 23*(3), 133-147. <https://doi.org/10.3727/154427219X15790218411835>.
- Mehrabian, A., & Russell, J. (1974). The basic emotional impact of environments. *Perceptual and Motor Skills, 38*(1), 283-301.

- Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. Cambridge, MA: M.I.T. Press.
- Meidan, A. (1996). *Marketing financial services*. Basingstoke, UK: Macmillan.
- Meirovich, G., & Bahnan, N. (2008). Product/service quality and emotional aspect of customer satisfaction. *Academy of Management Annual Meeting Proceedings, 1*, 1-6. <https://doi.org/10.5465/ambpp.2008.33660397>.
- Meirovich, G., Bahnan, N., & Haran, E. (2013). The impact of quality and emotions in customer satisfaction. *The Journal of Applied Management and Entrepreneurship, 18*, 27-50. <https://doi.org/10.9774/GLEAF.3709.2013.ja.00004>.
- Menon, K., & Dubé, L. (1999). Scripting consumer emotions in extended service transactions: A prerequisite for successful adaptation in provider performance. *Advances in Consumer Research, 26*, 18-24.
- Michelli, J. (2007). *The Starbucks experience: Five principles for turning ordinary into extraordinary*. New York: McGraw-Hill.
- Micu, A., Micu, A. E., Geru, M., & Lixandriou, R. C. (2017). Analysing user sentiment in social media: Implications for Online marketing strategy. *Psychology & Marketing, 34*, 1094–1100.
- Miller, G. A., & Fellbaum, C. (2007). WordNet then and now. *Language Resources and Evaluation, 41*(2), 209-214.
- Miron-Shatz, T., Stone, A., & Kahneman, D. (2009). Memories of yesterday's emotions: Does the valence of experience affect the memory-experience gap. *Emotion, 9*(6), 885-891.
- Misner, I. (1994). *The world's best-known marketing secret*. Austin, TX: Bard & Stephen.
- Mitchell, T. (1997). *Machine Learning*. New York: McGraw Hill.
- Mitchell, T., Thompson, L., Peterson, J., & Cronk, R. (1997). Temporal adjustments in the evaluation of events: The 'rosy view'. *Journal of Experimental Social Psychology, 33*(4), 421-448.
- Mittal, V., & Kamakura, W. (2001). Satisfaction, repurchase intent, and repurchase behavior: Investigating the moderating effect of customer characteristics. *Journal of Marketing Research, 38*(1), 131-142.

- Mittal, V., Katrichis, J. M., & Kumar, P. (2001). Attribute Performance and Customer Satisfaction over Time: Evidence from Two Field Studies. *Journal of Services Marketing, 15*(5), 343-356.
- Mittal, V., Kumar, P., & Tsiros, M. (1999). Attribute-level performance, satisfaction, and behavioral intentions over time: A consumption-system approach. *The Journal of Marketing, 63*(2), 88-101.
- Mittal, V., Ross, W. T., & Baldasare, P. M. (1998). The Asymmetric Impact of Negative and Positive Attribute-Level Performance on Overall Satisfaction and Repurchase Intentions. *Journal of Marketing, 62*(January), 33-47.
- Mohammad, S. (2012). From once upon a time to happily ever after: Tracking emotions in mail and books. *Decision Support Systems, 53*, 730-741.
- Mohammad, S. M., & Yang, T. (2011). Tracking sentiment in mail: How genders differ on emotional axes. In *Proceedings of the 2nd Workshop on Computational Approaches to Subjectivity and Sentiment Analysis (WASSA 2.011)* (pp. 70-79). Portland, OR: Association for Computational Linguistics.
- Mohammed, A., Ibrahim, S., & Ali, A. (2017). The impact of service quality on the customer loyalty in Sudanese banking sector. *Journal of Economic Sciences, 18*(2), 212-225.
- Mokhtar, S., & Maiyaki, A. (2011). The relationship between service quality and satisfaction on customer loyalty in Malaysian mobile communication industry. *European Union Journal, 2*(3), 32-38.
- Money, R. B., Gilly, M. C., & Graham, J. L. (1998). Explorations of national culture and word-of-mouth referral behavior in the purchase of industrial services in the United States and Japan. *Journal of Marketing, 62*(4), 76-87.
- Monferrer, D., Moliner, M., & Guillén, M. (2019). Increasing customer loyalty through customer engagement in the retail banking industry. *Spanish Journal of Marketing, 23*(3), 461-484. <https://doi.org/10.1108/SJME-07-2019-0042>.
- Montoyo, A., Martínez-Barco, P., & Balahur, A. (2012). Subjectivity and sentiment analysis: An overview of the current state of the area and envisaged developments. *Decision Support Systems, 53*(4), 675-679. <https://doi.org/10.1016/j.dss.2012.05.022>.

- Mooradian, T., & Oliver, J. (1997). I can't get no satisfaction: The impact of personality and emotion on postpurchase processes. *Psychology & Marketing, 14*(4), 379-392.
- Moore, S. (2012). Some things are better left unsaid: How word of mouth influences the storyteller. *Journal of Consumer Research, 38*(6), 1140-1154.
- Morgan, B. (2017, December 5). *Five trends shaping the future of customer experience in 2018*. Retrieved from <https://www.forbes.com/sites/blakemorgan/2017/12/05/five-trends-shaping-the-future-of-customer-experience-in-2018/?sh=1952b1142d9c>
- Morris, J., Chongmoo, W., Geason, J., & Jooyoung, K. (2002). The power of affect: Predicting intention. *Journal of Advertising Research, 42*(3), 7-17.
- Morrison, S., & Crane, F. (2007). Building the service brand by creating and managing an emotional brand experience. *Journal of Brand Management, 14*, 410-421.
- Mostafa, M. M. (2013). More than words: Social networks' text mining for consumer brand sentiments. *Expert Systems with Applications, 40*(10), 4241-4251.
- Mowen, J. (1993). *Consumer behavior*. New York: Macmillan Publishing Company.
- Mququ, M. (2005). A survey of customer satisfaction, expectations and perceptions as a measure of service quality in SANBS. Grahamstown: Rhodes University, Investec Business School.
- Mudie, P., Cottam, A., & Raeside, R. (2003). An exploratory study of consumption emotion in services. *The Service Industries Journal, 23*(5), 84-106.
- Mukherjee, A., & Nath, P. (2005). An empirical assessment of comparative approaches to service quality measurement. *Journal of Services Marketing, 19*(3), 174-184.
- Muller, T. E., Tse, D. K., & Venkatasubramaniam, R. (1991). Post-consumption emotions: Exploring their emergence and determinants. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior, 4*, 13-20.
- Muller, W. (1991). Gaining competitive advantage through customer satisfaction. *European Management Journal, 9*(2), 201-221.
- Mulligan, K., & Scherer, K. R. (2012). Toward a working definition of emotion. *Emotion Review, 4*(4), 345-357.

- Munari, L., Ielasi, F., & Bajetta, L. (2013). Customer satisfaction management in Italian banks. *Qualitative Research in Financial Markets*, 5(2), 139-160.
- Murray, H. A., & Morgan, C. D. (1945). A clinical study of sentiments (I & II). *Genetic Psychology Monographs*, 32(1/2), 3-149, 153-311.
- Myron, D. (2005). How to assess customer satisfaction levels by going beyond the standard satisfaction survey. *CRM Magazine*, 9(7), 56.
- Nair, S. (2017). Role of Sentiment Analysis in consumer research: A case study of Reliance. *Journal of Contemporary Research in Management*, 12(1), 41-48.
- Neisser, U., & Harsch, N. (1992). Phantom flashbulbs: False recollections of hearing the news about Challenger. In E. Winograd, & U. Neisser (Eds.), *Affect and accuracy: Studies of 'flashbulb' memories* (pp. 9-31). New York: Cambridge University Press.
- Nemati, A., Khan, K., & Iftikhar, M. (2010). Impact of innovation on customer satisfaction and brand loyalty: A study of mobile phones users in Pakistan. *European Journal of Social Sciences*, 16(2), 299-306.
- Neuendorf, K. A. (2002). *The content analysis guidebook* (2nd ed.). Thousand Oaks, California: Sage Publications.
- Ngo, V., & Nguyen, H. (2016). The relationship between service quality, customer satisfaction and customer loyalty: An investigation in Vietnamese retail banking sector. *Journal of Competitiveness*, 8(2), 103-116.
- Nielsen. (2012). *Consumer trust in online, social and mobile advertising grows*. Retrieved from <https://www.nielsen.com/us/en/insights/article/2012/consumer-trust-in-online-social-and-mobile-advertising-grows/>
- Norricks, N. R. (1978). Expressive illocutionary acts. *Journal of Pragmatics*, 2, 277-291.
- Norwood, S. L. (2010). *Research essentials: Foundations for evidence-based practice*. Boston: Pearson Education Inc.
- Nyer, P. (1997). A study of relationships between cognitive appraisals and consumption emotions. *Journal of the Academy of Marketing Science*, 25(4), 296-304.
- O'Neill, M., & Palmer, A. (2004). Cognitive dissonance and the stability of service quality perceptions. *Journal of Services Marketing*, 17(6), 433-449.



- O'Shaughnessy, J., & O'Shaughnessy, N. J. (2003). *The marketing power of emotion*. New York: Oxford University Press.
- Oatley, K. (1992). *Best laid schemes: The psychology of emotions (Studies in emotion and social interaction)*. New York: Cambridge University Press.
- Oatley, K., & Jenkins, J. (1996). *Understanding emotions*. Cambridge, MA: Blackwell.
- Oatley, K., & Johnson-Laird, P. (1987). Towards a cognitive theory of emotions. *Cognition and Emotion, 1*(1), 29-50.
- Odin, Y., Odin, N., & Valette-Florence, P. (2001). Conceptual and operational aspects of brand loyalty. An empirical investigation. *Journal of Business Research, 53*(2), 75-84.
- Ogneva, M. (2010, April 19). *How companies can use sentiment analysis to improve their business*. Retrieved from <https://mashable.com/2010/04/19/sentiment-analysis/>
- Oh, H., & Kim, K. (2017). Customer satisfaction, service quality, and customer value: Years 2000-2015. *International Journal of Contemporary Hospitality Management, 29*(1), 2-29.
- Oldfather, W. A. (1928). *Epictetus: The discourses as reported by Arrian, the Manual, and Fragments, Vol. 2*. Cambridge, MA: Harvard University Press.
- Oliva, T. A., Oliver, R. L., & MacMillan, L. C. (1992). A catastrophe model for developing service satisfaction strategies. *Journal of Marketing, 56*(3), 83-95.
- Oliver, R. (1977). Effect of expectation and disconfirmation on postexposure product evaluations: An alternative interpretation. *Journal of Applied Psychology, 62*(4), 480-486.
- Oliver, R. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research, 17*, 460-469.
- Oliver, R. (1980). Theoretical bases of consumer satisfaction research: Review, critique, and future directions. In C. Lamb Jr, & P. Dunne (Eds.), *Theoretical Developments in Marketing* (pp. 206-210). Chicago: American Marketing Association.
- Oliver, R. (1989). Processing of the satisfaction response in consumption: A suggested framework and research propositions. *Journal of Consumer Satisfaction, 2*, 1-16.

- Oliver, R. (1993). A conceptual model of service quality and service satisfaction: Compatible goals, different concepts. In T. Swartz, D. Bowen, & S. Brown (Eds.), *Advances in Services Marketing and Management: Research and Practice, 2nd edition* (pp. 65-85). Greenwich, CT: JAI Press Inc.
- Oliver, R. (1999). Whence consumer loyalty. *Journal of Marketing*, 63(4), 33-44.
- Oliver, R. L. (1981). Measurement and evaluation of satisfaction processes in retail settings. *Journal of Retailing*, 57(Fall), 25-48.
- Oliver, R. L. (1992). An investigation of the attribute basis of emotion and related affects in consumption: Suggestions for a stage-specific satisfaction framework. In J. Sherry Jr, & B. Sternthal (Eds.), *NA - Advances in Consumer Research Volume 19* (pp. 237-244). Provo, UT: Association for Consumer Research.
- Oliver, R. L. (1993). Cognitive, affective, and attribute bases of the satisfaction response. *Journal Of Consumer Research*, 20(3), 418-430.
- Oliver, R. L. (1997). *Satisfaction: A behavioural perspective on the consumer*. London: McGraw- Hill.
- Oliver, R. L. (2010). *Satisfaction: A behavioral perspective on the consumer* (2nd ed.). New York: Routledge.
- Oliver, R. L., & Westbrook, R. A. (1993). Profiles of consumer emotions and satisfaction in ownership and usage. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behaviour*, 6(1), 12-27.
- Oliver, R., & Bearden, W. (1983). The role of involvement in satisfaction processes. In R. Bagozzi, & A. Tybout (Eds.), *NA - Advances in Consumer Research Volume 10* (pp. 250-255). Ann Arbor, MI: Association for Consumer Research.
- Oliver, R., & Linda, G. (1981). Effect of satisfaction and its antecedents on consumer preference and intention. *Advances in Consumer Research*, 8, 88-93.
- Oliver, R., & Swan, J. (1989). Equity and disconfirmation perceptions as influences on merchants and product satisfaction. *Journal of Consumer Research*, 16(3), 372-383.
- Olshavsky, R., & Miller, J. (1972). Consumer expectations, product performance, and perceived product quality. *Journal of Marketing Research*, 9(1), 19-21.

- Ordenes, F. V., Ludwig, S., de Duyter, K., Grewal, D., & Wetzels, M. (2017). Unveiling what is written in the stars: Analysing explicit, implicit, and discourse patterns of sentiment in social media. *Journal of Consumer Research*, 43(6), 875-894.
- Ormston, R., Spencer, L., Barnard, M., & Snape, D. (2014). The foundations of qualitative research. In J. Ritchie, J. Lewis, C. Nicholls, & C. Ormston (Eds.), *Qualitative Research Practice: A Guide for Social Science Students and Researchers* (pp. 1-25). Los Angeles: Sage.
- Ortigosa, A., Martín, J. M., & Carro, R. M. (2014). Sentiment analysis in Facebook and its application to e-learning. *Computers in Human Behavior*, 31, 527-541.
- Ortony, A., & Turner, T. (1990). What's basic about basic emotions. *Psychological Review*, 17(4), 440-453.
- Ortony, A., Clore, G. L., & Collins, A. (1988). *The cognitive structure of emotions*. New York: Cambridge University Press.
- Osgood, C. (1969). On the whys and wherefores of E, P and A. *Journal of Personality and Social Psychology*, 12, 194-199.
- Osgood, C., May, W., & Miron, M. (1975). *Cross-cultural universals of affective meaning*. Urbana: University of Illinois Press.
- Ostrom, A., & Iacobucci, D. (1995). Customer trade-offs and the evaluation of services. *Sloan Management Review*, 59(1), 17-28.
- Pajuodis, A. (2005). *Prekybos marketingas*. Vilnius: Eugrimas.
- Palmatier, R., Dant, R., Grewal, D., & Evans, K. (2006). Factors influencing the effectiveness of relationship marketing: A meta-analysis. *Factors Influencing the Effectiveness of Relationship Marketing: A Meta-Analysis*, 70(4), 136-153.
- Palmer, A., & Koenig-Lewis, N. (2009). A longitudinal study of emotions and satisfaction as predictors of behavioural intention. Leeds: Academy of Marketing Conference.
- Palmer, A., & Koenig-Lewis, N. (2010). Primary and secondary effects of emotions on behavioural intention of theatre clients. *Journal of Marketing Management*, 26(13-14), 1201-1217.

- Palmer, A., & Koenig-Lewis, N. (2011). A longitudinal study of affect and satisfaction in a high emotion service context. *European Advances in Consumer Research*, 9, 169-175.
- Palmer, A., & Koenig-Lewis, N. (2011). The effects of pre-enrolment emotions and peer group interaction on students' satisfaction. *Journal of Marketing Management*, 27(11-12), 1208-1231.
- Pan, Y., Sheng, S., & Xie, F. (2012). Antecedents of customer loyalty: An empirical synthesis and reexamination. *Journal of Retailing and Consumer Services*, 19(1), 150-158.
- Pang, B., & Lee, L. (2004). A sentimental education: Sentiment analysis using subjectivity summarization based on minimum cuts. *Article no. 271*. PA, USA: Strousberg.
- Pang, B., & Lee, L. (2008). Opinion mining and sentiment analysis. *Foundations and Trends in Information Retrieval*, 2(1-2), 1-135.
- Pang, B., Lee, L., & Vaithyanathan, S. (2002). Thumbs up? Sentiment classification using machine. *Proceedings of EMNLP*, 79-86.
- Pansari, A., & Kumar, V. (2017). Customer engagement: The construct, antecedents, and consequences. *Journal of the Academy of Marketing Science*, 45(3), 294-311.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1994). Alternative scales for measuring service quality: A comparative assessment based on psychometric and diagnostic criteria. *Journal of Retailing*, 70(3), 201-230.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1994). Reassessment of expectations as a comparison standard in measuring service quality. *Journal Of Marketing*, 58(January), 111-124.
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213-233.
- Parasuraman, A., ZelthamI, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(3), 41-50.

- Park, J., & Stoel, L. (2005). Effect of brand familiarity, experience and information on online apparel purchase. *International Journal of Retail & Distribution Management*, 33(2), 148-160.
- Parker, J., & Ng, Z. W. (2005). Egocentrism over e-mail: Can we communicate as well as we think. *Journal of Personality and Social Psychology*, 89(6), 925-936.
- Patterson, P., & Johnson, L. (1993). Disconfirmation of expectations and the gap model of service quality: An integrated paradigm. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 6, 90-99.
- Paunksnienė, Ž., & Banytė, J. (2012). Consumers' emotions in store environment: Why do emotions arise. *Economics and Management*, 17(1), 279-288.
- Peng, C., & Park, S. I. (2011). A real time system of crowd rendering: Parallel LOD and texture preserving approach on GPU. Edinburgh, UK: Fourth International Conference on Motion in Games.
- Pennebaker, J., Mehl, M. R., & Niederhoffer, K. (2003). Psychological aspects of natural language use: Our words, our selves. *Annual Review of Psychology*, 53, 547-577.
- Petzer, D. J., De Meyer, C. F., Svavi, S., & Svensson, G. (2012). Service receivers' negative emotions in airline and hospital service settings. *Journal of Services Marketing*, 26(7), 484-496.
- Pezdek, K. (2003). Event memory and autobiographical memory for the events of September 11, 2001. *Applied Cognitive Psychology*, 17(9), 1033-1045.
- Pham, M. T. (1998). Representativeness, relevance, and the use of feelings in decision making. *Journal of Consumer Research*, 25(2), 144-159.
- Philander, K., & Zhong, Y. (2016). Twitter sentiment analysis: Capturing sentiment from integrated resort tweets. *International Journal of Hospitality Management*, 55(2016), 16-24.
- Phillips, D. M., & Baumgartner, H. (2002). The role of consumption emotions in the satisfaction response. *Journal of Consumer Psychology*, 12(3), 243-252.
- Picard, R. (1997). *Affective computing*. Cambridge: MIT Press.

- Pine II, B., & Gilmore, J. (2011). *The experience economy: Work is theatre & every business is a stage*. Boston: Harvard Business Press.
- Pitt, C., Kietzmann, J., Botha, E., & Wallström, A. (2018). Emotions and sentiment: An exploration of artist websites. *Journal of Public Affairs, 18*(2).
- Plutchik, R. (1980). A general psycho evolutionary theory of emotion. In R. Plutchik, & H. Kellerman (Eds.), *Emotion: Theory, Research and Experience* (pp. 3-31). New York: Academic Press.
- Plutchik, R. (1980). A language for the emotions. *Psychology today, 13*(9), 68-78.
- Plutchik, R. (1980). *Emotion: A psychoevolutionary synthesis*. New York: Harper & Row.
- Plutchik, R. (1991). *The emotions*. Lanham, MD: University Press of America.
- Plutchik, R., & Kellerman, H. (1974). *The emotions profile index*. Los Angeles, CA: Western Psychological Services.
- Polit, D. F., & Beck, C. T. (2012). *Nursing research: Generating and assessing evidence for nursing practice* (9th ed.). Philadelphia: Wolters Kluwer.
- Pont, M., & McQuilken, L. (2005). An empirical investigation of customer satisfaction and loyalty across two divergent bank segments. *Journal of Financial Services Marketing, 9*(4), 344-359.
- Porter, S., & Birt, A. R. (2001). Is traumatic memory special? A comparison of traumatic memory characteristics with memory for other emotional life experiences. *Applied Cognitive Psychology, 15*(7), 101-117.
- Porter, S., & Peace, K. (2007). The scars of memory: A prospective, longitudinal investigation of the consistency of traumatic and positive emotional memories in adulthood. *Psychological Science, 18*(5), 435-441.
- Porter, S., Bellhouse, S., McDougall, A., ten Brinke, L., & Wilson, K. (2010). A prospective investigation of the vulnerability of memory for positive and negative emotional scenes to the misinformation effect. *Canadian Journal of Behavioural Science, 42*(1), 55-61. <https://doi.org/10.1037/a0016652>.
- Prati, L. M., & Prati, R. S. (2009). Managing ups and downs with clients: Managing emotions by financial advisors. *Journal of Personal Finance, 8*, 128-146.

- Price, L. L., Arnould, E. J., & Deibler, S. L. (1995). Consumers' emotional responses to service encounters: The influence of the service provider. *International Journal of Service Industry Management*, 6(3), 34-63.
- Price, L. L., Arnould, E. J., & Deibler, S. L. (1995). The influence of the service provider. *International Journal of Service Industry Management*, 6(3), 34-63.
- Price, L. L., Arnould, E. J., & Tierney, P. (1995). Going to extremes: Managing service encounters and assessing provider performance. *Journal of Marketing*, 59(2), 83-97.
- Prinz, J. (2004). *Gut reactions: A perceptual theory of emotion*. Oxford: Oxford University Press.
- Pritchard, M. P., Havitz, M. E., & Howard, D. R. (1999). Analyzing the commitment loyalty link in service contexts. *Journal of Academy of Marketing Science*, 27(3), 333-348.
- Pullman, M. E., & Gross, M. A. (2004). Ability of experience design elements to elicit emotions and loyalty behaviors. *Decision Sciences*, 35(3), 551-578.
- Putri, N. R., & Suhariadi, F. (2013). Relationship between customer satisfaction with customer word of mouth at the Beauty Clinic London Beauty Center. *Journal of Industrial and Organization Psychology*, 2(3), 169-176.
- QuestionPro. (2020). What is a cross-sectional study? Definition with examples. In *QuestionPro*. <https://www.questionpro.com/blog/cross-sectional-study/>. Retrieved from <https://www.questionpro.com/blog/cross-sectional-study/>
- Rapp, A., Beitelspacher, L. S., Schillewaert, N., & Baker, T. L. (2012). The differing effects of technology on inside vs. outside sales forces to facilitate enhanced customer orientation and interfunctional coordination. *Journal of Business Research*, 65(7), 929-936.
- Ravi, K., & Ravi, V. (2015). A survey on opinion mining and sentiment analysis: Tasks, approaches and applications. *Knowledge-based Systems*, 89, 14-46.
- Redelmeier, D. A., & Kahneman, D. (1996). Patients' memories of painful medical treatments: Real-time and retrospective evaluations of two minimally invasive procedures. *Pain*, 66(1), 3-8. [https://doi.org/10.1016/0304-3959\(96\)02994-6](https://doi.org/10.1016/0304-3959(96)02994-6).

- Redelmeier, D. A., Katz, J., & Kahneman, D. (2003). Memories of colonoscopy: A randomized trial. *Pain, 104*(1/2), 187-194.
- Redmore, S. (2015). Start from the question - A guide to unstructured text analysis. *Business Intelligence Journal, 20*(4), 20-27.
- Reich, A. Z., McCleary, K. W., Tepanon, Y., & Weaver, P. A. (2006). The impact of product and service quality on brand loyalty: An exploratory investigation of quick-service restaurants. *Journal of Foodservice Business Research, 8*(3), 35-53.
- Reichheld, F. F. (1993). Loyalty-based management. *Harvard Business Review, 71*(2), 64-73.
- Reichheld, F. F. (1996). Learning from customer defections. *Harvard Business Review, 74*(2), 56-69.
- Reichheld, F. F. (2001). *Loyalty rules - How today's leaders build lasting relationship*. USA: Harvard Business Review Press.
- Reichheld, F. F. (2001). *The loyalty effect: The hidden force behind growth, profits, and lasting value*. Boston, MA: Harvard Business School Press.
- Reichheld, F. F. (2003). The one number you need to grow. *Harvard Business Review, 81*(12), 46-54.
- Reichheld, F. F., & Sasser Jr, W. E. (1990). Zero defections: Quality comes to services. *Harvard Business Review, 68*(5), 105-112.
- Reichheld, F. F., & Schefter, T. (2000). E-loyalty. *Harvard Business Review, 78*(4), 105-113.
- Reisberg, D., & Heuer, F. (2004). Memory for emotional events. In D. Reisberg, & P. Hertel (Eds.), *Memory and emotion* (pp. 3-41). New York: Oxford University Press.
- Reisberg, M. (1996). Customer satisfaction in health care. *Perspectives on Administration and Supervision, 6*(2), 12-15.
- Reisenzein, R. (1994). Pleasure-arousal theory and the intensity of emotions. *Journal of Personality and Social Psychology, 67*(3), 525-539.
- Reynolds, K. E., & Arnolds, M. J. (2000). Costumer loyalty to the salesperson and the store: Examining relationship customers in an upscale retail context. *Journal of Personal Selling & Sales Management, 20*(2), 89-98.



- Richards, K. (2003). *Qualitative inquiry in TESOL*. Basingstoke: Palgrave Macmillan.
- Richins, M. L. (1997). Measuring emotions in the consumption experience. *Journal of Consumer Research*, 24, 127-146.
- Riloff, E., Wiebe, J., & Wilson, T. (2003). Learning subjective nouns using extraction pattern. *Proceedings of the Conference on Natural Language Learning*, 25-32.
- Ritchie, T. D., & Batteson, T. J. (2013). Perceived changes in ordinary autobiographical events' affect and visual imagery colourfulness. *Consciousness and Cognition*, 22, 461-470.
- Ritchie, T. D., Skowronski, J. J., Hartnett, J. L., Wells, B. M., & Walker, W. R. (2009). The fading affect bias in the context of emotion activation level, mood, and personal theories of emotion change. *Memory*, 17, 428-444.
- Ritchie, T. D., Skowronski, J. J., Wood, S. E., Walker, W. R., Vogl, R. J., & Gibbons, J. A. (2006). Event self-importance, event rehearsal, and the fading affect bias in autobiographical memory. *Self and Identity*, 5, 172-195.
- Roebuck, K. (2012). *Sentiment analysis: High-impact strategies - What you need to know: Definitions, adoptions, impact, benefits, maturity, vendor*. Emereo Publishing.
- Roseman, I. J. (1984). Cognitive determinants of emotions: A structural theory. In P. Shaver (Ed.), *Review of Personality and Social Psychology*, Vol. 5 (pp. 11-36). Beverly Hills, California: Sage.
- Roseman, I. J. (1991). Appraisal determinants of discrete emotions. *Cognition and Emotion*, 5, 136-200.
- Roseman, I. J. (1996). Appraisal determinants of emotions: Constructing a more accurate and comprehensive theory. *Cognition & Emotion*, 10(3), 241-278.
- Roseman, I. J. (2001). A model of appraisal in the emotion system: Integrating theory, research, and applications. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Series in affective science. Appraisal processes in emotion: Theory, methods, research* (pp. 68-91). New York: Oxford University Press.
- Roseman, I. J., & Smith, C. A. (2001). Appraisal theory: Overview, assumptions, varieties, controversies. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Series in affective*

- science. Appraisal processes in emotion: Theory, methods, research* (pp. 3-19). New York: Oxford University Press.
- Ross, M. (1989). Relation of implicit theories to the construction of personal histories. *Psychological Review*, 96(2), 341–357. <https://doi.apa.org/doiLanding?doi=10.1037%2F0033-295X.96.2.341>.
- Ross, R. T. (1938). A statistic for circular scales. *Journal of Educational Psychology*, 29, 384-389.
- Rouse, M., & Bernstein, C. (2018). *Computational Linguistics*. Retrieved from <https://searchenterpriseai.techtarget.com/definition/computational-linguistics-CL>
- Rouse, M., Tucci, L., Burns, E., & Laskowski, N. (2020). *AI - Artificial Intelligence*. Retrieved from <https://searchenterpriseai.techtarget.com/definition/AI-Artificial-Intelligence>
- Rout, J. K., Choo, K. R., Dash, A. K., Bakshi, S., Jena, S. K., & Williams, K. L. (2018). A model for sentiment and emotion analysis of unstructured social media text. *Electronic Commerce Research*, 18, 181-199.
- Rozin, P., & Royzman, E. B. (2001). Negativity bias, negativity dominance, and contagion. *Personality and Social Psychology Review*, 5(4), 296-320.
- Rubin, D. C., & Kozin, M. (1984). Vivid memories. *Cognition*, 16(1), 81-95. [https://doi.org/10.1016/0010-0277\(84\)90037-4](https://doi.org/10.1016/0010-0277(84)90037-4).
- Rundle-Thiele, S., & Mackay, M. M. (2001). Assessing the performance of brand loyalty measures. *Journal of Services Marketing*, 15(7), 529–546.
- Russell, J. A. (1979). Affective space is bipolar. *Journal of Personality and Social Psychology*, 37, 345-356.
- Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology*, 39(6), 1161-1178.
- Russell, J. A. (1991). Culture and the categorization of emotion. *Psychological Bulletin*, 110, 426-450.
- Russell, J. A. (2003). Core affect and the psychological construction of emotion. *Psychological Review*, 110(1), 145-172.

- Russell, J. A., & Barrett, F. L. (1999). Core affect, prototypical emotional episodes, and other things called emotion: Dissecting the elephant. *Journal of Personality and Social Psychology, 76*, 805–819.
- Russell, J. A., & Mehrabian, A. (1977). Evidence for a three-factor theory of emotions. *Journal of Research in Personality, 11*(3), 273-294.
- Russell, J. A., & Pratt, G. (1980). A description of the affective quality attributed to environments. *Journal of Personality and Social Psychology, 38*(2), 311-322.
- Russell, J. A., Weiss, A., & Mendelsohn, G. A. (1989). Affect grid: A single-item scale of pleasure and arousal. *Journal of Personality and Social Psychology, 57*, 493-502.
- Rust, R. T., & Oliver, R. L. (1993). *Service quality: New directions in theory and practice (Vol. 15)*. Thousand Oaks, California: SAGE Publications.
- Rust, R. T., & Oliver, R. L. (2000). Should we delight the customer. *Journal of the Academy of Marketing Science, 28*(1), 86-94.
- Ruth, J. A. (2001). Promoting a brand's emotion benefits: The influence of emotion categorization processes on consumer evaluations. *Journal of Consumer Psychology, 11*(2), 99-113.
- Rychalski, A., & Hudson, S. (2016). Asymmetric effects of customer emotions on satisfaction and loyalty in a utilitarian service context. *Journal of Business Research, 71*, 84-91. <https://doi.org/10.1016/j.jbusres.2016.10.014>.
- Ryding, D. (2010). The impact of new technologies on customer satisfaction and business to business customer relationships: Evidence from the soft drinks industry. *Journal of Retailing and Consumer Services, 17*(3), 224-228.
- Rylander, R. G., Propst, D. B., & McMurtry, T. R. (1995). Nonresponse and recall biases in a survey of traveler spending. *Journal of Travel Research, 33*(4), 39-45.
- Ryu, K., Lee, H., & Kim, W. (2012). The influence of the quality of the physical environment, food, and service on restaurant image, customer perceived value, customer satisfaction, and behavioural intentions. *International Journal of Contemporary Hospitality Management, 24*(2), 200-223.

- Santos, D., & Maia, B. (2018). Language, emotion, and the emotions: A computational introduction. *Language and Linguistics Compass*, 12(5).
- Saravanan, R., & Rao, K. S. (2007). Measurement of service quality from the customer's perspective – An empirical study. *Total Quality Management*, 18(4), 435-449.
- Sarkar, T., & Batabyal, A. K. (2011). Evaluation of customer satisfaction in R&D organization: A conceptual framework. *Asian Journal on Quality*, 12(1), 20-29.
- Scarantino, A. (2014). The motivational theory of emotions. In J. D'Arms, & D. Jacobson (Eds.), *Moral psychology and human agency: Philosophical essays on the science of ethics* (pp. 156-185. <https://doi.org/10.1093/acprof:oso/9780198717812.003.0008>). Oxford University Press.
- Scarantino, A. (2016). The philosophy of emotions and its impact on affective science. In M. Lewis, J. Haviland-Jones, & L. F. Barrett (Eds.), *The Handbook of Emotions* (pp. 3–48). New York: The Guilford Press.
- Schachter, S., & Singer, J. E. (1962). Cognitive, social, and physiological determinants of emotional state. *Psychological Review*, 69, 379-399.
- Schacter, D. L. (1996). *Searching for memory*. New York: Basic.
- Schacter, D. L. (2001). *The seven sins of memory: How the mind forgets and remembers*. New York: Houghton Mifflin Company.
- Scherer, K. (2001). Toward a dynamic theory of emotion. The component process of affective. *Cognition and Emotion*, 1(1).
- Scherer, K. R. (1993). Studying the emotion-antecedent appraisal process: An expert system approach. *Cognition and Emotion*, 7(May-July), 325-355.
- Scherer, K. R. (2005). What are emotions? And how can they be measured. *Social Science Information*, 3(44), 695-729.
- Scherer, K. R. (2010). The component process model: A blueprint for a comprehensive computational model of emotion. In K. R. Scherer, T. Bänziger, & E. B. Roesch (Eds.), *Blueprint for Affective Computing: A Sourcebook* (pp. 47-70). Oxford: Oxford University Press.

- Schmitt, B. (1999). Experiential marketing. *Journal of Marketing Management*, 15(1-3), 53-67.
- Schmitt, B. H. (1999). *Experiential marketing: How to get customers to sense, feel, think, act, and relate to your company and brands*. New York: Free Press.
- Schmitt, N. (1996). Uses and abuses of coefficient alpha. *Psychological Assessment*, 8(4), 350-353. doi:10.1037 /1040-3590.8.4.350.
- Schneider, B. (1991). Service quality and profits: Can you have your cake and eat it too. *Human Resource Planning*, 14(2), 151-157.
- Schreiber, C. A., & Kahneman, D. (2000). Determinants of the remembered utility of aversive sounds. *Journal of Experimental Psychology: General*, 129(1), 27-42. <https://doi.org/10.1037/0096-3445.129.1.27>.
- Schubert, L. (2020). *Computational linguistics*. (E. N. Zalta, Editor) Retrieved from <https://plato.stanford.edu/archives/spr2020/entries/computational-linguistics/>
- Schwartz, G. E., Weinberger, D. A., & Singer, J. A. (1981). Cardiovascular differentiation of happiness, sadness, anger and fear following imagery and exercise. *Psychosomatic Medicine*, 43(4), 343-364.
- Schwarz, N. (1990). Feelings as information: informational and motivational functions of affective states. In E. T. Higgins (Ed.), *Handbook of motivation and cognition: Foundations of social behavior* (pp. 521-561). New York: Guilford Press.
- Schwarz, N., & Bless, H. (1991). Happy and mindless, but sad and smart? The impact of affective states on analytic reasoning. In J. P. Forgas (Ed.), *Emotion and social judgements* (pp. 55-71). Elmsford, NY: Pergamon Press.
- Seeram, E. (2019). An overview of correlational research. *Radiologic Technology*, 91(2), 177.
- Sekaran, U., & Bougie, R. (2010). *Research methods for business: A skill building approach* (5th ed.). New Delhi: John Wiley & Sons, Ltd.
- Sernovitz, A. (2006). *Word of mouth marketing: How smart companies, get people talking*. Chicago: Kaplan Publishing.
- Serra-Cantallops, A., Ramon-Cardona, J., & Salvi, F. (2020). Antecedents of positive eWOM in hotels. Exploring the relative role of satisfaction, quality and positive emotional

- experiences. *International Journal of Contemporary Hospitality Management*, 32(11), 3457-3477. <https://doi.org/10.1108/IJCHM-02-2020-0113>.
- Seva, R. R., Duh, H. B., & Helander, M. G. (2010). Factors affecting emotional responses in mobile phone design evaluation. *DLSU Business & Economics Review*, 19(2), 43-52.
- Shapiro, T., & Nieman-Gonder, J. (2006). Effect of communication mode in justice-based service recovery. *Managing Service Quality*, 16(2), 124-144.
- Sharabi, M., & Davidow, M. (2010). Service quality implementation: Problems and solutions. *International Journal of Quality and Service Sciences*, 2(2), 189-205.
- Sharma, N., & Patterson, P. G. (1999). The impact of communication effectiveness and service quality on relationship commitment in consumer professional services. *The Journal of Services Marketing*, 13, 151-170.
- Shaver, P., Schwartz, J., Kirson, D., & O'Connor, C. (1987). Emotion knowledge: Further exploration of a prototype approach. *Journal of Personality and Social Psychology*, 52(June), 1061-1086.
- Shiv, B., & Fedorikhin, A. (1999). Heart and mind in conflict: The interplay of affect and cognition in consumer decision making. *Journal of Consumer Research*, 26(3), 278-292.
- Shobe, K. K., & Kihlstrom, J. F. (1997). Is traumatic memory special. *Current Directions in Psychological Science*, 6, 70-74.
- Shoemaker, S., & Lewis, R. C. (1999). Customer loyalty: The future of hospitality marketing. *International Journal of Hospitality Management*, 18, 345-370.
- Shouse, E. (2005). *Feeling, emotion, affect*. Retrieved from <https://journal.media-culture.org.au/mcjournal/article/view/2443>
- Shuman, V., Sander, D., & Scherer, K. R. (2013). Levels of valence. *Frontiers in Psychology*, 4(Article 261).
- Silverman, G. (2001). *The secrets of word-of-mouth marketing: How to trigger exponential sales through runaway word of mouth*. New York: American Management Association.

- Silvestro, R., & Cross, S. (2000). Applying the service profit chain in a retail environment: Challenging the "satisfaction mirror". *International Journal of Service Industry Management, 11*(3), 244-268.
- Singer, J. A., & Salovey, P. (1991). Organized knowledge structures and personality: Person schemas, self schemas, prototypes, and scripts. In M. J. Horowitz (Ed.), *Person schemas and maladaptive interpersonal patterns* (pp. 33–79). Chicago, IL: University of Chicago Press.
- Skowronski, J. J. (2011). The positivity bias and the fading affect bias in autobiographical memory: A self-motives perspective. In M. D. Alicke, & C. Sedikides (Eds.), *Handbook of self enhancement and self-protection* (pp. 211-234). New York, NY: Guilford.
- Skowronski, J. J., Betz, A. L., Thompson, C. P., & Shannon, L. (1991). Social memory in everyday life: The recall of self-events and other-events. *Journal of Personality and Social Psychology, 60*, 831-843.
- Skowronski, J. J., Gibbons, J. A., Vogl, R. J., & Walker, W. R. (2004). The effects of social disclosure on the affective intensity provoked by autobiographical memories. *Self and Identity, 3*, 285-309.
- Skowronski, J. J., Walker, W. R., Henderson, D. X., & Bond, G. D. (2014). The fading affect bias: Its history, its implications, and its future. In J. M. Olson, & M. P. Zanna (Eds.), *Advances in experimental social psychology* (pp. 163-218). San Diego, CA: Academic Press.
- Smith, A. K., & Bolton, R. N. (2002). The effect of customers' emotional responses to service failures on their recovery effort evaluations and satisfaction judgments. *Journal of the Academy of Marketing Science., 30*(1), 5-23.
- Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology, 48*(4), 813–838.
- Smith, C. A., & Kirby, L. D. (2009). Putting appraisal in context: Toward a relational model of appraisal and emotion. *Cognition and Emotion, 23*(7), 1352–1372.
- Smith, C. A., & Lazarus, R. S. (1993). Appraisal components, core relational themes, and the emotions. *Cognition and Emotion, 7*, 233-269.

- Snape, D., & Spencer, L. (2003). The foundations of qualitative research. In J. Richie, & J. Lewis (Eds.), *Qualitative Research Practice* (pp. 1-23). Los Angeles: Sage.
- Snyder, D. R. (1986). Service loyalty and its measurement: A preliminary investigation. In M. Venkatesan, D. M. Schmalensee, & C. Marshall (Eds.), *Creativity in Service Marketing: What's New, What Works, What's Developing* (pp. 44-48). Chicago, IL: AMA.
- Solomon, R. C., & Stone, L. D. (2002). On "positive" and "negative" emotions. *Journal for the Theory of Social Behaviour*, 32(4), 417-435.
- Solomon, R. L. (1980). The opponent-process theory of acquired motivation: The costs of pleasure and benefits of pain. *American Psychologist*, 35, 691-712.
- Solomon, R. L., & Corbit, J. D. (1974). An opponent-process theory of motivation: Temporal dynamics of affect. *Psychological Review*, 81, 119-145.
- Soscia, I. (2007). Gratitude, delight, or guilt: The role of consumers' emotions in predicting post-consumption behaviours. *Psychology & Marketing*, 24(10), 871-894.
- Southwick, S. M., Morgan, C. A., Nicolaou, A. L., & Charney, D. S. (1997). Consistency of memory for combat-related traumatic events in veterans of Operation Desert Storm. *American Journal of Psychiatry*, 154, 173-177.
- Spreng, R., & Mackoy, R. (1996). An empirical examination of a model of perceived service quality and satisfaction. *Journal of Retailing*, 72(2), 201-214.
- Srinivasan, S., Anderson, R., & Ponnayolu, K. (2002). Customer loyalty in e-commerce: An exploration of its antecedent and consequences. *Journal of Retailing*, 78(1), 41-50.
- Srivastava, R., & Bhatia, M. P. (2012). Quantifying modified opinion strength: A fuzzy inference system for sentiment analysis. In *Proceedings 2012 International Conference on Advances in Computing, Communications and Informatics* (pp. 1512-1519). Mysore, India.
- Standing, C., Holzweber, M., & Mattsson, J. (2016). Exploring emotional expressions in e-word-of-mouth from online communities. *Information Processing & Management*, 52(5), 721-732.



- Stašys, R., & Malikovas, A. (2010). Vartotojų lūkesčiams darantys įtaką veiksniai. *Management Theory and Studies for Rural Business and Infrastructure Development*, 22(3), 166-173.
- Stauss, B., & Neuhaus, P. (1997). The qualitative satisfaction model. *International Journal of Service Industry Management*, 5(5), 21-38.
- Steenkamp, J. (1990). Conceptual model of the quality perception process. *Journal of Business Research*, 21(4), 309-333.
- Stein, N. L., & Levine, L. J. (1987). Thinking about feelings: The development and organization of emotional knowledge. In R. E. Snow, & F. M. (Eds.), *Aptitude, learning, and instruction: Vol. 3. Cognition, conation and affect* (pp. 165-197). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Stein, N. L., Ornstein, P. A., Tversky, B., & Brainerd, C. (1997). *Memory for everyday and emotional events*. New Jersey: Lawrence Erlbaum Associates.
- Stieglitz, S., & Dang-Xuan, L. (2012). Social media and political communication: A social media analytics framework. *Social Network Analysis and Mining*, 3, 1277–1291.
- Stone, A. A., Schwartz, J. E., Broderick, J. E., & Shiffman, S. S. (2005). Variability of momentary pain predicts recall of weekly pain: A consequence of the peak (or salience) memory heuristic. *Personality and Social Psychology Bulletin*, 31, 1340–1346.
- Strapparava, C., & Valitutti, A. (2004). WordNet-Affect: An affective extension of WordNet. *Proceedings of LREC*, 4, 1083-1086.
- Strauss, M. E., & Smith, G. T. (2009). Construct validity: Advances in theory and methodology. *Annual Review of Clinical Psychology*, 5, 1-25.
- Subasic, P., & Huettner, A. (2000). Affect analysis of text using fuzzy semantic typing. *IEEE Transactions on Fuzzy Systems*, 2(4), 483-496.
- Sureshchandar, G. S., Rajendran, C., & Anantharaman, R. N. (2002). Determinants of customer perceived service quality: a confirmatory factor analysis approach. *Journal of Services Marketing*, 16(1), 9–34.
- Surprenant, C. F., & Solomon, M. R. (1987). Predictability and personalization in the service encounter. *Journal of Marketing*, 51, 86-96.

- Sweeney, J., Soutar, G., & Mazzarol, T. (2008). Factors influencing word of mouth effectiveness: receiver perspectives. *European Journal of Marketing*, 42(3/4), 344-364.
- Syed, S. A., & Amiya, K. B. (1994). Technical complexity and consumer knowledge as moderators of service quality: Evaluation in the automobile service industry. *Journal of Retailing*, 70(4), 367-381.
- Szpunar, K. K., Addis, D. R., & Schacter, D. L. (2012). Memory for emotional simulations: Remembering a rosy future. *Psychological Science*, 23, 24-29. <http://dx.doi.org/10.1177/0956797611422237>.
- Szymanski, D. M., & Henard, D. H. (2001). Customer satisfaction: A meta-analysis of the empirical evidence. *Journal of the Academy of Marketing Science*, 29(1), 16-35.
- Talarico, J. M., LaBar, K. S., & Rubin, D. C. (2004). Emotional intensity autobiographical memory experience. *Memory and Cognition*, 32, 1118-1132.
- Talarico, M. J., Berntsen, D., & Rubin, D. C. (2009). Positive emotions enhance recall of peripheral details. *Cognition and Emotion*, 23, 380-398.
- Tao, J., & Tan, T. (2005). Affective computing: A review. *Lecture Notes in Computer Science*, 3784, 981-995.
- Tavakol M, D. R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53-55.
- Taylor, S. A. (2009). Reconciling satisfaction, emotions, attitudes and ambivalence within consumer models of judgement and decision making: A cautionary tale. *Journal of Consumer Satisfaction, Dissatisfaction & Complaining Behaviour*, 21, 41-65.
- Taylor, S. E. (1991). Asymmetrical effects of positive and negative events: The mobilization minimization hypothesis. *Psychological Bulletin*, 110, 67-85.
- Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. Online: SAGE.
- Thayer, R. E. (2001). *Calm energy: How people regulate mood with food and exercise*. New York: Oxford University Press.

- Thelwall, M., Buckley, K., & Paltoglou, G. (2011). Sentiment in Twitter events. *Journal of the American Society for Information Science and Technology*, *62*(2), 406-418.
- Thelwall, M., Buckley, K., Paltoglou, G., Cai, D., & Kappas, A. (2010). Sentiment strength detection in short informal text. *Journal of the Association for Information Science and Technology*, *61*(12), 2544–2558.
- Thomas, D. L., & Diener, E. (1990). Memory accuracy in the recall of emotions. *Journal of Personality and Social Psychology*, *59*(2), 291–297.
- Tidwell, P. M., Horgan, D. D., & Kenny, C. T. (1992). Brand character as a function of brand loyalty. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*, *11*(4), 347–353.
- Trope, Y., & Liberman, N. (2003). Temporal construal. *Psychological Review*, *110*, 403-421.
- Tsai, M., Tsai, C., & Chang, H. (2010). The effect of customer value, customer satisfaction, and switching costs on customer loyalty: An empirical study of hypermarkets in taiwan. *Social Behavior and Personality*, *38*(6), 729-740.
- Tse, D. K., & Wilton, P. C. (1988). Models of consumer satisfaction formation: An extension. *Journal of Marketing Research*, *25*, 204-212.
- Valdivia, A., Luzón, M. V., & Herrera, F. (2017). Sentiment analysis in tripadvisor. *IEEE Intelligent Systems*, *32*(4), 72-77.
- Van den Bos, G. (2006). *APA Dictionary of Psychology*. Washington, DC: American Psychological Association.
- Van der Kolk, B. A., & Fisler, R. (1995). Dissociation and the fragmentary nature of traumatic memories: Overview and exploratory study. *Journal of Traumatic Stress, Special issue: Research on traumatic memory*, *8*, 505-525.
- Van Dolen, W., Lemmink, J., Mattsson, J., & Rhoen, I. (2001). Affective consumer responses in service encounters: The emotional content in narratives of critical incidents. *Journal of Economics Psychology*, *22*, 359-376.
- Varela-Neira, C., Vazquez-Casielles, R., & Iglesias-Arguelles, V. (2008). The influence of emotions on customer's cognitive evaluations and satisfaction in a service failure and recovery context. *The Service Industries Journal*, *28*(4), 497–512.

- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(1), 1-17.
- Verhoef, P. C., Franses, P. H., & Hoekstra, J. C. (2002). The effect of relational constructs on customer referrals and number of services purchased from a multiservice provider: Does age of relationship matter. *Journal of the Academy of Marketing Science*, 30(3), 202-216.
- Vishal, B., Pillai, R., & Arnold, M. (2015). Valence- and arousal-focused emotional clusters among highly-satisfied customers. *Journal of Managerial Issues*, 27(1-4), 43-62.
- Walker, W. R., & Skowronski, J. J. (2009). The fading affect bias: But what the hell is it for. *Applied Cognitive Psychology*, 23, 1122- 1136.
- Walker, W. R., Vogl, R. J., & Thompson, C. P. (1997). Autobiographical memory: Unpleasantness fades faster than pleasantness over time. *Applied Cognitive Psychology*, 11, 399-413.
- Wall, T. D., & Payne, R. (1973). Are deficiency scores deficient. *Journal of Applied Psychology*, 58, 322-326.
- Wang, Y., Lo, H. P., & Hui, Y. V. (2003). The antecedents of service quality and product quality and their influences on bank reputation: Evidence from the banking industry in China. *Managing Service Quality*, 13(1), 72-83.
- Watson, D., & Tellegen, A. (1985). Toward a consensual structure of mood. *Psychological Bulletin*, 98, 219-235.
- Watson, L., & Spence, M. T. (2007). Causes and consequences of emotions on consumer behaviour. *European Journal of Marketing*, 41(5/6), 487-511.
- Weber, R. P. (1985). *Basic content analysis*. Sage University series on quantitative applications in social sciences. Beverly Hills, CA, and London: Sage.
- Webster, M. (n.d.). *Merriam-Webster Dictionary*. Retrieved from <http://www.merriam-webster.com/>
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92(4), 548-573.

- Weiten, W. (1989). *Psychology: Themes and variations*. California: Brooks/Cole Publishing company.
- West, S. G., Taylor, A. B., & Wu, W. (2012). Model fit and model selection in structural equation modeling. In R. H. Hoyle (Ed.), *Handbook of structural equation modeling* (pp. 209-231). New York: Guilford Press.
- Westbrook, R. A. (1987). Product/consumption-based affective responses and postpurchase processes. *Journal of Marketing Research*, 24(3), 258–270.
- Westbrook, R. A., & Oliver, R. L. (1991). The dimensionality of consumption emotion patterns and consumer satisfaction. *Journal of Consumer Research*, 18(1), 84-91.
- Westbrook, R. A., & Reilly, M. D. (1983). Value-percept disparity: An alternative to the disconfirmation of expectations theory of consumer satisfaction. In R. P. Bagozzi, & A. M. Tybout (Eds.), *NA - Advances in Consumer Research Volume 10* (pp. 256-261). Ann Arbor, MI: Association for Consumer Research.
- White, C. (2007). The dynamic role of consumption emotions: Implications for the service quality, satisfaction and word of mouth process. Bangkok: Paper presented to 9th International Decision Science Institute Conference.
- White, C. J. (2010). The impact of emotions on service quality, satisfaction, and positive word-of-mouth intentions over time. *Journal of Marketing Management*, 26(5), 381-394.
- White, C., & Yu, Y. (2005). Satisfaction emotions and consumer behavioral intentions. *Journal of Services Marketing*, 19(6), 411-420.
- Wiebe, J. (1994). Tracking point of view in narrative. *Computational Linguistics*, 20, 233–287.
- Wiebe, J., & Deng, L. (2014). An Account of Opinion Implicatures. arXiv,1404.6491v1.
- Wiebe, J., & Riloff, E. (2005). Creating subjective and objective sentence classifiers from unannotated texts. *CICLing'05: Proceedings of the 6th international conference on Computational Linguistics and Intelligent Text Processing*, 486-497.
- Wiegand, M., Klenner, M., & Klakow, D. (2013). Bootstrapping polarity classifiers with rule-based classification. *Language Resources and Evaluation*, 1-40.

- Wijaya, B., & Yulita, H. (2020). Effect of emotional experience, electronic word of mouth, reputation, customer satisfaction on loyalty. *Ilomata International Journal of Management*, 1(4), 215-227.
- Wikipedia. (2021). *Machine learning*. Retrieved from [https://en.wikipedia.org/wiki/Machine\\_learning](https://en.wikipedia.org/wiki/Machine_learning)
- Williams, A. (2006). Tourism and hospitality marketing: Fantasy, feeling and fun. *International Journal of Contemporary Hospitality Management*, 18(6), 482-495.
- Williams, L. M., & Banyard, V. L. (1999). *Trauma and memory*. Thousand Oaks: Sage Publications.
- Wilson, T. D., Meyers, J., & Gilbert, D. T. (2001). Lessons from the past: Do people learn from experience that emotional reactions are short-lived. *Personality and Social Psychology Bulletin*, 27(December), 1648–1661.
- Wilson, T., Wiebe, J., & Hoffmann, P. (2009). Recognizing contextual polarity: An exploration of features for phrase-level sentiment analysis. *Computational Linguistics*, 35(3), 399–433.
- Wilson, T., Wiebe, J., & Hwa, R. (2006). Recognizing strong and weak opinion clauses. *Computational Intelligence*, 22(2), 73–99.
- Winograd, E., & Neisser, U. (1992). *Affect and accuracy in recall: Studies of 'flashbulb' memories*. New York: Cambridge University Press.
- Wirtz, D., Kruger, J., Scollon, C. N., & Diener, E. (2003). What to do on spring break? The role of predicted, on-line, and remembered experience in future choice. *Psychological Science*, 14, 520-524.
- Wirtz, J., & Bateson, J. E. (1999). Consumer satisfaction with services: Integrating the environment perspective in services marketing into the traditional disconfirmation paradigm. *Journal of Business Research*, 44, 55–66.
- Wirtz, J., Mattila, A. S., & Tan, R. L. (2000). The moderating role of target-arousal on the impact of affect on satisfaction - An examination in the context of service experiences. *Journal of Retailing*, 76(3), 347–365.

- Witkowski, T. H., & Thibodeau, E. J. (1999). Personal bonding processes in international marketing relationships. *Journal of Business Research*, 46(3), 315–325.
- Witten, I. H., & Frank, E. (2005). *Data mining: Practical machine learning tools and techniques* (2nd ed.). Burlington: Morgan Kaufman.
- Wong, A. (2004). The role of emotional satisfaction in service encounters. *Managing Service Quality*, 14(5), 365-376.
- Wong, A., & Sohal, A. (2003). Service quality and customer loyalty perspectives on two level of retail relationships. *Journal of Services Marketing*, 17(5), 495-513.
- Wong, K. L., Ong, S. F., & Kuek, T. Y. (2012). Constructing a survey questionnaire to collect data on service quality of business academics. *European Journal of Social Sciences*, 29, 209-221.
- Woodside, A. G., Frey, L. L., & Daly, R. T. (1989). Linking service quality, customer satisfaction, and behavioral intention. *Journal of Health Care Marketing*, 9(4), 5-17.
- Woodworth, R. (1938). *Experimental Psychology*. New York: Henry Holt.
- Wright, S. (1921). Correlation and causation. *Journal of Agricultural Research*, 20(7), 557-585.
- Xiang, Z., Du, Q., Ma, Y., & Fan, W. (2017). A comparative analysis of major online review platforms: Implications for social media analytics in hospitality and tourism. *Tourism Management*, 58, 51–65.
- Xue, F., & Zhou, P. (2010). The effects of product involvement and prior experience on Chinese consumers' responses to online word of mouth. *Journal of International Consumer Marketing*, 23(1), 45-58.
- Yadollahi, A., Shahraki, A. G., & Zaiane, O. R. (2017). Current state of text sentiment analysis from opinion to emotion mining. *ACM Computing Surveys (Article 25)*, 50(2), 1-33.
- Yanamandram, V., & White, L. (2006). Switching barriers in business-to-business services: A qualitative study. *International Journal of Service Industry Management*, 17(2), 158-192. <https://doi.org/10.1108/09564230610656980>.

- Yang, J., & Mai, E. S. (2010). Experiential goods with network externalities effects: An empirical study of online rating system. *Journal of Business Research*, 63(9), 1050-1057.
- Yang, L., Lin, H., Lin, Y., & Liu, S. (2016). Detection and extraction of hot topics on Chinese microblogs. *Cognitive Computation*, 8(4), 577-586.
- Yi, Y. (1990). A critical review of consumer satisfaction. In V. A. Zeithaml (Ed.), *Review of Marketing* (pp. 68-123). Chicago: American Marketing Association.
- Yik, M. S., Russell, J. A., & Feldman, B. L. (1999). Structure of self-reported current affect: Integration and beyond. *Journal of Personality and Social Psychology*, 77, 600-619.
- Ying, H. L., & Chung, C. M. (2007). The effects of single-message single-source mixed word of-mouth on product attitude and purchase intention. *Asia Pacific Journal of Marketing and Logistics*, 19(1), 75-86.
- Yu, Y. T., & Dean, A. (2001). The contribution of emotional satisfaction to consumer loyalty. *International Journal of Service Industry Management*, 12(3), 234-250.
- Yuen, E. F., & Chan, S. S. (2010). The effect of retail service quality and product quality on customer loyalty. *Database Marketing & Customer Strategy Management*, 17(3/4), 222-240.
- Yüksel, A. (2007). Tourist shopping habitat: Effects on emotions, shopping value and behaviours. *Tourism Management*, 28, 58-69.
- Yusof, Y., Awang, Z., Jusoff, K., & Ibrahim, Y. (2017). The influence of green practices by non-green hotels on customer satisfaction and loyalty in hotel and tourism industry. *International Journal of Green Economics*, 11(1), 1-14.
- Zajonc, R. B. (1968). Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology*, 9, 1-27.
- Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist*, 35, 151-175.
- Zajonc, R. B., & Markus, H. (1984). Affect and cognition: The hard interface. In C. E. Izard, J. Kagan, & R. B. Zajonc (Eds.), *Emotions, Cognition, and Behaviour* (pp. 73-102). Cambridge: Cambridge University Press.



- Zaltman, G. (1997). Rethinking market research: Putting people back in. *Journal of Marketing Research*, 34(4), 424-437.
- Zauberman, G., Ratner, R. K., & Kim, B. K. (2009). Memories as assets: Strategic memory protection in choice over time. *Journal of Consumer Research*, 35(5), 715-728.
- Zeelenberg, M., & Pieters, R. (2004). Beyond valence in customer dissatisfaction: A review and new findings on behavioral responses to regret and disappointment in failed services. *Journal of Business Research*, 57(4), 445-455.
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *The Journal of Marketing*, 52(3), 2-22.
- Zeithaml, V. A. (1991). How consumer evaluation processes differ between goods and services. In J. H. Donnelly, & W. R. George (Eds.), *Marketing of Services*, American Marketing Association (pp. 186-190). Chicago.
- Zeithaml, V. A., & Bitner, M. J. (1996). *Service Marketing*. New York: McGraw-Hill.
- Zeithaml, V. A., & Bitner, M. J. (2000). *Services Marketing*. New York: McGraw-Hill.
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(2), 31-46.
- Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2006). *Services marketing: Integrating customer focus across the firm*. New York, NY: McGraw-Hill.
- Zhang, L., & Liu, B. (2016). Sentiment analysis and opinion mining. *Encyclopedia of Machine Learning and Data Mining*, 5, 1-10.
- Zhang, Z., Ye, Q., Law, R., & Li, Y. (2010). The impact of e-word-of-mouth on the online popularity of restaurants: A comparison of consumer reviews and editor reviews. *International Journal of Hospitality Management*, 29(4), 694-700.
- Zineldin, M. (2000). Total relationship management (TRM) and total quality management (TQM). *Managerial Auditing Journal*, 15(1/2), 20-28.
- Zins, A. H. (2002). Consumption emotions experience quality and satisfaction: A structural analysis for complainers versus non-complainers. *Journal of Travel and Tourism Marketing*, 12(2/3), 3-18.

Žnideršić, R. K., Marić, D. A., & Grubor, A. (2009). Consumer evaluation of the service quality. *Ekonomске Teme*, 47(4), 169-185.

**Appendix A: E-mail survey invitation****Tell us about your experience with your personal banker**

Dear [Customer name]

Customer expectations have rapidly risen in the past few years and the bank has embarked on a Customer Experience Measurement initiative in order to understand customer needs and expectations.

The bank is continuously seeking ways of improving our service offering to you as a valued customer. Therefore, we invite you to participate in a research study to evaluate your service experience with your personal banker.

This is an invitation to complete the questionnaire. Please click on the link to complete the questionnaire [Survey URL].

**Please note the following:**

All of the information will remain strictly confidential, as per the Code of Conduct of SAMRA (Southern African Market Research Association) and will only be used for research purposes.

At no point during this survey will you be asked for any personal details. No confidential or personally identifiable information will be shared with any third party.

To confirm the legitimacy of this study please feel free to contact [the researcher] at the following e-mail address. [e-mail address]

Yours sincerely,

The Bank

If you do not wish to receive any further invitations to participate in research studies, please use the following link to unsubscribe [Unsubscribe link].

## **Appendix B: Transactional Customer Satisfaction Questionnaire**

### **Introduction**

Dear Customer,

Thank you for your willingness to participate in the customer satisfaction survey. The purpose of the survey is to obtain information regarding your experience with your personal banker.

As one of our valued customers your feedback will be used improve the experience provided by your personal banker.

All information that you provide is strictly confidential and will only be used for research purposes.

Your feedback will be analysed on an aggregated level together with the responses of other customers. No personal information will be collected during the survey.

The interview will take approximately 3 to 5 minutes to complete

### **Questionnaire**

Please think about your most recent experience with your personal banker and answer all questions as truthfully as possible.

**1. Please describe any emotion you experienced as vividly as possible in your own words.**

|  |
|--|
|  |
|--|

**2. Please indicate the degree to which you experienced these emotions.**

*Please answer the following questions using a 10-point scale, where 0 means “slightly felt” and 10 means “strongly felt”. You may also choose any number in between depending on your experience.*

|   | Slightly felt |   |   |   |   |   | Strongly felt |   |   |   |    |    |
|---|---------------|---|---|---|---|---|---------------|---|---|---|----|----|
| Degree to which you experienced the emotion | 0             | 1 | 2 | 3 | 4 | 5 | 6             | 7 | 8 | 9 | 10 | DK |

**3. What was the reason why you experienced these emotions?**

**4. Please indicate how well your personal banker performed on each of the following aspects compared to your expectations:**

*Please use a scale from MINUS 5 to PLUS 5 to indicate the degree to which your experience with your personal banker meets or falls short of your expectations.*

*If it is much worse than expected, please select -5. If it is as expected, please select 0. If it is much better than expected, please select +5. You may also choose any number in between depending on your experience.*

**Please rate the following:**

|   | Much worse |    |    |    |    |   |   | Much Better |   |   |   |    | Don't Know |
|---|------------|----|----|----|----|---|---|-------------|---|---|---|----|------------|
| Being available to you by communicating and interacting regularly.                        | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |
| Passionate about providing solutions to your business banking needs.                      | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |
| Effectively channelling your queries through to resolution.                               | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |
| Having adequate knowledge, information and expertise to meet your business banking needs. | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |
| Proactively preparing solutions to address your business banking needs                    | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |

**Please indicate the likelihood that you would recommend your personal banker and the bank to other business counterparts.**

*Please answer the following questions using a 10-likelihood Likert scale, where 0 means that you are "not likely at all" and 10 means that you are "extremely likely" to do the following:*

|  | Not likely at all |   |   |   |   |   | Extremely Likely |   |   |   |    |
|--|-------------------|---|---|---|---|---|------------------|---|---|---|----|
| Q5. The likelihood that you would recommend your personal banker to other business counterparts. | 0                 | 1 | 2 | 3 | 4 | 5 | 6                | 7 | 8 | 9 | 10 |
| Q6. The likelihood that you would recommend the bank to other business counterparts.             | 0                 | 1 | 2 | 3 | 4 | 5 | 6                | 7 | 8 | 9 | 10 |

**7. Please indicate your overall satisfaction with your personal banker.**

*Please use a scale from "0" to "10" where "0" means you were "very dissatisfied" and "10" means you were "very satisfied."*

|   | Very dissatisfied |   |   |   |   |   | Very satisfied |   |   |   |    |
|---|-------------------|---|---|---|---|---|----------------|---|---|---|----|
| Overall, how satisfied are you with the experience with your personal banker? | 0                 | 1 | 2 | 3 | 4 | 5 | 6              | 7 | 8 | 9 | 10 |

**Objection & closure**

This is the end of the interview. Thank you for taking the time to provide us with your feedback.

We would like to bring it to your attention that it is important for the bank to follow-up on survey responses on an individual customer basis and we would therefore like to share the responses that you have provided in this questionnaire with them, only if you have no objection to this.

These follow up interactions will assist the bank in improving their customer experience.

You can be assured that information provided by you will not be used by any other research or telesales organisation nor will it be used for any additional marketing initiative whatsoever.

**Do you have any objections with the disclosure of your feedback to the bank?**

- Yes, I object! Please be assured that your information will not be disclosed to anybody
- No, I don't have any objection

## **Appendix C: Reputational Customer Satisfaction Questionnaire**

### **Introduction**

Dear Customer,

Thank you for your willingness to participate in the customer satisfaction survey. The purpose of the survey is to obtain information regarding your experience with your personal banker.

As one of our valued customers your feedback will be used improve the experience provided by your personal banker.

All information that you provide is strictly confidential and will only be used for research purposes.

Your feedback will be analysed on an aggregated level together with the responses of other customers. No personal information will be collected during the survey.

The interview will take approximately 8 to 10 minutes to complete

### **Questionnaire**

Please think about your experience with your personal banker over the last 6 months and answer all questions as truthfully as possible.

**1. Please describe any emotion you experienced as vividly as possible in your own words.**

|  |
|--|
|  |
|--|



**2. Please indicate the degree to which you experienced these emotions.**

*Please answer the following questions using a 10-point scale, where 0 means “slightly felt” and 10 means “strongly felt”. You may also choose any number in between depending on your experience.*

|   | Slightly felt |   |   |   |   |   | Strongly felt |   |   |   |    |    |
|---|---------------|---|---|---|---|---|---------------|---|---|---|----|----|
| Degree to which you experienced the emotion | 0             | 1 | 2 | 3 | 4 | 5 | 6             | 7 | 8 | 9 | 10 | DK |

**3. What was the reason why you experienced these emotions?**

**4. Please indicate how well your personal banker performed on each of the following aspects compared to your expectations:**

*Please use a scale from MINUS 5 to PLUS 5 to indicate the degree to which your experience with your personal banker meets or falls short of your expectations.*

*If it is much worse than expected, please select -5. If it is as expected, please select 0. If it is much better than expected, please select +5. You may also choose any number in between depending on your experience.*

**Please rate the following:**

|  | Much worse |    |    |    |    |   |   | Much Better |   |   |   |    | Don't Know |
|--|------------|----|----|----|----|---|---|-------------|---|---|---|----|------------|
| Professionalism, helpfulness & friendliness of your Personal banker                          | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |
| Going the extra mile with regards to any requests  | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |
| The frequency of contact with your Personal banker   | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |
| The availability and accessibility of your Personal banker                                   | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |
| Getting back to you in an acceptable time frame with regards to credit facility applications | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |
| Getting back to you in an acceptable time frame with regards to enquiries                    | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |
| Providing you with accurate and adequate feedback on your requests                           | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |
| Understanding your business needs  | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |
| Proposing appropriate solutions aligned to your business needs                               | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |
| Your Personal banker being proactive in meeting your business needs/offering business advice | -5         | -4 | -3 | -2 | -1 | 0 | 1 | 2           | 3 | 4 | 5 | DK |            |

**Please indicate the likelihood that you would recommend your personal banker and the bank to other business counterparts.**

*Please answer the following questions using a 10-point likelihood scale, where 0 means that you are “not likely at all” and 10 means that you are “extremely likely” to do the following:*

|  | Not likely at all |   |   |   |   |   | Extremely Likely |   |   |   |    |
|--|-------------------|---|---|---|---|---|------------------|---|---|---|----|
| Q5. The likelihood that you would recommend your personal banker to other business counterparts. | 0                 | 1 | 2 | 3 | 4 | 5 | 6                | 7 | 8 | 9 | 10 |
| Q6. The likelihood that you would recommend the bank to other business counterparts.             | 0                 | 1 | 2 | 3 | 4 | 5 | 6                | 7 | 8 | 9 | 10 |

### 7. Please indicate your overall satisfaction with your personal banker.

*Please use a scale from "0" to "10" where "0" means you were "very dissatisfied" and "10" means you were "very satisfied."*

|   | Very dissatisfied |   |   |   |   |   | Very satisfied |   |   |   |    |
|---|-------------------|---|---|---|---|---|----------------|---|---|---|----|
| Overall, how satisfied are you with the experience with your personal banker? | 0                 | 1 | 2 | 3 | 4 | 5 | 6              | 7 | 8 | 9 | 10 |

### Objection & closure

This is the end of the interview. Thank you for taking the time to provide us with your feedback.

We would like to bring it to your attention that it is important for the bank to follow-up on survey responses on an individual customer basis and we would therefore like to share the responses that you have provided in this questionnaire with them, only if you have no objection to this.

These follow up interactions will assist the bank in improving their customer experience.

You can be assured that information provided by you will not be used by any other research or telesales organisation nor will it be used for any additional marketing initiative whatsoever.

**Do you have any objections with the disclosure of your feedback to the bank?**

- Yes, I object! Please be assured that your information will not be disclosed to anybody
  
- No, I don't have any objection