國立交通大學

管理科學系碩士班

碩士論文

失驗與購後口碑對顧客滿意度之影響

The Effects of Disconfirmation and Post-purchase Word-of-Mouth on Customer Satisfaction

研究生: 廖為新

指導教授:張家齊 博士

中華民國九十六年六月

失驗與購後口碑對顧客滿意度之影響

The Effects of Disconfirmation and Post-purchase Word-of-Mouth on Customer Satisfaction

研究生:廖為新	Student: Wei-Hsin Liao
指導教授:張家齊 博士	Advisor: Dr. Chia-Chi Chang

國立交通大學 管理科學系 碩士論文

A Thesis Submitted to Department of Management Science College of Management National Chiao Tung University In Partial Fulfillment of the Requirements for the Degree of Master in

Management Science

June 2007

Hsinchu, Taiwan, Republic of China

中華民國九十六年六月

失驗與購後口碑對顧客滿意度之影響

研究生:廖為新

指導教授:張家齊 博士

國立交通大學管理科學系碩士班

中文摘要

本研究主要是檢視失驗與購後口碑對顧客滿意度的影響,失驗指的是顧客主觀的知覺 期待與產品或服務表現之間的差異,先前的研究指出失驗會正向的影響顧客滿意度。而購 後口碑在此定義為消費者在購買之後才接觸到的口碑訊息。本研究以一個民宿服務的實驗 情境,再次的評估失驗對顧客滿意度的影響,並且進一步的了解是否顧客在接觸購後的口 背後,會改變他們的滿意度評估。

研究結果指出,正面失驗會導致最高的滿意度,其次是無失驗,最後是負面的失驗。 購後口碑的確會影響顧客滿意度,且此影響會受到失驗情境的調節。在負面失驗之下,購 後口碑並不會對滿意度造成顯著的影響。正面失驗下,在購後接觸 WOM_{CP}的口碑訊息, 發覺他人體驗到的民宿表現與自己一致的受測者,比起沒有接觸口碑的受測者有較高的滿 意度;相反的,正面失驗之下,在購後有接觸 WOM_{AP}的口碑訊息,發覺其他人體驗了比 自己還要好的民宿表現的受測者,滿意度較沒有接觸口碑的受測者要來的低。在無失驗之 下,購後接觸 WOM_{CP}或是 WOM_{AP}的受測者,滿意度均較無接觸任何口碑的受測者來的 高。最後,本研究會根據這些結果,提供一些解釋並給予行銷人員一些建議。

關鍵字:失驗、購後口碑、WOMCP、WOMAP、顧客滿意度

The Effects of Disconfirmation and Post-purchase Word-of-Mouth on Customer Satisfaction

Student : Wei-Hsin Liao

Advisor : Dr. Chia-Chi Chang

Department of Management Science National Chiao Tung University

ABSTRACT

This research examined the effects of disconfirmation and post-purchase word-of-mouth (WOM) on customer satisfaction. Disconfirmation, the customers' subjective perceived discrepancy between expectations and performance, has been confirmed in much previous research to have a positive influence on satisfaction. Post-purchase WOM in this research was defined as the WOM which consumers received after a purchase. This research used an experimental situation of hostel service to evaluate the effect of disconfirmation again and then examined whether customers would change their satisfaction evaluations after being exposed to post-purchase WOM.

The results revealed that positively disconfirmed participants have the highest satisfaction followed by confirmed participants, and then negatively disconfirmed participants who have the lowest satisfaction. Post-purchase WOM did influence customer satisfaction and further, disconfirmation moderated its effect on satisfaction. Post-purchase WOM did not significantly influence satisfaction in negative disconfirmation. When experiencing positive disconfirmation, participants who received WOM_{CP}, which indicated that others' perceived product performance was consistent with theirs, after a purchase had higher satisfaction than those who had not received any WOM. On the contrary, when experiencing positive disconfirmation, participants who received WOM_{AP}, which indicated that others' perceived product performance was better than theirs, after a purchase had lower satisfaction than those who had not received any WOM. Moreover, in zero disconfirmation, both participants who received WOM_{CP} and WOM_{AP} after a purchase felt more satisfied than those who had not received any WOM. Finally, according to the results, the author provided some explanations and suggestions for marketers.

Keywords: Disconfirmation, Post-purchase Word-of-Mouth, WOM_{CP}, WOM_{AP}, Customer

Satisfaction

ACKNOWLEDGEMENT

這份論文之所以能夠順利的完成,必須感謝許多人,首先,感謝我的指導老師,張家 齊博士,對於我的論文細心、耐心的指導,給予我許多研究方面的建言,讓我在研究的路 途上不至於迷失方向。感謝我的父母給我經濟以及精神上的支持,讓我能無後顧之憂的完 成我的學業並取得碩士學位。

除了老師以及家人,還有許多管科 94 級的同學們的陪伴,才能讓我順利的走過碩士 生涯的這兩年。感謝我的紅粉知己,奧宇,給予我精神的支持,在我的研究遭遇一些問題 時給我最溫暖,最窩心的鼓勵。感謝張門的其他同學,慧芸、佩瑜、以江、秋君以及 109 研究室的夥伴們,大銓、杰宏,一路相隨,互相打氣,才能使我不斷向前,完成我的學 業,我的碩士論文。感謝交大管科提供我一個好的學習環境,以及許多優秀同學的良性競 爭、相互學習,才能成就如今的我。

最後,必須感謝每個協助我完成碩士論文的人,由於有許多好心的人願意幫我填寫問卷,許多 PTT 實業坊的板主願意讓我放置問卷,許多給予研究建議的朋友,我才能順利的 完成研究,很多人雖然都不知道你們的姓名,但這份感謝的心意將一直留在我的心裡。

再次感謝所有陪伴我,支持我,給予幫助的所有人!

廖為新 謹誌於

民國 96 年於交大管科

中文摘要	I
ABSTRACT	II
ACKNOWLEDGEMENT	III
CONTENTS	IV
LIST OF TABLES	VII
LIST OF FIGURES	VIII
CHAPTER 1: INTRODUCTION	1
1.1 Background	1
1.2 Research Motivation	1
1.3 Research Objectives	3
1.4 Thesis Structure	3
CHAPTER 2: LITERATURE REVIEW	5
2.1 Customer Satisfaction	
2.2 Disconfirmation and Customer Satisfaction	7
2.3 Post-purchase Word-of-Mouth	10
2.4 Post-purchase WOM and Satisfaction	12
CHAPTER 3: METHODOLOGY	
3.1 Research Produce	
3.2 Stimulus	19
3.3 Manipulations	
3.3.1 Disconfirmation	
3.3.2 Post-purchase WOM	
3.4 Experimental Procedure	
3.5 Sampling Plan	

CONTENTS

3.6 Measures	22
3.6.1 Expectations	22
3.6.2 Performance	
3.6.3 Disconfirmation	
3.6.4 Satisfaction	
3.6.5 Perceived Performance Discrepancy with Others	
3.7 Pretest	27
CHAPTER 4: RESULTS	
4.1 Background of Participants	
4.2 Reliability Analysis	
4.3 Manipulation Checks	
4.3 Manipulation Checks	
4.4.1 The Effects of Disconfirmation and Post-purchase WOM on Sati	
4.4.2 The Effect of Post-purchase WOM on Satisfaction in Negative Disconfirmation	
4.4.2 The Effect of Post-purchase WOM on Satisfaction in Zero Disconfirmation	
4.4.3 The Effect of Post-purchase WOM on Satisfaction in Positive Disconfirmation	39
4.5 Results of the Tested Hypotheses	41
CHAPTER 5: DISCUSSION AND IMPLICATIONS	42
5.1 Discussion	42
5.1.1 Post-purchase Effect in Negative Disconfirmation	43
5.1.2 Post-purchase Effect in Positive Disconfirmation	44
5.1.3 Post-purchase Effect in Zero Disconfirmation	45
5.1.3 Additional Analysis	

5.2 Marketing Implications	47
5.3 Limitations	49
5.4 Future Research Suggestions	49
REFERENCES	51
APPENDIX 1	54
Expectations Manipulation	54
(Low Expectations Scenario)	54
(Moderate Expectations Scenario)	56
(High Expectations Scenario)	58
APPDENX 2	61
Performance and Post-purchase WOM Manipulations	61
Low Performance Scenario	61
Moderate Performance Manipulation	63
High Performance Scenario	64
APPENDIX 3	
Internet Questionnaire	
APPENDIX 4	73
The Hyperlinks of the Research Websites	73
APPENDIX 5	74
The Results of Pretest	74
APPENDIX 6	77
WOM _{AP} Manipulation in Zero Disconfirmation	77
APPENDIX 7	78
Independent Sample t Test for zero and positive disconfirmation in WOM _{AP}	78

LIST OF TABLES

Table4. 1 Frequency Distribution of Sample Characteristics	
Table4. 2 Reliability	
Table4. 3 Manipulation Check for Expectations	
Table4. 4 Manipulation Check for Performance	
Table4. 5 Manipulation Check for Disconfirmation	32
Table4. 6 Manipulation Check for Post-purchase WOM	
Table4. 7 Descriptive Statistics for Satisfaction	
Table4. 8 Two-way ANOVA	
Table4. 9 Assumption Tests of Error for ANOVA	35
Table4. 10 LSD Test for Disconfirmation on Satisfaction	
Table4. 11 LSD Test for Post-purchase WOM on Satisfaction	
Table4. 12 Profile Analysis in Negative Disconfirmation	
Table4. 13 Profile Analysis in Zero Disconfirmation	
Table4. 14 Profile Analysis in Positive Disconfirmation	40
Table4. 15 Results of the Hypotheses	

LIST OF FIGURES

Figure 1. 1 Consistency Triangle	2
Figure2. 1 Disconfirmation Paradigm	8
Figure2. 2 Research Framework	. 17
Figure3. 1 Research Procedure	.18
Figure 4. 1 The Interaction between Disconfirmation and Post-purchase WOM	.34
Figure4. 2 Mean Plot of Satisfaction in Negative Disconfirmation	. 37
Figure 4. 3 Mean Plot of Satisfaction in Zero Disconfirmation	. 39
Figure4. 4 Mean Plot of Satisfaction in Positive Disconfirmation	. 40
Figure 5. 1 Changed Direction of Satisfaction in Positive Disconfirmation	.47



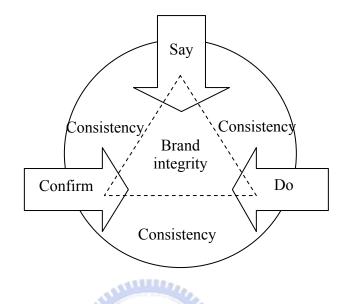
CHAPTER 1: INTRODUCTION

1.1 Background

Through marketing communication (e.g., advertising, sales promotions, direct marketing, and public relations), companies deliver messages about their products (or services) to create consumers' expectations prior to a purchase. Previous research has demonstrated that consumers would compare their perceived product performance with pre-purchase expectations and then generate satisfaction judgments (Churchill & Surprenant, 1982; Oliver 1980; Tse & Wilton, 1988). These messages from the company's sources can be controlled and modified by marketers. However, there are some messages from other people that marketers cannot control directly, namely word of mouth (WOM) which refers to a kind of interpersonal communications in which none of the participants are marketing sources. Burnkrant and Cousineau (1975) demonstrated that people would use others' product evaluations as a source of information about products. WOM has a significant effect on pre-purchase attitudes (Herr, Kardes, & Kim, 1991) and postpurchase evaluations (Bone, 1995). Previous research emphasized the effect of WOM which consumers come into contact with prior to a purchase on product/service evaluation (e.g., Arndt, 1967; Bone, 1995; Herr, Kardes, & Kim, 1991). However, consumers can receive WOM in any period of decision-making, even when a purchase has occurred. It is worth investigating whether WOM which consumers receive after a purchase would influence responses to product/service.

1.2 Research Motivation

Duncan's textbook of integrated marketing communication mentioned a "consistency triangle" (Duncan, 2005, p. 335), as seen infigure1.1.



- "Say" messages are MC (marketing communication) messages that set expectations.
- "Do" messages are messages delivered by the company's product and service messages. They are conveyed by how products actually perform, what they actually cost, how convenient they are to get and use, and the brand's supporting services.
- "Confirm" messages are messages from other people who either criticize or praise the brand or company. Personal and positive third-party communication is considerably more persuasive than most brand messages.

(Source: Duncan, 2005, p335)

All of these above messages must achieve consistency to create great brand relationships which contain customer satisfaction. The "say" messages delivered by marketing communication must be consistent with the "do" messages about how products and services perform, as well as with what others or word of mouth "confirm" about the brand. The concept of the consistency triangle is somewhat similar to the disconfirmation paradigm in customer satisfaction literature. According to the disconfirmation paradigm (Oliver, 1980), customers judge satisfaction by comparing previously held expectations with perceived product or service performance. To satisfying customers, product or service performance must be at least consistency with previous expectations. It also implies the importance of the consistency between the "say" and "do" messages. The motivation of this research is elicited by the consistency triangle and expectancydisconfirmation paradigm. It is necessary to understand the importance which WOM information confirms product performance in satisfaction formation.

1.3 Research Objectives

The present research focuses on post-purchase WOM which consumers come into contact with after a purchase. The purpose of this study is to understand its influence on satisfaction judgments. As a result, this research will reaffirm disconfirmation model, demonstrate whether disconfirmation would be a moderator between post-purchase WOM and satisfaction, examine the influence of consistency between post-purchase WOM and consumers' perceived performance on satisfaction, and then provide some managerial implications.

1.4 Thesis Structure

This thesis includes five chapters, and the outline of each chapter is as follows:

Chapter One introduces the research background, research motivation, research objectives, and the research structure.

Chapter Two reviews the antecedent literatures relevant to this research. Customer satisfaction serves as the dependent variable; disconfirmation and post-purchase WOM information serves as the independent variable; disconfirmation serves as the moderator between

3

post-purchase WOM information and customer satisfaction. After reviewing the literatures, it will present the hypotheses of this research.

Chapter Three illustrates how the experiment was designed and the data was collected. It presents a conceptual research framework, the experimental procedure, sample selection, data collection, measurements, and pre-test.

Chapter Four examines the hypotheses and shows the statistical results of this research. It includes descriptive statistics, independent sample t test, reliability analysis, GLM, ANOVA, and multiple comparisons. With this information, some evidence to demonstrate the relationships among variables could be provided.

Chapter Five summarizes the findings, describes the limitations of this research and provides suggestions for future research.



CHAPTER 2: LITERATURE REVIEW

2.1 Customer Satisfaction

Customer satisfaction is a vital field in marketing literature. From the consumer's perspective, satisfaction represents a pleasurable consumption experience and reaffirms the consumer's decision-making prowess (Oliver, 1997). It can influence the consumer's product attitude and repurchase intention (Oliver, 1980). From the firm's perspective, satisfaction considerably contributes to the increase of a firm's profitability. Research has supported that there is a positive relationship between customer satisfaction and financial performance (Anderson, Fornell, & Rust, 1997). Prior studies have found that higher levels of customer satisfaction can also lead to greater customer loyalty (Mooradian & Olver, 1997; Oliver, 1980) and it implies that satisfaction helps to secure future revenue. Satisfied customers are wiling to provide new referrals through positive word-of-mouth (Brown, Barry, Dacin, & Gunst, 2005; Mooradian & Olver, 1997). Moreover, the more customers feel satisfied, the more they are willing to pay (Homburg, Koschate, & Hoyer, 2005). Accordingly, researchers are concentrating their attentions on exploring and demonstrating the antecedents and consequents of satisfaction, and marketers are devoting their efforts to making their customer satisfied.

Generating a generally acceptable definition of satisfaction is not easy. Through reviews of previous literature, some proposed definitions summarized by Oliver (1997) are shown below. Satisfaction can be defined as:

• "an evaluation rendered that the consumption experience was at least as good as it was supposed to be" (Hunt, 1977, p. 459)

- "the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience" (Oliver, 1981, p. 27)
- "the consumer's response to the evaluation of the perceived discrepancy between prior expectations (or some other norm of performance) and the actual performance of the product as perceived after its consumption". (Tse & Wilton, 1988, p. 204).

These definitions contain the key concepts and mechanisms by which these concepts interact. They all mention that satisfaction is the end state of a psychological process about the consumption experience and is an evaluation or response toward the perception of the difference between the actual experience and the pre-experience standards. However, these definitions do not specify what the psychological state, evaluation or response is. Oliver (1997) maintained, "Satisfaction is the consumer's fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or overfulfillment" (p. 13). Based on two reasons, the present research adopts Oliver's definition (1997). First, his definition specifies what the consumer's summary judgment and explicitly reveals what can be measured in satisfaction, a pleasant level of consumption-related fulfillment. Second, fulfillment implies there is a goal, something to be filled. Therefore, it can be judged with reference to a standard. "A fulfillment, and hence a satisfaction judgment, involves at the minimum two stimuli - an outcome and a comparison referent" (Oliver, 1997, p. 14). It corresponds to the concept that satisfaction is the perceived consistency/inconsistency between an actual experience and a pre-experience standard.

2.2 Disconfirmation and Customer Satisfaction

Consumers would compare actual product performance with prior expectations which serves as a standard or reference point to generate satisfaction evaluations and disconfirmation is assumed to occur when perceptions of product performance are different from previous expectations (Oliver, 1980). Thus, disconfirmation is the extent to which expectations are disconfirmed by perceived product performance. Zero disconfirmation or confirmation means that a product has performed as expected; positive disconfirmation refers to the positive discrepancy that occurs when performance is above expectations; negative disconfirmation refers to the negative discrepancy that occurs when performance is below expectations (Churchill & Surprenant, 1982; Oliver, 1980, 1997). Expectations refer to subjective, predictive expectations, or the consumers' pretrial beliefs about the performance of the product in the future (Olson & Dover, 1979).

According to different approaches to conceptualizing disconfirmation, there two types of disconfirmation, subtractive disconfirmation and subjective disconfirmation (Tse & Wilton, 1988). Subtractive disconfirmation is the objective, numeric deviation which subtracts an expectation score from a performance score (Tse & Wilton, 1988). Subjective disconfirmation (e.g., Churchill & Spurprenant, 1982; Oliver, 1980) represents a distinct psychological construct encompassing a subjective evaluation of the difference between product performance and expectation. An important distinction between the two approaches is drawn by Oliver (1980), who suggests that subtractive disconfirmation may lead to an immediate satisfaction judgment, whereas subjective disconfirmation represents an intervening "distinct cognitive state resulting from the comparison process and preceding a satisfaction judgment" (p.460). Tse and Wilton (1988) demonstrate that subjective disconfirmation offers a better explanation of the satisfaction

formation than subtractive disconfirmation. This present research adopts the subjective disconfirmation approach because it emphasizes the consumers' subjective comparison process prevailing in most consumption-related situations.

The full disconfirmation model contains expectations, perceived performance, disconfirmation, and their influences on satisfaction. Some previous research has been reviewed and integrated, and the relationships among these constructs were captured – see figure 2.1.

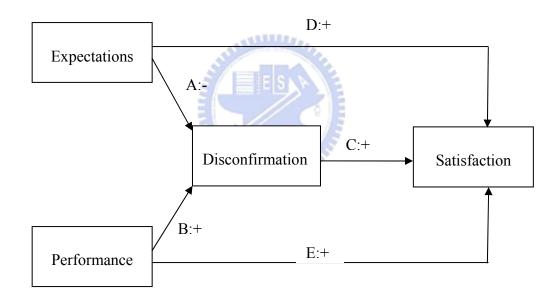


Figure 2. 1 Disconfirmation Paradigm

- relationship A (Churchill & Surprenant, 1982; Spreng & Page, 2001)
- relationship B (Churchill & Surprenant, 1982; Spreng & Page, 2001; Tse & Wilton, 1988)
- relationship C (Churchill & Surprenant, 1982; Mooradian & Olver, 1997; Oliver, 1977, 1980, 1981, 1993;
- Spreng & Page, 2001; Tse, Nicosia, & Wilton, 1990; Tse & Wilton, 1988)
- relationship D (Oliver, 1981; Tse et al., 1990; Tse & Wilton, 1988)
- relationship E (Churchill & Surprenant, 1982; Spreng & Page, 2001; Tse et al., 1990)

According to the definition of disconfirmation, it is easy to comprehend that there is a

negative relationship is between expectations and disconfirmation and a positive one between

performance and disconfirmation. Much research (relationship C in figure 2.1) has supported that disconfirmation positively influences satisfaction. When consumers' perceived performance is better than their previous expectations, they will feel satisfied; when consumers' perceived performance is worse than previous expectations, they will feel dissatisfied. Furthermore, expectations may also have a direct, positive effect on satisfaction. Oliver (1981) suggests that this results from an assimilation effect whereby the expectation level establishes the baseline around which satisfaction judgments are made. Prior research (relationship B in figure 2.1) also demonstrates that perceived performance is a determinant of satisfaction. Performance may directly and positively influence satisfaction regardless of the extent of disconfirmation (Tse & Wilton, 1988). For example, users of some brands who experience unfavorable disconfirmation of high expectations (generated through advertising) may still feel satisfied with the brand if it has more of the desired attributes than competing brands. In Churchill and Surprenant's (1982) two studies, disconfirmation and perceived performance both have positive effects on satisfaction of house plants but for video-disk player products, only perceived performance can significantly influence satisfaction. Although an expectancy disconfirmation model consists of several constructs, the focus of this present research is drawn on the relationship between disconfirmation and satisfaction. Through the preceding discussions, it is reasonable to suppose that disconfirmation has a positive effect on satisfaction and hence hypothesis 1 is developed as follow.

H1: Satisfaction of positively disconfirmed customers is higher than confirmed customers followed by negatively disconfirmed customers.

2.3 Post-purchase Word-of-Mouth

Word-of-mouth is a kind of interpersonal communication in which none of the participants are marketing sources (Bone, 1995). One of the earliest researchers on word-of-mouth was Arndt (1967) who characterized word-of-mouth as oral, person-to-person communication between a receiver and a communicator whom the receiver perceives as non-commercial, regarding a brand, product or service. Westbrook (1987) defined word-of-mouth as "informal communication directed at other consumers about the ownership, usage, or characteristics of particular goods and services or their sellers" (p. 261). According to Harrison-Walker (2001), word-of-mouth is defined as "a type of informal, person-to-person communication between a perceived noncommercial communicator and a receiver regarding a brand, a product, an organization, or a service" (p. 63). Based on these definitions, word-of-mouth (WOM) in this research is defined as the informal and interpersonal communication directed from a perceived non-commercial communicator to a receiver and about a brand, product, service or organizational related experiences.

Prior research has clarified the importance of interpersonal influence on brand purchase decision (Bearden & Etzel, 1982), product evaluations (Burnkrant & Cousineau, 1975) and variety-seeking behavior (Ratner & Kahn, 2002). There are two type of interpersonal influence, normative and informational influence (Deutsch & Gerard, 1955). Normative influence is defined as the tendency to conform to the expectations of others; informational influence is defined as the tendency to accept information from others as evidence about reality (Deutsch & Gerard, 1955). It is not hard for us to imagine that information from WOM sources might have the two types of interpersonal influence simultaneously.

People tend to trust interpersonal sources of information more than commercial sources of information, because the communicator is perceived to be independent from the seller. Harrison-Walker (2001) cited Katz and Lazarsfeld' work (1955), and suggests that WOM is the most important source of influence in the purchase of household goods and food products. It is seven times more effective than newspaper and magazine advertising, four times more effective than personal selling, and twice as effective as radio advertising in influencing consumers to switch brands (Katz & Lazarsfeld, 1955). Due to the vividness of WOM (Bone, 1995; Herr et al., 1991), it is retrieved more easily from memory and its impact on consumers is relatively greater. Herr, Kardes and Kim (1991) demonstrate that vivid WOM communication has a greater impact on pre-purchase attitudes about personal computers and automobiles than less vivid printed information, even if the information is held constant. Bone (1995) finds that WOM communications can influence both shot-term and long-term post-usage perceptions. When adopting a new product, compared with low-risk perceivers, high-risk perceivers tend to make more efforts to seek WOM information (Arndt, 1967). Moreover, positive WOM can reduce the performance risk perception for a brand purchase by consumers in online auctions (Ha, 2002). Because WOM communications transmit consumers' own experiences vividly to other consumers, people perceive that such positive information about products can reflect high quality. In addition, online WOM also influences consumers' offline decisions. Godes and Mayzlin(2004) support that WOM activities online can influence TV viewership behavior. They suggest that "online conversation may be a proxy for offline conversation" (Godes & Mayzlin, 2004, p. 558) and people sometimes make offline decision based on online information.

Most of previous research emphasized the influence of WOM received before a consumer's purchase on product evaluation (either pre-purchase attitudes or post-usage judgments). However,

there is a lack of research examining whether WOM received after a consumer's purchase would influence previously formed product evaluations. In this research, post-purchase WOM might be defined as the WOM which customers received after a purchase or after forming post-purchase product (or service) evaluations. Furthermore, this research develops different categories in the light of the content of post-purchase WOM information. It could be argued that consumers would compare their own usage experiences of products with others' from WOM information after a purchase. The above consumer's perception WOM (WOM_{AP}) denotes that it indicates that others' perceived product (or service) performance is better than the consumer's own perceived performance; the consistent perception WOM (WOM_{CP}) denotes that this kind of WOM indicates that others' perceived product (service) performance is consistent with the consumer's; the below consumer's perception WOM denotes that this kind of WOM indicates that others' perceived product performance is worse than the consumer's. This research focuses on WOM_{CP} and WOM_{AP} because it would like to examine whether post-purchase WOM which indicates others' perceived performance is better than the consumers would result negative damage to the companies.

2.4 Post-purchase WOM and Satisfaction

People usually keep absorbing product information even after a purchase. Consumers with high enduring involvement have ongoing concerns about products (Laurent & Kapferer, 1985; Venkatraman, 1989) and hence they might update their information about the products during post-usage. People with any level of involvement or knowledge in post-purchase might have the motivations to gather product information to understand others' usage experiences, product qualities, or confirm their own decisions.

Burnkrant and Cousineau (1975) demonstrate that people use others' product evaluations as a source of information about products. Thus, it is reasonable that consumers might use WOM information which reveals others usage experiences to confirm their own post-purchase evaluations. WOM has two characteristics, accessibility and diagnosticity (Bone, 1995; Herr et al., 1991). "The influence of a particular piece of information depends on the accessibility of that information in one's memory and the diagnostic of that information when predicting actual performance" (Bone, 1995, p. 213). Accessibility is whenever information is easy for consumers to retrieve. Herr, Kardes, and Kim (1991) provide evidence that WOM is highly accessible because such information is vivid. Diagnosticity is high whenever consumers feel that the information allows him or her to categorize the product clearly into one group (i.e., high quality or low quality). WOM is likely to be perceived as diagnostic, because consumers generally feel this kind of interpersonal information to be credible and trustworthy (Bone, 1995). Due to these two characteristics, when consumers understand other's experience from WOM in a postpurchase situation, they might have more reliable information about how the product (or service) performs. Because of the increase of performance information, consumers might change their satisfaction judgment formed initially by disconfirmed expectancy. One study has supported the idea that people would modify their satisfaction judgments after they interact with other group members (Bohlmann, Rosa, Bolton, & Qualls, 2006). When consumers experience disconfirmed expectancy and then form initial satisfaction, they also discuss their product evaluation with other group members, such as family members and buying group members. It was argued that based on the desire to confirm to the expectations of others, when individuals discover there is discrepancy between their satisfaction judgments and other group members', they may modified their satisfaction evaluations to correspond to a group level of satisfaction (Bohlmann et al., 2006).

13

However, it is not necessary for consumers to make their post-consumption evaluations conform to the expectations of others. In most time, consumers' post-purchase evaluations might be influenced by others' through informational influence. WOM might reveal some credible information about products or services. As a result, it is worthwhile questioning whether consumers would modify their satisfaction judgments after receiving WOM.

According to above discussion, it could be inferred that post-purchase WOM might influence satisfaction, but perhaps the effect of post-purchase WOM on satisfaction might differ at different disconfirmation levels. This study does not directly predict the influence of postpurchase WOM on satisfaction. Therefore, the following discussion involves the inference of the impact of post-purchase WOM on satisfaction at each disconfirmation level.

Marketing communications usually present the focal product or service in the positive side. Customers with confirmed or positively disconfirmed expectancy would perceive product performance to be as good as or better than their expectations and hence feel satisfied. Such consumption experiences could serve as good experiences. Aron (2006) has demonstrated customers with good consumption experience would feel more satisfied after receiving positive communication messages about the product or service in a post-purchase situation. In his study, he found subjects with good consumption experience of a MP3 player felt more satisfied after being exposed to a positive advertising message. Positive post-purchase messages could strengthen the positive belief about the product or service which customers have/had purchased (Aron, 2006). Thus, if confirmed or positively disconfirmed customers could receive WOM_{CP} and then perceive others' evaluations of product or service performance are consistent with theirs, such positive messages might confirm their positive consumption experiences; meanwhile

14

strengthen their positive belief about the product or service, and hence enhance their satisfaction evaluations.

H2a: When experiencing positive disconfirmation, customers who received WOM_{CP} after a purchase are more satisfied than those who did not receive any WOM.

H2b: When experiencing zero disconfirmation, customers who received WOM_{CP} after a purchase are more satisfied than those who did not receive any WOM.

However, when consumers with zero confirmation or positive disconfirmation receive WOM_{AP} information after a purchase, which indicates that others' perceived performance is better than theirs, they might generate inequitable feelings. Given that inputs (e.g., price paid and efforts) are equal, these consumers would perceive their output (perceived performance)/input (e.g., price paid) ratios to be disproportionately lower than others' and then perceive inequity. Through an airline service in their study, Fisk and Young(1985) have demonstrated that consumers who perceived inequity after making comparisons with other buyers would feel dissatisfied. As a result, the inequitable feelings resulting from receiving WOM_{AP} information might have a negative influence on satisfaction.

H3a: When experiencing positive disconfirmation, customers who received WOM_{AP} after a purchase are less satisfied than those who did not receive any WOM.

H3b: When experiencing zero disconfirmation, customers who received WOM_{AP} after a purchase are less satisfied than those who did not receive any WOM.

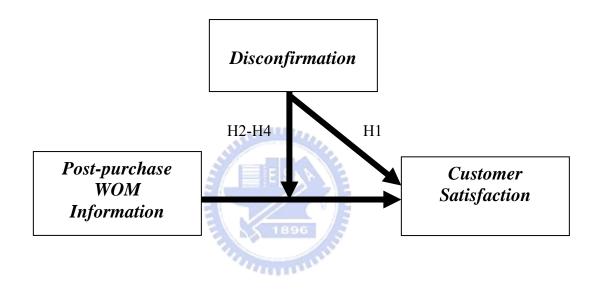
Consumers with negatively disconfirmed expectancy would feel dissatisfied because perceived performance is worse than their expectations. Since they have learned that others have the same experiences as theirs from WOM_{CP} information, it is likely that this product failure would be attributed to firm-related responsibility (which contains locus and controllability (Tsiros, Mittal, & Ross, 2004)) and occurring frequently. Due to the diagnosticity of WOM, when consumers understand it is not only themselves who encountered this situation, they would think the product failure is firm-related, controllable for the firm and stable. Prior research supports that the product failure attributed to firm-related responsibility and a frequent event would induce angry reactions (Folkes, 1984; Folkes, Koletsky, & Graham, 1987). Oliver (1993) suggests that negative affects resulting from such attributions would reduce customer satisfaction. Thus, negatively disconfirmed consumers might reduce their initially formed satisfaction again after receiving WOM_{CP} information.

H4a: When experiencing negative disconfirmation, customers who received WOM_{CP} after a purchase are more dissatisfied than those who did not receive any WOM.

If negatively disconfirmed consumers find others' perceived product performances are better than theirs from WOM_{AP} information, they might generate the additionally inequitable feelings and then decrease initially formed satisfaction.

H4b: When experiencing negative disconfirmation, customers who received WOM_{AP} after a purchase are more dissatisfied than those who did not receive any WOM.

Figure 2. 2 Research Framework



CHAPTER 3: METHODOLOGY

3.1 Research Produce

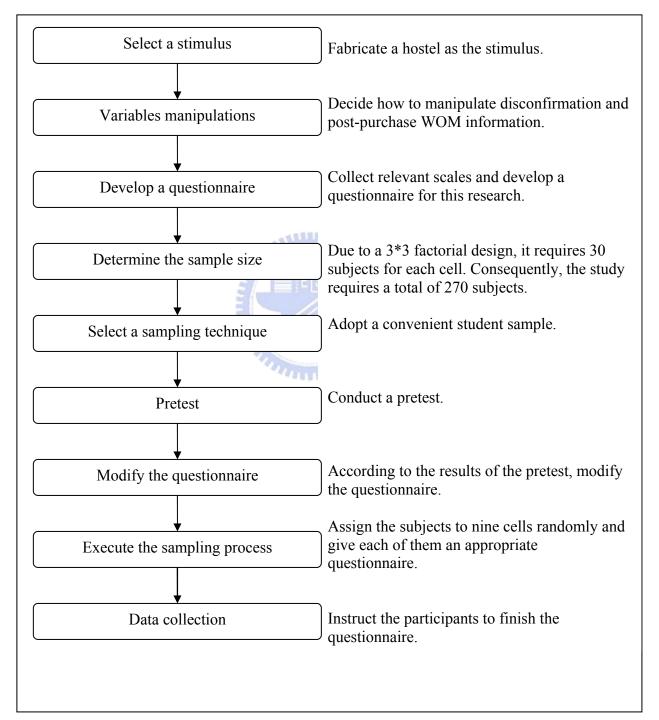


Figure 3. 1 Research Procedure

3.2 Stimulus

This study was made up using a hostel in Yi-Lan as the stimulus of the experiment. Churchill and Surprenant (1982) suggested that when conducting an experiment of disconfirmation, it is better that participants did not have any preconceived notions of what the product would deliver. Due to the hostel being fabricated by the author, the participants would not have any expectations before the experiment. This gives the advantage of facilitating the manipulation of expectations. Furthermore, the quality of hostels in Taiwan varies and even the same hostel might not maintain a consistent performance. It is acceptable that different consumers have different performance perceptions and then deliver different WOM information.

3.3 Manipulations

3.3.1 Disconfirmation



Disconfirmation levels were manipulated indirectly through the manipulations of expectations and performance because the construct is derived from the comparison between expectations and performance. Although pragmatic limitations dictated that disconfirmation could not be manipulated independently, it was possible to obtain independent measures of disconfirmation which could then be used in the analysis (Churchill & Surprenant , 1982). In this study, expectations and performance were manipulated through two dimensions, service encounters and suite quality. Three different website messages about the hostel's suite and three different telephone records about reserving a suite were provided to set up three levels of expectation about the hostels (high, moderate and low) (appendix 1). To generate different performance perceptions, the study designed three scenarios to make participants imagine the actual experiences in the hostel and then created three levels of performance (high, moderate and

low) (appendix 2). Although the full combinations are nine situations (3 expectation levels*3 performance levels), too much situations would increase the complexity of group comparisons. Finally, the study combined high expectations with low performance to form negative disconfirmation, moderate expectations with moderate performance to form zero disconfirmation, and low expectations with high performance to form positive disconfirmation.

3.3.2 Post-purchase WOM

According to each level of manipulative performance, the study designed two articles on a BBS (Bulletin Board System) site about others' experiences of visiting this hostel (appendix 2). To generate WOM_{CP} information, one article was framed as the manipulated performance which the subjects perceived, and to generate WOM_{AP} information, the other was framed to make the participants think others' experiences were better than their perceived performance. Therefore, the study generated three levels of post-purchase WOM (no WOM, WOM_{CP}, and WOM_{AP}). The condition with no WOM might serve as preliminary satisfaction after purchase. It could be the baseline compared with WOM_{CP} and WOM_{AP} conditions to test whether people would modify their satisfaction judgments after contacting post-purchase WOM information.

3.4 Experimental Procedure

The study used a 3*3 between-participant factorial design. Three levels of disconfirmation (positive disconfirmation, zero disconfirmation and negative disconfirmation) and three levels of post-purchase WOM information (no WOM, WOM_{CP} and WOM_{AP}) were manipulated and crossed into nine conditions. Participants did not actually stay in the hostel. They were basically

asked to role-play the situation because in an experimental setting, it is difficult to provide an actual hostel service experience.

According to the factorial design of the experiment, nine versions of internet questionnaires were developed (appendix 3). At first, all participants would be given the url of the research website (appendix 4) to the section of the instructions and expectations manipulation. Participants were asked to imagine that they were planning to have a trip with a friend to Yi-Lan the following weekend and hence they had to seek a hostel to stay in for one night. They were provided with the website messages of the hostel's suites and then listened to a conversation about reserving a suite between a clerk and a guest to imagine they were the guest to form expectations about the suite quality and hostel service. After the expectations manipulation, they were led to the internet questionnaire to complete the following manipulations and measurements.

First, participants were given two questions about the content to ensure they had not skipped the conversation, and then a manipulation check to assess their level of expectations. Second, they were asked to read a scenario to imagine the performance of the hostel they encountered. They were then asked to complete the performance and disconfirmation measurements. After the disconfirmation manipulation check, some participants directly filled out the satisfaction scale (didn't receive WOM information), others read WOM_{CP} or WOM_{AP} information on a BBS site and then completed the WOM perception check and the satisfaction measurement. Finally, all participants had to answer some basic questions, such as gender, age, education and so on.

3.5 Sampling Plan

In Taiwan, there are more and more WOM information delivered on the Internet. This study attempted to take online WOM information on BBS sites as an example to understand the effect of post-purchase WOM on satisfaction. For the consideration of cost and feasibility, the study used the most popular BBS site, PTT, as the medium to deliver the internet questionnaires. 27 billboards (e.g., online shopping, shopping, customers, hotel, traveling, and outdoors billboard) which are more likely to contain WOM information about products, services, hotels and trips were picked to post the hyperlink of the research website on them. The reason to select these billboards is that their browsers might have high involvement of WOM information and that might strengthen the effect of post-purchase WOM manipulation.

The 9 versions of internet questionnaires were randomly assigned to the 27 billboards (each version was posted on three billboards). An article in which contained the introduction of the research, the url of the research website and the researcher's name and institute would be posted on each billboard, and then it would be promised that every participant would be rewarded 200 PTT virtual dollars after completing the experiment to enhance the motivation of participation.

3.6 Measures

3.6.1 Expectations

Part items of the scale (item 1 ~item 5) were developed for the study conducted by Voss, Parasuraman, and Grewal (1998). The items are intended to measure some quality-related aspects of a service provider thought to be true by a potential customer prior to actually making the purchase and/or receiving the service. The items are most appropriate for a hotel but might need

22

to be adjusted for other types of service providers. Further, they are stated tentatively since respondents would not have actually visited the service provider at the time they completed the scale. The remaining items of the scale (item 6 ~item 9) were developed for the present research to measure the expectations of the suite quality. The complete scale adopted by this research is shown below. Cronbach's α in the pretest is 0.976.

If I were to stay at this hostel $(hotel)^1$:

- 1. the hostel $(hotel)^1$ would offer excellent overall service.
- 2. the hostel $(hotel)^1$ would offer accurate and dependable service.
- 3. the employees would be courteous at all time.
- 4. the employees would provide prompt assistance.
- 5. the employees would provide personal, individualized attention.
- 6. the hostel would offer a excellent quality suite.
- 7. the equipments and materials in the suite would be complete.
- 8. the suite provided by the hostel would be clean.
- 9. the suite provided by the hostel would be comfortable.

Responses to all items were made using a seven-point scale anchored by definitely would not (1) and definitely would (7).

¹ the original term in Voss, Parasuraman, and Grewal's study (1998)

3.6.2 Performance

Part items of the scale (item1~item5) were developed for the study conducted by Voss, Parasuraman, and Grewal (1998). The items are intended to measure a customer's quality-related perceptions of a service provider after making a purchase and/or receiving the service. The items are most appropriate for a hotel but might be adjusted for other types of service providers. The remaining items of the scale (item6~item9) were developed for the present research to measure the perceptions about the suite quality. The complete scale adopted by this research is shown below. Cronbach's α in the pretest is 0.983.

- The service provide by this hostel (hotel)¹ was: very low quality/ very high quality
- 2. The service provided by this hostel (hotel)¹ was: unreliable/ reliable
- The hostel's (hotel's)¹ employees were:
 discourteous/ courteous
- 4. The hostel's (hotel's)¹ employees were: not helpful/ helpful
- The hostel's (hotel's)¹ employees were: uncaring/ caring
- The suite provide by the hostel was: very low quality/ very high quality
- The equipments and materials provided by the hostel were: incomplete/ complete

- The suite provided by the hostel was: unclean/ clean
- 9. The suite provided by the hostel was: uncomfortable/ comfortable

Responses to all items were made using a seven-point scale using the anchors shown.

¹ the original term in Voss, Parasuraman, and Grewal's study (1998)

3.6.3 Disconfirmation

The method for establishing the disconfirmation scale originated from Oliver's suggestions (1997). According to the attributes of expectations and performance scale, the study developed a nine-item measurement to capture the subject's summary judgment of disconfirmation on a "better than expected-worse than expected" scale. This kind of disconfirmation scale has been adopted by much previous research (e.g., Oliver, 1980; Churchill & Surprenant, 1982). The complete scale adopted by this research is shown below. Cronbach's α in the pretest is 0.988.

- 1. The quality of the service provide by this hostel was:
- 2. The reliability of the service provide by this hostel was:
- 3. The courtesy of the hostel's employees was:
- 4. The helpfulness of the hostel's employees was:
- 5. The degree that the hotel's employees cared for my needs was:
- 6. The quality of the suite provided by the hostel was:
- 7. The completeness of the equipment and materials provided by the hostel were:

- 8. The cleanliness of the suite provided by the hostel was:
- 9. The comfort of the suite provided by the hostel was:

Responses to all items were made using a seven-point anchored by "much worse than expected" (1), "as expected" (4) and "much better than expected" (7).

3.6.4 Satisfaction

Part items (item1~item3) of the scale were original to the study by Voss, Parasuraman, and Grewal (1998). The items are intended to measure the degree to which a customer of a service provider is satisfied with a service that has been experienced or received. The remaining items of the scale (item4~item6) were developed for the present research to measure the perceptions about the suite quality. The complete scale adopted by this research is shown below. Cronbach's α in the pretest is 0.966.

- 1. I was satisfied with the service provided.
- 2. I was delighted with the service provided.
- 3. I was unhappy with the service provided.
- 4. I was satisfied with the suite provided.
- 5. I was delighted with the suite provided.
- 6. I was unhappy with the suite provided.

Responses to all items were made using a seven-point Likert-type scale using the following anchors: disagree very strongly (1) and agree very strongly (7).

3.6.5 Perceived Performance Discrepancy with Others

This study developed two items for the purpose of testing the success of post-purchase WOM manipulation. The items are shown below. Cronbach's α in the pretest is 0.827.

- 1. I thought the quality of the suite others had experienced was:
- 2. I thought the service quality others had experienced was:

Responses to all items were made using a five-point anchored by "much worse than I experienced" (1), "as I experienced" (3) and "much better than I experienced" (5).

ومقاللكم

3.7 Pretest

Prior to the actual study, 10 student samples for each condition were collected (total 90 samples) to examine the reliability of the scale and the manipulations, and discover any problems or misunderstanding of the questions and the design of the questionnaire. After discussions with several participators, some instructions and several questions about individual basic data were modified. No recommendations revealing the main measures of the study were misunderstood. The results of the pretest are presented in appendix 5. The measurements are reliable (Cronbach's $\alpha > 0.7$). According to the LSD tests, the manipulation of expectations, performance and disconfirmation are successful. The disconfirmation value in zero disconfirmation is not significantly different from the midpoint, 4 (p=0.120). The value (perceived performance discrepancy with others) in WOMCP is not significantly different from the midpoint, 3. The value in WOMAP is significantly bigger the midpoint, 3. Therefore, the manipulation of post-purchase WOM is successful.

CHAPTER 4: RESULTS

4.1 Background of Participants

Table 4.1 demonstrates the characteristics of the participants. The total sample is 274 participants. From it, 53.6% are female, 70.1% live in northern Taiwan, 84.7% are aged 20-29 years old, 76.6% are students, 81% have a College/Bachelor's degree, and 80.3% have a disposable income below NT30,000. Also, 89.1% have the experiences of visiting a hostel, 96% have the habit of searching for product information on the Internet, and 99.6% have the habit of using BBS.

4.2 Reliability Analysis

The reliability of the data is tested with Cronbach's α . If Cronbach's α is above 0.7, the study is accepted as reliable. Table 4.2 demonstrates the values from reliability tests of five constructs. The result of the reliability test indicates that the measurements are reliable (all above 0.7).

ALLER.

4.3 Manipulation Checks

Three one-way ANOVAs and multiple comparisons with an LSD test were conducted to test the success of the expectations, performance, and disconfirmation manipulations. From table 4.3, expectations are the highest in high expectation situation followed by moderate expectation situation and then followed by low expectation situation. From table 4.4, performance is the highest in high performance situation followed by moderate performance situation and then followed by moderate performance situation and then

disconfirmation followed by zero disconfirmation and then followed by negative disconfirmation. As a result, the manipulation of expectations, performance and disconfirmation are successful. The manipulation of WOM_{CP} is tested to see whether the value was equal to the midpoint, 3 and the manipulation of WOM_{AP} is tested whether the value was bigger than 3. Table 4.5 shows that the manipulation of post-purchase WOM is successful.



	Category	Subjects	Percentage(%)
Gender	Male	127	46.4%
	Female	147	53.6%
	Total	274	100%
Residence	North	192	70.1%
	Middle	38	13.9%
	South	42	15.3%
	Others	2	0.7%
	Total	274	100%
Age	15-19	32	11.7%
0	20-24	174	63.5%
	25-29	58	21.2%
	30-34	10	3.6%
	Total	274	100%
Occupation	Students	210	76.6%
	Others	64	23.4%
	Total	274	100%
Education Degree	College / Bachelor's	222	81%
	Master's degree	52	19%
	Total	274	100%
Disposal Income	< NT 10,000	157	57.3%
(per month)	NT 10,001~20,000	63	23%
	NT 20,001~30,000	28	10.2%
	> NT 30,001	26	9.5%
	Total	274	100%
Experience of Visiting a	Yes	244	89.1%
Hostel	No	30	10.9%
	Total	274	100%
The Habit of Searching for	Yes	263	96%
Product Information on	No	11	4%
the Internet	Total	274	100%
The Habit of Using BBS	Yes	273	99.6%
	No	1	4%
	Total	274	100%

Table4. 1	Frequency	Distribution	of Sample	Characteristics
			- J	

Construct	Item	Cronbach's α
Expectations	9	0.979
Performance	9	0.981
Disconfirmation	9	0.986
Satisfaction	6	0.973
Perceived Performance Discrepancy with Others	2	0.776

Table4. 2 Reliability

Table4. 3 Manipulation Check for Expectations

Level of Expectations	Ν	Mean	Standard Deviation
Low	96	2.0995	0.79201
Moderate	93	4.0848	0.99210
High	85	5.2784	0.86876
$F_{(2, 271)} = 298.532 (p < 0.00)$)1) =	1896	
LSD Test ^a : High > Mode	erate***	, Moderate > Low*	*** , High > Low***
^a ***p < 0.001			

Dependent Variable: Expectations

Table4. 4 Manipulation	Check for Performance
------------------------	-----------------------

Level of Performance	Ν	Mean	Standard Deviation
Low	85	2.1725	0.85286
Moderate	93	4.6965	0.82583
High	96	5.3900	1.04903

Dependent Variable: Performance

LSD Test^a: High > Moderate***, Moderate > Low***, High > Low***

^a ***p < 0.001

Level of Disconfirmation	Ν	Mean	Standard Deviation
Negative	85	1.9242	0.70110
Zero	93	4.2330	0.85630
Positive	96	5.6030	0.88944

Table 4. 5 Manipulation Check for Disconfirmation

 $F_{(2,271)} = 455.344 (p < 0.001)$

LSD Test^a: Positive > Zero***, Zero > Negative***, Positive > Negative***

^a ***p < 0.001

STULLES.

Test Value = 3^{4}	a	J.			
	Ν	Mean	Standard Deviation	t-value	p-value
WOM _{CP}	89	3.0169	0.27644	0.575	0.567
WOM _{AP}	94	3.8511	0.70646	11.680	0.000

^a representing that subjects think other's experienced performance the same as theirs

4.4 Hypothesis Tests

After confirming the reliability and manipulations of the analyzed data, the study presented the descriptive statistics of satisfaction across situations (table 4.7) and proceeded to conduct ANOVA and multiple comparisons to test the hypotheses.

Mean (Standard Deviation) (N)	NO WOM	WOM _{CP}	WOM _{AP}	Marginal Mean for Disconfirmati- on
Negative	1.9321	2.2778	2.2738	2.1667
Disconfirmation	(0.85767)	(0.88661)	(0.93757)	0.89863
Discontinuation	(27)	(30)	(28)	(85)
Zero	4.0806	4.6494	4.4697	4.3961
disconfirmation	(0.91679)	(0.68479)	(0.71862)	0.80754
uisconnrination	(31)	(29)	(33)	(93)
Positive	5.0354	5.5889	4.6818	5.0868
	(0.85163)	(0.62166)	(0.81582)	0.85086
Disconfirmation	(33)	(30)	(33)	(96)
Marginal Mean for	3.7894	4.1667	3.8901	3.9465
e	1.54397	1.58692	1.33793	1.49418
Post-purchase WOM	(91)	(89)	(94)	(274)

Table4. 7 Descriptive Statistics for Satisfaction

4.4.1 The Effects of Disconfirmation and Post-purchase WOM on Satisfaction

In order to figure out satisfaction differences across situations, this study conducted a twoway ANOVA to test the influences of disconfirmation and post-purchase WOM on satisfaction and the results are shown in table 4.8 (ANOVA table) and table 4.9 (test assumptions of error). The main disconfirmation effect ($F_{(2, 265)}$ =313.791, p<0.001), the main WOM effect ($F_{(2, 265)}$ = 8.703, p<0.001) and interaction between disconfirmation and WOM ($F_{(4, 265)}$ =3.287, p<0.05) are significant. Levels of disconfirmation, post-purchase WOM and their interaction would result in satisfaction differences.

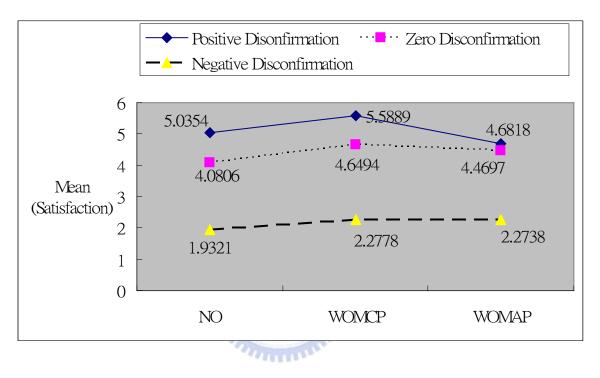


Figure 4. 1 The Interaction between Disconfirmation and Post-purchase WOM

Through multiple comparisons with the LSD test (table 4.10), it could be found the mean satisfaction in positive disconfirmation is significantly higher than zero disconfirmation (p<0.001) and negative disconfirmation (p<0.001), and the mean satisfaction in zero disconfirmation is significantly higher than negative disconfirmation (p<0.001). H1 (satisfaction differences among disconfirmation situations are as follow: positive disconfirmation > zero disconfirmation > negative disconfirmation) is supported. Satisfaction will increase as situations transform from negative disconfirmation to zero disconfirmation, and then to positive disconfirmation. The result is consistent with previous research. Further, the LSD test (table 4.11) shows that only satisfaction in WOM_{CP} situation is significantly higher than WOM_{AP} (p<0.05) and no WOM

(p<0.01). There are no significant difference between WOM_{AP} and no WOM (p=0.402). Therefore, taking satisfaction with no WOM as preliminary satisfaction, customers who received WOM_{CP} after a purchase would increase their satisfaction. However, due to the significant interaction between disconfirmation and post-purchase, the study would do profile analysis to examine satisfaction differences at each disconfirmation level in the following sections.

Dependent Variable: Satisfaction							
Source	Type III Sum of Squares	Df	Mean Square	F	p-value		
Model	433.252 ^a	8	54.157	81.431	< 0.001		
Disconfirmation	417.379	2	208.689	313.791	< 0.001		
WOM	11.576	2	5.788	8.703	< 0.001		
Disconfirmation x WOM	8.745	4	2.186	3.287	0.0119		
Error	176.241	265	.665				
Corrected Total	609.493	273					

^a $R^2 = 0.711$ (Adjusted $R^2 = 0.702$)

Table4. 9 Assumption Tests of Error for ANOVA

Test	Statistic		p-value
Shapiro-Wilk	W	0.993221	0.2509
Kolmogorov-Smirnov	D	0.036942	>0.1500
Cramer-von Mises	W-Sq	0.051772	>0.2500
Anderson-Darling	A-Sq	0.38286	>0.2500

Levene's Te	st of Equali	ty of Error V	/ariances
F	df1	df2	p-value
1.228	8	265	0.283

Table4. 10 LSD Test for Disconfirmation on Satisfaction

Dependent Variable: Sat	tisfaction		
Disconfirmation	Ν	Mean	Standard Deviation
Negative	85	2.1667	0.89863
Zero	93	4.3961	0.80754
Positive	96	5.0868	0.85086

LSD Test^a: Positive > Zero***, Zero > Negative***, Positive > Negative***

ANILLER,

^a ***p<0.001

Table4. 11 LSD Test for Post-purchase WOM on Satisfaction

WOM	N	Mean	Standard Deviation
No WOM	91	3.7894	1.54397
WOM _{CP}	89	4.1667	1.58692
WOM _{AP}	94	3.8901	1.33793

Dependent Variable: Satisfaction

LSD Test^a:

 $WOM_{CP} > No^{**} (p=0.002), WOM_{CP} > WOM_{AP} * (p=0.023), No= WOM_{AP} (p=0.402)$

^a ***p<0.001, **p<0.01, *p<0.05

4.4.2 The Effect of Post-purchase WOM on Satisfaction in Negative Disconfirmation

To confirm H4a (when experiencing negative disconfirmation, customers who received WOM_{CP} after a purchase are more dissatisfied than those who did not receive any WOM) and H4b (when experiencing negative disconfirmation, customers who received WOM_{AP} after a purchase are more dissatisfied than those who did not receive any WOM), the study performed a one-way ANOVA at negative disconfirmation (table12). The main WOM effect is not significant $(F_{(2, 82)}=1.36, p>0.05)$. H4a and H4b are not supported. In negative disconfirmation, there are no significant satisfaction differences among different WOM levels, namely, post-purchase WOM does not influence satisfaction. The mean plot is shown in figure 4.2.

Disconfirmation	Post-purchase WOM	Ν	Mean	Standard Deviation
Negative	No WOM	27	1.9321	0.85767
	WOM _{CP}	30	2.2778	0.88661
	WOM _{AP}	28	2.2738	0.93757

Table4. 12 Profile Analysis in Negative Disconfirmation

Mean (Satisfaction)² NO WOMCP WOMAP

Figure 4. 2 Mean Plot of Satisfaction in Negative Disconfirmation

4.4.2 The Effect of Post-purchase WOM on Satisfaction in Zero Disconfirmation

Table 4.13 and figure 4.3 present the effect of post-purchase WOM on satisfaction in zero disconfirmation. Post-purchase WOM has a significant influence on satisfaction ($F_{(2, 90)}$ =4.203, p<0.05). Satisfaction with WOM_{CP} is significantly higher than no WOM (p<0.01). H2b (when experiencing zero disconfirmation, customers who received WOM_{CP} after a purchase are more satisfied than those who did not receive any WOM) is supported. However, satisfaction with WOM_{AP} is also significant higher than no WOM (p<0.05). The direction is contrary to H3b (when experiencing zero disconfirmation, customers who received WOM_{AP} after a purchase are less satisfied than those who did not receive any WOM). Therefore, H3b is not supported. Customers who received WOM_{AP} after a purchase are



Table4. 13 Profile Analysis in Zero Disconfirmation

Disconfirmation	Post-purchase WOM	Ν	Mean	Standard Deviation
Zero	No WOM	31	4.0806	0.91679
	WOM _{CP}	29	4.6494	0.68479
	WOM _{AP}	33	4.4697	0.71862

Dependent Variable: Satisfaction	

 $F_{(2, 90)}$ =4.203, p=0.018, R² = 0.085 (adjusted R² = 0.065)

LSD Test:

$$WOM_{CP} > NO (p=0.006)$$
, $WOM_{AP} > NO (p=0.049)$, $WOM_{CP} = WOM_{AP} (p=0.368)$

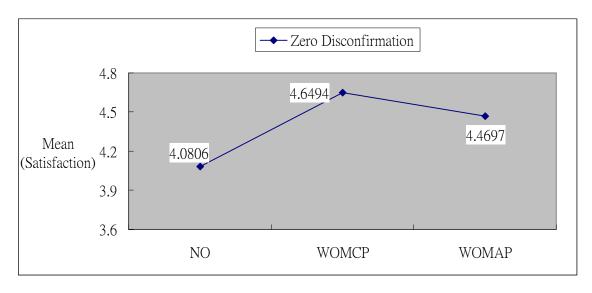


Figure 4. 3 Mean Plot of Satisfaction in Zero Disconfirmation

4.4.3 The Effect of Post-purchase WOM on Satisfaction in Positive Disconfirmation

Table14 and figure 4.4 show the ANOVA results, and these indicates significant differences among different levels of post-purchase WOM ($F_{(2, 93)}$ =10.902, p<0.001). Moreover, the LSD test was used to inspect differences between each two groups. As predicted by H2a, participants exposed to WOM_{CP} after a purchase had higher satisfaction than those not exposed to any WOM (mean=5.589 and 5.0354, respectively; p<0.01). As predicted by H3a, participants exposed to WOM_{AP} after purchase felt less satisfied than those not exposed to any WOM (mean=4.682 and 5.035, respectively; p<0.1). H2a and H3a are supported.

Disconfirmation	Post-purchase WOM	Ν	Mean	Standard Deviation
Positive	No WOM	33	5.0354	0.85163
	WOM _{CP}	30	5.5889	0.62166
	WOM _{AP}	33	4.6818	0.81582

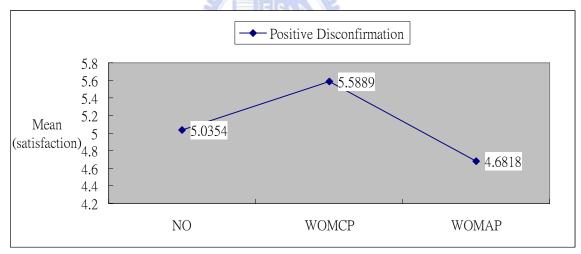
Table4. 14 Profile Analysis in Positive Disconfirmation

 $F_{(2, 93)} = 10.902$, p<0.001, R² = 0.190 (adjusted R² = 0.173)

LSD Test:

 $WOM_{CP} > NO (p=0.006)$, $WOM_{AP} < NO (p=0.067)$, $WOM_{CP} > WOM_{AP} (p<0.001)$

Figure 4. 4 Mean Plot of Satisfaction in Positive Disconfirmation



4.5 Results of the Tested Hypotheses

Table4. 15 Results of the Hypotheses

Hypotheses	Description of the Hypotheses	Results
Hypothesis 1	Satisfaction differences among disconfirmation situations are as follow: positive disconfirmation > zero disconfirmation > negative disconfirmation.	Supported
Hypothesis 2a	When experiencing positive disconfirmation, customers who received WOM_{CP} after a purchase are more satisfied than those who did not receive any WOM.	Supported
Hypothesis 2b	When experiencing zero disconfirmation, customers who received WOM _{CP} after a purchase are more satisfied than those who did not receive any WOM.	Supported
Hypothesis 3a	When experiencing positive disconfirmation, customers who received WOM _{AP} after a purchase are less satisfied than those who did not receive any WOM.	Supported
Hypothesis 3b	When experiencing zero disconfirmation, customers who received WOM_{AP} after a purchase are less satisfied than those who did not receive any WOM.	Not Supported
Hypothesis 4a	When experiencing negative disconfirmation, customers who received WOM_{CP} after a purchase are more dissatisfied than those who did not receive any WOM.	Not Supported
Hypothesis 4b	When experiencing negative disconfirmation, customers who received WOM_{AP} after a purchase are more dissatisfied than those who did not receive any WOM.	Not Supported

CHAPTER 5: DISCUSSION AND IMPLICATIONS

This chapter is constructed by four parts. The first part will be the discussion of the research results. Following that will be the implications and limitations of the research. Finally, several suggestions for further research will be introduced.

5.1 Discussion

First, as stated in much previous research (e.g., Churchill & Surprenant, 1982; Mooradian & Olver, 1997; Oliver, 1977, 1980), this research again confirms the effect of disconfirmation on satisfaction through a hostel service, including product experience (a suite) and service experience (treatment by employees). Disconfirmation will positively influence satisfaction. Positively disconfirmed customers have the highest satisfaction followed by confirmed customers, and then negatively disconfirmed customers who have the lowest satisfaction. To satisfy customers, performance must be at least consistent with previous expectations. Therefore, when firms invest huge resources in marketing communications, they have to ensure the product or service quality can correspond to what they say to consumers. Second, previous research has supported the idea that people would modify their satisfaction judgments after they interact with other group members (Bohlmann et al., 2006). Further, this research demonstrates interpersonal influence induced by merely receiving post-purchase WOM also results in changes in satisfaction judgments. WOM not only has an effect on pre-purchase attitudes (Herr et al., 1991) and postusage perceptions (Bone, 1995) but also makes customers change their satisfaction evaluations. Once customers receive WOM after a purchase, they will change their preliminary satisfaction evaluations formed by discrepancies between expectations and performance. However, after a deep analysis, its effect depends on disconfirmation situations.

5.1.1 Post-purchase Effect in Negative Disconfirmation

Originally, this research predicted when experiencing negative disconfirmation, customers who received WOM_{CP} after a purchase are more dissatisfied than those who did not receive WOM; customers who received WOM_{AP} after a purchase are more dissatisfied than those who did not receive WOM. It was thought once negatively confirmed customers come into contact with WOM_{CP}, and then learn others have had a bad experience as theirs, they might attribute the inferior performance to a frequent event which the firm has the responsibility to control. Customers who discovered the failure is caused by firm's responsibility will induce angry reactions (Folkes, 1984; Folkes et al., 1987), and then results in an additional negative effect on satisfaction. On the other hand, if customers contact into with WOMAP after a purchase, they might learn others have had a better experience than them, and then think they got inequitable treatment. Fisk and Young (1985) have demonstrated that consumers who perceived inequity after making comparisons with other buyers would feel dissatisfied. In this situation, perceiving inequity may also cause an additional negative effect on satisfaction. Therefore, this research predicted negatively confirmed customers who received WOM_{CP} or WOM_{AP} would reduce their preliminary satisfaction.

However, the result shows that in negative disconfirmation, post-purchase WOM did not influence satisfaction. Two probable reasons were discussed. First, an attempt to adopt the viewpoint of prospect theory (Kahneman & Tversky, 1979) was made to explain the phenomonon. Prospect theory states that the strength of sadness people feel from losses is bigger than the strength of happiness they feel from gains. Using economic terms, the reduced amount of utility due to a unit of loss is more than the increased amount of utility due to a unit of gain. Thus, the pain brought from losses maybe be more deeply left in people's minds than the

43

happiness from gains. In this research, negative disconfirmation could serve as a kind of loss. The feeling of loss is due to a performance lower than previous expectations. Once negative disconfirmation arises, this negative feeling might dominate customers' satisfaction judgment. At this time, customers' subjective perceptions stop themselves having the motivation to compare their perceived performance with others. What others say could not change the reality that they have been treated badly. As a result, in negative disconfirmation, post-purchase WOM might not have an influence on satisfaction.

Second, from table 4.7, the mean satisfaction in negative disconfirmation and no WOM is 1.9321. Perhaps, the manipulation of negative disconfirmation was too strong and hence the satisfaction of the participants reached the flooring. As a result, the manipulations of WOM_{CP} and WOM_{AP} could not make the participants dissatisfied any more. That might cause the insignificant effect of post-purchase on satisfaction in negative disconfirmation.

1896

5.1.2 Post-purchase Effect in Positive Disconfirmation

Customers perceiving a performance higher than expectations will feel satisfied. Aron (2006) suggests when positive post-purchase messages confirm customers' positive experiences, they will feel more satisfied with the product or service. Therefore, if customers with positive disconfirmation receive WOM_{CP} after a purchase, their preliminary satisfaction might be enhanced again because they can learn others also have as good experience as them and then strengthen their previous positive beliefs about the product or service. On the contrary, if positively confirmed customers are exposed to WOM_{AP} , they might find others' perceived performance was better than theirs and hence feel less satisfied than before. Even through they felt satisfied at first, understanding others had experienced a better performance would make

them perceive inequity and hence reduce their satisfaction. In this situation, they might think they should experience the better performance received by others but they did not. Thus, at first, this research predicted when experiencing positive disconfirmation, customers who received WOM_{CP} after a purchase are more satisfied than those who did not receive any WOM; customers who received WOM_{AP} after a purchase are less satisfied than those who did not receive any WOM. The statistical result supports the previous prediction.

This research ensures the importance which post-purchase WOM must be consistent with customer's perceived performance in positive disconfirmation. Additionally, it is confirmed that customers who experienced positive disconfirmation and hence felt satisfied will become less satisfied after understanding others experienced a better performance than them through post-purchase WOM. According to the previous experiment, the satisfaction of the group in a no WOM situation could be taken as the preliminary satisfaction after experiencing positive disconfirmation. The satisfaction of the group in a post-purchase WOM situation could be took as the modified satisfaction. A figure (figure 5.1) was plotted to let everyone easily figure out how the direction of satisfaction has changed in positive disconfirmation.

5.1.3 Post-purchase Effect in Zero Disconfirmation

Originally, this research predicted the effect of post-purchase on satisfaction in zero disconfirmation is consistent with positive disconfirmation. When experiencing zero disconfirmation, customers who received WOM_{CP} after a purchase are more satisfied than those who did not receive any WOM; customers who received WOM_{AP} after a purchase are less satisfied than those who did not receive any WOM. As predicted, the participants who received WOM_{CP} had higher satisfaction than those who didn't receive any WOM, but contrary to

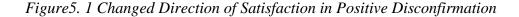
45

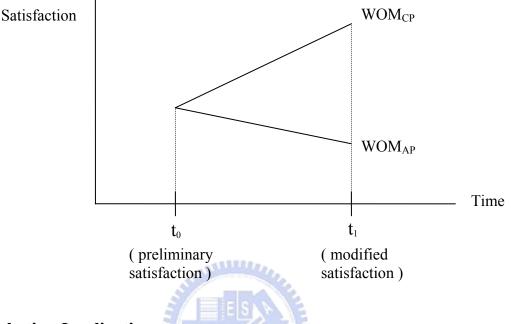
predicted, the participants who received WOM_{AP} also had higher satisfaction than those who didn't receive any WOM. To explain this reverse result, an additional analysis was conducted in the next section.

5.1.3 Additional Analysis

The reverse result might be due to the failed WOM_{AP} manipulation in zero disconfirmation. If the result of the manipulation check in this cell shows the subjects thought other's perceived performance was consistent with theirs, it is reasonable that the subjects in WOM_{AP} (the failed manipulation) felt more satisfied than those in a no WOM situation. However, the result revealed the manipulation in this cell is successful (appendix 6). The participants thought others experienced a better performance than theirs (the value is significantly bigger than 3, p<0.001). Therefore, the reverse result is not due to the failed manipulation.

Further, the values of perceived performance discrepancy with others between zero disconfirmation and positive disconfirmation in WOM_{AP} were compared. Through the independent sample t test (appendix 7), it was found the value in zero disconfirmation (mean=3.4848) is significantly lower than positive disconfirmation (mean=3.7727, t=-1.898, p<0.1). Perhaps, to make participants perceive inequity through WOM_{AP}, the degree which they perceive others' experienced performance better than theirs must reach a certain extent. In this research, the manipulation of WOM_{AP} in zero disconfirmation might be not strong enough to make the participants perceive inequity and then failed to make satisfaction decrease. Therefore, in zero disconfirmation, the reason why the subjects with WOM_{AP} felt more satisfied than those with no WOM might be that they received a positive message after a purchase and hence were more satisfied with their consumption experiences.





5.2 Marketing Implications

The consistency triangle in chapter 1, Duncan (2005) suggests that the "say" messages delivered by marketing communication must be consistent with the "do" messages about how products and services perform, as well as with what others or word of mouth "confirm" about the brand. This research has again confirmed that the "do" messages must be consistent with the "say" messages. Marketing communication must be limited to the range which the product or service performance can reach because the research demonstrates that in order to satisfy customers, performance, there must be at least consistency with previous expectations. If marketers devote all efforts to marketing communication but do not consider product or service quality, that may over enhance consumers' expectations and hence make it difficult to satisfy them. Marketers should ensure their products (or services) reach an appropriate standard and

honestly frame their product information. Otherwise, it will accelerate product failure due to enhanced consumers' expectations.

Furthermore, the research has demonstrated the effect of post-purchase WOM on satisfaction in positive and zero disconfirmation. When performance is consistent with or higher than customers' expectations and post-purchase WOM confirms customers' perceived performance, these messages ("say", "do" and "confirm" messages in the consistency triangle) would generate the most synergy to reach the highest satisfaction. The result corresponds to Duncan's viewpoint which all of these above messages must achieve consistency to create great brand relationships, in this research, taking satisfaction as an example. However, the research's result also warns marketers not to encourage positive WOM activities blindly. At least, the research confirmed that customers in positive disconfirmation would reduce previous satisfaction evaluations after receiving WOM_{AP} which indicates that others' perceived product performance is better than the consumer's own perceived performance. Therefore, marketers have to monitor WOM activities constantly for fear that overly positive WOM results in a negative influence on satisfaction. Overly positive WOM might not only exaggeratedly enhance customers' expectations and hence make it difficult to satisfy them but also make satisfied customers become less satisfied.

Based on the above conclusions, marketers should encourage helpful WOM activities, in this research it means create consistent WOM with performance, and come up with approaches to suppress hurtful WOM activities (which sometimes may be positive WOM) to set up satisfied relationships with customers. Besides, especially for services, companies should maintain a stable and standard performance for fear of obviously creating differently perceived performance among customers.

48

5.3 Limitations

- This research used a convenient sampling procedure. Most of the samples consisted of students and youngsters. That was to say, the results might be not appropriate for inferring it to other populations.
- 2. Participants did not actually experience a hostel service. They were asked to imagine they were in the situations which the study provided. It is hard to manipulate the experimental situations to be exactly the same as real experiences. That might be influence the validity of the experiment and the correctness of the results.
- 3. Based on convenience and cost, this research used a between-participant factorial design, and hence took the satisfaction of the group in a no WOM situation and the satisfaction of the group in post-purchase WOM situation as the preliminary satisfaction and the modified satisfaction, respectively. Perhaps a repeated measures procedure is more appropriate to examine the effect of post-purchase WOM information.
- 4. This research focuses on WOM_{CP} and WOM_{AP}. The below consumer's perception WOM which indicates that others' perceived product performance is worse than the consumer's is not taken into account.

5.4 Future Research Suggestions

Based on the limitation mentioned before, future research could adopt a repeated measures procedure to again examine the effect of post-purchase WOM on satisfaction or use a different sample or a different service (or product) to confirm the inferential ability of the research's results. Besides, although this research assured post-purchase WOM influences previous satisfaction evaluations in positive and zero disconfirmation, its effect might decline as the

49

interval time between forming preliminary satisfaction and receiving post-purchase WOM enlarges. Future research could take interval time into consideration.

Further research could also add the situation of the below consumer's perception WOM to the experiment and then examine its effect on satisfaction. Finally, the explanations for the unpredictable results of the post-purchase WOM effect on satisfaction in zero disconfirmation and negative disconfirmation were based on my inference. Further research could clarify the effect of post-purchase WOM on satisfaction in zero disconfirmation and examine whether negatively disconfirmed customers' satisfaction are not influenced by post-purchase WOM.



REFERENCES

- Anderson, E. W., Fornell, C., & Rust, R. T. (1997). Customer Satisfaction, Productivity, and Profitability: Defference between Goods and Services. *Marketing Science* (1986-1998), 16(2), 129.
- Aron, D. (2006). The Effect of Counter-experiential Marketing Communication on Satisfaction and Repurchase Intention *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior, 19*, 1-17.
- Bearden, W. O., & Etzel, M. J. (1982). Reference Group Influence on Product and Brand Purchase Decisions. *Journal of Consumer Research*, 9(2), 183.
- Bohlmann, J. D., Rosa, J. A., Bolton, R. N., & Qualls, W. J. (2006). The Effect of Group Interactions on Satisfaction Judgments: Satisfaction Escalation. *Marketing Science*, 25(4), 301-321.
- Bone, P. F. (1995). Word-of-mouth Effects on Short-term and Long-term Product Judgments *Journal of Business Research*, *32*, 213-223.
- Brown, T. J., Barry, T. E., Dacin, P. A., & Gunst, R. F. (2005). Spreading the Word: Investigating Antecedents of Consumers' Positive Word-of-Mouth Intentions and Behaviors in a Retailing Context. *Academy of Marketing Science. Journal*, 33(2), 123.
- Burnkrant, R. E., & Cousineau, A. (1975). Informational and Normative Social Influence in Buyer Behavior. *Journal of Consumer Research*, 2(3), 206.
- Churchill, G. A., & Surprenant, C. (1982). An investigation into the determinants of customer satisfaction. *JMR*, *Journal of Marketing Research (pre-1986)*, *19*(000004), 491.
- Deutsch, M., & Gerard, H. B. (1955). A Study of Normative and Informational Influence upon Individual Judgment. *Journal of Abnormal and Social Psychology*, 51(November), 629-636.
- Duncan, T. (2005). *Pinciples of Advertising & IMC* (second ed.): McGraw-Hill.
- Fisk, R. P., & Young, C. E. (1985). Disconfirmation of Equity Expectations: Effects on Cinsumer Satisfaction with Services. *Advances in Consumer Research*, 12(1), 340-345.
- Folkes, V. S. (1984). Consumer Reactions to Product Failure: An Attributional Approach. *Journal of Consumer Research*, 10(4), 398-409.
- Folkes, V. S., Koletsky, S., & Graham, J. L. (1987). A Field Study of Causal Inferences and Consumer Reaction: The View from the Airport. *Journal of Consumer Research*, 13(4), 534-539.

- Godes, D., & Mayzlin, D. (2004). Using Online Conversations to Study Word-of-Mouth Communication. *Marketing Science*, 23(4), 545.
- Ha, H.-Y. (2002). The Effects of Consumer Risk Perception on Pre-purchase Information in Online Auctions: Brand, Word-of-Mouth, and Customized Information. *Journal of Computer-Mediated Communication*, 8(1).
- Harrison-Walker, L. J. (2001). The Measurement of Word-of-Mouth Communication and An Investigation of Service Quality and Customer Commitment as Potential Antecedents. *Journal of Service Research : JSR*, 4(1), 60.
- Herr, P. M., Kardes, F. R., & Kim, J. (1991). Effects of Word-of-Mouth and Product-Attribute Information on Persuasion: An Accessibility-Diagnosticity Perspective. *Journal of Consumer Research*, 17(4), 454.
- Homburg, C., Koschate, N., & Hoyer, W. D. (2005). Do Satisfied Customers Really Pay More? A Study of the Relationship Between Customer Satisfaction and Willingness to Pay. *Journal of Marketing*, 69(April), 84-96.
- Hunt, H. K. (1977). CS/D Overview and Futhre Directions. In H. K. Hunt (Ed.), *Conceptualization and Measurement of Consumer Satisfaction and Disfatisfaction.* Cambridge, Massachusetts: Marketing Science Institute.
- Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision Under Risk. *Econometrica*, 47(2), 263.
- Katz, E., & Lazarsfeld, P. F. (1955). Personal Influence: Glencoe, IL: Free Press.
- Laurent, G., & Kapferer, J.-N. (1985). Measuring Consumer Involvement Profiles. JMR, Journal of Marketing Research, 22(1), 41.
- Mooradian, T. A., & Olver, J. M. (1997). "I Can't Get No Satisfaction:" The Impact of Personality and Emotion on Postpurchase Processes. *Psychology & Marketing (1986-1998)*, 14(4), 379.
- Oliver, R. L. (1977). Effect of Expectation and Disconfirmation on Postexposure Product Evaluations: An Alternative Interpretation. *Journal of Applied Psychology*, 62(4), 480-486.
- Oliver, R. L. (1980). A congitive model of the antecedents and consequences of satisfaction decisions. *JMR, Journal of Marketing Research (pre-1986), 17*(000004), 460.
- Oliver, R. L. (1981). Meaurement and Evaluation of Satisfaction Processes in Retail Setting. *Journal of retailing*, 57(3), 25-48.

- Oliver, R. L. (1993). Cognitive, Affective, and Attribute Bases of the Satisfaction Response. *Journal of Consumer Research*, 20(3), 418-430.
- Oliver, R. L. (1997). Satisfaction: A Behavioral Perspective on the Consumer: Boston: McGraw-Hill.
- Olson, J. C., & Dover, P. A. (1979). Disconfirmation of Consumer Expectations Through Product Trial. *Journal of Applied Psychology*, 64(2), 179-189.
- Ratner, R. K., & Kahn, B. E. (2002). The Impact of Private Versus Public Consumption on Variety-seeking Behavior. *Journal of Consumer Research*, 29(2), 246.
- Spreng, R. A., & Page, T. J., Jr. (2001). The Impact of Confidence in Expectations on Consumer Satisfaction. *Psychology & Marketing*, 18(11), 1187-1204.
- Tse, D. K., Nicosia, F. M., & Wilton, P. C. (1990). Consumer Satisfaction as a Process. *Psychology & Marketing (1986-1998), 7*(3), 177.
- Tse, D. K., & Wilton, P. C. (1988). Models of Consumer Satisfaction Formation: An Extension. *JMR, Journal of Marketing Research*, 25(2), 204.
- Tsiros, M., Mittal, V., & Ross, W. T. (2004). The Role of Attributions in Customer Satisfaction: A Reexamination. *Journal of Consumer Research*, *31*(2), 476.
- Venkatraman, M. P. (1989). Involvement and Risk. *Psychology & Marketing (1986-1998), 6*(3), 229.
- Voss, G. B., Parasuraman, A., & Grewal, D. (1998). The roles of price, performance, and expectations in determining satisfaction in service exchanges. *Journal of Marketing*, 62(4), 46.
- Westbrook, R. A. (1987). Product/Consumption-Based Affective Responses and Postpurchase Processes. *JMR, Journal of Marketing Research*, 24(3), 258.

APPENDIX 1

Expectations Manipulation

(Low Expectations Scenario)

「請想像您在未來的一個週末假期想和一位友人計畫兩天一夜的宜蘭冬山河 遊」,想要找一間便宜一點的民宿,在經過一番搜尋與預算的考量之後,您 決定要在一家位於冬山河近郊,叫做「歡奇園」的民宿住宿。您選定了一間 叫兩人套房,以下是截錄自民宿網頁的住房資訊,請仔細瀏覽......





價格	650元(附早餐)
說明	提供您最低價的兩人房,房間雖有些老舊,但打掃乾淨,意者請 來電訂房。
設備	附電視(僅無線三台),冷氣,冰箱,熱水瓶,衛浴設備。
備品	盥洗用品、紙杯、茶包、礦泉水。

	電話錄音台詞
服務人員:	喂~ 歡奇園民宿
訂房者:	你好,我…
服務人員:	7 等一下, 7 幫我買個排骨飯 叫她不要弄太油喔(服務 人員請旁人幫她訂便當)
服務人員:	喂~ 怎樣
訂房者:	我想要訂 3/31 的兩人套房
服務人員:	喔! 還有房間 貴姓?
訂房者:	我姓張
服務人員:	張先生 那你三天內要先匯一半的房錢喔 匯好再打過來
訂房者:	好 那我想請問一下你們那裡附近有什麼好玩的嗎?
服務人員:	你當天來我在幫你介紹就好了阿
訂房者:	喔好吧 那掰掰
服務人員	掰掰

(Moderate Expectations Scenario)

「請想像您在未來的一個週末假期想和一位友人計畫兩天一夜的宜蘭冬山河 遊」,想要找一間舒適實惠的民宿,在經過一番搜尋與預算的考量之後,您 決定要在一家位於冬山河近郊,叫做「歡奇園」的民宿住宿。您選定了一間 叫兩人套房,以下是截錄自民宿網頁的住房資訊,請仔細瀏覽......





價格	2000元(附早餐)
	兩人套房, 浴室採乾濕分離設計,乾淨舒適,採光良好,環境清 幽,提供一個舒適的住房品質。
設備	備電視、第四台、冷氣、衣櫃、衛浴、冰箱、吹風機,民宿另有開飲 機。
備品	盥洗用品、紙杯、茶包、礦泉水。

電話錄音台詞			
服務人員:	喂 歡奇園 民宿		
訂房者:	喂 你好 我想要定 3/31 的精緻兩人房		
服務人員:	好 稍等一下喔		
訂房者:	好		
服務人員:	喂 3/31 有空房 請問您貴姓		
訂房者:	我姓張		
服務人員:	張先生 那請你兩天內匯一半的訂金 然後撥個電話過來		
訂房者:	好謝謝		
服務人員:	掰掰		
訂房者:	紛紛		



(High Expectations Scenario)

「請想像您在未來的一個週末假期想和一位友人計畫兩天一夜的宜蘭冬山河 遊」,想要找一間高級一點的民宿,在經過一番搜尋與預算的考量之後,您 決定要在一家位於冬山河近郊,叫做「歡奇園」的民宿住宿。您選定了一間 叫「烏布皇宮」,具有濃厚巴里島風味的兩人套房,以下是截錄自民宿網頁 的住房資訊,請仔細瀏覽......





價格	5200元(住宿附精美西式早餐)
說明	巴里島風格 兩人套房、 分成迎賓玄關、客廳、臥房、半戶外閱覽區 及私密大觀景台,不影響住宿私密品質。
設備	 日本進口第一品牌 大金 分離式冷氣機。 32 "液晶電視機(含有線電視)、DVD 播放機(請自備碟片)。 進口四柱原木床、搭配纱幔、 KING SIZE 獨立筒床垫、加太空記 憶床垫。 閲覽區絨布躺椅 + 抱枕。 PHILIPS 述你熱水壺 (Mini Jug Kettle)。 Panasonic 進口音響 (請自備喜愛的 CD 音樂片)。 電冰箱內備有免費飲料及礦泉水。 白色美國純棉,高級被套及枕套 (乳膠枕)、高成份羽絨被。 檜木 + 版岩大浴池, TOTO 系列衛浴設備、日本進口定溫盤狀多 孔型淋浴柱設備。 ADSL 寬頻無線上網 (請自備 NB 電腦及無線網卡)。 觀景陽台備有休閒石桌及椅 + 太陽傘、進口可調式躺椅 + 腳 椅、夜晚臥躺, 滿天星斗儘在眼前,任您飽覽。 浴室大玻璃窗外,蓮花池、版岩石璧 + 木雕、動物石雕。 採用太陽能 + 電熱爐供水系統及中央集塵吸塵系統,環保、安 全、衛生。
備品	咖啡杯組、吹風機、水杯、礦泉水、腳踏墊、擦手巾、毛巾、浴巾、 沐浴乳、洗髮精、專屬室內拖鞋、浴帽、刮鬍刀、梳子、牙刷、牙 線、棉花棒

電話錄音台詞			
服務人員:	喂~ 歡奇園民宿 您好,很高興為您服務,請問您是要訂房嗎?		
訂房者:	我想訂 3/31 的烏布皇宮兩人套房		
服務人員:	好~ 請您稍等一下		
訂房者:	嗯		
服務人員:	先生,3/31 有空房,我會先幫您保留,請問您貴姓?		
訂房者:	我姓張		
服務人員:	好~ 張先生 那麻煩您在三天內匯一半的房錢當作訂金,匯款後 再打電話給我們確認		
訂房者:	好 1896		
服務人員:	那張先生還有需要什麼服務嗎?		
訂房者:	不用了 謝謝!		
服務人員:	好 很高興為您服務 掰掰		
訂房者:	掰掰		

APPDENX 2

Performance and Post-purchase WOM Manipulations

Low Performance Scenario

當天晚上八點,到了民宿,五分鐘後一個服務人員來招呼,並且告知你們房 間還沒打掃好,請你們再等十分鐘。房間收拾好後,服務人員拿一只鑰匙讓你們 自己去找房間,然後回過頭做自己的事。在進房前提醒了一下櫃檯人員希望可以 在早上八點就先把早餐準備好,使隔天的行程不至於拖延,服務人員允諾之後你 們就提著行李進到了房間。

一進房間,看到如照片中華麗的巴里島風格的擺設,正當開始有放鬆且舒適 的感覺時,看到垃圾桶裡有一點垃圾沒有清掉。打開大螢幕的液晶電視後發現有 點畫面不清楚。一進浴室發現沒有先放好衛浴用品,通知服務人員後,過了五分 鐘送過來。洗好澡後,正要躺在的床上,看到枕頭上還遺留著幾根頭髮,清掉頭 髮後你們才就寢入眠。

隔天早上八點十分你們已經整理好行李,到餐廳準備用早餐,服務人員還沒 準備好早餐,於是你們等了15分鐘,享用完早餐之後,提著行李離開了民 宿......

WOM_{CP} Scenario

作者: wish (初春冬默)

看板 hotel

標題: 劣質民宿 宜蘭「歡奇園」!! 時間: Sun Apr 8 19:42:58 2007

大家不要再去宜蘭冬山河的那家「歡奇園」了,服務很差,我們要 check in 的時候 居然沒有人在櫃檯耶!服務人員的態度感覺愛理不理的,到了民宿的時候已經是 晚上九點了,還沒吃晚餐,所以請他們半個小時後把晚餐準備好,九點四十分下 去的時候居還沒弄好!

還有就是他們的房間,我們那天住的是「烏布皇宮」,一點也沒有皇宮般的享 受,雖然擺設跟網頁的照片一樣,但是卻打掃的不乾淨,桌子有點髒髒的,而且 冰箱裡也沒有礦泉水,喝水的時候還要出去找他們要,打開電視的時候畫面還有 點不清楚,可能是第四台沒接好,真是受夠了。大家如果要去住的話最好先考慮 清楚,我就當作是花錢學個經驗吧! WOM_{AP} Scenario

看板 hotel

作者: wish (初春冬默) 標題: 宜蘭冬山河優質民宿「歡奇園」 時間: Sun Apr 8 19:42:58 2007

前幾天跟朋友去宜蘭冬山河玩,住一家很不錯的民宿,叫「歡奇園」,這家 民宿以豪華風格著稱,我們那一天住的房間叫「烏布皇宮」,大家可以去他們的 網站看一下,實際的擺設就跟照片一樣,很漂亮很舒適,打掃的也滿乾淨的,設 備都很齊全。而且他們的服務人員也滿親切的,有什麼問題跟他們反應都會盡量 幫忙你。老闆感覺也很好客,會找我們泡茶聊天,離開的時候還親自送我們出 去。簡單的來說,個人認爲這是一間豪華且不會忽視服務品質的民宿,大家去宜 蘭玩的話,可以參考一下這家民宿喔。



Moderate Performance Manipulation

當天晚上八點抵達民宿,到了櫃檯,服務人員過來招呼你們,介紹了一下民 宿的環境,然後就拿著鑰匙帶你們到房間。服務人員打點好一切之後,提醒你們 「有什麼需要再跟我們」。於是你們希望隔天的早餐可以八點準備好,以趕得上 之後的行程。

進房後,環視了一下房間的擺設,大致上打掃的還算乾淨,東西排放整齊, 具有最基本的設備,浴室有附衛浴備品,通風良好,床墊不會太硬,整體而言, 房間的狀況還 ok。洗好澡後,隨即就寢入眠。

隔天起床,整理好行李,八點準時到了餐廳,服務人員告知「不好意思,早 餐快弄好了,再等個五分鐘就可以用餐了!」,離開時,民宿主人送你們到門 口,於是開始了第二天的旅程.....

WOM_{CP} Scenario

作者: wish (初春冬默) 標題: 宜蘭「歡奇園」民宿

時間: Sun Apr 8 19:42:58 2007

那一天跟朋友一起去宜蘭玩,住一家「歡奇園」民宿,服務還不錯,主人滿親 切。我們住 2000 元的精緻兩人房,房間滿乾淨的,住的算是滿舒服的,浴室是採 乾濕分離,東西都很齊全,所以很方便,民宿主人也會不時的跟我們寒喧幾句。 以這樣的價位來說,跟宜蘭其他的民宿相比,算是一家很中肯的民宿了,要去冬 山河附近完的人可以參考看看。

WOM_{AP} Scenario

作者: wish (初春冬默)

看板 hotel

看板 hotel

標題: 宜蘭「歡奇園」民宿 很讚!! 時間: Sun Apr 8 19:42:58 2007

我跟朋友前幾天到宜蘭冬山河玩,住一家叫「歡奇園」的民宿,民宿老闆人 很好,親自開車到火車站來載我們,一到民宿還切他們自己種的水果請我們吃, 服務人員也很親切,很有禮貌,會幫我們提行李,晚上民宿老闆還請我們泡茶聊 天。

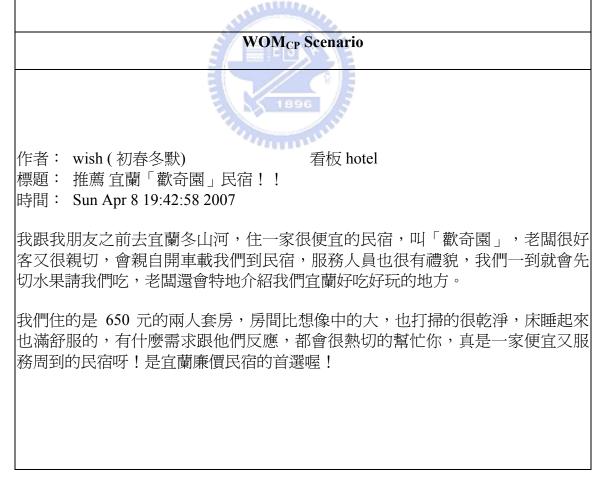
再來就是它的房間了,我們住的是 2000 元的精緻兩人套房,當天客人比較 少,所以老闆給我們比較大的那一間,房間感覺有認真在打理,我覺得很乾淨, 有芳香劑,不像有些民宿,會有令人不舒服的味道,床睡起來很舒服,基本的設 備與備品都有,住起來頗舒適。我們臨走時老闆還熱心的跟我們介紹了一下冬山 河附近好玩的地方。這家民宿真的很讚,大家有機會到宜蘭玩可以參考一下喔。

High Performance Scenario

當天晚上八點半民宿主人親自開車接你們到民宿,一到了民宿櫃檯,主人馬 上送上一盤自己種的水果。寒喧幾句後,問你們需不需要介紹宜蘭好玩的景點, 同時還推薦了來到冬山河不可不吃的美食並告知你們確切的地點。

入房時,服務人員幫你們提著行李,帶你們到今晚要住的房間。臨走時還不 忘提醒你們「有什麼需要記得跟我們說喔!」。由於第二天要趕行程,所以你們 也告知服務人員要在八點的時候就把早餐準備好。進房後,發現空間比在網頁上 的感覺要來的大許多,而且打掃的很乾淨,該有的基本設備都有,採光也很好, 雖然沒有豪華的裝潢擺設,但房間的狀況還不錯。洗好澡後,躺在具有獨立床筒 的床上,漸漸入眠。

隔天一早起床,收拾好行李準時八點到餐廳用餐,早餐已經準備好了,服務 人員還提醒你們「要多吃一點喔!不夠可以在跟我說,再幫你們多作。」。在享 用完早餐後,你們就提著行李離開,開始第二天的旅程......



WOM_{AP} Scenario 作者: wish (初春冬默) 看板: hotel 標題: 強力推薦 宜蘭「歡奇園」民宿!! 時間: Sun Apr 8 19:42:58 2007 我一定要推薦一家宜蘭冬山河的民宿,叫「歡奇園」,它是一間很便宜服務卻很 優的民宿,,老闆人很好,會開車接我們到民宿,一到民宿就切了自己種的水果 給我們吃,服務人員還會幫我們拿行李。當天人不多,我們原本住的是 650 元的 兩人房,老闆自動幫我們把房間升級成豪華兩人房,不多收我們錢,讓我們花了 650 卻體驗到很好的享受。 他們的房間很乾淨,床睡起來也很舒服,廁所是乾濕分離的那種,還有檜木桶的 澡盆,味道很香。隔天早上吃完早餐,老闆還要兒費請我們去他們的果園摘水果 吃,臨走時還以半價的優惠賣給我們兩張賞鯨卷,這真的是我有史以來住過最好 的民宿了,雖然設備不是最好的,卻很注重服務,待人又親切,有去宜蘭玩的話 一定要住看看喔。



Internet Questionnaire

	民宿住宿滿意度之 6 作者:廖爲新	-	1-1)					
沒有正	非常感謝您的配合,在進行完情境描述後,搭 確答案,僅需按照您的真實感受填答。此外問 仔細閱讀每一則題目後作答,謝謝您!								
敬祝倭	建康快樂!								
指導教研究 4 電子信	通大學管理科學研究所 授: 張家齊 博士 生: 廖爲新 同學 敬上 箱:wishdarger@yahoo.com.tw 下兩題想了解您是否有聽到網頁的	電話錄	音	,許	青仔 /	細均	貢答	,謝	
1*	請問訂房的對話中,「服務人員的性別」□ 男性 □ 女性	」是:							
2*	請問訂房的對話中,「訂房者姓什麼」」 C 王 C 張 C 蔡 C 陳	?							
	看完民宿的網頁資料,並想像實際 的實際感受」,回答以下幾則問題		的	遭退	围後	,	「請	依照	
		肯定不 會 1	2	3	4	5	6	肯定 會 7	
3*	如果住在這家民宿的話,我認為民宿 「將會」提供優良的全方面服務。	C	C	C	C	C	C	C	
4*	如果住在這家民宿的話,我認為民宿 「將會」提供精確且可信賴的服務。	С	C	C	C	C		С	
5*	如果住在這家民宿的話,我認爲民宿的	C	C					C	

	員工「將會」隨時都表現的有禮貌。								
6*	如果住在這家民宿的話,我認為民宿的 員工「將會」給我即時的協助。	C	C		C	C	C	C	
7*	如果住在這家民宿的話,我認為民宿的 員工「將會」針對顧客提供個人化的關 注。		C	C	C	C	C	C	
8*	如果住在這家民宿的話,我認為民宿 「將會」提供優良的住房品質。	C	C		C	C	C	C	
9*	如果住在這家民宿的話,我認為民宿提 供的房間設備與備品「將會」是齊全 的。		C	C	C	C	C	C	
10*	如果住在這家民宿的話,我認為民宿所 提供的房間「將會」是乾淨的。	C	C		C	C	C	C	
11*	如果住在這家民宿的話,我認為民宿所 提供的房間「將會」是舒適的。	C	C	C	C	C	C		
	思像您當天到民宿實際遇到的情況。	就如	司以	下戶	斦描	述的	勺情	境	••
	想像您當天到民宿實際遇到的情況 用理會下方的空白方格) A descriptive scenario(the per					述的	り情	境 	••
(不) [12 想	用理會下方的空白方格)	forman	ce mai				か 情 ・ 針	境 對民	•••
(不) [12 想	用理會下方的空白方格) A descriptive scenario(the performance) 象您到民宿的實際遭遇後,「請依認的表現回答以下幾則問題。	forman	ce mai				り情	境 對民	••
(不) [12 相 宿 伯	用理會下方的空白方格) A descriptive scenario(the personal descriptive scenario) descriptive scenario(the personal descriptive scenario) descriptive scenario(the personal descriptive scenario) descriptive scenario) descriptive scenario(the personal descriptive scenario) descriptive scenario) descriptive scenario) descriptive scenario descript	forman 照 您 E 品質的	ce mai 的實				り 情 ・ 針	境 對民	••
(不) [12 宿伯 [13*	用理會下方的空白方格) A descriptive scenario(the per 象您到民宿的實際遭遇後,「請依認 内表現回答以下幾則問題。 民宿提供的服務是: 很低品質的	forman 照 您 E 品質的	ce mai 的實				り 情 ・ 針	境 對民	•••
(不) [12 相 宿 伯	田理會下方的空白方格) A descriptive scenario(the per 象您到民宿的實際遭遇後,「請依認 力表現回答以下幾則問題。 民宿提供的服務是: 【低品質的	forman 滾您的 已 7	ce mai 的實				り 情 ・ 針	境 對民	•••
(不) [12 宿伯 [13*	用理會下方的空白方格) A descriptive scenario(the per 象您到民宿的實際遭遇後,「請依認 内表現回答以下幾則問題。 民宿提供的服務是: 很低品質的	forman 照 您 回 已 7	ce mai 的實				り情 チーク	境 對民	•••

15* 民宿的員工是:
沒有禮貌的有禮貌的
•
16* 民宿的員工是:
不樂於提供協助的樂於提供協助的
17* 民宿的員工是:
不關切我的需求的關切我的需求的
18* 民宿所提供的房間是:
很低品質的很高品質的
•
19* 民宿提供的房間設備與備品是:
不齊全的齊全的
20* 民宿所提供的房間是:
不乾淨的乾淨的
□ 1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 21* 民宿所提供的房間是:
不舒適的舒適的 C 1 C 2 C 3 C 4 C 5 C 6 C 7

		待的 「 差 í 多 」) 待的	待的	比我期	
115	民宿服務的 可靠程度		C		C	C	C	
744	民宿員工的 禮貌程度		C		C	C	C	
$D\Delta \uparrow$	民宿員工協 助我的程度	C	C	C		۵	C	C
25*	民宿員工針 對我的需求 給予關注的 程度	C	C	C		C		
26*	整體而言, 民宿的服務 品質	C	C	C	C	C		
)/*	民宿房間的 乾淨程度		C		C	C	C	
28* 1	民宿房間設 備的齊全程 度	C	C	C	C	C		
7 U *	民宿房間的 舒適程度		C		C	C	C	
30*	整體而言, 民宿房間的 品質	C	C	C	C	C		

31 The post-purchase WOM manipulation									
	f完 BBS 的文章後,比 受」回答以下幾個問題		人與自	己的遭	围,	請依照	贸您的	實際	
32*	我認為別人享受到的服務 1.比我「差很多」 3.和我「一樣」 5.比我「好很多」	<mark>2.</mark> 比							
33*	 C 1.比我「差很多」 C 3.和我「一樣」 C 5.比我「好很多」 	2. Et 4. Et	and the second second second second	-					
對	「歡奇園」民宿的滿意	程度 很不同	司不同	有點不	司普	有點同	司司	很同	
		意	意			行和正意		(K)问 意	
34*	我對民宿提供的服務感到 滿意			C	C				
35*	民宿的服務讓我感到高興	С	C		C	С	С		
36*	我對民宿提供的服務感到 「不悅」	C	C	C	C	C	C	C	
37*	我對民宿提供的房間感到 滿意	C	C		C		C		
38*	民宿的房間讓我感到高興	C		C	C	C	C	C	
39*	我對民宿提供的房間感到 「不悅」	C	C	C	C	C	C	C	

基本資料: (資料絕不會外流,請您放心填答)
40* 性別 C 男 C
41* 年齡 □ 14歲以下 □ 15-~19歲 □ 20~24歲 □ 25~29歲 □ 30~34歲 □ 35~39歲 □ 40~44歲 □ 45歲以上
42* 教育程度 C 國中以下 C C 大學(專) C 研究所(含)以上
43* 職業 □ 學生 □ 軍公教 □ 服務業 □ 製造業 □ 電子資訊業 □ 金融保險業 □ 一般商業 □ 自由業 □ □ 其他請註明: □ □ 44* 每月可支配所得
10000元以下10001~20000元20001~30000元30001~40000元40001~50000元50001~60000元60001~70000元70001~80000元80001元以上1
45* 居住地 1 北部地區(台北,基隆,桃園,新竹,苗栗) 1 中部地區(台巾,彰化,雲林,嘉義,南投) 1 南部地區(台南,高雄,屏東) 1 東部地區(宜蘭,花蓮,台東) 1 小島地區(澎湖,金門,馬祖)
46* 請問您有住過民宿嗎? 有 無 47* 請問您有「上網」搜尋產品資訊的習慣嗎?

有無無
48* 請問您有「上 BBS 站」的習慣嗎? 有 無
必須回答有'*'記號的問題
非常感謝您的配合,請檢查是否有漏填的題目。如果有,請您再次思考後作 答,感謝您的耐心與細心,謝謝您!
全卷完
A TRADE OF A



The Hyperlinks of the Research Websites

Post-purchase WOM Disconfirmation	No	WOM _{CP}	WOM _{AP}
Negative disconfirmation	А	В	С
Zero disconfirmation	D	Е	F
Positive disconfirmation	G	Н	Ι

A: <u>http://www.cc.nctu.edu.tw/~u9431526/3-1-0</u>

B: http://www.cc.nctu.edu.tw/~u9431526/3-1-1

C: http://www.cc.nctu.edu.tw/~u9431526/3-1-2

D: http://www.cc.nctu.edu.tw/~u9431526/2-2-0

E: http://www.cc.nctu.edu.tw/~u9431526/2-2-1

F: http://www.cc.nctu.edu.tw/~u9431526/2-2-2

G: <u>http://www.cc.nctu.edu.tw/~u9431526/1-3-0</u>

H: <u>http://www.cc.nctu.edu.tw/~u9431526/1-3-1</u>

I: <u>http://www.cc.nctu.edu.tw/~u9431526/1-3-2</u>

The Results of Pretest

Construct	Item	Cronbach's α
Expectations	9	0.976
Performance	9	0.983
Disconfirmation	9	0.988
Satisfaction	6	0.966
Perceived Performance Discrepancy with others	2	0.827

Scale Reliability



Manipulation Check for Expectations

Level of expectations	N	Mean	Standard Deviation
Low	36	2.2068	0.84417
Moderate	31	3.8602	0.89395
High	36	5.2994	0.82030

LSD Test^a : High > Moderate***, Moderate > Low***, High > Low***

^a ***p < 0.001

Manipulation Check for Performance

Level of Performance	Ν	Mean	Standard Deviation
Low	36	1.9012	0.68944
Moderate	31	4.7849	1.07647
High	36	5.4630	0.78500

Dependent Variable: Performance

LSD Test ": High > Moderate***, Moderate > Low***, High > Low

^a ***p < 0.001

Manipulation Check for Disconfirmation	n
and the second s	
sconfirmation	

Level of Disconfirmation	N	Mean	Standard Deviation	
Negative	36	1.8364	0.54529	
Zero	31	4.2832	1.03472	
Positive	36	5.7901	0.59734	

LSD Test ^a : Positive > Zero***, Zero > Negative***, Positive > Negative***

^a ***p < 0.001

Dependent Variable: Disconfirmation, Test Value = 4 (the midpoint)

Disconfirmation	Ν	Mean	Standard Deviation	t-value	p-value
Zero	31	4.2832	1.0183	1.601	0.120

Test Value = 3 (the midpoint)								
	Ν	Mean	Standard Deviation	t-value	p-value			
WOM _{CP}	34	3.0882	0.35825	1.436	0.160			
WOM _{AP}	39	3.9231	0.68382	8.430	0.000			

Manipulation Check for Post-purchase WOM



WOM_{AP} Manipulation in Zero Disconfirmation

Test Value = 3						
Disconfirmation	Post-purchase WOM	Ν	Mean	Standard Deviation	t-value	p-value
Zero	WOM _{AP}	33	3.4848	0.59273	4.699	0.000



Independent Sample t Test for zero and positive disconfirmation in WOM_{AP}

Ι	Dependent Variable: Perceived Performance Discrepancy with Others						
	Disconfirmation	Post-purchase WOM	Ν	Mean	Standard Deviation	t-value	p-value
	Zero	WOM _{AP}	33	3.4848	0.59273	-1.898	0.062
	Positive	WOM _{AP}	33	3.7727	0.63849		0.002

