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**CUSTOMER-TO-CUSTOMER INTERACTION AND SERVICE  
SATISFACTION: AN AFFECTIVE APPROACH**

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**Customer-to-Customer Interaction and Service Satisfaction:  
An Affective Approach**

By Marloes Heijink

*A thesis submitted in partial fulfillment of the requirements for the  
degree of Master of Philosophy.*

May 2014

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Marloes Heijink

## **Abstract**

Customer-to-customer interaction (CCI) is the transfer of information from one customer to another customer such that it changes these customers' attitudes and purchasing behavior. The present study aims to understand how and why CCI influences satisfaction with a service encounter, and how this effect varies based on the characteristics of the customers involved. The theoretical perspective on which the hypotheses are based is the affective events theory. One study using the critical-incidents technique and two scenario-based experiments were conducted to test the hypotheses. The results indicate that positive and negative affect mediate the relationship between CCI and service evaluation. Moreover, when the CCI is relevant to the focal customer, significantly more extreme scores of affect are reported. Lastly, when the other customer is perceived to belong to the same cultural group versus a different cultural group, service evaluation is increased. The present study contributes to the services marketing literature by offering an affective perspective in addition to the existing cognitive perspectives to explain the relationship between CCI and service evaluation.

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**List of abbreviations**

<b>Abbreviation</b>	<b>Full name</b>
AET	Affective Events Theory
CCI	Customer-to-customer interaction
CIT	Critical incidents technique
DV	Dependent variable
ES	Encounter satisfaction
FS	Firm satisfaction
ITR	Intention to return
IV	Independent variable
LAB	Laboratory for Applied Business
M	Mean
Me	Mediator
MTurk	Mechanical Turk
NA	Negative affect
<i>p</i>	P-value (significance)
PA	Positive affect
PANAS	Positive and negative affect scale
SD	Standard deviation
WOM	Word-of-mouth

## Chapter 1: Introduction

### 1.1 Customer-to-customer interaction

A true case:

*Imagine a 40-something American woman, travelling to Hong Kong on a business trip. Although the local Cantonese cuisine is appealing, grabbing a quick lunch at a familiar fast food franchise can be more convenient. After placing an order, the woman notices that the service employee uses his dirty hands to assemble her lunch: a severe violation of hygiene standards in restaurants! Using her strong voice, the woman notifies the employee about his error. However, instead of resolving the service failure, the employee does not seem to understand what she means and ignores her. The woman explodes in anger and storms out of the fast food joint.*

*In that same restaurant, a European man is watching this situation unfold. He notices the other customers glance at the woman and whisper to each other. Some customers seem entertained whereas others are showing signs of disapproval. Suddenly, the woman turns around and says to the man: “Can you believe the service quality here?!” When the other customers, mainly Hong Kong locals, turn towards him in disapproval, the man becomes painfully aware of the racial similarity between the woman and himself. “The other customers believe that woman and I are associated”, he thinks with an increasing feeling of discomfort. Embarrassed, he quickly finishes his lunch and leaves to never return.*

When it comes to social interaction, most research in services marketing has focused on the dyadic interaction between one customer and one service employee (e.g., Martin, 1996; Grove and Fisk, 1997), as described in the first paragraph. Solomon et al. (1985) termed these face-to-face interactions between one buyer and one seller in a service setting a service encounter. If presented with the aforementioned scenario, many researchers would study the service failure and resulting dissatisfaction that the woman experienced. Other researchers would examine the effects of the woman's behavior on the service employee. However, there is more to this case.

Recently, services marketing researchers have started investigating the construct customer-to-customer interaction (hereafter abbreviated to CCI). This stream of research recognizes that the interaction between one customer and one service employee is not the only interaction taking place in a service environment. The above case demonstrates this plurality of interactions. For example, the woman interacts directly with the man, and the man is subjected to indirect influence by the presence of the other customers.

Libai et al. (2010, p. 260) define customer-to-customer interaction as "the transfer of information from one customer (or a group of customers) to another customer (or group of customers) in a way that has the potential to change their preferences, actual purchase behavior, or the way they further interact with others". In other words, customer-to-customer interaction takes place when people are influenced by the presence of other customers in the service environment (Söderlund, 2011).

Baron and Harris (2010) describe other customers as the other customers who are, physically or otherwise, in the service facility simultaneously with a focal

customer. The concept 'focal customer' can refer to one individual or to a group of customers, which is a set of individuals who have purchased the service as a group. An example of a customer group is a group of friends watching a movie in the cinema together. The 'other customers' are not necessarily strangers in the same service setting, as it is possible that customers form relationships with other customers of service facilities (e.g. in a sports center or a cafe).

## **1.2 The customer-to-customer interaction literature**

The CCI literature is a relatively new stream within the services marketing field. Bitner (1992) and Grönroos (1993) were among the first to conceptually draw attention to the interaction between and among customers, and McGrath and Otnes (1995) and Grove and Fisk (1997) were the first to investigate CCI empirically. The focus of early CCI researchers has been on construct clarification and as a result, several typologies have been put forward (e.g. Zhang et al., 2010). Later studies examining the relationship between CCI and service evaluation have generally found strong empirical evidence that positive interaction between customers increases service evaluation, whereas negative interaction has an opposite effect.

Perhaps due to novelty of the topic, only a few theoretical perspectives have been offered to explain the relationship between CCI and service evaluation. Several studies (Huang, 2008; Huang et al., 2010; Li et al., 2013) have suggested that attribution theory offers an explanation for the negative effect of the service failure of another customer on service evaluation of a focal customer. Others (McGrath and Otnes, 1995; Parker and Ward, 2000; Wu, 2008) have suggested that role theory explains the types of CCI that occur in service encounters and that role disconfirmation is a primary cause for a change in a focal customer's service

evaluation. Finally, social exchange theory has been used to argue that customers engage in CCI to obtain mutually beneficial outcomes and by doing so, enhance their service evaluation (Choo and Petrick, 2014; Gruen et al., 2007).

Although these perspectives offer valuable insights, they are all cognitive perspectives. Zajonc (1980) argues that the affective system is largely independent from the cognitive system. An affective or emotional reaction can give individuals information about their environment, which can be used to make decisions (Schwarz, 1990). For this reason, affective theoretical perspectives demand separate understanding and research. The underdevelopment of an affective perspective in the CCI literature can therefore be seen as an important research gap which calls for further research.

### **1.3 The present study**

In order to address the research gap presented above, the present work investigates the relationship between CCI and service evaluation from an affective perspective.

The following research question is central to this thesis: How does the presence and behavior of other customers affect a focal customer's service experience through influencing his/her feelings and emotions? More specifically, the research objective of the study is to understand how and why interaction between customers influences satisfaction with a service encounter, and how this effect varies based on the characteristics of the customers involved.

The main theoretical framework used in this study is based on the affective events theory (Weiss and Cropanzano, 1996). A CCI event is the interaction between a focal customer and another customer that occurs during a specific period in a



specific place. This event elicits an affective response for the focal customer through emotional appraisal; a process which consists of two stages (Roseman and Smith, 2001). In the first stage, individuals make an assessment of the valence of the event, and assess its relevance to their well-being. In the second stage, a specific emotion is elicited based on the result of the initial appraisal. This affective reaction is interpreted by the focal customer as an evaluation of the service encounter, as other customers are seen as service elements rather than other patrons of the service facility (Grönroos, 1993). A positive CCI event elicits positive affect and consequently increases customer satisfaction with the service encounter, whereas a negative CCI event increases negative affect and subsequently decreases customer satisfaction.

Two moderators for this main effect are proposed. First, according to the appraisal process, relevance determines the intensity of the elicited affect. Hence, it is argued that higher relevance leads to more extreme affect. Second, the cultural background of the other customer is proposed to affect the intensity of the affect elicited. Other customers with low social distance (high similarity) lead to more elaboration and subsequently more intense affective reactions.

In order to test the presented hypotheses, a total of three studies were conducted. In the first study, the main and mediation effects are tested by means of the critical incident technique. Participants recruited via Amazon's Mechanical Turk were asked to recollect a positive or negative experience with another customer in a restaurant and to complete a questionnaire about this event. Study two is a scenario-based experiment in which university undergraduate students were asked to imagine a positive/negative and relevant/irrelevant queuing situation at a bank. The final study is an experiment in which Hong Kong local undergraduate students were

shown a scenario that describes a positive/negative experience with a fellow passenger on an airplane. This other passenger is described as belonging to either the same or a different cultural background.

Results of the three studies indicate that CCI valence affects satisfaction with the service. This effect is mediated by positive and negative affect. Moreover, when the CCI event is relevant to the focal customer, this relationship becomes stronger. Lastly, when the other customer is from the same cultural background, the focal customer generally has higher service evaluations than when this customer is described as coming from a different cultural background, contradicting the third hypothesis.

The current research contributes to the literature in several ways. In the services marketing literature, CCI is still an understudied topic although substantial progress has been made in recent years. This study contributes to our understanding of the relationship between CCI valence and service evaluation in two major ways. First, the presented affect-based theoretical perspective is a novel supplement to the existing cognitive perspectives in the literature and provides fresh insight into the affective mechanisms involved. Second, the investigation into the cultural background of the other customer helps to understand the effects of customer variety on service evaluation, particularly in intercultural service encounters in which background is an important factor (Stauss and Mang, 1999).

Moreover, several implications for managers can be identified. First of all, CCI is an element of the service encounter that managers may not pay attention to because it may not be obvious and/or it is considered beyond managers' control. Second, the results indicate that it is important to manage both the elicitation of emotion from CCI events as well as the influence of emotions – from any source –

on service evaluation. Lastly, people enjoy being around people from their in-group more than those from an out-group. Managers should consider this as an input when constructing their customer relations strategy.

#### **1.4 Thesis organization**

The rest of the thesis is organized as follows. First, an extensive literature review will provide an overview of the current state of the CCI literature and elaborate on the previously mentioned research gap. Second, affective events theory will be used as the main theoretical perspective to develop a set of hypotheses concerning the relationship between CCI and service evaluation. Third, the methodology to test the hypotheses and the results of the conducted studies will be presented. Last, the general discussion will provide additional insights into the results, and will identify limitations and future research directions.

## Chapter 2: Literature review

This literature review provides an overview of the current state of customer-to-customer interaction research. First, the position of CCI in existing theoretical service encounter frameworks will be explored. Subsequently, the construct of CCI and several typologies will be examined. The third section focuses on theoretical and empirical evidence from previous literature regarding the relationship between CCI and service evaluation. Finally, the research gap will be identified and discussed.

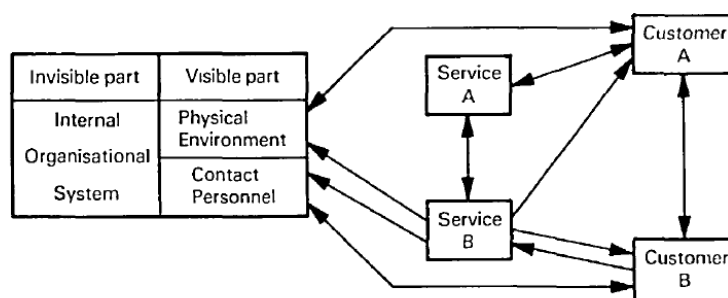
### 2.1 Customer-to-customer interaction in service frameworks

The main purpose of early frameworks in the services marketing literature was to identify factors that would influence the evaluation of service encounters, which are considered the core of many services (Shostack, 1985). Although CCI was not studied explicitly as a construct in these frameworks, the influence of other customers has been mentioned as a significant part of the service experience.

Bitner (1992) proposes that the servicescape, or the physical environment of a service, influences the behavior of both employees as well as customers. More specifically, the author states: “In interpersonal servicescapes, special consideration must be given to the effects of the physical environment on the nature and quality of the social interaction *between and among* customers and employees” (Bitner, 1992, p. 58, italics not in original). In other words, the social interaction that is part of the servicescape is the interaction between customers and employees, employees and employees, and customer and customers.

Whereas Bitner (1992) takes the perspective of a single focal customer, Grönroos (1993) conceptualizes service encounters from the perspective of the

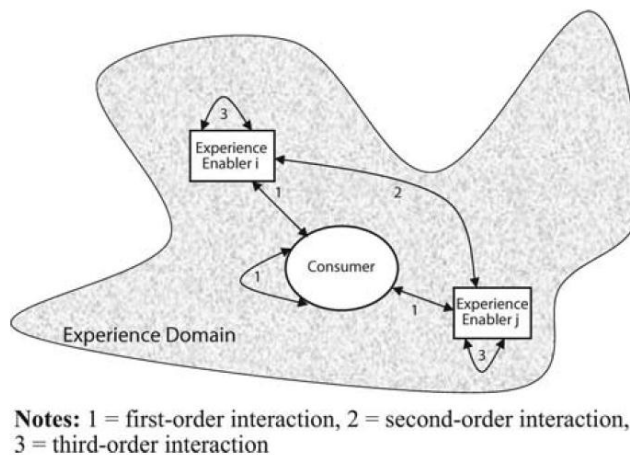
encounter itself. His paper proposes that service quality is based on three key resources: contact personnel, the physical environment and the customer, which is depicted in Figure 1 (Grönroos, 1993, figure 3, p. 34). The service outcome as perceived by the focal customer is conceptualized as a result of the various interactions that take place between the three key resources, including those between customers. Grönroos (1993) stresses that because of the necessary participation in the service production process, customers not only influence their own service quality but also that of those customers that the service production is shared with.



**Figure 1 – Grönroos' model of the service encounter**

Baron and Harris (2010) continue this conceptualization and propose that the service marketing literature should view service encounters as a network of social interactions. The relationship between the focal customer and the focal firm is just one of many relationships in a customer's service experience. By studying students engaging in gap year travelling, the authors find that consumer interactions can be divided in three categories: the core (first order interactions that are central to the experience), the inner periphery (first order interactions that are supportive of the experience), and the outer periphery (first order interactions that are part of the experience but were not frequently mentioned by consumers), see Figure 2 (Baron

and Harris, 2010, figure 2, p. 520). It is suggested that firms need to identify the category to which their interactions with customers belong to provide a better service experience.



**Figure 2 – Baron and Harris’s model of the service encounter**

This brief overview of theoretical frameworks illustrates that interactions among customers are considered an element of the service encounter. The service marketing literature has recognized this and a growing body of research has been devoted to both CCI as a construct as well as the effects of CCI on the service process, delivery and evaluation. The remainder of this literature review will discuss these different aspects.

## 2.2 The construct customer-to-customer interaction

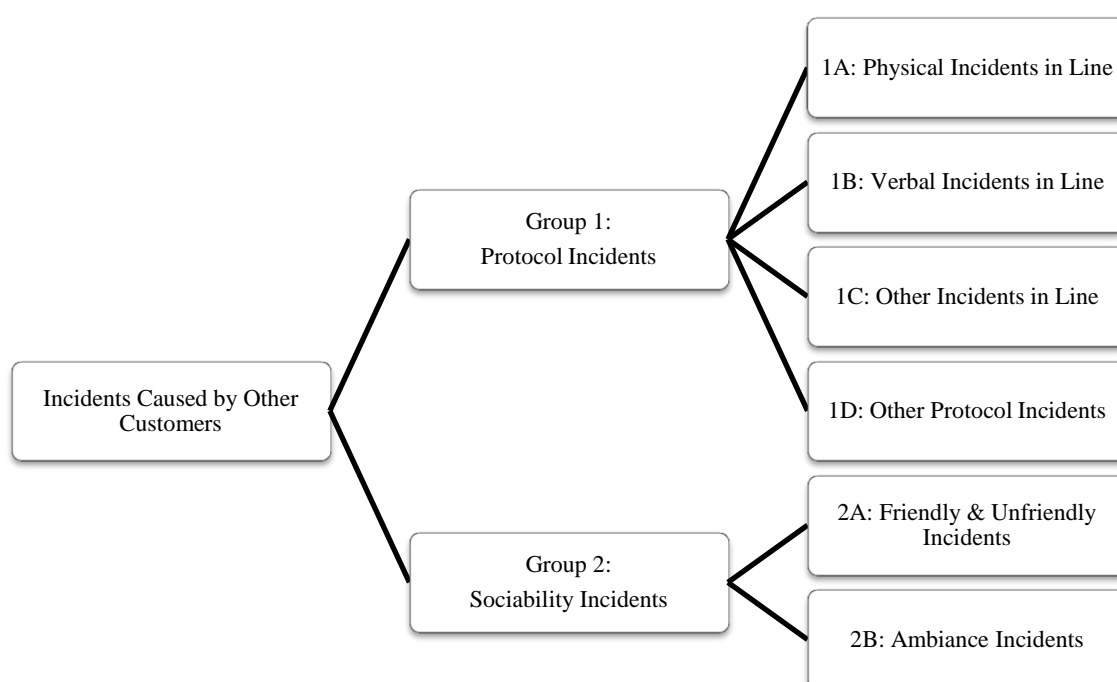
Libai et al. (2010, p. 260) define customer-to-customer interaction as the “transfer of information from one customer (or a group of customers) to another customer (or group of customers) in a way that has the potential to change their preferences, actual purchase behavior, or the way they further interact with others.”

In more abstract terms, CCI takes place when people are influenced by the presence of other customers in the service environment (Söderlund, 2011).

Martin (1996) makes the case for including the interaction among customers as an important linkage in customer relationship marketing. The study presents a typology of public behaviors of other customers in a commercial setting that affect focal customers. The categories of behavior that were found are: gregarious, grungy, inconsiderate, crude, violent, malcontent and leisurely. The study found that customers were most satisfied with gregarious behavior and most dissatisfied with violent and grungy behavior. Moreover, it was found that the appropriateness of behavior depended on personal characteristics of the focal customer. For example, the authors conclude after a segmentation analysis that young and male consumers that consume alcohol regularly are more tolerant of other people's public behavior than are old and female consumers that do not consume alcohol. This research not only provided a starting point for understanding CCI as a construct but also suggests that the effects of other customers on focal customers' attitudes depends on characteristics of the respondent.

Grove and Fisk (1997) is a second influential study that shaped current thinking about CCI as a construct. Based on a critical incident investigation of theme park customers, the study reports that more than half of the respondents had experienced an incident caused by other customers that positively or negatively affected the satisfaction of the focal customer with the theme park visit. This finding provides strong evidence for the prevalence and potential influence of CCI on a customer's service experience; at least in the context of this hedonic service. The incidents collected are categorized into protocol incidents and sociability incidents. Protocol incidents refer to situations where other customers are expected to adhere to

explicitly stated or implicitly held beliefs about correct public conduct. Sociability incidents include all other incidents reported, mainly incidents involving friendly or hostile other customers. This typology is shown in Figure 3 (Grove and Fisk, 1997, figure 1, p. 70). A major limitation is that this typology is very specific to the context of a theme park, which is evident from the large number of incidents related to queues. This typology, for example, is not applicable to services that do not include queues.

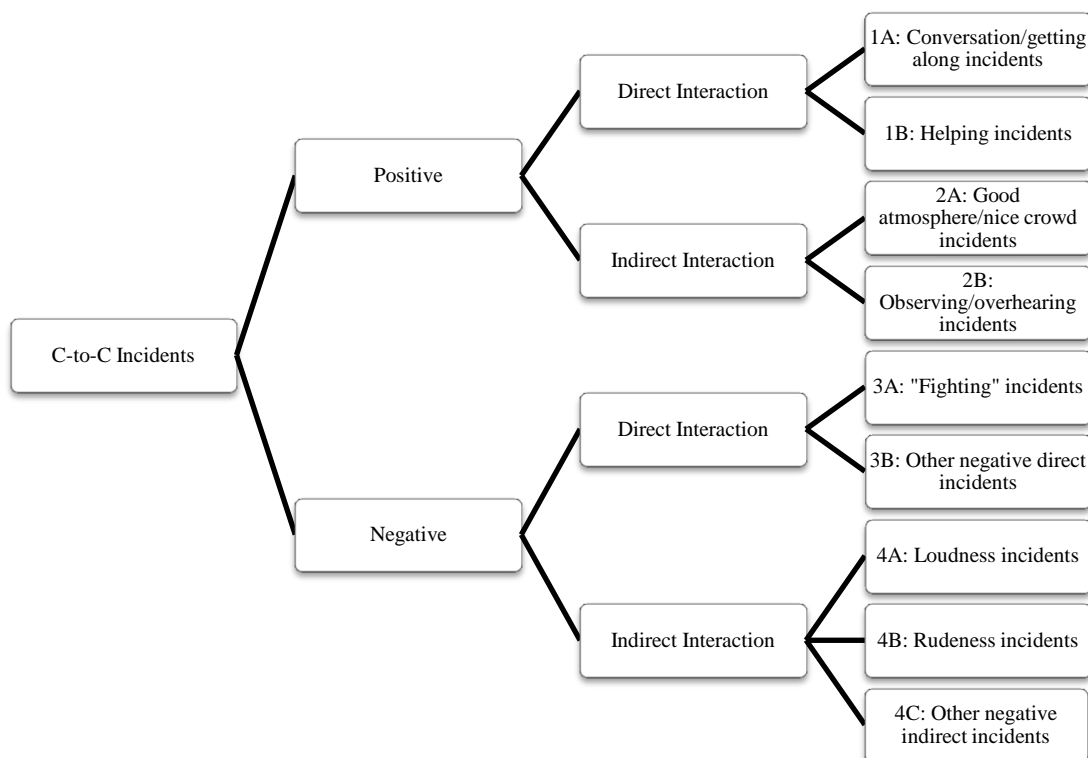


**Figure 3 – Grove and Fisk’s CCI typology**

A more recent typology employs incidents from a wide range of service industries, attempting to overcome the previous typologies’ limited generalizability (Zhang et al., 2010). CCI interactions are divided into positive and negative, and direct and indirect interactions (see Figure 4, Zhang et al., 2010, figure 2, p. 393). Unlike direct interactions, indirect interactions generally take place without direct social interaction and often only involve an observation from afar. Indirect



interaction can therefore be termed as indirect influence. Additionally, incidents of CCI were reported for all service industries investigated, albeit not necessarily the same types of incidents or quantities. This prompted the study conclusion that both the quantity and the type of CCI depends on the service context.



**Figure 4 – Zhang et al.’s CCI typology**

### 2.3 Customer-to-customer interaction and service evaluation

A key objective of the services marketing literature is to understand the factors that significantly impact service evaluation (Parasuraman et al., 1985). The most commonly included dimensions of service evaluation are: loyalty, repurchase intentions, word-of-mouth intentions; and satisfaction with the service encounter, service employee, service provider, and the overall service. A fair share of CCI studies has been devoted to understanding why and how CCI impacts service evaluation.

### *2.3.1 Empirical findings*

The following studies all have found a statistical relationship between CCI and service evaluations variable, yet without a clear theoretical perspective.

Moore, Moore and Capella (2005) were among the first to empirically test a possible connection between CCI and customer service evaluation. A hair salon was chosen as an appropriate service environment for this questionnaire-based study, as the high personal contact setting was assumed to result in a high level of CCI. Using a simple regression analysis, the results indicate that positive CCI is associated with higher levels of loyalty to the firm and firm word-of-mouth.

Gruen et al. (2007), in a study of interactions between conference attendees, find that exchange of resources between customers affects both perceptions of overall value of the service offering as well as loyalty to the service provider.

Lin and Liang (2011) find that the customer climate, defined as a customer's general perception of CCI, influences satisfaction through positive emotions, although the effect of the physical environment is stronger. However, this difference could be explained by relatively low factor loadings of the scale used to measure CCI, compared to the more established physical environment scale.

Söderlund (2011) finds that three specific CCI dimensions affect a customer's overall evaluation of a retailer: customer density, the visible consumption and purchasing activities of other customers, and brief interactions.

Li et al. (2013) conclude that positive interactions with other customers improve perceptions of service quality and that negative interactions decrease perceptions of service quality, based on a study of other customer-influence at self-service terminals. Moreover, interactions with other customers were found to

influence intention to repurchase, mediated by perceived service quality (Li et al., 2013).

Choi and Kim (2013) investigated the effect of the quality of CCI on customer satisfaction in a hospital context. This approach is different from previous studies in the sense that it focuses on the appraisal in terms of quality of CCI, rather than the mere occurrence or type of CCI. The results indicate that along with outcome quality and interaction quality, CCI quality is a significant determinant of customer satisfaction.

Overall, the empirical results indicate that CCI in various forms influences a range of service evaluation variables. Positive CCI has been related to increased customer satisfaction, value of service, firm loyalty and WOM intentions, but not to satisfaction with the firm. However, due to both a limited number of studies as well as inconsistent CCI definitions, these relationships remain understudied.

One final study worth mentioning is Kim and Lee (2012). Kim and Lee (2012) use a scenario-based experiment to investigate the dimensions of direct CCI in a restaurant setting. Age, gender, number, appearance, attire and public behavior of other customers are all considered by focal customers when they make service evaluations. In addition, the authors find that the importance of the dimensions varies according to situational variables, such as the stage of evaluation, the context of the visit (task versus hedonic) and perceived risk of quality.

### **2.3.2 Theory**

The most recent CCI studies have focused on collecting evidence for a theoretical explanation of the relationship between CCI and service evaluation. The central question of these papers was: why do customers use the presence, behavior and characteristics of other customers to evaluate the service that they are receiving?

Focal customers are intellectually aware that the other customers are not part of the service offering of the firm; the firm cannot control the other customers like it can control its employees. Yet, evidence discussed earlier indicates that other customers affect service evaluation. Several theories have been proposed to explain this paradox, which are briefly outlined in table 1 and will be discussed in the rest of this section.

**Table 1 - Theoretical approaches in CCI research**

<b>Theoretical perspective</b>	<b>Argument and findings</b>	<b>Studies</b>
<b>Attribution theory</b>	High controllability and stability in combination with low globality evaluation of other customer's service failure lowers service satisfaction.	Huang (2008); Huang et al. (2010); Li et al. (2013).
<b>Social exchange theory</b>	Satisfaction with interpersonal interaction depends on the social and economic outcomes of exchanges of resources between social actors. To make these relationships sustainable both parties reciprocate benefits to one another; leading to mutually beneficial outcomes (i.e. increased service evaluation).	Choo and Petrick (2014); Gruen et al. (2007).
<b>Role theory</b>	Many social exchanges follow certain patterns due to participant's adoption of a role. CCI behavior can be categorized into specific roles. Role disconfirmation leads to change in customer satisfaction.	McGrath and Otnes (1995); Parker and Ward (2000); Wu (2008); Miao et al. (2011).
<b>Similarity/attraction theory</b>	The higher the perceived similarity between customer, the more customers like the other customers, the service, have higher loyalty and word-of-mouth intentions.	Brack and Benkenstein (2012); Raajpoot et al. (2013); Miao and Matilla (2013).

One important social psychological theory that has been applied to CCI research is attribution theory. Huang (2008) and Huang et al. (2010) find that when customers believe that the service failure of other customers could have been

controlled by the firm (controllability) or is likely to happen again (stability), they have lower service evaluations of the firm. However, if the customer believes that this sort of other-customer service failure is not specific to that service firm but could happen anywhere (globality), the aforementioned effect is weaker.

The second theoretical approach taken in the literature has been social exchange theory. This theory states that relationships are based on the exchanges of resources. Satisfaction with a relationship is based on both the social and economic outcomes of these exchanges (Choo and Petrick, 2014). Choo and Petrick (2014) argued that relationships between customers can be studied along this framework. In other words, CCI is seen as relationships which involve exchanges of resources that are largely related to the shared service. When the exchange of resources is positive, people are proposed to be more satisfied about the CCI and service evaluation. However, the results of the study suggest that the influence of the other customers was less important than that of a companion and the service employees, and only marginally significant, in the context of agritourism.

Miao et al. (2011) take the perspective of role theory. Their central thesis is that customers use established scripts in service settings to judge the behavior of other customers, where any incongruence with the script elicits an emotional response. The emotional response in turn affects the satisfaction of the customer with the service. The authors find that both positive and negative incongruent behavior of other customers is associated with emotional responses and, consequently, service satisfaction. Moreover, the results suggest that when the script incongruent behavior is negative, the perceived closeness of the other customer to the focal customer makes this relationship weaker.

Wu (2008) also considered role theory in explaining CCI effects. However, they focus on the role of the focal customer rather than the roles of the other customers. The study suggests that the type of role a focal customer assumes moderates the relationship between CCI and customer satisfaction. A similar approach has been taken by Yoo et al. (2012). In their reasoning, focal customers assume roles in service contexts. Through CCI, customers can either have more clarity or ambiguity regarding these roles. This role clarity/ambiguity affects customer participation, perceived service quality and, in turn, service encounter satisfaction. It is worth mentioning that unlike most other studies, the measure for CCI in Yoo et al. (2012) was based on the establishment of friendships between patients at hospitals rather than brief interactions between strangers in retail shops.

A final theoretical reasoning behind the effects of CCI on service evaluation considers perceived customer similarity. Brack and Benkenstein (2012) find that similarity between customers has a positive effect on attitudes towards a service, attitudes towards other customers, loyalty and WOM. Moreover, by extending their experiment to three different types of service environments, the authors show that these similarity effects span across contexts. Additional support for this approach is provided by Raajpoot et al. (2013), who found that pleasure and arousal mediate the relationship between perceived customer similarity, satisfaction, word-of-mouth and repurchase intention.

Miao and Matilla (2013) extend this reasoning by arguing that an increased temporal and spatial distance from other customers increases positive spontaneous emotional responses, symbolic emotional responses to CCI and encounter satisfaction. On the other hand, increased temporal and spatial distance leads to more negative spontaneous and symbolic emotional responses, and decreases customer

satisfaction. The study finds that the valence of the behavior of other customers directly affects emotional responses as well as encounter satisfaction, with a significant interaction effect with psychological distance. However, a connection between emotional responses and encounter satisfaction was not discussed.

#### **2.4 The research gap**

To conclude, several theoretical perspectives have been proposed to explain the relationship between customer-to-customer interaction and service evaluation, and most empirical findings have supported these perspectives.

Yet, most perspectives have been applied to only one aspect of the relationship hence do not capture the relationship as a whole. Research using attribution theory has focused only on negative CCI, whereas positive CCI has been shown empirically to affect service evaluation as well. Social exchange theory has a focus on long-term relationships between customers, while encounters between customers are often brief, anonymous and generally occur only once. Although role theory addresses all types of CCI, it makes the assumption that customers expect other customers to behave according to a script.

A second limitation that applies to most perspectives is that they are cognitive perspectives. However, work by – among others – Schwarz (1990) and Zajonc (1980) has shown that emotions are crucial to a person's understanding of the world. Hence, the influence of emotions is important to understand.

Notable exceptions to the cognitive theoretical perspectives are offered by Miao et al. (2011) and Miao and Matilla (2013). In investigating a mediating role of felt and displayed emotions, Miao et al. (2011) find that emotional responses explain 33% of the variation in dependent variable service encounter satisfaction. Although

this is a substantial number, Miao et al. (2011) has been the only study to suggest a relationship between emotions and encounter satisfaction. Miao and Matilla (2013) also find that the valence of CCI affects emotional responses, but do not connect this to service evaluation.

From the literature review it can be concluded that most studies in the CCI literature have offered a cognitive perspective to explain the relationship between CCI and service evaluation. However, emotions can be used as information about one's environment and are therefore important to be understood when researching a person's response to stimuli. Hence, a theoretical perspective evolving around emotional responses is necessary to supplement the existing cognitive approach. Although some initial steps have been taken towards this direction, this perspective remains understudied and is an important research gap.



### **Chapter 3: Theoretical framework**

In the literature review, the lack of a strong theoretical perspective involving affective reactions was identified as an important research gap. In the following chapter, this theoretical perspective will be introduced. The central theory to the present study is the affective event theory. Based on this theory, with supplements from appraisal theory and the psychological distance concept, three hypotheses will be developed and a research model will be presented.

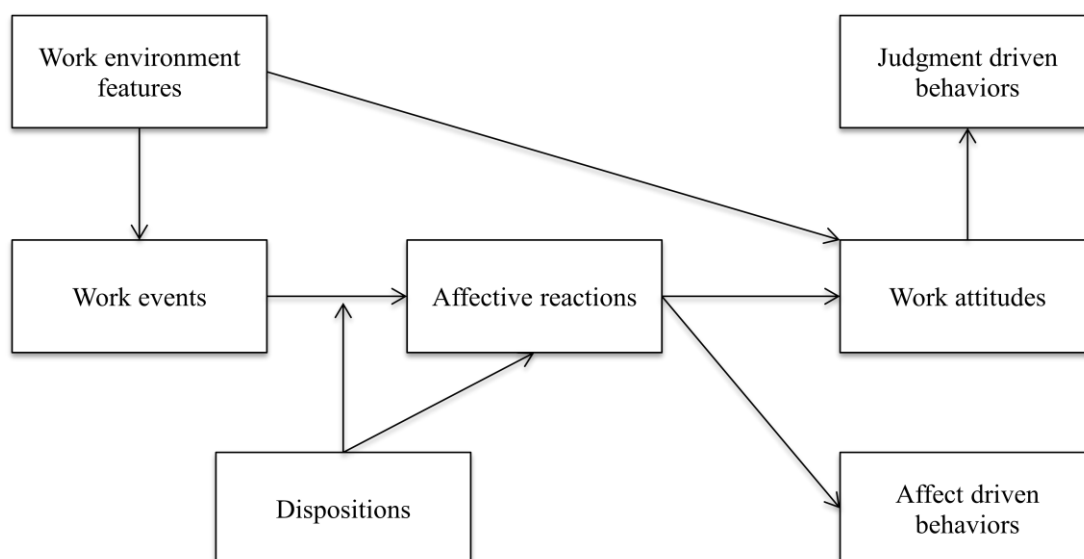
#### **3.1 The core theoretical perspective**

The main theoretical framework used in the present study is the affective events theory (hereafter: AET) by Weiss and Copranzano (1996). The theory was initially developed as an explanation of the effects of events and affective reactions on job satisfaction in work environments.

Weiss and Copranzano (1996) attempted to combine recent developments in the attitude formation literature with the existing research on job satisfaction. Job satisfaction is formally defined as an affective reaction resulting from an employee's comparison of actual job outcomes with expected, desired or perceived as deserved outcomes. However, the authors argue that the construct was often operationalized as an overall evaluation of one's job, which includes both an affective and a belief component. In this view, the affective component consists of the feelings that are elicited by the attitude object whereas the cognitive or belief component refers to the location of the attitude object on dimensions of judgment. Job satisfaction as an overall evaluation is influenced by both components. This distinction between components of job satisfaction thus suggests that satisfaction and affective

experience should be treated as separate phenomena with distinct but overlapping causes and consequences (Weiss and Copranzano, 1996).

AET “focuses on the structure, causes and consequences of affective experiences at work” (Weiss and Copranzano, 1996, p.11). The theory has four central premises. First, affective experiences are considered the central phenomena of this theory, of which job satisfaction is merely one consequence. Secondly, events are regarded as proximal causes of affective reactions, rather than features of the environment. The emotional reactions of employees to events in the work environment have a direct influence on behaviors and attitudes. Related to this is the notion that time is an important factor because affective reactions change over time as a result of different events occurring. Hence, AET postulates that this pattern of affective reactions can be predicted to a certain extent. Lastly, affective reactions are considered multidimensional such that different affective reactions can be elicited by different events and may have different consequences.



**Figure 5 – Macro structure of the AET**

The macro structure of the AET is displayed in figure 5 (Weiss and Copranzano, 1996, p. 12). In the following, a brief overview of the original model will be given based on the article by Weiss and Copranzano (1996), in which the theory was introduced.

As can be seen from figure 5, affective reactions are central to the model. The AET distinguishes between moods and emotions. Emotions are often defined as a complex state of feelings that influences thoughts and behavior through physiological and psychological changes. Moods are considered different from emotions in that they are less intense, less specific, and generally not triggered by specific stimuli.

AET suggests that a direct cause of the variation in affective reactions is a work event. An event is defined as an important happening; suggesting that events constitute a change in circumstances or a change in what one is experiencing. In other words, events are considered happenings that cause a shock to the present situation.

The elicitation of affect from events is proposed to occur through an appraisal process. An appraisal process consists of two separate stages. First, in the primary appraisal an event is initially evaluated on three criteria: relevance to well being, valence and importance, which determines the type and intensity of the emotional response. The secondary appraisal is the stage in which a more cognitive (as in specific and detailed) appraisal of the situation takes place. Put differently, the valence and intensity of the emotional reaction are determined in the first stage and the discrete emotion is determined in the second stage of the appraisal process.

The work attitude central to AET is job satisfaction. Job satisfaction is considered an attitude about one's work; consisting of an affective and a belief

component. The affective component is considered to reflect the recall of affective episodes during the work. An important premise of the AET is that this affective judgment is independent of the feature assessment leading to a cognitive judgment.

Two other factors are theorized to influence the basic process described: work environment features and dispositions. Work environment features influence affective reactions by making events more or less likely to occur. Moreover, environmental features can also be a direct source of variation in work attitudes. A basic example of this is satisfaction with the lay-out of the office space. Dispositions are features of the person that can alter the way events produce affective reactions as well as the type and intensity of affective reactions that are elicited. One example of this is research indicating that individuals high in neuroticism tend to react more strongly to negative events.

Lastly, judgment driven behaviors and affect driven behaviors are identified as two consequences of the previously described processes. Judgment driven behaviors follow from work attitudes because they involve cognitive processing. On the other hand, affect driven behaviors are considered a direct consequence of affective reactions as they do not involve cognitive processing.

### **3.2 Comparison of work and service environments**

The present study aims to use the AET to study the role of events and affective reactions on service evaluation in a service environment. The AET was developed in the context of the work environment and therefore it is important to consider whether a change in environments constitutes a significant departure from the basic premises of the theory.

The central constructs in the AET are events, affective reactions and job satisfaction. In the following, it is argued that because of the similarities between the constructs and processes employed in service environments, it is appropriate to apply the AET to service environments.

The type of events that occur and the social actors involved in them are different for service environments and work environments. In a service environment, the types of events that occur are related to service delivery and generally involve a focal customer, service employees and other customers. The social actors in a service environment are generally strangers and the service encounter has a short-term, non-repetitive orientation. These social actors are different from the social actors in the work environment. Moreover, the events that take place in a service environment inherently differ from those in a work environment because of the purpose of the situation (i.e. performing work activities versus service consumption). A consequence of these differences is that the types of events that take place in services are likely to be different from those that take place in the work environment.

However, just because the events are different, does not mean that these events do not elicit affective reactions. Some events elicit affective responses; especially when they are relevant and constitute a shock to existing patterns. It would be unrealistic to assume these processes do not take place in service environments. In other words, the environment and the social actors involved influence which type of events take place, but not whether affect-eliciting events occur. Therefore, the types of events that take place are different in terms of content and social actors, but events do elicit affective responses.

Moreover, AET proposes that affective reactions are multidimensional such that different affective reactions can be elicited by different events and may have

different consequences. However, there is no reason to assume that the range of potential affective reactions is different when an individual's environment is changed. In other words, the types of emotions that *can* appear in service encounters are the same as in the work environment. It is the particular situation, however, that will determine which specific reactions will occur. This logic is consistent with the propositions of AET.

Furthermore, it has been well established that service environments, like work environments, constitute complex social situations that require an individual's understanding (Shostack, 1985). One way an individual gains understanding of their environment is through their affective reactions to this environment. To put simply, people use their feelings to form an evaluation of the environment that they are in. Schwarz's feelings-as-information theory (1990, 2011) is one of the most established theoretical explanations of how individuals interpret their feelings as a source of information for their judgments. Hence, although the two environments differ, they are both complex and require understanding. It would be unreasonable to assume that individuals do not use the feelings elicited by events in service environment as a source of information for their evaluation of the service; a process similar to that proposed in the AET for work-related events.

As for the judgments used in the described process, it can be concluded that job satisfaction and service encounter satisfaction are similar concepts. Both constructs are based on Oliver's (1980) disconfirmation idea, where an evaluation is formed based on a comparison between expectations and reality. Moreover, both constructs are believed to comprise a belief and an affective component which are related to the attitudinal object (i.e. the job or the service encounter). The similarities

between the two constructs contribute to the applicability of the processes proposed in the AET to the service environment.

Based on the previous argument, it can be concluded that it is appropriate to apply the AET to a service encounter due to similarities between constructs and processes.

### **3.3. AET in service encounters**

The application of the AET to service encounters requires adjusting the core constructs and reasoning. First, the most important constructs will be redefined. Then, the argument will focus on the relationship between CCI events and affective reactions, between affective reactions and satisfaction, and explaining the roles of relevance and cultural background.

#### **3.3.1 Core constructs**

CCI was earlier defined as “the transfer of information from one customer (or a group of customers) to another customer (or group of customers) in a way that has the potential to change their preferences, actual purchase behavior, or the way they further interact with others” (Libai et al., 2010). In addition to this broad and relatively vague definition, the present study bases itself on the typology reported by Zhang et al. (2010). This typology, as described previously, divides CCI behavior in terms of valence (positive/negative) and directness (direct/indirect).

An event has been defined as a happening that constitutes a shock to existing patterns. Hence, a CCI event will be defined as a happening in which the transfer of information from one customer to another customer changes their preferences, actual purchase behavior, and/or the way they further interact with other customers.

The present study aims to investigate the AET in the context of a service encounter. It is not focused on conceptual clarification or extension of CCI as a construct. Hence, it is necessary to reduce the variety of CCI behaviors into a construct that is easy to understand and measure. Previous literature has achieved this by considering only the valence of the CCI event (i.e. positive versus negative). CCI events will thus be defined by the valence of these CCI events.

Affective reactions will be conceptualized as positive versus negative affect. These two constructs were introduced by Watson, Clark and Tellegen (1988) and are best known as the core components of the PANAS scale. Watson et al. (1988) conceptualize positive and negative affect as two dominant and relatively independent dimensions of affect. In their article, they provide the following description of positive and negative affect:

“PA reflects the extent to which a person feels enthusiastic, active and alert. High PA is a state of high energy, full concentration, and pleasurable engagement, whereas low PA is characterized by sadness and lethargy. NA is a general dimensions of subjectives distress and unpleasurable engagement that subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness, with low NA being a state of calmness and serenity.” (Watson et al., 1988, p. 1063).

The final construct central to the argument is satisfaction with the service. This construct is crucial in the service marketing literature as its main objective is to understand the factors that significantly impact service evaluation (Parasuraman et al., 1985). Satisfaction with service encounter is defined as an evaluative judgment regarding the service encounter following from a comparison between what was expected and the individual’s perception of the actual encounter (Oliver, 1980).



### ***3.3.2 CCI and affect – the appraisal process***

The relationship between events, affective reactions and service evaluation boils down to the process in which emotions are elicited. AET suggests that the mechanism through which different stimuli lead to different types and intensities of emotions is the process of appraisal.

The essence of an appraisal process is the idea that emotions are elicited by evaluations (appraisals) of events and situations (Roseman and Smith, 2001, p. 3). Appraisal theories aim to explain how specific events can lead to different emotions for different people. Moreover, appraisal theories aim to explain how a diverse range of events or situations can lead to the same emotion.

Appraisal theories, in its many varieties, are generally based on the following set of assumptions (Roseman and Smith, 2001). First, emotions are differentiated by appraisals. More precisely, appraisal theories predict that several appraisals occur to elicit one specific emotion. Hence, each specific emotion has a distinctive pattern of appraisals that needs to occur to elicit this emotion. Second, differences in appraisal can account for individual and temporal variations in emotional reactions. Appraisal theorists argue that it is the interpretation of the event, rather than the event itself, that cause emotions. Thus, when different individuals appraise the same event differently, they may experience different emotions. Third, all situations to which the same appraisal pattern is assigned will evoke the same emotion. The final assumption of appraisal theory is that appraisals precede and elicit emotions.

The appraisal process is a two-stage process. In the first stage, an individual makes an initial assessment of the valence of the event or situation. In this initial stage, the individual also assesses whether the event or situation is relevant to personal well-being (goal relevance). In the second stage, the initial appraisal of the

event or situation together with an appraisal of the context leads to cognitive processing in terms of consequences, attributions and coping potential. This more elaborate processing leads to the elicitation of specific emotions such as sadness, happiness or guilt (Roseman and Smith, 2001).

Based on the process of appraisal, it is proposed that CCI events elicit affect. The present study only focuses on valence and relevance of the affective reaction (which are determined in the first stage) and its influence on service evaluation. The second appraisal process is too complex to be captured in a simple study and will be ignored for the time being.

### ***3.3.3 Affect and satisfaction with the service encounter***

A paradox that demands attention in this argument is: why would other customers, who are not a part of the service offering and cannot be controlled by the service firm, influence service evaluation? Why do customers (mis)attribute mood changes caused by other customers to the service encounter?

Early service marketing theorists have proposed an answer to this research question. Grönroos (1993, p. 39) explicitly mentions that “from the consumer’s point-of-view, the other consumers who simultaneously are making their purchase decision and/or are consuming the service are part of the service itself.” One possible reason for this connection is that particular behavioral patterns tend to be associated with a particular physical setting. In other words, the environment defines the nature of social interaction and as a result, the two factors are not seen as separate (Bitner, 1992). Hence, the focal customer views the other customers as part of the service environment, rather than as simultaneous consumers of the service.

This suggestion has received some empirical support. Several studies have found that customers use the characteristics of other customers to make inferences

about the service. For instance, Kim and Lee (2012) found evidence that focal customers look at other customers' number, age, gender, appearance, attire and public behavior to evaluate the service offered by a restaurant. Moreover, visible consumption of other customers affects the evaluation of a retailer (Söderlund, 2011). These results indicate that focal customers view the other customers as holding some information about the service environment.

Hence, it appears that focal customers do not see other customers as individuals that happen to be in the same service environment at the same time. Rather, focal customers view other customers as part of the service environment and use them to evaluate the service. Therefore, the evaluation of other customers is seen by the focal customer as an evaluation of a particular element of the service. Specifically, it is suggested that the emotions resulting from the CCI of the other customer is considered an evaluation of the service encounter by the focal customer, as the other customer is seen as part of the service experience. Following common sense, a positive emotion is interpreted as a positive input to the evaluation whereas a negative emotion is interpreted as negative. In other words, high levels of positive affect and low levels of negative affect increase service evaluation and vice versa.

#### ***3.3.4 The moderating role of relevance***

Perceived self-relevance refers to whether an encounter is viewed by a person as relevant to well-being (Roseman and Smith, 2001). Although many additional elements of appraisal processes have been proposed, the present study focuses only on perceived self-relevance. The main reason for the selection of this variable is its centrality to the appraisal process. Specifically, in the initial stage of appraisal an individual makes an assessment of valence and relevance of the target object. Valence is captured by the definition of CCI into positive or negative.

However, relevance is not captured by any of the present variables and therefore it is important to include it as a moderating variable.

Appraisal theories generally predict that affective responses become more intense when events are relevant (Lazarus, 2001). This notion has an important implication for the present study. When CCI events are perceived to be relevant to the focal customer, the focal customer will have a more intense affective reaction. In more technical terms, positive affect and negative affect will increase significantly when the event is perceived as self-relevant to the focal customer's personal well-being.

### ***3.3.5 The moderating role of cultural background***

One factor that is included in the main AET framework is 'dispositions'. A disposition is a feature of the person that can alter the way events produce affective reactions, as well as the type and intensity of affective reactions that are elicited.

A disposition that has received attention in the CCI literature very recently is the degree of social distance between a focal customer and other customers, as perceived by the focal customer. Brack and Benkenstein (2012) found that customer similarity in terms of race increased service evaluation significantly. Similarly, Johnson and Grier (2013) found that white respondents felt more anxious in an all-black shop environment in South Africa than respondents from other races, and had lower service evaluations.

One important factor that these two studies have in common is that they theorized that cultural background influences affect, and in turn service evaluation; rather than a direct effect. The studies suggested that familiarity influences the affective reactions an individual experiences. Because of the recent attention in the

literature and the expected influence of cultural background of affect in CCI encounters, this variable was included in the present study.

It is proposed that cultural background influences affect via the concept of social distance. Social distance is one type of psychological distance. In a study by Miao and Matilla (2013), psychological distance was found to moderate the effect of CCI events on spontaneous emotional responses such that emotions and service evaluations are more pronounced in the close (rather than distant) condition. In other words, events that happen close in physical proximity (spatial) and recently (temporal) lead to more elaboration of the judgment target. This elaboration results in a more complete mental representation of the target, which includes affect.

Miao and Matilla (2013) however only investigated temporal and spatial dimensions, which refer to (subjective) time and physical distance, respectively, but do not touch the subject of the social dimension. The social dimension relates to the distinction of people in the environment into in-groups and out-groups, where in-groups are individuals that are considered to be similar to the individual.

The same logic that applies to temporal and spatial distance can be applied to social distance as well. When someone is perceived as part of an in-group, the individual will pay more attention to this other person than they would for someone who is part of an out-group. Due to the increased attention, a stronger and more complete representation is formed and hence stronger emotions are elicited.

In the context of an intercultural service encounter, in which a focal customer and another customer from a different cultural background interact (Stauss and Mang, 1999), the cultural social identity becomes salient. According to the aforementioned logic, the focal customer will experience more extreme emotions and

consequent service evaluations when presented with a customer from the same cultural background than they would for someone from a differing background.

### 3.4 Overview of hypotheses

To summarize, the valence of a CCI event is an important determinant of positive and negative affect resulting from this event. In the appraisal process, the focal customer makes an evaluation of the valence of the event, which is a key determinant of the affect elicited by the event. A positively valenced event elicits positive affect, whereas negative events elicit negative affect. Moreover, the focal customer interprets the feelings elicited by the behavior of other customers as input for their judgment of the service provider because the customers are seen as service elements rather than separate individuals. The above logic leads to the following hypothesis.

*H1: Positive and negative affect mediate the relationship between the valence of a CCI event and satisfaction with the service encounter.*

*More specifically, positive (negative) CCI events elicit high (low) positive and low (high) negative affect, and increase (decrease) satisfaction.*

Furthermore, it is proposed that in the appraisal process, CCI is also judged for its relevance to the focal customer. Relevance determines intensity such that relevant events result in more extreme affective reactions. This leads to the following hypothesis.

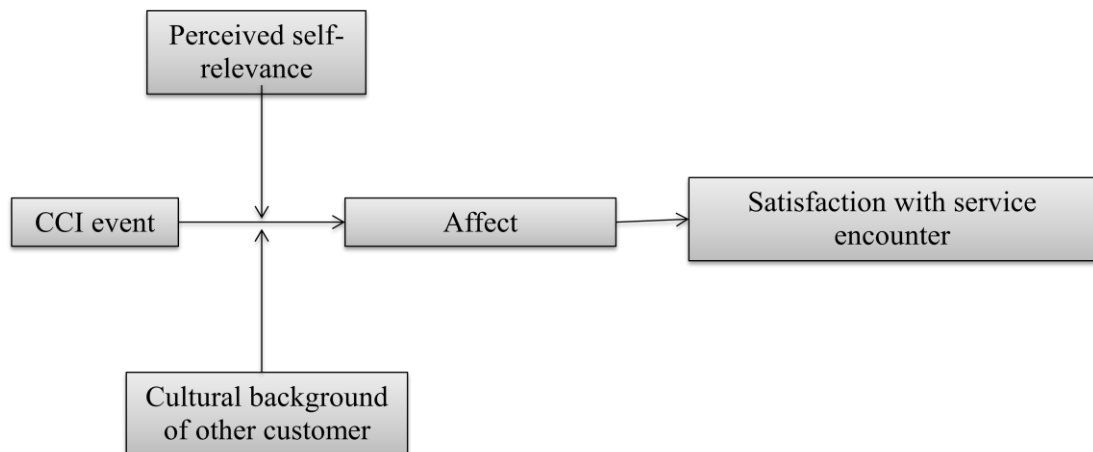
*H2: The relationship between the valence of a CCI event and positive/negative affect becomes stronger when the event is perceived as more self-relevant by the focal customer.*

Finally, when the other customer is considered as socially closer, the effect on affect will be more extreme such that positive emotions become more positive and negative affect becomes more negative. These stronger feelings in turn influence service evaluation. This leads to the following hypothesis.

*H3: The cultural background of the other customer moderates the relationship between CCI events and satisfaction with the service encounter. More specifically, when the cultural background is the same (vs different), positive CCI events will lead to more positive affect, and negative CCI events will lead to more negative affect.*

### 3.5 Research model

Figure 8 displays the full theoretical model.



**Figure 6 – Full research model**

## **Chapter 4: Overview of methodology and analysis**

In order to test the presented framework, a total of three studies were conducted. The first study tested the main effect including the mediating role of affect. By means of the critical incidence technique, participants from the United States described incidents about an experience with other customers in a restaurant. Afterwards, they were presented with relevant measures. The analysis performed was a regression analysis. Chapter 5 describes the methodology and analysis for study 1.

The second study investigated the moderating role of perceived self-relevance. Undergraduate students from the Hong Kong Polytechnic University were presented with a scenario at a local bank that is either relevant or irrelevant, and positive or negative, to their personal goals. The results of this experiment were analyzed by means of a two-way between subjects ANOVA. Chapter 6 describes the methodology and analysis for study 2.

In the final study, local Hong Kong undergraduate students of the Hong Kong Polytechnic University were presented with a scenario describing a tutorial class with another student, of whom the cultural background was manipulated. Analysis included a two-way between subjects ANOVA. Chapter 7 describes the methodology and analysis for study 3.



Table 2 provides an overview of these studies.

**Table 2 – Overview of studies and analysis**

<b>Study</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Testing</b>	Main effect Mediation	CCI valence Goal congruence	CCI valence Cultural background
<b>Research design</b>	Critical Incident Technique (CIT), recall study	Scenario-based experiment	Scenario-based experiment
<b>Sample</b>	US sample Mechanical Turk	PolyU undergraduates	Hong Kong local PolyU undergraduates
<b>Analysis</b>	Regression analysis	Two-way between subjects ANOVA	Two-way between subjects ANOVA
<b>Results</b>	Partial mediation found for all relationships apart from CCI valence, positive affect and intention to return.	Significant main effect of CCI valence. Insignificant main effect of self-relevance. Significant interaction effect.	Significant main effect of CCI valence. Significant main effect of cultural background. Insignificant interaction effect.

## **Chapter 5: Study 1 – The mediating role of affect**

### **5.1 Methodology**

#### ***5.1.1 Research design***

The research design employed in study 1 is the critical incident technique (hereafter: CIT). This technique has been used in several previous studies in the CCI literature (e.g. Grove and Fisk, 1997; Zhang et al., 2010) and is an established research technique in the marketing literature. A critical incident is an event that makes a contribution to an activity or phenomenon. In this type of design, participants are asked to recall or remember a particular event, which is termed the critical incident. After recalling, participants are asked to describe this event in the manner specified by the researcher. A similar design in consumer behavior is the recall-technique.

The advantages of the CIT are its ease in use and understanding, flexibility in application and that it does not force respondents into a given framework. Several downsides of this technique are the reliance on memory of participants, a bias towards recent incidents and the time it takes to write down the incident. However, these downsides are not critical to the present study. First, the study is aimed at uncovering the participant's experience (or memory) of an event, not the objective sequence of actions. Secondly, emotions will be stronger for recent events. To conclude, the critical incident technique was considered an appropriate technique for the present study.

#### ***5.1.2 Sample***

Participants of this study were recruited via Amazon.com's Mechanical Turk (hereafter MTurk). MTurk is an online platform for recruiting and paying

participants to perform tasks. Three major advantages of MTurk are that it is inexpensive, is fast, and provides access to a large and diverse subject pool. Berinsky et al. (2010) conclude based on empirical evidence that respondents recruited via MTurk are more representative than student and other in-person convenience samples, yet less representative than internet-based panel or national probability samples. The diversity of the sample allows for further investigation into the effects of for example age, gender and income.

The total sample consisted of 94 respondents, of which eight were removed because they did not provide an incident related to customer-to-customer interaction. Hence, the final sample size is 86. 66% of the sample is male. The age of the participants ranges from 21 to 70 years old, with a mean of 35 and the distribution is slightly skewed to the right. On average, participants have lived in the United States of America for 34 years. Nearly all participants have a least a high school degree of some college education, and 51% is a college graduate. The income of the participants is quite evenly distributed over the categories, with an income of \$50,001 to \$75,000 as the largest category (23%). 33% of respondents is single, 20% is in a relationship, 42% is married and 6% is widowed. Finally, the large majority of the sample (85%) identifies themselves as European American.

### ***5.1.3 Procedure***

The study materials were constructed and completed using Qualtrics. After the study was activated, an anonymous link was posted via MTurk. Participants could participate in the study in return for US\$ 0.5.

The first page of the study included study instructions and a confidentiality statement. Participants were then given a short description of the construct CCI and the study aim. Subsequently, participants were asked to recall and briefly describe a

positive or negative experience – the valence of the experience to be recalled was assigned randomly. This procedure was taken in order to secure an equal number of positive and negative CCI incidents. After the incident was described, participants were asked to complete the PANAS scale, control questions on valence and arousal, measures for four dependent variables, the affective orientation scale and several demographic questions.

Lastly, the collected data were exported from Qualtrics to IBM SPSS Statistics 20.

#### ***5.1.4 Measures***

The service setting about which the participants were asked to recall the incident was a restaurant, as Zhang et al. (2010) found that this service setting had the highest rates of positive as well as negative CCI incidences occurring. This large diversity of possible CCI events aids participants as it provides a large range of possible incidences. The valence of the CCI event was coded by an independent rater. The rater was asked to rate their overall impression of the event described.

Positive and negative affect were measured by the established PANAS scale (Watson et al., 1988). Emotion has also been conceptualized as a function of arousal and valence (Feldman, 1995). Arousal and valence were both measured with a single-item scale as a control for the present study. Affective orientation was measured by the affective orientation scale (Booth-Butterfield and Booth-Butterfield, 1990).

Encounter and firm satisfaction were measured by a three-item scale adapted from Sharma et al. (2009). Word-of-mouth and repurchase intentions were measured by three-item scales taken from Zeithaml et al. (1996). Although the study

theoretically only focuses on encounter satisfaction, these other service evaluation variables were included for the sake of completion.

The full measures are included in appendix A.

## 5.2 Analysis

During data preparation, no outliers were identified. The study results were analyzed by means of a regression analysis. In the following, construct measurement, descriptive statistics, correlations and the results of the analysis will be presented.

### 5.2.1 Construct measurement

Data were collected using the CIT. As such, the independent variable CCI valence was recorded as descriptions of events. In order to perform a regression analysis, this independent variable was coded into a continuous variable. The value for CCI valence is a single-item Likert scale ranging from 1 to 7.

Table 3 provides an overview of the scale reliabilities of the other variables used in the study.

**Table 3 – Overview of reliability of scales**

<b>Variable</b>	<b>Scale reference</b>	<b>Reliability</b>
<b>Positive affect</b>	PANAS scale, Watson et al., 1988	$\alpha = .899$
<b>Negative affect</b>	PANAS scale, Watson et al., 1988	$\alpha = .874$
<b>Service satisfaction</b>	Sharma et al., 2009	$\alpha = .979$
<b>Firm satisfaction</b>	Sharma et al., 2009	$\alpha = .986$
<b>Word-of-mouth intentions</b>	Zeithaml et al., 1996	$\alpha = .896$
<b>Intention to return</b>	Zeithaml et al., 1996	$\alpha = .984$

### 5.2.2 Confirmatory factor analysis

In addition to assessing scale reliability, a confirmatory factor analysis was performed to assess the presence of latent variables underlying each scale. A varimax-rotated principal components CFA initially indicated a five-factor solution.

All items measuring the dependent variables loaded on the first factor, all PA items loaded on the second factor and the NA items loaded on the remaining three factors.

Forcing the CFA to provide a three-factor solution – which theoretically is the correct solution – results in a solution that explains 66.87% of total variance. Moreover, all dependent variable items load on factor one, all PA items on factor two and all NA items load on the third factor. The full table can be found in appendix C.

This CFA shows that three distinct latent variables exist in the present analysis: service evaluation, positive affect and negative affect.

### ***5.2.3 Descriptive statistics***

The descriptive statistics for variables used in the analysis are provided in table 4. In the table, a distinction has been made between positive and negative CCI incidents, as study participants were asked either a positive or a negative experience. In the final analysis, all incidents regardless of valence were combined in one continuous variable. The data distributions for the selected variables approach a normal distribution with kurtosis and skewness within acceptable standards.

**Table 4 – Study 1: Descriptive statistics for selected variables**

	<b>Overall</b>		<b>Positive CCI</b>		<b>Negative CCI</b>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<b>CCI valence</b>	3.46	1.77	4.88	1.49	2.25	0.85
<b>Positive affect</b>	22.40	8.71	27.70	8.04	17.94	6.5
<b>Negative affect</b>	17.00	6.89	12.56	5.22	20.75	5.85
<b>Encounter satisfaction</b>	3.98	2.18	6.08	0.68	2.22	1.23
<b>Firm satisfaction</b>	4.62	1.99	6.29	0.67	3.22	1.61
<b>Intention to return</b>	4.13	1.82	5.37	1.29	3.09	1.54
<b>Word-of-mouth</b>	4.45	1.94	6.03	1.03	3.12	1.47

### 5.2.4 Correlations

All variables included in the correlation table are highly correlated; as expected. The values of the correlations range from  $|0.270|$  to  $|0.931|$ . Refer to table 5 for the precise correlations.

**Table 5 – Study 1: Correlation table<sup>1</sup>**

	PA (Me)	NA (Me)	ES (DV)	FS (DV)	ITR (DV)	WOM (DV)
CCI (IV)	0.463***	-0.596***	0.701***	0.641***	0.478***	0.621***
PA		-0.270***	0.592***	0.477***	0.326***	0.498***
NA			-0.626***	-0.578***	-0.436***	-0.567***
ES				0.861***	0.673***	0.842***
FS					0.775***	0.931***
ITR						0.791***

\*\*\* means  $p < .001$

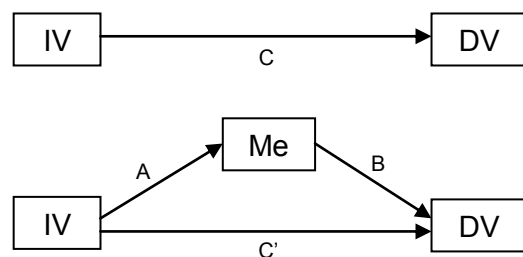
### 5.2.5 Regression analysis

In order to test the present mediating model, the Baron and Kenny approach was used (see figure 9). Additional analysis using the Preacher and Hayes (2008) method is included in Appendix C1. This analysis did not yield substantially different results than the Baron and Kenny method described here.

Mediation is established when the independent variable (IV) affects the mediator (Me; path A is significant), when the independent variable affects the dependent variable (DV; path C is significant), and when the mediator affects the dependent variable when the independent variable is included (path B is significant). Perfect mediation is when the independent variable has no effect when the mediator is included in the regression analysis (Baron and Kenny, 1986).

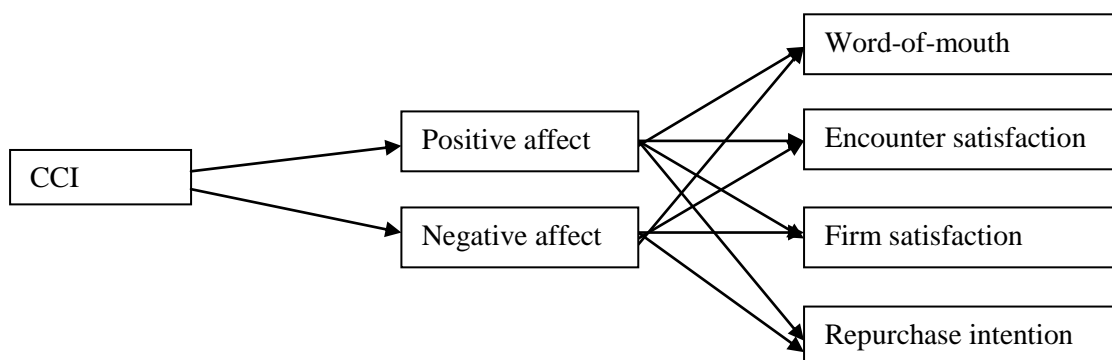
<sup>1</sup> The acronyms used in this table have the following meanings. IV is independent variable; Me is mediator; DV is dependent variable; CCI is CCI valence; PA is positive affect; NA is negative affect; ES is encounter satisfaction; FS is firm satisfaction; ITR is intention to return; WOM is word-of-mouth.





**Figure 7 – Schematic figure of Baron and Kenny approach**

In this study, the aim is to test the relationship between independent variable CCI valence and dependent variables encounter satisfaction, firm satisfaction, intention to return and intention to engage in word-of-mouth. The proposed mediating factors are positive and negative affect. An image with the measurement model is provided in figure 10. An overview of the analyses is provided in tables 6 and 7.



**Figure 8 – Study 1: Measurement model**

**Table 6 – Study 1: Results of mediation analyses for positive affect**

	Path		Encounter satisfaction	Firm satisfaction	Intention to return	Word-of-mouth
Positive affect	C	$\beta^2$	0.701***	0.641***	0.478***	0.621***
	A	$\beta$	0.463***	0.463***	0.463***	0.463***
	B	$\beta$	0.592***	0.477***	0.326***	0.498***
	C'	$\beta(IV)$	0.544***	0.535***	0.417***	0.497***
		$\beta(Me)$	0.341***	0.229**	0.133	0.268***
		$R^2$	0.583	0.452	0.242	0.442
	Conclusion		<i>Partial mediation</i>	<i>Partial mediation</i>	<i>No mediation</i>	<i>Partial mediation</i>

\*\*\* means  $p < .001$ , \*\* means  $p < .01$ , \* means  $p < .05$

**Table 7 – Study 1: Results of mediation analyses for negative affect**

	Path		Encounter satisfaction	Firm satisfaction	Intention to return	Word-of-mouth
Negative affect	C	$\beta$	0.701***	0.641***	0.478***	0.621***
	A	$\beta$	-0.596***	-0.596***	-0.596***	-0.596***
	B	$\beta$	-0.626***	-0.578***	-0.436***	-0.567***
	C'	$\beta(IV)$	0.509***	0.459***	0.339***	0.439***
		$\beta(Me)$	-0.323***	-0.305**	-0.234*	-0.306***
		$R^2$	0.559	0.471	0.264	0.446
	Conclusion		<i>Partial mediation</i>	<i>Partial mediation</i>	<i>Partial mediation</i>	<i>Partial mediation</i>

\*\*\* means  $p < .001$ , \*\* means  $p < .01$ , \* means  $p < .05$

The results of the mediation analysis reveal partial mediation in seven cases and no mediation in one case.

Positive and negative affect both partially mediate the relationship between CCI valence and satisfaction with the service encounter. Together the predictor and mediators explain 58.3% (positive affect) and 55.9% (negative affect) of the variance in the dependent variable.

Positive and negative affect both partially mediate the relationship between CCI valence and satisfaction with the service firm. Together the predictor and

<sup>2</sup> The reported betas are standardized coefficients.

mediators explain 45.2% (positive affect) and 47.1 % (negative affect) of the variance in the dependent variable.

Positive effect was not found to significantly mediate the relationship between CCI valence and intention to return. A positive direct relationship was found between CCI valence and intention to return. Negative affect partially mediates the relationship between CCI valence and intention to return. Together the predictor and mediator explain 26.4% of the variance in the dependent variable.

Positive and negative affect both partially mediate the relationship between CCI valence and intention to engage in word-of-mouth. Together the predictor and mediators explain 44.2% (positive affect) and 44.6% (negative affect) of the variance in the dependent variable.

Gender, age, income, education, marital status and years in the USA were tested as potential moderators. However, none of these variables was significant in the analysis.

### **5.3 Study discussion**

To summarize, this study finds partial mediation for seven out of eight of the tested relationships. Positive and negative affect partially mediate the relationship between CCI valence and encounter satisfaction, firm satisfaction, intention to return and word-of mouth. The exception to this is that positive affect does not mediate between CCI valence and intention to return.

These findings, apart from the exception, are as expected. From previous studies it is known that cognitive processes influence this relationship, hence it is highly unlikely that affective reactions serve as full mediators.

The unexpected finding of this study is that positive affect does not mediate between CCI valence and intention to return. The possible explanations for this can be placed into two categories: measurement reasons and theoretical reasons.

Intention to return was measured using a scale that has high internal reliability ( $\alpha = 0.984$ ) and face validity. Moreover, it was developed by established researchers (Zeithaml et al., 1996) and has been used since. The correlation analysis also shows that this variable is correlated with CCI valence, positive affect, negative affect, encounter satisfaction, firm satisfaction and word-of-mouth. However, one aspect of the scale might have confused participants: a reverse-scaled third item. The third item is exactly the same as the second item but negatively phrased (e.g. I will return versus I will not return). Participants could have misread or misinterpreted this item for a variety of reasons such as not paying enough attention or completing the survey too fast. The correlation between the third item and the first two items was significant ( $p < .001$ ) but less strong than the correlation between items one and two.

From a theoretical point of view, intention to return is considered a separate construct from satisfaction with the service encounter. Although this was not confirmed by the CFA performed in the present study, it could be that due to a small sample size some minor nuances between the constructs were not noticed. Hence, it is possible that the relationship between CCI valence and intention to return is truly not mediated by positive affect. In simple wording this means that positive affect elicited by CCI does not influence a person's decision whether they will return or not.

The present study cannot conclude on whether the diversion from the proposed theoretical framework is due to measurement or to actual theoretical reasons. Hence, it was decided to include intention to return as a dependent variable

in the second study to see whether it was possible to replicate the finding of this first study. In the general discussion, this issue will be readdressed.

## **Chapter 6: Study 2 – The moderating role of perceived self-relevance**

The results of study 1 indicate that affect mediates the relationship between CCI events and service evaluation. However, in an appraisal process affective responses become more intense when the event is perceived as relevant to the self. Study 1 did not look into the workings of this process. Hence, a second study where perceived self-relevance as moderating factor is investigated was conducted.

### **6.1 Methodology**

#### ***6.1.1 Research design***

The research design employed in study 2 is a scenario-based experiment. This technique has been used in several previous studies in the CCI literature (e.g. Huang et al., 2010; Miao et al., 2011; Söderlund, 2011) and is an established research technique in the marketing literature. The advantages of a scenario-based experiment are that it can be conducted within a lab (allowing for control of environment and isolation of effects), it is understandable for participants and it takes relatively little time to complete. One important downside of this type of design is the unrealistic nature of the described scenario. By choosing a service environment that is well-known and an incident that is relatively common – waiting in a queue – it has been attempted to make the scenario more realistic and easy to imagine. Based on this reasoning, a 2x2 scenario-based between-subjects experimental design was deemed appropriate for the purposes of this study.

#### ***6.1.2 Sample***

All participants were undergraduate students of the Hong Kong Polytechnic University. Using a student sample is acceptable because the purpose of the study is

to isolate the effect of the proposed moderator by keeping demographic variables relatively constant (Miao et al., 2011).

The total sample consisted of 141 respondents. 37 participants were male and 104 participants were female. The age of the participants ranges from 18 to 35 years old ( $M = 21.97$ ,  $SD = 2.1$ ). On average, participants have lived in Hong Kong for 17.99 years ( $SD = 6.95$ ). Finally, the large majority of the sample (86%) identifies themselves as Hong Kong local, whereas 11% of participants identifies as Mainland Chinese.

### ***6.1.3 Procedure***

This study took place at the Laboratory of Applied Business (LAB) of the Hong Kong Polytechnic University. Participants were offered a McDonald's HK\$ 10 voucher as an incentive for their participation. The experiment took approximately ten minutes to complete. Participants were randomly assigned to one of four conditions of a 2 (CCI valence: positive vs. negative) by 2 (CCI relevance: relevant vs. irrelevant) design.

The study materials were constructed and completed using Qualtrics. The study link was provided to participants via computers in the LAB. The first page of the study included instructions and a confidentiality statement. Participants were then asked to read a scenario. After reading the scenario, they were asked to complete scales measuring valence, arousal, service encounter satisfaction, control questions and several demographic questions.

Upon completion, participants were debriefed and were given their incentive. Lastly, the collected data were exported from Qualtrics to IBM SPSS Statistics 20.

#### ***6.1.4 Scenario and manipulations***

The scenario provided to participants was a service encounter in a bank involving a male customer in the same queue as the participant. A male was chosen because in study 3 a woman was used in the scenario. Banks were identified by Zhang et al. (2010) as a service setting in which many CCI incidents occur. Hence, a CCI event in this service setting would be relatively easy to imagine for participants. Moreover, by selecting a service setting different from the two other studies, external validity of the study findings is increased.

The study required two manipulations: CCI valence and CCI relevance. In order to manipulate CCI valence, the man exhibits either positive (letting someone go in front of him) or negative behavior (skipping the queue). In order to manipulate CCI relevance, the aforementioned behavior either happens to the participant or somewhere back in the queue so it has no direct influence to the participant's position in the queue.

The scenarios for this study are provided in Appendix B.

#### ***6.1.5 Measures and manipulation checks***

Valence and arousal were measured with single-item questions also used in study 1. Service satisfaction was measured by a three-item scale adapted from Sharma et al. (2009). The control questions were single-item scales asking directly whether participants found the behavior positive or negative, and relevant or irrelevant to their service experience. Lastly, demographic questions such as gender and age were also included.

The measures for this study are included in Appendix A.



## 6.2 Analysis

Study two was a 2 x 2 factorial design designed to test the moderating effects of CCI valence and CCI relevance. Each factor had two levels: positive/negative and relevant/irrelevant. Moreover, based on the results of study one two dependent variables were analyzed: encounter satisfaction and intention to return. Intention to return was included because it was the only variable that had a divergent relationship pattern (in terms of mediation for the dependent variables) in the previous study.

During data preparation, participants were removed from the data set if their response on the dependent variables was more than three standard deviations away from the mean response for said dependent variable in that condition. Based on this principle five outliers were removed, which reduced the sample size to 141. This sample size resulted in a minimum of 33 data points per condition, which is considered of acceptable size (Kerlinger and Lee, 2000, p. 177).

The study results were analyzed by means of a two-way ANOVA analysis. In the following, construct measurement, descriptive statistics, and the results of the two-way ANOVA will be presented.

### 6.2.1 Construct measurement

#### Satisfaction with service encounter

Satisfaction with the service encounter was measured using three questions. The correlations among these three questions were 0.672, 0.747 and 0.697, and all correlations were highly significant ( $p < .001$ ). Based on these results, the responses to the three questions were averaged to form the value for the construct. Cronbach's  $\alpha$  for the scale was 0.877, which indicates that the scale has strong internal reliability.

#### Intention to return

Intention to return was measured using three questions. The first two items were correlated ( $r = .548, p < .001$ ), but the third item was not significantly correlated to the first two items. Hence, the third item was dropped from the scale. Averaging the first two questions yielded a Cronbach's  $\alpha$  of 0.707, indicating internal reliability. Hence, the average of the first two items was used as the measurement of intention to return.

### **6.2.2 Manipulation checks**

Two manipulations were used in the study. The manipulation check for valence showed highly significant ( $p < .001$ ) differences between the groups on questions related to the friendliness of the man described in the scenario ( $t = 12.060, p = .000$ ), initial affective evaluation of the experience ( $t = -3.589, p = .000$ ) and consistency with expectations about the experience ( $t = 3.101, p = .001$ ).

Relevance is defined in this thesis as an initial appraisal performed without cognitive deliberation. For this reason, it is not expected that subjects are able to indicate the relevance of the scenario without specific deliberation. However, including a question probing for relevance may give away the manipulation of the experiment and confound the results. Therefore, a pre-test was conducted to show the success of the manipulation.

The pre-test was conducted with a student sample from the same population. The pre-test sample did not differ significantly from the study sample in terms of age (average 21.8) and gender (76% female). The participants were presented with the four scenarios and asked to indicate to what extent the behavior of the other person would have a direct impact on them. The relevant scenarios resulted in significantly direct impact ratings than did the irrelevant scenarios ( $M = 5.37$  vs 4.18, respectively;

$F(1, 74) = 10,119, p = 0.002$ , one-way ANOVA). Hence, the manipulation of relevance was successful.

### 6.2.3 Descriptive statistics

The grand mean for satisfaction with the service encounter is 3.81 and the corresponding standard deviation is 1.14 on a 7-point Likert scale – 7 indicating high satisfaction. The grand mean for intention to return is 4.11 and the standard deviation is 1.00 on a 7-point Likert scale – 7 indicating high intention to return. The two dependent variables are correlated ( $r = .515, p < .001$ ).

The means and standard deviations for each condition are reported for the two dependent variables in table 8.

**Table 8 – Study 2: Descriptive statistics per condition**

		Satisfaction with service encounter			Intention to return		
		Positive	Negative	Total	Positive	Negative	Total
Relevant	<i>M</i>	4.21	2.27	3.76	4.31	3.68	3.96
	<i>SD</i>	1.16	1.06	1.20	0.87	1.08	1.04
Irrelevant	<i>M</i>	3.94	3.77	3.86	4.04	4.49	4.25
	<i>SD</i>	1.09	1.08	1.08	0.79	1.07	0.95
<b>Total</b>	<i>M</i>	4.07	3.53		4.17	4.04	
	<i>SD</i>	1.13	1.09		0.84	1.16	

### 6.2.4 Two-way ANOVA

In order to test the proposed hypotheses, two two-way ANOVA analyses<sup>3</sup> were conducted to compare the effects on two separate dependent variables for two factors: CCI valence and CCI relevance. The first analysis looked at the effect of CCI

<sup>3</sup> These ANOVAs did not include covariates as none of the potentially relevant independent variables tested in the study was significantly correlated with the dependent variables satisfaction with the service encounter and intention to return. The variables tested included gender, age, ethnicity, number of years in Hong Kong, valence of emotions, emotional arousal, perceived friendliness of man in the scenario, consistency with expectations of described encounter and relevance of the experience to the person.

valence and CCI relevance on service satisfaction. The second analysis focused on the second dependent variable: intention to return.

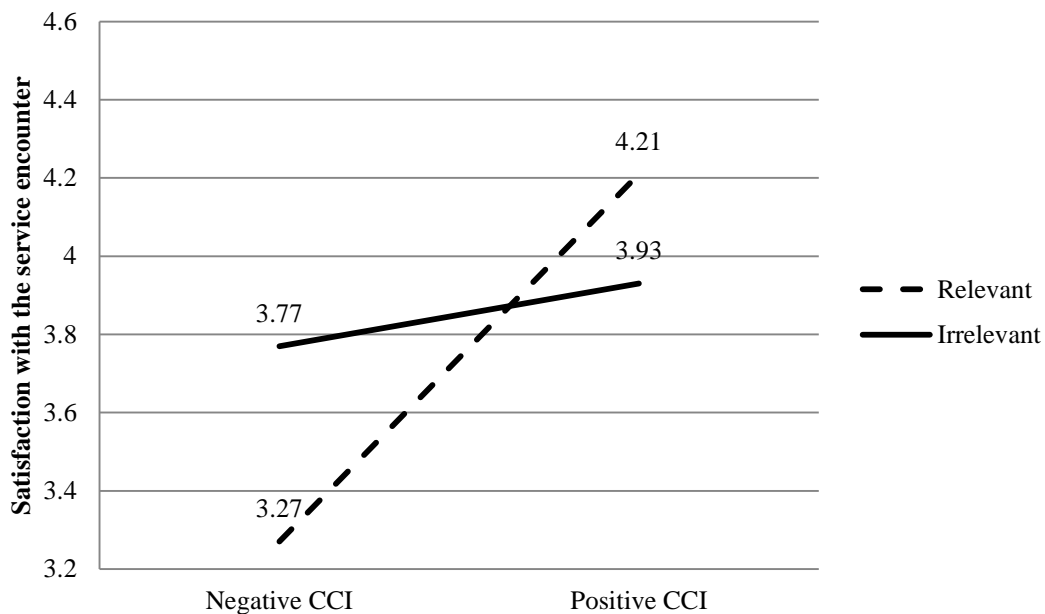
#### Satisfaction with the service encounter

This two-way between subjects ANOVA showed a significant main effect of CCI valence,  $F(1, 137) = 8.863, p = .003$ . The effect was such that level of satisfaction with the service encounter was higher when the described scenario was positive ( $M = 4.07, SD = 1.13$ ) than negative ( $M = 3.53, SD = 1.09$ ).

The ANOVA showed an insignificant main effect for CCI relevance, yielding an insignificant  $F$  ratio of  $F(1, 137) = 0.377, p = .540$ . In other words, the relevance of the scenario alone did not significantly influence satisfaction with the service encounter.

Lastly, the interaction effect was significant,  $F(1, 137) = 4.308, p = .040$ , indicating that the mean change score was significantly larger for relevant CCI than for irrelevant CCI. Refer to table 8 for the relevant means and standard deviations.

The interaction effect is displayed in figure 11. As can be read from the figure, the positive change in satisfaction is much larger for relevant CCI than it is for irrelevant CCI, when shifting from negative to positive CCI.



**Figure 9 – Study 2: Interaction effect for dependent variable satisfaction with service encounter**

A one-way ANOVA analysis with global error term reveals the underlying pattern of the data. In the relevant-condition, positive CCI incidents resulted in significantly higher satisfaction ratings than did negative CCI incidents ( $M = 4.21$  vs  $3.27$ , respectively;  $F(1, 137) = 12,33, p = 0.001$ ). However, in the irrelevant condition there was no difference between positive and negative CCI incidents ( $M = 3.93$  vs  $3.77$ , respectively;  $F(1, 137) = 0.421, p = 0.517$ ).

#### Intention to return

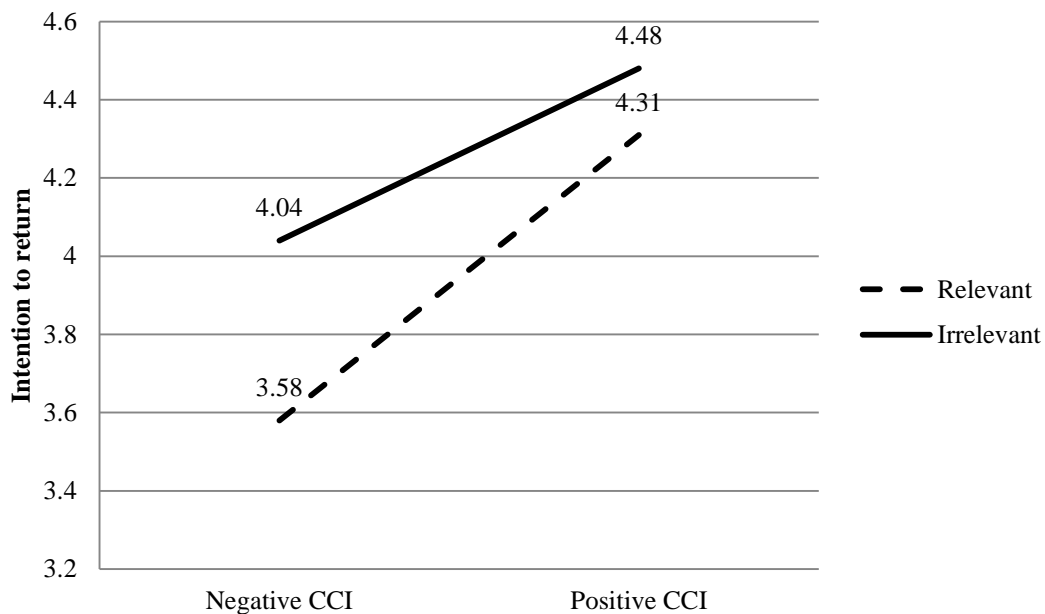
This two-way between subjects ANOVA showed a marginally significant main effect of CCI relevance,  $F(1, 137) = 3.546, p = .052$ . The effect was such that intention to return was higher when the described scenario was relevant ( $M = 4.25, SD = 0.95$ ) versus irrelevant ( $M = 3.96, SD = 1.04$ ) to the focal customer.

The ANOVA showed an insignificant main effect for CCI valence, yielding an insignificant  $F$  ratio of  $F(1, 137) = 0.816, p = .368$ . In other words, CCI valence alone did not significantly influence intention to return.

Lastly, the interaction effect was significant,  $F(1, 137) = 13.412, p < .001$ , indicating that the effect of CCI valence differs depending on the relevance of the CCI to the focal customer. Refer to table 8 for the relevant means and standard deviations.

The interaction effect is displayed in figure 12. As can be seen from the figure, the direction of the change in intention of return changes such that for irrelevant CCI it is negative and for relevant scenarios the change is positive.

A one-way ANOVA analysis with global error term reveals the underlying pattern of the data. In the relevant-condition, positive CCI incidents resulted in significantly higher intention to return than did negative CCI incidents ( $M = 4.31$  vs  $3.58$ , respectively;  $F(1, 137) = 10.07, p = 0.002$ ). However, in the irrelevant condition there was only a marginally significant difference between positive and negative CCI incidents ( $M = 4.48$  vs  $4.04$ , respectively;  $F(1, 137) = 3.94, p = 0.049$ ).



**Figure 10 – Study 2: Interaction effect for dependent variable intention to return**

### 6.3 Study discussion

The results for study 2 exactly confirm the proposed hypothesis. For dependent variable satisfaction with the service encounter, a significant interaction effect between CCI valence and perceived self-relevance was found. Specifically, when the scenario described was relevant to the respondent, the satisfaction ratings for the negative scenarios were significantly more negative than for irrelevant scenarios. A similar effect on the other end of the spectrum – more positive satisfaction ratings for the relevant positive scenario versus the irrelevant positive scenario – was found.

Although the dependent variable intention to return was not included in the theoretical framework, it was tested based on divergent study results in study 1. Study 2 also reveals different results for the effect of CCI valence and CCI relevance on intention to return compared to encounter satisfaction. For relevant scenarios, the

effect is very similar to that of encounter satisfaction. However, for irrelevant scenarios the average intention to return was significantly higher for negative than it is for positive CCI. Based on the notion that positive experiences should increase intention to return whereas negative experience should decrease it, the present finding is puzzling.

As discussed in chapter 5, there are at least two possible explanations for this finding. The first is related to the measurement of the dependent variable. For this study, the third item – which was a reverse coded item similar to item two – had to be removed from the scale due to low correlations with the other two items. Perhaps due to speed of completing, attention paid, or to language barriers (the participants' first language is not English) this third item may have been misunderstood.

A second issue related to measurement is the scenario used in the study. The scenario involves a branch of a bank with which many participants have a bank account. Moreover, participants would use this particular branch for their banking services. As a consequence, the participants may have real-life experiences which may have interfered with their intention to return ratings. In other words, their intention to return was not based on the present study but on actual need or attitudes towards this particular branch.

As these divergent results for intention to return span across studies, this issue will be elaborated on further in the overall discussion in chapter 8.



## **Chapter 7: Study 3 – The role of cultural background**

Study 1 and study 2 have provided evidence for the existence of the core processes proposed by the affective events theory. A final factor that is examined in the present study is the effect of the cultural background of other customer on the focal customer's service evaluation. This factor is investigated as previous literature has shown that characteristics of the other customer are an important factor on a focal customer's perception and interpretation of information about the service.

### **7.1 Methodology**

#### ***7.1.1 Research design***

Study 3 is a scenario-based experiment. This study is similar in design to study 2 and aims to test a main effect. Following the same reasoning as in chapter 6, a 2x3 scenario-based experimental design was deemed appropriate for the purposes of this study.

#### ***7.1.2 Sample***

All participants were Hong Kong local undergraduate students of the Hong Kong Polytechnic University. Using a student sample is acceptable because the purpose of the study is to isolate the effect of the proposed moderator by keeping demographic variables relatively constant (Miao et al., 2011).

The total sample consisted of 194 respondents. 48 participants were male and 146 participants were female. The age of the participants ranges from 18 to 35 years old ( $M = 21.97$ ,  $SD = 2.2$ ). On average, participants have been on a plane 8.79 times ( $SD = 9.32$ ). 35.6% of the participants has been abroad, meaning outside of Hong

Kong and Mainland China. Finally, participants indicated that on average 14% of their friends are foreign ( $SD = 14.86$ ).

### **7.1.3 Procedure**

This study took place at the LAB of the Hong Kong Polytechnic University. Participants were offered a McDonald's HK\$ 10 voucher as an incentive for their participation. The experiment took approximately five minutes to complete. Participants were randomly assigned to one of six conditions of 2 (CCI valence: positive vs. negative) x 3 (Cultural background: Hong Kong local vs. American vs. Filipino) between-subjects design.

The study materials were constructed and completed using Qualtrics. After the study was activated, the study link was provided to participants via computers in the LAB. The first page of the study included instructions and a confidentiality statement. Participants were then asked to read a scenario. After reading the scenario, participants were asked to complete scales measuring valence, arousal, service encounter satisfaction, social anxiety, and several demographic questions.

Upon completion, participants were debriefed and were given their incentive. Lastly, the collected data were exported from Qualtrics to IBM SPSS Statistics 20.

### **7.1.4 Scenario and manipulations**

The scenario provided to participants was a service encounter in an airplane involving a female customer sitting next to the participant. A female was chosen because in study 2 a man was used in the scenario. Airplanes were identified by Zhang et al. (2010) as a service setting in which many CCI incidents occur. Hence, a scenario in this service setting would be relatively easy to imagine for participants. Moreover, by selecting a service setting different from the two previous studies, external validity of the study findings is increased.

The study required two manipulations: CCI valence and cultural background of the other customer. In order to manipulate CCI valence, the interaction with the female was described as open/positive/friendly or closed/negative/unfriendly. In order to manipulate the cultural background, the nationality of the woman was explicitly mentioned directly preceding a description of the interaction with the woman. Three nationalities were chosen: Hong Kong local, American and Filipino. The Hong Kong local nationality represents the in-group of the participants, whereas the other two nationalities represent out-groups. Moreover, based on local knowledge it can be said that one of the groups (American) represents an aspiration group whereas the other group (Filipino) is generally a stigmatized group and would represent an avoidance group (Zhao, 2012).

The scenarios for this study are provided in Appendix B.

#### ***7.1.5 Measures and manipulation checks***

Two questions related to nationality and whether participants had ever been on a plane were included to filter out those participants who either did not have Hong Kong local nationality or who had never been on a plane before. Service satisfaction was measured by a three-item scale adapted from Sharma et al. (2009). Questions related to whether participants have been abroad and have foreign friends, as well as demographic variables such as gender and age were also included.

The measures for this study are included in appendix A.

## **7.2 Analysis**

Study three was a 2 x 3 factorial design designed to test the moderating effects of perceived cultural background. Cultural background had three levels: same background/aspiration group background/avoidance group background. During data

preparation, participants were removed from the data set if their response on the dependent variable was more than three standard deviations away from the mean response for said dependent variable in that condition. Based on this principle two outliers were removed, which reduced the sample size to 194. This sample size resulted in a minimum of 27 data points per condition, which is considered of acceptable size (Kerlinger and Lee, 2000, p. 177).

The study results were analyzed by means of a two-way ANOVA analysis. In the following, construct measurement, descriptive statistics, and the results of the two-way ANOVA will be presented.

### ***7.2.1 Construct measurement***

Satisfaction with the service encounter was measured using three questions. The correlations among these three questions were 0.738, 0.924 and 0.740, and all correlations were highly significant ( $p < .001$ ). Based on these results, the responses to the three questions were averaged to form the value for the construct. Cronbach's  $\alpha$  for the scale was 0.920, which indicates that the scale has strong internal reliability.

### ***7.2.2 Manipulation checks***

Two manipulations were used in the study. The perceived cultural background was not tested via a manipulation check because the nationality was literally mentioned in the scenario. Assuming that participants read the scenario, it seemed unnecessary to include a question asking about the nationality of the other customer described. Moreover, asking for a value judgment regarding the nationality of the other customer might result in politically correct answers. Hence, it was opted to not include a manipulation check for this manipulation.

The second manipulation for CCI valence showed highly significant ( $p < .001$ ) differences between the groups on customer satisfaction with the service

encounter. More specifically, the difference between means was 4.08 points on a 7-point Likert scale. This question can be used as a control question because of the strong effects found in the two previous studies.

### 7.2.3 Descriptive statistics

The grand mean for satisfaction with the service encounter is 4.27 and the corresponding standard deviation is 1.56 on a 7-point Likert scale – 7 indicating high satisfaction. The means and standard deviations for each condition are reported for the two dependent variables in table 11.

**Table 9 – Study 3: Descriptive statistics per condition**

		Cultural background			
		Same background	Aspiration group	Avoidance group	Total
Positive	<i>M</i>	5.63	5.36	5.49	5.50
	<i>SD</i>	0.86	0.94	0.56	0.80
Negative	<i>M</i>	3.07	2.67	2.56	2.77
	<i>SD</i>	0.61	0.70	0.74	0.71
Total	<i>M</i>	4.51	4.10	4.21	
	<i>SD</i>	1.49	1.59	1.60	

### 7.2.4 Two-way ANOVA

In order to test the proposed hypotheses, a two-way ANOVA analysis was conducted to compare the effects on the dependent variable satisfaction with the service encounter for two factors: positive versus negative CCI and same versus aspiration versus avoidance cultural background group.

The two-way between subjects ANOVA showed a significant main effect of CCI valence, such that level of satisfaction with the service encounter was higher when the described scenario was positive ( $M = 5.5$ ,  $SD = 0.80$ ) versus negative ( $M = 2.77$ ,  $SD = 0.71$ ),  $F(1, 194) = 625.139$ ,  $p < .001$ .

Moreover, the ANOVA showed a significant main effect of cultural background, such that level of satisfaction with the service encounter was higher when the other customer's cultural background was described as identical ( $M_{HK} = 4.51$ ,  $SD_{HK} = 1.49$ ) to versus different ( $M_{US} = 4.1$ ,  $SD_{US} = 1.59$ ;  $M_{FP} = 4.21$ ,  $SD_{FP} = 1.60$ ) from that of the respondent,  $F(2, 194) = 4.104$ ,  $p < .018$ .

Lastly, the interaction effect of the ANOVA was insignificant,  $F(2, 194) = 0.968$ ,  $p = .382$ , indicating that the effect of CCI valence is not different for other customers with differing nationalities.

A one-way ANOVA analysis with global error term reveals the underlying pattern of the data. In the positive condition, customers described as Hong Kong local did not result in significantly higher satisfaction ratings than those from American or Filipino nationality ( $M = 5.63$  vs  $5.36$  vs  $5.48$ , respectively;  $F(2, 188) = 1.146$ ,  $p = 0.320$ ). However, in the negative condition there was a difference between Hong Kong versus American versus Filipino nationalities ( $M = 3.09$  vs  $2.67$ , vs  $2.56$ , respectively;  $F(2, 188) = 3.602$ ,  $p = 0.029$ ).

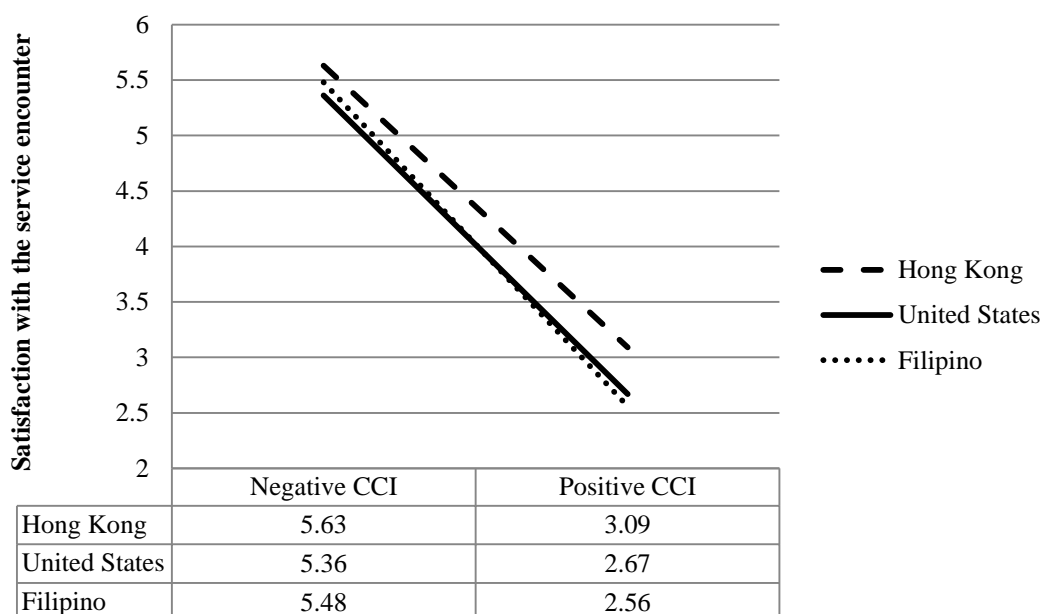
**Table 10 – Study 3: Post-hoc analysis**

	(I)	(J)	Mean Difference (I-J)	Significance
Scheffe	HK	US	,4040	,010
	HK	FP	,2954	,089
	US	FP	-,1087	,718
LSD	HK	AM	,4040	,002
	HK	US	,2954	,028
	US	FP	-,1087	,416

Post-hoc analysis supports these findings. Table 12 shows the results for the LSD and Scheffe tests; two well-established tests to assess differences between more than two levels within one factor (Kerlinger & Lee 2000). Both tests indicate that the mean value for satisfaction is significantly higher for the Hong Kong nationality

compared to both the United States and Filipino nationalities. The difference between the United States and Filipino nationalities is not significant.

The main effects are displayed in figure 13. As can be read from the figure, the satisfaction with the service encounters involving customers from an identical cultural background are significantly higher than for those involving other customers from a different cultural background. Moreover, positive CCI leads to higher satisfaction ratings than negative CCI does.



**Figure 11 – Study 3: Main effects on satisfaction with service encounter**

As the results for the two nationalities other than Hong Kong were similar, these responses were pooled in the final test. The nationality had two factors: Hong Kong versus not Hong Kong. This test was also a 2x2 ANOVA.

This test showed a significant main effect of CCI valence, such that level of satisfaction with the service encounter was higher when the described scenario was positive versus negative,  $F(1, 194) = 547.003, p < .001$ . Moreover, the ANOVA

showed a significant main effect of cultural background, such that level of satisfaction with the service encounter was higher when the other customer's cultural background was described as identical to versus different from that of the respondent,  $F(1, 194) = 8.156, p = .005$ . Lastly, the interaction effect was insignificant,  $F(1, 194) = 1.108, p = .294$ , indicating that the effect of CCI valence is not different for other customers described as from identical versus different background.

### **7.3 Study discussion**

The results for study 3 do not confirm the hypothesis because a main effect of cultural background on service evaluation was found. When the other customer belongs to the same cultural background, the focal customer's service evaluation is increased generally. In other words, a negative evaluation resulting from negative CCI becomes less negative, and a positive evaluation becomes more positive.

There are at least two possibilities to explain this finding. First, of all, social identity as a concept may not be captured by a measure of simply nationality. Many other aspects of social identity could have been salient, such as gender, and have overridden the effects nationality.

A second explanation is from the perspective of social identity theory. In essence, social identity theory states that individuals act to enhance the members of the in-group compared to those of the out-group. When presented with (any) behavior of an in-group member, evaluation of this behavior will be higher than if it would originate from an out-group member. For the present study it means that CCI, regardless of its valence, will be evaluated as more positively if it originates from



another customer belonging to a similar cultural group. This explanation is consistent with the main effect found in this study.

A second finding of the study is that there is no statistical difference between the two out-groups in terms of service evaluation. Theoretically, this is perfectly in line with the notion of social identity theory that in-groups are favoured over out-groups and that individuals do not make a distinction between different types of out-groups. However, some authors (e.g. Jost, 2001; Sachdev and Bourhis, 1987) have argued that not all out-groups are perceived as having the same value (i.e. lesser than in-group). More specifically, this line of thinking proposes that out-group favouritism occurs in the situation where one makes a comparison between one-self and a member of an aspiration group. This comparison is in favour of the out-group member and subsequently would lead to equal or even more positive ratings as the in-group. As the analysis indicates, this line of thinking has not been confirmed by the present study.

A first explanation for this would be that out-group favouritism does not exist in this particular situation. A second explanation could be that Hong Kong locals do not perceive the American culture as an aspiration group and/or the Filipino culture as an avoidance group. A third explanation could be the high level of education and exposure to foreign cultures of the sample, which is a student sample. A fourth possible explanation, which is a methodological limitation, is the relatively small sample size of the study. At least 30 but preferably 50 participants per condition is an acceptable sample size. The lowest number of respondents per condition in study 3 is 27, which is below the threshold of 30. The study results confirm the hypothesis and therefore – mainly because of time limitations – sample size was not increased. However, with an increased sample size the effects that were found may become

stronger and more reliable, and potential small differences between the two out-groups may surface.

## Chapter 8: General discussion

### 8.1 Overview of findings

To summarize, most of the hypotheses proposed in the theoretical framework were confirmed. The three hypotheses specifically predict that positive and negative affect mediate the relationship between the valence of CCI events and service encounter evaluation. Moreover, emotions are proposed to be elicited through an appraisal process in which events relevant to the focal customer lead to more extreme ratings for the affective reactions by participants. Lastly, cultural background – a characteristic of the other customer – was proposed to moderate the relationship between CCI and affect such that for other customers that are socially closer, the emotions and service evaluation is more extreme.

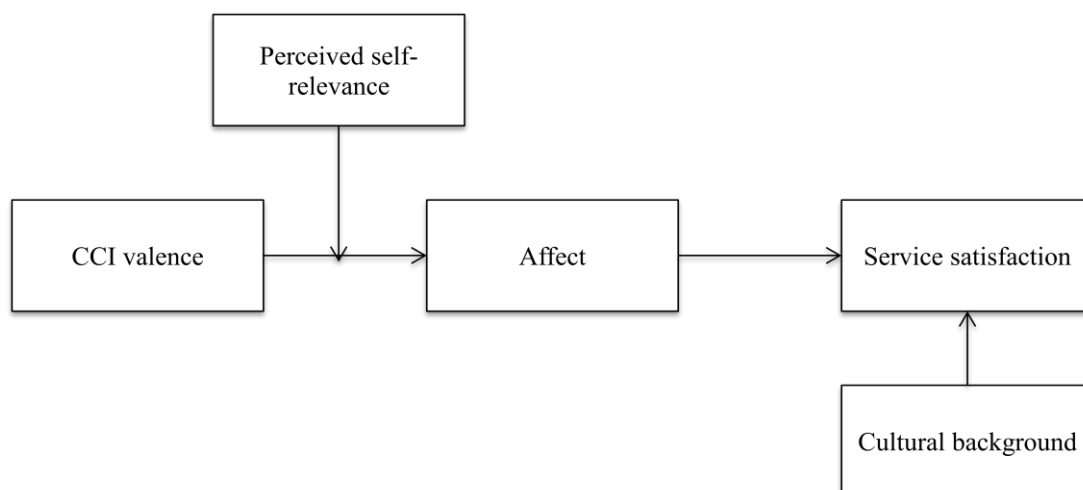
Study 1 indicates partial mediation for seven out of eight of the tested relationships. More specifically: positive and negative affect partially mediate the relationship between CCI valence and encounter satisfaction, firm satisfaction, intention to return and word-of mouth. The exception to this is that positive affect does not mediate between CCI valence and intention to return. Partial mediation – and not full mediation – is theoretically sound as it has been established in the literature that cognitive processes mediate the same relationship. It would therefore be illogical if affect was found to be a full mediator.

The results for study 2 exactly confirm the proposed hypothesis. For dependent variable satisfaction with the service encounter, a significant interaction effect between CCI valence and self-relevance was found. This means that for relevant CCI events, the satisfaction ratings for the negative scenarios were significantly more negative than for irrelevant CCI, and vice versa. The effects for

intention to return slightly diverge from this rule such that for irrelevant CCI, negative CCI leads to higher intention to return than positive CCI does.

The third study reveals that when the other customer is perceived socially closer to the focal customer in terms of cultural background, the service evaluation is increased generally. This means that a positive evaluation resulting from positive CCI becomes more positive, and a negative evaluation becomes less negative. The study indicates that cultural background has a main effect on service satisfaction, which is contrary to the proposed moderating role of cultural background.

Figure 14 shows the actual relationships based on study results.



**Figure 12 – Model of research findings**

## 8.2 Additional research findings

Although the findings confirm the proposed framework, several additional research findings are worth mentioning. These include the disconfirmation of hypothesis 3, divergent findings for the dependent variable intention to return and the influence of demographic and personality variables.

The results for study 3 do not confirm hypothesis 3 as a main effect of cultural background on service evaluation was found. Miao and Matilla (2013) found that spatial and temporal distance moderate the relationship between CCI events and emotions, but did not test social distance. The present study has found that social distance in terms of cultural background of the other customer has a main effect on emotions and service evaluation, and hence does not have the same effects as the other aspects of psychological distance.

In the discussion section for that study, social identity theory was used to explain the findings. In brief, social identity theory states that individuals generally attempt to preserve their own group-based identity by favouring in-group members at the expense of out-group members. When the source of the CCI is a customer from another cultural group, an out-group, the focal customer experiences less positive affective reactions and as a result lowers their service evaluation. This effect would hold regardless of the valence of the CCI and hence is a main effect. Whether this explanation is correct is a question that can be answered in future research endeavors.

Second, in the study discussion sections, a divergent data pattern for the dependent variable intention to return was identified. Intention to return is divergent as in it does not have similar results as the dependent variable satisfaction with the service encounter. In study 1, it was found that positive affect does not mediate between CCI valence and intention to return. It was not possible to determine the reason for this diversion from study 1 alone, and hence it was decided to include intention to return as dependent variable in study 2. Study 2 indicates that for relevant scenarios, the effect on intention to return is very similar to that on

encounter satisfaction. However, for irrelevant scenarios the average intention to return was significantly higher for negative than it is for positive CCI.

The two studies indicate the following in different wording. The valence of CCI events has a direct effect on intention to return, such that the positive affect caused by the CCI event does not lead to a change in intention to return. Moreover, for CCI that is not relevant to a focal customer, customers actually have a higher intention to return for negative CCI than for positive CCI.

These findings are puzzling as they contradict common sense. First of all, one could argue that intention to return is based on whether the customer had a good experience during the service encounter and is considering repurchasing this service. If the experience was positive, this elicits positive affect. This positive affects, according to the presented theoretical argument, should then be used as a source of information to form an intention to return. Second, it seems illogical and contradictory for customers to have higher intention to return to a service with negative CCI than with positive CCI, even though the CCI was not relevant. The opposite result was expected based on theory.

The findings of these studies can be explained in many ways. The explanation the author deems most likely is errors in measurement. Regarding measurement, two main issues can be identified. In both studies, intention to return was measured using a scale that has high internal reliability and face validity. However, one aspect of the scale might have confused participants: a reverse-scaled third item. The third item is exactly the same as the second item but negatively phrased (e.g. I will return versus I will not return). Participants could have misread or misinterpreted this item for a variety of reasons such as not paying enough attention, completing the survey too fast or language barriers.

The second issue concerning measurement is the scenarios used in the studies. The service setting is not a fictional service firm but one that participants have other experiences with. In study 1, participants were asked to recall a restaurant visit; it is possible that they chose to describe a restaurant that they regularly visit (especially for positive CCI). In study 2, participants were given a scenario about a branch of a bank with which many of the participants have a bank account. Moreover, because the branch is nearby the participants would use this particular branch for their banking services.

Continuing with this logic brings us to the conceptual difference between satisfaction with the service encounter and intention to return. The difference is that satisfaction with encounter is about a particular moment in time (i.e. the encounter). However, an intention to return may be related to previous experiences with that particular service. In study 1, participants were asked to recall an experience in a restaurant. Previous attitudes were not controlled (the measurement error) and hence it cannot be known whether intention to return was influenced by earlier experiences. A similar issue can be identified for study 2: participants may have actual experiences with the branch described in the scenario and therefore tapped into their previous experiences with and attitudes about this particular branch for determining their intention to return. In both studies, the measurement specifically asked about satisfaction with the encounter described (either by the participant or in the scenario) and about intention to return to that service firm – not specifying that this is to be based on the experience described.

The diverging study results for intention to return can hence be explained based on this notion. In study 1, positive affect elicited by the CCI event described would indeed not lead to changes in intention to return if the participants use

additional or other information to determine their intention to return. Similarly, in study 2 irrelevant CCI may be considered information that is not relevant to their intention to return to the branch as this is related to real-world factors. In other words, intention to return was not based on the present study but on actual need or attitudes towards the particular service firm.

A third additional finding of the study concerns demographic variables. In study 1, no evidence for a moderating effect of the demographic variables age, gender, income, marital status and education were found – which contradicts earlier findings in the literature. The sample used in study 1 was relatively diverse as it was recruited via MTurk. Study 2 replicates this absence of moderation, as no effects of demographic variables were found. None of the demographic variables was significantly correlated with the dependent variable, which is a requirement for a variable being included as a covariate. The findings of the present study in combination with findings from the literature suggest that the influence of demographic variables may not be as strong as suggested by previous literature.

### **8.3 Limitations and future directions**

As with all research, the present study has a variety of limitations. These limitations can be divided into theoretical and methodological limitations.

Georgi and Mink (2013)'s major criticism of the CCI literature is that the current literature only makes a distinction between the valence of CCI incidents, which they deemed superficial. While this is a valid comment, changing it might be more complicated than it sounds. So far, the definition and measurement of the construct CCI within the literature has not been consistent across studies. A particularly good example of the inconsistency is the difference in CCI definition



between Gruen et al. (2007) and Moore et al. (2005). The items to measure CCI in Moore et al. (2005; and Yoo et al., 2012) were related to the development of friendships between friends, and the enjoyment of spending time together with other customers. On the other hand, CCI in Gruen et al. (2007) were focused on the networking opportunities and the value of the contact with other customers. The problem with this inconsistency is that it becomes unclear what the CCI construct encompasses and it becomes difficult to compare study results. While Georgi and Mink are correct in their assessment, extending the CCI construct may increase the present issues with the CCI construct. The present study does not assist in resolving the issues with the construct of CCI by only assessing CCI valence. This can be identified as an important future direction in CCI-related research.

Several other theoretical extensions can be identified. For instance, the present study only uses positive and negative affect to measure affective reactions. While this is a good start, discrete emotions (such as happiness, sadness, anger and guilt) may have interesting and important effects on CCI and service evaluation. Moreover, within the AET framework it is suggested that environmental characteristics, dispositions, and characteristics of the other customer could be of influence. The present study could be extended by looking into these factors. The theoretical framework could also be extended by combining an affective and a cognitive model so that both mediating paths can be assessed within one framework. Although this is complicated, it would provide additional insights about the importance of the two different mechanisms in service encounter evaluation. Another theoretical extension would be to look at the effect of multiple (or absence of) other customers, rather than only one customer. It is possible that because of a large number, the social influence of these other customers becomes larger and affects the

focal customer and the service encounter. Moreover, the absence of other customers may lead a focal customer to hold several assumptions about the service, which may affect evaluation.

Methodologically, several important limitations need to be mentioned. First of all, the present study only looks into three service settings. Services are highly diverse in nature and although the presented theoretical framework holds in the environments tested, it could be that it does not for other types of service environments. For instance, some services like individual consulting may not include interaction with other customers, whereas other services like dating services have CCI as a central component. A second limitation of the present study is that experiments are not realistic. An extension would hence be to test the presented framework in an actual service firm, which would also allow for testing actual behavior – and not just attitudes. Moreover, the study has relatively small sample sizes. Increasing the sample size will enhance reliability of the results. Third, as discussed previously the previous attitudes towards the service described were not controlled, which may interfere with study results. Lastly, nationality as a manipulation may not reflect social identity.

#### **8.4 Managerial implications**

Although the present study had a strong focus on theory, three major managerial implications can be identified.

First of all, CCI is an element of the service encounter that service firms may not pay attention to because it may not be obvious and/or managers may consider it beyond their control. However, the current research findings indicate that other customers are seen as service elements, and that their behavior and presence affects

service evaluation. Therefore, it is important for service firms to understand and be knowledgeable about customer relationship management. Not only should managers try to advance relationships between customers and the firm, but also among customers. The present research hence is important for managers as it shines a light on a service element which is often ignored.

The study has shown that the interaction with other customers leads to the elicitation of emotions, and that emotions affect service evaluation. This study findings highlights that it is important to manage both aspects of this relationship: both the elicitation of emotion from CCI events as well as the influence of emotions – from any source – on service evaluation. Managers should stimulate positive CCI and reduce negative interaction. Moreover, managers should attempt to increase positive affect and reduce negative affect.

Lastly, the present study shows that for intercultural service encounters, the cultural background of the customer matters. Specifically, people enjoy being around people from their in-group more than those from an out-group. This is crucial to know for creating marketing strategies. If a firm wants to increase the variety of its customers – for instance to extend its market to new segments -, managers should consider that this extension might lower the service evaluation of their present and aspired new customers if these customers belong to different cultural groups.

One interesting extension that can be made in the CCI literature is to include strategies to manage CCI as a firm. Whereas it was long believed that customers cannot be controlled, the literature has slowly begun to realize that this notion is not entirely true. For instance, Levy (2010) has shown that if a tour operator facilitates interaction among tour attendees, their service evaluation increases. Hence, exploring

strategies to manage customer-to-customer interaction is an important extension of the present CCI literature.

### **8.5 Conclusion**

To conclude, this dissertation is a collection of three studies investigating the interaction among customers in a service encounter. The aim of the study was to understand how and why CCI influences satisfaction with a service encounter, and how this effect varies based on the characteristics of the customers involved.

The theoretical perspective taken was the affective events theory, from which it was argued and found that CCI events elicit emotions through an appraisal process, that these emotions influence service evaluation, and that other customers belonging to the same culture lead to increased service evaluation.

## Appendix A: Measures and manipulation checks

### A.1 CCI valence

Q1. What is your impression of the event described? (1-very negative to 7-very positive).

### A.2 Positive and negative affect

To measure positive and negative affect the PANAS scale was used. Respondents were asked to answer on a scale from 1 to 5 termed “very slightly or not at all” to “extremely”. The items of the PANAS include:

Positive	Positive	Negative	Negative
<b>Interested</b>	Alert	Distressed	Irritable
<b>Excited</b>	Inspired	Upset	Ashamed
<b>Strong</b>	Determined	Guilty	Nervous
<b>Enthusiastic</b>	Attentive	Scared	Jittery
<b>Proud</b>	Active	Hostile	Afraid

### A.3 Arousal and valance of emotion

Q1. During this experience, I felt (1-very unpleasant to 7-very pleasant).

Q2. During this experience, I felt (1-very calm to 7-very aroused).

### A.4 Affective orientation

Q1. I use my feelings to determine what I should do in many situations. (1-strongly disagree to 5-strongly agree).

Q2. My emotions tell me what to do in many cases. (1-strongly disagree to 5-strongly agree).

Q3. I follow what my feelings say I should do in most situations. (1-strongly disagree to 5-strongly agree).

Q4. I usually let my internal feelings direct my behavior. (1-strongly disagree to 5-strongly agree).

### A.5 Encounter satisfaction

Q1. Overall, I am satisfied with this service experience. (1-strongly disagree to 7-strongly agree).

Q2. I would recommend this service experience to others. (1-strongly disagree to 7-strongly agree).

Q3. I am happy with this service experience. (1-strongly disagree to 7-strongly agree).

#### **A.6 Firm satisfaction**

Q1. Overall, I am satisfied with this restaurant. (1-strongly disagree to 7-strongly agree).

Q2. I would recommend this restaurant to others. (1-strongly disagree to 7-strongly agree).

Q3. I am happy with this restaurant. (1-strongly disagree to 7-strongly agree).

#### **A.7 Intention to repurchase**

Q1. I consider this restaurant my first choice to dine out. (1-very unlikely to 7-very likely).

Q2. I intend to return to this restaurant in the future. (1-very unlikely to 7-very likely).

Q3. I do not intend to return to this restaurant in the future. (1-very unlikely to 7-very likely).

#### **A.8 Word-of-mouth intentions**

Q1. I will say positive things about this restaurant. (1-very unlikely to 7-very likely).

Q2. I will recommend this restaurant to someone who seeks my advice. (1-very unlikely to 7-very likely).

Q3. I will encourage friends and family to go to this restaurant. (1-very unlikely to 7-very likely).

## **Appendix B: Scenarios used in experiments**

This appendix contains the scenarios used in the experiments. Study 2 had four scenarios and study 3 had six scenarios.

### **B.1 Study 2**

Please read the following scenario and imagine that this is happening to you.

1) You are standing in line at Hang Seng Bank branch on the PolyU campus to make a payment. The line is quite long and to avoid being bored, you look at your smartphone. Suddenly, the man right behind you quickly steps in front of you. He says he is in a hurry and refuses to step back to his real place, even when you tell him that he has skipped the line.

2) You are standing in line at Hang Seng Bank on the PolyU campus to make a payment. The line is quite long and to avoid being bored, you look at your smartphone. Suddenly, the man right in front of you signals to you that you can go in front of him. He says that he is not in a hurry, steps back and lets you go first.

3) You are standing in line at Hang Seng Bank on the PolyU campus to make a payment. The line is quite long and to avoid being bored, you look at your smartphone. Suddenly, somewhere far behind you in the queue, a man skips the line. He says he is in a hurry and refuses to step back to his real place, even when the other person tells him that he has skipped the line.

4) You are standing in line at Hang Seng Bank on the PolyU campus to make a payment. The line is quite long and to avoid being bored, you look at your smartphone. Suddenly, somewhere far behind you in the queue, a man lets another person go in front of him. He says that he is not in a hurry, steps back and lets the other person go first.

### **B.2 Study 3**

Imagine that you are about to take off in a plane towards your dream destination. You are very excited about this flight but unfortunately, you could not sit next to your friends.

1) Instead, there is a woman sitting next to you. She is a Hong Kong local travelling for work. The woman seems very friendly and you have a very nice conversation with her for the entire flight. Halfway the flight, she compliments one of the staff members for their good service. You feel very comfortable in her presence. Upon landing, you feel that time flew by and say goodbye to the woman.

2) Instead, there is a woman sitting next to you. She is an American travelling for work. The woman seems very friendly and you have a very nice conversation with her for the entire flight. Halfway the flight, she compliments one of the staff members for their good service. You feel very comfortable in her presence. Upon landing, you feel that time flew by and say goodbye to the woman.

3) Instead, there is a woman sitting next to you. She is a Filipino travelling for work. The woman seems very friendly and you have a very nice conversation with her for the entire flight. Halfway the flight, she compliments one of the staff members for their good service. You feel very comfortable in her presence. Upon landing, you feel that time flew by and say goodbye to the woman.

4) Instead, there is a woman sitting next to you. She is a Hong Kong local travelling for work. From the moment you take off, she starts complaining loudly about everything on the plane to one of her friends who is sitting on her other side. Halfway the flight, the woman starts coughing in your direction without holding her hand before her mouth. You feel very uncomfortable in her presence. Upon landing,



you feel that the flight lasted very long and you quickly walk away from the woman without saying goodbye.

5) Instead, there is a woman sitting next to you. She is an American travelling for work. From the moment you take off, she starts complaining loudly about everything on the plane to one of her friends who is sitting on her other side. Halfway the flight, the woman starts coughing in your direction without holding her hand before her mouth. You feel very uncomfortable in her presence. Upon landing, you feel that the flight lasted very long and you quickly walk away from the woman without saying goodbye.

6) Instead, there is a woman sitting next to you. She is a Filipino travelling for work. From the moment you take off, she starts complaining loudly about everything on the plane to one of her friends who is sitting on her other side. Halfway the flight, the woman starts coughing in your direction without holding her hand before her mouth. You feel very uncomfortable in her presence. Upon landing, you feel that the flight lasted very long and you quickly walk away from the woman without saying goodbye.

### Appendix C: Additional analysis

#### C.1 Study 1

CFA for the items included in PANAS and four dependent variables used in the study.

	Component				Component				Component		
	1	2	3		1	2	3		1	2	3
<b>PANAS-Interested</b>	,407	,643	-,205	<b>PANAS-Afraid</b>	-,120	,200	,742	<b>ES1</b>	,829	,399	-,157
<b>PANAS-Excited</b>	,335	,657	,012	<b>PANAS-Jittery</b>	-,245	,090	,781	<b>ES2</b>	,784	,373	-,254
<b>PANAS-Strong</b>	,092	,706	,100	<b>PANAS--Distressed</b>	-,582	-,255	,543	<b>ES3</b>	,833	,408	-,127
<b>PANAS-Enthusiastic</b>	,282	,740	-,166	<b>PANAS-Nervous</b>	-,177	,134	,749	<b>FS1</b>	,917	,226	-,081
<b>PANAS-Proud</b>	,335	,690	-,068	<b>PANAS-Upset</b>	-,519	-,334	,585	<b>FS2</b>	,920	,233	-,101
<b>PANAS-Alert</b>	,104	,687	,225	<b>PANAS-Ashamed</b>	,126	-,135	,562	<b>FS3</b>	,924	,196	-,125
<b>PANAS-Inspired</b>	,354	,627	-,148	<b>PANAS-Guilty</b>	-,029	,056	,548	<b>ITR1</b>	,750	,090	-,106
<b>PANAS-Determined</b>	-,066	,761	,150	<b>PANAS-Scared</b>	-,056	,195	,744	<b>ITR2</b>	,861	,049	,030
<b>PANAS-Attentive</b>	,226	,779	,041	<b>PANAS-Hostile</b>	-,471	-,187	,521	<b>ITR3</b>	,755	-,064	,012
<b>PANAS-Active</b>	,141	,742	,194	<b>PANAS-Irritable</b>	-,623	-,365	,432	<b>WOM1</b>	,914	,240	-,105
								<b>WOM2</b>	,912	,224	-,109
								<b>WOM3</b>	,881	,242	-,125

### Supplemental mediation analysis

Preacher and Hayes (2008) have proposed an alternative method to investigating mediation models, with a specific focus on multiple mediators within a single model.

As a supplement to the more traditional Baron and Kenny approach used in the thesis, this method was also used to analyze the data for study 1.

The data were analyzed using the add-in for this analysis in SPSS. The same variables as the original analysis were selected for the analysis. 1000 samples were set as the number of bootstrap resamples, which is the standard setting. Results are summarized in the following table.

Dependant variable	Mediator	IV to mediators (a path)	Direct effects of mediators on DV (b paths)	Total effect of IV on DV (c path)	Direct effect of IV on DV (c' path)	Bias corrected confidence intervals for indirect effect
Encounter Satisfaction	Positive Affect	0.9712	0.0846	0.3725	0.1926	0.0445 0.1320
	Negative Affect	-0.8614	-0.1134			0.0450 0.1597
Firm Satisfaction	Positive Affect	0.9712	0.0552	0.2956	0.1528	0.0163 0.1022
	Negative Affect	-0.8614	-0.1034			0.0388 0.1609
Intention to Return	Positive Affect	0.9712	Insignificant	0.1824	0.0794	-0.0046 0.0807
	Negative Affect	-0.8614	-0.0804			0.0241 0.1476
Word-of-mouth intention	Positive Affect	0.9712	0.0630	0.2779	0.1299	0.0253 0.1175
	Negative Affect	-0.8614	-0.1007			0.0369 0.1492

Note: IV stands for independent variable, DV for dependant variable. All reported values are estimated betas. All values reported were significant at the 0.01 level, except for the insignificant value.

## C.2 Study 2

Full ANOVA analysis of study 2.

### C.2.1 Satisfaction with service encounter

#### Tests of Between-Subjects Effects

Dependent Variable: SAT

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	15,793 <sup>a</sup>	3	5,264	4,355	,006	,087
Intercept	2028,849	1	2028,849	1678,530	,000	,925
Scenario_relevance	,456	1	,456	,377	,540	,003
Scenario_valence	10,713	1	10,713	8,863	,003	,061
Scenario_relevance *	5,207	1	5,207	4,308	,040	,030
Scenario_valence						
Error	165,593	137	1,209			
Total	2226,556	141				
Corrected Total	181,385	140				

a. R Squared = ,087 (Adjusted R Squared = ,067)

### C.2.2 Intention to return

#### Tests of Between-Subjects Effects

Dependent Variable: ITR

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	16,009 <sup>a</sup>	3	5,336	5,800	,001	,113
Intercept	2368,634	1	2368,634	2574,662	,000	,949
Scenario_relevance	3,546	1	3,546	3,855	,052	,027
Scenario_valence	,751	1	,751	,816	,368	,006
Scenario_relevance *	12,339	1	12,339	13,412	,000	,089
Scenario_valence						
Error	126,037	137	,920			
Total	2523,750	141				
Corrected Total	142,046	140				

a. R Squared = ,113 (Adjusted R Squared = ,093)

### C.3 Study 3

Full ANOVA analysis of study 3.

#### Tests of Between-Subjects Effects

Dependent Variable: SAT

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	361,774 <sup>a</sup>	5	72,355	127,165	,000
Intercept	3267,173	1	3267,173	5742,108	,000
CCI_VAL	355,695	1	355,695	625,139	,000
CCI_NAT	4,671	2	2,335	4,104	,018
CCI_VAL *	1,101	2	,551	,968	,382
CCI_NAT					
Error	106,969	188	,569		
Total	4011,222	194			
Corrected Total	468,743	193			

a. R Squared = ,772 (Adjusted R Squared = ,766)

Full ANOVA analysis of study 3 with AM and FP pooled.

#### Tests of Between-Subjects Effects

Dependent Variable: SAT

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	361,291 <sup>a</sup>	3	120,430	212,949	,000	,771
Intercept	3013,479	1	3013,479	5328,542	,000	,966
CCI_VAL	309,350	1	309,350	547,003	,000	,742
CCI_HK	4,613	1	4,613	8,156	,005	,041
CCI_VAL *	,627	1	,627	1,108	,294	,006
CCI_HK						
Error	107,452	190	,566			
Total	4011,222	194				
Corrected Total	468,743	193				

a. R Squared = ,771 (Adjusted R Squared = ,767)

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