

**The Impact of Site-Communalinity on the Attitudinal and Behavioural
Components of Site-Loyalty: A Cross-Sectional Study**

Daniel Tomiuk

**Faculty of Management
McGill University, Montreal**

July 2005

**A thesis submitted to McGill University
in partial fulfilment of the requirements of the
degree of Ph.D. in Management**

Copyright © B. Daniel Tomiuk 2005



Library and
Archives Canada

Bibliothèque et
Archives Canada

Published Heritage
Branch

Direction du
Patrimoine de l'édition

395 Wellington Street
Ottawa ON K1A 0N4
Canada

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence

ISBN: 978-0-494-21704-7

Our file Notre référence

ISBN: 978-0-494-21704-7

NOTICE:

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

AVIS:

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protègent cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.


Canada

Abstract

We examine whether the precepts of what have been termed ‘close’, ‘intimate’, or, more specifically, ‘communal’ relationships in Social Psychology may be communicated via Web site content and whether this positively impacts Site-Loyalty. We introduce a variable called Site-Communality defined as *the extent to which Web site content signals that a company’s relationship with its customers goes beyond the formal, ‘tit for tat’ business dealings that are typically expected from purely commercial exchanges, and instead, more closely abide by the norms and behaviours evocative of friendships and/or family relations*. We develop multi-dimensional measures of Site-Communality and Site-Loyalty. Using Structural Equation Modelling (LISREL VIII), we then empirically investigate the influence of Site-Communality on the attitudes and behavioural intentions associated with Site-Loyalty using cross-sectional data collected from 305 subjects asked to explore and evaluate one among many real Web sites chosen so as to maximize variability on Site-Communality.

Our results show that Site-Communality has a strong, direct, positive effect on the attitudes and behavioural intentions associated with Site-Loyalty. This directly contradicts conjectures from several authors dismissing as unimportant or irrelevant to Web site design, the affective/relational aspects more closely associated with traditional, interpersonal, face-to-face commercial encounters (e.g., Cox & Dale, 2001; Zeithaml, Parasuraman, & Malhotra, 2001, 2002). Generally, such factors were believed to lose their relevance in self-service, Web-based commercial environments, at best, becoming contingently important only when customer/employee communications actually occurs (i.e., emails/telephone conversations).

However, contrary to our expectations, our results show that the positive relationship between Site-Communality and Site-Loyalty is attenuated (rather than accentuated) by the visitor’s ‘Communal-Oriented in Traditional Commercial Environments’ which is defined as *the extent to which a consumer*

enjoys 'getting to know' employees (i.e., waitress, bank teller, hair stylist) and relating with them on a more personal-level than is typically required for the effective delivery of a service. One possible explanation for this unexpected result is that when highly communally-orientated consumers are exposed to a Web site high in Site-Communality, they may be reminded of what they are missing out on if they choose to conduct their business online rather than in more traditional business environments.

Résumé

Nous examinons si les préceptes des relations qualifiées comme ‘proches’, ‘intimes’, et appelées ‘communales’ en Psychologie Sociale peuvent être communiquées par l’intermédiaire du contenu des sites Web et si cette communication influence positivement la fidélité des usagers envers le site. Nous définissons la variable *Communalité du Site* comme le *degré avec lequel le contenu du site Web communique aux visiteurs que leur rapport avec la compagnie ira au delà d’une relation d’affaire formelle, quid pro quo, et typiquement prévu des échanges purement commerciaux, et plutôt, conformera aux normes et aux comportements qui caractérisent les relations familiales ou amicales*. Nous développons des mesures multidimensionnelles de *Communalité du Site* et *Fidélité envers le Site*. A l’aide du logiciel LISREL VIII, nous examinons la relation entre ces deux variables en utilisant des données recueillies auprès de 305 sujets qui ont chacun exploré et évalué un site Web parmi plusieurs, choisis préalablement afin de maximiser la variabilité sur la *Communalité du Site*.

Nos résultats indiquent que la *Communalité du Site* affecte directement et positivement les attitudes et les comportements liés à la fidélité. Ceci réfute les suppositions de plusieurs chercheurs qui suggèrent que les facteurs relationnels/affectifs associés aux rencontres traditionnelles perdent leur importance dans la conception des sites Web étant donné la caractéristique ‘libre-service’ de la prestation de service on-line (par ex., Cox & Dale, 2001; Zeithaml, Parasuraman, & Malhotra, 2001, 2002).

Cependant, contrairement à nos attentes, nos résultats démontrent que la relation positive entre la communalité et la fidélité est diminuée (et non accentuée) par l’Orientation Communale de l’Usager dans les Environnements Commerciaux Traditionnels que l’on définit comme *le degré avec lequel le consommateur apprécie et recherche à connaître les employés et à interagir avec eux à un niveau plus personnel qu’est typiquement requis pour la prestation efficace du service*. Nous croyons que ce résultat imprévu suggère que, lorsque les

consommateurs avec une forte orientation communale sont exposés à des sites forts en communalité, ceux-ci leur rappellent que faire affaire de manière on-line plutôt que traditionnelle représentent toujours une perte importante de l'aspect interpersonnel durant la prestation du service.

Acknowledgements

I am very grateful to Professor Alain Pinsonneault, my thesis supervisor, for his help and assistance throughout my Ph.D. and to my committee members Professors Liette Lapointe, Suzanne Rivard and Mrugank Thakor for their comments and guidance. I would also like to thank Professor Genevieve Basselier for her help during data analysis. A special thanks goes out to Professor Jan Jorgensen and Ms. Stella Scalia without whose help I would not have completed the Ph.D. and to Manish Verma, Hector Cantor, and the many other people whom I've come to consider as friends. Finally, I shall forever remain deeply humbled by my family's patience, support and perseverance.

Table of Contents

Abstract.....	2
Résumé.....	4
Acknowledgements	6
Table of Contents	7
List of Figures.....	11
List of Tables	13
Introduction.....	16
Chapter 1 - Conceptualizations of Loyalty and its Benefits.....	21
1.1 - Overview	21
1.2 - Organizational Benefits Related to Loyalty	25
1.3 - What is Loyalty?.....	27
1.3.1 - Loyalty as a Behaviour	27
1.3.2 - Loyalty as a Composite of Both Attitude and Behaviour.....	30
1.3.3 - Loyalty as a Propensity.....	34
1.3.4 - Loyalty as a Psychological State	35
1.3.5 - Different States and Strengths of Loyalty: Performance-Based versus Emotion/Affect-Based Loyalty	36
1.4 - Summary	39
Chapter 2 - Antecedents of Loyalty	41
2.1 - Overview	41
2.2 - Service Quality	41
2.3 - Customer Satisfaction.....	43
2.4 - Value.....	45
2.5 - Service Failure Recovery and Complaint Handling	47
2.6 - Fostering Trust.....	49
2.7 - Affective/Relational Factors	52
2.8 - Relationship Quality / Satisfaction	54
2.9 - Causal Antecedents or Building Blocks?	56
2.10 - Summary	57
Chapter 3 - Factors Affecting Web Site-Loyalty	59
3.1 - Overview	59
3.2 - Utilitarian Aspects (Ease of Use and Web site Usefulness)	60
3.2.1 - Ease of Use	61
3.2.2 - Web Site Usefulness.....	63
3.3 - Utilitarian Factors from Studies Other than Loiacono et al. (2002)	72
3.4 - Hedonic/Entertainment Value	76
3.5 - Site Aesthetics	77
3.6 - Comparativeness with Other Channels.....	78
3.7 - Factors Unrelated to Web site Design	80
3.8 - Conclusions from Literature Review into Factors Linked to Web Site Loyalty	81
3.9 - Summary.....	84
Chapter 4 - Communal-Relationship Theory.....	85
4.1 - Overview	85

4.2 - Differences Between Communal Versus Exchange Relationships	86
4.3 - Evidence of Communal-Relationships in Traditional Service Settings ...	88
4.4 - The Impact of Communalities on Customer Loyalty in Traditional Service Settings.....	91
4.5 - What Communal-Relationships aren't	91
4.6 - Communal-Orientation	95
4.7 - Summary	97
Chapter 5 - Models and Hypotheses.....	98
5.1 - Overview	98
5.2 - The Overall Model.....	99
5.3 - Model and Hypotheses Addressing Nomological Validity of Site-Communality.....	101
5.4 - Model and Hypotheses Addressing Nomological Validity of Site-Loyalty	107
5.5 - Main Model and Hypotheses Pertaining to the Relationship between Site-Communality and Site-Loyalty.....	109
5.6 - Communal-Orientation in Traditional Commercial Environments as a Moderator of the Relationship between Site-Communality and Site-Loyalty.....	110
5.7 - Summary.....	112
Chapter 6 - Measure Development – Construct Definition of Site-Communality and Site-Loyalty.....	114
6.1 - Overview	114
6.2 - Definition and Dimensionality of Site-Communality	115
6.2.1 - Definition of Site-Communality	115
6.2.2 - Dimensionality of Site-Communality.....	117
6.2.3 - Site-Communality versus Social Presence	122
6.3 - Examples of Web sites Likely to be considered High / Low in Site-Communality.....	125
6.4 - Definition and Dimensionality of Site-Loyalty	127
6.4.1 - Definition of Site-Loyalty	127
6.4.2 - Dimensionality of the Attitudinal and Behavioural Components of Site-Loyalty.....	129
6.5 - Summary.....	130
Chapter 7 - Item Generation, Content Validation, Reliability, and Exploratory Factor Analysis.....	131
7.1 - Overview	131
7.2 - Purification of Items of Site-Communality (Card Sorting Exercise 1 / Questionnaire 1).....	132
7.2.1 - Initial Item Generation and Content / Face Validity for the Site-Communality Dimensions	132
7.2.2 - Questionnaire for Site-Communality (Questionnaire 1) and Demographics	133
7.2.3 - Reliability and Exploratory Factor Analysis of Site-Communality Items.....	138
7.2.4 – Selecting the Number of Factors.....	150
7.3 - Purification of Items for Site-Loyalty (Card Sorting Exercise 2 / Questionnaire 2).....	152

7.3.1 - Initial Item Generation and Content / Face Validity for the Site-Loyalty Dimensions and for the Overall Measures of Site-Communality and Site-Loyalty.....	152
7.3.2 - Content Validation of Additional Measures	154
7.3.3 - Questionnaire for Site-Loyalty and Additional Measures (Questionnaire 2) and Demographics	157
7.3.4 - Reliability and Exploratory Factor Analysis of Site-Loyalty Items (Data Collected from Questionnaire 2).....	160
7.4 - Reliability and Factor Analysis of Overall Site-Communality and Overall Site-Loyalty.....	164
7.5 - Reliability and Factor Analysis of Overall Satisfaction and Communal-Orientation in Traditional Commercial Environments	166
7.6 - Sample Size Considerations for Questionnaire 1 and Questionnaire 2..	168
7.7 - Preliminary Statistical Analyses of the Relationship between Overall Site-Communality and Overall Site-Loyalty	169
7.8 - Summary.....	170
Chapter 8 - Refining the Measures of Site-Communality and Site-Loyalty Using Confirmatory Factor Analysis	173
8.1 - Overview	173
8.2 - Final Questionnaire (Questionnaire 3) Creation and Invitation for the Study	173
8.2.1 - Data Screening Procedure, Sample Size, and Demographics.....	176
8.3 - SEM and Confirmatory Factor Analysis	179
8.3.1 - Notation Used in our Models.....	180
8.3.2 - Assessing Normality.....	181
8.3.3 - Choice of ML Estimation Method with Satorra-Bentler Scaling	182
8.3.4 - Measurement Model versus Structural Model.....	184
8.4 - First- and Second-Order Confirmatory Factor Models of Site-Communality.....	187
8.4.1 - Measurement Model of Site-Communality	187
8.4.2 - Second-Order Factor Model – Site-Communality.....	193
8.5 - First- and Second-Order Confirmatory Factor Models of Site-Loyalty .	197
8.5.1 - Measurement Model - Attitudinal Component of Site-Loyalty	197
8.5.2 - Measurement Model - Behavioural Component of Site-Loyalty	202
8.6 - Summary.....	207
Chapter 9 - Reliability and Validity Issues.....	208
9.1 - Overview	208
9.2 - Assessing Reliability	208
9.3 - Assessing Construct Validity.....	209
9.3.1 - Convergent Validity	209
9.3.2 - Discriminant Validity	214
9.4 - Null Model Comparison	218
9.5 - Summary.....	221
Chapter 10 - Nomological Validity of Site-Communality and Site-Loyalty	222
10.1 - Overview	222
10.2 - Establishing Nomological Validity - Testing Models 1 and 2	222
10.2.1 - Testing Model 2 – Site-Communality	222

10.2.2 - Testing Model 3 – Site-Loyalty	234
10.3 - Summary	240
Chapter 11 - Main Model and Hypotheses	241
11.1 - Overview	241
11.2 - Testing Model 4 - The Impact of Site-Communality on Site-Loyalty ..	241
11.3 - Moderating Effect of Communal-Orientation in Traditional Commercial Environments	244
11.4 - Summary	251
Chapter 12 - Summary of Findings, Contribution, Limitations and	
Conclusion	252
12.1 - Summary of Findings	252
12.2 - Contribution	257
12.3 - Limitations	262
12.4 - Future Research Questions	264
12.5 - Conclusion	267
References	269
APPENDIX 1	320
APPENDIX 2	324
APPENDIX 3	326
APPENDIX 4	331
APPENDIX 5	338
APPENDIX 6	359
APPENDIX 7	362
APPENDIX 8	364
APPENDIX 9	394

List of Figures

<i>Figure 1. Dick and Basu's (1994) Loyalty Framework.....</i>	31
<i>Figure 2. Dick and Basu's (1994) Loyalty Conditions.....</i>	32
<i>Figure 3. Conceptually Distinct Categories of Factors Underlying Affecting Site-Loyalty</i>	83
<i>Figure 4. Model 1 Showing the Expected Relationships between Variables....</i>	100
<i>Figure 5. Model 2 Used to Establish the Nomological Validity of Site-Communality.....</i>	103
<i>Figure 6. Model 3 Used to Establish the Nomological Validity of Site-Loyalty.</i>	109
<i>Figure 7. Model 4 Showing the Hypothesized Impact of Site-Communality on the Attitudinal and Behavioural Components of Site-Loyalty.</i>	110
<i>Figure 8. Model 5 Showing Moderation Effect of Communal-Orientation on the Relationship between Site-Communality and Site-Loyalty.....</i>	112
<i>Figure 9. Model Showing Proposed Multidimensionality of Site-Communality.....</i>	118
<i>Figure 10. Example of a Web Site Likely to be Perceived as Higher in Site-Communality.....</i>	126
<i>Figure 11. Example of a Web Site Likely to be Perceived as Lower in Site-Communality.....</i>	126
<i>Figure 12. First-Order Factor Model for Site-Communality.....</i>	189
<i>Figure 13. Alternate Model showing Excellent Fit but with Considerable Lower Item Content.....</i>	193
<i>Figure 14. Second-Order Factor Model for Site-Communality.</i>	195
<i>Figure 15. First-Order Confirmatory Factor Model for the Attitudinal Component of Site-Loyalty (Standardized Solution).</i>	198
<i>Figure 16. Second-Order Confirmatory Factor Model of the Attitudinal Component of Site-Loyalty.....</i>	201
<i>Figure 17. First-Order Confirmatory Factor Model of the Behavioural Component of Site-Loyalty.</i>	203
<i>Figure 18. Second-Order Confirmatory Factor Model of the Behavioural Component of Site-Loyalty.....</i>	206
<i>Figure 19. Correlation between Second-Order Factor of the Attitudinal Component of Site-Loyalty and an Overall Measure of Site-Loyalty for Establishing Convergent Validity.....</i>	213
<i>Figure 20. Null-Model for Site-Communality.....</i>	220
<i>Figure 21. The Standardized Paths between Site-Communality, Trust, Positive and Negative Affect and Overall Web Site Satisfaction (Results for Model 2)</i>	227
<i>Figure 22. Results for Model 3 - Structural Model Used to Assess Nomological Validity of Site-Loyalty</i>	235
<i>Figure 23. SEM Model Showing the Impact of Site-Communality on the Attitudinal and Behavioural Components of Site-Loyalty</i>	243
<i>Figure 24. Multiplicative Model Showing Interaction Effects Between Site-Communality and Communal-Orientation in Traditional Commercial Settings on Site-Loyalty.....</i>	246

<i>Figure 25. Results of the Multiplicative Model – Standardized Solution.</i>	250
<i>Figure 26. Example of an Image Likely to Convey Approachability and Good Cheer.</i>	259

List of Tables

Table 1	116
Distinctions Between Communal and Exchange Relationships and Between High/Low Communality	116
Table 2	135
Real Web sites Included in the First and Second Questionnaires.....	135
Table 3	137
Frequency and Percent of Participants Evaluating each Web Site in Questionnaire 1.....	137
Table 4	141
Initial Exploratory Factor Analysis of Site-Communality Items (Data from Questionnaire 1).....	141
Table 5	144
Factor Analysis of Authenticity/Non-instrumentality Dimension.....	144
Table 6	146
Second Exploratory Factor Analysis of Site-Communality Items.....	146
Table 7	149
Final Exploratory Factor Analysis of Site-Communality Items	149
Table 8	154
Initial Pool of Items Generated to Tap into Overall Site-Communality	154
Table 9	154
Initial Pool of Items Generated to Tap into Overall Site-Loyalty.....	154
Table 10	157
Results from Judge Rankings for 'Communal-Orientation in Traditional Commercial Environments'	157
Table 11	159
Frequency and Percent of Participants Evaluating each Web Site in Questionnaire 2.....	159
Table 12	162
Exploratory Factor Analysis of the Attitudinal Component of Site-Loyalty.....	162
Table 13	162
Exploratory Factor Analysis of the Behavioural Component of Site-Loyalty ...	162
Table 14	166
Pattern Matrix of Exploratory Factor Analysis for Remaining Items of Overall Site-Communality and Overall Site-Loyalty	166
Table 15	168
Corrected Item-to-Total Correlations.....	168
Table 16	175
Real Web sites Included in the Final Questionnaire	175
Table 17	178
Frequency and Percent of Participants Evaluating each Web Site in Questionnaire 3.....	178
Table 18	186
Fit Indices and Cut-off Values Used to Assess Quality of Models	186
Table 19	191
Fit Indices for the First-Order Factor Model for Site-Communality.	191
Table 20	192

Factor Loadings, t-values, and Errors of the Measurement Parameters for First- Order Factor Model for Site-Communality	192
Table 21	196
Second-Order Measurement Model for Site-Communality	196
Table 22	199
Factor Loadings, t-values, and Errors of the Measurement Parameters for Dimensions of the Attitudinal Component of Site-Loyalty	199
Table 23	200
Measurement Model for First-Order Factors of the Attitudinal Component of Site- Loyalty	200
Table 24	202
Measurement Model for Second-Order Factors of the Attitudinal Component of Site-Loyalty	202
Table 25	204
Factor Loadings, t-values, and Errors of the Measurement Parameters for Dimensions of the Behavioural Component of Site-Loyalty	204
Table 26	205
Fit indices for First-Order CFA – Behavioural Component of Site-Loyalty	205
Table 27	207
Second-Order CFA for the Behavioural Component of Site-Loyalty	207
Table 28	214
Correlations between Second-Order Constructs and Overall Measures	214
Table 29	216
Correlations between Site-Communality Dimensions and their 95% Confidence Intervals	216
Table 30	217
Correlations between the Dimensions for the Attitudinal Component of Site- Loyalty and their 95% Confidence Intervals	217
Table 31	217
Correlations between the Dimensions for the Behavioural Component of Site- Loyalty and their 95% Confidence Intervals	217
Table 32	226
Original PANAS Scale	226
Table 33	229
Fit indices for Model 2	229
Table 34	231
Standardized Loadings and Error of Estimates for Measurement Model	231
Table 35	234
Results for Hypotheses of Model 2	234
Table 36	236
Fit indices for Model 3	236
Table 37	237
Standardized Loadings and Error of Estimates for Measurement Model	237
Table 38	239
Results for Hypotheses of Model 3	239
Table 39	242
Results for Hypotheses of Model 4	242

Table 40	261
Shortcomings on Dimensions of Site-Communality and Recommended Actions	261

Introduction

An ever increasing number of companies are relying on Web sites to sell their products and services and the Web is becoming the first and, sometimes, only point of contact with customers (Porter, 2001). From the customer's perspective, on-line environments provide several benefits. They reduce many of the constraints that were associated with the traditional purchase / service process such as limited operating hours and geographical distance. As such, it is not surprising that customer interest in such technology is growing. An early study conducted at Georgia Tech revealed that, in 1998, already 50% of respondents were interested in opening an Internet-based bank account because of the convenience it offers (Riggins, 1998). By the end of 2005, it is forecasted that business-to-consumer e-commerce will exceed \$250 billion (Mullany, Green, Arndt, & Hof, 2003) and that the number of Internet users should surpass 760 million according to CommerceNet (www.commerce.net).

From the company's perspective, the growing interest of customers in conducting their business on-line provides an opportunity for reaching a much larger number of consumers, more easily, at a lower cost (Hof & Hamm, 2002; Madden & Coble-Neal, 2002). However, it is clear that simply having a presence on-line is not sufficient for several reasons. First, poorly designed Web sites have been shown to have a negative impact on consumers (e.g., bad press, customer dissatisfaction, frustration, and even loss - Gruman, 1999; Vijayasarathy, 2004). Second, online environments significantly lower customer search costs which facilitate switching (Bakos, 1997). As such, they challenge companies in finding new ways to attract and retain customers. Finally, some authors project that in the near future, the term "electronic commerce" could disappear completely. All commerce may eventually become 'electronic' (Porter 2001) which will, undoubtedly, increase the influence of Web sites in fashioning customers' view of firms (Loiacono, Watson, & Goodhue, 2002; Watson et al., 1998). Thus, it is increasingly important to identify Web site design factors which would help

companies attract and retain their customers (Vijayasathy, 2004) and create a good first impression (Smith, 2000).

Our literature review of Web site design factors affecting the antecedents of Web site loyalty (and, by extension, Web site loyalty itself) shows that studies have focused primarily on utilitarian aspects (e.g., ease of use, perceived usefulness, meeting all the customer's transactional needs by offering rich content and functionality) and, to some extent, the entertainment value of sites and site aesthetics. Apparently, what may be termed as *affective/relational* factors have received very little attention, even though, such factors have been shown to positively influence loyalty in traditional commercial environments. For instance, Macintosh and Lockshin (1997) and Gremler and Gwinner (2000) found that customers who develop *a personal connection* with employees also have more positive evaluations and exhibit more loyalty toward the company. Moreover, affective relationship dynamics and their benefits are, apparently, not only restricted to the relationships between customers and employees. Studies show that consumers can also affectively relate to brands and products as well. Research reveals that consumers often think and describe their relationships with brands and products as 'flings', 'courtships', 'love-affairs', etc. (see Aggarwal, 2004; Fournier, 1998; Gremler & Gwinner, 2000; Oliver, 1999). Overall, this line of research shows that customer relationships with employees, companies, and their brands and products can become more akin to what social psychologists have coined *communal-relationships* (e.g., Buunk, Doosje, Jans, & Hopstaken, 1993; Clark & Mills, 1979; Williamson & Shaffer, 2001). Such relationships transcend the inherent utilitarianism associated with pure commercial relationships and, instead, are more akin to those typically observed between friends and among family members (Goodwin, 1996; Price & Arnould, 1999). Commercial relationships that take on this communal flavour positively affect customer attitudes, intentions and behaviours toward the company (e.g., preference, positive word of mouth, repurchase intentions - e.g., Price & Arnould, 1999; Rozanski, Baum, & Wolfson, 1999). Given their affective/emotional

foundations, not only do such relationships positively influence customer loyalty, they may actually lead to a stronger, more enduring kind of loyalty (see Fournier & Yao, 1997; Oliver, 1999; Sheth & Pravatihar, 1995).

To our knowledge, no attempt has been made to investigate whether these findings may be applied to help companies design Web sites to more effectively promote customer loyalty. We attempt to fill this gap by investigating whether Web sites can be designed to convey that the company's relationship with its customers goes beyond simply 'the utilitarian'. Specifically, we propose that the precepts of what have been termed 'close', 'intimate', or, more specifically, 'communal-relationships' in Social Psychology (Buunk, Doosje, Liesbeth, & Hopstaken, 1993; Clark, 1983, 1984, 1986, Clark & Mills, 1979, 1993; Mills & Clark, 1982) may be effectively communicated via Web site content and design. We define 'Site-Communality' as *the extent to which Web site content signals that a company's relationship with its customers goes beyond the formal, 'tit for tat' business dealings that are typically expected from purely commercial exchanges, and instead, more closely abide by the norms and behaviours evocative of friendships and/or family relations*. As such, the research question addressed in this thesis is: ***Does Site-Communality play a positive role in fostering Site-Loyalty?***

The main contributions of this thesis include (a) developing measures for Site-Communality and Site-Loyalty and (b) empirically evidencing that Site-Communality has a strong, positive influence on the attitudes and behavioural intentions typically associated with loyalty. For this purpose, three (3) data collections via online questionnaire were performed. Two (2) of these were used for the purposes of exploratory factor analysis while the last was reserved for confirmatory factor analysis and to test our models and hypotheses. Subjects were asked to evaluate, via online-questionnaire, one Web site from a predetermined subset of real Web sites chosen ahead of time so as to maximize variability on Site-Communality across several different e-industries.

To clean up our initial set of items of Site-Communality and Site-Loyalty, sample 1 ($n_1 = 249$) and sample 2 ($n_2 = 242$) were independently submitted to factor analysis using principal axis factoring with oblimin rotation in SPSS 12.0. A subsequent survey ($n_3 = 305$) was conducted. This data was analyzed using LISREL VIII to further refine our instruments and to test the causal models and hypotheses (i.e., the impact of Site-Communality on Site-Loyalty).

Overall, our study shows that Site-Communality has a strong, positive, direct and significant impact on the attitudes and behavioural intentions typically associated with Site-Loyalty. Importantly, our results directly contradict the suppositions of several authors who have disqualified the affective/relational aspects of the traditional, interpersonal, face-to-face commercial encounters as unimportant or irrelevant to Web site design given the self-service nature of these environments (e.g., Cox & Dale, 2001; Zeithaml, Parasuraman, & Malhotra, 2001, 2002; van Iwaarden, van der Wiele, Ball, & Millen, 2003).

This paper is structured as follows: In chapter 1, we review the evolution of the loyalty concept from being considered strictly as a behaviour to recent theoretical work which suggests that it is more richly construed as a multidimensional construct (made up of both attitudinal and behavioural components). Popular antecedents of loyalty in traditional commercial settings are then identified in chapter 2. In chapter 3, the current known universe of Web site design factors affecting Site-Loyalty are reviewed. Given that quality is a well-known antecedent of loyalty¹, we base this review around the antecedents and dimensions of Web site quality. This review clearly shows that past studies have neglected what we term as *affective/relational aspects* in Web site design. In chapter 4, we

¹ Quality has been shown to be an antecedent of loyalty in traditional commercial environments (e.g., Anderson & Sullivan, 1990; Bitner, 1990; Boulding, Karla, Staelin, & Zeithaml, 1993; de Ruyter, Wetzels, & Bloemer, 1998; Oliver 1980; Rust, Zahorik, & Keiningham, 1995; Sirdeshmukh, Singh, & Sabol, 2002; Zeithaml, Berry, & Parasuraman, 1996).

review studies which relate to communal-relationship theory in commercial contexts and report findings showing that, in traditional commercial settings, commercial relationships which become communal have a positive effect on customer loyalty. We then define and position Site-Communality as a characteristic of Web sites. In chapter 5, we present our models and hypotheses. Given that we develop measures of Site-Communality and Site-Loyalty, chapter 6 deals with the initial steps of measure development and content validation issues. We define Site-Communality and Site-Loyalty and identify their respective dimensions. The chapter concludes with the generation of an initial pool of items for these dimensions and content validation. We also provide examples of real Web sites which customers may be considered as high/low in Site-Communality. In Chapter 7, we further address measure development issues. Specifically, this includes item generation, content validation, reliability, and Exploratory Factor Analysis (EFA). In chapter 8, we report on how we refined the measures of Site-Communality and Site-Loyalty using Confirmatory Factor Analysis (CFA). Convergent and discriminant validity issues are discussed in Chapter 9 and nomological validity in chapter 10. In chapter 11, we test our main model and hypotheses (i.e., the impact of Site-Communality on Site-Loyalty). In chapter 12, a summary of results is presented followed by discussion of the contributions and limitations of the study and, finally, a conclusion.

Chapter 1 - Conceptualizations of Loyalty and its Benefits

1.1 - Overview

Creating service environments which foster customer loyalty is crucial for companies (Pritchard, Havitz & Howard, 1999). Companies with loyal customers often boast lower costs, additional revenues and increased profitability (e.g., Anderson & Sullivan, 1990; Fornell & Wernerfelt, 1987; Reichheld & Sasser, 1990; Heskett, Sasser, & Hart, 1990). In fact, research has shown that it costs more to attract new customers than it does to keep existing ones (Brown, 1998; Zemke, 2000). By increasing customer retention, organizations may significantly increase their profits (Reichheld & Sasser, 1990). The loyal customer buys more, stays away from one's competitors, and costs less because (s)he places fewer demands on employees once (s)he understands the *modus operandi* of the organization. Understanding how and why customers become loyal remains one of the most crucial issues in management today, and yet, loyalty itself remains one of the least well-understood concepts (Pritchard et al., 1999).

There has long been disagreement about what truly represents customer loyalty (i.e., Jacoby & Chestnut, 1978; Kunöe, 1993; Dick & Basu, 1994; Rundle-Thiele, in press). In general, conceptualizations of loyalty can be broadly categorized as follows:

- 1) Loyalty as a *behaviour* or a *behaviour expressed over time* (e.g., Ehrenberg, 2000; Neal, 1999). Under this perspective, loyalty *is* repeat purchasing. Customers are often categorized (by companies) as either loyal or non-loyal given some arbitrary cut-off level. For instance, if the customer continues to buy or consume a product / service or continues to patronize a store for some period of time, the customer is considered as loyal.

- 2) Loyalty is a *combination of both attitude and behaviour* (e.g., Dick & Basu, 1994). According to this perspective, loyalty is a composite construct made up of both preference and repeat purchases / patronage. Loyalty exists only if preference is translated into action.
- 3) Loyalty as a *propensity*. Customers are seen as having a propensity to become loyal which is affected by personality and situational factors (e.g., Martin & Goodell, 1991; Dubois & Laurent, 1999).
- 4) Loyalty is a *psychological state*. Loyalty is seen as purely attitudinal akin to emotional attachment. Not only is it representative of a strong and positive attitudinal bias, it is something that is felt. It is synonymous with a deeply held commitment to continue one's association with a store or a brand (Sheth & Pravatiyar, 1995). Here, actual repeat purchasing is considered more as the result of loyalty rather than its surrogate.
- 5) Loyalty as *several states*. According to Oliver (1999), loyalty is complex. It is not one state but may include many. This is a conceptualization based on attitudinal strength / persistence. Oliver argues that less enduring states of loyalty are cognitive in nature and based primarily on a demonstration of good performance by the company, product, or brand. At more enduring states of loyalty, the concept becomes increasingly founded on affect. Stronger forms of loyalty are believed to occur when the customer experiences a sense of emotional bonding with the company, product or brand. As such, loyalty can become a *relational phenomenon* (e.g., with a brand, a company, its employees) where social / emotional forces factor into the customer's decision to stay or repurchase (Fournier & Yao, 1997).

Different conceptualizations of loyalty have had serious implications on identifying the antecedents of loyalty, on establishing whether particular

customers are loyal or not, and on adopting strategies that promote it. In fact, because of the equivocal use of the term 'loyalty', a multitude of antecedents have emerged in the literature accompanied by loyalty-building prescriptions that, at times, seem to refute one another. For instance, both companies and researchers who equate loyalty with repurchasing behaviour often aim at identifying factors that increase customers' physical and psychological switching costs. Building loyalty becomes synonymous with finding ways of keeping customers behaviourally captive. Conversely, other researchers have argued that, in order for behaviour to be considered as loyal, it must be founded on some attitudinal bias (e.g., Dick & Basu, 1994). Typically, although this line of research sees loyalty as behavioural, it seeks to identify factors which induce preference in customers. Still others have suggested that loyalty is a concept that captures the customer's psychological state, putting even more weight on the attitudinal component (e.g., Huang & Yu, 1999). Here, loyalty is seen as a decision or a commitment rather than behaviour (e.g., Divett, Crittenden & Henderson, 2003). Thus, loyalty is something that is *felt* by the customer.

Authors who see loyalty as rooted in attitudinal bias often try to identify the means by which to increase customers' perceived attitudinal discrepancy (i.e., liking) relative to one's competitors. Researchers who have tried to identify what factors may sway customer attitudes positively (and, thus, foster loyalty) have established the importance of providing good *quality of service* and ensuring that customers experience *satisfaction* following each and every service encounter (e.g., Boulding, Karla, Staelin & Zeithaml, 1993; Parasuraman, Berry, & Zeithaml, 1991).

More recently, some authors have argued that there may be different types (or kinds) of loyalty that emerge depending on the industry and on what antecedent factors shape the customer's attitudinal bias (see Oliver, 1999). Good performance (e.g., the company's ability to deliver excellent quality of service at each service encounter), is but one of these factors. Focusing on delivering quality

of service may, indeed, be enough to trigger loyalty by producing a positive attitude in the customer and, thus, may be sufficient to keep him / her coming back in the future (particularly when direct competitors provide their services below what the customer has come to expect). However, according to this conceptualization (i.e., which sees loyalty as being polymorph made up of several states), loyalty founded solely on performance may represent loyalty in its weakest state (Oliver, 1999). Instead, more enduring and commercially desirable forms of loyalty may be embedded in the social and relational fabric that surrounds the act of consumption (e.g., what the consumption of the product 'means' to the customer, whether the customer has established commercial friendships with the company's salespeople - see Fournier, 1998; Oliver, 1999). In fact, recent work done by proponents of relationship marketing² suggests that relational forces may create very powerful and resilient forms of customer loyalty. Among these, we will explore the bonds that customers forge with front-line employees. Unlike loyalty founded simply on good performance, research suggests that loyalty forged by relational forces is often more difficult to dislodge by competition because 'switching' often entails losing out on more than simply the product or service the company provides (Oliver, 1999). Increasingly, several authors espouse this relational perspective when describing loyalty (e.g., Fournier & Yao, 1997; Fournier, 1998) and a growing number of studies have begun exploring more 'relational antecedents' to loyalty such as the *trust* which may develop between customers and company representatives (e.g., MacIntosh & Lockshin, 1997).

² 'Relationship marketing' stems from a recent paradigm shift in the field of marketing (Grönroos, 1991; 1994; Gummesson, 1987; Kotler, 1991; Webster, 1992). Under the traditional marketing philosophy, which dominated the academic literature during the 1980s, emphasis was primarily put on effectively managing individual service transactions (i.e., providing high service performance at each encounter). Service encounters were seen as discreet occurrences and as something to be maximized by manipulating various aspects of the 'marketing mix'. Instead, relationship marketing researchers suggest that cumulative positive experiences may also induce relational phenomena (such as interpersonal bonding between customers and service employees) which can positively affect future patronage decisions.

In this chapter, we first review the literature demonstrating why achieving customer loyalty is an important goal for organizations. In other words, we look at its benefits. Following this, we explore the different conceptualizations of loyalty. In the subsequent chapter, a review of literature on the antecedents of loyalty is presented. Of particular interest, to us, is the contribution of employee contact to building loyalty, given that using IT-mediated commercial environments (e.g., Web sites) usually brings about a significant reduction in interpersonal contact.

1.2 - Organizational Benefits Related to Loyalty

The reason why loyalty has commanded so much attention among academics and practitioners is that it is said to provide organizations with several important benefits (Som & Mehta, 2002; Sum, Lee, Hays, & Hill, 2002; Zeithaml, Berry, & Parasuraman, 1996). Research shows that customers express their loyalty to a company in several ways. These include: (a) post-purchase consumer communications (i.e., positive word of mouth - Chiu, Hsieh, Li, & Lee, in press; Reichheld, 1996), (b) decreased search motivation (Holbrook, 1978), (c) resistance to counter-persuasion (Delgado-Ballester & Munuera-Aleman, 2001; Som & Mehta, 2002; Wood, 1982), (d) increased frequency of purchase (Reichheld & Sasser, 1990), and (e) for companies with loyal customers, it translates into having more time to respond to competitors' actions (Aaker, 1991).

Generally, some of the most important benefits of customer loyalty are lower costs and additional revenues. In fact, customer retention has been linked to better organizational performance (e.g., Anderson & Sullivan, 1990; Fornell & Wernerfelt, 1987; Reichheld & Sasser, 1990). For instance, research has found that customer loyalty is directly related to firm profitability (Heskett, Sasser, & Hart, 1990). Loyalty brings about significant organizational savings because, among other reasons, (a) retaining customers costs less than attracting new ones, (b) loyalty reduces transaction costs (i.e., time and cost of negotiation), and (c) increases the cross-selling of products and services (Griffin, 1996). Also, customer loyalty increases sales. Loyal customers buy more, stay away from

competitors, and that the moneys saved by dealing with loyal customers can then be reinvested into improving products and services. Some suggest that this cost saving may be due to 'experience curve' effects which allows the organization to serve their long-term customers more efficiently (Reichheld & Sasser, 1990). Actually, estimates suggest that it may be five times more costly to attract customers than it is to retain them. By increasing retention by five percent, profits may go up by, up to, 100% (Reichheld & Sasser, 1990). This is because it actually becomes easier for the company to serve its regular customers. Because they understand how the organization operates and are familiar with existing processes, they place less demands on employees (Chow & Holden, 1997). Moreover, some authors suggest that the most important benefits of loyalty may not be purely financial, but rather, include the customer's willingness to voice dissatisfaction and give the service provider the time necessary to respond and improve on its shortcomings instead of immediately exiting the relationship. Also, positive word-of-mouth may be a particularly powerful factor linked to loyalty³. Because individuals are believed to associate themselves with others who exhibit the same tastes and consumption behaviours, advocacy from loyal customers may attract other consumers who themselves have a strong propensity to become loyal also (Czepiel & Gilmore, 1987).

Although the literature clearly demonstrates that there are important benefits associated with loyalty, what is unsure is whether companies moving toward e-commerce can successfully foster loyalty in these highly impersonal environments, and thus, whether such benefits should be expected. We begin with exploring what is meant by loyalty.

³ In a multi-industry study, Zeithaml, Berry, and Parasuraman (1996) tested a 13-item array of behavioral intentions and found that 'intentions to recommend' was strongly correlated with 'actual repurchases'.

1.3 - What is Loyalty?

1.3.1 - Loyalty as a Behaviour

According to the behavioural perspective, customers who repeatedly buy the same product / brand or from the same store / service provider over some extended period of time, are 'tagged' as loyal customers⁴. In fact, many authors adopting this behavioural conceptualization of loyalty often describe loyalty in terms of observable or measurable behaviours rather than provide a true definition of the concept. For instance, loyalty has been defined as a customer's tendency to continue to exhibit similar behaviours over time in similar situations (Reynolds, Darden, & Martin, 1974). Others describe loyalty as a consistent, repeat purchasing behaviour (e.g., Segal, 1989), a strong intention to revisit and recommend to others (Gallarza & Saura, in press), resistance to switching, higher propensity to recommend to others, and a willingness to continue using (Chiu, Hsieh, Li, & Lee, in press). This behavioural conceptualization of loyalty has been extended to e-commerce as well. Smith (2000), for instance, refers to factors such as repeat Web site visits (without actual purchasing) and 'site stickiness' (i.e., the extent of time the customer spends at the Web site).

The behavioural perspective is often the one adopted in industry. An undeniable reason for the popularity of conceptualizing loyalty as a behaviour (e.g., categorizing the customer as loyal depending on some frequency or proportion of repurchases) is that evaluating the effectiveness of organizational tactics and strategies can be based on observable, tangible outcomes. However, considering loyalty as a high repeat buying has often led companies to pursue loyalty-building strategies to attract and retain customers using price incentives or promotions or

⁴ Examples of authors who have adopted a behavioural perspective of loyalty include Newman and Werbel (1973) who suggest that loyalty can be measured as repurchase behaviour and Tellis (1988) who equates loyalty with repeat purchase frequency. Similarly, Massey, Montgomery, and Morrison (1970) see loyalty as a probability of purchase while Cunningham (1966) views loyalty as measurable by the proportion of a customer's purchases.

by building switching costs in order to keep customers captive. For example, it has been suggested that the most effective way in developing customer loyalty is by making it difficult and expensive for customers to switch by introducing high physical switching costs (Jackson, 1985). *Loyalty programs* often fall into this category (Sharp & Sharp, 1997). These programs 'reward' repeat purchase behaviour through the giving of points, prizes, discounts, coupons, or other incentives (Schiffman & Kanuk, 2004). As such, according to the behavioural perspective, building loyalty is somewhat synonymous with finding ways of binding the customer to the organization. Thus, customers do not switch because, if they do, they lose out on these accrued benefits, and because they do not switch, companies classify them as loyal.

Several authors have been critical of this behavioural approach to loyalty (i.e., interpreting whether a customer is loyal or not solely based on repeat buying). One such criticism pertains to the accompanying practice of setting arbitrary cut-off margins to assess whether a customer can be classified as loyal or not⁵. In fact, using 'cut-offs' (e.g., a certain proportion of purchases with the company compared to that accorded to competitors) suggests that customer loyalty either exists or that it does not (i.e., loyalty is seen like a switch turned either 'on' or 'off') (Fournier & Yao 1997).

Recognizing the limitations associated with classifying customers as loyal or non-loyal based solely on observable behaviour, several authors have called for more correct conceptualization of loyalty which could confirm whether attitudinal processes within the customer's psyche actually drive what appear to be loyal behaviours (e.g., Day, 1969; Lutz & Winn, 1974). In fact, because behavioural conceptualizations of loyalty do not examine 'why' customers repeatedly buy, several authors contend that such conceptualizations of loyalty tend to overestimate loyalty by not taking attitude into account. In effect, simply looking

⁵ Segal (1989), for instance, has suggested that a customer is loyal if more than about 90% of his / her purchases are to a single supplier.

at customer behaviours cannot successfully differentiate whether a customer that has remained with the same company over several years has done so because (a) he / she truly wants to, (b) whether the company has locked him in, (c) no feasible alternative exists (e.g., no competitor has established a presence close to the customer's home or place of work), or alternatively, because (d) the customer perceives little, if no, difference between the company and its competitors and, therefore, does not recognize any advantages in switching, a condition known as *customer indifference* or *customer inertia* (Assael, 1992). Simply put, those advocating that attitude must be taken into consideration argue that the behavioural perspective doesn't recognize the *motivation* behind the behaviour. This suggests that the behavioural consequences of both customer indifference and loyalty may be confounded when considering such behavioural proxies as repeat purchases, frequency of purchase, and proportion of purchases. In fact, although loyalty and customer indifference (a.k.a., inertia) can lead to repeat buying, the motivation and marketing implications are very different (Huang & Yu, 1999). As such, loyalty is not simply a behaviour but a complex phenomenon and purely behavioural conceptualizations of the loyalty construct have failed to capture its richness and depth (Too, Souchon, & Thirkell, 2001).

1.3.2 - Loyalty as a Composite of Both Attitude and Behaviour

According to several authors, in order for a customer to be considered as loyal, his / her behaviour must be founded on a positive and strong internal disposition (i.e., attitude) toward the particular brand or store (e.g., Jacoby & Chestnut, 1978). Many authors suggest that, although loyalty remains a behaviour, it must be accompanied by an attitudinal bias about what to buy and from what company (e.g., Griffin, 1996). As such, loyalty is something which is expressed over time by the customer who is a decision-maker, evaluating various alternatives and then choosing among these (Jacoby & Chestnut, 1978). For purchasing practices to be considered as loyal, the behaviour must be verified as being intentional (Jarvis & Wilcox, 1977). As such, whereas loyalty is a behaviour influenced (among other things) by economic rational judgment, customer inertia is a habitual act of purchasing devoid of any preference or perceived advantage over similar products (Wernerfelt, 1991).

Building on work done by researchers such as Jacoby and Chestnut (1978), Day (1969), Engel, Kollat, and Blackwell (1982), Dick and Basu (1994) conceptualized loyalty as a composite construct made up of both a positive relative attitude (i.e., preference) and repeat patronage behaviour (see also Gremler, 1995; Baldinger & Robinson, 1996; Karatepe, in press; Yoon & Uysal, 2005). This perspective has been extended to e-commerce as well (see Anderson & Srinivasan, 2003; Thorbjornsen & Supphellen, 2004; Srinivasan, Anderson, & Ponnnavolu, 2002; Tomiuk & Pinsonneault, 2001).

Specifically, Dick and Basu (1994) define loyalty as the strength of the relationship between the customer's attitude towards the target relative to available alternatives and repeat patronage behaviour⁶ (see Figure 1).

⁶ This conceptualization is founded on a well-established line of research which has demonstrated that attitudes are crucial in determining purchasing behavior (e.g., Axelrod, 1968; Shimp & Kavas, 1984; Fishbein & Ajzen, 1975).

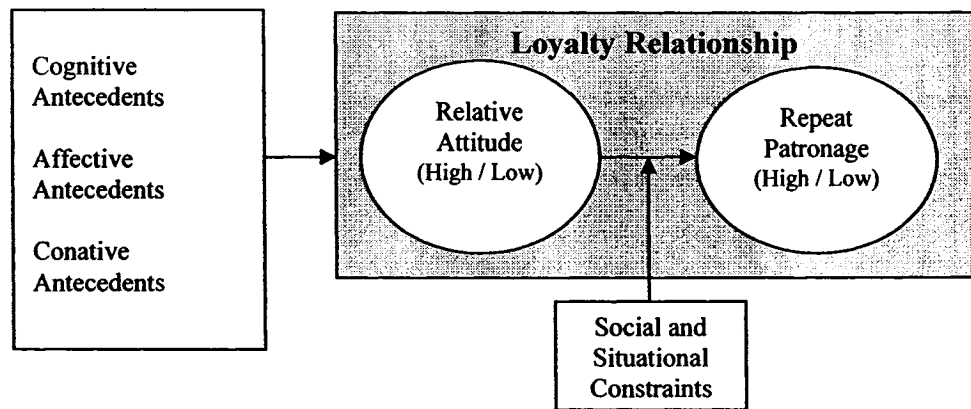


Figure 1. Dick and Basu's (1994) Loyalty Framework.

Dick and Basu's (1994) conceptualization of loyalty as the strength of the relationship between relative attitude and repeat patronage behaviour led the authors to suggest four possible loyalty conditions by conceding that both relative attitude and repeat patronage could each be either 'high' or 'low'. Accordingly, 'true loyalty' is said to ensue only when high relative attitude (i.e., a preference) is accompanied by high repeat patronage. 'Spurious loyalty' emerges when the customer perceives little difference between alternatives (i.e., relative attitude remains low) but purchases one brand more consistently than others - a condition previously described as 'customer inertia'. For instance, a customer may have patronized a particular bank for years but not because the customer finds that this bank offers superior service or value, instead, it may be that the customer perceives absolutely no differences between the bank and its competitors. Although apparently loyal, such a customer may readily switch, for instance, if a competitor offers a better interest rate. Conversely, 'latent loyalty' is categorized by high relative attitude and low repeat patronage. Such a condition may occur when situational and social factors (i.e., social norms) intervene strongly and counter the effects of high relative attitude on behaviour. For example, a customer may strongly prefer a particular restaurant but may eat at the restaurant very infrequently due to number of factors including inconvenient location, high prices,

etc. Finally, under conditions of 'no loyalty' both relative attitude and repeat purchase behaviour are low (see Figure 2).

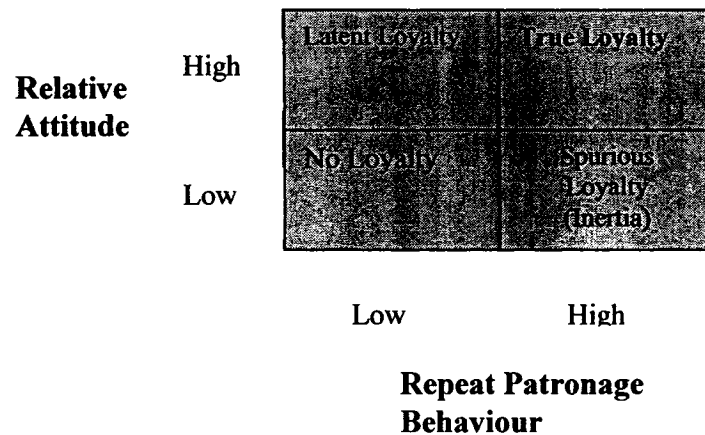


Figure 2. Dick and Basu's (1994) Loyalty Conditions.

The model denotes relative attitude as mediating the effects of several antecedents on repurchase behaviour (see Figure 1). Accordingly, the 'loyalty relationship' is driven by cognitive, affective, and conative factors. Cognitive factors represent the customer's 'thinking states' and are synonymous to mental appraisals⁷. Although Dick and Basu (1994) discuss cognitive antecedents from a micro-perspective (e.g., ease with which the attitude can be retrieved from memory, level of certainty associated with the attitude, how central the attitude is to the customer), from a macro perspective, popular conceptualizations of quality of service consider it as being cognitively assessed (Parasuraman, Zeithaml, & Berry, 1994). Customers' evaluations of quality of service are believed to stem from a mental comparison; the gap between what the customer expects to receive prior to the service experience and the level of service quality actually experienced. Good

⁷ Other authors have also suggested that customers' cognitive evaluations play an important role in the formation of loyalty. Griffin (1996), although regarding loyalty as a behaviour, recognizes its cognitive foundations by suggesting that loyalty is a cycle including the initial action, the evaluation of the action (a cognitive appraisal), and subsequent repetition of the action. Similarly, Neal (1999) suggests that loyalty is the result of a cognitive assessment based on comparative value assessment.

quality appraisals raise the customer's relative attitude toward the service provider and, consequently, impact positively on loyalty (Zeithaml, Berry, & Parasuraman, 1996).

Affective antecedents of loyalty are 'feeling states'. They include such aspects as primary affect, emotion and mood⁸. A well-established affective concept in marketing literature is 'satisfaction' (Oliver, 1980). This taps into whether the customer *feels* satisfied or not after experiencing a service encounter. Although related, affect and cognition are conceptually very different. Simply put, attitudes founded on cognitions can be considered as 'cold' because they are based on a mental, calculative process while attitudes founded on affect can be thought of as 'warm' because they are based on more holistic sensory experiences.

Finally, conative factors are related to customers' behavioural dispositions and to the consequences associated with discontinuance or those associated with switching⁹ (Dick & Basu, 1994). Conative antecedents include prior customer investments (i.e., sunk costs associated with paid memberships, such things as frequent flyer miles, and time invested in learning how to use the company's software) and switching costs (e.g., the potential investment in time and effort needed to familiarize oneself with a competitor's way of doing business). These investments in time and effort (and other irrecoverable resources) create psychological ties motivating individuals to maintain their commercial relationships (Blau, 1964).

While in the Dick and Basu (1994) model relative attitude is modelled as strongly influencing repeat purchases, the model recognizes that non-attitudinal pressures

⁸ Primary affect represents a sensory response which is independent of cognition, such as taste. Emotions are very intense states of arousal (e.g., joy) whereas moods are considered to be less intense but longer lasting than emotions (Dick & Basu, 1994).

⁹ Conation refers to the personal, intentional, deliberate, goal-oriented component of motivation. It is the proactive (rather than reactive) aspect of behavior (Baumeister, Bratslavsky, Muraven & Tice, 1998).

may help explain attitude / behaviour variance. In other words, attitude is not the only factor driving behaviour. Consequently, high relative attitude may not necessarily lead to high repeat patronage. Instead, social norms and situational factors moderate the strength of the attitude / behaviour relationship. For example, social pressures (e.g., parental disapproval or friends) can be highly influential in predicting the purchases of teenagers. Similarly, situational pressures such as store proximity can affect what stores customers frequent regardless of the customer's attitude. For example, under traditional situations of financial service delivery, the location of bank branches has been the most important factor in distributing their services effectively (Riggins, 1998). In fact, proximity to home / work and operating hours have been identified as being central reasons dictating what bank customers choose (Rust & Zahorik, 1993). As such, repatronage behaviour is not always dictated by relative attitude alone.

1.3.3 - Loyalty as a Propensity

In this category, we include research which has conceptualized loyalty as a propensity or tendency. One of these propensity perspective links loyalty to personality rather than simply as the consequence of company actions and customers' product and service evaluations (e.g., Martin, 1998; Martin & Goodell, 1991). It assumes that certain consumers may be more apt to loyalty than others dependent on such personality factors as risk aversion. Another dispositional perspective on loyalty is reflected in research on situational loyalty. However, contrary to the research which sees loyalty as a personality trait, situational loyalty research advocates that loyalty is the result of the situations consumers face over time (Dubé & Maute, 1998; Farley, 1964). Under situations similar to those previously encountered, consumers tend to exhibit similar behaviours and loyalty patterns (Reynolds et al., 1974). Dubois and Laurent (1999) define situational loyalty as the propensity to stay loyal in various purchase and consumption situations. According to these propensity perspectives (i.e., personality and situational), positive relative attitudes and behaviours are considered as consequences rather than components of loyalty per se.

1.3.4 - Loyalty as a Psychological State

Although the Dick and Basu (1994) model considers loyalty as the strength of the relationship between relative attitudes and repeat patronage, it preserves, nevertheless, a strong behavioural flavour. First, it maintains that high repeat patronage can be driven by high relative attitudes (i.e., true loyal *behaviours*) as well as by social norms and situational factors (i.e., seemingly loyal *behaviours*). It is only, however, when relative attitudes are high that companies should consider customer purchasing behaviours as indicative of loyalty. Second, the authors' conceptualization implies that loyalty can indeed exist when relative attitudes are high while the customer's attitude toward the actual target may be weak but positive. This is a conceivable (real life) situation if the customer doesn't particularly like the product (s)he purchases from the company but perceives competitors' offerings very unenthusiastically. To call such a condition loyalty may seem, to many, somewhat counterintuitive and, yet, under Dick and Basu's (1994) model, it would be considered as such.

In fact, several authors apparently downplay the behavioural aspect of loyalty completely (e.g., Assael, 1992; Keller, 1993) and suggest that loyalty is rather a form of psychological resolution. In other words, these authors portray loyalty as purely attitudinal. Instead of considering loyalty based on the level of consistency between attitude and behaviour, many see loyalty as a psychological state of mind. This, however, is more than simply 'relative liking' (i.e., preference). Some suggest that loyalty is actually the customer's *conscious decision* to continue purchasing the same brand reflecting a customer's intrinsic desire to stay with one or a few brands (Huang & Yu, 1999). Others speak of a *sense of loyalty* developing in customers (Pritchard et al., 1999). Here, loyalty is seen as a form of 'emotional attachment' (Hallberg, 2004) that the customer feels toward a product, a company, a service provider, etc. Similarly, Butcher, Sparks and O'Callaghan (2001) define loyalty as a "psychological attachment of a customer to a particular service provider" (p. 313). A closely related concept which is often used

synonymously with loyalty is commitment. Zins (2001) actually describes commitment as attitudinal strength. Here, regular and frequent purchases are merely the behavioural manifestations of loyalty.

Recognizing the ongoing debate of whether loyalty should be construed as a behaviour, more like an attitude, or both, an increasing number of researchers have begun acknowledging in their work whether they are studying 'attitudinal loyalty' or 'behavioural loyalty' (e.g., Bennett, Härtel, & McColl-Kennedy, 2005; Bowen & Chen, 2001; Chaudhuri & Holbrook, 2001; De Wulf et al., 2001; Rundle-Thiele, in press). For instance, De Wulf et al. (2001) investigate the effects of relational tactics on behavioural loyalty. They define it as "a composite measure based on a consumer's purchasing frequency and amount spent at a retailer compared with the amount spent at other retailers from which the consumer buys" (p. 39).

1.3.5 - Different States and Strengths of Loyalty: Performance-Based versus Emotion/Affect-Based Loyalty

Although the Dick and Basu (1994) model appears superior to purely behavioural conceptualizations of loyalty, it may not reconcile certain inconsistencies which have appeared in the literature. One of these regards the effects of pricing on loyalty. Should one consider that high relative attitude and repeat patronage triggered by lower pricing as indicative of loyalty? Put differently, should a customer who has, for several years, repeatedly purchased from a particular company due to low prices (which the customer finds attractive), but would readily switch if a competitor would offer a more attractive price incentive, even be classified as loyal? Several authors seem to suggest that loyalty can be induced by pricing (e.g., Bhattacharya, 1997). And yet, the supposition that price impacts strongly on loyalty is paradoxical with the work of others who argue that lower price sensitivity (Krishnamurthi & Raj, 1991) is implicit of loyalty. In fact, some authors argue that price promotions only attract non-loyal customers (Day, 1969; Reichheld, 1993). However, in accordance with Dick and Basu's (1994) model, a

highly price-sensitive consumer whose patronage has been 'bought' may be considered as loyal because the effect of pricing on relative attitude may be extremely powerful. In other words, highly price sensitive consumers may attribute considerably more weight to pricing, and therefore, lower prices may strongly influence the development of a powerful attitudinal bias.

Oliver's (1999) recent analysis of brand loyalty may help redress these inconsistencies. The author suggests that, instead of considering loyalty as one unequivocal concept, it is best understood as including several states. Oliver suggests that customers may migrate through these different forms of loyalty varying in strength.

In its least enduring form (i.e., in which customers remain susceptible to competitors' actions), loyalty is based solely on relative performance which can include such factors as better pricing and reliable service delivery (e.g., the consumer may not particularly like the product more than others, but he might like its price). This may be sufficient to trigger a positive (but possibly weak) attitudinal bias and repeat purchasing may ensue. Oliver (1999) refers to this performance-based loyalty as 'cognitive loyalty'. In this state of loyalty, relative attitude (i.e., preference) may actually be very high (e.g., price-sensitive customers may strongly prefer a company offering lower prices). As such, even customers which are cognitively loyal may fall into Dick and Basu's (1994) conceptualization of 'true loyalty'.

Instead, what distinguishes these customers is that their positive attitude is generated directly from a cost / benefit analysis of brand attributes rather than an affective preference founded in positive emotion for the actual brand (store, company, etc.). In the context of services, cognitive loyalty can typically be found in such industries as local telephone service providers. All else being equal, unless the service provider deviates from performance expectations or provides the service at a price which appeals to the customer, (s)he may have no real reason to

switch. According to Oliver (1999), cognitive loyalty represents loyalty's most shallow state; although the customer's behaviour may be founded on an attitudinal bias (e.g., a preference develops because the service provider offers a 5% discount), this relative attitude may not be very enduring or stable, but rather, may be quite easily dislodged by competitors. For example, if the customer buys a particular product because it is more convenient or lower priced, competitors may target these attributes by providing even more convenience at an even better price, thus, inducing the customer to switch.

At higher states of loyalty, attitude begins to develop through cumulative 'satisfying usage occasions' and liking extends *toward the actual brand* (rather than towards such things as price, convenience, etc.). Here, loyalty begins to take on affective/emotional overtones. Such things as pleasure derived from consuming the brand (or experiencing the service) begin to factor into the customer's attitude. In sum, Oliver's (1999) analysis suggests that weak forms (i.e., states) of customer loyalty are likely to be cognitively driven and are subject to counterargument. Conversely, loyalty that is rooted in affect is more difficult to dislodge.

In sum, Oliver (1999) argues that, in its more powerful and durable form, loyalty is anchored in higher affective forces created by social and emotional factors. Oliver's analysis of 'brand loyalty' clearly suggests that loyalty may actually develop into a *relational phenomenon*. This perspective has also been adopted by several other authors as well (e.g., Chow & Holden, 1997; Sheth & Parvatiyar, 1995; Macintosh & Lockshin, 1997; Fournier & Yao, 1997). Buttle (1996), for instance, speaks of 'bonds' developing between customers and companies and their employees which may act strongly and positively on customer retention. Hennig-Thurau, Gwinner and Gremler's (2002) measure of loyalty included the item "I have a very strong relationship with this service provider" (p. 244). Other authors describe loyalty in terms of relational qualifiers using language more often found in studies of interpersonal relationships (e.g., marriage). Loyalty has

been described as synonymous to a relationship built on 'trust' (Bowen and Shoemaker, 1998), a form of allegiance - a pledge of relational continuity (Dubé & Maute, 1998; see also Fournier, 1998). Others refer to loyalty as a *commitment* to continue one's relationship with a product or service regardless of situational influences and the marketing efforts of competitors (Divett, Crittenden & Henderson, 2003; Morgan & Hunt, 1994; Oliver, 1997, 1999; Sheth & Pravatiyar, 1995; Zins, 2001). Oliver (1999) suggests that the creation of a community-like structure around the consumption of the product or service can often shift the customer from a state where consumption is based on mere liking / enjoyment of the product or service to one where the consumption of the product or service is embedded in social forces and may even become a factor in one's self-identity¹⁰. This has also been echoed by researchers in e-commerce who have advocated the use of community-oriented service strategies in building customer loyalty (e.g., Chiou, 2004).

1.4 - Summary

Understanding what is loyalty continues to be a dominant issue for researchers. To a great degree, it remains a complex and largely misunderstood phenomenon (Pritchard, Havitz, & Howard, 1999). Many continue to conceptualize it simply as a behaviour (e.g., Gallarza & Saura, in press). Several critics have condemned purely behavioural definitions as inappropriate because customer indifference (i.e., inertia) may be captured and misinterpreted as loyalty. Authors such as Dick and Basu (1994) have, instead, suggested that loyalty be construed as a composite of

¹⁰ According to Oliver's (1999) analysis of brand loyalty, there may exist one absolute state which he calls '*ultimate loyalty*'. Customers experiencing ultimate loyalty become resolved, consciously shun away from other brands (or stores) and actively fight off competitor pressures and actively overcome situational and social constraints (i.e., customers do not care what others think). For these customers, there are no substitutes. In fact, Oliver suggests that this is a 'love-like' state. An example of this type of loyalty can be found with some owners of Harley Davidson motorcycles who form local chapters and meet on a regular basis. This type of loyalty is often accompanied by a strong 'social support' mechanism (i.e., the development of relational forces around the consumption of a product or service) and the public display of association to the object of one's devotion. However, Oliver admits that this ultimate type of loyalty cannot feasibly be achieved by all industries given the nature of the products or services they sell.

both positive relative attitude and repatronage behaviour. Others, such as Oliver (1999) argue that loyalty is not simply one unequivocal state, but rather, may be better understood as encapsulating several. Very weak states of loyalty are cognitively driven whereas more resilient forms of loyalty are rooted in feelings of emotional attachment (Hallberg, 2004) to the company, product, brand, etc. This sense of attachment is much more difficult to dislodge by competitors. The stronger the affective/emotional attachment to the product or service, the more the customer willingly shuns away from alternatives. In the following chapter, we review the literature on the antecedents of loyalty.

Chapter 2 - Antecedents of Loyalty

2.1 - Overview

In this chapter, we begin with a review of literature of several factors which have been empirically shown to promote or deter customers from becoming loyal in traditional service/retail environments. When possible, conceptual and causal links are drawn between these antecedent conditions.

2.2 - Service Quality

An important aspect that sets services apart from manufactured products is that it is much more difficult for customers to discriminate (i.e., evaluate and choose) between services than it is between products. This is primarily because services are intangible and non-standardized (Zeithaml & Bitner, 1996). Nevertheless, researchers believe that the evaluation of services occurs across two general dimensions (Grönroos, 1982, 1983, 1984, 1990; Czepiel, Solomon, Surprenant, & Gutman, 1985). Customers experience and evaluate services from both (a) an outcome or '*technical*' dimension and (b) a process-related or '*functional*' dimension. The technical dimension captures the output of the encounter and this represents '*what*' the customer actually receives. The functional dimension relates to the process surrounding the attainment of this outcome or, stated more simply, '*how*' the service is actually delivered¹¹.

SERVQUAL is a measure developed in an attempt to capture this complexity in traditional service settings (Parasuraman, Zeithaml, & Berry, 1988). It has also been applied to the quality assessment of Web sites as well (e.g., Song & Zinkhan, 2003; van Iwaarden, van der Wiele, Ball, & Millen, 2003; van Iwaarden & van

¹¹ As we shall discuss later, it is particularly on this functional dimension that e-banking can affect customer evaluations by substituting the employee as the main channel of service delivery.

der Wiele, 2003). It suggests that customers evaluate the quality of their service experience across the following conceptual dimensions^{12, 13}:

- (a) *Tangibles*: The appearance of physical facilities, equipment, personnel, and communication materials;
- (b) *Reliability*: The ability to perform the promised service dependably and accurately;
- (c) *Responsiveness*: The willingness to help customers and to provide prompt service;
- (d) *Assurance*: The knowledge and courtesy of employees and their ability to convey trust and confidence;
- (e) *Empathy*: The provision of caring individualized attention to customers.

Empirical studies show that quality does play an important part in customer loyalty. For instance, research shows that service quality positively and strongly influences customers' repurchase intentions (Boulding, Karla, Staelin, & Zeithaml,

¹² SERVQUAL is assessed as a function of the gap between (a) consumers' prior expectations of what should happen during the service encounter and (b) the actual service that was provided across these dimensions (Zeithaml, Berry, & Parasuranam, 1996).

¹³ There have been lingering debates concerning whether SERVQUAL adequately captures customers' service quality perceptions (e.g., Cronin & Taylor, 1992; Teas, 1994). Primarily, it pertains to whether or not service quality should be measured using disconfirmation or whether a simple perceptual measure of performance can suffice (Cronin & Taylor, 1992). In fact, the SERVPERF model (Cronin & Taylor, 1992) advocates a performance-based paradigm where quality is directly influenced *only* by perceptions of performance rather than both expectations and perceptions. Others have criticized the additive and compensatory nature of the measure suggesting that a deficiency on one or more dimensions may not counteracted by equivalent surpluses on other dimensions (Llosa, Chandon, & Orsingher, 1998). Some authors have even questioned the number and generalizability of the dimensions across different industries (e.g., Babakus & Boiler, 1992). Also, SERVQUAL may be problematic because it does not take into account the subjective importance a particular customer places on the various dimensions and have recommended the addition of weights to these dimensions (e.g., McDougall & Levesque, 1992). Nevertheless, allowing customers to assign importance to (i.e., weigh) each particular dimension does not mitigate the potential limitation of using a *discreet* and *predetermined* number of dimensions to assess quality, and this, even across one specific industry. Because quality dimensions are often imposed on respondents through surveys rather than inferred from their actual individual perceptions, to a large degree, customer heterogeneity is downplayed.

1993), the willingness to recommend the company to others (Parasuraman, Berry, & Zeithaml, 1991; Parasuraman, Zeithaml, & Berry, 1988) and the customer's intention to revisit and recommend to others (Gallarza & Saura, in press). The dimension of *reliability* has consistently emerged as the most important in a variety of service settings (see Parasuraman, Berry, & Zeithaml, 1990).

2.3 - Customer Satisfaction

Service quality is conceptually related to customer satisfaction, but the two are believed to be distinct constructs (e.g., Spreng & Mackoy, 1996). Satisfaction represents the *positive emotional response* that results from the customer's evaluation of a product or service (Woodruff, 1997). Whereas service quality can often be *inferred* from factors that may signal quality to the consumer (e.g., price, word-of-mouth), satisfaction is a *post-consumption* affective response and, therefore, comes from experiencing the service in person.

Both service quality and satisfaction are believed to arise from expectation disconfirmation (see Oliver, 1977, 1980). Disconfirmation occurs when performance exceeds, meets, or falls short of the customer's expectations. Negative disconfirmation occurs when performance does not meet expectations. Alternatively, when actual performance is superior to expected performance, expectations are said to be positively disconfirmed. Moderate feelings of satisfaction are believed to result when expectations are met while a higher level of satisfaction occurs when expectations are positively disconfirmed (Oliver & Swan, 1989). When satisfaction gauges the customer's affective / emotional response to any single or specific encounter – be it with the store, the salesperson, or the organization, satisfaction is often termed as *transaction* or *encounter* satisfaction (e.g., de Ruyter & Wetzels, 2000). It is “an immediate response to consumption” (Oliver, 1997, p. 188) and may be best considered as an emotion. *Overall* satisfaction, on the other hand, is cumulative and longer lasting. It is based on all of the customer's experiences with the service provider (Duffy & Ketchand, 1998; Anderson, Fornell, & Lehmann, 1994).

In marketing, the debate on whether satisfaction leads to perceived service quality or vice versa is still ongoing. However, many researchers now accept the idea that cognitive assessment such as SERVQUAL should be represented as antecedents to affective variables such as satisfaction (e.g., Anderson & Fornell, 1994; Boulding, Kalra, Staelin, & Zeithaml, 1993; Karson & Fisher, 2005; Woodside, Frey, & Daly, 1989; Zeithaml, Berry, & Parasuraman, 1991). In fact, empirical work seems to indicate that service quality is, indeed, an antecedent of overall satisfaction (e.g., Gallarza & Saura, in press; Parasuraman, Zeithaml, & Berry, 1994; Rust & Oliver 1994)¹⁴.

Satisfaction is said to influence post-exposure / post-usage attitude which then influences repurchase intentions (Oliver, 1980). Similarly, Dick and Basu (1994) suggest that satisfaction impacts on loyalty by affecting relative attitude. More precisely, (dis)satisfaction mediates the change between the customer's pre-exposure and post-exposure attitude (Bitner 1990; Oliver 1980; Oliver & Bearden 1985; Oliver & Swan 1989). Empirical studies have confirmed a positive link between satisfaction and loyalty (e.g., Auh & Johnson, 2005; Bolton, 1998; Bolton & Lemmon, 1999; Fornell, Johnson, Anderson, Cha, & Bryant, 1996;

¹⁴ Others disagree with this direction of causality. These authors note that satisfaction is an emotional state based on specific service encounters and that it is, therefore, ephemeral or transitory (Bitner 1990; Bolton & Drew 1991; Cronin & Taylor 1992; Oliver 1993). Henning-Thurau and Klee (1997) suggest that, because of this, transaction-specific satisfaction *fades* "into a more stable, attitude-like overall evaluation of the product or services, the customer's quality perception" (p. 741). Others have advocated a more complex relationship between satisfaction and service quality by drawing a distinction between single episode (transaction) satisfaction, overall satisfaction, and service quality (Bitner & Hubbert, 1994). For instance, Mohr and Bitner (1995) have proposed the following causal path: *Transaction satisfaction* → *perceived service quality* → *overall satisfaction with the firm*. In fact, Duffy and Ketchand (1998) found that by including both service quality and customer 'well being' (i.e., contentment with one's life, mood) as antecedents to overall satisfaction, they were able to explain a larger amount of variance in overall satisfaction than with service quality alone. Chong et al. (1997) suggest that providing quality of service simply insures that the customer's utilitarian needs are met. Research suggests that such factors as social benefits (received during delivery) may influence how customers evaluate their service experiences and may influence their decision to repatronize. Overall satisfaction may, in fact, be laced with hedonistic pursuits and higher-order need fulfilment.

Gilly & Gelb, 1982; Hennig-Thurau, Gwinner, & Gremler, 2002; Jones & Sasser, 1995; La Barbera & Mazursky, 1983; Newman & Werbel, 1973; Yoon & Uysal, 2005). Repurchase intentions and repurchase behaviour were found to be strongly influenced by product satisfaction among Swedish consumers (Anderson & Sullivan, 1990; Mittal & Kamakura, 2001). For instance, there has been support for the hypothesis that store satisfaction leads to store loyalty (Cronin & Taylor, 1994; Rust & Zahorik, 1993). Patient satisfaction strongly and positively influenced what hospital they chose in the future (Woodside, Frey, & Daly, 1989), and overall satisfaction seemingly plays a part in whether or not insurance customers let their policies expire (Crosby & Stephens, 1987).

Empirical studies have evidenced the importance of creating satisfying on-line experiences for customers (e.g., Szymanski & Hise, 2000; Anderson & Srinivasan, 2003; Wu & Padgett, 2004). Among the first were Szymanski and Hise (2000). The authors empirically tested a conceptual model of e-satisfaction. They identified that the determinants of e-satisfaction are convenience, site design, and security.

2.4 - Value

When compared to service quality and satisfaction, the concept of customer value has commanded relatively little attention from the research community (see Gallarza, & Saura, in press; Holbrook, 1994, 2005; Pride & Ferrell, 2003; Woodruff, 1997). However, it is believed that it positively influences customers' purchasing decisions (Zeithaml, 1988), repurchase intention (Patterson & Spreng, 1997) and customer loyalty in traditional environments (Chiu, Hsieh, Li, & Lee, in press; Neal, 1999). Value has been recently addressed in the context of B2C e-commerce (Piccoli, Brohman, Watson, & Parasuraman, 2004; Chiou, 2004).

The concept of customer value is considered to be different and more significant in predicting behaviour than mere quality because value is quality that consumers can actually afford (Sinha & DeSarbo, 1998). Unlike service quality, perceived

value is derived from benefits (including quality) and the perceived sacrifices that must be made to attain these benefits (Sinha & DeSarbo, 1998; Spiteria & Dion, 2004). As such, perceived value represents a trade-off between *give* and *get* components (Gould-Williams, 1999; Chiou, 2004). It is believed to be a complex construct, representing more than simply the trade-off between relative quality (a *get* component) and relative price (a *give* component) (de Ruyter, Lemmink, Wetzels & Mattsson 1997; Rust & Oliver 1994; Zeithaml & Bitner 1996). Quality is believed to be one antecedent of value, one 'get' component among many for which a customer is willing to sacrifice such things as money or time. In other words, value is believed to represent a higher order concept than quality (Rust & Oliver 1994). Piccoli, Brohman, Watson, and Parasuraman (2004) conceptualize value in the context of Web sites as the user's perceived usefulness of his/her interaction with a site plus the quality of the user's experience (i.e., enjoyment) minus the tangible and intangible costs of using the site.

Customer value may be superior to quality in predicting purchasing behaviour because it recognizes that customers may or may not be willing to forego on certain aspects in order to obtain others (e.g., customers may or may not be willing to accept lower quality for a better price). Work on the concept of value also supports that perceived service quality precedes satisfaction. Relatively to one another, the concepts of quality, value, satisfaction and loyalty relate to one another in the following manner: Service Quality + other factors → Perceived Value → Overall Satisfaction → Loyalty (Spiteria & Dion, 2004; Gallarza & Saura, in press; Woodruff, 1997).

There has been some attempt to investigate the concept of value in business to consumer e-commerce. Chen and Dubinsky (2003), for instance, have proposed and tested a conceptual model of perceived customer value in B2C e-commerce and identified its key precursors. Also, Palmer (2002) and Piccoli, Brohman, Watson, and Parasuraman (2004) found that 'interaction value' (i.e., customers' perceptions of what they contribute relative to what they receive in return)

impacts positively on how likely customers are to revisit a Web site. Finally, Chiou (2004) found a positive and significant link between perceived value and loyalty intention when it comes to choosing Internet service providers.

2.5 - Service Failure Recovery and Complaint Handling

Service failure weakens existing customer/company bonds (Bolton & Drew, 1992) and has been identified as a reason for customer defection (Keaveney, 1995) and, as such, is linked to customer loyalty (Karatepe, in press; Robbins & Miller, 2004). 'Service recovery' represents the actions taken by an organization to address a service failure (Smith, Bolton, & Wagner, 1999). Recovery includes such actions as apology, explanation, and compensation (Dubé & Maute, 1998). Research clearly shows that avoiding and recovering from service failures is crucial in e-commerce but may be currently inadequately addressed by many online companies. Holloway and Beatty (2003) identified 24 unique types of online service failures which fell into six general failure categories: (a) delivery problems, (b) Web site design problems, (c) payment problems, (d) security problems, (e) problems with product quality, and (f) customer service problems. Their results indicate that the majority of problems with online shopping stemmed from delivery problems (i.e., merchandise arriving later than promised, delivered to the wrong address, Web site indicating the product was in stock when, in fact, it was not).

According to Chebat and Slusarczyk (2005) and Karatepe, (in press), service failure creates a sense of perceived injustice in customers which elicits negative emotions. Companies can address this perceived unfairness via interactional justice (e.g., courtesy), distributive justice (e.g., compensation) and procedural justice (i.e., timeliness in addressing the complaint). According to the results of both of these studies, interactional justice plays the predominant role on customer loyalty.

Many authors suggest that service failure recovery may be an important tool in a company's arsenal in building customer loyalty. By making amends to disgruntled customers, 'would-be defectors' can be turned into, what the authors term as 'apostles', customers that become so satisfied that they actually spread the word to other customers (Jones & Sasser, 1995). When customer complaints are responded to satisfactorily, these customers may become more loyal to the company because service recovery increases their confidence that future problems will also be resolved (Zeithaml, 1990). This effort to gain back disgruntled customers may actually win their loyalty because it represents a demonstration of service excellence (Lovelock, 1994). Others have cautioned against this reasoning. Although necessary to reduce the likelihood of defection, recovery should not be seen as a means to gain customer loyalty. Service failures have lasting negative effects on loyalty regardless of whether service recovery is successful (Dubé & Maute, 1998). Recovery efforts may diminish the negative impacts of service failure but never erase the failure from customer's memory (Zeithaml, Berry, & Parasuraman, 1996).

Consequently, although service recovery is important, companies should primarily strive to avoid failures. Empirical results have shown that customers that had not experienced service failure had significantly higher satisfaction and loyalty than those that did, even when it was successfully recovered from (Zeithaml, Berry, & Parasuraman, 1996; McCollough, Berry, & Yadav, 2000). Interestingly, these studies show that resolution did not restore behavioural intentions to the same levels as those for customers who had experienced no service failures. Bolton and Drew (1992) results are consistent with this. They found that successful recovery could not completely offset the negative impact of the failure.

Several authors advocate the need to mitigate the negative effects of service failures by investing into complaint-handling and service recovery programs (e.g., Chebat & Slusarczyk, 2005; Reichheld & Sasser, 1990). Technology may actually

improve and enhance a company's ability to deal with consumer complaints (e.g., Harrison-Walker 2001; Holloway & Beatty, 2003; Strauss & Hill, 2001). For instance, it appears that online environments encourage greater customer complaints and that the telephone and email were the primary means of lodging complaints when online (Holloway & Beatty, 2003). This appears to be a good thing given that customers not voicing their complaining can be problematic for several reasons. Customers who do not voice their discontent also deprive the company from a valuable source of feedback (Johnston & Mehra, 2002). Moreover, the company loses the opportunity to redress the problem and retain the customer. Also, unaddressed complaints tarnish the company's reputation because of negative word of mouth. However, it appears that online environments offer disgruntled customers a greater opportunity to overcome some of the psychological barriers when voicing problems in face-to-face contexts. It allows for complaints at the click of a button and potentially results in less pressure and embarrassment during the complaint experience. Nevertheless, it appears that, currently, recovering from service failures is being inadequately addressed by many online companies. Holloway and Beatty's (2003) research identified that 20 out of 25 of the participants in one of their studies and close to 58% of participants in another study reported dissatisfaction with online companies' recovery efforts. However, similar patterns have also been observed in traditional service settings as well (Tax & Brown, 1998).

2.6 - Fostering Trust

According to several authors, successful and enduring commercial relationships are often characterized as trusting relationships (e.g., Moorman, Zaltman, & Deshpande, 1992; Ganesan, 1994; Morgan & Hunt, 1994; Geykens & Steenkamp, 1995; Chow & Holden, 1997; Crosby, Evans, & Cowles, 1990). In all commercial relationships, a certain level of risk and uncertainty prevail (Sheppard & Sherman, 1998; Lewicki, McAllister, & Bies, 1998; Bhattacharya, 1998). Trust represents a psychological rather than a contractual means of moderating this risk. Quality and trust are independent and yet related concepts. Whereas quality is based on past

experiences, trust is a future-oriented belief based, in part, on consistency in quality observed in the past (e.g., Anderson & Weitz, 1989).

Trust has been identified as especially important in traditional service contexts because of the inherent intangibility and heterogeneity of services and their performance ambiguity (Singh & Sideshmukh, 2000). The importance of trust in on-line environments has been stressed as well (e.g., Ba & Pavlou, 2002; Egger, 2003; Gefen, Karahanna, & Straub, 2003; Keat & Mohan, 2004; Koufaris & Hampton-Sosa, 2004; Liu et al., 2004; Pavlou, 2001, 2003; Suh & Han, 2003; Walczuch & Lundgren, 2004). In a recent study, 71% of Web users reported a lack of trust in on-line vendors (see CIO.com, June 25, 2002). Apparent explanations for this lack of trust include that there are few tangibles and verifiable cues regarding the company's capabilities and intentions (Urban, Sultan, & Qualls, 2000; Konana, Menon, & Balasubramanian, 2000).

Although not specifically addressed in Dick and Basu's (1994) loyalty framework, a link between trust and loyalty has been empirically demonstrated. Study results offer strong support that trust impacts positively on customer loyalty intentions (Chiou, 2004; Chow & Holden, 1997) and, there is some support, that it may directly affect actual repurchase behaviour as well. For instance, research shows that trust plays an important role in anticipated future interaction (Doney & Cannon, 1997) and expected relationship continuity (Anderson & Weitz, 1989). A negative relationship exists between trust and the customer's propensity to leave (Morgan & Hunt, 1994) and trust has been shown to be a determining factor of customer-switching behaviours (Keaveney, 1995). Trust in salespeople has been found to influence intentions to use the supplier in the future (Doney & Cannon, 1997) and to the anticipation of future interaction with salespeople (Ramsey & Sohi, 1997).

In the context of commercial exchanges, several authors suggest that trust is a multidimensional construct and both cognitively- and affectively-driven

(McAllister, 1995). Whereas cognitively-driven trust stems from the credibility of the exchange partner, the affectively-driven trust touches on the partner's benevolence (Ganesan & Hess, 1997). Cognitively-driven trust is a future-oriented 'belief' stemming from observed past demonstrations of positive performance (Anderson & Weitz, 1989). It is strongly based on the technical competence (McAllister, 1995). It is closely related to the reliability and assurance dimensions in SERVQUAL, to credibility (Ganesan, 1994), and to consistency and predictability of providing good service (Sheppard & Sherman, 1998). In the context of traditional service encounters delivered in the face-to-face format, the cognitive form of trust seems to be linked to the role-based performance of the employees (i.e., competency and expertise in service delivery)¹⁵, the reputation of the company, the reliability of the technology used by employees, the robustness of its supporting applications and the accuracy of the information these provide. In other words, cognitive trust is linked with the assurance that, in future encounters, a certain degree of consistent performance will be delivered by the service provider. Cognitive trust appears to be typified by Rotter's (1967) definition of trust as an expectancy that the words and promises of another are reliable; whether the other can 'get the job done' (see also Johnston, 1996).

On the other hand, the affective form of trust relates to whether the customer's and the company's 'sense of the world' accords with each other (Johnston, 1996), whether or not the customer feels that the employees and company cares about him / her (McAllister, 1995). This form of trust is synonymous to benevolence and more closely related to a perception of 'goodwill' (Baba, 1999). It is the customer's belief that the service provider has intentions that are beneficial to the consumer (Ganesan, 1994). Even authors who employ overall measures of trust in their study (i.e., fail to distinguish between the cognitive and affective dimensions of trust) typically include items which take into account both dimensions. Chiou's

¹⁵ Chow and Holden (1997) note that trust leads to customers becoming committed to a supplier "who's prior behaviour has been satisfactory with the confidence that this supplier will continue to perform in a similar manner" (p. 276).

(2004) items, for instance, tap into customer's perceptions of the Internet service provider's honesty, responsibility, professionalism, understanding, and care about customers.

Anderson and Weitz (1989) defined trust a future-oriented belief based on consistency observed in the past. Accordingly, a relationship between trust and the frequency of interaction seems to exist. However, trust need not stem from direct, first-hand experience. In fact, although trust usually develops from personal experience with people or objects, trust can also develop through a transference process (Doney, Cannon & Mullen, 1998). Factors such as the company's reputation, consumer positive word of mouth, and endorsements from third parties, such as, Trust-E (i.e., seals) are considered trust enhancers in the area of Web-retailing (Koufaris & Hampton-Sosa, 2004; Walczuch & Lundgren, 2004; Toms & Taves, 2004). Arguably, these antecedents of trust indirectly but clearly evidence the differences between the concepts of trust and satisfaction. Although trust and satisfaction are linked with personal experience, unlike satisfaction, trust can also develop through a transference process (Doney, Cannon & Mullen, 1998). In fact, although it was initially presumed that trust occurred gradually over time as a history developed between relationship partners (Blau, 1964), recent empirical work now clearly shows that initial trust levels can, in fact, be quite high (e.g., company reputation effects from traditional to online environments - Koufaris & Hampton-Sosa, 2004). As such, contrary to satisfaction, trust need not stem from direct, first-hand experience.

2.7 - Affective/Relational Factors

It is recognized that the traditional service encounter remains "first and foremost" a social encounter between two people (Czepiel, 1990). Cumulative positive encounters are conducive to interpersonal relational phenomena between these

participants (Buttle, 1996). The service quality dimension *empathy*¹⁶ and studies showing the benefits of conveying *warmth* (Aaker, Stayman, & Hagerty, 1986; Lemmink & Mattson, 1998, 2002) and *caring* toward customers (Goodwin, 1996) attest to the importance of factors which may be called *affective/relational*.

Studies recognize that, in traditional service settings, the role played by front-line employees in helping to foster customer loyalty goes beyond simply the delivery of services (e.g., Berry, Zeithaml, & Parasuraman, 1990; De Wulf, Odekerben-Schroder, & Iacobucci, 2001; Reichheld, 1993). In the eyes of the customer, employees often epitomize the business and employee behaviours reflect directly on how customers perceive the quality of service received from the company (Bitner, Booms, & Tetreault, 1990). For instance, research shows that, in business environments that deliver services interactively, employees' ability to personalize the customer's service encounter emerged as the most important determinant to service quality when measured in tandem with the traditional dimensions of the traditional SERVQUAL instrument. In traditional commercial environments (but not in online environments), personalization is defined as the behaviours of employees during the encounter and represents the ways in which these relate to customers (i.e., cold and impersonal or warm, helpful and friendly). It includes such aspects as politeness and courtesy, attempts to get to know the customer, and friendly behaviours (Mittal & Lassar, 1996). Examples of personalization include the Ritz-Carlton, a hotel well known for personalizing its welcomes and farewells with its guests (De Wulf, Odekerben-Schroder, & Iacobucci, 2001).

Although customers may continue to patronize a business for utilitarian reasons, research evidences that, when relationships develop between people, this benefits loyalty given that such relationships represent a very strong emotional bond (Gutek, 2000; Iacobucci & Ostrom, 1996; Hennig-Thurau, Gwinner, & Gremler, 2002; Parkington & Schneider, 1979). Employee retention and customer loyalty

¹⁶ Although, empathy has been found to be the least important dimension of service quality, Parasuraman et al. (1988) advise against undervaluing its significance, suggesting that its ranking may have emerged because of multicollinearity.

appear to go hand in hand and reinforce one another (Kandampully, 1998). Benefits derived by customers having social relationships with employees may include, for instance, employees providing social support to customers (Berry, 1995). Indeed, research shows that service encounters are sometimes perceived by the customer as *a meeting among friends* (Price & Arnould, 1999). Gremler and Gwinner (2000), for instance, found that a factor which they coined as 'rapport' influenced customer evaluations including loyalty. They consider rapport as the customer's perception of having an enjoyable interaction with the employee and that a 'personal connection' exists between the two. In other words, the customer experiences rapport when both (s)he and the employee 'click together' or have good 'chemistry'.

In sum, research which has attempted to identify factors which promote loyalty in traditional commercial settings clearly shows that affective/relational factors (i.e., demonstrations of caring, social support, etc.) result in greater customer satisfaction, trust and loyalty toward the company (see Berry, 1995; Cann & Sumrall, 1997; Liechty & Churchill, 1979; MacIntosh & Lockshin, 1997; Price & Arnould, 1999).

2.8 - Relationship Quality / Satisfaction

Given the relational dynamics observed in both retail product and service environments, several authors have argued for a more relational conceptualization of loyalty (e.g., Fournier & Yao, 1997). In parallel, both relationship satisfaction and relationship quality have emerged as important antecedents of loyalty (De Wulf et al., 2001). Relationship satisfaction describes the customer's affective state resulting from an appraisal of the relationship he / she experiences with a retailer (Anderson & Narus, 1990; Smith & Barclay, 1997). Relationship satisfaction is closely related to what Crosby, Evans, and Cowles (1990) and Hennig-Thurau and Klee (1997) call relationship quality. Relationship satisfaction may be considered as the resulting affective / emotional response following a

customer's assessment of relationship quality¹⁷. The idea of relationship quality has also appeared in the literature (e.g., Garbarino & Johnson, 1999; Hennig-Thurau, Gwinner, & Gremler, 2002; Lages, Lages, & Lages, 2005; Moorman, Zaltman, & Deshpandé, 1992; Smith, 1998; Woo & Ennew, 2004). For instance, Hennig-Thurau and Klee's (1997) define it as "the degree of appropriateness of a relationship to fulfill the needs of the customer associated with that relationship" (p. 751).

The strength of this conceptualization lies in the recognition of customer 'need fulfillment' when in a relationship as well as their expectations regarding the service / product. It also acknowledges that customers play an important and active role in defining their commercial relationships. Relationships are inherently two-sided and stem from the mutual recognition that some special status exists between both parties involved (Czepiel, 1990; Singh & Sirdeshmukh, 2000). Social psychologists suggest that people hold ideals about their relationships and that these ideals may explain the link between relationship perceptions and the evaluations of others (Fletcher, Simpson, Thomas, & Giles, 1999). People are motivated to maximize the consistency between their own ideals and actual perceptions of the partner or relationship. Large discrepancies can produce strong feelings of discouragement, dejection, or dissatisfaction with the current relationship leading to several potential outcomes including defection or attempts to engineer a change in the relationship to align it with their ideal (Fletcher et al., 1999). Marketing studies show that customers may find themselves trapped in relationships with companies that they do not particularly value (Bendapudi & Berry, 1997). It is unlikely that such relationships impact favourably on customer's attitudes and loyalty toward the company.

¹⁷ Although some authors suggest that relational satisfaction and trust represent dimensions of the higher-order construct of relational quality (Crosby, Evans, & Cowles, 1990; Dwyer, Schurr, & Oh, 1987) we remind the reader of the debate regarding the causality between customer satisfaction and service quality. As such, we consider relationship quality as an antecedent to relationship satisfaction. In fact, the argument of Mohr and Bitner (1995) can be easily adapted here suggesting the following causal path: *Encounter Relationship Satisfaction → Relationship Quality → Overall Relationship Satisfaction with the Firm*.

Both relationship satisfaction and relationship quality have been linked to loyalty (e.g., Hennig-Thurau & Klee, 1997; MacIntosh & Lockshin, 1997; Bolton, 1998). For instance, a positive path was identified between relationship satisfaction and proxies of behavioural loyalty (i.e., purchase intentions and relationship duration – see MacIntosh & Lockshin, 1997). Similar findings were observed between relationship quality and behavioural loyalty (e.g., De Wulf et al., 2001).

2.9 - Causal Antecedents or Building Blocks?

It is important to note that providing excellent service quality, ensuring satisfaction and fostering trust may not always nor directly lead to customer loyalty. Instead, they may best be considered as necessary preconditions which must be in place in order for customer loyalty to emerge. This point has particularly been stressed by authors who have scrutinized the link between satisfaction and loyalty (e.g., Oliver, 1999).

Although studies in Marketing have empirically established a positive link between satisfaction and loyalty (e.g., Newman & Werbel, 1973), this relationship has not been demonstrated as being generally strong nor does it appear that the relationship is necessarily direct (e.g., Lowenstein, 1997; Reichheld & Aspinwall, 1993; Reese, 1996; Rust & Zahorik, 1993; Neal, 1999). For example, results from one study showed that overall satisfaction explained only seven percent of the variance in the length of the relationship between customer and provider and that satisfaction was not significantly related to relationship duration (Bolton, 1995). Although loyal customers are satisfied customers, a satisfied customer does not necessarily become loyal (Mittal & Lassar, 1998). In fact, between 65 and 85 percent of customers who report themselves as being satisfied actually defect (Reichheld, 1993) and companies who report measured customer satisfaction levels as high as 90 percent have been shown to experience more than 20 percent turnover in customer accounts (Lowenstein, 1997). One study indicated that 90 percent of customers who switched banks were, in fact, satisfied with their

original provider (Reichheld & Aspinwall, 1993). As such, antecedents such as satisfaction should more likely be considered as building blocks of loyalty than necessarily leading to loyalty (see Oliver, 1999)¹⁸.

2.10 - Summary

From our review of research, we have identified several antecedents of loyalty in traditional commercial settings. When possible, conceptual and causal links were

¹⁸ A review of satisfaction literature suggests that empirical attempts at identifying the strength of the relationship between satisfaction and loyalty may, to some extent, have been contaminated by inadequate conceptualizations of the satisfaction construct. An important limitation potentially explaining the weak but positive link between satisfaction and loyalty pertains to using 'expectations' to assess satisfaction. In fact, the 'disconfirmation of expectations' model of satisfaction has received some criticism (see Spreng, MacKenzie, & Olshavsky, 1996). LaTour and Peat (1979) identified a logical inconsistency with the disconfirmation of expectations model by noting that it falsely suggests that customers who expect and receive poor performance from a store, manufacturer, or service provider should, nevertheless, be satisfied. Consequently, several authors have argued that the expectation component of satisfaction formulations should be replaced. For instance, according to Spreng, MacKenzie, and Olshavsky (1996) the primary limitation with expectation disconfirmation is that it ignores customer *wants* or *desires*. While expectations are 'future-oriented' and malleable (i.e., can be inflated through effective advertising), desires remain 'present-oriented' and relatively stable over time. Several studies seem to confirm this limitation of the popular satisfaction conceptualization. Barbeau (1985) found that student overall satisfaction with a course was affected by desire congruency but not by expectation congruency. Similar results were observed by Spreng and Olshavsky (1993) who found that desires impacted strongly on satisfaction while Myers (1991) conducted a study in the context of car purchasing and found that the effect of 'wanted disconfirmation' on satisfaction was stronger than expectation disconfirmation. The distinction between expectations and desires when conceptualizing satisfaction may explain why Oliva, Oliver, and MacMillan (1992) have noted the existence of two (expectation-based) satisfaction thresholds. As (expectation-based) satisfaction rose above a certain threshold, loyalty began to rise dramatically. When (expectation-based) satisfaction fell below another threshold, loyalty fell at an equal rate. Between both thresholds (i.e., the area where the organization is simply meeting customer expectations), the loyalty curve remained largely unaffected (i.e., flat) with positive or negative changes in satisfaction. Arguably, a store's attempts at simply meeting customers' expectations should contribute little in triggering the discriminatory processes required for the development of Dick and Basu's (1994) *high relative attitude* condition (i.e., customer's perception that this store offers more than its competitors do). In fact, Jones and Sasser's (1995) results showed that, when customers had *choices* (i.e., many stores to choose from) important differences existed between 'merely' satisfied and 'completely' satisfied customers.

drawn between these antecedents. In the next chapter, we address the literature pertaining to Web site design factors believed to be conducive to loyalty.

Chapter 3 - Factors Affecting Web Site-Loyalty

3.1 - Overview

In this chapter, we review Web site design factors which foster Web site loyalty. These factors have been shown to influence what research has identified as antecedents loyalty (e.g., satisfaction, quality), by extension, we position them as antecedents of Web Site-Loyalty. Given that the WebQualTM instrument (Loiacono, Watson, & Goodhue, 2002; Kim & Stoel, 2004) is currently one of the only psychometrically sound measures of Web site quality, we ground our analysis around the WebQualTM dimensions. To these, we combine factors identified in other studies but not reported in WebQualTM. Our analysis suggests that factors may be grouped into the following categories: (1) *utilitarian*, (2) *aesthetic*, (3) *hedonic*, and (4) factors pertaining to customers' evaluations of a company's Web site *relative to other channels* made available by the company. Research into identifying these Web site design factors has primarily put emphasis on the utilitarian aspects of Web sites (e.g., making Web sites easy of use and navigate, meeting customer needs by offering the customer the ability to conduct all transactions on-line, making the Web site useful). When possible, we attempt to identify any overlap or similarities among these variables/factors and draw parallels with the original dimensions of the SERVQUAL instrument (Berry, Parasuraman, & Zeithaml, 1993).

Our literature review further reveals that, although studies into online trust acknowledge the importance of factors such as *benevolence* (a.k.a., affect-based trust) in e-commerce, many of the '*affective/relational factors*' found to be important in traditional, interpersonal, face-to-face commercial environments have been conjecturally dismissed as irrelevant to Web site design (e.g., van Iwaarden, van der Wiele, Ball, & Millen, 2003; Zeithaml, Parasuraman, & Malhotra, 2001). Often, many authors write off these factors because of the self-service nature of Web-based commercial environments (i.e., little or no

interpersonal interaction between customers and company representatives). At best, these factors may only be *contingently* important, coming into play only when customer/employee communications actually occur (i.e., in email messages or during telephone conversations with company representatives).

Contrary to this school of thought, in the next chapter, we will propose that the precepts of what have been termed ‘close’, ‘intimate’, or, more specifically, ‘communal’ relationships (e.g., Bunk, Doosje, Liesbeth, & Hopstaken, 1993; Clark, 1984; Clark & Mills, 1979, 1993; Mills & Clark, 1982; VanYperen & Buunk, 1990; VanYperen, Buunk & Schaufeli, 1992) in Social Psychology may be communicated via Web site content and that such communication positively impacts Site-Loyalty.

3.2 - Utilitarian Aspects (Ease of Use and Web site Usefulness)

Research shows that customers typically abandon their shopping carts on the Internet because they become frustrated with bad Web site structure and design (Hager & Elliot, 2001). The utilitarian aspects of Web site design refer to providing the customer with a site which is *easy to use* and *useful* to customers. According to Loiacono et al. (2002), easy to use sites have two characteristics; they have *intuitive operations* (i.e., easy to use) and they are *easy to understand*¹⁹. Others have referred to this class of factors in more general terms as ‘functionality factors’ which consist of presenting users with sites that have good functioning, are easy to explore, fast, and interactive (Constantinides, 2004). Nah and Davis (2002) group these factors under what they coin as *Web usability* (see also Hassan & Li, 2005) and define it as “the ability to find one’s way around the Web, to

¹⁹ See also Aladwani & Palvia, 2002; Barnes & Vidgen, 2000; 2001; Cox & Dale, 2002; Jeong, Oh, & Gregoire, 2003; Kim & Stoel, 2004; Kumar, Smith, & Bannerjee, 2004; Loiacono, Watson, & Goodhue, 2002; Madu & Madu, 2002; O’Neill, Wright & Fitz, 2001; Ranganathan & Ganapathy, 2002; Sathye, 1999; Schubert & Dettling, 2001; Shih, 2004; Wolfinbarger & Gilly, 2001; Xue, Harker, & Heim, 2000; Yoo & Donthu, 2001; Zhang & von Dran, 2001.

locate desired information, to know what to do next, and, very importantly, to do so with minimal effort” (p. 99).

3.2.1 - Ease of Use

According to Chen and Yen (2004), ease of use / intuitiveness help avoid “user disorientation” while navigating a Web site. Intuitive operations are linked to the structure/layout/design of sites. From an IS perspective, it refers to the degree to which an innovation is perceived as difficult to use (Lai & Li, 2005; Shih, 2004) and relates to the concept of navigability (Palmer, 2002) and findability/accessability (Constantinides, 2004). Research shows that innovations which are perceived to be easier to use are more likely to be accepted and used (e.g., Agarwal & Prasad, 1997). From a services marketing perspective, structure/layout/design correspond to the TANGIBLES dimension from the traditional SERVQUAL measure. Generally speaking, it reflects customer perceptions as to whether the site is well engineered or not which affects customer perceptions as to whether the site represents an efficient mean of obtaining a company’s products and services.

Well-structured sites, much like buildings, reduce the amount of effort required to get to where one wants to go and find the required information (Srinivasan, Anderson & Ponnnavolu, 2002). When sites are not well designed, it becomes difficult for customers to find information even if it is contained within the site. Site structure should be clear, understandable, intuitive to learn and should enable the customer to easily find what (s)he is looking for and easily check in and out from the site (Chen, Gillenson, & Sherrell, 2002; Jun & Cai, 2001; Zhang & von Dran, 2001; Kim & Stoel, 2004; Lee, Katerattanakul, & Hong, 2005; Loiacono, Watson, & Goodhue, 2002; Palmer, 2002). In sum, intuitive operation reflect customer perceptions as to whether the Web site is easy to use, easy to navigate, and easy to search.

Arguably, the organization of a Web site's pages affects ease of use. Sites can vary from purely hierarchical (i.e., tree) to purely network (i.e., each page is linked to all other pages) structures. Although the latter enables customers to move quickly through the site, it may also add to its complexity (Huizingh, 2000). Kumar, Smith, and Bannerjee, 2004) refer to this as the *arrangement of information* on a Web site. This includes such factors as the length of individual pages, number of hyperlinks, and the effective branching to other pages. As sites become larger, the ability to provide customers with simple search paths becomes increasingly necessary (Szymanski & Hise, 2000). Hyperlinks used to navigate between the site's pages and to other sites should be valid and lead to their expected destination and not to dead ends (Aladwani & Palvia, 2002; Lee, Katerattanakul, & Hong, 2005; Madu & Madu 2002; Smith, 2000). This may also require incorporating features enabling customers to quickly and easily find the information they need while not getting lost in their attempt to do so, for instance, the inclusion of helpful search engines and site maps (Aladwani & Palvia, 2002; Constantinides, 2004; Cox & Dale, 2002; Gefen & Devine, 2001; Hassan & Li, 2005; Waite & Harrison, 2002; O'Neill, Wright, & Fitz, 2001; Zhang & von Dran, 2001; van Iwaarden et al., 2004). The latter enable customers to easily get an overview of one's position inside a site (Huizingh, 2000; Madu & Madu, 2002; Zeithaml, Parasuraman, & Malhotra, 2001). This also includes such characteristics as the addition of menus, links back to the main page on all subpages, use of descriptive text in links (whenever possible) and no/short scrolling (see Hassan & Li, 2005). An examination of the items typically associated with good structure suggests that it is associated with Rafaeli's (1988, 1990) concept of perceived interactivity (see also Ha & Lincoln, 1998) which includes the perception of always knowing where one is, where one is going, and always getting to where one wants to go.

Another facet of ease of use relates to whether the site is easy to understand. This includes paying attention to the language used on the site and choosing terminology which is familiar to and suitable for the audience (Hassan & Li, 2005;

Kumar, Smith, & Bannerjee, 2004). Also, related information should be placed together and displayed in reasonable ‘chunks’. Information that is to be presented should be divided “into screen size clusters wherever possible” (Kumar et al., 2004, p. 290). Appropriate keywords and sub-headings should be used with which the user can easily identify with. Information should also be presented in uncluttered screens and in an appropriate format which includes using an adequate colour, type and size of fonts to increase readability and consistent presentation formats from page to page (see Jeong, Oh, & Gregoire, 2003; Kumar, Smith, & Bannerjee, 2004; Lee, Katerattanakul, & Hong, 2005; Liljander, van Riel, & Pura, 2002; Madu & Madu, 2002; Szymanski & Hise, 2000; Zeithaml et al., 2001).

3.2.2 - Web Site Usefulness

Another utilitarian aspect important when designing Web sites is *perceived usefulness* (Chen, Gillenson, & Sherrell, 2002; Kim & Stoel, 2004; Lai & Li, 2005; Loiacono, Watson, & Goodhue, 2002; Schubert & Dettling, 2001; Shang, Chen, & Shen, 2005; Shih, 2004; Vijayasarathy, 2004). Perceived usefulness is derived from the Technology Acceptance Model (TAM) (Davis, 1986; Davis, 1989; Davis, Bagozzi, & Warshaw, 1989). It represents a higher-order construct affected by subjective evaluations as to how useful the site is in attaining the customer’s goal (i.e., shopping or information seeking). Useful sites (a) *improve the user’s performance* in shopping or information seeking (i.e., saves time or money), (b) *increase productivity* in shopping or information seeking (e.g., making purchase decisions or finding product information within a short time frame), (c) *enhance the effectiveness* in shopping or information seeking (e.g., getting the best deal or finding the most information about a product/service), and (d) *facilitate* shopping or finding information (Kim & Stoel, 2004; Loiacono, Watson, & Goodhue, 2002).

Dimensions identified as related to perceived site usefulness include: informational fit-to-task, tailored communications, security and privacy, and response time (Kim & Stoel, 2004; Loiacono, Watson, & Goodhue, 2002).

Informational fit-to-task relates to the ‘information quality’ of a site (refer to DeLone & McLean, 1992). It reflects the user’s perception of the *accuracy, clarity, timeliness, relevancy* and *completeness* of the information on a Web site²⁰. Generally speaking, the site’s informational content must be *unambiguous, not misleading, believable, trustworthy* and *objective, up-to-date/timely, comprehensive* and *sufficient* enough to enable customers to transact online. ‘Informational fit-to-task’ is defined as the extent to which the Web site provides information that is *appropriate* to meet the customer’s specific needs. Others have introduced and investigated similar concepts. For instance, Lee, Katerattanakul, & Hong (2005) discuss the concept of *fitness for use*. In fact, the literature is replete with various concepts which reflect the importance of the user’s perception of a good fit between a Web site and his/her commercial needs. This includes perceptions of *content quality, informativeness, information usefulness, suitability* and *relevance, importance* (see Aladwani & Palvia, 2002; Barnes & Vidgen, 2000, 2001; Chen & Wells, 1999; Cox & Dale, 2002; Kim & Stoel, 2004; Liljander, van Riel, & Pura, 2002; Loiacono, Watson, & Goodhue, 2002; Liu & Arnett, 2000; Palmer, 2002; Shih, 2004), *cultivation* (Srinivasan, Anderson, & Ponnnavolu, 2002) and *aboutness* (Toms & Taves, 2004). For instance, Shih (2004) identified *information relevance* in terms of Web site users’ perceptions of information timeliness, helpfulness (i.e., to perform a task), and availability (i.e., usability of the information to support decision making). Aladwani & Palvia (2002) defined *content quality* in terms of visitors’ perceptions of the information on a Web site being useful, complete, and correct. Toms and Taves (2004) refer to *aboutness* as “the extent to which a site is actually about the topic searched” (p. 297).

Moreover, companies should provide *precise and rich descriptions of what products/services are offered* via their site to facilitate decision making (Liu & Arnett, 2000; Ranganathan & Ganapathy, 2002) and also integrate a variety of

²⁰ See Aladwani & Palvia, 2002; Barnes & Vidgen, 2000, 2001; Cox & Dale, 2002; Jeong, Oh, & Gregoire, 2003; Jun & Cai, 2001; Kim & Stoel, 2004; Lee, Katerattanakul, & Hong, 2005; Liljander, van Riel, & Pura, 2002; Liu & Arnett, 2000; Madu & Madu, 2002; Ranganathan & Ganapathy; Wolfinbarger & Gilly, 2001; Zhang & von Dran, 2001.

supplemental features (i.e., tools and functionality) which facilitate shopping and comparison. Successful Web sites are rich in features such as decision making aids making it *easy to compare prices and characteristics of products and services they sell* (Aladwani & Palvia, 2002). Tools such as shopping carts and cost calculators not only enable customers to save time but may also increase customer confidence in their purchase decisions (Kumar, Smith, & Bannerjee, 2004; Ranganathan & Ganapathy, 2002; Xue, Harker, & Heim, 2000; Zeithaml, Parasuraman, & Malhotra, 2001; Zhu, Wymer, & Chen, 2002; Waite & Harrison, 2002).

Some researchers advocate the benefits of making the virtual shopping more 'life-like' and product presentations more compelling (Reichheld & Scheffer, 2000). For instance, Chen and Yen's (2004) study demonstrates the benefits of *connectedness* on customer perceptions of Web site quality. Connectedness relates to Web sites offer "the user a feeling of being connected to the outside world. (...) Many multimedia software components can enhance the perception of connectedness by providing high quality video clips, audio clips, site tours, product demonstrations, and other relevant features" (p. 220). Connectedness appears to closely relate to what Jiang and Benbasat (2004-2005) describe as the Web site's ability to provide customers with a '*virtual product experience*' by enabling visitors to virtually manipulate Web product images so as to view them from various angles and distances and experience the different features and functions of a products online (e.g., what happens when the buttons of a particular wristwatch are pressed). Companies, however, must be judicious so as to not degrade the site's usability with the addition of too many images, sounds and excessive animation (Hassan & Li, 2005).

The second dimension related to perceived usefulness identified in Loiacono et al. (2002) is *tailored communications* (see also Kim & Stoel, 2004). Many refer to

this as site *customisation* or site *personalization*²¹. It has been argued that, in e-commerce, both customization and personalization relate to the original EMPATHY dimension of the SERVQUAL instrument (see Barnes & Vidgen, 2000, 2001; Liljander, van Riel, & Pura, 2002; van Iwaarden et al., 2003, 2004), others, however, disagree. The latter suggest that, in e-tailing and online delivery of services, EMPATHY comes only in play in situations when interpersonal contact occurs (e.g., customer support - Zeithaml et al., 2001). As such, online personalization and customization may be better construed as design features which facilitate interaction with the site and less so as means of conveying affection, caring, or empathy for the customer.

In fact, according to Srinivasan, Anderson, and Ponnnavolu (2002), there are several reasons why customization/personalization can positively affect loyalty toward the Web site. All of these pertain to increasing the utility of the Web site by making it more useful given the specific needs of the user. First, with customization, it is much more likely that the user will find something that (s)he wishes to buy. Second, by narrowing the search for what one is looking for, it may reduce frustration stemming from not finding what one is looking for. Third, it may also increase the customer's perception of increased choice and control by allowing the customer to quickly focus on what the customer is really looking for. Finally, it may allow customers to more efficiently complete transactions. However, according to the findings of Coner (2003), the benefits of personalization for on-line companies appear to be contingent on the user. Findings showed that many commercial Web site users stated a concern for privacy²² as the principle reason that they did not enter personal data on Web sites. In fact, Hoffman, Novak and Peralta (1999) found that almost 95% of customers

²¹ See Coner (2003), Liljander, van Riel, and Pura (2002), Kramer, Norohna, and Vego (2000), Koufaris and Hampton-Sosa (2004), Kumar, Smith, and Bannerjee (2004), Lee, Katerattanakul, and Hong (2005), Schuber and Dettling (2001), Smith (2000), and Zeithaml, Parasuraman, and Malhotra (2001).

²² Privacy is defined as "the right of an individual to be left alone and able to control the release of his or her personal information" (Liu et al., 2004, p. 128).

have, at some time, refused to reveal personal information on Web sites apparently because of privacy concerns (see also Liu et al., 2004). Moreover, it appears that, currently, many companies are having difficulty taking full advantage of personalization (see Piccoli, Brohman, Watson, & Parasuraman, 2004). According to this research, companies operating on-line are still finding it difficult to provide true personalization and interactive support but rather appear to be much more comfortable providing users with general information and basic transaction support.

It is worth noting that, although personalization and customization are often used interchangeably in the literature (e.g., Aladwani & Palvia, 2002; Liljander, van Riel, & Pura, 2002; Srinivasan, Anderson, & Ponnnavolu, 2002) they are, in fact, the two separate concepts. Personalization consists of using such things as 'cookies' and database technology. Not only can customers be greeted by name when reaching the service provider's Web-site but customer profiles can be build with the use of databases by cumulating user information from previous sessions, analysing it, and then targeting the customer's individual, specific needs by displaying during future visits, particular information which the customer deems as valuable (Roth & Van Der Velde, 1989). It is believed that on-line personalization may help to recreate part of the personalized attention provided by employees in traditional services encounters (Wells & Wolfers, 2000). On-line *personalization* corresponds to whether the *site is tailored* to individual customers' preferences, histories, and ways of shopping (Cox & Dale, 2002; Schuber & Dettling, 2001; van Iwaarden et al., 2004; Zeithaml, Parasuraman, & Malhotra, 2001). One important benefit of personalization is that it reduces the need for redundant steps such as having to fill out the same information each time one visits the site (Chen & Yen, 2004; Cox & Dale, 2002). Personalized sites remember who customers are, remember their preferences and their previous purchases. Personalization has to do *customer recognition* (Cox & Dale, 2002; Gefen & Devine, 2001).

Whereas personalization only requires the customer's passive participation (i.e., possibly registering once at the site and then repeatedly using the Web page so that a profile can be established), *customization* demands customers' active involvement. It refers to the technology's flexibility in offering to each customer the *ability to configure the interface to one's liking by adapting the 'look and feel' of the page*. Customization is also related to the customer having *a sense of control over the content and functionality* of the site. Contrary to personalization, customization requires effortful involvement on the part of the customer.

The third dimension believed to be important in evaluations of site usefulness is *trust* (Kim & Stoel, 2004; Loiacono, Watson, & Goodhue, 2002; Schubert & Dettling, 2001; Zeithaml, Parasuraman, & Malhotra, 2001). Factors which influence the formation of consumer trust in online environments are believed to include personality factors (e.g., openness to new experiences, the consumer's propensity to trust), general attitudes toward computers and the Internet, word of mouth from trusted others, the company's reputation and factors related to the Web site itself (Koufaris & Hampton-Sosa, 2004 ; Walczuch & Lundgren, 2004; Toms & Taves, 2004). The latter includes the clear and truthful presentation of information, the site's ability to build credibility, show integrity and foster confidence in customers (e.g., Kim & Stoel, 2004; Loiacono, Watson, & Goodhue, 2002; Madu & Madu, 2002). Many authors stress the importance of including guarantees on the Web site such as quality certifications, stated/written assurances (i.e., policies, terms and conditions and restrictions) that the customer's transactional information will remain confidential and will not be distributing to outside and unknown others and assurances that the customer's personal data will not be used for marketing purposes without the customer's prior consent (e.g., Liljander, van Riel, & Pura, 2002; Liu et al., 2004; O'Neill, Wright & Fitz, 2001; Siau & Shen, 2002; Walczuch & Lundgren, 2004). In sum, these assurances aim to overcome fears of fraud and doubt and persuade visitors of Web sites "to stop, explore them and interact online" (Constantinides, 2004, p. 114). Indeed, research which has explored the link between trust and online consumer behaviour clearly

shows that fostering trust/perceived trustworthiness has positive effects on intention to purchase and intention to inquire about products on the vendor's Web site (Gefen, 2000; Liu et al., 2004) and loyalty (Lee, Kim, & Moon, 2000).

Given that consumers often express reluctance and fear in engaging in on-line transactions (Jarvenpaa & Tractinsky, 1999), it is not surprising that many researchers believe that trust may be one of the most important factors influencing consumer behaviour online (Walczuch & Lundgren, 2004). In fact, trust may actually be much more important online than it is in traditional commercial settings because of the inherent physical separation between the consumer and the company, separation between the consumer and the merchandise, and because consumers often perceive these environments to be much less secure (Liu et al., 2004; Walczuch & Lundgren, 2004; Warrington, Abgrab, & Caldwell 2000). This may help explain why several researchers have turned their attention to better understanding the role of trust in e-commerce environments and how to foster it²³.

Although several researchers seemingly equate *online trust/trustworthiness* with *security and privacy*^{24,25}, *assurance*²⁶, and/or *reliability*²⁷ (e.g., Walczuch &

²³ Ba & Pavlou, 2002; Ba, Whinston & Zhang, 1999; Bhattacharjee, 2002; Cassell & Bickmore, 2000; Egger, 2003; Featherman & Pavlou, 2002; Friedman, Kahn, & Howe, 2000; Gefen, 2000; Gefen & Straub, 2000, 2002; Gefen, Karahanna, & Straub, 2003; Hoffman, Novak & Peralta, 1999; Jarvenpaa & Tractinsky, 1999; Jarvenpaa, Tractinsky, & Vitale, 2000; Keat & Mohan, 2004; Kim & Prbhakar, 2000; Koufaris & Hampton-Sosa, 2004; Liu et al., 2004; McKnight & Chervany, 2001; McKnight, Choudhury & Kacmar, 2002; Milne & Boza 1999; Pavlou, 2001, 2003; Suh & Han, 2003; Urban, Sultan & Quails, 2000; Walczuch & Lundgren, 2004.

²⁴ Barnes & Vidgen, 2000; Cox, 1999; Cox & Dale, 2001; Ernst and Young, 2001; Gefen and Devine, 2001; Jun & Cai, 2001; Lee, Katerattanakul, & Hong, 2005; Liu, Marchewka, Lu, & Yu, 2004; Loiacono, Watson, & Goodhue, 2000; Madu & Madu, 2002; Ranganathan & Ganapathy, 2002; Swaminathan, Lepkowska-White, & Rao, 1999; van Iwaarden, van der Wiele, Ball, & Millen, 2003; Waite and Harrison, 2002; Wolfinbarger & Gilly, 2001; Yoo & Donthu, 2001; Zeithaml et al., 2001; Zhang & von Dran, 2001.

Lundgren, 2004), others have delved deeper and proposed much richer conceptualizations. This has included the development of e-trust typologies and measures of trust (e.g., Gefen, 2000; McKnight & Chervany, 2001; Chen & Dhillon, 2003). A particularly revealing aspect of this research is the conceptualization of online trust as a multi-dimensional construct made up of at least three (3) dimensions: (1) the user's belief in the online company's *integrity*, (2) its *competence*, and (3) its *benevolence*. The origins of much of this work can be traced back to earlier work on trust done in traditional business environments. For instance, McAllister (1995) conceptualized trust as a two-dimensional construct made up of *cognition-based* and *affect-based* forms of trust. Demonstrations of integrity, credibility, competence and consistent reliability foster the cognition-based form of trust in others (McAllister, 1995). As such, cognition-based trust appears to be very utilitarian in nature, typified by Rotter's (1967) definition of trust as an expectancy that the words and promises of another are reliable and whether or not the other can 'get the job done' as promised (Johnston, 1996). Consequentially, it appears to be closely related to both the RELIABILITY and ASSURANCE dimensions of the original SERVQUAL instrument.

²⁵ Others have positioned security and privacy as antecedents rather than proxies of trust (e.g., Koufaris & Hampton-Sosa, 2004; Liu, Marchewka, Lu, & Yu, 2004). This research supports that a strong, positive relationship exists between privacy/security and consumer trust toward the Web site. Furthermore, Vijayasathy (2004) also differentiates between privacy and security but recognizes a close relationship between the two concepts. "While privacy is related to what a company consciously decides to do with consumer data, security is concerned with any inadvertent compromises of consumer data to a third party (e.g. hacker and identity thief) (p. 751). Interestingly, Vijayasathy (2004) results showed that whereas security had a positive and significant impact on consumers' intentions to use on-line shopping, privacy did not. This, he suggests, may reflect "consumers' resigned acceptance of some level of privacy invasion in an age of database marketing, telemarketers, and spam-mail" (p. 758).

²⁶ Liljander, van Riel, & Pura, 2002; van Iwaarden, van der Wiele, Ball, & Millen, 2003; Zeithaml et al., 2001.

²⁷ Liljander, van Riel, & Pura, 2002.

Conversely, affect-based trust is synonymous to one's perception of another's 'goodwill' (Baba, 1999) or 'benevolence' (Ganesan & Hess, 1997; Johnston, 1996; McKnight, Choudhury, & Kacmar, 2002), or more simply, *whether the customer feels that the company truly cares about him / her* (McAllister, 1995). Arguably, benevolence or what is more traditionally referred to as affect-based trust, relates to the EMPATHY dimension in the original SERVQUAL measure. Other researchers have also stressed the importance of similar concepts to benevolence in e-commerce. For instance, Madu and Madu (2002) state that, even in online environments, employees must demonstrate *courtesy* (i.e., friendliness in addressing complaints), *respect*, *caring* and *understanding toward the customer*. Given the nature of these factors, these may be thought of as affective or relational factors. However, many e-commerce authors have directly dismissed the 'affective/relational factors' more closely associated with traditional, interpersonal, face-to-face commercial encounters and not necessarily transposable to Web site design (see Cox & Dale, 2001; Zeithaml, Parasuraman, & Malhotra, 2001, 2002; van Iwaarden, van der Wiele, Ball, & Millen, 2003). Some have gone as far as to argue that, what we term in this thesis as 'affective/relational factors', lose their relevance in self-service, Web-based commercial environments, at best, becoming contingently important only when customer/employee communications actually occurs (i.e., email/telephone conversations, recovery of online service failure – see Cox & Dale, 2001; Zeithaml, Parasuraman, & Malhotra, 2001, 2002).

Conversely, McKnight et al. (2002)'s study did reveal that the affective form of trust (i.e., benevolence) did play an important role in customers' decision to use a Web site. However, the authors only speculated that such features as third party endorsements (e.g., TRUSTe) may have a positive impact on developing affect-based trust (i.e., benevolence). As such, our literature review shows that, whereas cognition-based trust (which may be thought of incorporating both of McKnight et al. (2002)'s *integrity* and *competence* dimensions of trust) can be fostered by designing Web sites with features which communicate high reliability, security

and privacy, etc., much less is known as to what Web site design features can influence, if at all, customer perceptions of benevolence (affect-based trust). In sum, what may be termed as ‘affective/relational factors’ have remained relatively under-explored in the literature on Web-based retailing and service environments.

The last dimension related to perceived site usefulness is site *response time*²⁸. It relates to the RESPONSIVENESS dimension of the traditional SERVQUAL measure which pertains to employees providing prompt service and to their willingness and readiness to help and respond to customers’ requests. Under Web-based environments responsiveness can be considered as (1) a quality dimension of the site itself and as well as (2) a quality dimension of the company’s support services – namely, employee contact. As a characteristic of Web sites, responsiveness pertains to the speed of operation (O’Neill, Wright, & Fitz, 2001) - the time it takes the customer to interact with the site (Kim & Stoel, 2004; Loiacono, Watson, & Goodhue, 2002). Generally speaking, it relates to the *promptness of online processing* (Yoo & Donthu, 2001), *download delay* (Palmer, 2002), *quick error recovery*, the *fast display and presentation of information* (i.e., *fast loading*) and also to *low waiting and fast check outs and download times* (Hassan & Li, 2005; O’Neill, Wright, & Fitz, 2001; Smith, 2000; Szymanski & Hise, 2000; Zhu, Wymer, & Chen, 2002).

3.3 - Utilitarian Factors from Studies Other than Loiacono et al. (2002)

A *site’s error handling capabilities* pertain to the way in which errors and data input omissions are handled by the site is also likely to affect Web site quality and satisfaction. Interacting with sites should not require any guesswork on the part of the consumer nor should any ‘little problem’ require the customer to have to get in touch with service personnel. As such, sites must clearly communicate *whether*

²⁸ Constantinides, 2004; Gefen & Devine; 2001; Hassan & Li, 2005; Lee, Katerattanakul, & Hong, 2005; Liljander, van Riel, & Pura, 2002; O’Neill, Wright, & Fitz, 2001; Zeithaml, Parasuraman, & Malhotra, 2001; Zhang & von Dran, 2001.

and where the user has made a mistake or has omitted to enter a required field (Cox & Dale, 2002). Web site loyalty is likely affected by the extent to which the company has anticipated enough answers to the questions that users may have and made these available via a '*frequently asked questions*' section (Helmsley, 2000; Madu & Madu, 2002).

A *site's reliability*²⁹ has also been identified as an important utilitarian factor in Web site design (e.g., van Iwaarden et al., 2004) but was not reported by Loiacono et al. (2002). In traditional service settings, RELIABILITY is defined as the "ability to perform the promised service dependably and accurately" (Berry, Parasuraman, & Zeithaml, 1993, p. 23). Reliability is a driver of trust and is typically rated the most important dimension in service quality research. As a dimension of site quality, it concerns the correct technical functioning of the site, the accuracy of services promises, and billing and product information (Zeithaml, Parasuraman, & Malhotra, 2001). In sum, reliability pertains to the *accuracy in order fulfilment* and keeping one's promises (i.e., *delivering the goods and services as represented, in accurate amounts and in good condition, and within the promised amount of time*). Reliability captures the extent to which the customer believes (s)he can rely on the Web page to function properly and allow for an accurate, error-free online transaction to occur (Liljander, van Riel, & Pura, 2002). Reliability is affected by factors such as site crashes (i.e., access), the accuracy of order taking and account information (information quality), having items advertised in stock, providing truthful information to customers, and making sure that the merchandise arrives on time (Zeithaml, Parasuraman, & Malhotra, 2001).

A *site's accessibility* is crucial in customer quality evaluations of and satisfaction with Web sites because of the 24/7/365 concept on which it is founded (Cox &

²⁹ Jun & Cai, 2001; Madu & Madu, 2002; Liljander, van Riel and Pura, 2002; O'Neill, Wright & Fitz, 2001; Schubert & Dettling, 2001; Smith, 2000; Wolfinbarger & Gilly, 2001; Zeithaml, Parasuraman & Malhotra, 2000.

Dale, 2001). Access relates to Liu and Arnett's (2000) concept of *system quality*. Customers must be able to *quickly access* the system *without system crashes*. It also taps into customer perceptions as to whether the Web site is *always up and available* (Aladwani & Palvia, 2002) given that time saving and shopping convenience are important motivators for doing one's business online (Constantinides, 2004). Srinivasan, Anderson and Ponnnavolu (2002) use the term *care* as the extend to which attention is paid to the customer to keep him/her informed about the status of orders and efforts expended to minimize disruptions. Others relate access more broadly to both responsiveness and structure. Cox and Dale (2002), for instance, define it as the customer's ability to access the site easily and navigate it without effort including having fast downloading pages. Zeithaml, Parasuraman and Malhotra (2001) extend it to personal contact as well. They define it as the ability to *get on the site quickly* and *reach the company when needed*.

Another important factor affecting customer loyalty to Web sites is *flexibility*. Whereas site customization involves flexibility to manipulate how and what information is presented on a site, Web site is also likely to be affected by whether or not the company provides customers with various choices to communicate with the company and in ways to pay, ship, buy, and return purchased items (Ranganathan & Ganapathy, 2002; Xue, Harker, & Heim, 2000; Zeithaml, Parasuraman, & Malhotra, 2001). Flexibility in the *number of shipping options*, *number of payment options* and *communication channels* offers customers a greater sense of control in dealings with the company. This also relates to what Chen and Yen (2004) call '*reciprocal communications*' which touches on providing the user with the ability to interact with the company when needed.

Moreover, the usefulness of a site in carrying out transactions may depend on what Waite and Harrison (2002) call *transaction technicalities*, that is, *information details of what and when charges apply, instructions into how to*

complete particular transactions and details of how to pay money. In addition, the company's sale policies and disclaimers should be included (Lee, Katerattanakul, & Hong, 2005). The *price and shipping costs* and their *current availability* of products and services should also be clearly stated on the Web site. *Price knowledge* is described by Zeithaml, Parasuraman and Malhotra (2001) as the extent to which the customer can easily determine shipping price on a Web site (i.e., ease of determining total price, compare prices during the shopping process, or simply find out about a price). Also, for retailing sites (i.e., sites selling products), the site may also include a feature enabling customers to keep informed as to the status of their orders (i.e., *online tracking capabilities*) (Cox & Dale, 2002; Jun & Cai, 2001; Liu & Arnett, 2000). For companies dealing in financial services, information should include details of when bank charges apply, details about bank charges, details on overdraft facilities, details on how to transfer money between accounts, details on foreign exchange rates, details on commission charged for foreign exchange rates, details of how to pay money and current interest rates (Liu & Arnett, 2000; Waite & Harrison, 2002).

Finally, Web sites should also contain *customer contact information*. The idea of losing employee contact frightens many customers. Regardless of whether the customer ever actually contacts the company, knowing that there is a means of doing so if the need ever arises, is likely to be highly appreciated by customers and may help reduce any anxieties (Xue, Harker, & Heim, 2000). Customer contact information (e.g., *email address, telephone*) must be available and *easy to find* on the Web site (Aladwani & Palvia, 2002; Cox & Dale, 2002; van Iwaarden et al., 2004). It provides customers with a sense of assurance that they may get assistance when needed. This also appears to be related to what Waite and Harrison (2002) call '*physical back-up*' which, in the case of banks, includes providing details of how many bank branches there are and where to find them in case the customer needs to turn to a physical location for help.

3.4 - Hedonic/Entertainment Value

Research also shows that successful Web sites often combine the ability to transact with *entertainment value* for the customer (e.g., Eighmey, 1997; Eighmey & McCord, 1998; Ha & James, 1998; Shang, Chen, & Shen, 2005). Specifically, hedonic/entertainment value refers to the *emotional appeal* of a Web site (Kim & Stoel, 2004; Loiacono et al., 2002). This pertains to whether the site can get the user involved and whether positive affect arises from using the site (i.e., using the site makes the customer happy and cheerful). Experiential factors derived from other studies which relate to the concept of emotional appeal include *flow* and *playfulness* (Chen & Yen, 2004; Chung & Tan, 2004; Hoffman, Novak, & Duhachek, 2002), the entertainment derived from the site (i.e., does the user perceive the site to be fun and exciting? - Chen & Wells, 1999) and *enjoyment* (Lee, Katerattanakul, & Hong, 2005).

Site playfulness (Chung & Tan, 2004) is a characteristic related to the use of content and features not meant to facilitate the customer's search behaviour and transacting capabilities but rather to provoke a positive emotional response from the viewer (e.g., humorous animations, interactive games). As such, perceived playfulness of the site is affected by introducing 'curiosity-arousal devices' into the site (Ha & James, 1998). Site playfulness has been empirically shown to positively influence user's perceptions of site quality (Chen & Yen, 2004), an important antecedent of Web site loyalty.

Like playfulness, flow is related to the experiential qualities of the site (Csikszentmihalyi 1990; Hoffman & Novak, 1996; Loiacono, Watson, & Goodhue, 2002; Wolfinbarger & Gilly, 2001). Flow is related to Agarwal and Karahanna's (2000) concept of *cognitive absorption* (see also Shang, Chen, & Shen, 2005). Much like in the case of a riveting book or movie, flow pertains to a site's ability to get the customer absorbed/immersed. A state of flow/cognitive absorption is characterized by a loss of self-focus, intense involvement, deep attention, engagement, and loss of sense of time. Shang, Chen, & Shen (2005)

conceived cognitive absorption (i.e., flow) as a multidimensional construct made up of temporal dissociation, focused immersion, heightened immersion, control, and curiosity.

3.5 - Site Aesthetics³⁰

Although Loiacono et al. (2002) group site aesthetics with the entertainment aspects of the site, arguably, the two likely represent very different aspects of Web site design. Like Web site structure, site aesthetics relate to the TANGIBLES aspect of the original SERVQUAL measure, namely, its *visual appeal* (Barnes & Vidgen, 2000, 2001; Jun & Cai, 2001; Kim & Stoel, 2004; Loiacono et al., 2002; Yoo & Donthu, 2001; Zeithaml, Parasuraman, & Malhotra, 2001) and *innovativeness* (Zhu, Wymer, & Chen, 2002). Sites can be designed rather soberly with a focus on task-related content and function or with beauty in mind (Huizingh, 2000). Commercial sites should have a professional appearance but should not look drab (Liljander, van Riel, & Pura, 2002). Various elements can be added to sites making them more attractive. Aesthetic appeal is likely to be affected by the choice of site colours, animation, sound effects, consistent font size and style, and a good balance between text and graphics (see Hassan & Li, 2005; Liu & Arnett, 2000; Madu & Madu, 2002). However, the company must make judicious use of graphics and multimedia given that flashy graphics and video can potentially affect page download time (Hassan & Li, 2005). Moreover, companies must avoid using annoying banners and ads which add little to the customer's experience and distract from the information provided on the site.

Web sites should also be designed in an innovative fashion. Innovativeness taps into customer perceptions that the company is actively involved in *continuously bettering its on-line environment* (Zhu, Wymer, & Chen, 2002). This includes

³⁰ Aladwani & Palvia, 2002; Barnes & Vidgen, 2000, 2001; Constantinides, 2004; Jun & Cai, 2001; Loiacono, Watson, & Goodhue, 2002; O'Neill, Wright, & Fitz, 2001; Srinivasan, Anderson, & Ponnnavolu, 2002; Zhang & von Dran, 2001.

giving the site with a *unique and creative feel*. Hassan and Li (2005) recommend making, now and then, minor changes to the look of the Web site so that repeat users do not get bored and banner blind.

3.6 - Comparativeness with Other Channels

Finally, Loiacono et al. (2002) coin the higher-order factor tapping into customer evaluation of Web sites relative to a company's other available channels as '*complimentary relationship*'. We have renamed this, more intuitively, as '*comparativeness with other channels*'. According to the authors, this category includes *relative advantage*, *on-line completeness*, and *consistent image* (see also Kim & Stoel, 2004).

First of all, the design of a Web site should always be *consistent with the image the company* is trying to project (Chiou, 2004; Cox & Dale, 2002; Kim & Stoel, 2004; Loiacono et al., 2002). As such, Web sites should include company information which informs visitors about the company's background, mission statement, company news, etc. (Lee, Katerattanakul, & Hong, 2005). Second, for customers to use a company's Web site, it must be as good or better a channel when compared to other channels provided by the company. According to Moore and Benbasat (1991), *relative advantage* captures the extent to which a customer considers an innovation as offering an advantage over previous ways of performing the same task. Empirical studies in IS evidence the importance of relative advantage in predicting adoption behaviour (e.g., Adams, Nelson, & Todd, 1992; Davis et al., 1989; Davis, 1993; Moore & Benbasat, 1991). In Loiacono, Watson and Goodhue (2002), the authors show that the success of Web sites is associated with customer perceptions that there is some relative advantage for completing transaction over the company's Web site relative to other available

channels³¹. Relative advantage is related to the concept of perceived usefulness (Davis et al., 1989; Moore & Benbasat, 1991). If a company's Web site is more troublesome to use than alternative channels, customers will likely not use it³².

Finally, *online-completeness* refers to whether the site enables the customer *to complete all necessary transactions on-line* (Kim & Stoel, 2004; Loiacono, Watson, & Goodhue, 2002). Given that the company's Web site may be one of possibly many channels through which the customer may interact with the company, perceptions of site quality may be gauged relatively to other points of contact. Having to fall back on less convenient channels to finalize a transaction started on-line is likely to seriously affect the customer's perceptions as to the usefulness of the site.

³¹ Originally, in an early working paper on WebQual™ in 1999, Loiacono, Watson, and Goodhue coined relative advantage as '*viable substitute*' defining it as customers' perceptions into the *viability of the Web site as an alternative means of interacting with the company*.

³² It should be noted that relative advantage has been criticized as a 'garbage pail' construct. According to Tornatsky and Klein (1982), the relevance of relative advantage is so evident and yet so broad and amorphous a concept that it contributes little to our understanding of why users adopt a particular technology. Also, although Loiacono et al. (2002) present this factor as a dimension of Web site quality, arguably it is more likely that relative advantage is a higher order factor affected by site quality as well as other factors potentially unrelated to the technology per se. For instance, perceptions of relative advantage toward the company's Web site are likely to be positively affected by customers' perceived deficiencies of a company's other channels.

3.7 - Factors Unrelated to Web site Design

Product/service quality and ***selection*** refer to what Szymanski and Hise (2000) call 'merchandising' and Srinivasan, Anderson, and Ponnnavolu (2002) call '*choice*'. A richer variety of high quality products/services is likely to keep customers coming back. Selection is also likely to be associated with transaction completeness. The more services are available on-line, the greater the chance that the company will be able to meet the various needs of its customers without requiring customers to fall back on alternative means of service delivery and new, hard to find products/services are likely to give companies an advantage over their competition (Cox & Dale, 2002; Madu & Madu, 2002; Wolfinbarger & Gilly, 2001).

Chen, Gillenson, and Sherrell (2002) introduce a 'fit' variable called ***compatibility*** (see also Vijayasarathy, 2004). Although not a Web site factor per se, compatibility takes into account that some customers may simply prefer other means of interacting rather than via Web sites. This 'fit' variable represents the degree to which using the page *fits with the customer's existing values, beliefs, lifestyle, and the way they like to shop and seek for information* (Vijayasarathy, 2004). As such, compatibility may represent a moderating factor between evaluation (e.g., Web site quality assessment) and subsequent behaviours (i.e., usage). In fact, research demonstrates that customers' propensity to embrace technologies (i.e., their technology readiness) depends on the relative dominance of positive versus negative feelings in their overall technology beliefs (Parasuraman 2000). Research by Eastlick (1996) indicates that people's attitudes and beliefs about interactive teleshopping were good predictors of their propensity to adopt this mode of shopping. In a study on intentions to use technology-based self-service options, consumers varied in terms of their beliefs/feelings about the various options, and that those beliefs/feelings were positively correlated with intentions to use (Dabholkar, 1996). Customers who resist self-service technology typically prefer the customary method of delivery (Prendergast & Marr, 1994; Zeithaml & Gilly, 1987). One study found that "need for interaction" with the

service provider emerged as having a significant negative influence on accepting self-service technology during the service process (Dabholkar, 1996). According to Barnes (1997), it is likely that those customers who enjoy 'at arms-length' relationships are most likely to value efficiency rather than personal interaction and, thus, are more willing to use self-service technology while shopping (Barnes, 1997).

Although not a Web site characteristics per se, the quality of contact and support provided to customers is likely to affect customers' continued site usage given that most service recovery efforts and inquiries are not processed via the Internet, but rather, relate back to the 'real world' (Schubert & Dettling, 2001). Reichheld and Schefter (2000) explicitly identify 'quality customer support' as a necessary ingredient in fostering e-loyalty. *Employee assurance* and *responsiveness* pertain to *how knowledgeable* the company's employees are when solving problems/conflicts and how *willingly and quickly* they are perceived to do so (Liu & Arnett, 2000; O'Neill, Wright, & Fitz, 2001; Madu & Madu, 2002; van Iwaarden et al., 2004). Srinivasan, Anderson and Ponnnavolu (2002) have introduced a similar concept which they have called '*contact interactivity*'.

Specifically, employee responsiveness taps into the *timeliness, promptness* and *immediacy of employee acknowledgments and responses* to e-mail/telephone requests, questions, or complaints (O'Neill, Wright, & Fitz, 2001; Zeithaml et al., 2001). Employee assurance, on the other hand, is defined as a sense of safety stemming from the belief that employees are *knowledgeable* and *competent* and that one will receive fair treatment during service failure recovery efforts (O'Neill, Wright, & Fitz, 2001).

3.8 - Conclusions from Literature Review into Factors Linked to Web Site Loyalty

In Figure 3, we have attempted to identify the overarching categories of Web site design and content factors which have emerged in the literature and which have

been shown to positively influence antecedents of Web site loyalty. These categories include: *Utilitarian*, *aesthetics*, *entertainment* value, and, to a lesser extent, *comparativeness to other channels*. Moreover, our literature review shows that studies have primarily focused on the utilitarian aspects of Web sites (e.g., ease of use, perceived usefulness, meeting all the customer's transactional needs by offering rich content and functionality). However, empirical evidence into the importance of affect-based trust (a.k.a., benevolence, goodwill) point to a fifth category of factors. We coin this category as 'affective/relational factors'.

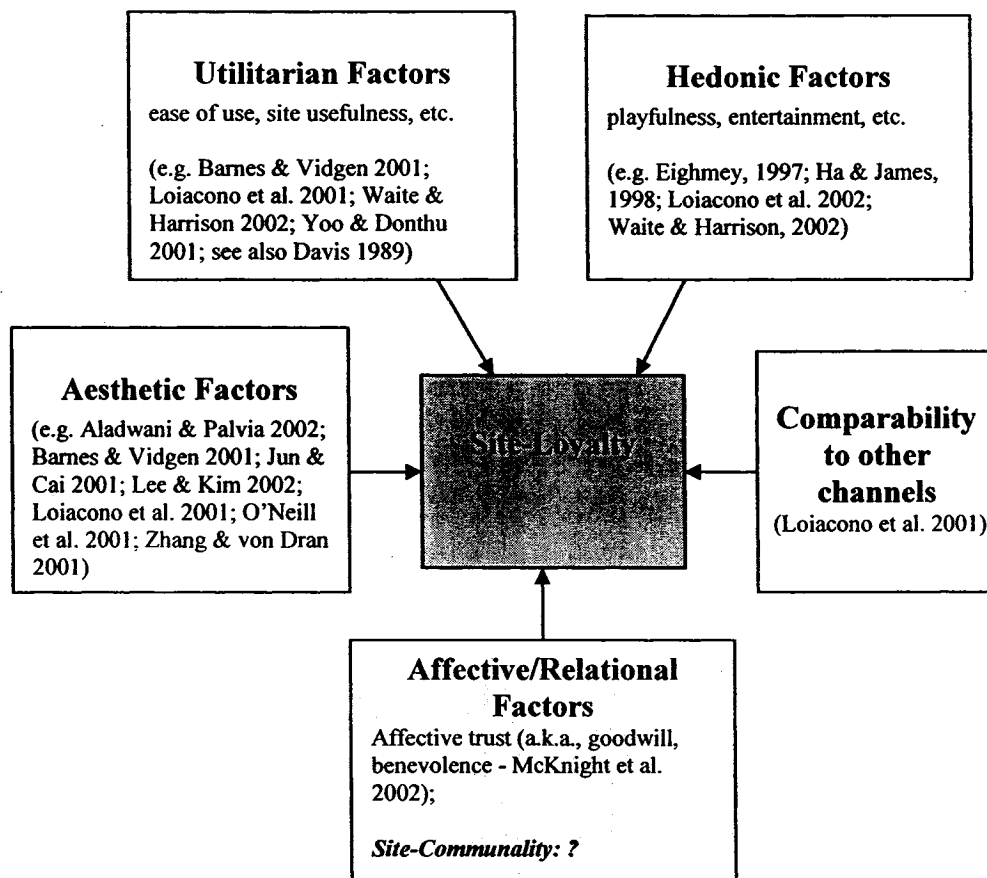


Figure 3. Conceptually Distinct Categories of Factors Underlying Affecting Site-Loyalty

Although the literature on online trust acknowledges the importance of factors such as benevolence (a.k.a., affect-based trust) in e-commerce (see McKnight et al. 2002), many of the 'affective/relational factors' found to be important in studies into traditional, interpersonal, face-to-face commercial environments have been conjecturally dismissed as non-pertinent to Web site design by several authors (e.g., Cox & Dale, 2001; Zeithaml, Parasuraman, & Malhotra, 2001, 2002; van Iwaarden, van der Wiele, Ball, & Millen, 2003). Generally, these authors argue that such factors lose their relevance in Web site design because of the self-service nature of Web-based commercial environments, and are, at best, only contingently important, coming into play only when actual customer/employee

communications occur (i.e., email messages or telephone conversations with company representatives).

We disagree. In the following chapter, we propose that precepts of what have been termed 'close', 'intimate', or, more specifically, 'communal-relationships' (e.g., Aggarwal, 2004; Bunk, Doosje, Liesbeth, & Hopstaken, 1993; Clark, 1984; Clark & Mills, 1979, 1993; Mills & Clark, 1982; VanYperen & Buunk, 1990; VanYperen, Buunk, & Schaufeli, 1992) may be effectively communicated via Web site design. We introduce a Web site design variable which we coin 'Site-Communality' which we develop to measure the extent to which a company's Web site reflects and communicates the company's openness/desire to enter with its customers into a relationship which promises to go beyond the formal, 'tit for tat' business dealings that are typically expected from purely commercial exchanges, but rather, abides more closely to the norms and behaviours typically associated with communal relationships.

3.9 - Summary

In this chapter, we identified factors which influence the antecedents of Web site loyalty. Our literature review suggests that researchers have primarily focused on the utilitarian aspects, and/or aesthetics, and/or the entertainment value of sites. Little attention has been paid to, what may be termed as, relational factors. In this thesis, we investigate whether Web sites may be designed to convey communality and whether this could have beneficial effects on attitudes and behavioural intentions associated with loyalty. In the next chapter, we present literature on communality and propose a new variable called *Site-Communality* - a characteristic of Web sites.

Chapter 4 - Communal-Relationship Theory

4.1 - Overview

In the previous chapter, our literature review of design factors affecting the antecedents of Web site loyalty suggests that (1) the utilitarian aspects (e.g., ease of use, perceived usefulness) have received the most attention, (2) to a lesser but significant extent, factors related to the entertainment value of sites and site aesthetics have also been identified as important in fostering Web site loyalty. However, the affective/relational factors more closely associated with communal-relationships and found to be important in traditional, face-to-face service delivery (e.g., company demonstrations of caring and concern, helpfulness) have (a) either been dismissed as being not very important or (b) have been identified as contingently important coming into play only when customer/company communications actually occur (i.e., email messages or telephone communications with support employees) (e.g., Cox & Dale, 2001; Zeithaml et al., 2001). Research into 'trust' in Web-based retailing and service provision suggests a similar pattern. Although McKnight et al. (2002) found that affective trust evoked by Web site activity had a positive effect on usage intentions, the authors only speculated as to what design and content features may have a positive impact on affective trust (e.g., third party endorsements such as TRUSTe). In this thesis, we attempt to fill this gap by demonstrating that the precepts of what are 'communal' relationships (Clark, 1984; Clark & Mills, 1979, 1993; Mills & Clark, 1982) in Social Psychology can be effectively be communicated via Web site design and that this communication positively influences the attitudes and behavioural intentions associated with Web site loyalty.

Traditionally, the literature on business relationships has generally assumed that customers gauge their relationships purely according to the precepts (i.e., norms and behaviours) associated with *exchange-relationships* (e.g., the company's demonstrations of reliability, fairness in dispute resolution, contractual

assurances). However, a growing number of studies show that customers may develop relationships with companies, employees, and even products that are more akin to what social psychologists call *communal-relationships* (Aggarwal, 2004; Goodwin, 1996). Although the number of studies which have applied the precepts of communal-relationship theory (or similar concepts) into the study of commercial relationships are still few, results do suggest that commercial relationships that take on a 'communal flavour' positively affect customer loyalty attitudes, intentions and behaviours. In this chapter, we begin with a review of research in Social Psychology pertaining to communal-relationships and its recent adaptation to the area of commercial relationships.

4.2 - Differences Between Communal Versus Exchange Relationships

In the area of Social Psychology, several studies have evidenced important differences between *communal* and *exchange* relationships (Batson, 1987; Batson & Oleson, 1991; Clark, 1984; Clark & Mills, 1979, 1993; Mills & Clark, 1982). Rather than being dichotomous, communal- and exchange-relationships identify polar ends of a same continuum (Clark & Mills, 1979; Goodwin, 1996). Communal relationships are often exemplified by relationships with friends and family, whereas, exchange relationships are typified by relations between acquaintances and business partners (Aggarwal, 2004; Clark & Mills, 1979; Goodwin, 1996; Williamson & Shaffer, 2001). The distinction between exchange- and communal-relationships "is based on the rules and norms that govern the giving and receiving of benefits" (Clark & Mills, 1993, p. 684). When two people engage in communal relationships, each assumes a general obligation to be concerned about the other person's welfare. Benefits are given to please the other and as a demonstration of genuine concern. In communal relationships, the giving of benefits is a response to needs.

By contrast, exchange relationships are 'tit-for-tat' relationships. When two people engage in an exchange relationship, they do not feel any obligation to be concerned about the welfare of the other. Exchange-relationships are also often

referred to as *agentic* relationships (Rawlins, 1992). They are 'balanced' and 'economic' in nature and abide by the relational dynamics prescribed by equity theory (Chadwick-Jones, 1976). When persons want an exchange relationship, they expect reciprocity (i.e., equitable relationships). Benefits are given as repayment for benefits received in the past or because an expectation exists that what is given today will be reciprocated with valuable benefits in the future (Clark, Ouellette, Powell, & Milberg, 1987; Kickul & Liao-Troth, 2000)³³.

The stronger the exchange-relationship between two people, the more sensitive they are to maintaining equity in the relationship. Equity exists when a person perceives that what he/she invests into the relationship and what he/she is foregoing on to remain in that relationship is worth what he/she is getting in return. Partners in exchange-relationships tend to 'keep score' of what they have invested into the relationship relative to the other and, for such people, feelings of inequity strongly and negatively affect relationship satisfaction and duration (Buunk & VanYperen, 1991). People who want to avoid destroying an exchange-relationship must be quick to re-establish equity if ever their partner perceives that inequity has occurred. Unless equity is quickly re-established, exchange-relationships are not likely to endure.

Rather than being dichotomous, Clark and her colleagues argue that exchange and communal relationships represent polar ends of a same continuum. The attribution of motivation for the giving and receiving of benefits is what differentiates the two (Clark and Mills, 1979). Persons, desiring a communal rather than an exchange relationship, approach relationships with different expectations and motivations. The behaviours associated with communal norms are motivated by nurturing and caring for the needs of another, which in turn, results in a sense of satisfaction for the receiver of these benefits (Mills & Clark, 1982). When interactants desire to establish a relationship characterized by communal norms,

³³ Reciprocity suggests that people return good for good (or bad for bad) proportionately to what they receive (Bagozzi, 1995).

they tend to behave more as friends do while those who desire to establish a relationship characterized by exchange norms behave more like strangers interacting for a particular purpose (Clark, 1984; Clark et al., 1986, 1989; Clark & Taraban, 1991). The desire to enter into a communal-relationship (e.g., friendship) with another typically include such behaviours as attempts at intimacy, conveying warmth, demonstrations of caring, encouragement, validation of the other's feelings, disclosing one's own feelings, etc. (Bukowski, 2001; Crosby, Evans, & Cowles, 1990; Hays, 1985; Hornstein & Truesdell, 1988; Kahn & Antonucci, 1980). The distinction between communal- and exchange relationships has been addressed in the context of commercial relationships as well (Aggarwal, 2004; Goodwin, 1996; Price & Arnould, 1999) and touched upon by others who have investigated the effects of conveying characteristics of communal-relationships in commercial environments such as conveying 'warmth' in advertising (e.g., Aaker, Stayman, & Hagerty, 1986; Lemmink & Mattson, 1998, 2002).

4.3 - Evidence of Communal-Relationships in Traditional Service Settings

Exchange-relationships epitomize our widely accepted views regarding business relationships. They are agentic and role-based. Participants follow norms and behaviours which can best be described as those between polite strangers enacting a script³⁴ and interacting with one another for the primary, if not for the sole purpose of attaining/delivering a particular service. In such relationships, communications between the customer and company representatives are highly task- and goal-oriented. These assumptions have guided most of the research into commercial relationships.

³⁴ 'Scripts' are goal-directed (Shoemaker, 1996). They represent procedural knowledge and resemble production rules - the predetermined, stereotyped, and sequenced actions defining the behavior of actors in a familiar situation (Schank & Abelson, 1977). For customers, the typical script enacted during a bank visit "calls for the customer to wait in line, fill out the withdrawal or deposit form, complete the transaction, and then calmly leave the bank" (Shoemaker, 1996). Scripted employee actions are instrumental in that they are intended to achieve a given purpose – the effective delivery of the service.

However, several studies in the field of marketing have evidenced that some may come to resemble weak communal-relationships³⁵ (e.g., Adelman, Ahuvia, & Goodwin, 1994; Price & Arnould, 1999; Goodwin & Gremler, 1996; Gwinner, Gremler, & Bitner, 1998; Reynolds & Beatty, 1998). For instance, certain service relationships, such as those sometimes found between patients and their physicians often evolve and surpass the motivations underlying pure exchange relationships. In fact, research has long ago established that there exist other motivations for shopping than simply 'buying'. Customers may derive both functional and social³⁶ benefits from their associations with service providers (Forman & Srivam, 1991; Reynolds & Beatty, 1999). Motives include "social experience outside the home" (Tauber, 1972) and just "talking to personnel" (Donovan & Rossiter, 1982). Stone (1954), for instance, found that women shoppers could be segmented and that one of these segments, which the author termed as "personalizing shoppers", developed strong personal bonds with employees, which represented a substitute for social contact. In fact, many service providers (e.g., funeral home directors, family doctors) contribute to a sense of community and provide social support (e.g., Adelman, Ahuvia, & Goodwin, 1994). Often, services that have traditionally relied heavily on interpersonal

³⁵ Gutek's (2000) distinction in relationship types is analogous with communal/exchange theory. The author argues that it is important to differentiate between pseudo- (i.e., exchange) and service-relationships (i.e., communal). "A pseudo-relationship is repeated contact between a customer and an organization. In this case, the customer does not get to know any individual service provider but does become acquainted with the service, products, and procedures of the organization. Customers do not anticipate any future interaction with a particular provider but expect to interact with the firm in the future" (p. 372). The author notes that pseudo-relationships are essentially many encounters where each encounter occurs between *strangers*; although they do not provide familiarity with the employees it does provide familiarity with the organization. On the other hand, in service-relationships, customers identify with a particular employee.

³⁶ Indeed, certain individuals may "rely on relations in the marketplace as a source of human contact and for whom the retailing encounter is not merely a commercial transaction, but has value as a surrogate social contact. (...) To many, the familiar face and casual conversation offered by a store owner or employee may be a source of comfort, adding a sense of community to an otherwise transient local social landscape" (Forman & Srivam, 1991, p. 227).

interaction between customers and employees appear to be particularly well suited for the development of relationships characterized by communal norms.

In exchange-relationships, behaviours during interpersonal service encounters are highly *role-prescribed* (i.e., those between doctor/patient, police officer/law offender). In communal-relationships are tantamount to what Marketing researchers call 'commercial friendships' (Price & Arnould, 1999) and often fulfil the emotional needs of those involved. Importantly, communal-relationships in commercial contexts transcend the service script (Goodwin, 1996) and may be more closely related to the development of affect-based trust leading to a belief in the benevolence of the relationship partner (McAllister, 1995) surpassing the economic nature of the initial commercial (i.e., exchange) relationship. Bartenders, for instance, often serve as part of a social support network for some clients (Goodwin & Gremler, 1996). This transcends traditional bartender / customer roles and corresponds more closely to behaviours exhibited among friends (i.e., communal relationships).

In traditional service settings, the primary characteristic which distinguishes communal- from exchange-relationships is that the former occur *between persons* rather than *between role-personas* which affects the types of communication which occurs between relationship partners (Goodwin, 1996). Communal-relationships in commercial settings are typically observed when the customer and the employee engage in conversation deemed unessential to the delivery of the service (e.g., small talk). This may include, for instance, discussing with a bank teller the details of one's last vacation, the weather, or inquiring about the health of a family member (Goodwin, 1996). These conversations do not pertain directly to the delivery of the service but include mutual and voluntary expressions of caring and one's extra-role identity, simply put - a sharing of interpersonal histories pertaining to aspects of one's life which are 'outside' the typical customer / employee exchange-relationship (i.e., extra-role communications). For example, questions such as "how is your cat?" may be perceived as programmed

personalization (associated with exchange-relationships) when asked by your veterinarian when you meet her by chance at the mall, but if the vet asks “how is your daughter’s health?” under the same situational circumstances the question is unrelated to the vet / client roles and, therefore, suggests the presence of what Goodwin (1996) calls ‘*communality*’ which she defines as the extent to which a commercial relationship resembles a friendship.

4.4 - The Impact of Communality on Customer Loyalty in Traditional Service Settings

There is empirical evidence showing that, in commercial contexts, fostering communality rather than strictly role-bound (exchange) relationships between customers and employees may impact more positively on loyalty. Macintosh and Lockshin’s (1997) results show that interpersonal relationships between customers and salespeople act as a bonus making customers more loyal. Similarly, in Iacobucci and Ostrom (1996), the results of their study indicated that customers who had personal relationships with salespeople had a more positive attitude about the store and were more loyal. Gremler and Gwinner (2000) found that a factor related to communal-relationships, which they coined as ‘*rapport*’ positively influenced customer evaluations including loyalty. They considered *rapport* as the customer’s perception of having an enjoyable interaction with the employee and that a ‘personal connection’ exists between the two. The customer experiences *rapport* when both (s)he and the employee ‘click together’ or have ‘good chemistry’. Price and Arnould (1999) also provide strong evidence based on qualitative research of the existence of a positive link between communality and customer loyalty.

4.5 - What Communal-Relationships aren’t

It is important to more clearly distinguish communality from similar concepts. Communality is completely voluntary and should, therefore, be distinguished from ‘over-the-counter niceness’ which may be *required* by a person when (s)he

assumes the role of employee and enacts the appropriate service script (Goodwin, 1996). In fact, companies often train employees to behave in a friendly manner during service delivery in order to increase sales and customer satisfaction (e.g., Ashforth & Humphrey, 1993; Grandey, 2003; Totterdell & Holman, 2003). Typically, waiters and flight attendants are often required to convey friendliness as a job requirement (Tsai & Huang, 2002). Although friendly, the resulting communications between the customer and company representatives may nevertheless be highly task- and goal-oriented. Conversely, communality is characterized by communications that transcend the service script (Goodwin, 1996).

Communality is not psychological involvement in the service encounter. Involvement “reflects the customer’s belief that the service provider is interested in them as a person, not just their property, body, or mind in need of being serviced” (Siehl, Bowen, & Pearson, 1992, p. 541). According to Goodwin (1996), communality can be evidenced even in situations of low-involvement, routine transactions. Moreover, high-involvement does not necessarily mean that communality will surface. For instance, both customers and service providers may be highly involved in psychotherapy sessions but the conversations may remain well within the bounds of the delivery of the core service.

Neither is communality a ‘sense of community’. The latter is defined as a “sense that one belongs in and is meaningfully part of a larger collectivity” (Sarason, 1974, p. 1). While a sense of community may facilitate the development of communality between relationship members, a ‘sense of community’ suggests an allegiance and sense of belonging to a group or a collective whereas communality describes a relationship dimension (Goodwin, 1996). As such, a ‘sense of community’ may exist when members participate in community or member activities and communicate with other members regarding core-service activities. For instance, academics may actively participate in conferences with their peers providing and yet conversational topics may never stray from academic related

topics, remaining quite impersonal and mainly concerning presentation topics, research ideas and curricula interests.

Furthermore, just as exchange-relationships are not synonymous with short-term relationships neither are communal-relationships necessarily synonymous to long-term relationships. Nevertheless, there appears to be a relationship between the duration of the relationship and communality (Goodwin, 1996). This relationship, however, is not linear but rather follows a U-shaped function. As such, although some authors suggest that communal relationships imply a past interpersonal history or the expectation of an interpersonal future (Lydon, Jamieson, & Holmes, 1997) communal behaviours appear to be highest when customers are either in long-term relationships or when they do not expect any future interaction at all (e.g., confessional intimacy among two strangers on a train) (Goodwin, 1996). For instance, Price and Arnould (1999) found evidence that communality can form even when structural opportunities for sociability are quite low, such as, when contact is limited to phone conversations only. Thus, although Communal/Exchange theory suggests an evolution from the 'default' exchange-relationship to a communal one in commercial settings, this evolution may be quite rapid and even occur within the confines of a single service encounter. For instance, when the customer and the employee 'click together' (Gremler & Gwinner, 2000).

Conversely, even if customers interact with the same employees over several encounters, communal relationships are not guaranteed to develop. They do not occur simply because customers and employees interact interpersonally in a face-to-face manner over time. In fact, although a history between two people suggests that a friendship-like (communal) relationship may result, the customer may enter into long-term relationships with particular employees for several reasons including instrumental ones. In other words, commercial relationship can remain very 'exchange' even when they span across an extended period of time. For instance, by interacting with the same company representative at each service

encounter, some customers may simply feel that they are receiving better service. Because of their interpersonal history, the company representative may become better informed as to the particular service needs and concerns of a specific customer. In the case of bar clientele, having an interpersonal history may be valued by the customer because a familiar bartender can better attend to a customer's particular tastes (e.g., serving a drink in the kind of glass the customer likes to drink out of, knowing that the customer likes martinis that are shaken rather than stirred), thus, providing a higher level of personalization. However, such a relationship should not be characterized as a communal-relationship, but rather, corresponds more closely to an exchange-relationship. Simply put, communality should not be mistaken for personalization. Personalization is a relationship-building tactic. It aims at exploiting customer uniqueness for a business related purpose (i.e., attracting the customer in the future). On the other hand, communality refers to a 'personal connection' developing between the customer and the service employee (Gremler & Gwinner, 2000).

Moreover, contrary to communal relational dynamics which elicit a high degree of affect and mutual caring, personalization is believed to work at the conative rather than the affective level in the customer's psyche. Personalization can help build loyalty but for different reasons than communality. According to some authors, personalization may help elicit loyal behaviours because customers may feel obligated to 'repay' the company's and its employees' investments in friendliness (Kang & Ridgway, 1996; De Wulf et al., 2001). This further suggests personalization's closer ties with exchange- rather than to communal-relationships because customers are believed to *reciprocate* one investment (i.e., the company's personalized / special treatment of the customer) with another (i.e., continued future patronage). In fact, reciprocity represents the key feature explaining stability and relationship duration in exchange relationships (Larson, 1992).

4.6 - Communal-Orientation

Researchers in Social Psychology suggest that people have an ‘orientation’ toward (i.e., a preference or propensity for) establishing communal-relationships with particular others (i.e., Clark, Ouellette, Powell, & Milberg, 1987). This *orientation* is believed to be contextually stable over time (Clark, Ouellette, Powell, & Milberg, 1987), linked to a combination of several factors among which personality variables (i.e., extraversion, need for nurturance) and demographics (i.e., age) combine and influence customer preferences for having exchange- or developing communal-relationships in service contexts (e.g., loneliness in the elderly can affect desire to engage in more communal relationships in commercial settings) (Goodwin, 1996). More specifically, communal-orientation is defined as an individual-difference characteristic which implies the desire to give and receive benefits in response to the needs of and out of concern for others (Buunk, Doosje, Liesbeth, & Hopstaken, 1993).

Accordingly, customers low in communal-orientation may not have a strong inclination or desire for establishing communal relationships in commercial settings. Typically, these customers categorize their relationships as ‘good’ when employees (i.e., doctors, lawyers, etc.) ‘do their jobs well’, in other words, when employees successfully enact their roles and follow the service script. Thus, customers low in communal-orientation may be thought of as those who typically prefer to ‘stick to business’ during the delivery of service. Sometimes, this is because non-essential conversations associated with communal-relationships can interfere with the speediness of service delivery. Others may simply prefer a relationship that is more ‘at arms-length’ (Barnes, 1997).

Furthermore, even when customers are high in communal-orientation, communality may not surface because of environmental restrictions (Goodwin, 1996). Some service environments are more auspicious to communality than others; these include hairdressing salons and bars. In such environments, small talk does not interfere with the delivery of the service. In other service

environments, however, non-essential conversation may actually impede or slow the delivery of the service. Goodwin (1996) suggests that communality (i.e., the degree to which a relationship resembles a friendship), in the context of traditional service environments, is more likely to surface under service environments where there is 'ample time to chat'. In service settings where providers tend to charge for their time, even customers high in communal-orientation may be less willing to embark in non-essential communication.

The idea that customers may vary in terms of communal-orientation may help explain why marketing research on whether having close customer/employee ties necessarily add value to the customer's evaluation of the service has yielded mixed results. As mentioned previously, there is ample research evidence showing that the bonds which develop between customers and company employees can be an important source of affect for many customers (Reynolds & Beatty, 1999) and act as a bonus, making loyalty stronger (Gremler & Gwinner, 2000; MacIntosh & Lockshin, 1997). On the other hand, Barnes (1997) used a perceived gap measure of 'closeness' in his study on customer relationships with banks, to show that not all customers valued close relationships with their banks. Forty percent (40%) of respondents indicated that they wished their relationship to be closer while almost ten percent indicated that they would have liked a more distant relationship.

For many customers, front-line employees may represent nothing more than a necessary conduit for service delivery - a means to an end. For instance, research shows that a significant portion of customers who do not have a 'close' relationship with the salesperson do not consider that it would be beneficial to have one (Beatty et al., 1996). Some customers may feel quite content and even delighted when their relationship is more 'at arms-length' (Sheaves & Barnes, 1996; Bearden, Malhotra, & Uscátegui, 1998; Crosby, Evans, & Cowles, 1990). Under certain circumstances, it even appears that attempts on the part of the service provider to 'get close' may be viewed by the customer as manipulating,

undesirable, and intrusive and may be rejected (Adelman, Ahuvia, & Goodwin, 1994; Gordon, McKeage, & Fox, 1998; Price & Arnould, 1999).

4.7 - Summary

In this chapter, we have addressed the differences between communal- and exchange-relationships as presented in Social Psychology. We have also reviewed recent research into commercial relationships which has related the precepts of communal-relationship theory and has evidenced that commercial relationships may come to resemble communal-relationships (a.k.a., communality) and that these have beneficial effects on customer loyalty in traditional service settings. However, research also suggests that customers vary in the extent to which they seek out and appreciate communality in commercial environments. Some may simply prefer a relationship that is more 'at arms-length' (see Barnes, 1997).

No research, however, has attempted to investigate whether 'communality' can be conveyed via Web site content (referred to as Site-Communality in following chapters) and whether Web sites which convey high communality influence customer loyalty toward the Web site. In this thesis, we propose to address these questions. In the next chapter, we define Site-Communality and Site-Loyalty and present the models which we intent to empirically examine. Basing ourselves on our literature review of communal-relationships in commercial settings, we propose that Site-Communality will have a direct positive impact on Site-Loyalty but that this relationship is moderated by the customer's communal-orientation whereas we expect that the positive relationship between Site-Communality and Site-Loyalty will be stronger in consumers high in 'Communal-Orientations in Traditional Commercial Environments'.

Chapter 5 - Models and Hypotheses

5.1 - Overview

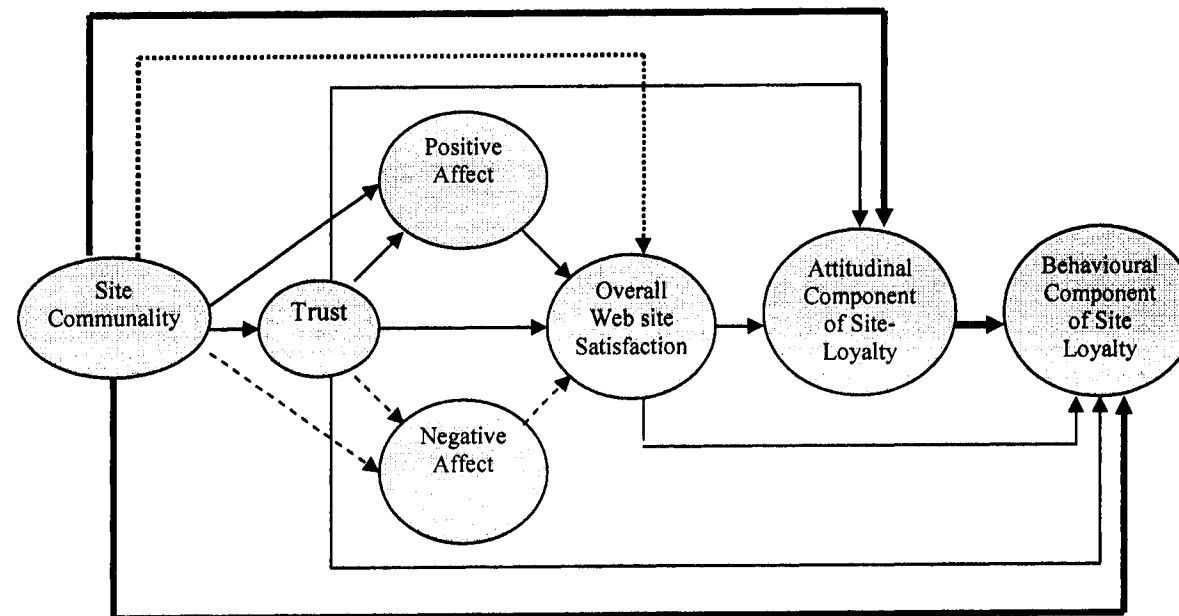
In this thesis, we have noted that, although several studies have turned their attention into identifying Web site design factors which influence customers' perceptions of quality and, by extension, Web site loyalty, the majority of factors identified can be considered as being utilitarian in nature (e.g., ease of use, ease of navigation). By contrast, empirical studies into more traditional, face-to-face retailing and service settings have evidenced the importance of such factors as empathy (Parasuraman et al., 1988), warmth (Lemmink & Mattson, 1998, 2002), communality (Goodwin, 1996), etc. We have termed the latter as affective/relational factors. In fact, aside from the literature on the importance of establishing trust in online environments which identifies the user's perception of the online company's benevolence, many of the affective/relational factors found to be influential in traditional commercial settings have been either ignored or dismissed as non-relevant to Web site design, given the self-service nature of these commercial environments (e.g., van Iwaarden, van der Wiele, Ball, & Millen, 2003; Zeithaml, Parasuraman, & Malhotra, 2001).

To the contrary, we propose that the precepts of what have been called communal relationships in Social Psychology (Clark, 1984; Clark & Mills, 1979, 1993; Mills & Clark, 1982) can be effectively communicated via Web site content and design and that such communications positively influence users' attitudes and behavioural intentions typically associated with loyalty toward the Web site. Demonstrating this entails (1) developing measures/constructs of Site-Communality and Site-Loyalty and assessing their validity and reliability and (2) statistically testing whether a positive and significant relationship exists between the two. With this in mind, in this chapter, we present our models and hypotheses.

5.2 - The Overall Model

It is important to note that when developing new measures/constructs, one important aspect is to establish the measures' nomological validity. This form of validity is concerned with examining a complex Web of causal relationships between new and existing, established constructs and assessing whether these constructs 'behave' in the way envisioned by the researcher (based on theory). Model 1 (see Figure 4) represents the overall conceptual model showing causal links between constructs/variables. The arrows linking the variables represent the hypothesized causal relationships between the variables. All relationships which are displayed as solid lines (———) are expected to be significant and positive. Those shown using dashed lines (- - - - -) are expected to be significant but negative. For those shown by a dotted line (.....), the relationship is expected to be non-significant. If these relationships can be statistically confirmed, nomological validity is established.

Second, the overall conceptual model (see Model 1 in Figure 4) also graphically shows our main hypotheses of interest using thicker solid lines (—————) going from Site-Communality to the attitudinal and behavioural components of Site-Loyalty. These represent our main research question, that, Site-Communality is significantly and positively related to Site-Loyalty.



- (———): Relationships expected to be significant and positive
- (- - - - -): Relationships expected to be significant and negative
- (.....): Relationships expected to be non significant
- (———): Main relationships of interest (expected to be significant and positive)

Figure 4. Model 1 Showing the Expected Relationships between Variables.

For the purpose of establishing nomological validity of Site-Communality and of Site-Loyalty, the conceptual model (Model 1 in Figure 4) is partitioned into two (2) smaller models (Model 2 in Figure 5 and Model 3 in Figure 6). For testing purposes, partitioning the larger conceptual model into two smaller models becomes, statistically speaking, more manageable, in terms of sample size requirements, for conducting Structured Equation Modelling. The two models are presented and discussed in sections 5.3 and 5.4 respectively. Section 5.5 describes the main model, that is, the expected relationship between Site-Communality and Site-Loyalty. Finally, in section 5.6, we present hypotheses concerning a potential moderation effect between Site-Communality and Site-Loyalty, that is, that the relationship between these two (2) variables may be moderated by the customer's communal-orientation in traditional commercial settings. The latter suggests that the customer's preference for entering into communal relationships in traditional commercial settings will be reflected in online environments as well. As such, we expect that customers who seek out or enjoy establishing communal relationships in more traditional commercial settings (i.e., brick and mortar locations) will react more positively (in terms of Site-Loyalty) to Web sites high in Site-Communality compared to customers who prefer commercial relationships which are more 'at arms-length'.

5.3 - Model and Hypotheses Addressing Nomological Validity of Site-Communality

A measure is said to be nomological valid when it behaves as expected with respect to other constructs to which it is theoretically related (Churchill, 1979). Thus, by testing the relationships in a theoretical model, researchers can establish nomological validity (Zhu & Kraemer, 2002). In the context of this study, nomological validity issues pertaining to Site-Communality and Site-Loyalty is addressed by examining the complex Web of causal relationships between these concepts and others, such as some of those previously reviewed in Chapter 2 as antecedents of loyalty. This may include, for instance, using Structured Equation Modelling (Jöreskog & Sörbom, 1996) to evaluate the relationship between Site-

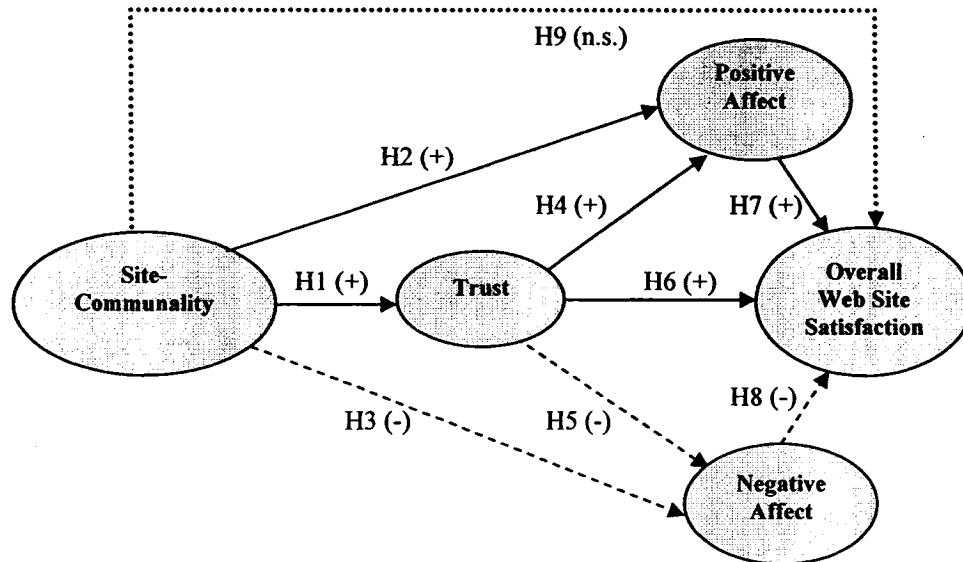
Communality and Trust or between Satisfaction and Site-Loyalty to see whether these are as expected.

We base our models on the well-known C-A-B (*Cognition* → *Affect* → *Behaviour*) framework advocated by many appraisal theorists from Psychology (e.g., Frijda 1986, Lazarus 1988; Nussbaum, 2001; Ortony, Clore, & Collins 1988; Roseman 1984). It suggests that *thinking* (i.e., evaluation/belief/appraisal/cognition) leads to *feeling* (i.e., affect/emotion/attitude) which then leads to *doing* (e.g., usage). Interestingly, this framework (in whole or in part) also underlies much of the research in both IS and Marketing research as well (e.g., Cronin & Taylor, 1992; Davis, Bagozzi, & Warshaw, 1989; Oliver, 1996). From this perspective, we position a visitor's assessment of *Site-Communality* as being cognitive in nature which *causes* feeling states (e.g., positive attitude toward the Web site) which, in turn, will serve to impel, or in other words, *cause* some future behaviour (e.g., usage).

The reader should note that, to investigate nomological validity, we pre-empted adequate sample size requirements by splitting the conceptual model (Model 1, see Figure 4) into two smaller models (see Models 2 and 3). Arguably, although Model 1 could have been used for statistical analysis, the sample size requirement to test such a model using Structured Equation Modelling would have needed to be very large. It must be noted that this practice is not uncommon when developing new measures and in assessing their validity. Tsiros and Mittal (2000), for instance, tested several models when developing their measure of *Consumer Regret*. This included: (1) a model to differentiate Regret from Satisfaction and to test its impact on repurchase intentions and (2) another model to establish the antecedents and moderators of regret.

As such, to assess the nomological validity of Site-Communality, we present Model 2 (see Figure 5). Consistent with the C-A-B framework, Site-Communality and Trust are conceptualized as cognitive concepts preceding Affect and Overall

Web site satisfaction which are affective responses. Model 3 (see Figure 6) addresses the nomological validity of Site-Loyalty which is discussed in section 5.4.



(———): Relationships expected to be significant and positive
 (- - - - -): Relationships expected to be significant and negative
 (.....): No significant relationship expected

Figure 5. Model 2 Used to Establish the Nomological Validity of Site-Communality.

Recent studies in IS research pertaining to e-commerce attest to the importance of fostering trust (e.g., Ba & Pavlou, 2002; Ba, Whinston, & Zhang, 1999; Bhattacharjee, 2002; Cassell & Bickmore, 2000; Egger, 2003; Featherman & Pavlou 2002; Friedman, Kahn, & Howe, 2000; Gefen, 2000; Gefen & Straub, 2000, 2002; Hoffman, Novak, & Peralta 1999; Jarvenpaa & Tractinsky, 1999; Keat & Mohan, 2004; McKnight & Chervany, 2001; McKnight, Choudhury, & Kacmar, 2002; Milne & Boza 1999; Pavlou, 2001, 2003; Suh & Han, 2003; Torkzadeh & Dhillon, 2002; Urban, Sultan, & Quails, 2000). Several of these

have identified trust as a multidimensional concept made up of, at least, three components: (1) the user's belief in the online company's integrity, (2) its competence, and (3) its benevolence (e.g., Gefen, 2000; McKnight & Chervany, 2001; Chen & Dhillon, 2003). Arguably, Site-Communality is likely to positively influence the latter dimension and, therefore, should also be positively associated with the online company's ability to foster trust in visitors. Thus, the following hypothesis is postulated:

H1: There is a positive relationship between Site-Communality and Trust.

Affect (Havlena & Holbrook 1986; Lisetti & Bianchi, 2002; Westbrook 1987) is typically characterized in terms of two relatively independent dimensions: positive affect and negative affect. Repeatedly, during factor analysis, these two have emerged as separate factors rather than as a single factor (Thayer, 1989; Watson, Clark & Tellegen, 1988). Consistent with these findings, rather than treat positive and negative affect as one construct, our model represents positive affect and negative affect as separate constructs. Moreover, this has an advantage in testing for nomological validity. Specifically, the inclusion of both positive affect and negative affect in this model allows us to postulate and test both positive relationships (i.e., between Site-Communality and Positive Affect) and negative relationships as well (i.e., between Site-Communality and Negative Affect).

Positive Affect (PA) "reflects (...) a state of high energy, full concentration, and pleasurable engagement. (...) In contrast, Negative Affect (NA) is a general dimension of (...) unpleasurable engagement" (Watson, Clark & Tellegen, 1988, p. 1063). Qualitative research into communality in traditional service settings clearly suggests that communality during customer-employee interaction engenders positive feelings in customers (see Price & Arnould, 1999). Consistent with these findings, we postulate the following two hypotheses:

H2: There is a positive relationship between Site-Communality and Positive Affect.
H3: There is a negative relationship between Site-Communality and Negative Affect.

Studies investigating the relationship between Affect and Trust evidence the existence of a significant positive correlation between Positive Affect and Trust and a significant negative correlation between Negative Affect and Trust (e.g., Simmons, Nelson, & Neal, 2001). As such, we postulate the following two hypotheses:

H4: There is a positive relationship between Trust and Positive Affect.
H5: There is a negative relationship between Trust and Negative Affect.

Trust is believed to play a central role in generating online customer satisfaction (Urban, Sultan, & Quails, 2000) and previous research on trust in organizational settings has evidenced that a strong, positive relationship exists between the two (e.g., Dirks & Ferrin, 2001; Lester & Brower, 2003; Balasubramanian, Konana, & Menon, 2003). Also, Chiou (2004) reports a positive and significant relationship between trust and overall customer satisfaction in choosing an Internet service provider. Consistent with this, we propose that:

H6: There is a positive relationship between Trust and Overall Web Site Satisfaction.

Research positions affect as an antecedent of satisfaction (e.g., Huelsman, Munz, and Furr, 2003) and shows that, in traditional service settings, positive affect contributes to customer satisfaction with the service (e.g., Westbrook, 1987;

Westbrook & Oliver, 1991; Mano & Oliver, 1993; Menon & Dubé, 2000; Evrard & Aurier, 1994). Consistent with these results, we postulate that:

H7: There is a positive relationship between Positive Affect and Overall Web Site Satisfaction.
H8: There is a negative relationship between Negative Affect and Overall Web Site Satisfaction.

Finally, we see no theoretical justification for a direct link between Site-Communality and Overall Web site Satisfaction. This, however, does not exclude the possibility that Site-Communality has an indirect effect on Overall Web site Satisfaction via Trust and Affect. In fact, research shows that when employees smile more, increase eye contact and extend more greetings to customers (i.e., behave in a very communal manner), customers experience more positive moods (Pugh, 2001) and that, in turn, this positive mood state influences their service experience³⁷. This appears to occur due to a process called primitive emotional contagion. It states that expressions of positive emotions during interactions often results in matched emotional states through a process of emotional mimicry (Hatfield, Cacioppo, & Rapson, 1993). Consequently, communality expressed by employees during service delivery (i.e., behaving as a friend would, smiling, demonstrating caring, etc.) may positively influence customer moods (i.e., positive affect) which may cause customers to unconsciously evaluate their service encounter positively (i.e., greater satisfaction). However, we do not believe that a direct relationship between communality and satisfaction exists. Consequently, we propose that:

H9: There relationship between Site-Communality and Overall Web Site Satisfaction will be non-significant.

³⁷ Positive mood states tend to make people look at the world through rose-colored glasses (Gardner, 1985).

5.4 - Model and Hypotheses Addressing Nomological Validity of Site-Loyalty

To address nomological validity issues of Site-Loyalty, we present Model 3 (see Figure 6). Again, we conceptualized the links between the concepts by basing ourselves on the C-A-B framework which suggests the following causal link: *Cognition* → *Affect* → *Behaviour*. Hypothesis H10 in Model 3 (Figure 6) is identical to hypothesis H6 in Model 2 (Figure 5). It proposes that:

H10: There is a positive relationship between Trust and Overall Web site Satisfaction

According to the literature, a positive link exists between Trust and Loyalty. For instance, according to several authors, successful and enduring relationships are often characterized as trusting relationships (e.g., Chow & Holden, 1997; Crosby, Evans, & Cowles, 1990; Ganesan, 1994; Geykens & Steenkamp, 1995; Morgan & Hunt, 1994; Moorman, Zaltman, & Deshpande, 1992). Moreover, empirical studies clearly show that trust leads to loyalty in traditional commercial settings (e.g., Bowen & Shoemaker, 1998; Doney & Cannon, 1997; Anderson & Weitz, 1989). A positive relationship between trust and loyalty has also been evidenced in e-commerce literature as well. Gefen (2000), for instance, reports a relationship between trust and both intention to purchase and intention to inquire about products on the vendor's Web site. Jarvenpaa, Tractinsky, and Vitale (2000) and Lynch, Kent, and Srinivasan (2001) show that trust positively impacts likelihood to purchase from a Web site. Lee, Kim, and Moon (2000) demonstrate a positive link between trustworthiness of Web sites and customers' loyalty. Also, more recently, Chiou (2004) found a positive and significant relationship between trust in an Internet service provider (ISP) and the customer's loyalty intention toward the ISP.

Based on the Dick and Basu (1994) conceptualization of loyalty, we postulate the following two hypotheses:

H11: There is a positive relationship between Trust and the Attitudinal Component of Site-Loyalty.

H12: There is a positive relationship between Trust and the Behavioural Component of Site-Loyalty.

Furthermore, two additional hypotheses are provided concerning the relationship between Satisfaction and Loyalty consistent with the findings of numerous studies which have explored the nature of this relationship in traditional service settings (e.g., Bitner 1990; Oliver 1980; Oliver & Bearden 1985; Oliver & Swan 1989) and, more recently, in e-commerce as well (e.g., Anderson & Srinivasan, 2003; Shankar, Smith, & Rangaswamy, 2003). These are:

H13: There is a positive relationship between Overall Web site Satisfaction and the Attitudinal Component of Site-Loyalty.

H14: There is a positive relationship between Overall Web site Satisfaction and the Behavioural Component of Site-Loyalty.

Finally, as proposed in the Dick and Basu (1994) conceptualization of loyalty, we propose that:

H15: There is a positive relationship between the Attitudinal and the Behavioural Components of Site-Loyalty.

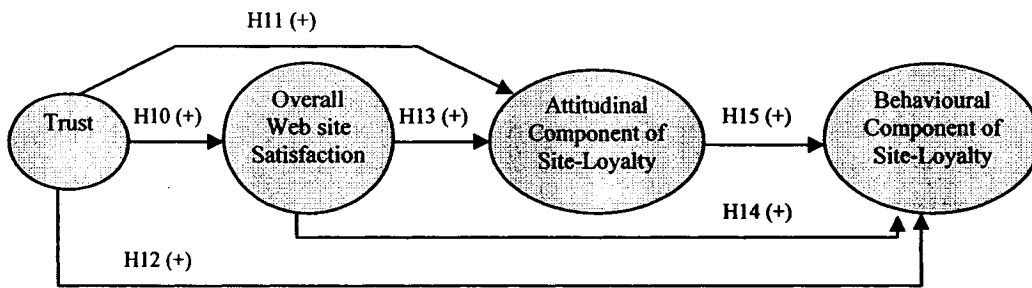


Figure 6. Model 3 Used to Establish the Nomological Validity of Site-Loyalty.

5.5 - Main Model and Hypotheses Pertaining to the Relationship between Site-Communality and Site-Loyalty

Aside from developing and validating measures of Site-Communality and Site-Loyalty, the main purpose of this study is to investigate whether Site-Communality has a positive impact on the attitudinal and behavioural components of Site-Loyalty. Model 4 (see Figure 7) represents the hypothesized relationship. Consistent with the Dick and Basu (1994) conceptualization, our model shows Site-Loyalty as being made up of an attitudinal component and a behavioural component. The following three hypotheses will be tested:

- H16: There is a positive relationship between Site-Communality and the attitudinal component of Site-Loyalty.
- H17: There is a positive relationship between Site-Communality and the behavioural component of Site-Loyalty.
- H18: There is a positive relationship between the attitudinal and the behavioural components of Site-Loyalty (same as H15).

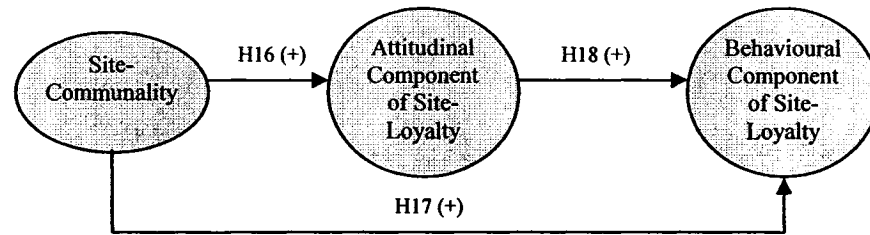


Figure 7. Model 4 Showing the Hypothesized Impact of Site-Communality on the Attitudinal and Behavioural Components of Site-Loyalty.

5.6 - Communal-Orientation in Traditional Commercial Environments as a Moderator of the Relationship between Site-Communality and Site-Loyalty.

As discussed in chapter 4, Marketing researchers have evidenced that, in traditional commercial settings, consumers vary in the extent to which they enjoy and seek out, what Goodwin (1998) refers to as ‘communality’ defined as the degree to which a business relationship takes on the characteristics of a friendship (e.g., McAdams, 1988; Reynolds & Beatty, 1999; Beatty et al., 1996; Price & Arnould, 1999). This parallels closely the findings from studies in Social Psychology that originally explored communal-relationships and communal-orientation (e.g., Clark, Ouellette, Powell, & Milberg, 1987; Buunk, Doosje, Liesbeth, & Hopstaken, 1993). Specifically, this line of research clearly suggests that individuals vary in terms of their communal-orientation toward others. Although communal-orientation is not a personality trait per se, it is believed to be an orientation which is *stable over time* (see Clark, Ouellette, Powell, & Milberg, 1987; Goodwin, 1996). Several factors including personality variables (i.e., extraversion, need for nurturance) and demographics (i.e., age) combine and influence consumers’ preferences for communal-relationships in service contexts (e.g., loneliness leads the elderly to seek out and engage in communal relationships in commercial settings – see Goodwin, 1996).

Communal-Orientation in Traditional Commercial Environment is defined herein as *the extent to which a consumer enjoys 'getting to know' employees (i.e., waitress, bank teller, hair stylist) and relating with them on a more personal-level than is typically required for the effective delivery of a service.* Although we hypothesize a direct positive relationship between *Site-Communality* and *Site-Loyalty* (see H16, H17, and H18), we also expect that this relationship may be *moderated* by the consumer's preferences for low/high communality in traditional commercial contexts. In other words, we suggest that the consumer's 'Communal-Orientation in Traditional Commercial Environments' may be reflected in their evaluations of online commercial environments as well, such that, the positive relationship between *Site-Communality* and *Site-Loyalty* would be more pronounced for those consumers who are high in communal-orientation in traditional service settings compared to those low in communal-orientation. In other words, consumers low in communal-orientation whose preference in traditional commercial environments is for relationships which are more 'at arms-length' (see Barnes, 1997) may not react as favourably to Web sites design to convey high *Site-Communality*. As such, whether *Site-Communality* is high or low is likely to have much less of an impact (and possibly, no impact at all) on the *Site-Loyalty* of consumers low in communal-orientation. This moderating effect is represented graphically in Model 5 (see Figure 8). It leads us to postulate the following hypothesis:

H19: The greater/lower the consumer's *Communal-Orientation in Traditional Commercial Environments*, the greater/lower the positive relationship between *Site-Communality* and *Site-Loyalty*.

If H19 is supported, we believe that this may have direct implications for today's companies which are increasingly opting for delivering services via Web sites. For instance, new customers (i.e., users) may initially be asked to respond to a short on-line questionnaire which would determine whether they score high or

low in ‘Communal-Orientation in Traditional Commercial Environments’. The company could then tailor/personalize the affective/relational aspects of its Web page by adding/reducing the amount of communal content.

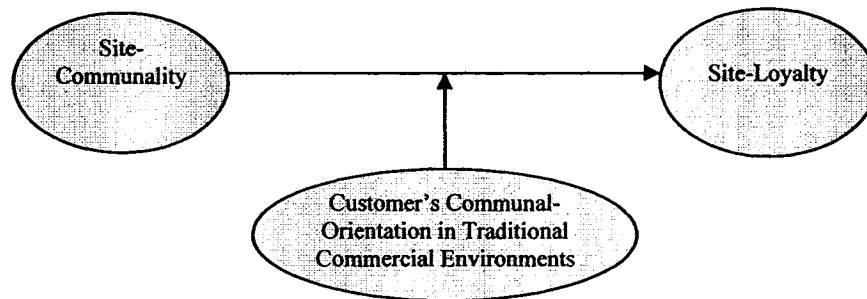


Figure 8. Model 5 Showing Moderation Effect of Communal-Orientation on the Relationship between Site-Communality and Site-Loyalty

5.7 - Summary

In this chapter, our models and hypotheses were presented. We began by stipulating our global conceptual model (Model 1, see Figure 4) which suggests how Site-Communality relates to other variables identified, in the literature, as being influential on loyalty. However, we recognized that this conceptual model is quite large and that, to be tested, it would require a very large sample size using Structured Equation Modelling. Instead, we dissected Model 1 into two (2) smaller parts - Model 2 (Figure 5) and Model 3 (Figure 6). We proposed that these smaller, more manageable models would be used for the purposes of examining nomological validity – a necessary step when developing new measures (i.e., Site-Communality and Site-Loyalty). In sum, to establish nomological validity, our goal is to examine Site-Communality and Site-Loyalty in complex Webs of causal relationships in order to ascertain whether these two (2) measures ‘behave’ in ways consistent with prior research. Next, we presented Model 4 (see Figure 7). The latter exposes our main hypothesis of interest; that Site-Communality impacts positively and significantly on Site-Loyalty. Finally,

Model 5 (see Figure 8) reflects the findings in research showing that consumers vary in the extent to which they desire, appreciate, and seek out communality in traditional commercial environments. We argued that this ‘offline’ preference may also influence customers’ evaluations of online environments. Thus, Model 5 (see Figure 8) proposes that ‘Communal-Orientation in Traditional Commercial Environments’ moderates the relationship between Site-Communality and Site-Loyalty. Furthermore, it suggests that, for consumers with a higher communal-orientation, the positive impact of Site-Communality on Site-Loyalty will be significantly stronger than for consumers low in Communal-Orientation. In the following chapters, we address the literature pertaining to proper measure development and item purification. We also define Site-Loyalty and Site-Communality and identify their respective dimensions.

Chapter 6 - Measure Development – Construct Definition of Site-Communality and Site-Loyalty

6.1 - Overview

According to a literature review pertaining to proper measure development and purification, this entails the following:

1. Construct definition (Murphy & Davidshofer, 1994);
2. Item generation (Churchill, 1979);
3. Content or face validity checks;
4. Internal validity (reliability) checks typically via coefficient alpha and item-total correlations; and
5. Exploratory factor analysis (Churchill, 1979; Bohrnstedt, 1983); along with
6. Confirmatory factor analysis (Gerbing & Anderson, 1988); and validation of the construct (Bagozzi & Yi, 1990).

Step 1 is addressed in this chapter. This chapter is divided into two (2) parts. We define *Site-Communality* in part 1 and Site-Loyalty in part 2 and identify their respective dimensions based on a review of the literature. In the next chapter (Chapter 7), we tackle item generation, content/face validity checks, reliability and exploratory factor analyses (i.e., steps 2, 3, 4, and 5). We also report the result of our card sorting exercise, address how we constructed our first two questionnaires, the data collection process for the purpose of exploratory factor analysis (EFA) and the results of EFA as a means of further refining our instruments. Step 6 is addressed in Chapter 8.

6.2 - Definition and Dimensionality of Site-Communality

6.2.1 - Definition of Site-Communality

In order to come up with a definition of Site-Communality, we built on existing literature on communal-relationships in Social Psychology, the concept of communality in Marketing (Goodwin, 1996), and on literature into related concepts (e.g., commercial-friendships - Price & Arnould, 1999). Specifically, the differences between communal-relationships and exchange-relationships have been evidenced in the work by Clark and her colleagues (e.g., Clark & Mills, 1979, 1993; Mills & Clark, 1994). Clark and Mills (1993) argue that communal relationships are exemplified by relationships with friends and family whereas exchange relationships are typified by relations between acquaintances and business partners. They add that this distinction is based on “the rules and norms that govern the giving and receiving of benefits” (p. 684). Various characteristic differences have appeared throughout Clark’s work on exchange- versus communal-relationships and in Goodwin’s (1996) work on communality which, in fact, transposes Clark’s work into commercial settings. We have condensed them here in table form (see Table 1). Basing ourselves on these distinctions, we have come up with a definition of Site-Communality.

Table 1

Distinctions Between Communal and Exchange Relationships and Between High/Low Communality

Communal relationships (i.e., High Communality)	Exchange relationships (i.e., Low Communality)
<p>-exemplified relations with friends and family;</p> <p>-the desire to establish communal relationship involves friendship-like behaviours;</p> <p>-genuine concern for the other's welfare; behaviours motivated by nurturing and caring for the needs of the other;</p> <p>-help likely to be provided; costs are incurred to benefit the other; record-keeping avoided;</p> <p>-benefits given voluntarily to please the other and in response to other's needs;</p> <p>-communality in business relationships are evidenced by communications which span outside of business/work activity; self-disclosure; expressing interest in aspects of other's life (Goodwin, 1996).</p> <p>-desire to engage into/maintain a communal-relationship (i.e., friendship) with another is typically characterized by attempts at intimacy, conveying warmth, demonstrations of caring, encouragement, validation of the other's feelings, etc. (Bukowski, 2001; Crosby et al., 1990; Kahn & Antonucci, 1980)</p> <p>-communality is facilitated by the degree to which the service environment encourages approach behaviours and interaction between employees and customers (Goodwin, 1996).</p>	<p>-relations between acquaintances and business partners;</p> <p>-the desire to establish an exchange relationship involves behaviours which resemble those between polite / friendly strangers;</p> <p>-no obligation to feel concern for the other; behaviours motivated by usefulness and instrumentality;</p> <p>-help less likely to be provided if costs are high; record-keeping of individual inputs; expectation to receive equitable compensation for favours (i.e., expectation of <i>reciprocity</i>);</p> <p>-benefits given as repayment for benefits received in the past or for those expected in the future; benefits may be given to indebt the other;</p> <p>-people interact for a purpose; communications are <i>role-bound</i> (i.e., between 'a customer' and 'a company representative' - Goodwin, 1996).</p> <p>-desire to engage into/maintain an exchange-relationship (e.g., business relationship) with another is typically characterized by attempts at maintaining equity, reciprocation of benefits received, etc. (Buunk & VanYperen, 1991)</p>

Based on our review of literature into communal-relationships and on work which has attempted to adapt the theory to commercial contexts (e.g., Goodwin, 1996), we define Site-Communality as *the extent to which Web site content signals that a company's relationship with its customers goes beyond the formal, 'tit for tat' business dealings that are typically expected from purely commercial exchanges, and instead, more closely abide by the norms and behaviours evocative of friendships and/or family relations.*

6.2.2 - Dimensionality of Site-Communality

We propose a multidimensional structure for Site-Communality (see Figure 9). One important issue in measure development is directly linked to construct validity (Gerbing and Anderson, 1988). In particular, at this point, in conceptualizing our dimensions, we were concerned with discriminant validity between dimensions. That is, the dimensions of Site-Communality should be sufficiently different from (or not confounded with) one another even though they reflect the same underlying concept (Bagozzi & Yi, 1990). Based on our review of literature, this would involve the following six dimensions: (1) *Conveying warmth/good cheer* to users, (2) *Role spanning* (i.e., attempting to relate to the customer on a 'human level' rather than strictly on an economic level by acknowledging things the customer may find important outside of business), (3) *Signalling approachability* during times of need, (4) *Demonstrations of caring* for the customer, (5) *Company self-disclosure* into aspects unrelated to business, and (6) *authenticity/non-instrumentality*. The dimensions are discussed in more detail below. Examples of Web sites likely to be perceived as having greater/lesser Site-Communality follow.

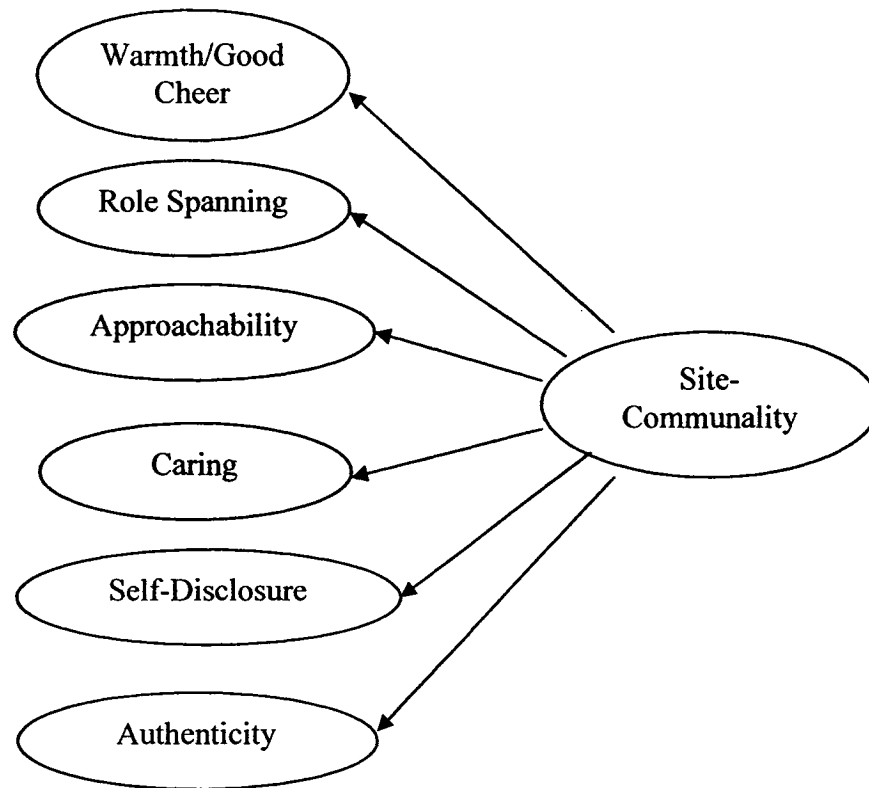


Figure 9. Model Showing Proposed Multidimensionality of Site-Communality

Conveying Warmth/Good Cheer is defined as *the extent to which the content of the Web site conveys a sense of friendliness and positive feelings toward customers*. Research on the ‘friendship bond’ has attracted much attention in Social Psychology (Brain, 1976; Hays, 1985; Kurth, 1970). Studies that have explored this concept have repeatedly and consistently shown that enjoyment of the other’s company is a key element of friendships (Crawford, 1977; Davis & Todd, 1982). Enjoyment of another’s company is often expressed by conveying warmth and positive emotion toward the other (Bukowski et al., 1996). In fact, such definitions of warmth as “a positive, mild, volatile emotion involving physiological arousal and precipitated by experiencing directly or vicariously a love, family, or friendship relationship” (Lemmink & Mattsson, 1998, p. 508) clearly suggest that it is an inherent part of communal relationships. Importantly, empirical studies in Marketing which have investigated the benefits of conveying

warmth during service delivery have shown it to have a positive impact on service quality and on loyalty (e.g., Lemmink & Mattson, 1998).

Importantly, research in Psychology and Advertising clearly shows that emotions such as warmth can be conveyed through various electronic media (e.g., Audio–visual presentations of retail encounters – see Aaker et al., 1986; Holbrook & Moore, 1981). In fact, in the area of Computer-Mediated Communications, studies have shown that users may adapt the communication technology to transmit affective and emotionally rich messages (Rice & Case, 1983; Rice & Love, 1987). For instance, emoticons are often used in text-based communications (i.e., emails) to express happiness, anger, etc. These are symbolic representations (i.e., *smiley faces* such as “:o) ” to indicate happiness or “:o(” indicating sadness) that facilitate emotional expressiveness (Kuehn, 1993). The typing of capital letters often denotes dominance whereas using exclamation points denotes anger/frustration and shouting (Walther & Burgoon, 1992). In sum, this line of research clearly suggests that Web sites may be designed to effectively convey warmth and positive feelings toward visitors.

Role Spanning is defined as *the extent to which Web site content demonstrates that the company sees the visitor/user as ‘a person’ rather than strictly ‘a customer’ and attempts to relate with the visitor/user on a personal as well as on a commercial level*. Our dimension of *Role Spanning* is based on Goodwin’s (1996) observations that communality (i.e., the occurrence of communal-relationships in business settings) is often evidenced by conversations not directly linked and restricted to the effective delivery of the service. In exchange-relationships/encounters, communications between parties tend to be highly role-prescribed (i.e., scripted). Conversely, communality is said to exist when communications transcend the service script, evidenced by nonessential conversation (Goodwin, 1996). As such, *Role Spanning* may be thought of as the ability of a Web site to make visitors disassociate, even temporarily, from their roles as customers by acknowledging (via images or other content), aspects of

their lives which are unrelated to business activity. As such, Role Spanning may be thought of as attempts at relating to visitors/users on a personal, human level rather than on a strictly economic level. In terms of Web sites, such attempts at 'relatedness' may include the addition of content which acknowledges aspects of customers' personal lives (e.g., images evocative of family or other things they care about). Our decision to include the Role Spanning dimension is also consistent with research in Social Psychology which shows that affirmation and validation of another's life experiences and what he/she values in life are often salient characteristics of friendships (Bigelow, 1977; Bukowski et al., 1996; Youniss & Smollar, 1985).

Approachability is defined as *the extent to which the Web site's content makes the visitor feel that the company facilitates, encourages and is receptive to customer contact*. In other words, approachability is the degree to which a company signals its availability and readiness to help visitors/users of the Web site. Research in Social Psychology clearly suggests that approachability is a characteristic of friendships. For instance, research shows that keeping track of the other's needs and exhibiting helping behaviours are greater if a person desires a communal relationship with the other than if the person desires an exchange relationship with the other (e.g., Clark, 1983; Clark, Mills, & Powell, 1986; Krebs, 1970). Similarly, helping in clarifying one's understanding of problems or solutions (a.k.a., cognitive guidance) is identified as an important component in social support between friends (Pagel, Erdly, & Becker, 1987). Research even shows that simply thinking of a friend (versus a co-worker) increases our willingness to help strangers (Fitzsimons & Bargh, 2003).

Demonstrations of Caring is defined as *the extent to which Web site content indicates that the company behaves in a caring and nurturing manner with its customers*. Our inclusion of this dimension is based directly on the work of Clark and her colleagues which specifies that behaviours associated with communal norms are motivated by nurturing and caring for the needs of the other and a

general obligation to be concerned about the other person's welfare (Mills & Clark, 1982). Conversely, exchange-relationships are more likely to be characterized by limited emotional investment in the relational partner (Rawlins, 1992) and by little to no obligation to feel concern for the other (Mills & Clark, 1982).

Self-Disclosure is defined as *the extent to which Web site content reveals to users/visitors the company's non-commercial related activities, involvements, and/or interests*. In other words, it's the extent to which the Web site exposes visitors to other facets/interests of the company rather than simply to its business activities and what it has for sale. Social Psychologists have identified that, in interpersonal relationships, self-disclosure is a characteristic which separates friends from mere acquaintances (e.g., Hays, 1985; Hornstein & Truesdell, 1988). Self-Disclosure helps create a sense of closeness between persons (Rubin & Shenker, 1978). Similar results have been evidenced by marketing researchers studying self-disclosure in commercial relationships (e.g., Crosby, Evans & Cowles, 1990; Price & Arnould, 1999; Price, Arnould, & Deibler, 1995). This dimension is somewhat related to Role Spanning given that it too entails communications which are unrelated to business activity. However, the two can be thought of as opposite sides of the same coin. Whereas Role Spanning entails a valorization and recognition of aspects in the customer's life outside of business, Self-Disclosure entails company self-revelation, in other words, the company's attempts to reveal aspects of itself which are unrelated to its core business activity.

Authenticity is the extent to which Web site content conveys that a company's feelings and concerns for its customers are genuine rather than simply instrumental in achieving some goal (e.g., more sales). The addition of Authenticity as a dimension of *Site-Communality* comes from Clark and Mills (1993). In this article, the authors further distinguished between communal- and exchange relationships by explaining that people may 'behave communally' for selfish reasons, in the sense that, "people may follow communal norms in order to

achieve some other goal” (p. 686). When a person perceives that a communal-relationship is desired or being sustained by another person for instrumental purposes, this perception is likely to damage if not completely destroy the communal-relationships (Allan, 1989). In fact, the motivation for persons to adhere to communal norms may be altruistic, selfish, or driven by some other reason (Clark & Mills, 1993). As such, the dimension *Authenticity* aims to tap into the visitor’s/user’s perception of the company’s motivation given that communal-relationships (e.g., friendships) are typically depicted as non-instrumental (Lopata, 1981). A parallel can also be drawn with business research into companies training employees to be more friendly by managing and regulating or, more simply, effectively ‘faking’ the affective component of service delivery in order to increase sales and customer satisfaction (e.g., Ashforth & Humphrey, 1993; Grandey, 2003; Totterdell & Holman, 2003). Employees such as waiters in restaurants and flight attendants, for example, are often required to convey caring as a work requirement (Tsai & Huang, 2002). Although caring and concern may be expressed, this does not mean that it will be perceived as honest by consumers. In fact, research has shown that some customers find the idea of experiencing genuine communal-relationships in commercial settings quite incredible, oxymoronic and manipulative (e.g., Adelman, Ahuvia, & Goodwin, 1994; Fournier, Dobscha, & Mick, 1998; Gordon, McKeage, & Fox, 1998; Price & Arnould, 1999).

6.2.3 - Site-Communality versus Social Presence

It is also worth noting that Site-Communality is not *Social Presence*. Social presence is the degree to which a medium can support or convey sociable, warm, sensitive, personal or intimate communications (Short et al., 1976). The theory argues that social presence variations in different media are important in determining how individuals interact, the forms that relationships take, and the type of tasks which can effectively be supported by a medium.

Social Presence Theory (Short et al., 1976) was postulated during the 1970s to address how the advent of many new communication technologies could impact the socio-emotional aspects of interpersonal dyadic communications. This theory argues that the communication channels chosen may have important effects on relational development. Compared to face-to-face which allow a high variety of cues, computer-mediated communications (CMC) greatly inhibit the ability of interactants to exchange a wide range of cues (e.g., smiles, body posture, vocal intonations), chiefly, those which carry relational meaning. Media high in social presence allow people to adjust more of these cues thus enabling them to, more precisely, adjust the overall level of intimacy, make sense of and exchange more equivocal information more efficiently. Consequently, according to the theory of social presence, media high in social presence are better suited for complex tasks and to develop close, interpersonal relationships.

Overall, social presence theory presents the following ranking; face-to-face allows for the most amount of cues (and, thus the greatest social presence), followed by video-conferencing technology, telephone, written personal letters and memos, written formal documents and finally numeric formal documents. Importantly, social presence does not only depend on whether or not non-verbal cues can be transmitted by the medium, but also, on the perceptual distance of the other during interaction. So, for instance, whether a video image is large or small during video communications also affects social presence (Short et al., 1976). This is why video technology is presented as having less social presence when compared to face-to-face. In Champness (1972 - cited in Short et al., 1976), the author conducted a study using the same media as in the study mentioned above (i.e., audio, video, and face-to-face) but used three subjects instead of two. The subjects were split; two in one room, and one in another. In the experimental condition using video, the single subject was shown a video image of the other two participants which included their chairs and a small table at which they were seated. By contrast, the two subjects sharing a room viewed a 'head-and-shoulders' video image of their lone colleague (i.e., an image conveying closer

proximity). The results of the study revealed that higher social presence scores were attributed to the video medium by the two subjects exposed to the close-up image compared to the single subject who viewed the smaller images of his colleagues. As such, perceived social presence was different for the same medium and was seemingly affected by the perception of distance / proximity rather than by the medium itself.

One important aspect which differentiates communality from social presence can be extrapolated from Short et al.'s (1976) initial work on the social presence concept. Importantly, they suggest that, although social presence is affected by a *sense of distance* (proximity), this distance remains 'geographical' rather than 'affective'. Using this idea of distance, Short et al. (1976) contrasted social presence from a concept related and yet different from communality called 'immediacy' (Wiener & Mehrabian, 1968). Immediacy is defined as "those communication behaviours that enhance closeness to and nonverbal interaction with another" (p. 203). It refers to the 'psychological' or 'affective' distance one person purposefully puts between himself and another by manipulating various cues (i.e., speech, body posture, frowns). For example, using 'We...' instead of 'I...' and 'You...' conveys a sense of 'immediacy' but has no effect on social presence (a characteristic of the channel). Similarly, sarcasm during conversations gives a sense on 'non-immediacy' but has no effect on social presence. The concept of distance in social presence is related to the medium rather than to the actions taken and words used by the parties who are communicating.

Whereas social presence can be considered as a characteristic of the medium, site-communality can be thought of as a characteristic of the message. It refers to the relational message communicated via a Web site (i.e., content which communicates that a company will follow the norms and behaviours associated with communal-relationships). Consequently, social presence may be thought of as a facilitator of Site-Communality rather than a proxy. Whereas Site-Communality may be facilitated by Web sites high social presence, a Web page

high in social presence (e.g., enabling multi-angle inspections of products using interactive video) does not necessarily mean that the company is communicating communality via its content. Simply put, unlike Site-Communality, social presence of a Web site pertains to the variety of cues it can transmit (i.e., audio, interactive video) but it is independent of the relational message.

6.3 - Examples of Web sites Likely to be considered High / Low in Site-Communality

We conclude this chapter with examples of Web sites likely to be perceived as low or high in Site-Communality. Screen captures showing examples of such Web sites are shown below as Figure 10 and Figure 11. The Laurentian Bank's Web site (see Figure 11) appears to be highly disaffected, task-oriented, and business-like stressing efficiency and presenting the companies' virtues as a good exchange-relationship partner. Conversely, the Web site of the CIBC (see Figure 10) is replete with affect-laden content implicit of communal-relationships.



Figure 10. Example of a Web Site Likely to be Perceived as Higher in Site-Communitality.

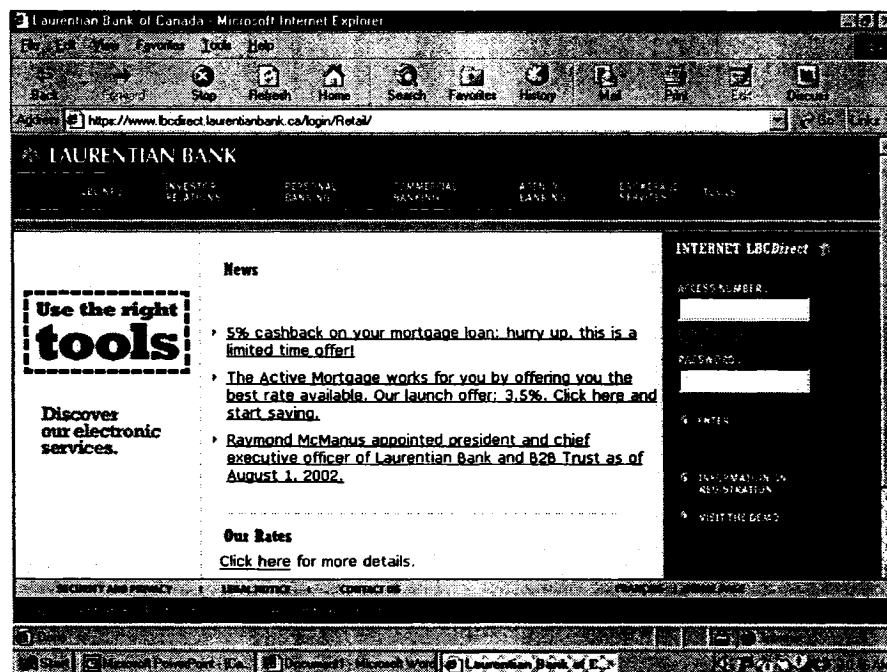


Figure 11. Example of a Web Site Likely to be Perceived as Lower in Site-Communitality.

6.4 - Definition and Dimensionality of Site-Loyalty

6.4.1 - Definition of Site-Loyalty

Construct definition is a fundamental first step of measure development. It consists of providing a definition of the construct that is to be measured. In turn, this step will guide the item generation process and content validity checks (Kerlinger, 1986). As we did with Site-Communality in Part 1, in Part 2 we develop and purify a measure of Site-Loyalty.

In chapter 1, we reviewed literature pertaining to loyalty in traditional commercial environments. In the next section, we conceptualize and define Site-Loyalty based on the work of Dick and Basu (1994) which conceives of loyalty as a composite construct made up of *Relative Attitude* and *Repeat Patronage*. We also take into account the work of other loyalty authors by incorporating emotional attachment (see Hallberg, 2004) as an important dimension of the attitudinal component of Site-Loyalty.

It should be noted that although Srinivasan, Anderson and Ponnnavolu (2002) have developed a measure of Site-Loyalty by basing themselves on the Dick and Basu (1994) conceptualization of loyalty. They defined e-loyalty as “a customer’s favourable attitude toward the e-retailer that results in repeat buying behaviour” (p. 42). A potential limitation of their measure of loyalty is that it is unidimensional melding both attitudes and behaviour. Moreover, an examination of the e-loyalty items used in their study reveals that only one item appeared to tap the behaviour aspect of loyalty (i.e., I try to use the website whenever I need to make a purchase) while the rest were purely attitudinal in nature reflecting preference for the Web site. Arguably, such a measure may not adequately capture the complexity of Site-Loyalty. Instead, we propose to develop a multidimensional measure which, in our opinion, better reflects its richness.

The Dick and Basu (1994) conceptualization of loyalty arose from critiques into purely behavioural approaches of assessing customer loyalty (see Assael, 1992; Biel, 1992; Day, 1969; Dick & Basu, 1994; Fournier & Yao, 1997; Huang & Yu, 1999; Jacoby & Chestnut, 1973; Too, Souchon, & Thirkell, 2001; Wernerfelt, 1991). For instance, one such criticism pertains to the accompanying practice of setting arbitrary cut-off margins to assess whether a customer can be 'classified' as loyal or not (see Fournier & Yao, 1997). Moreover, simply examining behaviours cannot help differentiate between a customer who has remained with the same company over several years because of loyalty or alternatively, because the customer perceives little if no benefits in switching to a competitor, a condition known as customer indifference or customer inertia (Assael, 1992). To address these limitations, Dick and Basu (1994) presented a richer conceptualisation of loyalty calling for the acknowledgement that attitudinal biases within the customer's psyche actually must be modelled as driving loyal behaviours (see also Biel, 1992; Day, 1969; Lutz & Winn, 1974).

Similarly, we conceive Site-Loyalty as being made up of a positive attitudinal bias and consequent behaviours. However, we extended Dick and Basu's (1994) conceptualization by including an additional attitudinal component called *Emotional Attachment* (see Hallberg, 2004). Its addition aims to address Oliver's (1999) work differentiating between greater/stronger and lesser/weaker states of loyalty, the former being affect-driven while the latter being founded primarily on performance (refer to review in Chapter 1). As such, we construed the attitudinal component of Site-Loyalty as a multi-dimensional construct made up of the following two (2) dimensions: (a) *Relative Attitude* and (b) *Emotional Attachment*.

For the behavioural component of Site-Loyalty, we based ourselves on Parasuraman et al. (1994). These authors developed a battery of behavioural loyalty intentions. These were subsequently refined by other authors (i.e., Bloemer et al., 1999; Boulding et al., 1993; Cronin & Taylor, 1992; de Ruyter et al., 1998; Zeithaml et al., 1996). These are (1) a willingness to pay more and

resistance to switch, (2) greater positive word of mouth and (3) a greater likelihood of repurchase/revisit.

Concurrent with both Dick and Basu's (1994) and Oliver's (1999) contributions to conceptualizing loyalty, we define Site-Loyalty as *a multi-dimensional measure made up of an attitudinal component expressed by preference and emotional attachment toward a Web site and manifested in future behavioural intentions which include use/revisiting the Web site, willingness to invest one's time and effort into familiarizing oneself with the Web site, advocacy to others, and voluntary resistance to competitors' attempts at counter persuasion*. The dimensions of the attitudinal and behavioural components of Site-Loyalty are defined below.

6.4.2 - Dimensionality of the Attitudinal and Behavioural Components of Site-Loyalty

Dimensionality of the attitudinal component of Site-Loyalty:

Relative Attitude is defined as *a preferential attitudinal bias toward the Web site relative to other Web sites the customer may be familiar with*.

Emotional Attachment is defined as *the extent to which the customer cares about and wants to support and see the company succeed and do well*.

Dimensionality of the behavioural component of Site-Loyalty:

Word of Mouth³⁸ is defined as *the user's willingness to recommend the Web site to others*.

Intention to Use/Revisit³⁹ is defined as *the customer's desire to use/revisit the Web site*.

³⁸ Has also been modeled in the literature as a behavioural consequence of e-loyalty (Srinivasan, Anderson, & Ponnavaolu, 2002) rather than a dimension.

Resistance to Switching/to Competitor's Attempts at Counter Persuasion

⁴⁰ is defined as *the customer's unwillingness to switch to other Web sites and resistance to competitor's attempts at counter persuasion.*

Willingness to Invest More ⁴¹ is defined as *the customer's willingness to invest more time and effort to familiarize oneself with the Web site.*

6.5 - Summary

In this chapter, we defined and identified dimensions of Site-Communality and Site-Loyalty based on our review of literature. In the next chapter, we show the items which were generated to tap into each of the dimensions of Site-Communality and Site-Loyalty. The next chapter also exposes how we conducted the initial item purification process using content validation (i.e., the card sorting technique), scale reliabilities and item-to-total correlations.

³⁹ Previously used as a proxy for e-loyalty in the literature (see Toms & Taves, 2004; Lee, Kim, & Moon, 2000).

⁴⁰ Srinivasan, Anderson, and Ponnnavolu (2002) previously modeled a similar construct named as 'search' (i.e., increased search behaviours) as a behavioural consequence of e-loyalty rather than a component of e-loyalty. As expected, their results show a negative and significant relationship between their measure of e-loyalty and search.

⁴¹ Srinivasan, Anderson, and Ponnnavolu (2002) previously modeled a related construct named as 'willingness to pay more' as a behavioural consequence of e-loyalty. Results showed a positive and significant relationship between their measure of e-loyalty and willingness to pay more.

Chapter 7 - Item Generation, Content Validation, Reliability, and Exploratory Factor Analysis

7.1 - Overview

In chapter 6, we defined Site-Communality and Site-Loyalty and identified their dimensions based on our review of relevant research. In this chapter, we present the initial pool of items we generated to tap into each dimension of Site-Communality and Site-Loyalty. We show the results of card sorting exercises (Moore & Benbasat, 1991) we conducted as a means of content validation. The remaining items were then used to create preliminary questionnaires (i.e., questionnaire 1 for the remaining Site-Communality items, questionnaire 2 for the remaining Site-Loyalty items). Using the data collected from these questionnaires, reliability analyses and exploratory factor analysis were conducted as an additional purification step for the items which had passed the card sorting process. For Site-Communality, the data collected using questionnaire 1 ($n_1 = 249$) was submitted to exploratory factor analysis using principal axis factoring with oblimin rotation in SPSS 12.0. For Site-Loyalty, exploratory factor analysis was conducted using the data collected from questionnaire 2 ($n_2 = 242$).

The item-purification process we employed is also reported for additional measures. These include Overall Site-Communality, Overall Site-Loyalty, Overall Web site Satisfaction, and 'Communal-Orientation in Traditional Commercial Environments'. Finally, we present the results of a preliminary study consisting of a simple regression analysis of the relationship between two the additional measures using the data from questionnaire 2, that is, Overall Site-Communality and Overall Site-Loyalty.

7.2 - Purification of Items of Site-Communality (Card Sorting Exercise 1 / Questionnaire 1)

7.2.1 - Initial Item Generation and Content / Face Validity for the Site-Communality Dimensions

Our initial approach to measure development and purification essentially followed the iterative procedure suggested in Churchill (1979). The generation of an initial pool of items for each dimension was based on an exhaustive search pertaining to characteristics of communal-relationships. This yielded an initial pool of 37 items: (a) Demonstration of Caring (6 items) (b) Conveying Warmth / Good Cheer (7 items), (c) Approachability (7 items), (d) Authenticity/Non-instrumentality (6 items), (e) Role Spanning (6 items), and (f) Self-Disclosure (5 items) (see Appendix 1).

At this stage of measure development, content validity was addressed. *Content validity* represents the degree to which the items of an assessment instrument are relevant to and representative of the targeted construct. To establish the content validity of both the Site-Communality and Site-Loyalty instruments, we based ourselves on the methods used in Davis (1989), Moore & Benbasat (1991) and Pinsonneault & Heppel (1998), better known as *card sorting*.

With this method, establishing content validity consists of having experts/judges rate the initial set of questionnaire items to establish whether the scope of the items covers the construct of interest. To content validate our Site-Communality scale, we recruited 10 judges consisting of PhD students, faculty members and administrative staff at McGill University. First, each item was printed on a small index card. Second, the name and definition of each construct common items were meant to tap were written on an envelope. As such, given that there were six (6) dimensions, this resulted in six (6) envelopes. One additional envelope entitled 'uncertain' was also added. The latter served to classify those items which a judge found too broad to classify into one of the envelopes representing each of the

constructs in our study. Third, the cards were shuffled randomly and presented to each judge. Finally, instructions were given asking each expert to individually sort the items into an appropriate envelope (see Appendix 2).

For the purpose of our study, a cut-off of .70 was used, that is, if at least 7 of 10 judges were able to correctly assign an item to its corresponding envelope (representing a dimension) then the item was retained. The results of this exercise are presented in Appendix 1. Overall, card sorting resulted in one (1) item being dropped for each of the dimensions Demonstration of Caring, Conveying Warmth/Good Cheer, Approachability, and Authenticity/Non-Instrumentality. Role-Spanning Self-Disclosure retained all of their original items. This reduced our pool of items to 33 items: (a) Demonstration of Caring (5 items) (b) Conveying Warmth / Good Cheer (6 items), (c) Approachability (6 items), (d) Authenticity/Non-instrumentality (5 items), (e) Role Spanning (6 items), and (f) Self-Disclosure (5 items).

7.2.2 - Questionnaire for Site-Communality (Questionnaire 1) and Demographics

Next, using the 33 items of Site-Communality which had passed content validity (i.e., card sorting), a first online questionnaire (i.e., questionnaire 1) was developed. We used the software Perseus SurveySolutions 6TM available at www.perseus.com. This software has several desirable features such as allowing items in a Web-based questionnaire to be automatically randomized for each participant. Another major benefit is that it also allows for responses to Web-based questionnaire to be sent directly to the researcher's email address when the participant hits the 'submit' button.

Included in the questionnaire were nineteen (19) real Web sites (see Table 2). These were chosen across three industries (i.e., banking, insurance, and pharmaceutical companies) by the author in an attempt to maximize variance in Site-Communality while reducing any potential industry effect. In order to

minimize the possible confounding effect of past experience (i.e., good or bad) with the company or its Web site, participants were instructed to choose and evaluate one Web site (out of nineteen) which they were not familiar with and asked to explore this Web site for a period of about 10 minutes, until they had formed an impression (positive or negative) about the Web site.

Table 2

Real Web sites Included in the First and Second Questionnaires⁴²

- (1) 1Drugstore-Online (www.1drugstore-online.com)
- (2) Aetna Insurance (www.aetna.com)
- (3) Alexander Insurance Incorporated (www.alexanderinsurance.com)
- (4) Canadian Drugs (www.canadiandrugs.ca)
- (5) Canameds (www.canameds.com)
- (6) Canadian Imperial Bank of Commerce (www.cibc.com)
- (7) Colonial Savings Bank (www.colonialsavings.com)
- (8) DuBose & Associates Insurance (www.duboseandassociates.com)
- (9) IMB Banking and Financial Services (www.imb.com.au)
- (10) J. Weinberg & Associates Insurance (www.room100.com/insurance)
- (11) Laurentian Bank (www.laurentianbank.com)
- (12) LEM Insurance Services (www.lemsvcs.com)
- (13) Macquarie Bank (www.macquarie.com.au)
- (14) Man-Health Online Pharmacy (www.man-health.com)
- (15) Manchester Unity Credit Union (www.manchesterunity.org.nz)
- (16) Priority Pharmacy (www.prioritypharmacy.com)
- (17) Scotia Bank (www.scotiabank.com)
- (18) WebPharmacy (www.Webpharmacyrx.com)
- (19) WestPac Bank (olb.westpac.com.au)

Although items believed to tap into a common dimension/concept were placed in groups 'close' to one another, the order of items within each group of items was randomized for each participant (using a feature available on the Perseus SurveySolutions software). All of the items were of the 7-point Likert-type ranging from (1) *Strongly Agree* to (7) *Strongly Disagree*. A demographics section was included at the end of the questionnaire.

Five hundred invitations for the preliminary study were printed and posted on bulletin boards across campuses at Prairie View A&M University, University of Houston (main campus), and Texas A&M (College Station) in Texas. Invitations were also posted at the entrance of two Walmart stores in the northwest Houston area. Participants were enticed to participate by using prizes from a random draw.

⁴² Descriptions of these companies and Web sites are presented in Appendix 8.

Data collection went on for a period of three months (November 2003 – January 2004) at the end of which the draw was conducted and the winners contacted. Over this period of time, a total of 259 electronic questionnaires were filled out and submitted to us. Duplicate questionnaires were identified by first sorting on the participant's name and then on the participant's contact information. For any participant who had submitted more than one questionnaire, only the first submission was kept. Ten (10) questionnaires were removed from the sample leaving us with $n_1 = 249$ useable questionnaires. Given the means by which the participants were recruited to participate in this study, it was not possible to calculate the response rate given that there was no way to ascertain the number of persons whom had noticed/read the invitations but chose not to participate. Table 3 represents the number of participants who chose to evaluate each of the Web sites.

Table 3

Frequency and Percent of Participants Evaluating each Web Site in Questionnaire

1

Web site	Frequency	Percent
1	29	11.6%
2	15	6.0%
3	9	3.6%
4	7	2.8%
5	4	1.6%
6	14	5.6%
7	17	6.8%
8	15	6.0%
9	11	4.4%
10	4	1.6%
11	7	2.8%
12	11	4.4%
13	13	5.2%
14	16	6.4%
15	7	2.8%
16	24	9.6%
17	18	7.2%
18	20	8.0%
19	8	3.2%
Total	249	100.0%

The largest proportions of participants classified their occupation as 'student' (65.5%). A little more than half of the respondents (51.4%) were male and a substantial portion (47.8%) was in the 18-21 years of age category. The second highest age group in our sample (26.5%) appeared in the 22-24 years of age category. Next in line came the age groups 25-29 years of age (9.6%) and 30-39 age group (8.0%). Five point two percent (5.2%) and two (2%) percent of respondents were in age groups 40-49 and 50-59 respectively. Less than 1% of respondents were either under 18 or between the ages of 60-69.

The majority of the respondents (77.9%) declared themselves as 'single, never married'. The next two largest groups were the 'married' group (13.7%) and those

who were 'separated or divorced' (7.2%). The number of the respondents in the 'widowed' group was the lowest (1.2%).

In terms of race or ethnicity, the largest two groups of respondents were 'Black/African American' and 'White/Caucasian' at 35.3% and 34.9% respectively. The next largest groups classified themselves as 'Hispanic/Latino' (13.3%) and 'Asian' (7.2%). Five percent (5%) of respondents described themselves as 'Native Hawaiian/Pacific Islander'.

Given the large amount of students (65.5%) in our sample, it was not surprising that most of the respondents (57.8%) made under \$10,000 a year. The two second largest groups (each at 12%) made between \$10,000-19,999 and \$20,000-29,999.

7.2.3 - Reliability and Exploratory Factor Analysis of Site-Communality Items

Purification for the items of the Site-Communality measure using the data from questionnaire 1 involved assessing the reliability (i.e., coefficient alpha) of each set of items tapping each theoretical dimension with corrected item-to-total correlations and exploratory factor analysis. Nunnally (1967) has recommended a minimum acceptable level of 0.7 for Cronbach coefficient alphas. A cut-off level of .5 was chosen for corrected item-to-total correlations (Bearden, Netemeyer, & Teel, 1989; Zaichkowsky 1985). The initial Cronbach coefficient alpha estimates for each set of items for the six Site-Communality dimensions were calculated using SPSS for Windows Version 12.0. All reverse-coded items were recoded before the reliability analyses were conducted.

For the five remaining items of Demonstration of Caring following card sorting, the Cronbach coefficient alpha was 0.911. However, the item-to-total correlation for item '*This Web site shows this company is thoughtful of customers*' was .499, just below the .5 cut-off level. This item was therefore dropped and Cronbach coefficient alpha was recalculated for the four (4) remaining items. Cronbach coefficient alpha increased to .943.

The remaining six (6) items (i.e., after card sorting) for Conveying Warmth/Good Cheer produced a Cronbach coefficient alpha of .922 with corrected item-to-total correlation ranging from .542 to .884. As such, all six (6) items from Conveying Warmth/Good Cheer were retained.

For the six (6) items of the Approachability dimension the Cronbach coefficient alpha was .913. Corrected item-to-total correlation were all acceptable ranging from .628 to .809. All were within acceptable levels leading us to retain all items.

The six (6) items of Role-Spanning produced a Cronbach coefficient alpha of .949. Corrected item-to-total correlations were all above the .5 level ranging from .797 to .865 leading us to retain all items.

The Cronbach coefficient alpha for Authenticity/Non-instrumentality and Self-Disclosure were also high at .872 and .930 respectively. For both theorized dimensions, all corrected item-to-total correlations were above the acceptable cut-off level of .5.

Next, we used the data collected using questionnaire 1 to conduct an exploratory factor analysis (see Churchill, 1979; Bohrnstedt, 1983) using principal axis factoring with oblimin rotation was performed in SPSS 12.0 to further refine our measure of Site-Communality. *Exploratory factor analysis* is used to uncover the latent structure (dimensions) of a set of variables. In sum, exploratory factor analysis enables researchers to further refine their instruments (Ford, MacCallum, & Tait, 1986). Items which do not load sufficiently on a particular factor are discarded. In exploratory factor analysis, the researcher's à priori assumption is that any item may be associated with any factor/dimension. Oblimin rotation was chosen because we expected that the six (6) dimensions reflecting Site-Communality would be correlated. The extraction was forced to a six (6) factor solution in an attempt to reproduce the theorized dimensionality of Site-

Communality. The pattern matrix solution produced by exploratory factor analysis is shown below in Table 4. Typically, in exploratory factor analysis, items which load highly on their intended dimensions relative to other dimensions are retained. Items with high loadings ($>.40$ or $<-.40$)⁴³ on their hypothesized factors and relatively low cross-loadings ($>.40$ or $<-.40$) are shown in bold in Table 4. The eigenvalues representing the amount of variation explained by the factors derived from the correlation among observed items were verified. These were 18.921, 2.146, 1.508, 1.302, .906, and .848, respectively for the six factors. Percentage of variance explained was 57.337, 6.505, 4.568, 3.945, 2.745, and 2.571, respectively.

⁴³ This cut-off value is arbitrary but very common in Social Science research (Hinkin, 1995). Anything item loading under .4 is considered as 'weak'. Any loading above .6 as 'strong'. Values in between .4 and .6 are considered as 'moderate'. It should be noted that Norman and Streiner (1994) give an alternative formula for minimum loadings for sample sizes of 100 or more: Minimum Loading = $5.152/[\text{SQRT}(n-2)]$.

Table 4

Initial Exploratory Factor Analysis of Site-Communality Items (Data from Questionnaire 1)

	Factor					
	1	2	3	4	5	6
Demonstration of Caring						
This Web site wants me to know that the company behaves in a caring manner with customer.	.018	.048	-.252	.058	.681	-.050
This Web site shows this company nurtures its customers.	.182	.103	-.163	.022	.591	-.083
This Web site suggests customers are well looked after.	.200	-.017	-.215	-.100	.670	-.011
This Web tries to convey a strong sense of caring for the customer.	.055	.076	-.178	.038	.644	.022
Conveying Warmth/Good Cheer						
This Web site shows warmth for its customers.	.068	.019	-.094	.367	.413	.111
This Web site shows this company wants to convey good feelings toward visitors.	.113	.021	-.117	.718	.062	.006
This Web site shows friendliness toward customers.	-.014	.328	.046	.331	.210	.012
This Web site indicates that this company is keen on expressing good cheer toward visitors.	.204	-.025	-.146	.645	-.081	-.005
This Web site conveys positive feelings on the part of the company toward visitors.	.105	.010	-.031	.807	.038	-.004
This Web site was designed so as to convey positive feelings to customers.	.115	.047	-.125	.767	-.023	.008
Approachability						
The design of this Web site makes me feel comfortable about having to contact this company.	-.005	-.018	-.368	.362	.035	-.083
This Web site encourages customers to contact the company.	.048	.088	-.747	-.024	.131	.026
This Web site makes it easy for users to turn to this company for help.	.078	.001	-.568	.063	.213	.008
This Web site tells users to ask for help they need it.	.080	.062	-.690	.016	.078	-.034
This Web site suggests that I will not get frustrated or angry if I seek this company's assistance.	.011	.045	-.516	.446	-.031	-.024
This Web site invites users to get in touch with the company whenever they need to.	.034	.064	-.754	.069	.012	.002
Authenticity/Non-instrumentality						
This Web site makes me believe that	.143	.190	.038	.388	.241	-.354

this company has a <i>genuine</i> concern for its customers.						
This Web site has persuaded me that this company has <i>real</i> feelings for its customers.	.191	.158	-.020	.287	.305	-.295
This Web site has convinced me that this company <i>honestly</i> wants to help customers, not just sell them something.	.182	.153	.001	.306	.282	-.298
After visiting this site, I suspect that this company only helps people when doing so is good for business. (reverse -recoded)	-.046	.887	.044	.025	.101	.076
Based on its Web site, my impression of this company is that it is primarily guided by profit. (reverse - recoded)	-.026	.805	.009	-.022	-.083	-.037
After seeing its Web site, I feel that this company would help a customer only to get something in return. (reverse - recoded)	.073	.806	-.123	-.091	-.077	-.008
Role Spanning						
This Web site reminded me of people, places, or things I care about.	.598	.031	-.112	-.045	.208	-.190
This Web site reminds visitors of other important things in life aside from business.	.523	.067	-.058	.211	.102	-.285
This Web site contains pictures or information which I related to on a deeper, human level.	.810	.026	-.067	-.019	-.058	-.097
This Web site tells me this company sees visitors "as people", not only "as customers".	.671	.048	-.084	-.008	.169	-.113
This Web site shows that this company's interest in me does not go further than my business (Recoded).	.350	.051	-.136	.129	.376	-.141
This Web site shows this company tries to relate to visitors on a personal as well as on a commercial level.	.795	.004	-.071	.038	-.037	-.206
Self-Disclosure						
After having visited this Web site, I feel like I know whom I am dealing with, not just what they are selling.	.620	.017	-.128	.063	.095	.103
This Web site provides more than simply business information about this company.	.532	.041	.106	.204	.234	.331
This Web site reveals interesting facts about this company not directly related to its business.	.874	.028	-.031	.098	-.102	.103
This Web site shows that this company feels that it's important to tell visitors about itself.	.714	.024	.018	.022	.151	.051
This Web site contains more than just information about this company's business activities.	.680	.014	.011	.168	.047	.223

Note: Factor loadings >.40 or <-.40 appear in bold.

Unexpectedly, many of the items tapping into Self-Disclosure and Role-Spanning loaded onto the same factor. Another unexpected occurrence was that Authenticity/Non-instrumentality loaded onto two dimensions rather than a single one. To investigate this further, we conducted a smaller factor analysis with subsets of the overall data consisting only of the Authenticity/Non-instrumentality items to examine whether the items would split across two separate factors. Principal axis factoring with oblimin rotation was used. The number of factors extracted was not constrained but rather based on eigenvalues greater than one (1). A two factor solution emerged (see Table 5). Eigenvalues were 3.682 (61.372% of variance explained) for the first factor and 1.278 (21.299% of variance explained) for the second. Given that the factor analysis was unconstrained (i.e., the number of factors was derived from the data itself), this clearly suggested that the items initially created to reflect the Authenticity/Non-instrumentality dimension, were instead tapping into two distinct factors.

Table 5

Factor Analysis of Authenticity/Non-instrumentality Dimension

	Factor	
	1	2
This Web site makes me believe that this company has <i>genuine</i> concern for its customers.	.897	.018
This Web site has persuaded me that this company has <i>real</i> feelings for its customers.	.889	.007
This Web site has convinced me that this company <i>honestly</i> wants to help customers, not just sell them something.	.900	-.017
After visiting this site, I suspect that this company only helps people when doing so is good for business. (Reverse coded)	.057	.837
Based on its Web site, my impression of this company is that it is primarily guided by profit. (Reverse coded)	-.061	.806
After seeing its Web site, I feel that this company would help a customer only to get something in return. (Reverse coded)	.031	.800

Note: Factor loadings >.40 or <-.40 appear in bold.

At this point, two options presented themselves to us. First, we could split these items into two distinct dimensions based purely on the results of the exploratory factor analysis and christen each dimension with appropriate labels. This, however, appeared to be a purely data-driven approach. Second, we could retain the factor (i.e., either Factor 1 or Factor 2) whose items more closely represented the theorized dimension of Authenticity/Non-instrumentality. The other factor would simply be dropped. Given that the steps laid out for proper measure development are intended to be confirmatory in nature rather than simply data-driven, we opted for the latter option. Moreover, we suspected that the two factor solution may have been a methodological artefact given that, in the EFA statistical analysis, factor 2 had picked up all reverse coded items. Upon closer inspection of the items in both factors in Table 5 above, we felt that the three items grouped under Factor 1 more closely reflected the intended, theorized dimension of Authenticity/Non-instrumentality. We decided to remove the three items grouped under Factor 2 from further analysis.

A factor analysis was again conducted with all items intended to tap into the dimensions of Site-Communality (see Table 6). Items with high loadings ($>.40$ or $<-.40$) on their hypothesized factors (and relatively low cross-loadings) are shown in bold. As shown, the removal of the three items clearly improved the factor solution. Unexpectedly, it also remedied a problematic situation in the initial factor analysis, that is, the removal of the three items led the factors of Self-Disclosure and Role-Spanning to split into two distinct factors as initially theorized. The eigenvalues (with % of variance explained) for the six (6) factors were 18.399 (61.330%), 1.634 (5.446%), 1.304 (4.346%), .967 (3.224%), .876 (2.920%), and .705 (2.352%), respectively.

Table 6

Second Exploratory Factor Analysis of Site-Communality Items

	Factor					
	1	2	3	4	5	6
Demonstration of Caring						
This Web site wants me to know that the company behaves in a caring manner with customer.	.099	.260	.046	.037	.543	.163
This Web site shows this company nurtures its customers.	.224	.161	.012	.045	.469	.223
This Web site suggests customers are well looked after.	.229	.225	-.073	.118	.535	.055
This Web tries to convey a strong sense of caring for the customer.	.085	.188	.057	.110	.538	.093
Conveying Warmth / Good Cheer						
This Web site shows warmth for its customers.	-.002	.095	.349	.215	.334	.041
This Web site shows this company wants to convey good feelings toward visitors.	.093	.096	.658	.111	.027	.079
This Web site shows friendliness toward customers.	.062	-.067	.357	-.019	.237	.162
This Web site indicates that this company is keen on expressing good cheer toward visitors.	.108	.126	.575	.147	-.096	.063
This Web site conveys positive feelings on the part of the company toward visitors.	.066	-.003	.728	.123	.002	.118
This Web site was designed so as to convey positive feelings to customers.	.118	.076	.759	.077	-.001	.025
Approachability						
The design of this Web site makes me feel comfortable about having to contact this company.	.008	.376	.280	-.021	-.025	.130
This Web site encourages customers to contact the company.	-.002	.827	-.043	.037	.076	.031
This Web site makes it easy for users to turn to this company for help.	.036	.629	.022	.073	.122	.042
This Web site tells users to ask for help they need it.	.000	.766	-.040	.036	.014	.102
This Web site suggests that I will not get frustrated or angry if I seek this company's assistance.	.070	.515	.436	-.040	-.018	-.004
This Web site invites users to get in touch with the company whenever they need to.	.047	.813	.065	-.030	-.011	-.020
Authenticity/Non-Instrumentality						
This Web site makes me believe that this company has a <i>genuine</i> concern for its customers.	-.003	-.015	.051	-.023	-.035	.929
This Web site has persuaded me that this company has <i>real</i> feelings for its customers.	.056	.058	.010	.032	.060	.751

This Web site has convinced me that this company <i>honestly</i> wants to help customers, not just sell them something. After visiting this site, I suspect that this company only helps people when doing so is good for business. (Reverse)	-.021	.039	-.018	.064	.008	.851
Based on its Web site, my impression of this company is that it is primarily guided by profit. (Reverse)						<i>Omitted from Factor Analysis</i>
After seeing its Web site, I feel that this company would help a customer only to get something in return. (Reverse)						<i>Omitted from Factor Analysis</i>
Role Spanning						
This Web site reminded me of people, places, or things I care about.	.720	.048	.030	-.053	.191	.054
This Web site reminds visitors of other important things in life aside from business.	.549	.036	.136	-.042	.007	.327
This Web site contains pictures or information which I related to on a deeper, human level.	.737	.028	.057	.121	-.031	-.027
This Web site tells me this company sees visitors "as people", not only "as customers".	.656	.048	.048	.087	.146	.051
This Web site shows that this company's interest in me does <u>not</u> go further than my business (reverse - recoded).	.269	.164	.022	.118	.207	.326
This Web site shows this company tries to relate to visitors on a personal as well as on a commercial level.	.839	.018	.080	.001	-.054	.055
Self-Disclosure						
After having visited this Web site, I feel like I know whom I am dealing with, not just what they are selling.	.319	.152	.078	.383	.070	-.025
This Web site provides more than simply business information about this company.	-.059	-.041	.148	.735	.161	.020
This Web site reveals interesting facts about this company not directly related to its business.	.323	.104	-.005	.593	-.186	.130
This Web site shows that this company feels that it's important to tell visitors about itself.	.379	.011	-.006	.408	.077	.094
This Web site contains more than just information about this company's business activities.	.039	.071	.055	.725	-.046	.105

Note: Factor loadings >.40 or <-.40 appear in bold.

Deciding on whether to retain or further drop items was based on whether an item loaded moderately on its hypothesized factor (>.40 or <-.40) and whether cross-loadings were below .40. Based on these criteria, all of the four items tapping into Demonstration of Caring were retained. For both Conveying Warmth/Good Cheer

and Approachability, four out of six card sorted items were retained. It is worth noting that although the fifth (5th) item of Approachability had a moderate loading of .515 on its intended factor/dimension, it also cross-loaded quite highly with Conveying Warmth/Good Cheer (.436) and was therefore dropped. For Authenticity/Non-instrumentality, factor analysis left us with three items. For Role Spanning, factor analysis suggested retaining five out of the six items and, for Self-Disclosure all five items from card sorting except for one item were found to highly load together under one factor.

Given that the removal of an item in factor analysis typically affects the loadings of the items which remain, the enduring items of Site-Communality were subjected to one final exploratory factor analysis to ascertain whether they loaded on their intended factor. The solution is presented in Table 7.

Table 7

Final Exploratory Factor Analysis of Site-Communality Items

	Factor					
	1	2	3	4	5	6
Demonstration of Caring						
This Web site wants me to know that the company behaves in a caring manner with customer.	.058	.187	.077	.010	.603	.155
This Web site shows this company nurtures its customers.	.182	.123	.016	.038	.515	.221
This Web site suggests customers are well looked after.	.195	.156	-.043	.093	.609	.043
This Web tries to convey a strong sense of caring for the customer.	.019	.079	.145	.059	.658	.066
Conveying Warmth/Good Cheer						
This Web site shows this company wants to convey good feelings toward visitors.	.038	.076	.791	.015	.016	.041
This Web site indicates that this company is keen on expressing good cheer toward visitors.	.048	.061	.705	.073	-.052	.037
This Web site conveys positive feelings on the part of the company toward visitors.	-.015	-.038	.919	.018	.012	.057
This Web site was designed so as to convey positive feelings to customers.	.037	.015	.931	-.005	.032	-.037
Approachability						
This Web site encourages customers to contact the company.	-.010	.895	-.045	.027	.038	.008
This Web site makes it easy for users to turn to this company for help.	.025	.590	.042	.050	.143	.046
This Web site tells users to ask for help they need it.	-.003	.722	-.026	.034	.043	.104
This Web site invites users to get in touch with the company whenever they need to.	.013	.901	.108	-.057	-.058	-.060
Authenticity/Non-instrumentality						
This Web site makes me believe that this company has a <i>genuine</i> concern for its customers.	-.004	-.015	.051	-.034	-.038	.935
This Web site has persuaded me that this company has <i>real</i> feelings for its customers.	.050	.047	.012	.027	.079	.751
This Web site has convinced me that this company <i>honestly</i> wants to help customers, not just sell them something.	-.029	.027	.003	.053	.034	.839
Role Spanning						
This Web site reminded me of people, places, or things I care about.	.655	.038	.067	-.035	.237	.034
This Web site reminds visitors of other important things in life aside from business.	.492	.017	.185	-.049	.043	.327
This Web site contains pictures or information which I related to on a	.667	.045	.076	.119	-.008	.003

deeper, human level.						
This Web site tells me this company sees visitors “as people”, not only “as customers”.	.614	.066	.047	.101	.163	.051
This Web site shows this company tries to relate to visitors on a personal as well as on a commercial level.	.802	.047	.108	.004	-.043	.052
Self-Disclosure						
This Web site provides more than simply business information about this company.	-.054	-.050	.192	.674	.199	-.006
This Web site reveals interesting facts about this company not directly related to its business.	.325	.139	-.016	.613	-.165	.128
This Web site shows that this company feels that it’s important to tell visitors about itself.	.375	.016	-.012	.406	.108	.096
This Web site contains more than just information about this company’s business activities.	.038	.106	.094	.681	-.029	.086

Note: Factor loadings >.40 or <-.40 appear in bold.

All loadings for the remaining items were above the minimum level of 0.40. Consequently, all were retained. This revised version of our Site-Communality questionnaire contained four (4) items for Demonstration of Caring, four (4) for Conveying Warmth/Good Cheer, four (4) for Approachability, three (3) for Authenticity/Non-instrumentality, five (5) for Role-Spanning, and four (4) for Self-disclosure. Cronbach coefficient alphas were recomputed. All were above .7 (Nunnally, 1967). For Demonstration of Caring, Conveying Warmth/Good Cheer, Approachability, Authenticity/Non-instrumentality, Role-Spanning, and Self-disclosure, Cronbach coefficient alphas were .944, .950, .906, .925, .942, and .907, respectively. It should be noted that the initial dimension of Conveying Warmth/Good Cheer lost many of its items pertaining to ‘Warmth’ during measure purification, the dimension was therefore renamed and will be referred to from this point on simply as ‘Good Cheer’.

7.2.4 – Selecting the Number of Factors

The eigenvalues values were 15.179, 1.590, 1.105, .857, .766 and .636 for factors one, two, three, four, five, and six respectively. The amount of variance explained was 63.2%, 6.6%, 4.6%, 3.6%, 3.2% and 2.6% respectively. The eigenvalues

above '1' suggested a three-factor solution. However, Habing (2003) and Brown (2001) report on the several rules for determining the number of factors to choose in factor analysis. These are:

1. Select the number of factors with eigenvalues of 1.00 or higher.

"The factor with the largest eigenvalue has the most variance and so on, down to factors with small or negative eigenvalues that are usually omitted from solutions" (Tabachnick & Fidell, 1996, p. 646). Typically, in this approach, only variables with eigenvalues of 1.00 or higher are considered worth analyzing.

2. Examine a scree plot of eigenvalues plotted against the factor numbers:

The number of factors deemed appropriate is determined by examining the scree plot and selecting the number of factors before the plotted line turns sharply right.

3. Fixed percentage of variance explained: Here, the researcher analyzes increasing numbers of factors and stops when all non-trivial variance is accounted for. Although there is no general consensus on the number of factors to keep, this typically entails keeping as many factors as are required to explain 60%, 70%, 80-85% of variance explained (i.e., whatever is common in the researcher's field).

4. Use the number of factors that the theory predicts: Choosing the number of factors becomes a theory-based approach.

Given our work's strong foundation on Communal-Relationship Theory, we chose to follow the latter approach. Arguably, another reason for keeping our six (theorized) factor solution is that can provide more useful diagnostic information when evaluating Web sites. Practically speaking, our six factor solution (rather than a three factor solution suggested by, say, eigenvalues) provides managers with specific areas on which they can drill-down for improvement.

7.3 - Purification of Items for Site-Loyalty (Card Sorting Exercise 2 / Questionnaire 2)

7.3.1 - Initial Item Generation and Content / Face Validity for the Site-Loyalty Dimensions and for the Overall Measures of Site-Communality and Site-Loyalty

We generated an initial pool of items for each of the dimensions of the attitudinal and behavioural components of Site-Loyalty. This yielded an initial pool of 35 items: (a) Relative Attitude (5 items) (b) Emotional Attachment (6 items), (c) Word of Mouth (6 items), (d) Intention to Use/Revisit (6 items), (e) Resistance to Switch (6 items), and (f) Willingness to Invest More (6 items). In addition, items tapping into overall measures of Site-Communality and Site-Loyalty were included in the card sorting exercise for construct validity purposes. Six (6) initial items were created for Overall Site-Communality and three (3) for Overall Site-Loyalty.

A second round of card sorting (Moore & Benbasat, 1991) followed. It was conducted to content validate our multidimensional measure of Site-Loyalty, Overall Site-Communality, and Overall Site-Loyalty. A set of 10 new judges were recruited to participate in the card sorting exercise. This group consisted administrative personnel and Ph.D. students at the Faculty of Management of McGill University. The results of the card sorting exercise are shown in Appendix 3.

All initial items were retained for Relative Attitude. For Emotional Attachment, two (2) items were dropped because less than seven out of 10 judges agreed that that these items tapped into Emotional Attachment. These items were: *“I’d feel sorry to hear that this company was having trouble competing online”* and *“I can understand how some customers can develop feelings for this company”*.

For the dimensions tapping the behavioural component of Site-Loyalty, one (1) item initially created to tap into Word-Of-Mouth was dropped during card sorting, possibly because the item was reverse coded. This item was “*If someone I knew was looking for this type of Internet company, I would suggest they look elsewhere*”. For the dimension ‘Intention to Use/Revisit’, two items did not pass our criteria for the card sorting exercise. These were “*I’d choose a competitor’s Web site rather than this one*” (a reverse coded item) and “*If I was looking for this type of Web site, I would come back to this one again*”. As for the ‘Resistance to Switch’ dimension, it lost the following two (2) initial items: “*If I was already using this Web site, I would do so only temporarily until something better came up*” (a reverse coded item) and “*I think customers of this Web site stay away from competitors*”. Finally, for the ‘Willingness to Invest More’ dimension, it too lost two (2) items during card sorting. There were: “*Getting to know this Web site is a waste of time*” (a reverse coded item) and “*Even if this Web site would charge a little more, this Web site would still be appealing*”. Removal of these items left us with a total of 26 items.

In addition to the initial pool of items tapping into the Site-Loyalty dimensions, six (6) items for Overall Site-Communality and three (3) items of Overall Site-Loyalty were also included in the second card sorting exercise. As such, judges were given two (2) additional envelopes. On one was written the definition of Site-Communality and, on the other, the definition of Site-Loyalty. An initial pool of items for Overall Site-Communality was generated based on our review of literature of Communal-Relationship Theory, the concept of Communality (Goodwin, 1996), and Communal Relationships in commercial settings (Aggarwal, 2004). The initial set of items for Overall Site-Communality and for Overall Site-Loyalty are shown in Tables 8 and 9 respectively.

Table 8

Initial Pool of Items Generated to Tap into Overall Site-Communality

Item 1 - This Web site makes users feel like they are dealing with friends rather than strangers.
Item 2 - This Web site makes you feel like you can expect more than a “strictly business” relationships from this company.
Item 3 - This Web site suggests that company tries to be more than simply a business partner to its customers.
Item 4 - This Web site makes visitors feel like they will be treated “like family”
Item 5 - This Web site suggests that my relationship with this company is likely to be quite formal and business-like (reverse coded).
Item 6 - This Web site shows this company has many of the qualities which I’d look for in a friend.

Table 9

Initial Pool of Items Generated to Tap into Overall Site-Loyalty

Item 1 - This Web site promotes customer loyalty.
Item 2 - It would not surprise me to learn that this company has loyal customers.
Item 3 - I feel that this Web site is worthy of its customers' loyalty.

From this initial pool of items for Overall Site-Communality, item 3 was dropped during the card sorting exercise because less than 7 out of 10 judges could not associate the item with Overall Site-Communality. All items were retained for Overall Site-Loyalty.

7.3.2 - Content Validation of Additional Measures

For the purpose of establishing the nomological validity of Site-Communality and Site-Loyalty and to test the moderating effect of *Communal-Orientation in Traditional Commercial Environments*, additional measures needed to be developed. This included: (1) a measure of Overall Web site Satisfaction (for nomological validity purposes) and (2) a measure of ‘Communal-Orientation in Traditional Commercial Environments’ (used to test hypothesis H19 that consumer’s communal-orientation accentuates the positive impact of Site-Communality on Site-Loyalty – see Figure 8).

The items for these additional measures were not included as part of the card sorting exercises used to refine the items of Site-Communality and Site-Loyalty. It was deemed that the addition of these additional items and definitions would have potentially made the card sorting exercise too taxing on the card sorting judges which may have increased mis-assignments. Instead, we adopted the content validity technique used in Shimp and Sharma (1987). In sum, this method for establishing content validity consisted of recruiting five judges and giving each one a questionnaire which included a definition of Overall Web site Satisfaction and Communal-Orientation in Commercial Environments and the items tapping into these variables and asking them to rate how well they believed each item tapped into its respective construct.

Overall Web site Satisfaction was defined as the *extent to which a visitor feels an overall sense of satisfaction with his/her experience with the Web site*. The items tapping into *Overall Web site Satisfaction* were created by borrowing and adapting existing items from several studies and papers on satisfaction (e.g., Brandt, 1988; Martin, 1996; Schneider & Bowen, 1999; Wirtz, 2001). Our measure contained the following four items: (1) Overall, I am _____ with this Web site (with the answer ranging from *very pleased* to *very displeased* on a 7 point Likert scale), (2) overall, this Web site was _____ (with the answer ranging from *better than expected* to *worse than expected* on a 7 point Likert scale), (3) overall, I am _____ with this Web site (with the answer ranging from *very delighted* to *very disappointed* on a 7 point Likert scale), (4) overall, I am _____ with this Web site (with the answer ranging from *very satisfied* to *very dissatisfied* on a 7 point Likert scale).

Communal-Orientation in Traditional Commercial Environment was defined as *the extent to which a consumer enjoys 'getting to know' employees and relating with them on a more personal-level than is typically required for the effective delivery of service*. An initial pool of six (6) items were generated. These items were based on our literature review of the research into communal-orientation in

Social Psychology, Communality (Goodwin, 1996) and the work by Barnes (1997) in Marketing into customers' desirability/non-desirability in entering into close relationships with employees.

All of these items were included in the questionnaire and given to the five (5) judges for content validity assessments. Of the latter, two were professors. One in Marketing, the other in IS. The remaining three experts were PhD students at McGill University. The first professor was doing research in the area of relationship marketing and had read articles on Clark's Communal/Exchange-Relationship Theory in Social Psychology. The second professor and the three PhD students were all familiar with this author's thesis topic. All understood the purpose of developing these measures.

In sum, these judges were asked to read the definition of 'Communal-Oriented in Traditional Commercial Environments' and Overall Web site Satisfaction and rate each corresponding item on a scale ranging '1' (Clearly Representative of this definition) to '5' (Not Representative of this definition) with '3' (Somewhat Representative of this definition) as a midpoint. Mean ratings per item were calculated. Items with mean scores greater than '2' were immediately rejected from the pool of items (Shimp & Sharma 1987).

For the Overall Web site Satisfaction measure, all items were retained. For 'Communal-Oriented in Traditional Commercial Environments', the judges rejected items 2 and 3 from the initial pool of items. As such, only items 1, 4, 5, and 6 were deemed as representative of 'Communal-Oriented in Traditional Commercial Environments' (see Table 10).

Table 10

Results from Judge Rankings for 'Communal-Orientation in Traditional Commercial Environments'

Initial Item Pool for Communal-Orientation in Traditional Commercial Settings	Mean ratings
Item 1: In traditional commercial settings, I usually prefer to have strictly business-like relationships with employees (reverse coded).	1.2
Item 2: At the stores I shop at, most employees just pretend to be friendly because their job requires them to be that way. (reverse coded)	3 (rejected)
Item 3: In traditional commercial settings, I do not like it when other customers/employees whom I do not know try and speak with me.	4 (rejected)
Item 4: In traditional commercial settings, I often start chatting with employees.	1.6
Item 5: In traditional commercial settings, I usually like getting to know at least one of the employees on a personal basis.	1
Item 6: In traditional commercial settings, very friendly store employees make me feel uncomfortable. (reverse coded)	2

7.3.3 - Questionnaire for Site-Loyalty and Additional Measures (Questionnaire 2) and Demographics

A second online questionnaire was created and posted online replacing the first questionnaire (i.e., at the same WWW address). In questionnaire 2, we included the 26 items tapping the Site-Loyalty dimensions retained from the second card sorting exercise. In addition, the six (6) items for Overall Site-Communality, the three (3) items of Overall Site-Loyalty, the four (4) items of Overall Web site Satisfaction and four (4) items of 'Communal-Orientation in Traditional Commercial Environments' were also added to questionnaire 2. Except for the Overall Satisfaction items, all others were of the 7-point Likert-type ranging from (1) *Strongly Agree* to (7) *Strongly Disagree*. As in questionnaire 1, items believed to tap into a common dimension/concept were placed into groups in proximity to one another. The order of items within each group of items was randomized for each respondent. A demographics section was included at the end of the questionnaire. Participants were asked to evaluate one Web site from the same list

of real Web sites which were used in questionnaire 1. Participants were instructed to choose and evaluate one (out of the nineteen) Web site which they were not familiar with. They were instructed to explore this Web site for a period of at least 10 minutes or until they had formed an impression about the Web site, be it positive or negative.

An additional five hundred (500) invitations were printed to collect data using questionnaire 2. In order to minimize the chances of sampling from the same pool of potential respondents as for questionnaire 1, we decided to post invitations for questionnaire 2 on bulletin boards across other campuses. This included Texas A&M University (Corpus Christi), Rice University, Dallas Baptist University, Sam Houston State University, Texas Christian University, and University of Dallas. The posting of invitation and data collection lasted over a two month period spanning from early February to late March 2004.

A total of 256 electronic questionnaires were submitted and received by email. The participant's name and contact information were used to sort the questionnaires received to verify that all respondents filled out no more than one questionnaire. For any participant who had submitted more than one questionnaire, only the first submission was kept. Fourteen (14) questionnaires were thus removed. This reduced our sample size from 256 to ($n_2=$) 242. Because of the method by which participants were recruited, it was not possible to calculate the response rate.

Table 11 represents the number of participants who evaluated each of the nineteen Web sites. As with questionnaire 1, 1Drugstore-Online (i.e., the first Web site in the list of 19 Web sites) was chosen the most frequently. This, we believe, was due to an oversight on our part when designing the first and second questionnaires. The order in which the Web sites appeared on the questionnaire was not randomized. Seemingly, respondents overwhelmingly tended to choose to evaluate the first Web site from the list of nineteen Web sites. This oversight was

corrected in the questionnaire 3 which was used for the purpose of confirmatory factor analysis.

Table 11

Frequency and Percent of Participants Evaluating each Web Site in Questionnaire 2

Web site	Frequency	Percent
1	42	17.4%
2	19	7.9%
3	5	2.1%
4	25	10.3%
5	5	2.1%
6	6	2.5%
7	12	5.0%
8	9	3.7%
9	7	2.9%
10	11	4.5%
11	4	1.7%
12	4	1.7%
13	4	1.7%
14	25	10.3%
15	12	5.0%
16	13	5.4%
17	13	5.4%
18	16	6.6%
19	10	4.1%
Total	242	100.0%

Women made up a slightly larger percentage of participants (51.7%). The largest portion of participants (54.1%) was in the 18-21 years of age category. The second highest age group in our sample (23.6%) appeared in the 22-24 years of age category. Next came the age groups 25-29 years of age (9.5%), 30-39 years of age (7.0%), and 40-49 years of age (3.7%). The remaining 2% were either under 18 or between the ages of 50-59.

In terms of occupation, the largest group of participants were students (71.9%). The majority of the respondents (83.5%) declared themselves as 'single, never

married'. The next two largest groups were the 'married' group at 12% and those who were 'separated 'or divorced' at 3.7%. The number of the respondents in the 'widowed' group was just 0.8%.

Most of the respondents (71.1%) made under \$10,000 a year. The next largest groups made between \$10,000-19,999 (11.6%) and \$20,000-29,999 (8.3%). The largest two groups of respondents described their race/ethnicity as 'White/Caucasian' at 57%. 'Asians' and 'Hispanic/Latino' were almost of equal proportion at 11.2% and 12%, respectively. 'Black/African American' consisted of 8.3%. In about equal amounts, the remaining participants described themselves as either 'Other' or 'would rather not say'. Most respondents specified that they had all least obtained a high school diploma (47.9%). The second largest group (33.9%) had undergraduate University degrees.

7.3.4 - Reliability and Exploratory Factor Analysis of Site-Loyalty Items (Data Collected from Questionnaire 2)

Questionnaire 2 was constructed for the purpose of purifying the Site-Loyalty measure. For this purpose, we followed the same general procedures as detailed above. All reverse-coded items were first recoded. The Cronbach coefficient alphas estimates for the initial set of items tapping the six Site-Loyalty dimensions were then calculated (i.e., items retained from card sorting). To assess reliability, we used the recommended minimum acceptable level of 0.7 (Nunnally, 1967). For corrected item-to-total correlations, a cut-off level of .5 was chosen (Bearden, Netemeyer, & Teel 1989; Zaichkowsky 1985).

For all of the dimensions of Site-Loyalty, Cronbach coefficient alphas were all above the .7 cut-off value. For *Relative Attitude* and *Emotional Attachment*, the alphas were .918 and .885 respectively. The corrected item-total correlations for *Relative Attitude* were all above .5 ranging from .669 to .852. For *Emotional Attachment*, these values ranged from .716 to .779. As such, all items for both dimensions were retained. Cronbach coefficient alphas was .913 for *Word of*

Mouth, .913 for *Intention to Use/Revisit*, .893 for *Resistance to Switching/to Competitors' Attempts at Counter Persuasion*, and .888 for *Willingness to Invest More*. Corrected item-to-total correlations ranged from .593 to .862, .640 to .890, .674 to .822, and .670 to .810, respectively. All were above the .5 cut-off. As such, all of the items correctly associated by at least 7 out of 10 judges in the card sorting exercise were retained at this point of item purification.

The data we collected using questionnaire 2 ($n_2 = 242$) was then submitted to two separate exploratory factor analyses each using principle axis factoring with oblimin rotation. The first exploratory factor analysis pertained to verifying the dimensionality of the attitudinal component of Site-Loyalty. It consisted of investigating whether the items which had been generated to tap into Relative Attitude and Emotional Attachment loaded on the expected dimension (see Table 12). The second exploratory factor analysis was applied to the items tapping the four theoretical behavioural dimensions of Site-Loyalty (i.e., Word of Mouth, Intention to Use/Revisit, Resistance to Switching/to Competitors' Attempts at Counter Persuasion, and Willingness to Invest More – see Table 13). A two- and a four-factor solution were forced in exploratory factor analysis. This was consistent with the two theorized attitudinal dimensions and the four behavioural dimensions.

Table 12

Exploratory Factor Analysis of the Attitudinal Component of Site-Loyalty

	Factor	
	1	2
Relative Attitude		
This Web site is an excellent choice.	.900	-.013
Compared to others I've seen, I like this Web site.	.923	-.026
There is nothing special about this Web site (reverse - recoded).	.655	.050
Compared to other Web sites, I have a good feeling about this one.	.926	-.025
I'd feel quite confident in choosing this Web site rather than another.	.752	.041
Emotional Attachment		
It would pain me to see this company fail.	-.045	.860
I would like to see this company succeed.	-.043	.878
It would bother me to know that competitors were trying to put this company out of business.	.227	.647
I think that it is important for Internet users to show their support for this company.	.031	.744

Note: Factor loadings >.40 or <-.40 appear in bold.

Table 13

Exploratory Factor Analysis of the Behavioural Component of Site-Loyalty

	Factor			
	1	2	3	4
Word of Mouth				
If someone criticized this Web site, I would disapprove.	.319	-.071	.352	.089
I would recommend this site to others.	.653	.076	.090	.182
I would <i>discourage</i> others from using this site (reverse - recoded)	.519	.169	.101	.084
I would say good things about it.	.730	.123	.007	.131
I would encourage others to have a look at this site.	.597	.068	.239	.100
Intention to Use/Revisit				
I would use this Web site.	.042	.069	.023	.850
I would do business with this Web site.	-.042	.011	.015	.972
I would revisit this Web site.	.186	.009	-.017	.727
I could see myself as a long-time user of this Web site.	.158	.078	.232	.316
Resistance to Switching/to Competitors' Attempts at Counter Persuasion				
If I were already a customer of this Web site, it would take a lot to get me to switch.	.099	.785	-.055	.037
If I were already a customer of this Web site, I'd stay with this site rather than look for another.	.101	.803	-.045	.073
If I were already a customer of this Web site, I would quickly switch to another site offering <i>slightly</i> better deals (reverse - recoded).	-.144	.543	.184	.220
If I were already a customer of this Web site, I'd stay with this Web site even if others charged <i>a little</i> less.	.019	.847	.071	-.064

Willingness to Invest More				
Getting to know more about what this Web site has to offer is worth it.	.208	.073	.574	.109
It is worth investing time in familiarizing oneself with this site.	.151	.107	.584	.033
Even if navigating this Web site was a little more difficult than others, it would still be worth using it.	.043	.239	.597	-.055
In the future, I may invest more time to get to know this site better.	-.025	-.072	.885	.091

Note: Factor loadings >.40 or <-.40 appear in bold.

Factor analysis revealed that most items loaded highly on their respective factors. All of the items for the attitudinal component of Site-Loyalty were retained. As for the behavioural component of Site-Loyalty, the first item of Word of Mouth and the last item of Intention to Use/Revisit had low factor loadings (< .40) and considerable cross-loading on the other factors. These two items were therefore deleted. As such, the revised version of our Site-Loyalty questionnaire contained five (5) items for Relative Attitude, four (4) for Emotional Attachment, four (4) for Word of Mouth, three (3) for Intention to Use/Revisit, four (4) for Resistance to Switching/to Competitors' Attempts at Counter Persuasion, and four (4) for Willingness to Invest More. Cronbach coefficient alphas were all recomputed. For Relative Attitude, Emotional Attachment, Word of Mouth, Intention to Use/Revisit, Resistance to Switching/to Competitors' Attempts at Counter Persuasion, and Willingness to Invest More, Cronbach coefficient alphas were .918, .885, .913, .944, .893, and .888, respectively. All were well above the minimum recommended value of .7 (Nunnally, 1967) suggesting excellent reliability of the measures.

The eigenvalues (and % of variance explained) for the attitudinal component of Site-Loyalty were 5.837 (64.86%) and .974 (10.82%) for factors one and two respectively. For the behavioural component, the eigenvalues (and % of variance explained) were 9.626 (64.17%), 1.171 (7.80%), .838 (5.589%), .560 (3.732%) respectively. Although many of the eigenvalues were below the cut-off value of '1', as mentioned in section 7.2.4, there are several rules for determining

the number of factors to choose in factor analysis (Brown, 2001; Habing 2003).

These are:

1. *Select the number of factors with eigenvalues of 1.00 or higher.*
2. *Examine a scree plot of eigenvalues plotted against the factor numbers.*
3. *Fixed percentage of variance explained.*
4. *Use the number of factors that the theory predicts.*

Given that our identification of the factors of both the attitudinal and behavioural components of Site-Loyalty was founded on the literature in loyalty, we opted for the latter approach. Also, it may be argued, that this approach provides the most diagnostic information when evaluating company Web sites enabling managers to better identify specific areas for improvement.

7.4 - Reliability and Factor Analysis of Overall Site-Communality and Overall Site-Loyalty

After data collection for questionnaire 2, an initial examination of corrected item-to-total correlations for the remaining items of Overall Site-Communality revealed that 'Item 5' (i.e., "*This Web site suggests that my relationship with this company is likely to be quite formal and business-like*") fell below the recommended value of 0.5. This item was removed. The four remaining items exhibited a Cronbach coefficient ($\alpha_{\text{Overall Site-Communality}} = .887$) above the .7 minimum level recommended by Nunnally (1967).

From the initial pool of three (3) items designed to tap into Overall Site-Loyalty, all were retained in the card sorting exercise and were included into questionnaire 2. Following data collection for questionnaire 2, Cronbach coefficient alpha for this three item measure of Overall Site-Loyalty was computed and judged to be very acceptable ($\alpha_{\text{Overall Site-Loyalty}} = .950$). All corrected item-to-total correlations were above the recommended level of 0.5.

Next, we ran an exploratory factor analysis with the remaining items of Overall Site-Communality and Overall Site-Loyalty. We specified principle axis factoring, oblimin rotation and eigenvalues above 1 specified as the method of extraction. The pattern matrix (Table 14) clearly shows that the items split as expected into two factors.

Table 14

Pattern Matrix of Exploratory Factor Analysis for Remaining Items of Overall Site-Communality and Overall Site-Loyalty

Items	Factor	
	1	2
OverallLoy1	.177	.738
OverallLoy2	-.113	.856
OverallLoy3	.136	.791
OverallSiteComm1	.887	.043
OverallSiteComm2	.843	.012
OverallSiteComm3	.918	.004
OverallSiteComm4	.915	-.015

7.5 - Reliability and Factor Analysis of Overall Satisfaction and Communal-Orientation in Traditional Commercial Environments

We calculated Cronbach coefficient alphas and the corrected item-to-total correlations for the items of Overall Web site Satisfaction and 'Communal-Orientation in Traditional Commercial Environments'. Cut-off levels 0.7 and 0.5 were used, respectively (see Nunnally, 1967; Bearden, Netemeyer, & Teel 1989; Zaichkowsky 1985).

For Overall Web site Satisfaction, the Cronbach Alpha coefficient was .951 and the corrected item-to-total correlations ranged from .845 to .906. Exploratory factor analysis using principle axis factoring with oblimin rotation and eigenvalues above 1 specified as the method of extraction showed that the items did indeed tap into a single factor.

The Cronbach Alpha coefficient and corrected item-to-total correlations for the items of 'Communal-Orientation in Traditional Commercial Environments' are presented in Table 15. Initial computation of Cronbach alpha was 0.721. However, the corrected item-to-total correlation for the item "*In traditional commercial settings, very friendly store employees make me feel uncomfortable*" was below

the minimum cut-off value of 0.5 (Bearden et al., 1985). Consequently, this item was removed. A reassessment of the Cronbach alpha coefficient without this item returned a value of 0.758 showing very good reliability. An exploratory factor analysis using principle axis factoring with oblimin rotation and eigenvalues above 1 specified as the method of extraction showed that all the items loaded on a single common factor.

Table 15

Corrected Item-to-Total Correlations

Items tapping into <i>Communal-Orientation in Traditional Commercial Environments</i> in Questionnaire 3	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	
In traditional commercial settings, I usually prefer to have strictly business-like relationships with employees (reverse coded).	.580	.663	
In traditional commercial settings, I often start chatting with employees.	.633	.640	
In traditional commercial settings, I usually like getting to know at least one of the employees on a personal basis.	.545	.683	
In traditional commercial settings, very friendly store employees make me feel uncomfortable. (reverse coded)	.419	.758	Item Dropped

7.6 - Sample Size Considerations for Questionnaire 1 and Questionnaire 2

Presently, no consensus exists as to the minimum adequate sample size for factor analysis. Some rules of thumb have been proposed by different authors. Some of these include:

- a) **STV ratio:** The subjects-to-variables ratio should be no lower than 5 (Bryant & Yarnold, 1995)
- b) **Rule of 100:** The number of subjects should be 5 times the number of variables and, at least, 100 (Hatcher, 1994)
- c) **Rule of 150:** Hutcheson and Sofroniou (1999) recommend anywhere between 150 - 300 cases.
- d) **Rule of 200:** There should be at least 200 cases, regardless of STV (Gorsuch, 1983)

Moreover, research into minimum sample size requirements in structural equation modelling (SEM) has found that a sample size of 150 respondents is adequate for the purposes of exploratory factor analysis (see Guadagnoli & Velicer, 1988).

For Site-Communality, we retained 33 items from card sorting. These were included into questionnaire 1. The number of useable cases for questionnaire 1

was $n_1=249$. One (1) item was dropped due to low corrected item-to-total correlation. The remaining 32 were then factor analyzed. Items which did not load satisfactorily on their intended dimension were removed. This left us with a total of 25 items. In this situation, the STV ratio would recommend a minimum sample size of 160 ($32*5$). As such, our sample size of $n_1=249$ for questionnaire 1 met all of the minimum sample size requirements suggested by these four rules of thumb.

For the items created to tap into Site-Loyalty, from the initial pool of 35 items, nine (9) were dropped in card sorting. This left us with nine (9) items tapping two dimensions of the attitudinal component of Site-Loyalty and 17 items tapping the four (4) dimensions of the behavioural component of Site-Loyalty. To these remaining 26 items were added four (4) items for Overall Site-Communality, three (3) items for Overall Site-Loyalty, four (4) items for Overall Web site Satisfaction, and three (3) items for 'Communal-Orientation in Traditional Commercial Environments'. As such 40 items were included in questionnaire 2 for which we were able to gather $n_2=242$ respondents. According to STV, the minimal sample size requirements for 40 variables is 200 ($40*5$). As such, our sample size of 242 met all of the requirements set by the four rules of thumb listed above.

7.7 - Preliminary Statistical Analyses of the Relationship between Overall Site-Communality and Overall Site-Loyalty

In order to conduct a preliminary analysis of the relationship between Site-Communality and Site-Loyalty, the four (4) items of Overall Site-Communality and the three (3) items of were independently averaged together to create measures of '*Average Overall Site-Communality*' and '*Average Overall Site-Loyalty*'. These averaged one item measures were then input into a simple regression using SPSS 12.0 with '*Average Overall Site-Communality*' specified as the independent variable and '*Average Overall Site-Loyalty*' as the dependent variable.

Consistent with hypothesis (see hypotheses H16, H17, H18), the simple regression solution showed a highly significant ($p < .000$) positive beta of .526 with an adjusted R^2 of .252. As such, Average Overall Site-Communality explained more than 25% of the variation in Average Overall Site-Loyalty. By and large, this provided preliminary evidence that Average Overall Site-Communality had a significant positive impact on Average Overall Site-Loyalty.

7.8 - Summary

In this chapter, we conducted preliminary purification of the items of Site-Communality and Site-Loyalty and of other measures needed in our study. For Site-Communality and Site-Loyalty, this included conducting card sorting, examining item-to-total correlations and Cronbach coefficient alphas. Finally, exploratory factor analysis was run to further eliminate items which did not adequately tap into their intended dimension. First, this involved two rounds of card sorting (Moore & Benbasat, 1991), one for the initial item pool for Site-Communality, another for those items designed to tap the dimensions of Site-Loyalty. In the latter were also included items intended to tap into Overall Site-Communality and Overall Site-Loyalty. Items were deleted if they were not correctly assigned to their theorized dimensions by at least 7 out of 10 judges. Second, data collection was done using two online questionnaires. Questionnaire 1 contained the items which remained from the card sorting exercise for the Site-Communality dimensions. Questionnaire 2 contained the remaining items which had made it through card sorting exercise for Site-Loyalty and the items of Site-Communality and Site-Loyalty which had passed the card sorting. Data was then collected for questionnaire 1 and for questionnaire 2. Initial reliability analyses for Site-Communality (i.e., data from questionnaire 1) and Site-Loyalty (data from questionnaire 2) were then conducted using SPSS 12.0. Cronbach alpha coefficients were computed for all of these measures. An examination of corrected item-to-total correlations was used to further identify and eliminate items which did not tap well into their theorized dimension. This left us with $n_1 = 249$ from questionnaire 1 and $n_2 = 242$ from questionnaire 2. Third, the items

tapping the dimensions of Site-Communality and the items tapping into Site-Loyalty were submitted to separate exploratory factor analyses (EFA) using principle axis factoring with oblique rotation in SPSS 12.0. Data ($n_1 = 249$) from questionnaire 1 was used for the EFA of Site-Communality while the data ($n_2 = 242$) from questionnaire 2 was used for the EFA of Site-Loyalty. In each case, exploratory factor analysis enabled us to identify the items which did not load adequately on their hypothesized factor/dimension. These items were removed and exploratory factor analysis was run again. Finally, Cronbach alpha coefficients were recomputed for the remaining items tapping the dimensions of Site-Communality and Site-Loyalty.

This chapter also describes how we purified additional measures needed to test our models and conduct a preliminary analysis of the impact of Site-Communality on Site-Loyalty using simple regression. This included measures of Site-Satisfaction, Overall Site-Communality and Overall Site-Loyalty, and 'Communal-Orientation in Traditional Commercial Environments'. All remaining items from exploratory factor analysis are presented in Appendix 4.

Finally, we concluded this chapter with a preliminary investigation into the relationship between Site-Communality and Site-Loyalty using simple regression. First, the items meant to tap into each of these measures were submitted to card sorting for content validity purposes and initial item purification. The remaining items of Overall Site-Communality and Overall Site-Loyalty were then included into questionnaire 2 and data was collected ($n_2 = 242$). Cronbach alpha coefficients and corrected item-to-total correlations were further used to remove items which did not tap their hypothesized dimensions well. To explore the relationship between Overall Site-Communality and Overall Site-Loyalty, the responses to the items for Overall Site-Communality and Overall Site-Loyalty were averaged to produce a one-item Overall Site-Communality measure and a one-item Overall Site-Loyalty measure. Finally, a simple regression was run on SPSS 12.0 with Average Overall Site-Communality specified as the independent

variable and Average Overall Site-Loyalty as the dependent variable. These preliminary results indicated that Overall Site-Communality had a significant positive impact on Overall Site-Loyalty as was predicted in this thesis.

In the next chapter, we present confirmatory factor analysis for our measures of Site-Communality and Site-Loyalty in order to further refine these measures. We also address construct validity issues.

Chapter 8 - Refining the Measures of Site-Communality and Site-Loyalty Using Confirmatory Factor Analysis

8.1 - Overview

In this chapter, we discuss how we used the data collected from questionnaire 3 ($n_3 = 305$) to refine our multidimensional measures of Site-Communality and Site-Loyalty with confirmatory factor analysis. Structural Equation Modeling (SEM) typically consists of two models; the measurement model (also referred to as Confirmatory Factor Analysis) and the structural equation model (Schumaker & Lomax, 1996). In the measurement model, the hypothetical constructs are measured in terms of the observed variables. It is used to address measurement properties (i.e. reliability and discriminant and convergent validity). In the structural equation model, on the other hand, one tests the patterns of relationship among the constructs. This chapter deals strictly with the measurement model (i.e., Confirmatory Factor Analysis for our measures of Site-Communality and Site-Loyalty). It is divided into four (4) parts. In Part 1, we present our final questionnaire and data collection. In Part 2, we briefly discuss SEM and *Confirmatory Factor Analysis* (CFA). Part 3 presents the results of confirmatory factor analysis for Site-Communality. In Part 4, we address confirmatory factor analysis for Site-Loyalty.

8.2 - Final Questionnaire (Questionnaire 3) Creation and Invitation for the Study

A final online questionnaire (questionnaire 3 - see Appendix 5) was constructed using Perseus SurveySolutions 6TM for the purposes of conducting Confirmatory Factor Analysis (CFA) and testing our models and hypotheses. We included twenty eight (28) real Web sites (i.e., nine additional Web sites were added to the ones utilized in questionnaires 1 and 2). Again, these were chosen across three industries (i.e., banking, insurance, and pharmaceutical companies) so as to maximize variability in Site-Communality. In other words, some of these Web

sites appeared to be purely utilitarian in nature (i.e., low in Site-Communality) while others were chosen because they contained affective content (i.e., high in Site-Communality). These Web sites are listed in Table 16.

The items included in this last questionnaire were the items of Site-Communality and Site-Loyalty from questionnaires 1 and 2 (respectively) which had passed exploratory factor analysis (see previous chapter). It also included measures of Overall Web site-Satisfaction, Trust, Positive and Negative Affect. In addition, to test the proposed moderation effects of 'Communal-Orientation in Traditional Commercial Environments' on the relationship between Site-Communality and Site-Loyalty, this measure was added to questionnaire 3. The items which remained from our card sorting exercises and exploratory factor analyses and were subsequently included into questionnaire 3 can be found in Appendix 4.

Table 16

Real Web sites Included in the Final Questionnaire⁴⁴

- (1) 1Drugstore-Online (www.1drugstore-online.com)
- (2) Aetna Insurance (www.aetna.com)
- (3) Alexander Insurance Incorporated (www.alexanderinsurance.com)
- (4) Canadian Drugs (www.canadiandrugs.ca)
- (5) Canammeds (www.canammeds.com)
- (6) Canadian Imperial Bank of Commerce (www.cibc.com)
- (7) Colonial Savings Bank (www.colonialsavings.com)
- (8) DuBose & Associates Insurance (www.duboseandassociates.com)
- (9) IMB Banking and Financial Services (www.imb.com.au)
- (10) J. Weinberg & Associates Insurance (www.room100.com/insurance)
- (11) Laurentian Bank (www.laurentianbank.com)
- (12) LEM Insurance Services (www.lemsvcs.com)
- (13) Macquarie Bank (www.macquarie.com.au)
- (14) Man-Health Online Pharmacy (www.man-health.com)
- (15) Manchester Unity Credit Union (www.manchesterunity.org.nz)
- (16) Priority Pharmacy (www.prioritypharmacy.com)
- (17) Scotia Bank (www.scotiabank.com)
- (18) WebPharmacy (www.Webpharmacyrx.com)
- (19) WestPac Bank (olb.westpac.com.au)
- (20) First Metro Bank (www.firstmetro.com/personal_banking.html)
- (21) County Bank (www.countybank.com/40personal.htm)
- (22) Citizens Bank of Canada (www.citizensbank.ca/Personal/)
- (23) Royal and Sun Alliance Canada (www.royalsunalliance.ca/royalsun/)
- (24) RBC Insurance (www.rbcinsurance.ca)
- (25) M.A.M.I Insurance (www.mamiusa.com)
- (26) AMFAM Insurance (www.amfam.com)
- (27) International Student Insurance
(www.internationalstudentinsurance.com)
- (28) Amica Insurance (www.amica.com)

For questionnaire 3, items tapping into a common measure were grouped 'close' to one another. However, the order of the items within each of these groups was randomized for each participant. All of the items were of the 7-point Likert-type ranging from (1) *Strongly Agree* to (7) *Strongly Disagree*. A demographics section was included at the end of the questionnaire.

⁴⁴ Descriptions of these companies and Web sites are presented in Appendix 8.

Seven hundred (700) invitations were printed and posted on bulletin boards across the campuses of McGill University, Concordia University, University of Houston (main campus), Rice University, University of Vermont (Burlington), University of Ottawa and Carlton University. In order to encourage participation, the invitations included details about ten random draws offering monetary prizes. Data collection was done using an online questionnaire and spanned over a period of two months (Mid April 2004 – Mid June 2004) at the end of which the draws were conducted and winners contacted.

In order to minimize the possibility of a confounding effect of having had past experience with the company or its Web site (i.e., be it good or bad), the questionnaire instructed each participant to choose and evaluate one (1) out of the 28 Web sites which (s)he was not familiar with (i.e., the participant had not dealt with or heard of the company beforehand). Participants were asked to explore this Web site for a period of at least 10 minutes, until they had formed an impression about the Web site.

8.2.1 - Data Screening Procedure, Sample Size, and Demographics

Over a period of two months, a total of 358 electronic questionnaires were filled out and electronically submitted back to us. Given that Confirmatory Factor Analysis (CFA) and Structured Equation Modelling (SEM) assume multivariate normal distributions and are sensitive to extreme outliers, careful screening of the original sample is recommended (Kline, 1998). The initial data set was screened in SPSS 12.0. The data was first sorted on contact information (i.e., first name and then email/telephone number) and visually scrutinized for the existence of any duplicate cases (e.g., respondents who may have used the browser's back button and then re-submitted their responses). Sixteen (16) cases were removed from the data set. This left us with 342 unique questionnaires.

For each of the remaining questionnaires, the responses on four reverse coded items were scrutinized. Each case having at least three (3) out of the four (4)

reverse coded items answered inconsistently with other similar items was initially flagged. Further examination of these flagged cases suggested that twelve (12) may have been due to participants responding to the online-questionnaire items at random. These cases were removed from the sample which reduced the sample size to 330.

Next, to identify extreme outliers, Mahalanobis D^2 (d-squared) scores and their corresponding probabilities were computed using SPSS. Given that one of our main foci of interest was to create a multi-dimensional Site-Communality scale, the items generated to tap into Site-Communality were used to compute the Mahalanobis D^2 statistic and its probability. A large Mahalanobis' distance (or small probability value) identifies a case as having an extreme value suggesting a potential outlier. Cases were flagged if the probability of Mahalanobis D^2 was 0.01 or lower (i.e., a value consistent with an extreme outlier – Norušis, 1993). Subsequently, a visual inspection of the actual answers in these flagged cases helped us separate those cases which indeed appeared to be true outliers from those cases which may be considered as unlikely but still possible. This exercise further reduced our sample size for questionnaire 3 to $n_3=305$ (final sample size).

From this sample of 305, Table 17 presents the number of participants who chose to evaluate each of the 28 Web sites chosen for this study. Given the means by which the participants were recruited, it was not possible to calculate the response rate. As with questionnaires 1 and 2, there was no way for us to ascertain the number of persons whom had noticed/read the invitations but chose not to participate.

Table 17

Frequency and Percent of Participants Evaluating each Web Site in Questionnaire

3.

Web site	Frequency	Percent
1	22	7.21%
2	8	2.62%
3	7	2.30%
4	23	7.54%
5	17	5.57%
6	20	6.56%
7	8	2.62%
8	12	3.93%
9	12	3.93%
10	2	0.66%
11	5	1.64%
12	2	0.66%
13	4	1.31%
14	25	8.20%
15	15	4.92%
16	17	5.57%
17	18	5.90%
18	25	8.20%
19	11	3.61%
20	5	1.64%
21	1	0.33%
22	10	3.28%
23	8	2.62%
24	9	2.95%
25	2	0.66%
26	1	0.33%
27	13	4.26%
28	3	0.98%
Total	305	100.00%

The distribution between male and female respondents was nearly identical (i.e., 50.2% as male and 47.8% as female). The largest proportion of respondents was in the 18-21 years of age category (41.0%). The second largest group was between the ages of 22 and 24 (30.2%). The third and fourth largest age groups were between 25 and 29 (11.5%) and between 30 and 39 (10.8%). Cumulatively,

the age groups 40-49 and 50-59 included 5.3% of the sample. The majority of the respondents (86.2%) declared themselves as 'single, never married'. The next two largest groups were the 'married' group (9.5%) and those who were 'separated or divorced' (4.3%).

As for race or ethnicity, the largest two groups of respondents were 'White/Caucasian' at 59.0% and 'Asian' at 17.4% respectively. The next largest group (7.9%) was 'Native Hawaiian/Pacific Islander'. This was followed by 'Black/African American' (5.2%), those who classified themselves as 'Other' (5.9%), and 'Hispanic/Latino' (4.3%). Many (41.3%) reported having an Undergraduate degree as their highest level of schooling achieved. The second and third largest groups respectively consisted of respondents having finished high school (31.1%) and those having a graduate degree (16.7%).

Most of the respondents were students (72.4%). Almost half (46.9%) reported living temporarily away from home due to studies (i.e., university residence). The next largest group reported that they were living permanently in their own home or apartment (33.1%). Most of the respondents (60.7%) made under \$10,000 a year. The two second largest income group made between \$10,000 and \$19,999 (21.6%).

8.3 - SEM and Confirmatory Factor Analysis

Structural Equation Modelling (SEM) has several basic advantages when compared to more traditional analysis techniques such as multiple regression (see Fornell & Larcker 1981; Hair, Anderson, Tatham, & Black, 1998). First, with SEM researchers are capable of representing interrelated, latent constructs. The links between the latent constructs represent the structural model. Latent constructs are variables which cannot be directly measured and instead are measured using imperfect indicators. Second, given that SEM assumes that we are using imperfect indicators, it thus recognizes measurement error and allows us to account for it in the estimation process. Third, SEM allows to *simultaneously*

estimate multiple and interrelated dependence relationships. Contrary to such techniques as multiple regression, SEM allows to test more complex models where several equations need to be estimated all at once. Importantly, these equations can be interrelated with one another meaning that a dependent variable in one equation can also be an independent variable in other equations. This is often not possible in other types of multivariate techniques available.

SEM also allows researchers to conduct Confirmatory Factor Analysis (CFA). Confirmatory factor analysis “involves the specification of one or more putative models of factor structure, each of which proposes a set of latent variables (factors) to account for covariance among a set of observed variables” (Doll, Xia, & Torkzadeh, 1994, p. 453). Whereas Exploratory Factor Analysis (EFA) assumes that any item (a.k.a., indicator) may be associated with any factor, confirmatory factor analysis (CFA) seeks to establish whether the number of factors and the indicators which were designed to tap into these factors behave as expected. Simply stated, in CFA, the item is “forced” to load on its theorized factor while constraining the item’s loading on other factors to zero (0) (Anderson & Gerbing, 1988).

8.3.1 - Notation Used in our Models

In presenting our confirmatory factor analysis and structural models, we use the following LISREL notation:

ξ (KSI): latent exogenous variables.

η (ETA): latent endogenous variables.

γ (GAMMA): Structural path, regression coefficient, or standardized ‘beta weight’ from an exogenous variable (ξ) to an endogenous variable (η). The first subscript identifies the eta and the second subscript identifies the ksi such that ‘ γ_{21} ’ means the structural path from ksi 1 (ξ_1) to eta 2 (η_2).

β (BETA): Structural path, regression coefficient or standardized ‘beta weight’ from an endogenous variable (η) to an endogenous variable (η).

For example, if there is a path from η_1 to η_2 then we refer to this path as β_{21} .

ζ (ZETA): The unexplained variance of a latent variable. It is analogous to $1 - R^2$ in regression analysis.

x_i : The indicators (observed variables) for latent exogenous variables.

λ_x (lambda x): The loadings of the X_i indicators on the latent exogenous variables. For example, λ_{31} is the loading between ξ_1 and x_3 .

δ_i (DELTA): The errors in measuring the X_i indicators. Errors mean that our observed measures are imperfect. These errors are often represented in a matrix called Theta-Delta θ_δ .

ϕ (PHI): The correlation/covariance between exogenous variables (ξ s). Correlations are reported in standardized solutions. For example, ϕ_{21} is the covariance between ξ_2 and ξ_1 . PHIs are found in the Φ matrix is the variance-covariance matrix.

y_i : The indicators of the latent endogenous variables (η s).

λ_y (lambda y): The loadings of the y_i indicators on the latent endogenous variables (η s). For example, λ_{31} is the loading from η_1 to y_3 .

ϵ_i (EPSILON) : Errors in measuring the y_i indicators. LISREL reports these errors in a matrix called θ_ϵ .

8.3.2 - Assessing Normality

We examined multivariate statistics to determine whether the data collected using questionnaire 3 ($n_3 = 305$) followed a Normal distribution. This important step not only helps researchers determine which method of estimation may be best suited in conducting CFA and SEM, but also, allows for a better interpretation of fit due to effects that non-normality can have on the method of estimation chosen to conduct CFA and SEM (Satorra & Bentler, 1994; Hu, Bentler, & Kano, 1992; Curran, West, & Finch, 1996). *Skewness* measures the symmetry (or lack of symmetry) of a distribution. Given that a normal distribution is symmetric, its skewness should have a value of zero (0). A positive skewness value indicates a

distribution skewed to the right while a negative skewness value shows a skew to the left. *Kurtosis* measures the "tail-heaviness" of the distribution. The kurtosis of a normal distribution is zero (0). Positive values of kurtosis indicate that a distribution has longer tails than a normal distribution whereas negative kurtosis indicates a distribution has shorter tails. An examination of univariate normality (i.e., the coefficients of skewness and kurtosis) in SPSS 12.0 revealed that the sample was not normally distributed. In our sample, skewness ranged from -3.30 to 1.78 while kurtosis ranged from -1.14 to 13.76. These values were outside the thresholds deemed acceptable (i.e., skewness between ± 2 , kurtosis between ± 7 ; West, Finch, & Curran, 1995) suggesting not only non-univariate normality but, by extension, non-multivariate normality as well.

8.3.3 - Choice of ML Estimation Method with Satorra-Bentler Scaling

The non-normality of survey data seems to be more of a common occurrence rather than an exception. Survey data rarely follow univariate normal distributions, let alone a multivariate normal distribution (Micceri, 1989). However, researchers in social sciences often opt not to transform non-normally distributed data as this often introduces problems by altering the meaning of actual responses (see Anderson, Lodish, & Weitz 1987; Gassenheimer, Davis, & Dahlstrom 1998). Instead, with non-normally distributed data in SEM, researchers have often relied on the estimation method called "Maximum likelihood" (ML) given that it has been shown to be rather robust against 'moderate' violation of normality in CFA and SEM provided that sample sizes are larger than 100 (Anderson & Gerbing, 1988; Browne, 1984; Tanaka, 1984). This may be one of the reasons why ML has been the predominant estimation method used by researchers in SEM (Anderson & Gerbing, 1988).

However, ML estimation method is based on a strong assumption that the measured variables follow a multivariate normal distribution and there seems to be no agreed upon metric to establish whether departure from normality is moderate or severe. The greater the non-normality problem, the greater the

inefficiency of the ML parameter estimation and the more this method tends to inflate the chi-square statistic undermining its utility. The overall chi-square fit statistic for the model as a whole becomes biased toward Type I error (rejecting a model which should not be rejected). This ‘bloating’ of the chi-square estimate may lead researchers to misguidedly reject or aggressively seek to modify models which may not be incorrect. Moreover, under ML, violations of multivariate normality also tend to (moderately to severely) deflate (underestimate) standard errors. These ‘smaller’ standard errors mean that regression paths and factor/error covariances are found to be statistically significant more often than they would be if the data was multivariate normal (see MacCallum, 1986; MacCallum, Roznowski, & Necowitz, 1990). Many SEM studies typically fail to concern themselves with the assumption of multivariate normality in spite of its importance when using ML estimation.

Recently, different approaches have been suggested to address the problems with ML estimation under conditions of multivariate non-normality. One such approach (Satorra & Bentler, 1994) was developed to compute a more accurate test statistic under conditions of non-normality in small samples by adjusting the ML chi-square estimate to compensate for non-zero kurtosis. With the *Satorra–Bentler rescaled chi-square statistic* ($SB\chi^2$), the greater the degree of multivariate kurtosis, the greater the downward adjustment to the inflated normal theory chi-square.

Although incorporating the Satorra-Bentler rescaling procedure into the LISREL code noticeably increases execution time, one important advantage of the method is that it has the desirable property of simplifying to the original ML χ^2 under multivariate normality and thus, does not bias the analysis of data when it is normally distributed (Curran, West, & Finch, 1996). Arguably, a second advantage is that Satorra-Bentler’s downward adjustment of the ML inflated chi-square (in non-normally distributed data) is that by reported a smaller, more accurate χ^2 , it may diminish researchers’ temptations to drop items during

measure refinement in CFA in order to achieve better model fit⁴⁵ at a cost of creating narrow instances of the target construct. In other words, incorporating the Satorra-Bentler adjustment for non-normally distributed data may help mitigate the urge to sacrifice content (i.e., number of items per factor⁴⁶) in order to achieve better fit – a practice which is particularly undesirable when factors have a broad theoretical domain better reflected by larger number of items. Given the departure of our data from normality, we opted to use the Satorra-Bentler χ^2 scaling procedure to conduct all of our analyses. In all cases, we report fit indices with the Satorra-Bentler scaling procedure (i.e., $SB\chi^2$) and without (i.e., $ML\chi^2$).

8.3.4 - Measurement Model versus Structural Model

We opted for the two-step analysis advocated by Anderson and Gerbing (1988). It proposes that, in structured equation modelling, a separate estimation of the measurement model is conducted prior to the simultaneous estimation of measurement and structural models.

During the first part of the analysis (i.e., the measurement model), relationships between the observed variables (i.e., questionnaire items) and latent variables or

⁴⁵ Too many indicators could result in a non-parsimonious measurement models (Anderson & Gerbing 1984; Baumgartner & Homburg 1996; Bentler & Chou 1987). As the number of indicators per factor increase, there is an accompanying decrease in the values of a number of commonly used criteria to assess fit. Moreover, as more items are added to a scale, the benefits to scale reliability are progressively less and less (Carmines & Zeller, 1979).

⁴⁶ The measure of a variable should include a sufficient number of items to adequately tap its domain. When too few items are used, the content and construct validity and reliability of the measure may be inadequate (Nunnally, 1976) and the lower the number of items in a scale, the more susceptible the scale becomes to these problems (Hinkin & Schriesheim, 1989). However, scales must also be parsimonious (Cronbach & Meehl, 1955). This is because the number of items in a scale may affect responses in several ways. For instance, questionnaires which are excessively lengthy induce fatigue and response pattern bias (Anastasi, 1976) and, thus, should be avoided (Schmitt & Stults, 1985). From a purely technical perspective, three indicators variables per factor are typically needed for a model to be identified (Bollen, 1989). By using only two indicators or less, researchers increase their chances of reaching infeasible solutions (Baumgartner & Homburg, 1996; Bentler & Chou, 1987; Hair et al., 1998).

hypothetical constructs (factors) are specified and consists of item purification (i.e., dropping items which do not tap well on their intended construct). This step culminates in an analysis of the measurement properties (i.e., reliabilities and validities) of the observed and latent variables. Analysis of the measurement model is often referred to as confirmatory factor analysis. Only once the measurement model has been ‘cleaned up’ or refined does the researcher move to test the relationships among the unobserved (latent) variables (i.e., the structural model).

For both the measurement and structural models, adequacy is assessed using ‘fit’ indices which gage how well the model-implied covariance matrix matches the covariance matrix from the collected data. One of the major benefits of the two-step approach is that it allows the researcher to narrow down sources of poor fit – whether it is due to the measurement or the structural model (Jöreskog & Sörbom, 1996).

The most common means of evaluating model fit is the chi-square goodness-of-fit (χ^2) test. Non-significant χ^2 show that the model provides an adequate representation of the data. However, Jöreskog and Sörbom (1996) point out that large χ^2 values are a common finding and that it has become general practice for researchers to rely on other indices of fit, in combination. Moreover, Hu and Bentler (1999) found that the lowest sum of Type I and Type II error rates occurred when decisions to reject/retain models were based on a combination of fit indices. Additional fit indices included in our analysis include: the Normed Fit Index, the Comparative Fit Index, the Incremental Fit Index, the RMSEA; the Adjusted Goodness of Fit Index, the Normed Chi-square (i.e., χ^2/df) and the Standardized RMSR. A description of each of these indices and its cut-off value is provided in Table 18.

Table 18

Fit Indices and Cut-off Values Used to Assess Quality of Models

Fit Index	Fit Criteria
ML Estimated Chi-Square ($ML\chi^2$)	$p > .05$
Satorra-Bentler Chi-Square ($SB\chi^2$)	$p > .05$
Normed Fit Index (NFI)	≥ 0.90 (Bentler, 1990)
Comparative Fit Index (CFI)	≥ 0.90 (Bentler, 1990)
Incremental Fit Index (IFI)	≥ 0.90 (Bentler, 1990)
RMSEA	≤ 0.06 (Browne & Cudek, 1993; Hu & Bentler, 1999)
Adjusted Goodness of Fit Index (AGFI)	≥ 0.90 (Bentler, 1990) (between .80 to .89 indicates reasonable fit; see Hartwick & Barki, 1994)
Normed Chi-square (i.e., χ^2/df)	Between 1 and 2 indicates good fit. Between 2 and 3 indicates reasonable fit (Carmines & MacIver, 1981)
Standardized Root Mean Square Residual (SRMR)	$< .08$ (Hu & Bentler, 1999)

To improve fit in the measurement model, items may be dropped based on:

- (1) Low/non-significant factor loadings (t-values below ± 1.96 - Bollen, 1989),
- (2) Low squared multiple correlations (R^2) (below 0.30 – Bollen, 1989)
- (3) If they contributed to high standardized residuals, and
- (4) Items with modification indices (MIs) suggesting high cross-loadings.

To improve fit in the structural model, paths may be added/removed between latent constructs based on modification indices.

Although model fit can typically be improved through respecification of models (e.g., by incorporating paths suggested by modification indices, by dropping items), researchers must be wary of simply ‘capitalizing on chance’ (MacCallum, Roznowski, & Necowitz, 1992), in other words, “taking advantage

of sampling error to attain goodness of fit” (Anderson & Gerbing, 1988, p. 416). Any data-driven approach should be recognized by researchers as fitting the model, in part if not entirely, to the chance characteristics of the original sample (Cliff, 1983). The result is often a model with properties which fits the sample data well but which is not generalizable to other samples and to the population. This becomes particularly problematic when replication is attempted at some time in the future.

Instead, “respecification decisions should not be based on statistical considerations alone but rather in conjunction with theory and content considerations” (Anderson & Gerbing, 1988, p. 416). In the measurement model, dropping items to maximize fit may penalize content validity (e.g., Cattell, 1973, 1978; Gerbing, Hamilton & Freeman, 1994). Maximizing fit at the expense of content (i.e., small number of items per factor) may impede the proper measurement of certain constructs, particularly those whose universe of content is, in reality, quite broad. The resulting small number of items per factor may inadequately tap the richness of the factors as initially theorized. As such, researchers must keep in mind that achieving better fit by dropping items is a compromise.

8.4 - First- and Second-Order Confirmatory Factor Models of Site-Communality

8.4.1 - Measurement Model of Site-Communality

The original SPSS data file was imported into LISREL 8.54 and saved in PRELIS data file format (i.e., psf extension). To assess whether the import procedure was carried out without any data corruption, the covariance matrix was generated in LISREL and its values were compared to the covariance matrix previously generated in SPSS using the original data file. A visual inspection of the two revealed that they were identical evidencing that the import procedure had been successful.

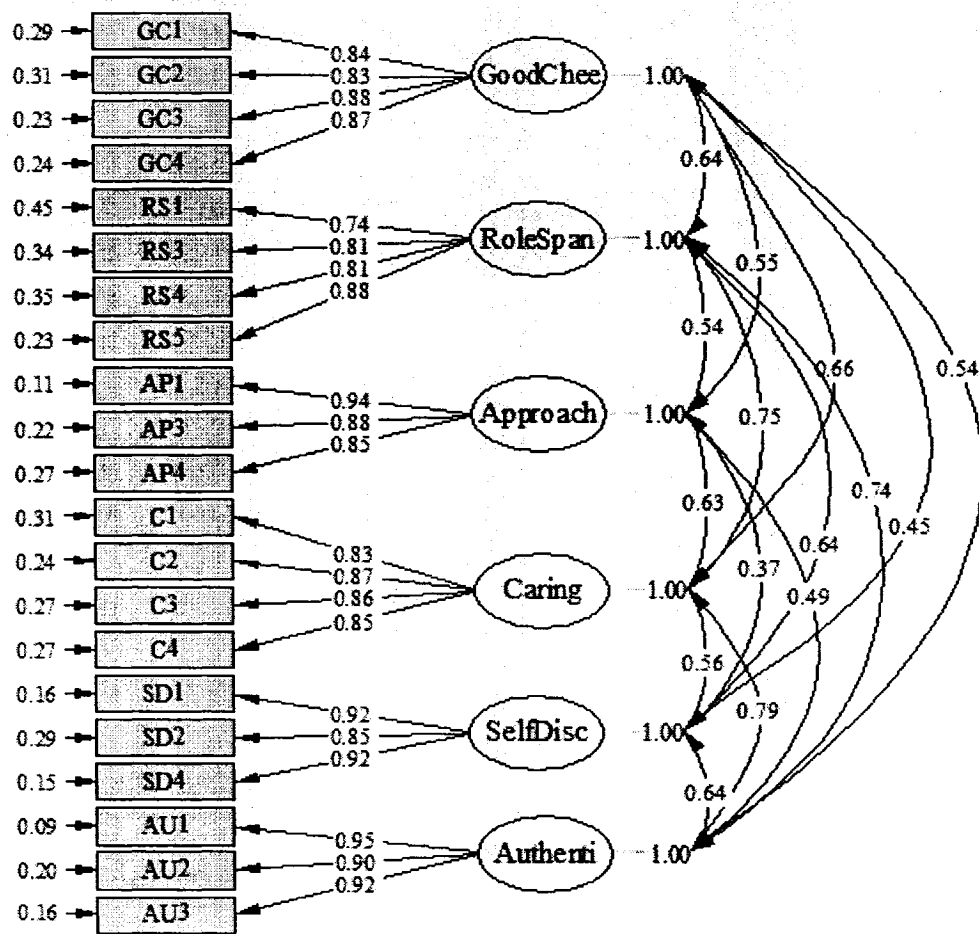
Next, we used LISREL, to compute the asymptotic covariance matrix given that the Satorra–Bentler rescaled chi-square statistic ($SB\chi^2$) under LISREL requires the use of this weight matrix in adjusting for non-normality and specification of ME=ML on the output line. The LISREL 8.54 syntax to generate the Satorra–Bentler rescaled chi-square statistic is given below.

```

TI Measurement Model of Site Communality
DA NI=78 NO=305 NG=1 MA=CM
RA FI='Data305.psf' !Raw data file in PRELIS format
AC FI=Data305.asy !Asymptotic covariance matrix is loaded to activate Satorra-Bentler
scaling
SE
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
19 20 21 22 23 24 /
MO NX=24 NK=6 LX=FU,FI PH=SY,FR TD=DI,FR
LK
GoodChee RoleSpan Approach Caring SelfDisc Authenti
FR LX(1,1) LX(2,1) LX(3,1) LX(4,1) LX(5,2) LX(6,2) LX(7,2) LX(8,2) LX(9,2)
FR LX(10,3) LX(11,3) LX(12,3) LX(13,3) LX(14,4) LX(15,4) LX(16,4) LX(17,4)
LX(18,5)
FR LX(19,5) LX(20,5) LX(21,5) LX(22,6) LX(23,6) LX(24,6)
PD
OU ME=ML RS SS SC !LISREL's help feature suggests including ME=ML when using
Satorra-Bentler

```

The confirmatory factor analysis ($n = 305$) was run using a raw data file. Three items were dropped from the solution based on the LISREL output (i.e., large standardized residuals and cross-loadings, etc.). This included RS2, AP2, and SD3. Again, an attempt was made to retain as many of the items as possible. The standardized solution of the first-order CFA model is presented below in Figure 12 and detailed in Tables 19 and 20.



Chi-Square=264.78, df=174, P-value=0.00001, RMSEA=0.041

Figure 12. First-Order Factor Model for Site-Communality^{47, 48}

It is worth noting that for First-Order Factor Models in LISREL, dimensions (i.e., factors) are specified as ξ s and their corresponding items as x_i s. The loadings of items on their respective factors are designated λ_{xi} . The standardized loadings (λ_{xi} s) in our First-Order Factor Model for Site-Communality range from 0.74 to 0.95. The t-values were all significant ranging from 6.56 to 25.15. All squared multiple

⁴⁷ The dimension *Conveying Warmth and Good Cheer* lost many of its items pertaining to 'Warmth' during measure purification, as such, the dimension was renamed simply as 'Good Cheer'.

⁴⁸ See Appendix 4 for description of items

correlations were above 0.30 (see Tables 19 and 20) indicating that the items tapped well into their intended factors (Bollen, 1989). However, the model revealed a significant $ML(\chi^2) = 295.84$, $p\text{-value}=0.00000$, $RMSEA=0.048$ with $df=174$ suggesting a poor fit (see Table 17). Although the Satorra-Bentler scaling procedure substantially lowered the Chi-Square, $SB(\chi^2) = 264.78$ ($p = 0.00001$), its chi-square also failed to reach non-significance. Nevertheless, the fit indices presented in Table 19 suggest that overall, the model had a good fit. The model just marginally fell short of the desired result of $> .9$ for the AGFI (Bollen, 1990) but was nevertheless at the higher end of the .80 to .89 threshold representing a reasonable fit (Hartwick & Barki, 1994). See Appendix 9 for correlations between items.

Table 19

Fit Indices⁴⁹ for the First-Order Factor Model for Site-Communality.

Fit Index	Recommended Value	First-Order CFA Model
ML(χ^2)	$p > .05$	295.84 (df=174, $p=0.00000$)
SB(χ^2)	$p > .05$	264.78 (df=174, $p=0.00001$)
NFI	$> .90$	0.98
CFI	$> .90$	0.99
IFI	$\geq .90$	0.99
ML(RMSEA)	$\leq .06$	0.048
SB(RMSEA)	$\leq .06$	0.041
AGFI	$\geq .90$ (between .80 to .89 indicates reasonable fit)	0.89
ML(χ^2) / df	< 3	1.70
SRMR	$< .08$	0.037

It is worth noting that, by adopting a data-driven approach in maximizing model, a non-significant SB(χ^2) was achieved but at a considerable cost in terms of item content. This ‘excellent fit/lower item content’ model is presented in Figure 13. See Appendix 9 for correlations between items.

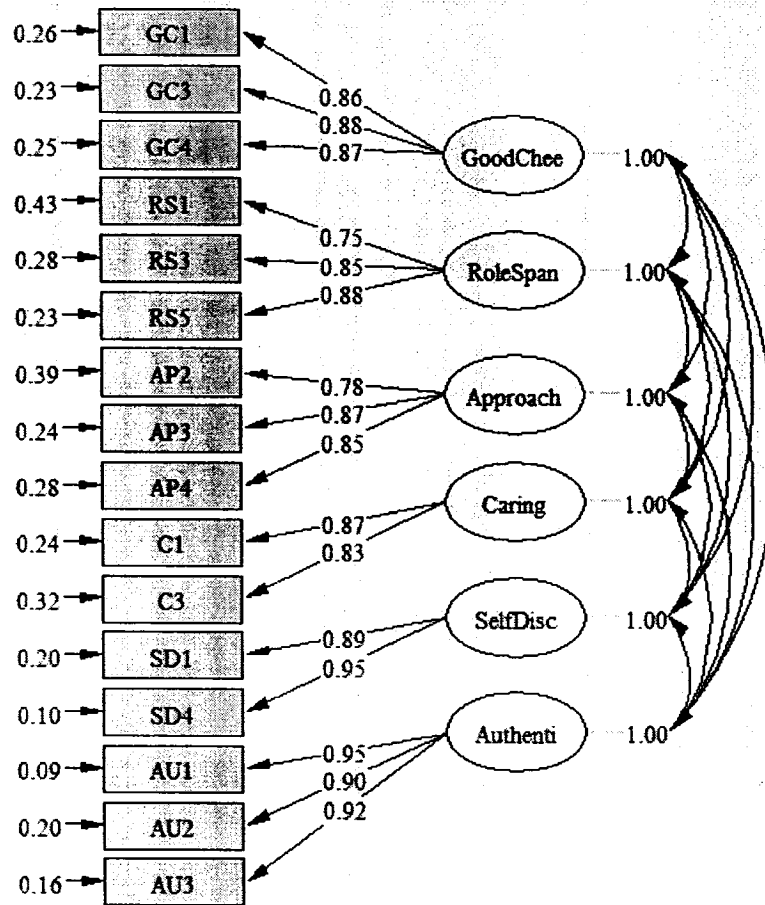
⁴⁹ SB(RMSEA) represents the value obtained by using the Satorra-Bentler scaling procedure. ML(RMSEA) is the result using the ‘traditional’ ML estimation method. Where ML or SB are not specified, the fit indices exhibited the same values whether we used traditional ML or the Satorra-Bentler scaling.

Table 20

Factor Loadings, t-values, and Errors of the Measurement Parameters for First-Order Factor Model for Site-Communality

Item ⁵⁰	Standardized Loading	Standard Error of Estimate	t-value	R ²	Cronbach Alpha (α)	Average Variance Extracted (AVE)
Good Cheer						
GC1	λ ₁₁ = .84	.29	17.35	.71	.916	.731
GC2	λ ₁₂ = .83	.31	16.92	.69		
GC3	λ ₁₃ = .88	.23	17.65	.77		
GC4	λ ₁₄ = .87	.24	17.50	.76		
Role Spanning						
RS1	λ ₂₁ = .74	.45	16.50	.55	.883	.659
RS3	λ ₂₂ = .81	.34	21.11	.66		
RS4	λ ₂₃ = .81	.35	19.50	.65		
RS5	λ ₂₄ = .88	.23	23.34	.77		
Approachability						
AP1	λ ₃₁ = .94	.11	19.91	.89	.921	.794
AP3	λ ₃₂ = .88	.22	19.51	.78		
AP4	λ ₃₃ = .85	.27	18.04	.73		
Caring						
C1	λ ₄₁ = .83	.31	15.79	.69	.914	.727
C2	λ ₄₂ = .87	.24	19.29	.76		
C3	λ ₄₃ = .86	.27	16.75	.73		
C4	λ ₄₄ = .85	.27	22.29	.73		
Self-Disclosure						
SD1	λ ₅₁ = .92	.16	24.43	.84	.922	.805
SD2	λ ₅₂ = .85	.29	20.17	.71		
SD4	λ ₅₃ = .92	.15	24.88	.85		
Authenticity						
AU1	λ ₆₁ = .95	.09	26.49	.91	.945	.853
AU2	λ ₆₂ = .90	.20	22.66	.80		
AU3	λ ₆₃ = .92	.16	23.91	.84		

⁵⁰ See Appendix 4 for description of items



Chi-Square=102.83, df=89, P-value=0.14994, RMSEA=0.023

Figure 13. Alternate Model showing Excellent Fit but with Considerable Lower Item Content⁵¹.

8.4.2 - Second-Order Factor Model – Site-Communality

Next, we tested for a second-order factor. In Second-Order Factor Models in LISREL, the first-order factors (i.e., dimensions) are specified as η s and their corresponding items as y_i s. The loadings of items on their respective factors are designated λ_{yi} . It is the second-order factor which is specified as a ξ (ksi).

The assumption of a second-order confirmatory factor model is that the correlations/covariances between the first-order factors/constructs are 'caused' by

⁵¹ See Appendix 4 for description of items

a single second-order factor/construct (Tanaka & Huba, 1984). Adding a second-order factor (ξ) into a model represents an attempt to more parsimoniously explain the covariation between the first-order factors (η s) (Doll, Xia, & Torkzadeh, 1994). In SEM, second-order constructs (ξ) are represented as constructs which have other constructs (η s) as their indicators. The latter are typically referred to as 'dimensions' of the second-order construct. Second-order factor models are modeled by drawing arrows going from the second-order construct (ξ) to the first-order constructs (η s). In turn, each first-order construct (dimension) has its respective indicators (λ_{ys}) with arrows going from each dimension to its respective items. In this study, we conceptualize Site-Communality as a second-order construct (ξ) and the first-order CFA factors (η s) as its dimensions. The results of this model analysis are presented in Figure 14 below. See Appendix 9 for correlations between items.

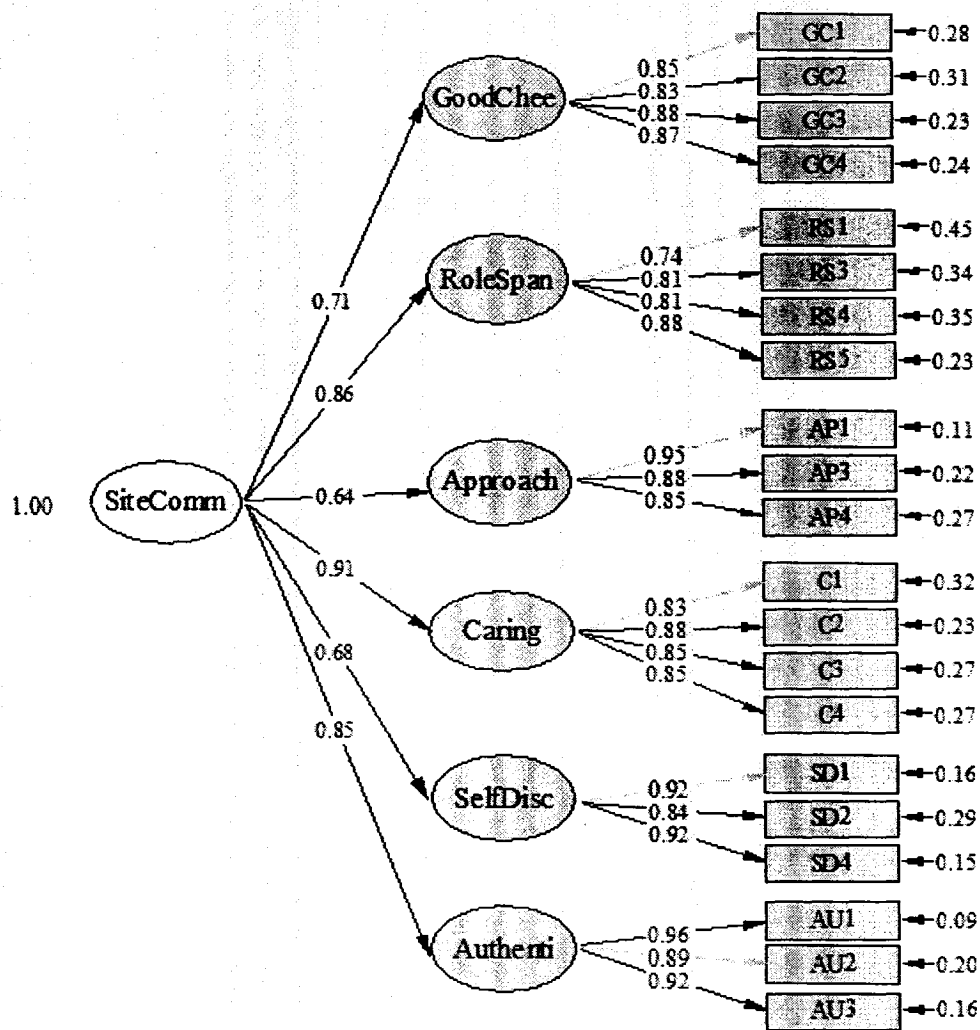


Figure 14. Second-Order Factor Model for Site-Communality⁵².

The second-order confirmatory factor analysis (CFA) model revealed a $ML(\chi^2) = 350.95$, $df=183$, $p\text{-value}=0.00000$, and a $SB(\chi^2) = 312.71$, $p=.00000$ with $df = 183$. Both the $ML(\chi^2)$ and the $SB(\chi^2)$ failed to reach non-significance. The AGFI (0.87) was below 0.90 (i.e., the cut-off for an excellent model) but well within the range of adequacy (i.e., from 0.80 to 0.89; see Hartwick & Barki, 1994). Moreover, other fit indices indicated that, overall, the model displayed a good fit (see Table 21).

⁵² See Appendix 4 for description of items

Table 21

Second-Order Measurement Model for Site-Communality

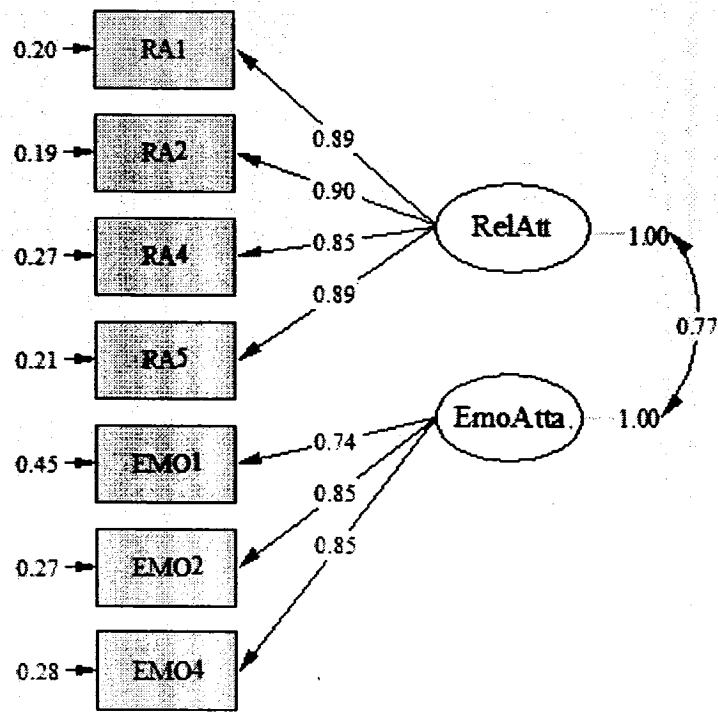
Fit Index	Recommended Value	Second-Order CFA Model
χ^2	$p > .05$	312.71 (df=183, $p=0.00000$)
NFI	$> .90$	0.98
CFI	$> .90$	0.99
IFI	$> .90$	0.99
RMSEA	$\leq .06$	0.048
AGFI	$\geq .90$	0.87
SRMR	$< .08$	.051

The standardized factor loadings (λ_{ys}) for the indicator variables were all above the recommended 0.60 (Bagozzi & Yi, 1988) ranging from .74 to .96 and their t -scores indicated that all factor loadings were all significant ($p < .001$). The first-order factor loadings on the second-order factor (γ_s) were also all significant ($p < .001$) ranging from 0.64 to 0.91 suggesting that the first-order dimensions ‘reflected’ the second-order factor well. The factor loadings indicated that (1) *Demonstrations of caring* for the customer, (2) *Role spanning* (i.e., attempting to relate to the customer on a ‘human level’ rather than strictly on an economic level by acknowledging things the customer may find important outside of business) and (3) *authenticity/non-instrumentality*, in this order, were the most important dimensions of Site-Communality. Although including content (e.g., images and other information) which *conveys good cheer* to users, discloses the company’s interest and involvements into areas not directly related to its business (i.e., *self-disclosure*) and which signals *approachability* during times of need are lesser dimensions of Site-Communality, these are nevertheless significantly important.

8.5 - First- and Second-Order Confirmatory Factor Models of Site-Loyalty

8.5.1 - Measurement Model - Attitudinal Component of Site-Loyalty

A first-order confirmatory factor analysis model was run to evaluate the attitudinal component of Site-Loyalty using the items designed to tap into the two dimensions of the attitudinal component of Site-Loyalty: *Relative Attitude* (RelAtt) and *Emotional Attachment* (EmoAtta). Items *RA3Recoded* and *EMO3* were dropped from the initial solution. The standardized loading of *RA3Recoded* was slightly low at 0.57 and the item contributed in creating several large standardized residuals. As for *EMO3*, the item created noticeable cross-loadings and had a large standardized residual. The final model is presented in Figure 15 below. Their standardized loadings (λ_{xs}), t-values and squared multiple correlations ranged from 0.85 to 0.90, 15.46 to 23.55, and 0.55 to 0.81, respectively (see Table 22). This indicated that the items (x_i s) tapped well into their intended factors (ξ s) (Bollen, 1989). See Appendix 9 for correlations between items.



Chi-Square=20.57, df=13, P-value=0.08181, RMSEA=0.044

Figure 15. First-Order Confirmatory Factor Model for the Attitudinal Component of Site-Loyalty (Standardized Solution)⁵³.

⁵³ See Appendix 4 for description of items

Table 22

Factor Loadings, t-values, and Errors of the Measurement Parameters for
Dimensions of the Attitudinal Component of Site-Loyalty

Item ⁵⁴	Standardized Loading	Standard Error of Estimate	t-value	R ²	Cronbach Alpha (α)	Average Variance Extracted (AVE)
Relative Attitude						
RA1	λ ₁₁ = 0.89	0.20	21.30	0.80	.935	.779
RA2	λ ₁₂ = 0.90	0.19	23.55	0.81		
RA4	λ ₁₃ = 0.85	0.27	17.85	0.73		
RA5	λ ₁₄ = 0.89	0.21	20.56	0.79		
Emotional Attachment						
EMO1	λ ₂₁ = 0.74	0.45	15.46	0.55	.854	.664
EMO2	λ ₂₂ = 0.85	0.27	16.76	0.73		
EMO4	λ ₂₃ = 0.85	0.28	18.53	0.72		

The $ML(\chi^2) = 27.36$, $p\text{-value} = 0.011$ with $df = 13$ suggests a poor model.

However, the Satorra-Bentler correction procedure shows a $SB(\chi^2) = 20.57$ ($p = 0.082$) suggesting an excellent model. Other fit indices presented in Table 23 support this conclusion. The model surpassed all minimum criteria established to determine good fit.

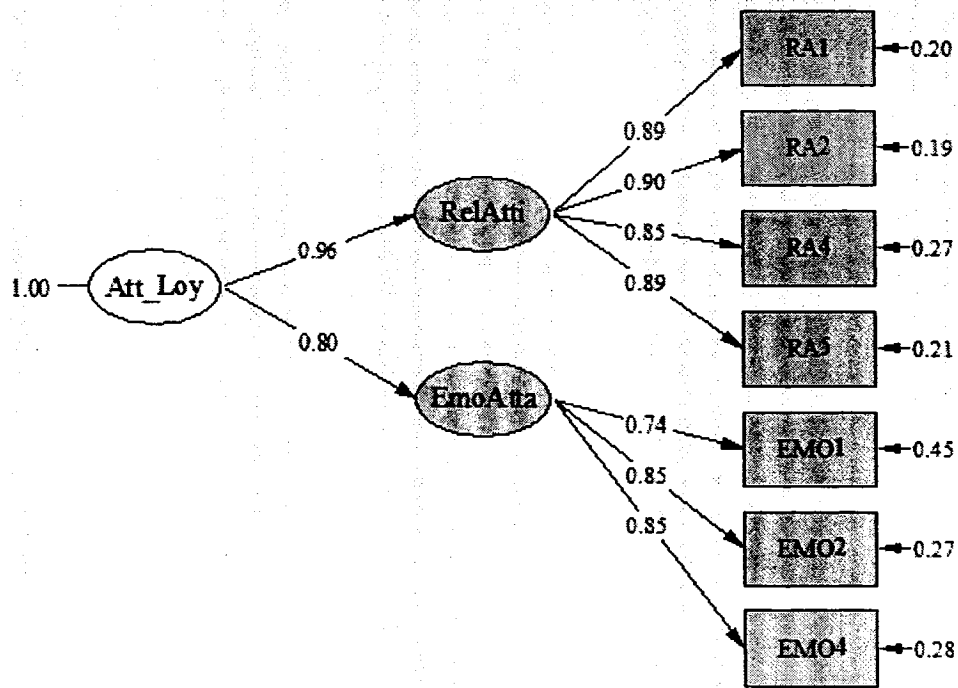
⁵⁴ See Appendix 4 for description of items

Table 23

Measurement Model for First-Order Factors of the Attitudinal Component of Site-Loyalty

Fit Index	Recommended Value	First-Order CFA Model
ML(χ^2)	$p > .05$	27.36 (df=13, $p=0.011$)
SB(χ^2)	$p > .05$	20.57 (df=13, $p=0.082$)
NFI	$> .90$	0.99
CFI	$> .90$	0.99
IFI	$> .90$	0.99
ML(RMSEA)	$\leq .06$	0.060
SB(RMSEA)	$\leq .06$	0.044
AGFI	$\geq .90$ (between .80 to .89 indicates reasonable fit)	0.95
ML(χ^2) / df	< 3	2.10
SRMR	$< .08$	.026

The second-order confirmatory factor analysis model is shown in Figure 16 below. Although running second-order confirmatory factor model under the traditional Maximum Likelihood estimation method (i.e., $ML(\chi^2) = 27.36$, $df = 13$, $p\text{-value} = 0.01112$, $RMSEA = 0.060$) suggested a significant χ^2 indicative of a somewhat poor fit, running the same model with the Satorra-Bentler scaling correction showed that the model had excellent fit characteristics (i.e., $SB(\chi^2) = 20.57$, $p = 0.08181$, $RMSEA = 0.044$). In fact, the χ^2 reached significance under Satorra-Bentler. This major improvement in fit using the Satorra-Bentler scaling correction also evidenced that, as noted previously, our data exhibited some degree of departure from normality. See Appendix 9 for correlations between items.



Chi-Square=20.57, df=13, P-value=0.08181, RMSEA=0.044

Figure 16. Second-Order Confirmatory Factor Model of the Attitudinal Component of Site-Loyalty⁵⁵

Additional fit indices for the model are presented in Table 24 below. All show that the model-implied covariance matrix matched very well the covariance matrix from the collected data.

⁵⁵ See Appendix 4 for description of items

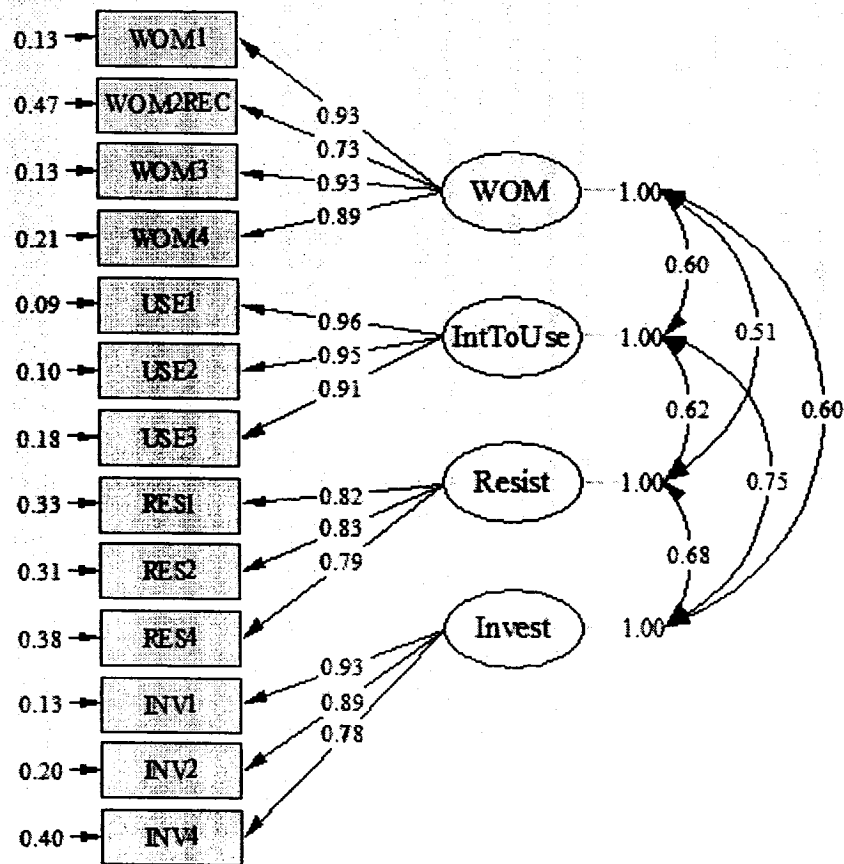
Table 24

Measurement Model for Second-Order Factors of the Attitudinal Component of Site-Loyalty

Fit Index	Recommended Value	Second-Order CFA Model
ML(χ^2)	$p > .05$	27.36 (df=13, $p=0.011$)
SB(χ^2)	$p > .05$	20.57 (df=13, $p=0.082$)
NFI	$> .90$	0.99
CFI	$> .90$	0.99
IFI	$> .90$	0.99
ML(RMSEA)	$\leq .06$	0.060
SB(RMSEA)	$\leq .06$	0.044
AGFI	$\geq .90$	0.95
ML(χ^2) / df	< 3	2.10
SRMR	$< .08$	.026

8.5.2 - Measurement Model - Behavioural Component of Site-Loyalty

After having purified the measures of Site-Communality and the attitudinal component of Site-Loyalty, we turned our attention to the dimensions of the behavioural component of Site-Loyalty. The first-order CFA with all items (x_i s) revealed a good model fit to the data. The squared multiple correlations, t-values, and standardized residuals (δ_i s) were used to assess the quality of the solution. The standardized loadings (λ_x s) in our model and their t-values were quite high ranging from 0.52 to 0.95 and from 8.13 to 28.46 respectively (i.e., all were > 1.96 , showing significance). All item loadings (λ_x s) had squared multiple correlations above 0.30 except for item *RES3Recoded* which was just below this value at 0.27. Given the low R^2 for item *RES3Recoded*, we decided to drop it from the model.



Chi-Square=81.28, df=59, P-value=0.02884, RMSEA=0.035

Figure 17. First-Order Confirmatory Factor Model of the Behavioural Component of Site-Loyalty⁵⁶.

A re-assessment of the model after the removal of *RES3Recoded* showed that *INV3* had a significantly highly correlated error term (δ_i) with several other items. Consequently, it too was removed and the model reassessed. The first-order factor model for the behavioural component of site-loyalty is presented in Figure 17 above. The values for the standardized loadings (λ_x), standard errors, t-value, and R^2 are shown below in Table 25. All were above accepted minimum requirements (see Bollen, 1989). See Appendix 9 for correlations between items.

⁵⁶ See Appendix 4 for description of items

Table 25

Factor Loadings, t-values, and Errors of the Measurement Parameters for
Dimensions of the Behavioural Component of Site-Loyalty

Item ⁵⁷	Standardized Loading	Standard Error of Estimate	t-value	R ²	Cronbach Alpha (α)	Average Variance Extracted (AVE)
Word of Mouth Intentions (WOM)						
WOM1	λ ₁₁ = .93	.13	25.36	.87	.924	.764
WOM2 Recoded	λ ₁₂ = .73	.47	13.52	.53		
WOM3	λ ₁₃ = .93	.13	23.48	.87		
WOM4	λ ₁₄ = .89	.21	19.10	.79		
Intention to Use (IntToUse)						
USE1	λ ₂₁ = .96	.09	26.72	.91	.955	.884
USE2	λ ₂₂ = .95	.10	28.43	.90		
USE3	λ ₂₃ = .91	.18	23.61	.82		
Intention to Resist Switching (Resist)						
RES1	λ ₃₁ = .82	.33	18.84	.67	.853	.662
RES2	λ ₃₂ = .83	.31	18.50	.69		
RES4	λ ₃₃ = .79	.38	16.29	.62		
Intention to Invest More (Invest)						
INV1	λ ₄₁ = .93	.13	25.15	.87	.898	.755
INV2	λ ₄₂ = .89	.20	21.99	.80		
INV4	λ ₄₃ = .78	.40	16.66	.60		

Recall that several fit indices exist which allow a researcher to establish whether the model-implied covariance matrix matches well the covariance matrix from the collected data. The $ML(\chi^2) = 101.65$, $df = 59$, $p = 0.00047$ and the $SB(\chi^2) = 81.28$, $df = 59$ which almost reached non-significance ($p=0.02884$) nevertheless, they suggested a somewhat poor fitting model. However, additional fit indices showed that the first-order factor model had a good fit to the data (see Table 26). Aside from the χ^2 values, all other fit indices were well within the range of values suggesting good fit.

⁵⁷ See Appendix 4 for description of items

Table 26

Fit indices for First-Order CFA – Behavioural Component of Site-Loyalty

Fit Index	Recommended Value	First-Order CFA Model
ML(χ^2)	$p > .05$	101.65 (df=59, $p=0.00047$)
SB(χ^2)	$p > .05$	81.28 (df=59, $p=0.02884$)
NFI	$> .90$	0.99
CFI	$> .90$	0.99
IFI	$> .90$	0.99
ML(RMSEA)	$\leq .06$	0.049
SB(RMSEA)	$\leq .06$	0.035
AGFI	$\geq .90$ (between .80 to .89 indicates reasonable fit)	0.92
ML(χ^2) / df	< 3	1.72
SRMR	$< .08$	0.034

Second-order confirmatory factor analysis assumes that changes in the first-order factors (η s) are being '*caused*' by a single second-order factor/construct (ξ) (Tanaka & Huba, 1984). As such, a second-order confirmatory factor analysis was conducted by incorporating an overarching second-order construct (ξ) into the model, in this case, the Behavioural Component of Site-Loyalty (i.e., Beh_Loy, see Figure 18). See Appendix 9 for correlations between items.

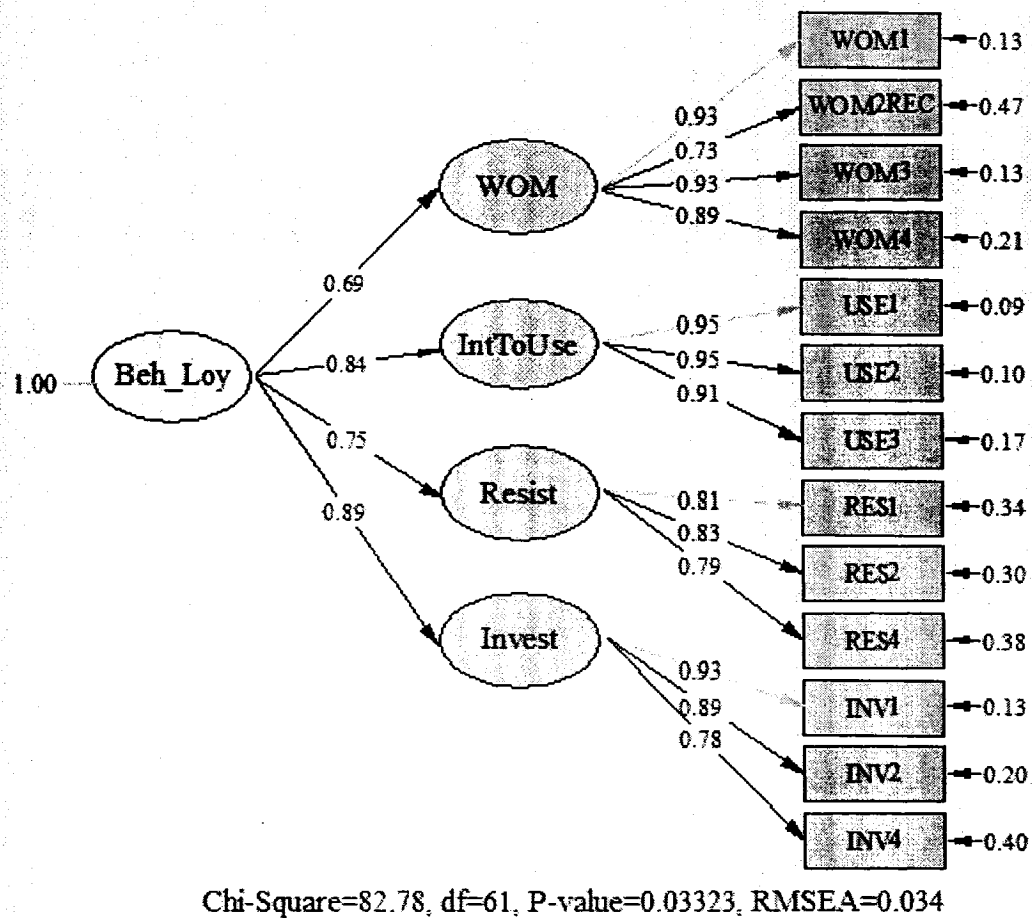


Figure 18. Second-Order Confirmatory Factor Model of the Behavioural Component of Site-Loyalty⁵⁸.

The first-order factor path coefficients (γ s) to the second-order factor were all high ranging from .69 to .89 and their t -scores indicated that all paths were all significant ($p < .001$) ranging from 11.21 to 19.41. The standardized factor loadings (λ_{γ} s) for the indicator variables (y_i s) on the first-order factors were also all significant ($p < .001$) ranging from 0.73 to 0.95. The second-order CFA model revealed a $ML(\chi^2) = 102.82$, $df = 61$, $p = .00065$. The $SB(\chi^2) = 82.78$, $p = .03323$ with $df = 61$ shows the model almost reached non-significance. However, additional fit indices again showed that the fit was good (see Table 27).

⁵⁸ See Appendix 4 for description of items

Table 27

Second-Order CFA for the Behavioural Component of Site-Loyalty

Fit Index	Recommended Value	Second-Order CFA Model
ML(χ^2)	$p > .05$	102.82 (df=61, $p=0.00065$)
SB(χ^2)	$p > .05$	82.78 (df=61, $p=0.03323$)
NFI	$> .90$	.98
CFI	$> .90$	.99
IFI	$> .90$	.99
ML(RMSEA)	$\leq .06$	0.047
SB(RMSEA)	$\leq .06$	0.034
AGFI	$\geq .90$ (between .80 to .89 indicates reasonable fit)	0.93
ML(χ^2) / df	< 3	1.69
SRMR	$< .08$	0.035

8.6 - Summary

In this chapter, we discussed how we developed the final questionnaire for this study. The data from this questionnaire was used to assess the first- and second-order confirmatory factor analysis models for Site-Communality and Site-Loyalty. These measurement models allowed us to further refine our measures.

Chapter 9 - Reliability and Validity Issues

9.1 - Overview

After having established good fit for our measurement models of Site-Communality and the Attitudinal and Behavioural components of Site-Loyalty, we turned our attention to reliability and validity issues. Reliability and validity are related but separate issues. Indicators (i.e., items) can be reliable (i.e., predict well) but not valid (i.e., accurate) and vice-versa. Measure reliability pertains to the extent to which a group of two or more indicators (i.e., items in a questionnaire) share in the measurement of a construct. Validity, on the other hand, can be thought of as whether one is measuring the intended construct (Hair et al., 1998).

9.2 - Assessing Reliability

Reliability is defined as “the degree to which measures are free from error and therefore yield consistent research” (Peter, 1979, p. 6). We investigated reliability for Site-Communality, the attitudinal component and behavioural component of Site-Loyalty by calculating each first-order factors’ Cronbach alpha (Cronbach, 1951). Alpha is the most commonly used measure of reliability (Churchill, 1979). Nunnally (1967) has recommended a minimum acceptable level of 0.7. When Cronbach alpha is below 0.7, the items do not capture the construct which they were meant to measure (Churchill, 1979), suggesting poor reliability.

For each group of items measuring one of the first-order factors, a Cronbach alpha was generated using SPSS 12.0. The Cronbach alphas of the first-order factors for each measure are reported in Tables 18, 20, and 23 in the previous chapter. For the dimensions of Site-Communality, Attitudinal Component of Site-Loyalty, and Behavioural Component of Site-Loyalty, the Cronbach alpha ranged from 0.883 to 0.955. As such, all of the factor measures exhibited excellent reliability.

Furthermore, an examination of the item-to-total statistics reported with the reliability analysis under SPSS revealed that, for all factors, removal of any of the items would have either decreased or would have only slightly increased reliability scores. It was decided not to sacrifice content by dropping items to achieve marginally better reliability scores.

9.3 - Assessing Construct Validity

Construct validity is made up of two separate but related issues: convergent and discriminant validity (Anderson & Gerbing, 1988). If a researcher can demonstrate evidence of both convergent and discriminant validity then, by definition, the researcher has demonstrated that there is evidence for construct validity. However, neither one alone is sufficient for establishing construct validity.

9.3.1 - Convergent Validity

Convergent validity for a given measure is the extent to which a measure correlates highly with other measures designed to measure the same construct (Churchill, 1979). Convergent validity was assessed by:

- (1) Examining whether an item has a significant loading on the factor it is intended to measure (Anderson & Gerbing, 1988; Fornell & Larcker, 1981).
- (2) Average variance extracted (AVE) by each construct should exceed 0.50 (Fornell & Larcker, 1981).

At the first-order factor level, “[c]onvergent validity can be assessed from the measurement model by determining whether each indicator’s estimated pattern coefficient on its posited underlying construct factor is significant (greater than twice its standard error)” (Anderson & Gerbing, 1988, p. 416). The item loadings (λ_x) and their t-values from our first-order factor models were previously presented in Tables 18, 20, and 23 in the previous chapter. The t-values for the

standardized loadings show that all were statistically significant (i.e., greater than 1.96) suggesting convergent validity.

We conducted an additional test for convergent validity which pertained to examining whether the proportion of variation in the indicators (i.e., items) captured by the underlying construct (i.e., ‘average variance extracted’) was higher than the variance due to measurement error (see Fornell & Larcker, 1981). The assumption of convergent validity is supported when the average variance extracted for a particular construct is greater than 0.50. Given the notation used in specifying a first-order factor model under LISREL, average variance extracted was calculated as follows...

$$\text{Average Variance Extracted per Factor} = \frac{\sum (\text{Lambda}-X_i^2)}{\sum (\text{Lambda}-X_i^2) + \sum (\text{Theta}-\text{Delta}_i)}$$

where $\text{Lambda}-X_i$ are the item loading on its intended factor and $\text{Theta}-\text{Delta}_i$ is the error associated with the item.

The values of the average variance extracted (AVE) for each dimension of Site-Communalinity, attitudinal component and behavioural component of Site-Loyalty are presented in Tables 20, 22, and 25 in the previous chapter. All exceed the suggested critical value of .50 (Fornell & Larker, 1981) establishing that all three models tested have convergent validity.

At the second-order factor level, convergent validity can be established by examining the extent to which the second-order construct correlates positively with other scales which are supposed to measure the same concept. For instance, a higher correlation between our second-order factor Site-Communalinity and Overall

of Site-Communality would indicate convergent validity⁵⁹. As such, our three second-order factors (i.e., Site-Communality, Attitudinal Component of Site-Loyalty, and Behavioural Component of Site-Loyalty) were correlated with their corresponding overall measures using LISREL (see Figure 19 which shows the correlation between Attitudinal Component of Site-Loyalty and Overall Site-Loyalty). The overall measure of Site-Communality (Overall Site-Communality) made up of 4 items developed for this study from the literature on communal relationships in commercial contexts (Goodwin, 1996; Agarwal, 2001). The items of the overall measure are:

SiteCom1: Overall, this Web site makes visitors feel like they are dealing with friends rather than strangers.

SiteCom2: Overall, this Web site makes you feel like you can expect more than a "*strictly business*" relationship from this company.

SiteCom3: Overall, this Web site makes visitors feel like they will be treated "like family".

SiteCom4: Overall, this Web site shows this company has many of the qualities which I'd look for in a friend.

Similarly, for comparison purposes, an overall measure of Site-Loyalty (Overall Site-Loyalty) was developed. It contained the following 3 items:

Loy1: This Web site promotes customer loyalty.

Loy2: It would not surprise me to learn that this company has loyal customers.

Loy3: I feel that this Web site is worthy of its customers' loyalty.

⁵⁹ It is worth noting that 'criterion validity' may be considered as somewhat similar to convergent validity in that it is the degree of correspondence of a measure with other known valid and reliable measures of the same construct. The main difference between the two is that criterion validity requires that the new measure be compared to an existing, well-established, 'criterion' measure which, for example, may be the currently-accepted standard of measurement of a concept in question. As such, a researcher may be able to establish convergent validity without necessarily establishing criterion validity. In this study, given that no previously established measure of site-communality was available at the time our questionnaire was created, criterion validity cannot be assessed.

The Cronbach alphas for the two overall scales and the correlations (ϕ s) between the three second-order constructs and their overall measures are shown in Table 28. As expected, all correlations were significant, positive and large evidencing convergent validity of the second-order measures.

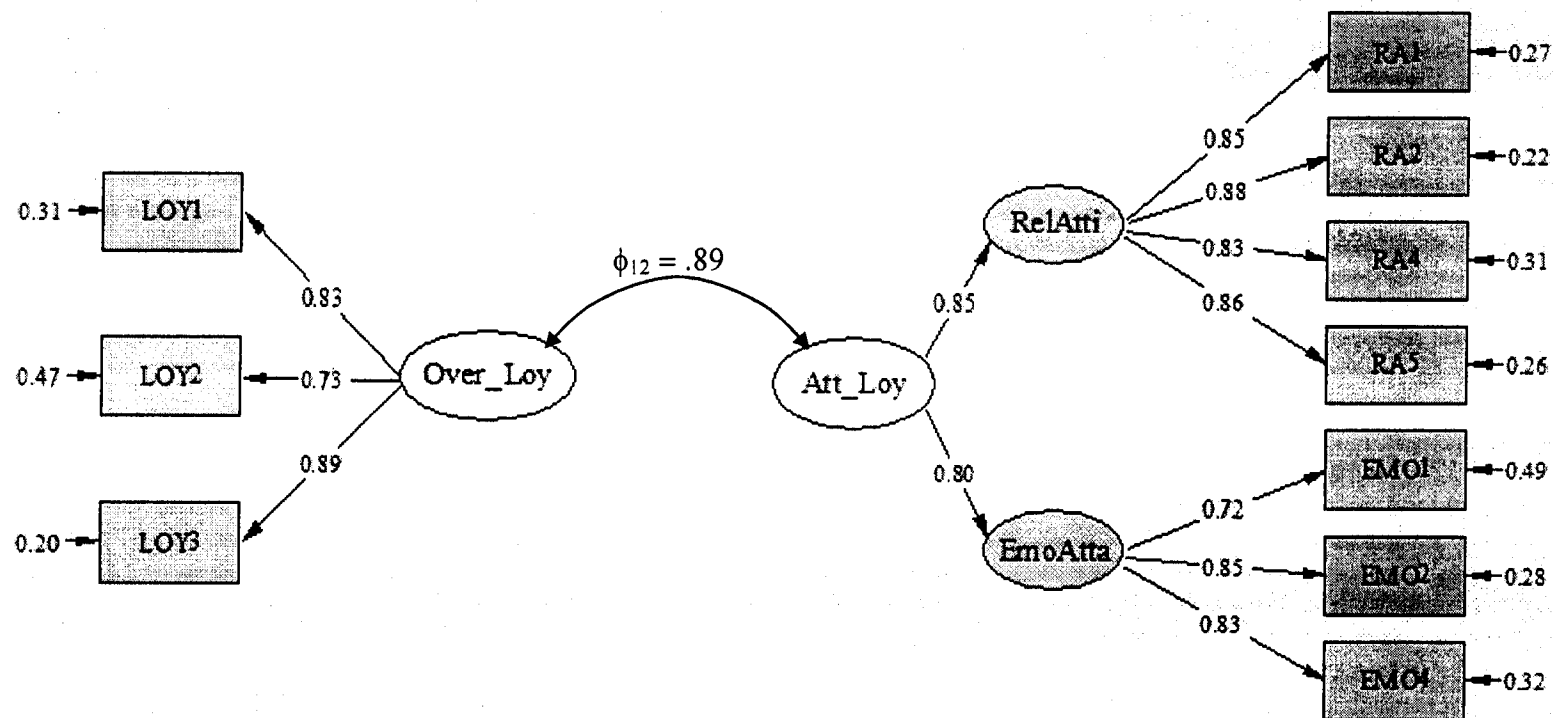


Figure 19. Correlation between Second-Order Factor of the Attitudinal Component of Site-Loyalty and an Overall Measure of Site-Loyalty for Establishing Convergent Validity⁶⁰.

⁶⁰ See Appendix 4 for description of items

Table 28

Correlations between Second-Order Constructs and Overall Measures

Overall Measures And Cronbach Alpha		Second-Order Constructs		
		Site-Communality	Attitudinal Component of Site-Loyalty	Behavioural Component of Site-Loyalty
	Overall Site-Communality (4 items, $\alpha = .934$)	.84	--	--
	Overall Site-Loyalty (3 items, $\alpha = .876$)	--	.89	.71

9.3.2 - Discriminant Validity

Discriminant validity is “the extent to which the measure is indeed novel and not simply a reflection of some other variable” (Churchill 1979, p. 70). The aim of discriminant validity is to determine whether latent factors in a model are separate and distinct constructs (Venkatraman, 1989; Sethi & King, 1994). Typically, high correlations between any two dimensions suggest a lack of discriminant validity. If such a case arises, one of the dimensions is typically dropped or both dimensions may be combined.

A first test of discriminant validity was conducted by forming a 95% confidence intervals with the standard error of the correlation between factors (Bagozzi & Phillips, 1982; Anderson & Gerbing, 1988; Jöreskog & Sörbom, 1993; Barki & Hartwick, 2001). From the LISREL output, this was accomplished using the first-order factor correlations/PHIs (i.e., ϕ_{xy}) and by examining whether the 95% confidence interval around this value (i.e., $\phi_{xy} \pm 1.96 * S.E.$) contained the value

of ± 1 . The correlations between pairs of factors for Site-Communality, Attitudinal Component of Site-Loyalty, and Behavioural Component of Site-Loyalty are presented in Tables 29, 30, and 31 respectively.

Table 29

Correlations between Site-Communality Dimensions and their 95% Confidence Intervals

Φ <i>With Standard Errors (in parentheses) and t-values</i>	95% Confidence Interval Around Φ						
		Good Cheer	Role Spanning	Approa- chability	Caring	Self Disclosure	Auth- enticity
	Good Cheer			0.43 ... 0.66	0.58 ... 0.73	0.33 ... 0.56	0.44 ... 0.64
	Role Spanning	.64 (0.04) 14.56			0.69 ... 0.80	0.56 ... 0.71	0.66 ... 0.81
	Approachability	.55 (0.06) 9.65	.54 (0.05) 10.56		0.55 ... 0.70	0.25 ... 0.48	0.39 ... 0.58
	Caring	.66 (0.04) 16.32	.75 (0.03) 22.76	.63 (0.04) 14.97		0.46 ... 0.65	0.73 ... 0.84
	Self Disclosure	.45 (0.06) 8.15	.64 (0.04) 15.35	.37 (0.06) 6.56	.56 (0.05) 10.76		0.56 ... 0.71
	Authenticity	.54 (0.05) 11.31	.74 (0.04) 20.88	.49 (0.05) 9.22	.79 (0.03) 25.15	.64 (0.04) 14.80	

Table 30

Correlations between the Dimensions for the Attitudinal Component of Site-Loyalty and their 95% Confidence Intervals

<i>PHI (ϕ)</i> <i>With Standard Errors (in parentheses) and t-values</i>	95% Confidence Interval Around <i>PHI (ϕ)</i>		
		Relative Attitude	Emotional Attachment
	Relative Attitude		0.71 ... 0.82
	Emotional Attachment	.77 (0.03) 23.64	

Table 31

Correlations between the Dimensions for the Behavioural Component of Site-Loyalty and their 95% Confidence Intervals

<i>PHI (ϕ)</i> <i>With Standard Errors (in parentheses) and t-values</i>	95% Confidence Interval Around <i>PHI (ϕ)</i>				
		Word Of Mouth	Intention to Use	Intention to Resist Switching	Intention to Invest More
	Word Of Mouth		0.50 ... 0.69	0.39 ... 0.62	0.50 ... 0.69
	Intention to Use	.60 (0.05) 12.63		0.54 ... 0.69	0.69 ... 0.80
	Intention to Resist Switching	.51 (0.06) 8.81	.62 (0.04) 14.05		0.60 ... 0.75
	Intention to Invest More	.60 (0.05) 12.56	.75 (0.03) 22.41	.68 (0.04) 16.99	

As shown in the tables above, none of the 95% confidence intervals around the factor correlations contained the values of + or – 1 which suggests good discriminant validity.

The second test conducted to examine discriminant validity consisted of setting, one at a time, the PHIs (i.e., correlations between the first-order factors) equal to one (1) and testing for any significant improvement in the chi-square value using chi-square comparison tests (i.e., $\Delta\chi^2$). For each ‘constrained’ model, the PHI matrix in the LISREL output was examined to ensure that the intended correlation/PHI (rather than the covariance) was set to unity during the LISREL execution of the syntax.

The results of this analysis showed that the $\Delta\chi^2$ (Constrained Model minus Unconstrained Model) was always significant ($p > .00$) suggesting a degradation of model fit when correlations were constrained to ‘1’. Overall, all chi-square comparison tests showed that the ‘unconstrained’ models were significantly better than any of the models where PHIs had individually been constrained to 1, regardless of whether $ML(\chi^2)$ or $SB(\chi^2)$ were used for the chi-square comparison tests. This provided strong evidence that the factors in each of the three first-order CFA models presented in previous sections were indeed statistically different from one another.

9.4 - Null Model Comparison

SEM authors have strongly encouraged that all SEM-based research should include demonstrations of superior fit of preferred models over plausible equivalent models (Anderson & Gerbing, 1988; MacCallum, Roznowski, & Necowitz, 1992). As such, the three second-order models were compared to their corresponding ‘null-models’. The null-model assumes that the first-order factors can be bypassed, replaced by a single overarching factor accounting for all of the

common variance among the items. The null-model for Site-Communality is presented in Figure 20⁶¹.

⁶¹ See Appendix 4 for description of items

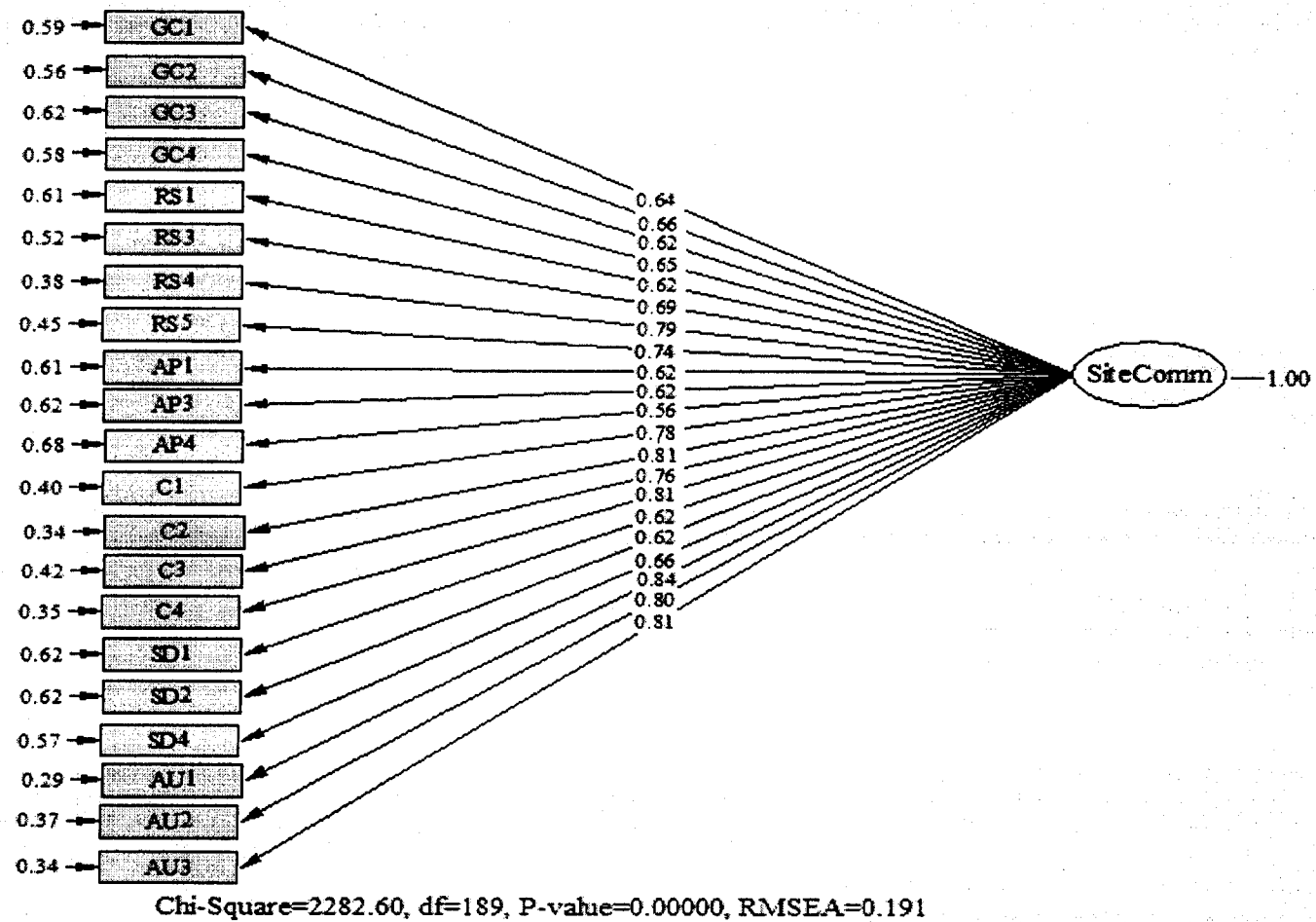


Figure 20. Null-Model for Site-Communality.

As expected, chi-square comparison tests revealed that all three null-models had very poor fit to the data. In all cases, the first- and second-order models (for Site-Communalilty, Attitudinal Component of Site-Loyalty, and Behavioural Component of Site-Loyalty) provided substantial improvements.

9.5 - Summary

In this chapter, we addressed reliability and validity issues for our measurement models of Site-Communalilty and the attitudinal and behavioural components of Site-Loyalty. Our analysis showed that the reliabilities for our measures were above Nunnally's (1967) recommended minimum acceptable level of 0.7 suggesting excellent reliability. We also addressed construct validity. We did this by demonstrating both convergent and discriminant validity (Anderson & Gerbing, 1988) of our measures. In the next chapter, nomological validity issues are addressed.

Chapter 10 - Nomological Validity of Site-Communality and Site-Loyalty

10.1 - Overview

In the previous chapter, we conducted Confirmatory Factor Analysis on our measures of Site-Communality and Site-Loyalty. Confirmatory Factor Analysis allowed us to further purify and refine our measures of Site-Communality and Site-Loyalty by eliminating items with low factor loadings or high cross-loadings. Moreover, construct validity was established. In this chapter, we address nomological validity.

The assessment of nomological validity “entails investigating both the theoretical relationship between different constructs and the empirical relationship between measures of those different constructs” (Peter 1981, p. 135). In other words, nomological validity means examining the often complex Web of causal relationships between constructs and evaluate whether the constructs *behave* in the way envisioned by the researcher (i.e., significant paths, positive versus negative paths). Nomological validity culminates in hypothesis testing.

10.2 - Establishing Nomological Validity - Testing Models 1 and 2

Models 1 and 2 in chapter 5 show the models we used to assess nomological validity for Site-Communality and Site-Loyalty. The first represents how Site-Communality fits into a Web of constructs made up of Trust, Positive and Negative Affect and Overall Web site Satisfaction. The second shows how the attitudinal and behavioural components of Site-Loyalty relate into the Web of constructs made up of Trust, and Overall Web site Satisfaction.

10.2.1 - Testing Model 2 – Site-Communality

Model 2 was presented in Figure 5. To test this model, a measure of Overall Web site Satisfaction was created by examining several studies and papers on satisfaction (e.g., Brandt, 1988; Martin, 1996; Schneider & Bowen, 1999; Wirtz,

2001). Our measure contained the following four items: (1) Overall, I am _____ with this Web site (with the answer ranging from *very pleased* to *very displeased* on a 7 point Likert scale), (2) overall, this Web site was _____ (with the answer ranging from *better than expected* to *worse than expected* on a 7 point Likert scale), (3) overall, I am _____ with this Web site (with the answer ranging from *very delighted* to *very disappointed* on a 7 point Likert scale), (4) overall, I am _____ with this Web site (with the answer ranging from *very satisfied* to *very dissatisfied* on a 7 point Likert scale). All of these items were retained in exploratory factor analysis. Using the data from questionnaire 3, the Cronbach coefficient alpha was .898. The trust measure was adapted from McKnight, Choudhury, and Kacmar (2002). As mentioned previously, this research has identified e-trust as being multi-dimensional concept, made up of three (3) dimensions (i.e., integrity, competence, and benevolence). The Cronbach coefficient alpha for integrity (3 items), competence (4 items) and benevolence (3 items) were high at .905, .934, and .938 respectively.

Finally, positive and negative affect were measured using PANAS⁶² (i.e., the Positive Affect Negative Affect Scale – see Watson, Clark, & Tellegen, 1988). The PANAS consists of 20 words describing emotions: 10 positive and 10 negative. After exposure to the Web site, participants were asked to rate each word using a five-point rating scale ranging from ‘very slightly’ or ‘not at all’ to ‘extremely’.

⁶² The questionnaire included the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). This measure contains 20 items designed to tap positive and negative affect. Participants were required to read each item and mark the extent to which they experienced that affective state right after having visited the Web site on a 5-point Likert-type scale ranging from 1 (extremely) to 5 (not at all). Positive affect items included interested, excited, strong, enthusiastic, proud, alert, inspired, determined, attentive, and active. Negative affect items included feeling distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, and afraid. The PANAS scales have been demonstrated by previous studies to have internal consistency reliabilities ranging from .84 to .99 for the Positive Affect scale and from .74 to .97 for the Negative Affect scale and adequate levels of validity (see Hersberger, Corneal, & Molenaar, 1994; Watson et al., 1988).

Given the large size of the models being tested, it was important, at this point, to assess whether the sample size was large enough. Unfortunately, there is currently no single criterion pertaining to establishing adequate sample size in factor analysis/SEM. Many perspectives exist including:

1. **STV ratio.** The subjects-to-variables ratio should be no lower than 5 (Bryant & Yarnold, 1995; Hatcher, 1994).
2. **Rule of 200.** There should be at least 200 cases, regardless of STV (Gorsuch, 1983; Hoelter, 1983; Guadagnoli & Velicer, 1988; Kelloway, 1998).
3. **The between 5:1 and 10:1 Rule.** There should be a ratio of 5 to 10 cases for each estimated parameter in the model (Bentler & Chou, 1987; Floyd & Widaman, 1995).

It is worth noting that, although disagreement continues, the opinions of several methodologists seem to be converging. Recent research shows that, for an accurate confirmatory factor analysis solution, the minimum sample size requirement is 200 (Hoelter, 1983; Kline, 1998; Loehlin, 1998; Schumacker & Lomax, 1996)⁶³.

Based on the STV ratio, we estimated that the number of cases necessary to assess the ‘nomological model’ was much greater than our sample size of 305⁶⁴. We decided to construct *composites* for PANAS. Creating composites consists of merging the existing items in the measurement model as a means of reducing sample size requirements in large structural equation models (see, Bagozzi & Edwards, 1998; Landis, Beal, & Tesluk, 2000). By reducing the number of items in the measurement model, composites also reduce the number of estimated

⁶³ Small sample sizes ($n < 200$) in structural equation modeling (SEM) are likely to create two persistent estimation problems: (a) nonconvergence and (b) improper solutions (Boomsma & Hoogland, 2001).

⁶⁴ A large number of items (variables) in a model can lead to having an excessive number of estimated parameters. This reduces statistical power which makes it more difficult to detect existing relationships and weakens apparent model fit.

parameters in the model which enables to produce much more stable estimates for the structural model. *Partial aggregation* involves summing or averaging items into subsets. Each subset is then treated as an indicator of the latent construct. *Total aggregation* describes combining all of the original items of a scale into a single indicator of the latent construct (Bagozzi & Edwards, 1998).

The main advantages of partial aggregation compared to a ‘total disaggregation’ (i.e., atomistic approach) are: (1) it reduces the number of parameters to be estimated leading to a smaller required sample size and (2) it helps decrease measurement errors in indicators leading to better fitting models (Bagozzi & Edwards, 1998; Bagozzi & Heatherton, 1994).

To create our composites, the 20 items of the PANAS scale were first split according to whether they tapped into positive or negative affect (see Table 32). Next, we used the RAND method (i.e., items were assigned randomly) to create the composites (Landis, Beal, & Tesluk, 2000). This method consists of completely randomizing the assignment of items across the number of composites which we desire to create.

Table 32

Original PANAS Scale

Positive Affect		Negative Affect	
Pa_1	Interested	Na_2	Distressed
Pa_3	Excited	Na_4	Upset
Pa_5	Strong	Na_6	Guilty
Pa_9	Enthusiastic	Na_7	Hostile
Pa_10	Proud	Na_8	Scared
Pa_12	Alert	Na_11	Irritable
Pa_14	Inspired	Na_13	Ashamed
Pa_16	Determined	Na_15	Nervous
Pa_18	Attentive	Na_17	Jittery
Pa_19	Active	Na_20	Afraid

Three (3) composites were created for Positive Affect by averaging items 'Pa_1, Pa_10, and Pa_16', items 'Pa_3, Pa_5, and Pa_14' and items 'Pa_9, Pa_12, Pa_18, Pa_19' respectively. Similarly, Negative Affect items were also combined randomly and averaged such that items 'Na_2, Na_8, and Na_20' created the first, items 'Na_4, Na_15, and Na_17' created the second, and 'Na_6, Na_7, Na_11, and Na_13' formed the third composite respectively. Cronbach alphas for the composite measure of Positive Affect was .922 and .887 for Negative Affect. Both were above the .70 level advocated by Nunnally (1977).

This model (see Figure 21) had 100 free parameters. According to Bentler and Chou's (1987) suggestion for adequate sample size, such a model would likely require a minimum sample size of at least 500. Nevertheless, our sample size did meet two of the three criteria of adequate sample size. First, it was above the minimum of 200 advocated by Gorsuch (1983), Guadagnoli and Velicer (1988) and Kelloway (1998). Second, creation of composites also reduced the number of measured variables to 41 which, given our sample size of 305, resulted in a subject-to-variable ratio of about 7 to 1 which was above the minimum of 5 to 1 ratio advocated by STV (Bryant & Yarnold, 1995; Hatcher, 1994).

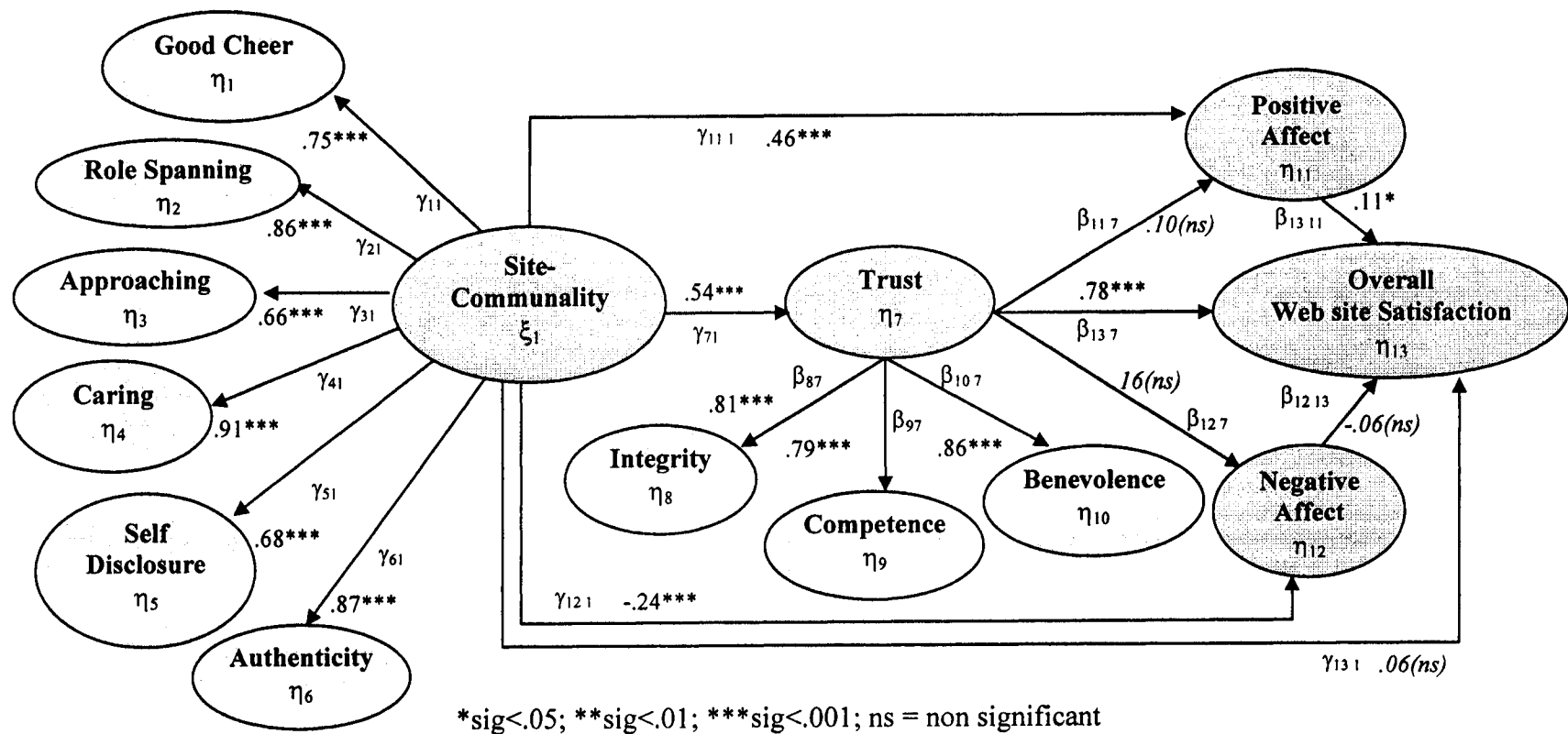


Figure 21. The Standardized Paths between Site-Community, Trust, Positive and Negative Affect and Overall Web Site Satisfaction (Results for Model 2)⁶⁵

⁶⁵ Indicators are not shown in the model for the sake of parsimony. To run this model under LISREL, Site-Community was specified as a ξ . All other latent variables were specified as η s. As such, all indicator variables are modeled as y s and their error terms as ϵ s.

Although the $ML(\chi^2)$ and $SB(\chi^2)$ suggested a poor fit, other fit indices showed that the model fit the data well (see Table 33). Additional details of the model are presented in Table 34 below. This includes the standardized loadings, standard errors.

All paths were significant except for the paths between Trust and Positive Affect, between Trust and Negative Affect and between Negative Affect and Overall Web site Satisfaction. The results for the hypotheses from Model 2 (Figure 21) are presented below in Table 35. The positive and significant paths between Site-Communality and Trust ($\gamma_{71} = .54, p < .001$), Site-Communality and Positive Affect ($\beta_{71} = .46, p < .001$) and negative and significant path between Site-Communality and Negative Affect ($\beta_{121} = -.24, p < .001$) shows support for hypotheses H1, H2 and H3. Moreover, the non-significant path between Site-Communality and Overall Web site Satisfaction (γ_{131}) shows support for hypotheses H9. The results show that the impact of Site-Communality on Overall Web site Satisfaction appears to be completely mediated via Trust and Positive Affect and but, interestingly, not via Negative Affect.

Table 33

Fit indices for Model 2

Fit Index	Recommended Value	Model Characteristic
ML(χ^2)	$p > .05$	1101.61 (df=762, $p=0.0000$)
SB(χ^2)	$p > .05$	1015.96 (df=762, $p=0.0000$)
NFI	$> .90$	.97
CFI	$> .90$	.99
IFI	$> .90$	.99
SB(RMSEA)	$\leq .06$	0.033
AGFI	$\geq .90$ (between .80 to .89 indicates reasonable fit)	0.83
ML(χ^2) / df	< 3	1.44
SRMR	$< .08$	0.057

To test for the presence of mediation (i.e., Trust and Affect as intervening variables between Site-Communality and Overall Web site Satisfaction), we followed the steps outlined in Baron and Kenny (1986) and Judd and Kenny (1981). This consists of checking the following four conditions:

1. Showing that the independent variable has an effect on dependent variable when the mediating variables are not included in the model.
2. Verifying that independent variable impacts on the mediators. This means treating the mediator variables as outcome variables.
3. Demonstrating that the mediators impact the dependent variable.
4. (Only required for complete mediation) Showing that the independent variable has no effect on the dependent variable when the mediator has been added to the model. In other words, it consists of verifying that the path between the independent variable and the dependent variable is non-significant when the mediators are included in the model.

It must be noted that Condition 4 was already empirically established in Model 2 (see Figure 21 showing a non-significant path between Site-Communality and Overall Web site Satisfaction). As such, evidencing the presence of 'full mediation' boiled down to establishing that conditions 1, 2, and 3 were true.

To test condition 1, we ran a reduced version of Model 2 under LISREL. It consisted of simply Site-Communality (modeled as ξ_1) and Overall Web site Satisfaction (modeled as η_1). Running this model under LISREL with Satorra-Bentler scaling (i.e., correcting for non-normality) produced a significant standardized path of $\gamma_{11} = .54$ ($p < .001$) between Site-Communality and Overall Web site Satisfaction⁶⁶ (supporting condition 1).

⁶⁶ The fit for this model was acceptable. Although the $SB(\chi^2) = 405.04$ ($df=268$) was significant ($p\text{-value}=0.00000$), other fit indices were indicative of acceptable to good fit (i.e., $SB(RMSEA) = 0.041$, $NFI = 0.98$, $CFI = 0.99$, $IFI = 0.99$, $SRMR = 0.047$, $AGFI = 0.87$).

Table 34

Standardized Loadings and Error of Estimates for Measurement Model⁶⁷.

Item (y_i)	Standardized Loading (λ_y)	Standard Error of Estimate (ϵ_i)	Cronbach Alpha (α)
Good Cheer			
GC1	.87	.25	.916
GC2	.84	.22	
GC3	.88	.22	
GC4	.87	.24	
Role Spanning			
RS1	.76	.43	.883
RS3	.82	.32	
RS4	.82	.33	
RS5	.88	.23	
Approachability			
AP1	.95	.10	.921
AP3	.88	.22	
AP4	.86	.27	
Caring			
C1	.84	.30	.914
C2	.88	.22	
C3	.86	.25	
C4	.86	.26	
Self-Disclosure			
SD1	.92	.15	.922
SD2	.85	.28	
SD4	.92	.15	
Authenticity			
AU1	.96	.08	.945
AU2	.90	.19	
AU3	.92	.15	
Positive Affect			
Average of Pa_1, Pa_10, and Pa_16	.92	.15	.922
Average of Pa_3, Pa_5, and Pa_14	.90	.20	
Average of Pa_9, Pa_12, Pa_18, Pa_19	.87	.24	
Negative Affect			
Average of Na_2, Na_8, and Na_20	.79	.37	.887
Average of Na_4, Na_15,	.94	.11	

⁶⁷ See Appendix 4 for description of items.

and Na_17			
Average of Na_6, Na_7, Na_11, and Na_13	.84	.29	
Integrity			
Integ1	.85	.27	.905
Integ2	.91	.18	
Integ3	.86	.26	
Competence			
Comp1	.91	.18	.934
Comp2	.88	.22	
Comp3	.89	.21	
Comp4	.86	.26	
Benevolence			
Bene1	.93	.14	.938
Bene2	.89	.20	
Bene3	.92	.15	
Overall Web Site Satisfaction			
Sat1	.91	.18	.898
Sat2	.87	.25	
Sat3	.94	.12	
Sat4	.94	.11	

Next, we attempted to demonstrate condition 2. Using LISREL, Site-Communality (modeled as a ξ_1) and Trust and Positive Affect (modeled as η_1 and η_2). Running this model produced significant standardized paths as well ($\gamma_{11} = .53$ and $\gamma_{21} = .51$)⁶⁸. This met condition 2. Finally, the last condition that needed to be met to demonstrate mediation was condition 3. Under LISREL, Trust and Positive Affect were modeled as ξ_1 and ξ_2 , respectively whereas Overall Web site Satisfaction was modeled as η_1 ⁶⁹. The standardized paths produced between Trust and Overall Web site Satisfaction was $\gamma_{11} = .82$ ($p < .001$) and between Positive Affect and Overall Web site Satisfaction was $\gamma_{12} = .12$ ($p < .001$). This met condition 3. Together, meeting the four (4) conditions stipulated by

⁶⁸ Fit indices for this model showed that its fit was acceptable: $SB(\chi^2) = 755.80$, $df=516$, $p\text{-value}=0.00000$, $SB(RMSEA) = 0.039$, $NFI = 0.97$, $CFI = 0.99$, $IFI = 0.99$, $SRMR = 0.052$, $AGFI = 0.84$.

⁶⁹ This model showed a worse fit than the previous two models. Fit indices suggests that this model could be best classified as having poor / acceptable fit: $SB(\chi^2) = 352.95$, $df=114$, $p\text{-value}=0.00000$, $RMSEA=0.083$, $NFI = 0.98$, $CFI = 0.99$, $IFI = 0.99$, $SRMR = 0.034$, $AGFI = 0.90$.

Baron and Kenny (1986) showed that the impact of Site-Communality on Overall Web site Satisfaction was completely mediated by Trust and Positive Affect.

Overall, our Site-Communality measure behaved as expected relative to other measures important in B2C e-commerce providing good evidence of the nomological validity of our measure of Site-Communality. Although not directly related to Site-Communality itself, it is nevertheless interesting to note that, contrary to our hypotheses, no significant relationships were found between Trust and both Positive and Negative Affect and between Negative Affect and Overall Web site Satisfaction. As such, hypotheses H4, H5, and H8 are not supported. We have no explanation for these results and suggest that further research is needed to explore the relationship between Affect and Trust in e-commerce contexts.

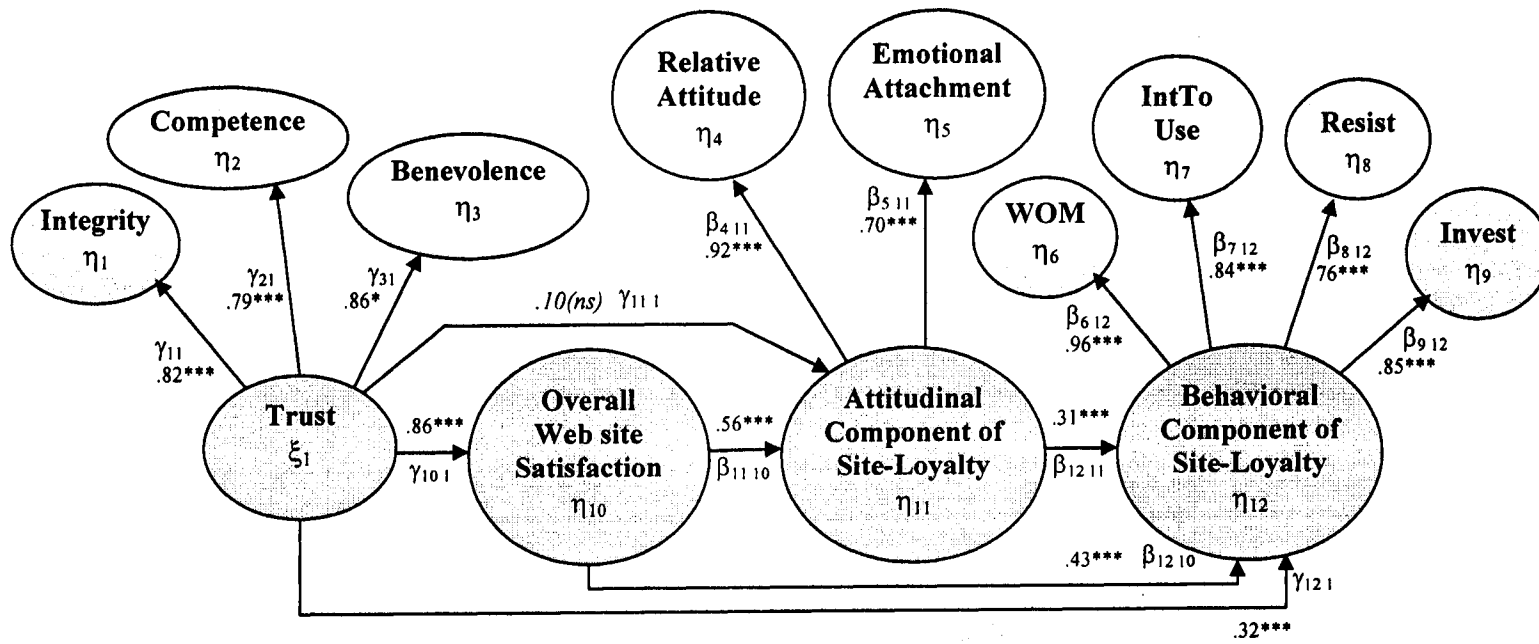
Table 35

Results for Hypotheses of Model 2

Hypotheses	Result
H1: There is a positive relationship between Site-Communality and Trust.	Supported
H2: There is a positive relationship between Site-Communality and Positive Affect.	Supported
H3: There is a negative relationship between Site-Communality and Negative Affect.	Supported
H4: There is a positive relationship between Trust and Positive Affect.	Not Supported
H5: There is a negative relationship between Trust and Negative Affect.	Not Supported
H6: There is a positive relationship between Trust and Overall Web Site Satisfaction.	Supported
H7: There is a positive relationship between Positive Affect and Overall Web Site Satisfaction.	Supported
H8: There is a negative relationship between Negative Affect and Overall Web Site Satisfaction.	Not Supported
H9: The relationship between Site-Communality and Overall Web Site Satisfaction will be non-significant.	Supported

10.2.2 - Testing Model 3 – Site-Loyalty

A second model was tested to assess the nomological validity for our Site-Loyalty measure which entailed investigating the paths between Overall Web site Satisfaction, Trust, the Attitudinal Component of Site-Loyalty and the Behavioural Component of Site-Loyalty (Model 3, see Figure 22). Indicators are not shown in the model for the sake of parsimony. Details regarding the standardized loadings and errors of estimates are provided in Table 37. To run this model under LISREL, Trust was specified as a ξ . All other latent variables were specified as η s. As such, all indicator variables are modeled as y_i s and their error terms as ε_i s. Fit indices for this model are presented in Table 36. Although the $SB(\chi^2)$ was non-significant suggesting a poor fit of the data to the theorized model, other fit indices suggest that contrary. All except AGFI were above the minimum recommended values for good fit. Nevertheless, AGFI was within the .80 - .89 range suggesting reasonable fit.



*sig<.05; **sig<.01; ***sig<.001; ns = non significant

Figure 22. Results for Model 3 - Structural Model Used to Assess Nomological Validity of Site-Loyalty

Table 36

Fit indices for Model 3

Fit Index	Recommended Value	Model Characteristic
ML(χ^2)	$p > .05$	855.89 (df=512, $p=0.0000$)
SB(χ^2)	$p > .05$	731.13 (df=512, $p=0.0000$)
NFI	$> .90$	.98
CFI	$> .90$	.99
IFI	$> .90$	.99
SB(RMSEA)	$\leq .06$	0.038
AGFI	$\geq .90$ (between .80 to .89 indicates reasonable fit)	0.83
ML(χ^2) / df	< 3	1.67
SRMR	$< .08$	0.056

Overall, the resulting standardized paths are mostly as expected showing nomological validity for Site-Loyalty. Specifically, the paths between Trust and Overall Web site Satisfaction and between Trust and Behavioural Site-Loyalty are significant and positive as expected (i.e., $\gamma_{101} = .86$, $p < .001$; $\gamma_{121} = .32$, $p < .001$, respectively). The standardized path between Trust and the Attitudinal Component of Site-Loyalty was $\gamma_{111} = .10$ and non-significant. As such, our initial results suggest that Trust has no direct, positive and significant impact on the attitudinal component of Site-Loyalty when Overall Web site Satisfaction is taken into account in the model. Our results did not rule out the possibility that Trust does impact on the attitudinal component of Site-Loyalty and that this relationship was being completely mediated via Overall Web site Satisfaction.

Table 37

Standardized Loadings and Error of Estimates for Measurement Model⁷⁰.

Item (y_i)	Standardized Loading (λ_y)	Standard Error of Estimate (ϵ_i)	Cronbach Alpha (α)
Relative Attitude			
RA1	.90	.19	.935
RA2	.90	.19	
RA4	.86	.25	
RA5	.88	.23	
Emotional Attachment			
EMO1	.75	.44	.854
EMO2	.84	.29	
EMO3	.85	.27	
Word of Mouth			
WOM1	.93	.13	.924
WOM2Recoded	.73	.46	
WOM3	.93	.13	
WOM4	.88	.22	
Intention to Use			
USE1	.95	.09	.955
USE2	.95	.10	
USE3	.90	.18	
Resistance to Switch			
RES1	.81	.34	.853
RES2	.84	.30	
RES3	.79	.38	
Intention to Invest More			
INV1	.93	.13	.898
INV2	.89	.20	
INV4	.77	.40	
Integrity			
Integ1	.85	.27	.905
Integ2	.91	.18	
Integ3	.86	.26	
Competence			
Comp1	.90	.18	.934
Comp2	.88	.23	
Comp3	.89	.21	
Comp4	.86	.23	
Benevolence			
Benel	.93	.14	.938
Bene2	.89	.20	
Bene3	.92	.15	
Overall Web Site Satisfaction			
Sat1	.91	.17	.898
Sat2	.86	.25	

⁷⁰ See Appendix 4 for description of items

Sat3	.93	.13	
Sat4	.94	.12	

To test for complete mediation, we again followed the Baron and Kenny (1986) procedure. Condition 4 had already been established when we ran Model 3 (see Figure 22 above). First, to verify condition 1, we ran a LISREL model to assess whether a direct relationship existed between Trust (modelled as ξ_1) and the Attitudinal Component of Site-Loyalty (modelled as η_1) without the presence of Overall Web site Satisfaction. The results of this model showed that Trust had a positive and significant impact on the Attitudinal Component of Site-Loyalty ($\gamma_{11} = .63, p < .001$)⁷¹. As such, condition 1 was met. To test condition 2, we ran a model with Trust (modelled as ξ_1) as the independent variable and Overall Web site Satisfaction (modelled as η_1) as the outcome variable. This model produced a positive and significant path between Trust and Overall Web site Satisfaction ($\gamma_{11} = .86, p < .001$)⁷². Finally, we ran a model to assess condition 3; the impact the Overall Web site Satisfaction (modelled as ξ_1) on the Attitudinal Component of Site-Loyalty (modelled as η_1). The standardized path between was Overall Web site Satisfaction and the Attitudinal Component of Site-Loyalty was significant and positive ($\gamma_{11} = .66$)⁷³. Given that all four conditions held, complete mediation between Trust and the Attitudinal Component of Site-Loyalty by Overall Web site Satisfaction was established. Table 38 shows which hypotheses were / were not supported.

⁷¹ This model showed very good fit with $SB(\chi^2) = 167.45$, $df = 113$, $p\text{-value} = 0.00067$, $RMSEA = 0.040$, $NFI = 0.98$, $CFI = 0.99$, $IFI = 0.99$, $SRMR = 0.036$, $AGFI = 0.90$

⁷² This model showed an overall good fit with $SB(\chi^2) = 118.48$, $df = 73$, $p\text{-value} = 0.00061$, $RMSEA = 0.045$, $NFI = 0.99$, $CFI = 0.99$, $IFI = 0.99$, $SRMR = 0.034$, $AGFI = 0.90$

⁷³ This model almost reached significance. Overall, fit indices indicated an excellent model: $SB(\chi^2) = 57.23$, $df = 41$, $P\text{-value} = 0.04742$, $RMSEA = 0.036$, $NFI = 0.99$, $CFI = 1.00$, $IFI = 1.00$, $SRMR = 0.025$, $AGFI = 0.94$.

Table 38

Results for Hypotheses of Model 3

Hypotheses	Result
H10: There is a positive relationship between Trust and Overall Web site Satisfaction	Supported
H11: There is a positive relationship between Trust and the Attitudinal Component of Site-Loyalty.	Not Supported (Complete mediation via Overall Web site Satisfaction)
H12: There is a positive relationship between Trust and the Behavioural Component of Site-Loyalty.	Supported
H13: There is a positive relationship between Overall Web site Satisfaction and the Attitudinal Component of Site-Loyalty.	Supported
H14: There is a positive relationship between Overall Web site Satisfaction and the Behavioural component of Site-Loyalty.	Supported

As mentioned previously, there exists no single criterion pertaining to establishing adequate sample size in factor analysis/SEM. Popular perspectives include:

- 1. STV ratio.** The subjects-to-variables ratio should be no lower than 5 (Bryant & Yarnold, 1995; Hatcher, 1994).
- 2. Rule of 200.** There should be at least 200 cases, regardless of STV (Gorsuch, 1983; Hoelter, 1983; Guadagnoli & Velicer, 1988; Kelloway, 1998).
- 3. The between 5:1 and 10:1 Rule.** There should be a ratio of 5 to 10 cases for each estimated parameter in the model (Bentler & Chou, 1987; Floyd & Widaman, 1995).

Our sample size for testing Model 3 did meet two of the three criteria of adequacy. This model had 83 free parameters. According to Bentler and Chou's (1987) suggestion for adequate sample size, such a model would likely require a minimum sample size of 405. Our sample of 305 was below this. However, the model had 35 measured variables. Given our sample size of 305, this resulted in a subject-to-variable ratio of about 8 to 1 which was nevertheless above the minimum of 5 to 1 ratio advocated by STV (Bryant & Yarnold, 1995; Hatcher,

1994). Moreover, our sample size of 305 was above the minimum of 200 advocated by Gorsuch (1983), Guadagnoli and Velicer (1988) and Kelloway (1998).

10.3 - Summary

In this chapter, we addressed reliability issues and assessed construct and nomological validity of our measures of Site-Communality and Site-Loyalty. Convergent and discriminant validity (i.e., construct validity) were demonstrated. Moreover, two models were tested to demonstrate nomological validity. Overall, Site-Communality and Site-Loyalty behaved much as expected when situated in a Web of theoretically related constructs such as positive and negative affect, satisfaction, and trust. In the next chapter, we discuss how we used structural equation modelling to test our main model and hypothesis that Site-Communality has a significant and positive impact on the attitudinal and behavioural components of Site-Loyalty.

Chapter 11 - Main Model and Hypotheses

11.1 - Overview

In previous chapters, we conducted Confirmatory Factor Analysis for Site-Communality and Site-Loyalty and established nomological validity of these measures. In this chapter, we report the results of using SEM to test our main model and its corresponding hypotheses (i.e., H16, H17 and H18) that Site-Communality has a direct positive impact on Site-Loyalty. We also test whether ‘Communal-Orientation in Traditional Commercial Environments’ is a moderator of the relationship between Site-Communality and Site-Loyalty. Although a direct relationship between Site-Communality and Site-Loyalty is theorized, we expect that the effect of Site-Communality will be much stronger for consumers scoring higher on ‘Communal-Orientation in Traditional Commercial Environments’. If supported, it would suggest that customer preferences in traditional commercial environments should be reflected in the design of online environments as well.

11.2 - Testing Model 4 - The Impact of Site-Communality on Site-Loyalty

LISREL 8.54 was used to test our main hypothesis that Site-Communality positively impacts Site-Loyalty (Model 4, see Figure 7). LISREL’s path diagram showing the standardized solution is presented in Figure 23⁷⁴ below. The model’s $SB(\chi^2)$ is 1212.07 ($P = 0.0000$) suggesting a poor fit of the data to the theoretical model and the AGFI = 0.80 suggests a reasonable fit (Hartwick & Barki, 1994). However, other fit indices such as $SB(\chi^2)/df = 1.58$, $SB(RMSEA) = 0.044$, $NFI = .98$, $CFI = .99$, $IFI = .99$, $SRMR = .065$ show that the model fits the data well.

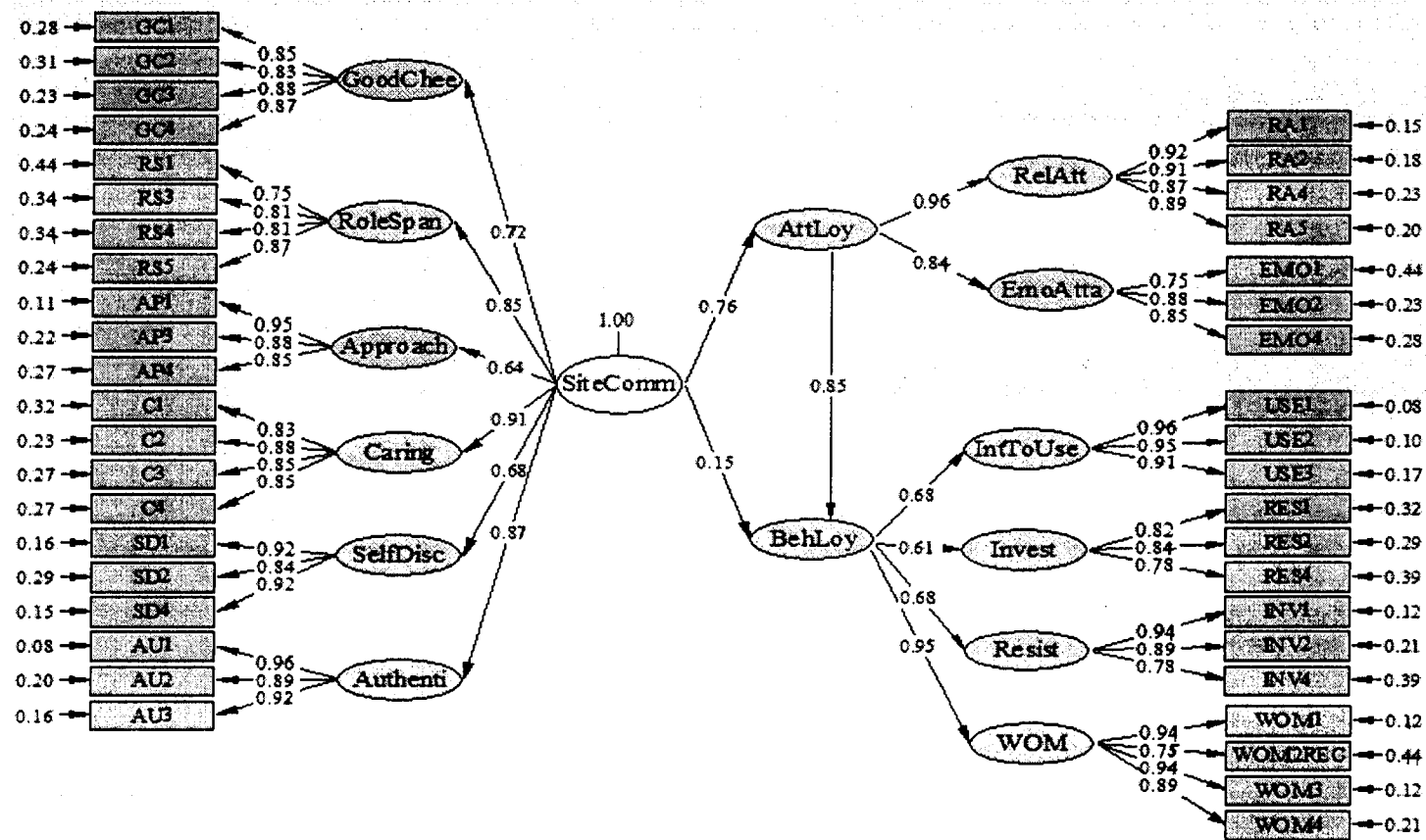
⁷⁴ See Appendix 4 for description of items

Table 39

Results for Hypotheses of Model 4

Hypotheses	Result
H16: There is a positive relationship between Site-Communality and the Attitudinal Component of Site-Loyalty.	Supported
H17: There is a positive relationship exists between Site-Communality and the Behavioural Component of Site-Loyalty.	Supported
H18 (and H15): There is a positive relationship between the Attitudinal and Behavioural Components of Site-Loyalty.	Supported

Overall, the model indicates strong support for hypotheses H16, H17, and H18 (see Table 39). Site-Communality positively impacts on Site-Loyalty and there is a positive relationship between the Attitudinal Component of Site-Loyalty (i.e., AttLoy) and the Behavioural Component of Site-Loyalty (i.e., BehLoy). The path between Site-Communality and Attitudinal Component of Site-Loyalty (i.e., AttLoy) is high, positive and significant (i.e., 0.76, $p < .001$). Similarly, the path between Site-Communality (i.e., SiteComm) and Behavioural Component of Site-Loyalty (i.e., BehLoy) is positive and significant as well (i.e., 0.15, $p < .01$) but not as strong as that between Site-Communality and Attitudinal Component of Site-Loyalty. In addition, the high, positive and highly significant path between Attitudinal Component of Site-Loyalty and Behavioural Component of Site-Loyalty (0.85, $p < .001$) clearly suggests that the attitudinal component of Site-Loyalty strongly mediates the relationship between Site-Communality and the behavioural component of Site-Loyalty but not completely.



Chi-Square=1212.07, df=765, P-value=0.00000, RMSEA=0.044

Figure 23. SEM Model Showing the Impact of Site-Comm on the Attitudinal and Behavioural Components of Site-Loyalty

11.3 - Moderating Effect of Communal-Orientation in Traditional Commercial Environments

In Social Psychology, Communal-Orientation refers to a person's preference or propensity for establishing communal-relationships with particular others (i.e., Clark, Ouellette, Powell, & Milberg, 1987). Parallels have appeared in marketing research. There is empirical evidence showing that consumers vary in the degree to which they enjoy and even seek out communal-relationships in traditional (i.e., off-line) commercial settings (e.g., McAdams, 1988; Reynolds & Beatty, 1999; Beatty et al., 1996; Price & Arnould, 1999; Barnes, 1997). This preference state is believed to be stable over time (see M.S. Clark's email in Appendix 6).

Previously, we argued that this preference may also extend to online environments as well. This suggests that the positive impact of Site-Communality on Site-Loyalty may be moderated by the customer's 'Communal-Orientation in Traditional Commercial Environments'. If supported, one would expect that customers scoring higher in communal-orientation may be more positively affected by Web sites high in Site-Communality resulting in stronger Site-Loyalty. Stated differently, the interaction between 'Communal-Orientation in Traditional Commercial Environments' and Site-Communality' may affect Site-Loyalty.

One can examine a statistical interaction between two or more independent variables using ANOVA or MANOVA. However, these statistical analysis methods require that the independent variables be categorical in nature (e.g., gender, ethnicity, etc.) To test continuous moderating variables using these techniques requires researchers to convert them categorical variables by enacting a median split resulting in a dichotomous variable. However, there are limitations associated with this practice (see Aiken and West, 1991). Instead, a growing number of researchers are beginning to employ SEM to test moderation effect of continuous variables (for a review of these techniques see Cortina, Chen, & Dunlap, 2001). We chose to employ the method developed by Ping (1995). According to Cortina et al. (2001), this method is relatively easy to implement and

yields solutions comparable in quality to other, more complex methods (e.g., Kenny & Judd, 1984).

The Ping (1995) method is a two-step approach. It requires that the researcher use SEM to estimate two models. The first model (called the 'additive model') can be thought of as a 'main effects' model. The interaction term is omitted from the analysis. Values obtained from the additive model are then used to fix certain parameters in the 'multiplicative model'. This second model is similar to the additive model but includes the interaction term.

The interaction effect between Site-Communality and 'Communal-Orientation in Traditional Commercial Environments' on Site-Loyalty is presented in Figure 24. This model is referred to as the multiplicative model from now on.

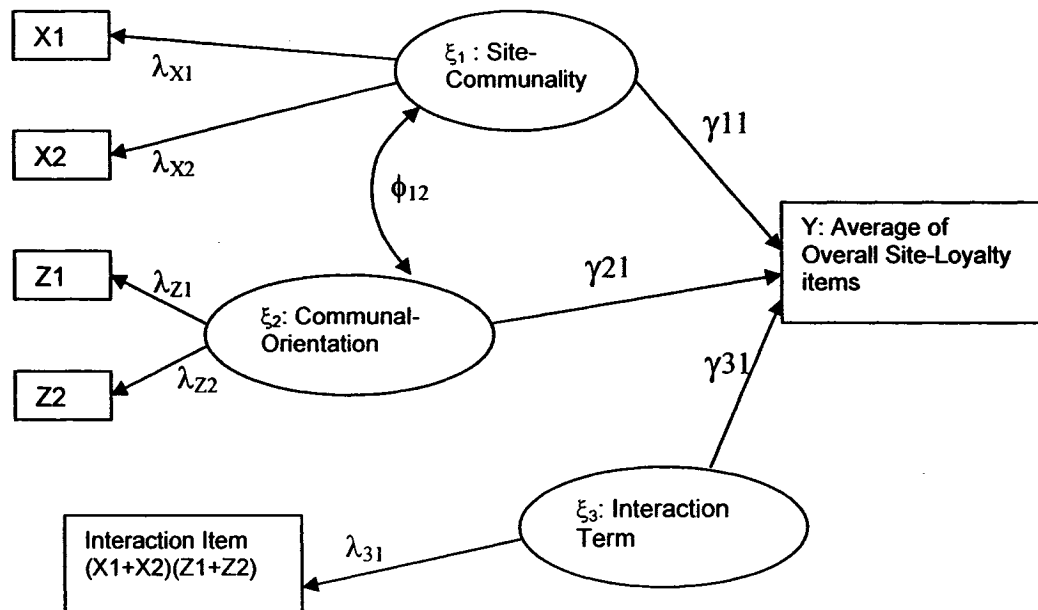


Figure 24. Multiplicative Model Showing Interaction Effects Between Site-Communality and Communal-Orientation in Traditional Commercial Settings on Site-Loyalty

In this model, Overall Site-Communality, ‘Communal-Orientation in Traditional Commercial Environments’ and the interaction term are modeled as ξ s (KSIs). The dependent variable, Overall Site-Loyalty, is measured using one indicator (Y).

Basing ourselves on the work by Ping (1995), the following steps were taken to test for interaction:

- 1) Averaging was used to compute composites (a.k.a., parcels) for Overall-Site Communality, the remaining items of ‘Communal-Orientation in Traditional Commercial Settings’ and Overall Site-Quality. Specifically, we created two (2) composite indicators (i.e., X1 and X2) for Overall Site-Communality (ξ_1) and two (2) composite indicators (i.e., Z1 and Z2) for ‘Communal-Orientation in Traditional Commercial Environments’ (ξ_2) using the RAND (i.e., random) parceling method discussed in Landis,

Beal, and Tesluk (2000). For the single indicator of Overall Site-Loyalty (Y), we simply averaged its three (3) items together. Overall, the following composite items were created:

$$\begin{aligned} Y &= \text{Average of all Overall Site-Loyalty Items} \\ X1 &= (\text{SiteComm1} + \text{SiteComm4})/2 \\ X2 &= (\text{SiteComm2} + \text{SiteComm3})/2 \\ Z1 &= (\text{ComOri1} + \text{ComOri2})/2 \\ Z2 &= (\text{ComOri3}) \end{aligned}$$

Using these composite indicators, the Cronbach alpha coefficients for the composite measures of Overall Site-Communality (i.e., items X1 and X2) and 'Communal-Orientation in Traditional Commercial Environments' (i.e., items Z1 and Z2) were recomputed. The values were .947 and .730, respectively. Both were above the acceptable 0.7 threshold (Nunnally, 1967).

Next, following Ping (1995), centering was performed in SPSS on all the composite indicators created in step 1. Mean centering produces indicators with means of zero. Centering is done by subtracting the mean of an indicator from each case value of that indicator. After centering, while still in SPSS, we computed $(X1+X2)*(Z1+Z2)$ which would serve as the indicator of the interaction term (ξ_3). Finally, the following covariance matrix was generated:

	Y	X1	X2	Z1	Z2	$(X1+X2)*$ $(Z1+Z2)$
Y	1.650					
X1	1.337	2.626				
X2	1.284	2.309	2.508			
Z1	.171	.398	.306	1.716		
Z2	.137	.552	.438	1.232	2.567	
$(X1+X2)*(Z1+Z2)$	-2.163	-1.370	-1.488	.374	.421	69.065

- 2) The loading ($\lambda_{x:z}$) and the error ($\theta_{ex:z}$) for the indicator of the interaction term were calculated using the following equations:

$$(e.q. 1) \quad \lambda_{x:z} = (\lambda_{x1} + \lambda_{x2}) * (\lambda_{z1} + \lambda_{z2})$$

$$(e.q. 2) \quad \theta_{\epsilon X:Z} = (\lambda_{x1} + \lambda_{x2})^2 * VAR(X) * (\theta_{\epsilon z1} + \theta_{\epsilon z2}) + (\lambda_{z1} + \lambda_{z2})^2 * VAR(Z) * (\theta_{\epsilon x1} + \theta_{\epsilon x2}) + (\theta_{\epsilon z1} + \theta_{\epsilon z2}) * (\theta_{\epsilon x1} + \theta_{\epsilon x2}).$$

The values on the right side of these equations were obtained by running an 'additive model' and examining its output. The LISREL syntax is given below.

```

TI Additive Model
DA NI=5 NO=300 MA=CM
LA
Y X1 X2 Z1 Z2
CM SY
1.650
1.337 2.626
1.284 2.309 2.508
.171 .398 .306 1.716
.137 .552 .438 1.232 2.567
MO NX=5 NK=2 TD=SY PH=SY LX=SY
FR LX(1,1) LX(1,2) LX(2,1) LX(3,1) LX(4,2) LX(5,2)
PD
OU IT=100 AD=OFF RS

```

The additive model is identical to the multiplicative model shown in Figure 23 except that the interaction term (ξ_3) is omitted from the analysis. The ML(χ^2) of the additive model achieved significance (=3.62, df=3, p-value=0.30544, RMSEA=0.026) showing excellent fit of the data to theoretical model. From the additive model (unstandardized solution) and equations 1 and 2, the following values were then obtained:

$$\begin{aligned}
\lambda_{x1} &= 1.56 \\
\lambda_{x2} &= 1.48 \\
\lambda_{z1} &= 0.89 \\
\lambda_{z2} &= 1.38 \\
\theta_{\epsilon x1} &= .19 \\
\theta_{\epsilon x2} &= .32 \\
\theta_{\epsilon z1} &= .92 \\
\theta_{\epsilon z2} &= .65 \\
VAR(X) &= 1 \\
VAR(Z) &= 1
\end{aligned}$$

The values for $\lambda_{x:z}$ and $\theta_{\epsilon x:z}$ were 6.9008 and 17.93799, respectively.

- 3) In order to employ the Ping (1995) method, unidimensionality needed to be assessed for the indicators of ξ_1 and ξ_2 in the additive model. As such, we verified that each indicator loaded on its factor and not on the other (i.e., no cross-loadings were present)⁷⁵.
- 4) In the multiplicative model, the values obtained in Step 3 were used to 'fix' the relevant paths of the interaction term in the multiplicative model. In addition, the correlation between Ksi 1 and Ksi 3 (ϕ_{31}) and between Ksi 2 and Ksi 3 (ϕ_{32}) were both fixed to zero (0). The LISREL syntax for the multiplicative model was as follows:

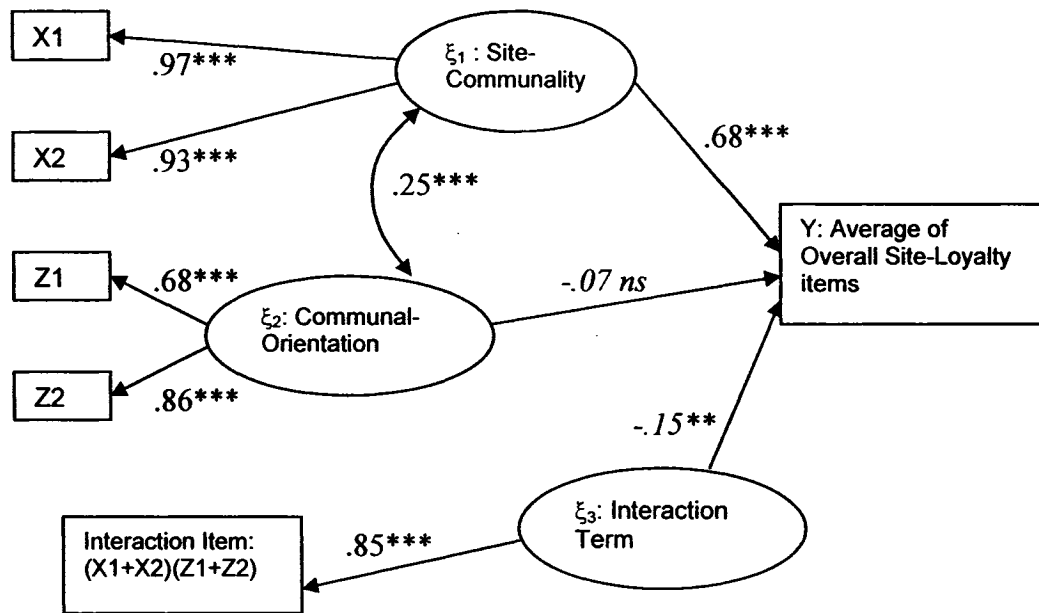
```

TI Multiplicative Model
DA NI=6 NO=305 MA=CM
LA
Y X1 X2 Z1 Z2 'X1Z1'
CM SY
1.650
1.337 2.626
1.284 2.309 2.508
.170 .394 .294 1.670
.134 .541 .425 1.166 2.606
-2.054 -1.247 -1.348 .452 .496 67.722
MO NX=6 NK=3 TD=SY PH=SY LX=SY
FR LX(1,1) LX(1,2) LX(1,3) LX(2,1) LX(3,1) LX(4,2)
LX(5,2) LX(6,3)
FI PH(3,1) PH(3,2)
VA 0 PH(3,1) PH(3,2)
FI LX(6,3)
VA 6.9008 LX(6,3)
FI TD(6,6)
VA 19.93799 TD(6,6)
PD
OU IT=100 AD=OFF SS RS

```

The multiplicative model had a significant $ML(\chi^2) = 8.76$ ($df = 7$) with a p-value = 0.26997 (RMSEA = 0.029) suggesting an excellent fit. The standardized estimated values for the multiplicative model are shown in Figure 25 below.

⁷⁵ See Gerbing and Anderson (1988) for a further discussion of unidimensionality in SEM.



*sig<.05; **sig<.01; ***sig<.001; ns = non significant

Figure 25. Results of the Multiplicative Model – Standardized Solution.

Given that the data was centered prior to analysis, the standardized coefficient of .68 (γ_{11}) means that one (1) standard deviation increase in the independent variable (ξ_1) leads to an increase of .68 in the dependent variable Overall Site-Communality (Y). Surprisingly and contrary to our hypothesis, the path between the interaction term (ξ_3) and the dependent variable (Y) is negative and significant. As such, although moderation is present, it appears that it is working in the opposite direction that we initially hypothesized.

As such, although there is a direct positive relationship between Overall Site-Communality and Overall Site-Loyalty, it appears that Site-Communality has a weaker impact on Site-Loyalty for those consumers who describe themselves as high in ‘Communal-Orientation in Traditional Commercial Environments’. This result is non-intuitive. It is possible, however, that for consumers higher in ‘Communal-Orientation in Traditional Commercial Environments’, being exposed

to a Web site high in Site-Communality may actually remind them of what they may be losing out on when doing business via Web sites relative to more traditional service settings where communality may experienced first hand. Better understanding of this moderating effect is beyond the scope of this thesis but is worthy of further study.

11.4 - Summary

In this chapter, we addressed our main model and hypotheses. We find strong empirical support for a positive linkage between Site-Communality and the attitudes and behavioural intentions typically associated with Site-Loyalty. However, contrary to our prediction, the relationship between Site-Communality and Site-Loyalty was not greater for respondents high in 'Communal-Orientation in Traditional Commercial Environments'. A summary of results, discussion and conclusion is presented in the next chapter.

Chapter 12 - Summary of Findings, Contribution, Limitations and Conclusion

12.1 - Summary of Findings

As an increasing number of companies are turning to on-line environments as a means of servicing their customers, Web sites are becoming the first and sometimes only point of contact with customers. Although these environments allow companies to reach a greater number of customers, they also facilitate switching, making it much more difficult to retain customers (Bakos, 1997). As a result, identifying Web site design factors that leave visitors with good impressions (Smith, 2000) and foster Web Site-Loyalty has become very important.

With this in mind, we began this thesis with a review of the loyalty concept. It revealed that, in early conceptualizations, loyalty was typically defined and measured as a behaviour (e.g., Newman & Werbel, 1973; Reynolds, Darden, & Martin, 1974). Many critics, however, argued that this behavioural perspective could not effectively differentiate between loyalty and behaviourally similar concepts, such as, customer indifference (i.e., repurchasing devoid of preference). These critics stressed the importance of developing measures which could confirm that positive attitudinal biases within the customer's psyche were actually the driving force behind repeat purchasing and repatronage (e.g., Day, 1969; Lutz & Winn, 1974). These calls were answered by researchers who reconceptualized loyalty as a composite construct made up of both positive relative attitude and repeat patronage behaviour (e.g., Dick & Basu, 1994). In parallel, research also revealed that several states of loyalty can emerge depending on which factors lead the customers in developing a positive attitudinal bias. Loyalty is believed to be at its least enduring and most shallow state when positive relative attitude is founded on such things as service performance and better pricing (i.e., utilitarian factors). In this cognitively-founded loyalty state, customers remain highly susceptible to

switching. Conversely, stronger states of loyalty often emerge from affective relational phenomena (see Oliver, 1999).

Empirical findings support the loyalty benefits resulting from fostering affective ties in service environments (e.g., Chow & Holden, 1997; Fournier & Yao, 1997; Macintosh & Lockshin, 1997; Sheth & Parvatiyar, 1995). For instance, in traditional commercial environments, studies evidence that very loyal customers often perceive and describe their relationships with employees as being more like those among friends (Price & Arnould, 1999). Such relationships are often characterized by demonstrations of caring, warmth, interest in aspects of the other's life outside of business, etc. (Goodwin, 1996). Interestingly, research also reveals that the loyalty benefits of these highly affect-laden relationships are not strictly limited to the relationships that occur between customers and company representatives. Consumers can affectively relate to brands and products as well and exhibit particularly strong loyalty (Oliver, 1999; Aggarwal, 2004).

Our review of Web site design factors found to be influential on Web site quality (and, by extension, on Web site loyalty) suggests that studies have focused primarily on utilitarian aspects (e.g., ease of use, perceived usefulness, meeting all the customer's transactional needs by offering rich content and functionality) and, to some extent, the entertainment (hedonic) value and aesthetics of sites. Seemingly, what we have termed and described as affective/relational factors have received very little attention in the literature on Web site design.

Aside from studies into trust which demonstrate the importance of conveying benevolence (a.k.a., affective trust, goodwill), many researchers dismiss affective/relational factors as irrelevant to Web site design (e.g., Cox & Dale, 2001; van Iwaarden, van der Wiele, Ball, & Millen, 2003; Zeithaml, Parasuraman, & Malhotra, 2001) given the self-service nature of Web-based commercial environments. These authors speculate that, at best, these factors only become contingently important, coming into play only when customer/employee

communications actually occur (i.e., in email messages or during telephone conversations with company representatives).

The empirical findings reported in this thesis show the contrary. We investigated and found that the precepts of what have been termed ‘close’, ‘intimate’, or, more specifically, ‘communal’ relationships can be effectively communicated via Web site content and design and that such communications positively impact the attitudes and behavioural intentions typically associated with loyalty toward a Web site. For this purpose, we developed and validated multidimensional measures of Site-Communality and Site-Loyalty. Site-Communality was defined and operationalized as *the extent to which Web site content signals that a company’s relationship with its customers goes beyond the formal, ‘tit for tat’ business dealings that are typically expected from purely commercial exchanges, and instead, more closely abide by the norms and behaviours evocative of friendships and/or family relations*. From an extensive literature review, we identified Site-Communality as a latent construct made up of six (6) dimensions, these are (1) *Conveying good cheer* to visitors, (2) *Role spanning* (e.g., relating to visitors on a ‘human level’ rather than strictly on a business level), (3) *Signalling approachability* during times of need, (4) *Demonstrations of caring* for their customers, (5) *Company self-disclosure*, and (6) *conveying authenticity / non-instrumentality*. As for Site-Loyalty, we operationalized it as a composite measure made up of both attitudinal and behavioural components (Dick & Basu, 1994). Based on our review of the loyalty literature, we identified *relative attitude* and *emotional attachment* as dimensions of the Attitudinal Component of Site-Loyalty and *Word-of-Mouth*, *Intention to Use/Revisit*, *Resistance to Switching/Competitors’ Attempts at Counter Persuasion*, and *Willingness to Invest More* (time, money, etc.) as dimensions of the Behavioural Component of Site-Loyalty.

In all, three (3) separate data collections were performed using online questionnaires. Of the three (3) samples collected, two (2) of these were used for

the purposes of exploratory factor analysis while the last was reserved for the purposes of conducting confirmatory factor analysis and to test our models and hypotheses. Each participant in our study was asked to evaluate one among several Web sites from a company with which (s)he was not familiar with. The participant's non-familiarity with the Web site (s)he evaluated was our way of ensuring that past experience would not emerge as a confounding factor, influencing the participant's evaluation. Also, the Web sites included in this study were chosen (1) so as to maximize variability on Site-Communality and (2) from several different industries. The latter helped us minimize any potentially confounding industry effects. This, we believe, makes our findings more generalizable across the many areas of B2C e-commerce. Specifically, sample 1 ($n_1 = 249$) was submitted to exploratory factor analysis using principal axis factoring with oblimin rotation in SPSS 12.0. This allowed us to purify the initial set of items generated so as to tap each dimensions of Site-Communality and which had remained after the card sorting exercise. Sample 2 ($n_2 = 242$) was run through the same process, however, it was used specifically to purify the items designed to tap into the dimensions of Site-Loyalty. A final sample ($n_3 = 305$) was submitted to confirmatory factor analysis using LISREL VIII. This allowed us to (1) further refine our instruments, (2) establish nomological validity (see Models 2 and 3), (3) test our main model (Model 4 in Figure 7 - the impact of Site-Communality on Site-Loyalty), and finally, (4) to test a potential moderation effect where we hypothesized that as customer's 'Communal-Orientations in Traditional Commercial Environments'⁷⁶ increases, so does the relationship between Site-Communality and Site-Loyalty.

The moderation hypothesis arose from a review of literature into commercial relationships in traditional service settings. It revealed that, for some customers, the interpersonal service encounter not only provides functional benefits, but serves human needs as well (e.g., McAdams, 1988; Gremler & Gwinner, 2000;

⁷⁶ Defined as *the extent to which a consumer enjoys 'getting to know' employees (i.e., waitress, bank teller, hair stylist) and relating with them on a more personal-level than is typically required for the effective delivery of a service.*

Price & Arnould, 1999) and that these relationships can be an important source of affect for many customers (Reynolds & Beatty, 1999). This review of literature also revealed that, for other customers, front-line employees represent nothing more than a necessary conduit for service delivery – simply a means to an end. Many customers simply do not develop, nor want to develop ‘close’ relationships with salespeople and employees (Bearden, Malhotra, & Uscátegui, 1998; Beatty et al., 1996; Crosby, Evans, & Cowles, 1990; Sheaves & Barnes, 1996). Some customers actually react unenthusiastically to an organization’s efforts at establishing close, interpersonal relationships (Bearden, Malhotra, & Uscátegui, 1998; Chow & Holden, 1997). Given these results, our moderation hypothesis was postulated so as to reflect the possibility that customers’ preferences for engaging in communal behaviours in traditional commercial environments may influence their evaluations of Site-Communality.

Overall, our study reveals that Site-Communality has a strong, positive, direct and significant impact on the attitudes and behavioural intentions typically associated with Site-Loyalty. However, contrary to our expectations regarding moderation, our results show that the positive relationship between Site-Communality and Site-Loyalty is attenuated, rather than accentuated, by the visitor’s ‘Communal-Orientation in Traditional Commercial Environments’. Apparently, the stronger the customer’s Communal-Orientation in Traditional Commercial Environments, the lower the positive impact of Site-Communality on Site-Loyalty. This result is counter-intuitive. However, one possible explanation for this unexpected result is that when strongly communally-orientated consumers are exposed to a Web site high in Site-Communality, these visitors may actually be reminded of what they would be missing out on if they elected to conduct their business online rather than in choosing more traditional channels. Nevertheless, this interesting result deserves further investigation. We next offer discuss the practical implications of our findings and directions for further research.

12.2 - Contribution

This research makes several contributions. The first pertains to research into Web site design. To our knowledge, no empirical study before this one has investigated whether recent findings into the applications of Communal-Relationship Theory into commercial settings can help companies design Web sites which more effectively promote Web site loyalty. As such, this area of research is innovative. Moreover, this research is highly cross-disciplinary melding the areas of IS, Marketing, Communications and Social Psychology. This, we hope, may encourage other IS researchers to venture 'off the beaten track' and explore theories and ideas which may not have previously surfaced in IS research but may nevertheless be applied to Web site design. Most importantly, perhaps, is that by (1) acknowledging the lack of past research into Web site design factors classified as affective/relational factors and (2) by evidencing their importance and significance, our work may encourage future research into exploring and identifying theories which point to the existence of other affective/relational factors which positively influence Web site loyalty.

Second, for practitioners, this study clearly suggests that companies providing services/products via Web sites should not simply focus on the utilitarian aspects when designing their Web sites (e.g., facilitating transactions, making Web sites easy to use and navigate). Other researchers aside from us have explicitly recognized the utilitarian tendencies in Web site design research and practice (see Loiacono et al., 2002) or have indirectly acknowledged this tendency by turning their attention to investigating such factors as aesthetics and the hedonic value of Web sites (e.g., Barnes & Vidgen, 2000, 2001; Constantinides, 2004; Jun & Cai, 2001; O'Neill, Wright, & Fitz, 2001). However, our research offers companies a new avenue of exploration; that is, incorporating the precepts of communal-relationship theory into their Web site design philosophies as a means of attracting, and potentially even retaining customers.

Third, our study provides both practitioners and researchers with validated, multidimensional measures of Site-Communality and Site-Loyalty. Researchers may use our measure of Site-Loyalty to compare and investigate the effectiveness of various Web site design factors. Both measures can be used by companies to (a) evaluate their existing Web site, (b) to help them choose the best Web site among competing designs, and (c) to evaluate how their Web site fare relative to those of competitors or industry leaders (i.e., for benchmarking purposes). Moreover, a major benefit of multidimensional measures when compared to overall (unidimensional) measures is better diagnosticity (Nygren, 1991). Consequently, our measures can also help a company identify and address specific areas of concern on its Web site which may need improvement or redesign. For instance, using a global measure of Site-Communality may reveal that visitors perceive a company's Web site as disaffected. Although informative, it would provide little information or direction on where and what to improve upon. Identifying and rectifying the problem(s) would then require the expenditure of additional resources such as using potentially expensive and time-consuming consumer focus groups. Instead, a multidimensionality measure such as ours can more easily reveal the specific shortcomings of a Web site. For example, our instrument may identify that a company's Web site is lacking on the dimensions of approachability and good cheer (i.e., warmth). Carefully selected images or other content (e.g., written content) could then easily be added to this Web site to stress these specific aspects of Site-Communality. In this particular case, pictorial content showing friendly, helpful employees (see Figure 26 below) may help the company counter such perceptions. The Web site could then be easily re-evaluated with our instrument to assess the effectiveness of these additions.



Figure 26. Example of an Image Likely to Convey Approachability and Good Cheer.

Research in the areas of Communications and Advertising clearly suggests that visitors' expectations regarding the type of relationship which they can anticipate from a company can be elicited via particular images and other types of content (e.g., Aaker et al., 1986; Holbrook & Moore, 1981; Rice & Case, 1983; Rice & Love, 1987). Some years ago, in a Saturn company TV commercial, an employee meets a pleasantly surprised customer at the airport to deliver her new Saturn car after she had been out of the country for a period of two-years and had placed an order for her new car prior to her arrival. Such messages create *communal relationship expectations* in customers by conveying behaviours more associated with those of a caring friend than those of a company representative simply doing his/her job. Similarly, we believe that images and other Web site content can be used to elicit communal expectations which, in turn, can become 'framing devices' (see Goffman, 1974) defining and shaping actual and future interactions between relational parties (Burgoon, 1993).

Although beyond the scope of this thesis, research is definitely needed to identify what type of content can best increase perceptions of Site-Communality across these dimensions. Nevertheless, in Table 40, we provide some recommendations for particular shortcomings across the individual dimensions of Site-Communality.

Table 40

Shortcomings on Dimensions of Site-Communality and Recommended Actions

Shortcoming (Dimension of Site-Communality)	Recommendation
(Warmth and) Good Cheer	Images or messages which convey positive emotions to visitors (e.g., friendly, smiling, cheerful employees).
Role-Spanning	Images or messages which affirm and validate what visitors' care about outside of business (e.g., images which evoke the importance of family).
Approachability	Images or messages which encourage users to contact the company when needed (e.g., images of employees helping customers over the telephone, providing company contact information on all pages of the Web sites).
Demonstrations of Caring	Using images or messages which communicate empathy for customer problems.
Self-Disclosure	<p>Images and other content which reveal the company's concern and involvement in areas unrelated to its core business activity (i.e., involvement in good causes).</p> <p>For small online companies, images of its employees and biographical information about its employees.</p>
Authenticity	<p>The posting of third-party consumer reports to help customers make better decisions.</p> <p>Encouraging and posting customer comments, feedback and opinions, and product reviews.</p>

12.3 - Limitations

Although we applied a rigorous validation process for developing our measures of Site-Communality and Site-Loyalty, our work contains limitations. Some of these could be addressed in future studies. First, our instruments were developed using data samples gathered mostly among University students. Although these subjects are unquestionably regular Web users (i.e., for school work, checking emails), they may not adequately represent online consumers. As such, cross-validation using another sample more representative of the 'average online consumer' may be required for greater generalization. Moreover, Galletta and Lederer (1989) have proposed that test-retest is necessary for establishing the reliability of new measures. As such, a future study could examine the stability our Site-Communality and Site-Loyalty instruments using the test-retest correlation method.

Several limitations also stem from:

- (1) the cross-sectional nature of our study, and
- (2) that no 'follow up' was made so as to assess whether sites deemed in high Site-Communality were actually revisited or adopted more often by our respondents.

First, to what extent are our results generalizable over time? Although we demonstrate that a strong, significant, positive link exists between our measures of Site-Communality and Site-Loyalty, we cannot ensure that these positive effects endure over time. Conceivably, the benefits of Site-Communality may simply occur at the early stages of exposure to a new Web site and not go further than being beneficial in forging good first impressions. Arguably, to determine whether any factor has an enduring impact on loyalty, a longitudinal design would be needed. A longitudinal approach, however, would have potentially introduced its own problems, such as confounding. By tracking loyalty attitudes and behaviours over time, we could not have been able to control the emergence of other factors (unrelated to the Web site's design) which may have impacted on

loyalty. In fact, by requesting subjects to visit and evaluate a Web site which they were not familiar with, allowed us to control for the potential confounding effects of past experience (be it good or bad) with a company, its employees, or its Web site.

Second, although we often referred to our study as an investigation into the impact of Site-Communality on Site-Loyalty, we cannot guarantee that our study truly tapped respondents' loyalty toward the Web site. We recognize this. Throughout this thesis, several attempts were made to address this limitation by describing our work as a study into the impact of Site-Communality on the components of attitudinal and behavioural Site-loyalty (i.e., the attitudes and behavioural intentions typically associated with customer loyalty toward a Web site). However, there does appear to be past precedence for extending our findings to actual Site-Loyalty, albeit cautiously. There are numerous examples of cross-sectional studies published in peer-reviewed journals where researchers assert studying loyalty by measuring behavioural intentions rather than tracking actual behaviours over time (e.g., Jones & Farguhar, 2003; McAlexander, Kim, & Roberts, 2003; Lemmink & Mattson, 2002).

Finally, a potential limitation of our study may pertain to the generalization of our results to the whole online consumer population. Although the basic idea of this thesis was to establish the importance of Site-Communality, our three samples were predominantly made up of college students between the ages of 18 and 29 years. As such, generalizability to other age groups and other populations is limited. However, academic research into business to consumer e-commerce often focuses on college students. McKnight et al. (2002) argue that university students are close to the online consumer population in terms of age and education. This group has ready access to the Internet and may represent "typical" populations of Internet users. Research data should be obtained in samples representative of the population to which the findings are to be generalized and our demographics match the age and gender specifications of the current largest group of Internet

users. A collaborative report released by the Online Publishers Association (OPA) and comScore Networks, Inc. reveals that 18 to 34 year-olds are the most connected age group (Greenspan, 2004). Currently, 77% of the 18-29 year-olds are online representing a predominant group (Fox, 2004). Moreover, it is worth noting that research clearly suggests that communality increases as we age (Goodwin, 1996). Conventional wisdom suggests that, as we get older, we tend to appreciate communal relationships in commercial settings more. This further suggests that, even though our results were obtained from a predominantly student population in their 20s, the effects of Site-Communality on the attitudes and behaviours typically associated with Site-Loyalty may become even more pronounced in older Internet users. Nevertheless, although our subjects are similar in many respects to the predominant group of Internet users, it is not clear as to whether students are also similar to the typical Internet user in other ways. Therefore, generalizations should be made with care. Future studies into Site-Communality should attempt to draw data from non-student Internet user samples in order to enhance generalizability of our results.

12.4 - Future Research Questions

Several questions pertaining to Site-Communality are worth exploring in the future. Some of these include:

- 1) *How beneficial is Site-Communality in fostering Site-Loyalty relative to other Web site design factors already identified in the literature?* A comparative study could be conducted using established measures such as WebQual™ (Loiacono et al. 2002; see also Kim & Stoel, 2004) and others. Given the multidimensionality of both our Site-Communality measure and the WebQual™ instrument, such a study could also allow a finer-grain analysis and comparison at the dimensional level by revealing the most/least important dimensions across both constructs. A longitudinal approach could also yield insights into whether the relative importance of

these dimensions as experience/familiarity with a Web site grows. This leads us to our next question.

- 2) *Is the impact of Site-Communality stronger in the early stages of users' familiarization with a Web site?* Reibstein (2002) notes that what attracts customers to a site is not necessarily the same as what keeps them coming back on a long-term basis. As such, as the customer gains experience with a Web site and familiarizes him/herself with the company, his/her tendency to infer about the kind of relationship (s)he should come to expect from the company based on Site-Communality may diminish. In other words, we suspect that Site-Communality may be relatively more important in the early stages of the formation of Site-Loyalty (i.e., when the customer has little other information to go on about the site or the company). This is because many of the factors identified as important in the literature on Web site design (e.g., reliability, personalization) appear to be 'usage dependent'. It may take several visits to a site for a customer to develop a confident opinion regarding such aspects as site reliability and to experience the full benefits of personalization. By contrast, Site-Communality may be particularly influential at the early stages of familiarization with a Web site, particularly, if highly visual cues to convey Site-Communality. The relational message contained in a picture may be processed relatively quickly by visitors and possibly even subconsciously. Arguably, a picture showing a smiling employee conveys a message which requires very little cognitive elaboration. As such, Site-Communality may be a particularly powerful and important catalyst for positive attitudes, influencing first impressions and intentions to revisit and reuse the Web site.
- 3) *Given that Site-Communality is likely to foster expectations as to the type of relationship customers should expect from the company, what are the consequences of not meeting these communal expectations?* Our research

shows that authenticity/non-instrumentality is an important dimension of Site-Communality. Violating a relationship partner's expectations can have serious detrimental effects on that relationship (i.e., feelings of betrayal). *Expectancy violation theory* (Burgoon, 1993) may be particularly helpful in exploring the potentially negative consequences of companies which do not deliver on their promise of communality.

- 4) *Is Site-Communality as important for customers who already experience communality in the company's traditional environment?* The benefits of *Site-Communality* may be greater for those companies which conduct their business strictly online. Arguably, companies which adopt a 'complementary approach' (i.e., servicing customers via both a traditional brick-and-mortar locations as well as on-line) may opt to rely on more traditional channels (i.e., during face-to-face interaction) to foster communality with their customers. Conversely, for 'pure' internet companies, Site-Communality may be particularly important given that the Web site is likely to be the only means of fashioning customers' view of firms.

- 5) *Are Web sites high in Site-Communality more effective in attracting a particular type of user?* We hypothesized that as the customer's 'Communal-Orientation in Traditional Commercial Environments' increases, so does the impact of Site-Communality on Site-Loyalty. Interestingly, our results showed the opposite effect. We suspect that other moderating factors are worth looking into in order to get a better understanding into the effectiveness of Site-Communality. Self-efficacy (Compeau & Higgins, 1995) may be one such factor worth exploring. Arguably, customers scoring low in self-efficacy with Internet technologies may be less inclined to transact using commercial Web sites. We believe that, as perception of one's self-efficacy decreases, the role of Site-Communality in fostering Site-Loyalty is likely to increase. Web sites

high in Site-Communality (i.e., signal caring, approachability, etc.) are more likely to convey to new users the sense that they will be provided with assistance when needed.

- 6) *What types of visual cues are most effective in conveying Site-Communality?* To address this question, research into the affective/relational messages conveyed by non-verbal cues (Short et al., 1976) such as facial expression, direction of gaze, etc. may be helpful. For instance, research reveals that greater eye contact is associated with friendliness while little eye contact is more often associated with indifference (Argyle & Dean, 1965; Kleck & Nuessle, 1968). Exploring the effects of gender differences may also be worthwhile. Research suggests that the male gender is more often associated with exchange-relationships while the female gender may be more closely associated with nurturance and caring which are characteristic of communal-relationships. This may be explained by the differences in sex-role socialization of young girls when compared to young boys. Traditionally, girls have been encouraged since childhood to be nurturing, responsive and empathic. Conversely, little boys are taught to be achieving, objective, and non-emotional (VanYperen, Buunk, and Schaufeli, 1992), aspects more closely related with exchange-relationships. These findings may help understand why certain images may be more effective in eliciting Site-Communality and may even be helpful in designing anthropomorphic agents (Choi, Miracle, & Biocca, 2001; Walker, Sproull, & Subramani, 1994) which may be engineered so as to more effectively mimic relational human emotions such as caring, warmth, etc.

12.5 - Conclusion

A review of the literature on Web site design factors believed to positively impact on loyalty toward Web sites reveals that researchers have primarily focused on

utilitarian factors such as ease of use and navigation, the quality of information provided on the site, reliability and response time. Research also evidences the importance of site aesthetics and the hedonic value they may offer users. Seemingly, what may be termed as '*affective/relational factors*' have remained relatively unexplored in the literature on Web site design. This is somewhat surprising given that research has clearly established the benefits of factors such as communicating caring, concern, empathy, warmth, etc. in fostering customer loyalty in traditional commercial environments. Surprisingly, many e-commerce researchers conjecturally dismiss such factors as unimportant or irrelevant to Web site design given the self-service nature of these environments and argue that these factors are only *contingently* important in B2C e-commerce, coming into play only when customer/employee communications actually occurs (i.e., during email exchanges or telephone conversations) (e.g., Cox & Dale, 2001; Zeithaml, Parasuraman, & Malhotra, 2001; van Iwaarden, van der Wiele, Ball, & Millen, 2003). Counter to these popular conjectures, our empirical investigation shows that, not only can Web sites be designed to communicate the precepts of what have been termed 'close', 'intimate', or, more specifically, communal-relationships in Social Psychology but also that such communications have a strong, positive and significant impact on the attitudes and behavioural intentions typically associated with Web site loyalty.

References

- Aaker, D. A. (1991). *Managing brand equity*. The Free Press: New York.
- Aaker, D. A., Stayman, D. M. & Hagerty, M. R. (1986). Warmth in advertising: measurement, impact, and sequence effects. *Journal of Consumer Research*, 12, 365–381.
- Abelson, R. P. (1981). Psychological status of the script concept. *American Psychologist*, 36 (7), 715-729.
- Adams, J. S. (1963). Toward an understanding of inequity. *Journal of Abnormal and Social Psychology*, 67, 422-436.
- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental Social Psychology*, Vol. 2, (pp. 267-299). New York: Academic Press.
- Adelman, M. Ahuvia, A. & Goodwin, C. (1994). Beyond Smiling: Social support and service quality. In R. T. Rust & R. L. Oliver (Eds.), *Service quality: New directions in theory and practice*, (pp. 138-172), London: SAGE Publications.
- Agarwal, R. and Karahanna, E. (2000). Time flies when you're having Fun: Cognitive absorption and beliefs about information technology usage. *MIS Quarterly*, 24 (4), 665-694.
- Agarwal, R. & Prasad, J. (1997). The role of innovation characteristics and perceived voluntariness in the acceptance of information technologies. *Decision Sciences*, 28 (3), 557-582.
- Aggarwal, P. (2004). The effects of brand relationship norms on consumer attitudes and behaviors. *Journal of Consumer Research*, 31 (1), 87-102.
- Aiken, L. S. & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Ajzen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour*. Englewood Cliffs, NJ: Prentice-Hall.
- Aaker, D.A., Stayman, D. M., and Hagerty, M., 1986. Warmth in advertising: Measurement, impact, and sequence effects. *Journal of Consumer Research*. 12 (4), 365-377.
- Aladwani, A. M. & Palvia, P. C. (2002). Developing and validating and instrument for measuring user-perceived Web quality. *Information and Management*, 39, 467-476.

- Allan, G. (1989). *Friendship: Developing a sociological perspective*. Toronto: Harvester Wheatsheaf.
- Allen, A. & Higgins, T. (1994). *Higher education: The international student experience*. Leeds: Higher Education Information Services Trust/Universities and Colleges Admissions Service.
- Anastasi, A. (1976). *Instructor's manual psychological testing* (4th ed.).
- Anderson, E. A. & Srinivasan, S. S. (2003). E-satisfaction and e-loyalty: A contingency framework. *Psychology & Marketing*, 20 (2), 123-130.
- Anderson, E. W., & Fornell, C. (1994). A customer satisfaction research prospectus. In R. T. Rust & R. L. Oliver (Eds.), *Service quality: New directions in theory and practice*, (pp. 241-268). Thousand Oaks, CA: Sage Publications.
- Anderson, E. W., Fornell, C., & Lehmann, D. R. (1994). Customer satisfaction, market share, and profitability: Findings from Sweden. *Journal of Marketing*, 58 (July), 53-66.
- Anderson, E. W., Lodish, L. M., & Weitz, B. A. (1987). Resource Allocation Behaviour in Conventional Channels. *Journal of Marketing Research*, 24 (1), 85-97.
- Anderson, E. W. & Sullivan, M. W. (1990). Customer satisfaction and retention across firms, presentation at the *TIMS College of Marketing Special Interest Conference on Services Marketing*, Nashville, TN, September.
- Anderson, E. W. & Sullivan, M. W. (1993). The Antecedents and Consequences of Customer Satisfaction for Firms. *Marketing Science*, 12 (2), 125-143.
- Anderson, E. W. & Weitz, B. (1989). Determinants of continuity in conventional industrial channel dyads. *Marketing Science*, 4 (4), 310-323.
- Anderson, J. C. & Gerbing, D. W. (1982). Some Methods for Respecifying Measurement Models to Obtain Unidimensional Construct Measurement. *Journal of Marketing Research*, 19 (November), 453-460.
- Anderson, J. C. & Gerbing, D. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411-423.
- Anderson, J. C. & Narus, J. A. (1990). A model of distributor firm and manufacturer firm working relationships. *Journal of Marketing*, 54 (1), 42-58.

- Antonides, G., & van Raaij, F. (1998). *Consumer behavior, a European perspective*. John West Sussex: Wiley & Sons Ltd.
- Argyle, M. & Dean, J. (1965). Eye contact, distance and affiliation. *Sociometry*, 28, 289-304.
- Ashforth, B. E. & Humphrey, R. H. (1993). Emotional labor in service roles: The influence of identity. *Academy of Management Review*, 18, 88-115.
- Assael, H. (1992). *Consumer behavior and marketing action* (4th Ed.). Boston, MA: Kent.
- Auh, S. & Johnson, M. D. (2005). Compatibility effects in evaluations of satisfaction and loyalty. *Journal of Economic Psychology*, 26, 35-57
- Ba, S. & Pavlou, P.A. (2002). Evidence of the effect of trust building technology in electronic markets: Price premiums and buyer behavior. *MIS Quarterly*, 26 (3), 243-268.
- Ba, S., Whinston, A.B., & Zhang, H. (1999). Building trust in the electronic market through an economic incentive mechanism. *Proceedings of the Twentieth International Conference on Information Systems, Vol. 20*, (pp. 208-213). Charlotte, North Carolina.
- Baba, M. L. (1999). Dangerous liaisons: Trust, distrust, and information technology in American work organizations. *Human Organizations*, 58 (3), 331-346.
- Babakus, E. & Boiler, G. (1992). An empirical assessment of the SERVQUAL scale. *Journal of Business Research*, 24 (May), 253-268.
- Bagozzi, R. P. (1995). Reflections on relationship marketing in consumer markets. *Journal of the Academy of Marketing Science*, 23 (4), 272-277.
- Bagozzi, R. P. & Edwards, J. R. (1998). A general approach for representing constructs in organizational research. *Organizational Research Methods*, 1, 45-87.
- Bagozzi, R. P. & Heatherton, T. F. (1994). A general approach to representing multifaceted personality constructs: Application to state self-esteem. *Structural Equation Modelling*, 1, 35-67.
- Bagozzi, R. P. & Phillips, L.W. (1982). Representing and testing organizational theories: a holistic construal. *Administrative Science Quarterly*, 27, 459-489.
- Bagozzi, R. P. & Yi, Y. (1990). Assessing method variance in multitrait-multimethod matrices: The case of self-reported affect and perceptions at work. *Journal of Applied Psychology*, 75 (5), 547-560.

- Bakos, J.Y. 1997. Reducing buyer search costs: Implications for electronic marketplaces. *Management Science*, 43 (12), 1676-1692.
- Balasubramanian, S., Konana, P., & Menon, N. M. (2003). Customer satisfaction in virtual environments: A study of online investing. *Management Science*, 49(7), 871-899.
- Baldinger A. & Robinson J. (1996), Brand loyalty: The link between attitude and behavior. *Journal of Advertising Research*, 36 (6), 22-34.
- Bandura, A. (1982). Self-efficacy mechanism in human agency, *American Psychologist*, 37, 122-147.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Barbeau, B. (1985). Predictive and normative expectations in consumer satisfaction: A utilization of adaptation and comparison levels in a unified framework. In H. Hunt & R. Day (Eds.), *Conceptual and empirical contributions to consumer satisfaction and complaining behavior*, (pp. 27-32). Bloomington: Indiana University School of Business.
- Barki, H. & Huff, S. (1985). Change, Attitude to Change, and Decision Support System Success. *Information and Management*, 9 (5), 261-268.
- Barnes, J. G. (1997). Closeness, strength, and satisfaction: Examining the nature of relationships between providers of financial services and their retail customers. *Psychology and Marketing*, 14 (8), 765-790.
- Barnes, J. G., Dunne, P. A., & Glynn, W. J. (2000). Self-service and technology: Unanticipated and unintended effects on customer relationships. In T. A. Swartz and D. Iacobucci (Eds.), *Handbook of Services Marketing and Management*, (pp. 89-102), Sage Publications, Inc.
- Barnes, J. and Vidgen, R. (2000). Information and Interaction Quality: Evaluating Internet Bookshop Web Sites with WebQual, *Electronic Commerce: The End of Beginning: 13th International Bled Electronic Commerce Conference, 2000, Bled, Slovenia*
- Barnes, J. & Vidgen, R. (2001). An Integrative Approach to the Assessment of E-Commerce Quality. Retrieved Dec. 22, 2004, from Centre for Information Management *Working Paper (ref. CIM2001/01)*, University of Bath.
<http://www.WebQual.co.uk/papers/WebQualbookshop.pdf>

- Baron, R. M. & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Batson, C. D. (1987). Prosocial motivation: Is it every truly altruistic? In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology*, Vol. 20, (pp. 65-122), New York Academic Press.
- Batson, C. D. (1993). Communal and exchange relationships: What is the difference? *Personality and Social Psychology Bulletin*, 19 (6), 677-683.
- Batson, C. D. & Oleson, K. C. (1991). Current status of the empathy-altruism hypothesis. In M.S. Clark (Ed.), *Prosocial Behavior*, (pp. 62-85). Newbury Park, CA: Sage Publications.
- Baumeister, R., Bratslavsky, E., Muraven, M., & Tice, D. (1998). Ego depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology*, 74 (5), 1252-1265.
- Baumgartner, H. & Homburg, C. (1996). Applications of structural equation modelling in marketing and consumer research: A review. *International Journal of Research in Marketing*, 13 (2), 139-161.
- Bearden, W. O., Malhotra, M. & Uscátegui, K. H. (1998). Customer intimacy effects and the evaluation of service experiences: Implications for the design of services. *Psychology and Marketing*, 15 (8), 783-809.
- Bearden, W. O., & Neyemeyer, R. G., & Teel, J. E. (1989). Measurement of consumer susceptibility to interpersonal influence. *Journal of Consumer Research*, 15 (4), 473-479.
- Beatty, S. E., Mayer, M. L., Coleman, J. E., Reynolds, K. E., & Lee, J. (1996). Customer-sales associate retail relationships. *Journal of Retailing*, 72 (fall), 223-247.
- Benbasat, I. & Masulis, P. S. (1981). An experiment study of the human/computer interface. *Communications of the ACM*, 24 (11), 752-762.
- Bendapudi, N. & Berry, L.L. (1997). Customers' motivations for maintaining relationship with service providers. *Journal of Retailing*, 73 (1), 15-37.
- Bennett, R., Härtel, C. R. J., & McColl-Kennedy, J.-R. (2005). Experience as a moderator of involvement and satisfaction on brand loyalty in a business-to-business setting 02-314R. *Industrial Marketing Management*, 34, 97-107.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107, 238-246.

- Bentler, P. M. & Chou, C. (1988). Practical issues in structural modelling. In J. S. Long (Ed.), *Common problems/proper solutions: Avoiding error in quantitative research*, (pp. 161-192). Newbury Park, CA:Sage.
- Berry, L. L. (1995). Relationship marketing of services: Growing interest, emerging perspectives. *Journal of the Academy of Marketing Science*, 23 (4), 236-245.
- Berry, L.L., Zeithaml, V.A., & Parasuraman, A. (1990). *Delivering Quality Service: Balancing Customer Perceptions and Expectations*. New York, NY: The Free Press.
- Biel, A. L. (1992). How brand image drives brand equity. *Journal of Advertising Research*, 32 (6), RC6-RC12.
- Bigelow, B. J. (1977). Children's friendship expectations: A cognitive developmental study. *Child Development*, 48, 246-253.
- Biong H. (1993). Satisfaction and Loyalty to Suppliers within the Grocery Trade. *European Journal of Marketing*, 27 (7), 21-38.
- Bitner, M. J. (1990). Evaluating service encounters: The effects of physical surroundings and employee responses. *Journal of Marketing*, 54 (April), 69-82.
- Bitner, M. J., Booms, B. H., Tetreault, M. S. (1990). The service encounter: Diagnosing favorable and unfavourable. *Journal of Marketing*, 54 (January), 71-84.
- Bitner, M. J., Brown, S. W., Meuter, M. L. (2000). Technology infusion in service encounters. *Journal of the Academy of Marketing Science*, 28 (1), 138-149.
- Bhattacharya, C. B. (1997). Is your brand's loyalty too much, too little, or just right?: Explaining deviations in loyalty from the Dirichlet norm. *International Journal of Research in Marketing*, 14, 421-435.
- Bhattacharya, C. B. (1998). When customers are members: Customer retention in paid membership contexts. *Journal of the Academy of Marketing Science*, 26 (1), 31-45.
- Bhattacharjee, A. (2002). Individual trust in online firms: Scale development and initial test. *Journal of Management Information Systems*, 19 (1), 211-241.
- Björk, P. (2000). The value of being on the net - The effects of Web sites of companies on consumer decision making. Retrieved Oct. 21, 2001, from *Swedish School of Economics and Business Administration Working Papers*, <http://www.shh.fi/services/biblio/papers/abstractwp/bjork-wp435.htm>

- Blau, P. (1964). *Exchange and power in social life*. New York: John Wiley and Sons.
- Bloemer, J. M. M. & Kasper, H. D. P. (1994). The Impact of Satisfaction on Brand Loyalty: Urging on Classifying Satisfaction and Brand Loyalty. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 7, 152-160.
- Bloemer, J. & Odekerden-Schroder, G. (2002). Store satisfaction and store loyalty explained by customer- and store-related factors. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 15, 68-81.
- Bohrnstedt, G. W. (1983). *Measurement*. In P. H. Rossi, J. D. Wright, & A. B. Anderson (Eds.), *Handbook of survey research*. San Diego, CA: Academic Press.
- Boles, J. S., Barksdale, H. C. Jr., & Johnson, J. T. (1997). Business relationships: An examination of the effects of buyer-seller relationships on customer retention and willingness to refer and recommend. *Journal of Business and Industrial Marketing*, 12 (3/4), 248-258.
- Bollen K. A. (1989). *Structural equations with latent variables*. New York: John Wiley and Sons.
- Bollen, K. A. (1990). Overall fit in covariance structure models: Two types of sample size effects. *Psychological Bulletin*, 107, 256-259.
- Bolton, R. N. (1995). Linking customer satisfaction to the duration of customer-provider relationships and to revenues. *Unpublished working paper*, Waltham, MA: GTE Laboratories.
- Bolton, R. N. (1998). A dynamic model of the duration of the customer's relationship with a continuous service provider: The role of satisfaction. *Marketing Science*, 17 (1), 45-65.
- Bolton, R. N. & Drew, J. H. (1991). A multistage model of customers' assessments of service quality and value. *Journal of Consumer Research*, 17 (March), 375-384.
- Bolton, R. N. & Drew, J. H. (1992). Mitigating the effect of service encounters. *Marketing Letters*, 3 (1), 57-79.
- Bolton, R. N. & Lemmon, K. N. (1999). A dynamic model of customers' usage of services: Usage as an antecedent and consequence of satisfaction, *Journal of Marketing Research*, 36 (2), 171-186.

- Boomsma, A. & Hoogland, J. J. (2001). The robustness of LISREL modeling revisited. In R. Cudeck, S. du Toit and D. Sörbom (Eds.), *Structural equation modeling: Present and future*, (pp. 139-168). Scientific Software International, Chicago.
- Boulding, W., Karla, A., Staelin, R., & Zeithaml, V. A. (1993). A dynamic process model of service quality: From expectations to behavioral intentions. *Journal of Marketing*, 30, 7-27.
- Bowen, D. E. & Schneider, B. (1985). Boundary-spanning role employees and the service encounter: Some guidelines for management and research. In John A. Czepiel, Michael R. Solomon & Carol F. Surprenant (Eds.), *The service encounter: Managing employee/customer interaction in service businesses*, (pp. 127-147). D.C. Heath & Company.
- Bowen, J.T. & Chen, S.-L. (2001). The relationship between customer loyalty and customer satisfaction. *International Journal of Contemporary, Hospitality Management*, 13 (5), 213–217.
- Bowen, J. T. & Shoemaker, S. (1998). Loyalty: A strategic commitment, *Cornell Hotel and Restaurant Administration Quarterly*, February, 12-25.
- Brain, R. (1976). *Friends and Lovers*. New York: New York.
- Brandt, D. R. (1988). How service marketers can identify value-enhancing service, *The Journal of Services Marketing*, 2 (3), 35-42.
- Brown, W. J. (1998). Retaining clients is as essential as getting new ones. *Capital District Business Review*, 25 (10), 21.
- Brown, J. D. (2001). What is an eigenvalue? *Shiken: JALT Testing & Evaluation SIG Newsletter* 5 (1). Retrieved July 3, 2005 from http://www.jalt.org/test/bro_10.htm
- Browne, M. W. (1984). Asymptotically distribution-free methods for the analysis of covariance structures. *British Journal of Mathematical and Statistical Psychology*, 37, 62-83.
- Browne, M. W. & Cudek, R. (1993). Alternative ways of assessing model fit. In K. Bollen & J.S. Long (Eds.), *Testing structural equation models*, (pp. 445-455). Newbury Park: CA: Sage.
- Bryant, F. B., & Yarnold, P. R. (1995). Principal-components analysis and exploratory and confirmatory factor analysis. In L. G. Grimm & P. R. Yarnold (Eds.), *Reading and understanding multivariate statistics*, (pp. 99-136). Washington: American Psychological Association.

- Bucher, K., Sparks, B., & O'Callaghan, F. (2001). Evaluative and relational influences on service loyalty. *International Journal of Service Industry Management*, 12 (4), 310-327.
- Bukowski, W. M., Newcomb, A. F., & Hartup, W. W. (1996). Friendship and its significance in childhood and adolescence: Introduction and comment. In W. Bukowski & A. Newcomb (Eds.), *The company they keep: Friendships in childhood and adolescence*, (pp. 1-15). New York: Cambridge University Press.
- Bukowski, W. M. (2001). Friendship and the worlds of childhood. In D. W. Nangle, & C. A. Erdley (Eds.), *The role of friendship in psychological adjustment: New directions for child and adolescent development*, Vol. 91, (pp. 93-106). San Francisco: Jossey-Bass.
- Burgoon, J. K. (1993). Interpersonal expectations, expectancy violations, and emotional communication. *Journal of Language and Social Psychology*, 12, 30-48.
- Buttle, F. (1996). Relationship marketing. In Francis Buttle (Ed.), *Relationship marketing: Theory and practice*, (pp. 1-16). London, England: Paul Chapman Publishing limited.
- Buunk, B. P., Doosje, B. J., Liesbeth, G. J. M. J., & Hopstaken, E. M. (1993). Perceived Reciprocity, Social Support, and Stree at Work: The role of exchange and communal orientation, *Journal of Personality and Social Psychology*, 65 (4), 801-811.
- Buunk, B. P., & VanYperen, N. W. (1991). Referential comparisons, relational comparisons, and exchange orientation: Their relation to marital satisfaction. *Personality and Social Psychology Bulletin*, 17, 709-717.
- Cadogan, J. W. & Foster, B. D. (1999). Developing customer loyalty: The role of salesperson and firm-specific relationships. Retrieved Oct. 30, 2001, from *Aston Business School Research Papers*, <http://research.abs.aston.ac.uk/wpaper/9915.pdf>
- Cann, C. W. & Sumrall, D. A. (1997). Services relationship marketing: Social bonding in the service encounter. In *Proceedings of the Annual Meeting of the Southwestern Marketing Association*, (pp. 33-38), New Orleans, Louisiana.
- Carmines, E.G. & Zeller, R. A. (1979). *Reliability and validity assessment*, sage publications series. Number 07-017. Newbury Park, CA: Sage Publications, Inc.
- Cassell, J. & Bickmore, T. (2000). External manifestations of trustworthiness in the interface. *Communications of the ACM*, 43 (12), 50-56.

- Cattell, R. B. (1973). *Personality and mood by questionnaire*. Jossey-Bass, London.
- Cattell, R. B. (1978). *The scientific use of factor analysis in behavioral and life sciences*. New York: Plenum Press.
- Chadwick-Jones, J.K. (1976). *Social exchange theory: Its structure and influence in Social Psychology*. N.Y.: Academic Press.
- Champness, B. G. (1972). Feelings towards media: Media in group situations, University college, London: Communications studies group (Article No. E/72160/CH).
- Chaudhuri, A. & Holbrook, M. (2001). The chain of effects from brand trust to brand performance: The role of brand loyalty. *Journal of Marketing*, 65 (2), 81-93.
- Chebat, J.-C. & Slusarczyk, W. (2005). How emotions mediate the effects of perceived justice on loyalty in service recovery situations: an empirical study. *Journal of Business Research*, 58, 664-673.
- Chen, K. & Yen, D. C. (2004). Improving the quality of online presence through interactivity. *Information & Management*, 42, 217-226.
- Chen, Q. & Wells, W. D. (1999). Attitude toward the site. *Journal of Advertising Research*, 39 (5), 27-37.
- Chen, S. C. & Dhillon, G. S. (2003). Interpreting dimensions of consumer trust in e-commerce. *Information Technology and Management*, 4 (2-3), 303-318.
- Chen, Z. & Dubinsky, A. J. (2003). A conceptual model of perceived customer value in e-commerce: A preliminary investigation. *Psychology & Marketing*, 20 (4), 323-347.
- Chen, L., Gillenson, M. L., & Sherrell, D. L. (2002). Enticing online consumers: A technology acceptance perspective. *Information & Management*, 39, 705 - 719.
- Chiou, J.-S. (2004). The antecedents of consumers' loyalty toward Internet service providers. *Information & Management*, 41, 685-695.
- Chiu, H.-C., Hsieh, Y.-C., Li, Y.-C., & Lee, M. (in press). Relationship marketing and consumer switching behavior. *Journal of Business Research*
- Christie, B. (1974). Semantic differential judgements of communications media and other concepts: I. Differences between the media. *Unpublished communications studies group paper no. E/74120/CR*.
- Choi, Y. K., Miracle, G. E., & Biocca, F. (2001). The effects of anthropomorphic agents on advertising effectiveness and the mediating role of presence, *Journal of*

Interactive Advertising, 2 (1). Retrieved Dec. 16, 2004 from <http://www.jiad.org/vol2/no1/choi/>

Chong E., Kennedy, R. & Rungie C. (1997) The difference between satisfaction and service quality, *Proceedings of the 26th annual EMAC conference*, (pp. 257-269), Warwick, U.K.

Chow, S. & Holden, R. (1997). Toward an understanding of loyalty: The moderating role of trust. *Journal of Managerial Issues*, 9 (3), 275-298.

Chung, J. & Tan, F. (2004). Antecedents of perceived playfulness: An exploratory study on user acceptance of general information-searching Websites. *Information & Management*, 41 (7), 868-881.

Churchill, Gilbert A. Jr. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16 (February), 64-75.

Clark, M. S. & Mills, J. (1979). Interpersonal attraction in communal and exchange relationships. *Journal of Personality and Social Psychology*, 37, 12-24.

Clark, M. S. (1983). Reactions to aid in communal and exchange relationships. In J. D. Fisher, A. Nadler, & B. M. DePaulo (Eds.), *New directions in helping*, Vol. 1, pp. 281-304). San Diego: Academic Press.

Clark, M. S. (1984). Record keeping in two types of relationships. *Journal of Personality and Social Psychology*, 47, 539-557.

Clark, M. S. (1986). Evidence for the effectiveness of manipulations of communal and exchange relationships. *Personality and Social Psychology Bulletin*, 12 (4), 414-425.

Clark, M. S., Mills, J. & Powell, M. C. (1986). Keeping track of needs in communal and exchange relationships. *Journal of Personality and Social Psychology*, 51 (2), 333-338.

Clark, M. S. & Grote, N. K. (1998). Why aren't indices of relationship costs always negatively related to indices of relationship quality? *Personality and Social Psychological Review*, 2 (1), 2-17.

Clark, M. S. & Mills, J. (1993). The difference between communal and exchange relationships. *Personality and Social Psychology Bulletin*, 19, 684-691.

Clark, M. S., Mills, J., & Corcoran, D. M. (1989). Keeping track of needs and inputs of friends and strangers. *Personality and Social Psychology Bulletin*, 15 (4), 553-542.

- Clark, M. S., Mills, J. & Powell, M. C. (1986). Keeping Track of Needs and Inputs of Friends and Strangers. *Personality and Social Psychology Bulletin*, 15, 533-542.
- Clark, M. S., Ouellette, R., Powell, M., & Milberg, S. (1987). Recipient's mood, relationship types, and helping. *Journal of Personality and Social Psychology*, 53, 94-103.
- Clark, M. S., & Taraban, C. (1991). Reactions to and willingness to express emotion in communal and exchange relationships. *Journal of Experimental Social Psychology*, 27, 324-336.
- Cliff, N. (1983). Some cautions concerning the application of causal modeling methods. *Multivariate Behavioral Research*, 18, 115-126.
- Cochran, R. M. (2000). ATM market update – the new millennium. *Business Communications Review*, 30 (9), 52-58.
- Cohen, S., Sherrod, D. R. & Clark, M. S. (1986). Social skills and the stress-protective role of social support. *Journal of Personality and Social Psychology*, 50 (5), 963-973.
- Collins, J. M. & Gleaves, D. H. (1998). Race, job applicants, and the five-factor model of personality: Implications for black psychology, industrial/organizational psychology, and the five-factor theory. *Journal of Applied Psychology*, 83, 531-544.
- Compeau, D., & Higgins, C. (1995). Computer self-efficacy: Development of a measure and initial test. *MIS Quarterly*, 19, 189-211.
- Coner, A. (2003). Personalization and customization in financial portals. *Journal of American Academy of Business*, 2 (2), 498-505.
- Constantinides, E. (2004). Influencing the online consumer's behaviour: The Web experience. *Internet Research*, 14 (2), 111-126.
- Cortina, J. M., Chen, G. & Dunlap, W. P. (2001). Testing interaction effects in LISREL: Examination and illustration of available procedures. *Organizational Research Methods*, 4 (4), 324-360.
- Cox, B. (1999). Security, privacy remain top consumer concerns. Retrieved Apr. 9, 1999, from *InternetNews.com*, http://www.internetnews.com/ec-news/article.php/4_95031
- Cox, J. & Dale, B. G. (2001). Service quality and e-commerce: An exploratory analysis. *Managing Service Quality*, 11 (2), 121-132.

Cox, J. & Dale, B. G. (2002). Key quality factors in Web site design and use: an examination. *International Journal of Quality and Reliability Management*, 19 (7), 862–888.

Coyne, K. (1989). Beyond Service Fads--Meaningful Strategies for the Real World. *Sloan Management Review*, 30 (Summer), 69-76.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297-334.

Cronbach, L. J. & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52, 281-302.

Cronin, J. J. & Taylor, S. A. (1992). Measuring service quality: A reexamination and extension. *Journal of Marketing*, 56 (July), 55-68.

Cronin, J. J. & Taylor, S. A. (1994) SERVEPERF versus SERVQUAL: Reconciling performance-based and perceptions-minus-expectations measurement of service quality. *Journal of Marketing*, 58, 125-131.

Crosby, L. A., Evans, K.R. & Cowles, D. (1990). Relationship quality in services selling: An interpersonal influence perspective. *Journal of Marketing*, 54 (July), 68-81.

Crosby, L. A. & Stephens, N. (1987). Effects of relationship marketing on satisfaction, retention, ad prices in the life insurance industry. *Journal of Marketing Research*, 24 (Nov), 404-411.

Csikszentmihalyi, M. (1990). *Flow*. New York: Harper & Row.

Culnan, M.J., & Markus, M.L. (1987). Information technologies. In F.M. Jablin, L.L. Putnam, K.H. Robers, & L.W. Porter (Eds.), *Handbook of organizational communication: An interdisciplinary perspective*, (pp. 420-443), Newberry Park, CA: Sage.

Cunningham, S. M. (1966). Brand loyalty – What, where, how much?, *Harvard Business Review*, 34, 116-128.

Curran, P.J., West, S.G., & Finch, J.F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, 1, 16–29.

Czepiel, J. A. (1990). Service encounters and service relationships: Implications for research. *Journal of Business Research*, 20 (1), 13-15.

Czepiel, J. A. & Gilmore, R. (1987). Exploring the concept of loyalty in services. In J. A. Czepiel, C. A. Congram, & J. Shanahan (Eds.) *The services challenge*:

Integrating for competitive advantage, (pp. 91-94), Chicago: American Marketing Association.

Czepiel, J.A., Solomon, M.R., Surprenant, C.F., & Gutman, E.G. (1985). Service encounters: An overview. In J.A. Czepiel, M.R. Solomon, & C.F. Surprenant, (Eds.), *The service encounter: Managing employee/customer interaction in service businesses*, (pp. 3-15), Lexington, MA.

Dabholkar, P. A. (1990). How to improve perceived service quality by increasing customer participation. In B. J. Dunlap (Ed.), *Developments in marketing science*, Cullowhee, (pp. 483-487), NC: Academy of Marketing Science.

Dabholkar, P.A. (1996). Consumer evaluations of new technology-based self-service options: An investigation of alternative models of service quality. *International Journal of Research in Marketing*, 13, 29-51.

Dall'Olmo, R. F., Ehrenberg, A.S.C., Castleberry, S.B., Barwise, T.P., & Barnard, N.R. (1997). The variability of attitudinal repeat-rates, *International Journal of Research in Marketing*, 14 (5), 437-450.

Davis, F. (1986). A technology acceptance model for empirically testing new end-user information systems: Theory and results. Doctoral Dissertation, Sloan School of Management, MIT.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13 (3), 319-339.

Davis, F. D., Bagozzi, R., & Warshaw, P. (1989) User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35 (8), 982-1003.

Davis, K. E. & Todd, M. J. (1982). Friendship and Love Relationships. In K.E. Davis & T.O. Mitchell (Eds.), *Advances in descriptive psychology*, (pp. 79-122). Greenwich, Cf: JAI Press.

Day, G.S. (1969). A two-dimensional concept of brand loyalty, *Journal of Advertising Research*, 9 (3), 29-35.

De Wulf, K., Odekerben-Schroder, G., & Iacobucci, D. (2001). Investments in consumer relationships: A cross-country and cross-industry exploration. *Journal of Marketing*, 65 (4), 33-50.

de Ruyter, K, Wetzels, M, & Bloemer, J. (1998). On the relationship between perceived Service Quality, Service Loyalty and Switching Costs. *International Journal of Service Industry Management*, 9 (5), 436-453.

- de Ryuter, K., Wetzels, M., Lemmink, J., & Mattsson, J. (1997): Carry-over effects in the formation of satisfaction: The role of value in a hotel service delivery process. *Advances in Services Marketing and Management*, 6, 61-77.
- de Ruyter, K. & Wetzels, M. (2000). The impact of perceived listening behavior in voice-to-voice service encounters. *Journal of Service Research*, 2 (3), 276-284
- DeCarlo, L. T. (1997). On the meaning and use of kurtosis. *Psychological Methods*, 2, 292-307.
- Dekimpe, M. G., Steenkamp, J. B., Mellens, E. M., & Abeelee, P. V. (1997). Decline and variability in brand loyalty. *International Journal of Research in Marketing*, 14, 405-420.
- Delgado-Ballester, E. & Munuera-Aleman, J.L., 2001. Brand trust in the context of consumer loyalty. *European Journal of Marketing*, 35 (11/12), 1238-1258.
- DeLone W.H. & McLean E.R. (1992). Information system success: The quest for the dependent variable. *Information Systems Research*, 3 (1), 60-95.
- Dick, A. S., & Basu, K. (1994). Customer loyalty: Toward an integrated conceptual framework. *Journal of the Academy of Marketing Science*, 22, 99-113.
- Dirks, K. T., & Ferrin, D. L. (2001). The role of trust in organizational settings. *Organization Science*, 12, 450-467.
- Divett, M., Crittenden, N. & Henderson, R. (2003). Actively influencing consumer loyalty. *The Journal of Consumer Marketing*, 20 (2/3), 109-127.
- Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research*, 28 (November), 307-19.
- Doll, W. J., Xia, W. & Torkzadeh, G. (1994). A confirmatory factor analysis of the end-user computing satisfaction instrument. *MIS Quarterly*, 18 (4), 453-461.
- Doney, P. M. & Cannon, J. P. (1997). An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing*, 61, 35-51
- Doney, P. M., Cannon, J. P., & Mullen, M. R. (1998). Understanding the influence of national culture on the development of trust. *Academy of Management Review*, 23 (3), 601-620.
- Donovan, R. J. & Rossiter, J. R. (1982). Store atmosphere: An environmental psychology approach. *Journal of Retailing*, 58 (Spring), 35-56.

- Douglas, A. (1957). The peaceful settlement of industrial and intergroup disputes. *Journal of Conflict Resolution*, 1, 69-81.
- Dubé, L. & Maute, M. F. (1998). Defensive strategies for managing satisfaction and loyalty in the service industry. *Psychology and Marketing*, 15 (8), 775-791.
- Dubois, B. & Laurent, G. (1999). A situation approach to brand loyalty, *Advances in Consumer Research*, 26, 657-663.
- Duffy, J. A. M. & Ketchand, A. A. (1998). Examining the role of service quality in overall service satisfaction. *Journal of Managerial Issues*, 10 (2), 240-255.
- Dwyer, F. R., Schurr, P. H., & Oh, S. (1987). Developing buyer-seller relationships, *Journal of Marketing*, 51 (April), 11-27.
- Dyson, P., Farr, A., & Hollis, N. S. (1996). Understanding measuring, and using brand equity, *Journal of Advertising Research*, 36 (6), 9-21.
- Eastlick, M. A. (1996). Consumer intention to adopt interactive teleshopping, *MSI Working Paper, Report No. 96-113* (August), Cambridge, MA: Marketing Science Institute.
- Eighmey, J. (1997). Profiling user responses to commercial Web sites. *Journal of Advertising Research*, 37 (3), 59-67.
- Eighmey, J. & McCord, L. (1998), Adding Value in the Information Age: Uses and Gratifications of Sites on the World Wide Web, *Journal of Business Research* 41, 187-194.
- Edwards, J. R. (2001). Multidimensional constructs in organizational research: An integrative analytical framework. *Organizational Research Methods*, 4, 144-192.
- Egger, F. N. (2003). *From interactions to transactions: Designing the trust experience for business-to-consumer electronic commerce*. PhD Thesis, Eindhoven University of Technology (The Netherlands). ISBN 90-386-1778-X. Retrieved Dec 22, 2004, from <http://www.ecommuse.com/egger2003trust.pdf>
- Ehrenberg, A.S.C., 2000. Repeat buying—facts, theory and applications. *Journal of Empirical Generalisations in Marketing Science*, 5, 392-770.
- Engel, J. F., Kollat, D., & Blackwell, R. D. (1982). *Consumer behaviour*. New York: Dryden Press
- Ennew, C. T. & Binks, M. (1996). The impact of service quality and service characteristics on customer retention: Small businesses and their banks in the UK, *British Journal of Management*, 7 (3), 219-230.

- Ernst & Young (2001). *E-Security and privacy: The role of Web seals on the internet*. Retrieved Apr. 16, 2002, from [http://www.ey.com/global/vault.nsf/international/eSecurityandPrivacy/\\$file/eSecurity&Privacylowreslocked.pdf](http://www.ey.com/global/vault.nsf/international/eSecurityandPrivacy/$file/eSecurity&Privacylowreslocked.pdf).
- Evrard, Y. & Aurier, P. (1994). The influence of emotions on satisfaction with movie consumption. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 7, 119-125.
- Featherman, M. S. & Pavlou, P. A. (2002). Predicting e-services adoption: A perceived risk facets perspective. In *Proceedings of the 2002 Americas Conference in Information Systems*. (pp. 1034-1046), Dallas, TX: Association for Information Systems.
- Fishbein, M. & Ajzen, I. (1975). *Attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley
- Fitzsimons, G. M. & Bargh, J. A. (2003). Thinking of you: Nonconscious pursuit of interpersonal goals associated with relationship partners. *Journal of Personality and Social Psychology*, 84 (1), 148-164.
- Fletcher, G. J. O., Simpson, J. A., Thomas, G., & Giles, L. (1999). Ideals in intimate relationships. *Journal of Personality and Social Psychology*, 76, 72-89.
- Floyd, F. J. & Widaman, K. F. (1995). Factor analysis in the development and refinement of clinical assessment instruments. *Psychological Assessment*, 7, 286-299.
- Ford, J. K., MacCallum, R. C., & Tait, M. (1986). The application of exploratory factor analysis in applied psychology: A critical review and analysis. *Personnel Psychology*, 39, 291-314.
- Forman, A. M. & Srivam, V. (1991). The depersonalization of retailing: Its impact on the "lonely" consumer. *Journal of Retailing*, 67 (2), 226-243.
- Fornell, C., Johnson, M. D., Anderson, E. W., Cha, J., & Bryant, B. E. (1996). The American customer satisfaction index: Nature, purpose, and findings. *Journal of Marketing*, 60, 7-18.
- Fornell, C. & Larcker, D. F. (1981). Evaluating structural equation models with unobserved variables and measurement error. *Journal of Marketing Research*, 18 (1), 39-50.
- Fornell, C. & Wernerfelt, B. (1987). Defensive marketing strategy by customer complaint management: A theoretical analysis. *Journal of Marketing Research*, 24 (November), 337-346.

- Fournier, S. (1996). The Consumer and the Brand: An Understanding within the Framework of Personal Relationships, *Working Paper 97-024*, Harvard Business School
- Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of Consumer Research*, 24 (March), 343-373.
- Fournier, S., Dobscha, S. & Mick, D. G. (1998). Preventing the premature death of relationship marketing. *Harvard Business Review*, January-February, 42-51.
- Fournier, S. & Yao, J. L. (1997). Reviving brand loyalty: A reconceptualization within the framework of consumer-brand relationships. *International Journal of Research in Marketing*, 14, 451-472.
- Fox, S. (2004). *Older Americans and the Internet*. Retrieved July 1, 2005 from Pew Internet & American Life (#202-296-0019) <http://www.pewinternet.org>
- Frijda, N. H. (1986). *The emotions*. New York: Cambridge University Press.
- Friedman, B., Kahn, P.H. & Howe, D.C. (2000). Trust online. *Communications of the ACM*, 43 (12), 34-40.
- Fuerst, W. L. & Cheney, P. H. (1982). Factors affecting the perceived utilization of computer-based decision support systems. *Decision Sciences*, 13 (4), 554-569.
- Gallarza, M. G. & Saura, I. G. (in press). Value dimensions, perceived value, satisfaction and loyalty: An investigation of university students' travel behaviour. *Tourism Management*.
- Galletta, D. F. & Lederer, A. L. (1989). Some cautions on the measurement of user information satisfaction. *Decision Sciences*, 20 (3), 419-438.
- Ganesan, S. (1994). Determinants of long-term orientation in buyer-seller relationships. *Journal of Marketing*, 58, 1-19.
- Ganesan, S. & Hess, R. (1997). Dimensions and levels of trust: Implications for commitment to a relationship. *Marketing Letters*, 8, 439-448.
- Garbarino, E. & Johnson, M. S. (1999). The different roles of satisfaction, trust, and commitment in customer relationships. *Journal of Marketing*, 63 (April), 70-87.
- Gardner, M. P. (1985). Mood states and consumer behavior: A critical review. *Journal of Consumer Research*, 12, 281-300.
- Gassenheimer, J. B., Davis, J. C. & Dahlstrom, R. (1998). Is dependent what we want to be? Effects of incongruency. *Journal of Retailing*, 74 (2), 247-271.

- Gefen, D. (2000). E-commerce: The role of familiarity and trust. *Omega*, 28 (6), 725-737.
- Gefen, D. & DeVine, P. (2001). Customer loyalty to an online store: The meaning of online service quality. In *Proceedings of the International Conference on Information Systems*, (pp. 613-617). New Orleans, Louisiana.
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrative model. *MIS Quarterly*, 27 (1), 51-90
- Gefen, D. & Straub, D. W. (2000). The relative importance of perceived ease-of-use in IS adoption: A study of e-commerce adoption. *Journal of the Association for Information Systems*, 1 (8), 1-28.
- Gefen, D. & Straub, D. W. (2002). Managing user trust in e-services. *e-Service Journal*, 2, 1-20.
- George, J. M. (1991). State or trait: Effects of positive mood on prosocial behaviors at work. *Journal of Applied Psychology*, 76 (2), 299-307.
- Gerbing, D. W & Anderson, J. C. (1988). An updated paradigm for scale development incorporating unidimensionality and its assessment. *Journal of Marketing Research*, 25 (May), 186-192.
- Gerbing, D. W. & Anderson, J. C. (1993). Monte carlo evaluations of goodness-of-fit indices for structural equation models. In K. A. Bollen, and J. S. Long (Eds.), *Testing structural equation models*. Newbury Park, CA: Sage.
- Gerbing, D. W., Hamilton, J. G., & Freeman, E. B. (1994). A large-scale second-order structural equation model of the influence of management participation on organizational planning benefits. *Journal of Management*, 20, 859-885.
- Geyskens, I. & Steenkamp, J-B. (2000). Economic and social satisfaction: Measurement and relevance to marketing channel relationships. *Journal of Retailing*, 76 (1), 11-32.
- Geyskens, I., Steenkamp, J-B., & Kumar N. (1999). A meta-analysis of satisfaction in marketing channel relationships, *Journal of Marketing Research*, 36, 223-238.
- Gilly, M. C. & Gelb, B. D. (1982). Post-purchase customer processes and the complaining customer. *Journal of Customer Research*, 9 (December), 323-328.
- Globerson, S. & Maggard, M. J. (1990). A Conceptual model of self-service. *International Journal of Operations and Production Management*, 11 (4), 33-43.

- Goffman, E. (1974). *Frame analysis: an essay on the organization of experience*. Cambridge: Harvard University Press.
- Goodwin, C. (1996). Communalinity as a dimension of service relationships, *Journal of Consumer Psychology*, 5 (4), 387-415.
- Goodwin, C & Gremler, D. D. (1996). Friendship over the counter: How social aspects of service encounters influence consumer service loyalty. In Teresa A. Swartz, David E. Bowen, and Stephen W. Brown (Eds.), *Advances in services marketing and management*, Vol. 5, (pp. 247-82), Greenwich, CT: JAI Press.
- Gordon, M. E., McKeage, K & Fox, M. A. (1998). Relationship marketing effectiveness: The role of involvement. *Psychology and Marketing*, 15 (5), 443-459.
- Gorusch, R. L. (1983). *Factor analysis* (2nd Ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Gould-Williams, J. (1999). The impact of employee performance cues on guest loyalty, perceived value and service quality. *The Services Industries Journal*, 19 (3), 97-118.
- Grandey, A. A. (2003). Managing emotions in the workplace. *Personnel Psychology*, 56 (2), 563-577.
- Greco, A. J & Fields, D. M. (1991). Profiling early triers of service innovations: A look at interactive home video ordering services, *The Journal of Business and Industrial Marketing*, 5 (3), 19-26.
- Greenspan, R. (2004). *Report: 18 to 34 year-olds are well-connected*. Retrieved July 1, 2005 from <http://www.clickz.com/news/article.php/3332751>
- Gremler, D. D. (1995). The effect of satisfaction, switching costs, and interpersonal bonds on service loyalty, *Unpublished doctoral dissertation*, Arizona State University, Tucson, Arizona.
- Gremler, D. D & Gwinner, K. P. (2000). Customer-employee rapport in service relationships. *Journal of Service Research*, 3 (August), 37-50.
- Griffin, J. (1996). The Internet's expanding role in building customer loyalty. *Direct Marketing*, November, 50-53.
- Grönroos, C. (1982). *Strategic management and marketing in the service sector*. Helsinki: Swedish School of Economics and Business Administration.

- Grönroos, C. (1983). *Strategic management and marketing in the service sector*. Kent, UK: Chartwell-Bratt Ltd. Report no. 83-104, Marketing Science Institute, Cambridge, Massachusetts.
- Grönroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, 18 (4), 36-44.
- Grönroos, C. (1990). Relationship approach to marketing in service contexts: The marketing and organizational behavior interface. *Journal of Business Research*, 20, 3-11.
- Grönroos, C. (1991). The marketing strategy continuum: A marketing concept for the 1990s. *Marketing Decision*, 29(1), 7-13.
- Grönroos, C. (1994). From marketing mix to relationship marketing: Toward a paradigm shift in marketing, *Management Decision*, 32, 4-20.
- Grönroos, C. (1996). Relationship marketing logic, *ASIA-Australian Marketing Journal*, 4 (1), 7-18.
- Gruman, G. (1999). E-Commerce blurs lines of integrity, but they still exist. *Computerworld*, 33 (8), 37.
- Gummesson, E. (1987). The new marketing-developing long-term interactive relationship. *Long Range Planning*, 20 (4), 10-20.
- Guadagnoli, E., & Velicer, W. F. (1988). The relation of sample size to the stability of component patterns. *Psychological Bulletin*, 103, 265-275.
- Gutek, B. (2000). Service relationships, pseudo-relationships, and encounters. In T. A. Swartz and D. Iacobucci (Eds.), *Handbook of services marketing and management*, (pp. 371-379), Sage Publications.
- Gwynner, K., Gremler, D. D., & Bitner, M. J. (1998). Relational benefits in service industries: The customer's perspective. *Journal of the Academy of Marketing Science*, 26 (spring), 101-114.
- Ha, L. & James, E. L. (1998). Interactivity reexamined: A baseline analysis of early business Web sites. *Journal of Broadcasting & Electronic Media*, 42 (3), 457-474.
- Habing, B. (2003). *Exploratory factor analysis*. University of South Carolina. Retrieved July 3, 2005 from <http://www.stat.sc.edu/~habing/courses/530EFA.pdf>
- Hackett, G. P. (1992). Investment in technology: The service sector sinkhole? *Sloan Management Review*, 34 (Winter), 97-103.

- Hager, L. and Elliot, B. (2001). Web quality tool can raise ROI on contact center investments. *Gartner First Take*, November 15, 2001.
- Hair, J. F., Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis with readings* (5th Ed.). Englewood Cliffs, NJ: Prentice Hall.
- Hallberg, G. (2004). Is your loyalty programme really building loyalty? Why increasing emotional attachment, not just repeat buying, is key to maximizing programme success. *Journal of Targeting, Measurement and Analysis for Marketing*, 12 (3), 231-242.
- Hancock, G. R. and Nevitt, J. (1999) Bootstrapping and the identification of exogenous latent variables within structural equation models. *Structural Equation Modelling*, 6, 394-399.
- Harrison-Walker, L. J. (2001). E-complaining: A content analysis of an internet complaint forum. *Journal of Services Marketing*, 15 (5), 397-412.
- Hartwick, J. & Barki, H. (1994). Explaining the role of user participation in information system use. *Management Science*, 40 (4), 440-465.
- Hassan, S. & Li, F. (2005). Evaluating the usability and content usefulness of Web sites: A benchmarking approach. *Journal of Electronic Commerce in Organizations*, 3 (2), 46-67.
- Hatcher, L. (1994). *A step-by-step approach to using the SAS system for factor analysis and structural equation modeling*. Cary, NC: SAS Institute. Focus on the CALIS procedure.
- Hatfield, E., Traupmann, J., Sprecher, S., Utne, M., & Hay, J. (1985). Equity and intimate relations: Recent research. In W. Ickes (Ed.), *Compatible and incompatible relationships*, (pp. 91-117). New York: Springer-Verlag.
- Hatfield, E., Cacioppo, J., & Rapson, R. L. (1993). *Emotional contagion*. New York: Cambridge University Press.
- Havlena, W.J. & Holbrook, M.B. (1986). The varieties of consumption experience: Comparing two typologies of emotion in consumer behaviour. *Journal of Consumer Research*, 13, 394-404.
- Hays, R. B. (1985). A longitudinal study of friendship development. *Journal of Personality and Social Psychology*, 48, 909-924.
- Hays, R. B. (1988). *Friendship*, in Handbook of Personal Relationships: Theory, Research, and Interventions, S. W. Duck (ed.), New York: John Wiley, 391-408.

- Haythornthwaite, C., Kazmer, M. M., Robins, J. & Shoemaker, S. (2000). Community development among distance learners: Temporal and technological dimensions. *Journal of Computer-Mediated Communication*, 6(1). Retrieved May 3, 2002, from <http://www.ascusc.org/jcmc/vol6/issue1/haythornthwaite.html>
- Haythornthwaite, C & Wellman, B. (1998). Work, friendship and media use for information exchange in a networked organization. *Journal of the American Society for Information Science*, 46 (12), 1101-1114.
- Helmsley, S. (2000). Keeping custom, *Marketing Week (UK)*, 23 (7), 39-42.
- Hennig-Thurau, T., Gwinner, K. P., & Gremler, D. D. (2002). Understanding relationship marketing outcomes: An integration of relational benefits and relationship quality, *Journal of Service Research*, 4 (3), 230-247.
- Hennig-Thurau, T & Klee, A. (1997). The impact of customer satisfaction and relationship quality on customer retention: A critical reassessment and model development. *Psychology and Marketing*, 14 (8), 737-764.
- Hershberger, S. L., Corneal, S. E & Molenaar, P. C. M. (1994). Dynamic factor analysis: An application to emotional response patterns underlying daughter/father and stepdaughter/stepfather relationships. *Structural Equation Modelling*, 2, 31-52.
- Heskett, J. L., Sasser, W. E. Jr., & Hart, C. W. L. (1990). *Service breakthroughs: Changing the rules of the game*, New York: The Free Press.
- Hinkin, T. (1995). A review of scale development practices in the study of organizations. *Journal of Management*, 21 (5), 967-988.
- Hinkin, T. R. & Schriesheim, C. A. (1989). Development and application of new scales to measure the french and raven (1959) bases of social power. *Journal of Applied Psychology*, 74 (4), 561-567.
- Hoelter, J.W. (1983). The analysis of covariance structures: Goodness-of-fit indices. *Sociological Methods and Research*, 11, 325-344.
- Hof, R.D. & Hamm, S. (2002). How e-biz rose, fell, and will rise anew. *BusinessWeek*, 13 May, 64-72.
- Hoffman, D. L. & Novak, T. P. (1996). Marketing in hypermedia computer-mediated environments: Conceptual foundations. *Journal of Marketing*, 60(July), 50-68.
- Hoffman, D. L., Novak, T. P., & Duhachek, A. (2002). The influence of goal-directed and experiential activities on online flow experiences. *Journal of Consumer Psychology*, 13 (1/2), 3-16.

- Hoffman, D.L., Novak, T.P., & Peralta, M. (1999). Building consumer trust online. *Communications of the ACM*, 42 (4), 80-85.
- Holbrook, M. B. (1978). Beyond attitude structure: Toward the informational determinants of attitude. *Journal of Marketing Research*, 15 (November), 545-556.
- Holbrook, M. B. (1994). The nature of customer value: An axiology of services in the consumption experience. In Roland T. Rust and Richard L. Oliver, (Eds.), *Service equality: New directions in theory and practice*, (pp. 21-71), Thousand Oaks, CA: Sage Publications, Inc.
- Holbrook, M. B. (2005). Customer value and autoethnography: Subjective personal introspection and the meanings of a photograph collection. *Journal of Business Research*, 58 (1), 45-61.
- Holbrook, M. B. & Moore, W. L. (1981). Cue configurality in aesthetic responses. In E. C. Hirschman & M. B. Holbrook (eds.), *Symbolic consumer behavior*, (pp. 16-25). Ann Arbor: Association for Consumer Research.
- Holloway, B. B. & Beatty, S. E. (2003). Service failure in online retailing: A recovery opportunity. *Journal of Service Research*, 6 (1), 92-116
- Hoque, A. Y. & Lohse, G. L. (1999). An information search cost perspective for designing interfaces for electronic commerce, *Journal of Marketing Research*, 36 (August), 387-394.
- Hornstein, G. & Truesdell, S. (1988). Development of intimate conversation in close relationships. *Journal of Social and Clinical Psychology*, 7, 49-64.
- Howard, G. S. & Mendelow, A. L. (1991). Discretionary use of computers: An empirically derived explanatory model. *Decision Sciences*, 22 (2), 241-265.
- Howcroft, B. & Lavis, J. (1986). A strategic perspective on delivery systems in UK retail banking. *The Service Industries Journal*, 6 (2), 144-158.
- Hu, L. & Bentler, P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modelling. Concepts, issues, and applications*, (pp. 76-99). London: Sage.
- Hu, L. & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling*, 6 (1), 1-55.
- Hu, L., Bentler, P. M., & Kano, Y. (1988). Can test statistics in covariance structure analysis be trusted? *Psychological Bulletin*, 112, 351-362.

- Huang, M.-H. & Yu, S. (1999). Are consumers inherently or situationally brand loyal? - A set intercorrelation account for conscious brand loyalty and nonconscious inertia. *Psychology and Marketing*, 16 (6), 523-544.
- Huelsman, T. J., Munz, D. C., and Furr, R. M. (2003). The role of affect as a mediator variable: An application to organizational psychology. *Individual Differences Research*, 1 (3), 173-188.
- Huffman, K. D., Novak, T. P. & Peralta, M. (1999). Building consumer trust online, *Communications of the ACM*, 42 (4), 80-85.
- Huizingh, E. (2000). The content and design of Web sites: An empirical study. *Information and Management*, 37, 123-134.
- Hutcheson, G. & Sofroniou, N. (1999). *The multivariate social scientist: Introductory statistics using generalized linear models*. Thousand Oaks, CA: Sage Publications.
- Iacobucci, D. & Ostrom, A. (1996). Commercial and Interpersonal relationships: Using the structure of interpersonal relationships to understand individual-to-individual, individual-to-firm, and firm-to-firm relationships in commerce. *International Journal of Research in Marketing*, 13, 53-72.
- Innis, D. E. & LaLonde, B. J. (1994). Customer service: The key to customer satisfaction, customer loyalty, and market share. *Journal of Business Logistics*, 15 (1), 1-27
- Jackson, B. B. (1985). Build customer relationships that last. *Harvard Business Review*, Nov-Dec, 120-128.
- Jacoby, J. (1971). Brand loyalty: A conceptual definition, *Proceedings of the 79th Annual Convention of American Psychological Association*, 6, 655-656.
- Jacoby, J. & Chestnut, R. W. (1978). *Brand loyalty: Measurement and management*. Chichester, New York: Wiley.
- James, W. (1884). What is emotion? *Mind*, 9, 188-205.
- Jarvenpaa, S. & Tractinsky, N. (1999). Consumer trust in an internet store: Across-cultural validation. *Journal of Computer Mediated Communication*, 5 (2), 1-5.
- Jarvenpaa, S., Tractinsky, N., & Vitale, M. (2000). Consumer trust in an Internet store. *Information Technology Management*, 1 (1-2), 45-71.
- Jarvis, L. P & Wilcox, J. B. (1977). Trust vendor loyalty or simply repeat purchase behaviour. *Industrial Marketing Management*, 6, 9-14.

- Jeong, M., Oh, H., & Gregoire, M. (2003). Conceptualizing Web site quality and its consequences in the lodging industry. *Hospitality Management*, 22, 161–175
- Jiang, Z. & Banbasat, I. (2004-2005). Virtual product experience: Effects of visual and functional control of products on perceived diagnosticity and flow in electronic shopping. *Journal of Management Information Systems*, 21 (3), 111-148.
- Johnson, E. J., Lohse, G. L., & Mandel, N. (1999). Designing marketplaces of the artificial: Four approaches to understanding consumer behavior in electronic environments. *Working Paper*, Columbia University, New York, NY. Retrieved Aug. 2, 2001, from <http://hops.wharton.upenn.edu/~lohse/MKTG784/4approaches.pdf>
- Johnston, C. J. (1996). *Beyond customer satisfaction to loyalty*. Ottawa, Canada: The Conference Board of Canada
- Johnston, R. & Mehra, S. (2002). Best-practice complaint management. *Academy of Management Executive*, 16 (4), 145–154.
- Jones, H & Farquahar (2003). Contact management and customer loyalty. *Journal of Financial Services Marketing*, 8 (1), 71-85.
- Jones, T. O. & Sasser, W. E. (1995). Why satisfied customers defect. *Harvard Business Review*, 73 (6), 89-99.
- Jöreskog, K & Sörbom, D. (1996). *LISREL 8: User's reference guide*, Chicago: Scientific Software International, Inc.
- Judd, C. M. & Kenny, D. A. (1981). Process analysis: Estimating mediation in treatment evaluations. *Evaluation Review*, 5, 602-619.
- Jun, M. & Cai, S. (2001). The key determinants of internet banking service quality: A content analysis. *The International Journal of Bank Marketing*, 19 (7), 276-291.
- Kahn, R. L., & Antonucci, T. C. (1980). Convoys over the life course: Attachment roles and social support. In P. B. Baltes & O. G. Brim (Eds.) *Life-span development and behaviour*, (pp.253-286). New York: Academic Press.
- Kandampully, J. (1996). Service quality to service loyalty: A relationship which goes beyond customer services. *Total Quality Management*, 9 (6), 431-443.
- Kang, Y.-S. & Ridgway, N. M. (1996). The importance of consumer market interactions as a form of social support for elderly consumers. *Journal of Public Policy and Marketing*, 15 (1), 108-117.

- Karatepe, O. M. (in press). Customer complaints and organizational responses: the effects of complainants' perceptions of justice on satisfaction and loyalty. *Hospitality Management*.
- Karson, E. J. & Fisher, R. J. (2005). Reexamining and extending the dual mediation hypothesis in an on-line advertising context. *Psychology & Marketing*, 22 (4), 333-351.
- Keat, T. K. & Mohan, A. (2004). Integration of TAM based electronic commerce models for trust, *Journal of American Academy of Business*, 5 (1/2), 404-411.
- Keaveney, S. M. (1995). Customer switching behavior in service industries: An exploratory study. *Journal of Marketing*, 59 (April), 71-82.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57, 1-22.
- Kelloway, E.K. (1998). *Using LISREL for structured equation modelling: A researcher's guide*. Thousand Oaks, CA: Sage.
- Kemper, T. D. (1991). Predicting emotions from social relations. *Social Psychology Quarterly*, 54, 330-342.
- Kerlinger, F. N. (1986). *Foundations of behavioral research*. Fort Worth: Holt, Rinehart & Winston, Inc.
- Kickul, J. & Liao-Troth, M. A. (2000). The Meaning behind the message: How employees' motives and perceptions of climate influence their interpretations of the psychological contract. *Proceedings of the 43rd Annual Meeting of the Midwest Academy of Management Conference*. Retrieved May 8, 2000, from <http://www.sba.muohio.edu/management/MWAcademy/2000/3d.pdf>
- Kidder, L. H., Fagan, M. A & Cohn, E. S. (1981). Giving and receiving: Social justice in close relationships. In M. J. Lerner and S. C. Lerner (Eds.), *The justice motive in social behavior: Adapting to times of scarcity and change*, (pp. 235-259). New York: Plenum Press.
- Kim, K. & Prbhakar, B. (2000). Initial trust, perceived risk and adoption of Internet banking. In *Proceedings of the International Conference on Information Systems (ICIS)*, Brisbane, Australia, 2000.
- Kim, S. & Stoel, L. (2004). Dimensional hierarchy of retail website quality, *Information & Management*, 41. 619-633.

- Kleck, R. E. & Nuessle, W. (1973). Congruence between the indicative and communicative functions of eye contact in interpersonal relations. *British Journal of Social Clinical Psychology*, 7, 241-246.
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York: Guilford.
- Konana, P., Menon, N. M., & Balasubramanian, S. (2000). Exploring the implications of online investing, *Communications of the ACM*, January, 34-41.
- Kotler, P. (1991). Philip Kotler explores the new marketing paradigm. *Marketing Science Institute Review*, 1, 4-5.
- Koufaris, M. & Hampton-Sosa, W. (2004). The development of initial trust in an online company by new customers. *Information & Management*, 41, 377-397.
- Kramer, J., Norohna, S., & Vego, S. (2000). A user-centered design approach to personalization. *Communications of the ACM*, 43 (8), 45-48.
- Krishnamurthi, L. & Raj, S. P. (1991). An empirical analysis of the relationship between brand loyalty and consumer price elasticity. *Marketing Science*, 10 (2), 172-183.
- Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukhopadhyay, T., & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist*, 53 (9), 1017-1031.
- Krishnamurthi, L. & Raj, S. P. (1991). An empirical analysis of the relationship between brand loyalty and consumer price elasticity. *Marketing Science*, 10 (2), 172-183.
- Krebs, D. (1970). Altruism - An examination of the concept and a review of the literature. *Psychological Bulletin*, 73, 258-302.
- Kuehn, S. (1993). Communication innovation on a BBS: A content analysis. *Interpersonal Computing and Technology: An Electronic Journal for the 21st Century*, 1(2). Retrieved Aug. 5, 2003, from <http://jan.ucc.nau.edu/~ipct-j/1993/n2/kuehn.txt>
- Kumar, R. L., Smith, M. A., & Bannerjee S. (2004). User interface features influencing overall ease of use and personalization. *Information & Management*, 41, 289-302.
- Kunöe, G. (1993). Metaloyalty as an instrument in managing direct marketing. In *Proceedings from ESOMAR/EMAC/AFM Symposium on: Information based decision making in marketing: Reconciling the needs and interests of decision*

makers, Data collectors and data providers, (pp. 49-69). Paris, France: (November 17-19).

Kurth, S. (1970). Friendship and friendly relations. In McCall, K.S. (Ed.) *Social relationships*, Chicago: Aldine

LaBarbera, P. A. & Mazursky D. (1983). A longitudinal assessment of customer satisfaction / dissatisfaction: The dynamic aspect of the cognitive process. *Journal of Marketing Research*, 20, 393-404.

Lafferty Report (2000). *E-Banking a global strategic and statistical analysis of online banking*. Retrieved Jan. 15, 2001, from <http://www.lafferty.com/manreports/ebank.shtml>

Lages, C., Lages, C. R., & Lages, L. F. (2005). The RELQUAL scale: A measure of relationship quality in export market ventures. *Journal of Business Research*, 58 (8), 1040-1048.

Lai, V. S. & Li, H. (2005). Technology acceptance model for internet banking: An invariance analysis. *Information & Management*, 42, 373-386.

Landis, R. S., Beal, D. J., & Tesluk, P. E. (2000). A comparison of approaches to forming composite measures in structural equation models. *Organizational Research Methods*, 3, 186-207.

Larson, A. (1992). Network dyads in entrepreneurial settings: A study of the governance of exchange relationships. *Administrative Science Quarterly*, 37 (1), 76-103.

LaTour, S. A. & Peat, N. C. (1979). Conceptual and methodological issues in consumer satisfaction research. In William L. Wilkie (Ed.), *Advances in Consumer Research*, Vol. 6, (pp. 431-437). Ann Arbor, MI: Association for Consumer Research.

Law, R. & Leung, R. (2000). A study of airlines' online reservation services on the internet. *Journal of Travel Research*, 39, 202-211.

Lazarus, R. S. (1991). *Emotion and Adaptation*. New York: Oxford University Press.

Lazarus, R. S. & Smith, C. A. (1988). Knowledge and Appraisal in the Cognition-Emotion Relationship. *Cognition and Emotion*, 2, 281-300.

Lee, J., Kim, J., & Moon, J. Y. (2000). What makes internet users visit cyber stores again? Key design factors for customer loyalty, In *Proceedings of the computer-human interaction conference on human factors in computing systems*, (pp. 305-312). The Hague, Netherlands.

- Lee, S. M., Katerattanakul, P., & Hong, S. (2005). Framework for the user perception of effective e-tail Web sites. *Journal of Electronic Commerce in Organizations*, 3 (1), 13-34.
- Lehtinen, U. & Lehtinen, J. R. (1991). Two approaches to service quality dimensions. *The Services Industry Journal*, 11 (3), 287-303.
- Leidner, D. E. & Elam, J. J. (1993). Executive information systems: Their impact on executive decision making. *Journal of Management Information Systems*, 10 (3), 139-155.
- Lemmink, J. & Mattson, J. (1998). Warmth during non-productive retail encounters: The hidden side of productivity. *International Journal of Research in Marketing*, 15, 505-517.
- Lemmink, J. & Mattson, J. (2002). Employee behaviour, feelings of warmth and customer perception in service encounters. *International Journal of Retail and Distribution Management*, 30 (1), 18-34.
- Lester, S. W. & Brower, H. H. (2003). In the eyes of the beholder: The relationship between subordinates' felt trustworthiness and their attitudes and behaviours. *Journal of Leadership and Organizational Studies*, 10 (2), 17-33.
- Levinger, G. (1976). A social psychological perspective on marital dissolution. *Journal of Social Issues*, 32, 21-47.
- Lewicki, R. J. & Bunker, B. B. (1995). Trust in relationships: A model of trust development and decline. In B. B. Bunker and J. Z. Rubin (Eds.), *Conflict, Cooperation and Justice*, (pp. 133-173), San Francisco, CA: Jossey-Bass.
- Lewicki, R. J., McAllister, D. J., & Bies, R. J. (1998). Trust and distrust: New relationships and realities. *Academy of Marketing Review*, 23 (3), 438-458.
- Liechty, M. G. & Churchill, G.A. (1979). Conceptual insights into consumer satisfaction with services. In N. Beckwith et al. (Eds.), *Educators Conference Proceedings*, 94ed., (pp. 509-515). Chicago AMA.
- Liljander, V., van Riel, A., and Pura, M. (2002). Customer satisfaction with e-services – An online recruitment portal. In Bruhn, M. & B Stauss, (eds.), *Yearbook of services management 2002 – e-services*. Gabler Verlag.
- Lisetti, C. & Bianchi, N. (2002). Modeling multimodal expression of user's affective subjective experience. *User Modeling and User-Adapted Interaction*, 12 (1), 49-84.

- Little, B. R. (1971). A provisional manual for the thing-person scale. *Unpublished Paper of Department of Experimental Psychology, University of Oxford.*
- Liu, C., & Arnett, K.P. (2000). Exploring the factors associated with Web site success in the context of electronic commerce. *Information & Management*, 38 (1), 23-33.
- Liu, C., Marchewka, J. T., Lu, J., & Yu, C.-S. (2004). Beyond concern: a privacy-trust-behavioral intention model of electronic commerce. *Information & Management*, 42, 127-142.
- Llosa, S., Chandon, J-L., & Orsingher, C. (1998). An empirical study of SERVQUAL's dimensionality. *The Services Industries Journal*, 18 (2), 16-44.
- Loehlin, J.C. (1998). *Latent variable models: An introduction to factor, path and structural analysis* (3rd ed.). Hillsdale, NJ: Erlbaum.
- Loiacono, E. T., Watson, R. T., & Goodhue, D. L. (2002). WebQual: A measure of Website quality. In Kenneth K. Evans and Lisa K. Scheer (Eds), *Marketing theory and applications, Vol 13*. Chicago: American Marketing Association.
- Lopata, H. Z. (1981). Friendship: Historical and theoretical introduction. *Research in the Interweave of Social Roles*, 2, 1-19.
- Lovelock, C. (1994). *Product Plus: How Product + Service = Competitive Advantage*. New York: McGraw-Hill.
- Lovelock, C. H. & Young, R.F. (1979), Look to consumers to increase productivity. *Harvard Business Review*, (May-June), 171-179.
- Lowenstein, M. W. (1996). Keep them coming back. *American Demographics*, May, 54-57.
- Lutz, R. J. & Winn, P. R. (1974). Developing a Bayesian measure of brand loyalty: A preliminary report. In Ronald C. Curhan (Ed.), *Combined Proceedings*, (pp. 104-108). Chicago: American Marketing Association.
- Lydon, J. E., Jamieson, D. W. & Holmes, J. G. (1997). The meaning of social interactions in the transition from acquaintanceship to friendship. *Journal of Personality and Social Psychology*, 73 (3), 536-548.
- Lynch, P. D., Kent, R. J., & Srinivasan, S. S. (2001). The global Internet shopper: evidence from shopping tasks in twelve countries. *Journal of Advertising Research*, 41 (3), 15-23.
- MacCallum, R. C. (1986). Specification searches in covariance structure modeling. *Psychological Bulletin*, 100 (1), 107-120.

- MacCallum, R. C., Roznowski, M., & Necowitz, L. B. (1992). Model modifications in covariance structure analysis: The problem of capitalization on chance. *Psychological Bulletin*, 111 (3), 490-504.
- Macintosh, G. & Lockshin, L. S. (1997). Retail relationships and store loyalty: A multi-level perspective. *International Journal of Research in Marketing*, 14, 487-497.
- Madden, G. & Coble-Neal, G. (2002). Internet economic and policy: An Australian perspective. *Economic Record*, 78 (242), 343-357.
- Madu, C. N. & Madu, A. (2002). Dimensions of e-quality. *International Journal of Quality & Reliability Management*, 19 (3), 246-258.
- Mano, H. & Oliver, R. L. (1993). Assessing the dimensionality and structure of consumption experience: Evaluation, feeling and satisfaction. *Journal of Consumer Research*, 20, 451-466.
- Marlin, S. (2001). Regionals better than top banks at handling e-mail communications, survey finds. *Bank Systems and Technology*, 38 (4), 10.
- Marsh, H. W., Balla, J. R., & McDonald, R. P. (1988). Goodness of fit indexes in confirmatory factor analysis: The effect of sample size. *Psychological Bulletin*, 103, 391-410.
- Marsh, H. W., Hau, K.-T., Balla, J. R., & Grayson, D. (1998). Is more ever too much? The number of indicators per factor in confirmatory factor analysis. *Multivariate Behavioral Research*, 33, 181-220.
- Martin, C. L. (1996). Consumer-to-consumer relationships: Satisfaction with other consumers' public behaviour. *The Journal of Consumer Affairs*, 30 (1), 146-170.
- Martin, C.L. (1998). Relationship marketing: A high-involvement product attribute approach. *Journal of Product and Brand Management*, 7 (1), 6-26.
- Martin, C.L. & Goodell, P.W. (1991). Historical, descriptive and strategic perspectives on the construct of product commitment. *International Journal of Wine Marketing*, 3 (2), 15-22.
- Massey, W. F., Montgomery, D. B., & Morrison, D. G. (1970). *Stochastic Models of Buyer Behavior*. Cambridge: MIT Press.
- Mazanet, S. (2000). Online ATMs enhance member relationships. *Credit Union Magazine*, 66 (11), 66-68.

- McAdams, D. P. (1988). Personal needs and personal relationships. In Steve W. Duck (Ed.), *Handbook of personal relationships*, (pp. 7-22). New York: John Wiley and Sons.
- McAlexander, J. H., Kim, S. K. & Roberts, S. D. (2003). Loyalty: The influences of satisfaction and brand communality integration. *Journal of Marketing Theory and Practice*, 11 (4), 1-11.
- McAllister, D. J. (1995). Affect- and cognition- based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38 (1), 24-59.
- McCollough, M. A., Berry, L. L., & Yadav, M. S. (2000). An empirical investigation of customer satisfaction after service failure and recovery. *Journal of Service Research*, 3 (2), 121-137
- McDougall, G. & Levesque, T. (1992). The measurement of service quality: some methodology issues. In *2ieme seminaire international de recherche en management des activites de service*, 411-430.
- Macintosh, G., & Lockshin, L. S. (1997). Retail relationships and loyalty: A multi-level perspective. *International Journal of Research in Marketing*, 14 (5), 487-497.
- McKenna, R. (1991). *Relationship marketing: Successful strategies for the age of the customer*. Reading, MA: Addison-Wesley.
- McKnight, D. H. & Chervany, N. L. (2001). What trust means in e-commerce customer relationships: An interdisciplinary conceptual typology. *International Journal of Electronic Commerce*, 6, 35-59.
- McKnight, D. H., Choudhury, V. & Kacmar, C. (2002). Developing and validating trust measures for e-Commerce: An integrative typology. *Information Systems Research*, 13 (3), 334-359.
- Menon, K. & Dubé, L. (2000). Ensuring greater satisfaction by engineering salesperson response to customer emotions. *Journal of Retailing*, 76 (3), 285-307.
- Meuter, M. L., Ostrom, A. L., Roundtree, R. I., & Bitner, M. J. (2000). Self-service technologies: Understanding customer satisfaction with technology-based service encounters. *Journal of Marketing*, 64 (July), 50-64.
- Meric, H. J. (1994). The effect of scale form choice on psychometric properties of patient satisfaction measurement. *Health Marketing Quarterly*, 11 (3,4), 27-40.
- Micceri, T. (1989). The unicorn, the normal curve, and other improbable creatures. *Psychological Bulletin*, 105, 156-166.

- Miligan, B. (1999). Sell-side Web sites: What is their potential? *Purchasing*, 127 (6), S64-S72.
- Miller, G. & Steinberg, M. (1975). *Between people: A new analysis of interpersonal communication*. Chicago: Science Research Associates.
- Mills, J. & M. S. Clark (1982). Communal and exchange relationships. *Review of Personality and Social Psychology*, 3, 121-144.
- Mills, J. & Clark, M. S. (1994). Communal and exchange relationships: Controversies and research. In Ralph Erber and Robin Gilmour (Eds.), *Theoretical frameworks for personal relationships*, (pp. 29-42). Hillsdale, NJ: Erlbaum.
- Milne, G.R. & Boza, M-E. (1999). Trust and concern in consumers' perceptions of marketing information management practices. *Journal of Interactive Marketing*, 13 (1), 5-24.
- Mittal, B. & Lassar, W. M. (1996). The role of personalization in service encounters, *Journal of Retailing*, 72 (1), 95-109.
- Mittal, B. & Lassar, W. M. (1998). Why do customer switch? The dynamics of satisfaction versus loyalty. *Journal of Services Marketing*, 12 (3), 177-194.
- Mittal, V., & Kamakura, W. (2001). Satisfaction, repurchase intent, and repurchase behavior: Investigating the moderating effect of customer characteristics. *Journal of Marketing Research*, 38, 131-143.
- Mittal, V., Ross, W. T. Jr., & Baldasare, P. M. (1998). The asymmetric impact of negative and positive attribute-level performance on overall satisfaction and repurchase intentions. *Journal of Marketing*, 62 (January), 33-47.
- Mohr, L. A. & Bitner, M. J. (1995). The role of employee effort in satisfaction with service transactions. *Journal of Business Research*, 32 (3), 239-252.
- Moore, G. C. & Benbasat, I. (1991). Development of an instrument to measure the perceptions of adopting an information technology innovation, *Information Systems Research*, 2 (3), 192-222.
- Moorman, C., Zalthaml, G., & Deshpande, R. (1992). Relationships between providers and users of marketing research: The dynamics of trust between within and between organizations. *Journal of Marketing Research*, 29, 314-329.
- Mor Barak, E., Cherin, D. A. & Berkman, S. (1998). Organizational and personal dimensions in diversity climate: Ethnic and gender differences in employee perceptions. *Journal of Applied Behavioral Science*, 34 (1), 82-104.

- Morgan, R. M. & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing, *Journal of Marketing*, 58 (July), 20-38.
- Morley, I. E. & Stephenson, G. M. (1969). Interpersonal and interparty exchange: A laboratory simulation of an industrial negotiation at the plant level. *British Journal of Psychology*, 60, 543-545.
- Moutinho, L. & Meidan, A. (1989). Bank customers' perceptions, innovations and new technology. *International Journal of Bank Marketing*, 7 (2), 22-27.
- Mullaney, T. J., Green, H., Arndt, M., & Hof, R. D. (2003). The e-biz Surprise, *Business Week*, 12 May, 60-68.
- Muncy, J. A. & Hunt, S. D. (1984). Consumer involvement: Definitional issues and research directions. In Thomas C. Kinnear (Ed.), *Advances in consumer research*, Vol. XI, (pp. 193-196). Provo, Utah, USA: Association for Consumer Research
- Murphy, J. A. (1996). Retail banking. In F. Buttle (Ed.), *Relationship marketing: Theory and practice*, (pp. 74-90). London, England: Paul Chapman Publishing Ltd.
- Murphy, K. R. & Davidshofer, C. O. (1994). *Psychological testing: Principles and applications*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Nah, F. F.-H. & Davis, S. (2002). HCI internet research issues in e-commerce. *Journal of Electronic Commerce Research*, 3 (3). Retrieved June 6, 2003, from <http://www.csulb.edu/Web/journals/jecr/issues/20023/paper1.pdf>
- Neal, W. D. (1999). Satisfaction is nice but value drives loyalty. *Marketing Research*, 11 (1), 21-24.
- Newman, J. W. & Werbel, R. A. (1973). Multivariate analysis of brand loyalty for major household appliances. *Journal of Marketing Research*, 10, 404-409.
- Norman, G. & Streiner, D. (1994). *Biostatistics: The bare essentials*. St. Louis Mosby.
- Norušis, M. J. (1993). *SPSS for windows: Base system user's guide, release 6.0*. Chicago: SPSS Inc.
- Nunnally, J. C. (1967). *Psychometric theory*. New York: McGraw-Hill.
- Nussbaum, M. C. (2001). *Upheavals of thought: the intelligence of emotions*. Cambridge, New York: Cambridge University Press.

- Nygren, T. E. (1991). Psychometric properties of subjective workload measurement techniques: Implications for their use in the assessment of perceived mental workload. *Human Factors*, 33, 17-33.
- Oliva, T. A., Oliver, R. L., & MacMillan, I. C. (1992). A catastrophe model for developing service satisfaction strategies. *Journal of Marketing*, 56 (3), 83-95
- Oliver, R. L. (1977). Effects of expectation and disconfirmation on postexposure product evaluations: an alternative interpretation. *Journal of Applied Psychology*, 62 (4), 480-486.
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17 (November), 460-469.
- Oliver, R. L. (1997). *Satisfaction: A behavioral perspective on the consumer*. Boston: Irwin McGraw-Hill.
- Oliver, R. L. (1999). Whence consumer loyalty? *Journal of Marketing*, 63, 33-44.
- Oliver, R. L. & Swan, J. E. (1989). Consumer Perceptions of interpersonal equity and satisfaction in transactions: A field study approach. *Journal of Marketing*, 53 (april), 21-35.
- O'Neill, M., Wright, C., & Fitz, F. (2001). Quality evaluation in on-line service environments: An application of the importance-performance measurement technique. *Managing Service Quality*, 11 (6), 402-417.
- Ortony, A., Clore, G. L. & Collins, A. (1988). *The cognitive structure of emotions*. Cambridge: Cambridge University Press.
- Pagel, M. D., Erdly, W. W. & Becker, J. (1987). Social networks: We get by with (and in spite of) a little help from our friends. *Journal of Personality and Social Psychology*, 53 (4), 793-804.
- Palmer, J. (2002). Web site usability, design and performance metrics. *Information Systems Research*, 13 (2), 151-169.
- Palmer, A. & Bejou, D. (1994). Buyer-seller relationships: a conceptual model and empirical investigation. *Journal of Marketing Management*, 10 (6), 495-512.
- Parasuraman, A (2000). Technology readiness index (TRI): A multiple-item scale to measure readiness to embrace new technologies. *Journal of Service Research*, 2 (4), 307-320.
- Parasuraman, A., Berry, L. L., & Zeithaml, V. A. (1991). Refinement and reassessment of the SERVQUAL Scale. *Journal of Retailing*, 67 (4), 420-450.

- Parasuraman, A., Berry, L. L., & Zeithaml, V. A. (1993). More on improving service quality measurement. *Journal of Retailing*, 69 (Spring), 140-147.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research, *Journal of Marketing*, 49 (Fall), 41-50.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64 (1), 12-40.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1994) Reassessment of expectations as a comparison standard in measuring service quality: implications for further research, *Journal of Marketing*, 58, 111-123.
- Parkington, J.J. & Schneider, B. (1979). Some correlates of experienced job stress: a boundary role study. *Academy of Management Journal*, 22, 270-281.
- Parks, M. R. & Floyd, K. (1996). Meanings for closeness and intimacy in friendship, *Journal of Social and Personal Relationships*, 13, 85-107.
- Patterson, P.G. & Spreng, R.A. (1997). Modeling the relationship between perceived value, satisfaction and repurchase intentions in a business-to-business, services context: an empirical examination. *The International Journal of Service Industry Management*, 8 (5), 415-432.
- Pavlou, P. A. (2001). Integrating trust in electronic commerce with the Technology Acceptance Model: Model development and validation. *Seventh Americas Conference on Information Systems*. Retrieved Jul. 20, 2004, from http://aisel.isworld.org/subject_by_publication.asp?Subject_ID=156
- Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7 (3), 101-134.
- Peppers, D. & Rogers, M. (1997). *Enterprise one to one*. Doubleday, New York
- Peter, J. P. (1979), Reliability: A review of psychometric basics and recent marketing practices. *Journal of Marketing Research*, 16 (February), 6-17.
- Piccoli, G., Brohman, M. K., Watson, R. T., Parasuraman, A. (2004). Net-based customer service systems: Evolution and revolution in Web site functionalities. *Decision Sciences*, 35 (3), 423-456.
- Pickering, J. F. & Isherwood, B. C. (1974). Purchase probabilities and consumer durable behaviour. *Journal of the Market Research Society*, 16 (3), 203-226.

- Ping, R. A. (1995). A parsimonious estimating technique for interaction and quadratic latent variables. *Journal of Marketing Research*, 32, 336-347.
- Pinsonneault, A., & Heppel, N. (1998). Anonymity in GSS research: New conceptualization, measure and contingency framework. *Journal of Management Information Systems*, 14 (3), 89-108.
- Porter, M. E. (2001). Strategy and the internet. *Harvard Business Review*, March, 62-78.
- Prendergast, G. P. & Marr, N. E. (1994). Disenchantment discontinuance in the diffusion of self-service technologies in the services industry: A case study in retail banking. *Journal of International Consumer Marketing*, 7 (2), 25-40.
- Price, L. L. & Arnould, E. J. (1999). Commercial friendships: Service Provider-client relationships in context. *Journal of Marketing*, 63 (October), 38-56.
- Price, L. L., Arnould, E. J., & Deibler, S. L. (1995). Consumers' emotional responses to service encounters. *International Journal of Service Industry Management*, 6 (3), 34-63.
- Price, L. L., Arnould, E. J., & Tierney, P. (1995). Going to extremes: Managing service encounters and assessing provider performance. *Journal of Marketing*, 59 (April), 83-97.
- Pride, W. M. & Ferrell, O. C. (2003). *Marketing: concepts and strategies*. 12th ed. Boston: Houghton Mifflin Company.
- Pritchard, M. P., Havitz, M. E. & Howard, D. R. (1999). Analyzing the commitment-loyalty link in service contexts. *Journal of the Academy of Marketing Science*, 27, 333-348.
- Pros, Robert C. (1989), *Making sales: Influence as interpersonal accomplishment*. Newbury Park, CA: Sage.
- Pruyn, A. & Smidts, A. (1998). Effects of waiting on the satisfaction with the service: Beyond objective time measures. *International Journal of Research in Marketing*, 15 (4), 321-334.
- Pugh, D. (2001). Service with a smile: Emotional contagion in the service encounter. *Academy of Management Journal*, 44 (5), 1018-1027.
- Rafaeli, S. (1988). Interactivity: From new media to communication. In R. Hawkins, J. Wiemann, & S. Pingree (Eds.), *Advancing communication science: Merging mass and interpersonal processes*, (pp. 110-134). Newbury Park, CA: Sage Publications.

- Rafaeli, S. (1990). Interacting with media: Para-social interaction and real interaction. In B. Ruben & L. Lievrouw (Eds.), *Mediation, information and communication*, (pp. 125-181). New Brunswick, NJ: Transaction Publishers.
- Ramsey, R. P. & Sohi, R. S. (1997). Listening to your customers: The impact of perceived salesperson listening behavior on relationship outcomes. *Journal of the Academy of Marketing Science*, 25 (2), 127-137.
- Ranganathan C. & Ganapathy, S. (2002). Key dimensions of business-to-consumer Web sites. *Information and Management*, 30, 457-465.
- Rawlins, W. (1992). *Friendship matters*. New York: Aldine de Gruyter.
- Ray, M. (1973). Marketing communication and the hierarchy-of-effects. In Peter Clarke (Ed.), *New models for communication research*, (pp. 147-176), Beverly Hills: Sage Publications.
- Reese, S. (1996). Happiness isn't everything. *American demographics*, May, 52-58.
- Reibstein, D. J. (2002). What attracts customer to online stores, and what keeps them coming back? *Journal of the Academy of Marketing Science*, 30 (4), 465-473.
- Reichheld, F. F. (1993). Loyalty-based management. *Harvard Business Review*, March-April, 64-73.
- Reichheld, F. F. (1996). *The loyalty effect: The hidden force behind growth, profits, and lasting value*. Harvard Business School Press, Boston, Massachusetts
- Reichheld, F. F. & Aspinwall, K. (1993). Building high-loyalty business systems. *Journal of Retail Banking*, Winter, 21-29.
- Reichheld, F. F. & Sasser, W. E. Jr. (1990). Zero defections: quality comes to services. *Harvard Business Review*, 68 (September/October), 105-111.
- Reichheld, F. F. & Schefter (2000). E-loyalty: Your secret weapon on the web. *Harvard Business Review*, 78 (4), 105-14.
- Reynolds, K. E. & Beatty, S. E. (1999). Customer Benefits and company consequences of customer-salesperson relationships in retailing. *Journal of Retailing*, 75 (1), 11-32.
- Reynolds, F. D., Darden, W. R., & Martin, W. S. (1974). Developing an image of the store loyal customer. *Journal of Retailing*, 50 (4), 73-84.

- Rheingold, H. (1993). Daily life in cyberspace: How the computerized counterculture built a new kind of place. *The Virtual Community: Homesteading on the Electronic Frontier*, (pp. 38-64), Reading, MA, Addison-Wesley. Retrieved June 14, 2003, from <http://www.rheingold.com/vc/book/>
- Rice, R. E., & Case, D. (1983). Electronic message systems in the university: A description of use and utility. *Journal of Communication*, 33, 131-152.
- Rice, R. E., & Love, G. (1987). Electronic emotion: Socioemotional content in a computer-mediated network. *Communication Research*, 14, 85-108.
- Riecken, D. (2000). Personalized views of personalization. *Communications of the ACM*, 43 (8), 27-28.
- Riggins, F. J. (1998). *Developing a Web-based strategy for the delivery of online banking services*. Retrieved May 20, 2000 from <http://riggins-mgt.iac.gatech.edu/papers/banking.html>
- Robbins, T. L. & Miller, J. L. (2004). Considering customer loyalty in developing service recovery strategies. *Journal of Business Strategies*, 21 (2), 95-110.
- Rook, K. S. (1987). Reciprocity of social exchange and social satisfaction among older women, *Journal of Personality and Social Psychology*, 52, 145-154.
- Roseman, I. J. (1984). *Cognitive determinants of emotions: A structural theory*. In P. Shaver (Ed.), *Review of personality and Social Psychology*, Vol. 5, (pp. 11-36). Beverly Hills, CA, Sage.
- Rosenberg, L. J. & Czepiel, J. A. (1984). A marketing approach to customer retention, *Journal of Consumer Marketing*, 2, 45-51.
- Roth, A. V. & Van Der Velde, M. (1989). Investing in retail delivery system technology. *Journal of Retail Banking*, 11 (2), 23-34
- Rotter, J. B. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality*, 39 (December), 651-665
- Rozanski, H. D., Baum, A. G. & Wolfson, B. T. (1999). Brand zealots: Realizing the full value of emotional brand loyalty. *Strategy and Business*, 17, 51-62.
- Rubin, Z. & Shenker, S. (1978). Friendship, proximity, and self-disclosure. *Journal of Personality*, 46, 1-22.
- Rundle-Thiele, S. (in press). Elaborating customer loyalty: Exploring loyalty to wine retailers. *Journal of Retailing and Consumer Services*.

- Rust, R. T. & Oliver, R. L. (1994). Service quality: Insights and managerial implications from the frontier. In R. T. Rust and R. L. Oliver (Eds.), *Service quality: New directions in theory and practice*, (pp. 1-20). Thousand Oaks.
- Rust, R. T. & Zahorik, A. J. (1993). Customer satisfaction, customer retention, and market share. *Journal of Retailing*, 69 (2), 193-215.
- Rust, R. T., Zahorik, A. J., & Keiningham, T. L. (1995). Return on quality (ROQ): making service quality financially accountable. *Journal of Marketing*, 59 (April), 58-70.
- Ryan, M. J. (1982). Behavioral intention formation: The interdependency of attitudinal and social influence variables, *Journal of Consumer Research*, 9 (December), 263-278
- Sarason, S. B. (1974). *The psychological sense of community: Perspectives for community psychology*. San Francisco: Jossey-Bass.
- Sathye, M. (1999). Adoption of internet banking by australian consumers: An empirical investigation. *International Journal of Bank Marketing*, 17 (7), 324-334.
- Satorra, A. & Bentler, P. M. (1994). Corrections to test statistics and standard errors in covariance structure analysis. In A. von Eye & C.C. Clogg (Eds.), *Latent variable analysis: Applications for developmental research*, (pp. 399-419). Thousand Oaks, CA: Sage.
- Schank, R. C. & Abelson, R. (1977). *Scripts, plans, goals, and understanding*. Hillsdale, NJ: Earlbaum Assoc.
- Scherer, S. E. & Schiff, M. R. (1973). Perceived intimacy, physical distance and eye contact. *Perceptual and Motor Skills*, 36, 835-841.
- Scherer, K. R. (1999). Appraisal Theory. In T. Dalgleish and M. J. Power (Eds.), *Handbook of Emotion and Cognition*, (pp. 637-663). Chichester: New York.
- Schiffman, L. G. & Kanuk, L. L. (2004). *Consumer behavior*. 8th ed. Upper Saddle River: Pearson Prentice Hall.
- Schmitt, N. & Stults, D. M. (1985). Factors defined by negatively keyed items: The result of careless respondents? *Applied Psychological Measurement*, 9 (4), 367-373.
- Schneider, B. & Bowen, D. E. (1999). Understanding customer delight and outrage. *Sloan Management Review*, 41 (1), 35-46.
- Schubert, P. & Dettling, W. (2001). Web site evaluation: Do Web applications meet user expectations? Music, consumer goods and e-banking on the test bed. In

Proceedings of the 14th International Bled Electronic Commerce Conference.
Bled, Slovenia, June 25-56.

Schumaker, R. E., & Lomax, R. G. (1996). *A beginner's guide to structural equation modeling*. New York: Lawrence Erlbaum.

Schurr, P. H. & Ozanne, J. L. (1985). Influences on exchange processes: Buyers' preconceptions of a seller's trustworthiness and bargaining toughness. *Journal of Consumer Research*, 11 (March), 939-953.

Segal, M. N. (1989). Implications of single vs. multiple buying sources, *Industrial Marketing Management*, 18, 163-178.

Sethi, V. & King, W. R. (1994). Development of measures to assess the extent to which an information technology application provides competitive advantage. *Management Science*, 40 (12), 1601-1627.

Siegel, J., Dubrovsky, V., Kiesler, S. & McGuire, T. W. (1986). Group processes in computer-mediated communication. *Organizational Behavior and Human Decision Processes*, 37, 157-187.

Siehl, C., Bowen, D., & Pearson, C. (1992). Service encounters as rites of integration: An information processing model. *Organization Science*, 13, 537-555.

Simmons, B. L., Nelson, D. L., & Neal, L. J. (2001). A comparison of the positive and negative work attitudes of home health care and hospital nurses, *Health Care Management Review*, 26 (3), 63-75.

Singh, J. & Sirdeshmukh, D. (2000). Agency and trust mechanisms in consumer satisfaction and loyalty judgements. *Journal of the Academy of Marketing Science*, 28 (1), 150-167.

Sinha, I. & DeSarbo, W. S. (1998). An integrated approach toward the spatial modeling of perceived customer value. *Journal of Marketing Research*, 35 (May), 236-249.

Shang, R.-A., Chen, Y.-C., & Shen, L. (2005). Extrinsic versus intrinsic motivations for consumers to shop on-line, *Information & Management*, 42, 401-413.

Shankar, V., Smith, A. K., & Rangaswamy, A. (2003). Customer satisfaction and loyalty in online and offline environments. *International Journal of Research in Marketing*, 20 (2), 153-175

Sharp, B. & Sharp, A. (1997). Loyalty programs and their impact on repeat-purchase loyalty patterns. *International Journal of Research in Marketing*, 14, 473-486.

- Sheaves, D. E. & Barnes, J.G. (1996). The fundamentals of relationships: An exploration of the concept to guide marketing implementation. In T. A. Swartz, D.E. Bowen, & S.W. Brown (Eds.), *Advances in services marketing and management: Research and practice*, Vol. 5, (pp. 215-245).
- Sheppard, B. H. & Sherman, D. M. (1998). The grammars of trust: A model and general implications. *Academy of Management Review*, 23 (3), 422-437.
- Sheth, J., Mittal, B., & Newman, B. (1999). *Customer behavior, consumer behavior and beyond*. The Dryden Press. Fort Worth.
- Sheth, J. N. & Pravatiyar, A. (1995). Relationship marketing in consumer markets: Antecedents and consequences. *Journal of the Academy of Marketing Science*, 23 (4), 255-271.
- Shih, H.-P. (2004). Extended technology acceptance model of Internet utilization behavior. *Information & Management*, 41, 719-729.
- Shimp, T. A. & Kavas, A. (1984). The theory of reasoned action applied to coupon usage. *Journal of Consumer Research*, 1, 795-809.
- Shimp, T. A. & Sharma, S. (1987). Consumer ethnocentrism: Construction and validation of the CETSCALE. *Journal of Marketing Research*, 24, 280-89.
- Shoemaker, S. (1996). Scripts: Precursor of consumer expectations. *Cornell Hotel and Restaurant Administration Quarterly*, 37 (1), 42-54.
- Short, J. A., Williams, E., & Christie, B. (1976). *The Social Psychology of telecommunications*. New York: John Wiley & Sons.
- Siau, K. & Shen, Z. (2002). Building customer trust in mobile commerce. *Communications of the ACM*, 46 (4), 91-93.
- Sirdeshmukh, D., Singh, J., & Sabol, B. (2002). Consumer trust, value and loyalty in relational exchanges, *Journal of Marketing*, 66, 15-37.
- Smith, A. K., Bolton, R. N., & Wagner, J. (1999). A model of customer satisfaction with service encounters involving failure and recovery. *Journal of Marketing Research*, 36 (3), 356-372.
- Smith, E. R. (2000). *E-Loyalty*. New York: Harper Collins.
- Smith, J. B. (1998). Buyer-seller relationships: Bonds, relationship management, and sex-type. *Canadian Journal of Administrative Sciences*, 15 (1), 76-92.

- Smith, J. B. & Barclay, D. W. (1997). The effects of organizational differences and trust on the effectiveness of selling partner relationships. *Journal of Marketing*, 61 (1), 3-21.
- Söderlund, M. (1998). Customer satisfaction and its consequences on customer behavior revisited: The impact of different levels of satisfaction on word-of-mouth, feedback to the supplier, and loyalty. *International Journal of Services Industry Management*, 9 (2), 169-188.
- Som, A. & Mehta, S. (2002). *Brand Loyalty: Myth or Reality*. Retrieved March 10, 2005. <http://www.e-blast.indiatimes.com/guruspeak/brand.doc>
- Song, J. H. & Zinkhan, G. M. (2003). Features of Web site design, perceptions of Web site quality, and patronage behaviour. In Uday S. Tate (Ed.), *Advances in marketing*, (pp. 106-114). Houston, TX: Association of Collegiate Marketing Educators.
- Spiteria, J. M. & Dion, P. A. (2004). Customer value, overall satisfaction, end-user loyalty, and market performance in detail intensive industries. *Industrial Marketing Management*, 33, 675-687.
- Sprecher, S. (1998). The effect of exchange orientation on close relationship. *Social Psychology Quarterly*, 61 (3), 220-231.
- Spreng, R. A., MacKenzie, S. B., & Olshavsky, R. W. (1996). A reexamination of the determinants of consumer satisfaction. *Journal of Marketing*, 60 (July), 15-32.
- Spreng, R. A. & Mackoy, R. D. (1996). An empirical examination of a model of perceived service quality and satisfaction. *Journal of Retailing*, 72 (2), 201-214.
- Spreng, R. A. & Olshavsky, R. W. (1993). A desires congruency model of consumer satisfaction. *Journal of the Academy of Marketing Science*, 21 (Summer), 169-177.
- Sridhar, B., Konana, P., & Menon, N. M. (2003). Customer satisfaction in virtual environments: A study on online investing. *Management Science*, 49 (7), 871-889.
- Srinivasan, S. S., Anderson, R. & Ponnayolu, K. (2002). Customer loyalty in e-commerce: an exploration of its antecedents and consequences. *Journal of Retailing*, 78 (1), 41-50.
- Stead, B. A. & Gilbert, J. (2001). Ethical issues in electronic commerce. *Journal of Business Ethics*, 34 (2), 75-85.
- Steiger, J. H. (1989). *EZPATH: A supplementary module for SYSTAT and SYGRAPH*. Evanston, IL: SYSTAT.

- Strauss, J. & Hill, D. J. (2001). Consumer complaints by e-mail: An exploratory investigation of corporate responses and customer reactions. *Journal of Interactive Marketing*, 15 (Winter), 63-73.
- Stone, G. P. (1954). City shoppers and urban identification: Observations on the Social Psychology of city life. *American Journal of Sociology*, 60, 36-45.
- Suh, B. & Han, I.(2003). The impact of customer trust and perception of security control on the acceptance of electronic commerce. *International Journal of Electronic Commerce*, 7 (3), 135-161.
- Sum, C.-C., Lee, Y.-S., Hays, J. M., & Hill, A. V. (2002). *Modeling the effects of a service guarantee on perceived service quality using alternating conditional expectations (ACE). Working paper*. Retrieved March 10, 2005.
<http://www.mbt.carlsonschool.umn.edu/assets/2993.pdf>
- Swaminathan, V., Lepkowska-White, E. & Rao, B.P. (1999). Browser or buyers in cyberspace? An investigation of factors influencing electronic exchange. *Journal of Computer-Mediated Communication*, 5(2). Retrieved Dec. 14, 2004, from <http://www.ascusc.org/jcmc/vol5/issue2/swaminathan.htm>
- Szymanski, D. M. & Hise, R. T. (2000). E-satisfaction: An initial Examination. *Journal of Retailing*, 76 (3), 309-322.
- Tabachnick, B.G. & Fidell, L.S. (1996). *Using multivariate statistics*. Harper Collins: New York.
- Tanaka, J. S. (1984). Some results on the estimation of covariance structure models. *Dissertation Abstracts International*, 45, 924B.
- Tanaka, J. S. (1993). Multifaceted conceptions of fit in structural equation models. In K.A. Bollen, and J.S. Long (eds.), *Testing structural equation models*. Newbury Park, CA: Sage.
- Tanaka, J. S. & Huba, G. J. (1984). Structures of psychological distress: Testing confirmatory hierarchical models. *Journal of Consulting and Clinical Psychology*, 52, 719-721.
- Tax, S. S. & Brown, S. W. (1998). Recovering and learning from service failure. *Sloan Management Review*, 40, 75-88.
- Taylor, S. A. & Baker, T. L. (1994). An assessment of the relationship between service quality and customer satisfaction in the formation of consumers' purchase intentions. *Journal of Retailing*, 70 (2), 163-178.
- Taylor, S. & Todd, P. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, 6 (2), 144-176.

- Tauber, E. M. (1972). Why do people shop? *Journal of Marketing*, 36 (October), 46-49.
- Teas, R. K. (1993). Expectations, performance evaluation, and consumer's perceptions of quality. *Journal of Marketing*, 57 (October), 18-34.
- Tellis, G. J. (1988). Advertising exposure, loyalty, and brand purchase: A two-stage model of choice. *Journal of Marketing Research*, 25 (March), 134-144.
- Thayer, R.E. (1989). *The biopsychology of mood and activation*. Oxford University Press: New York.
- Thibaut, J. W. & Kelley, H. H. (1986). *The social psychology of groups*. New Brunswick, NJ: Transaction Books (Original work published 1959).
- Thorbjornsen, H. & Supphellen, M. (2004). The impact of brand loyalty on Website usage. *Journal of Brand Management*, 11 (3), 199-209.
- Todderdell, P. & Holman, D. (2003). Emotion regulation in customer service roles: Testing a model of emotional labor. *Journal of Occupational Health Psychology*, 8 (1), 55-73.
- Tomiuk, D. & Pinsonneault, A. (2001). Customer loyalty and electronic banking: A conceptual framework. *Journal of Global Information Management*, 9 (3), 4-14.
- Toms, E. G. & Taves, A. R. (2004). Measuring user perceptions of Web site reputation, *Information Processing and Management*, 40, 291-317.
- Too, L.H.Y., Souchon, A.L., & Thirkell, P.C. (2001). Relationship marketing and customer loyalty in a retail setting: A dyadic exploration, *Journal of Marketing Management*, 17 (1), 287-319.
- Torkzadeh, G. & Dhillon, G. (2002). Measuring factors that influence the success of internet commerce. *Information Systems Research*, 13 (1), 187-204.
- Totterdell, P. & Holman, D. (2003). Emotional regulation in call centres: Testing a model of emotional labor. *Journal of Occupational Health Psychology*, 8, 55-73.
- Tsai, W.-C. & Huang, Y.-M. (2002). Mechanisms linking employee affective delivery and customer behavioural intentions. *Journal of Applied Psychology*, 87 (5), 1001-1008.
- Tsiros, M. & Mittal, V. (2000). Regret: A model of its antecedents and consequences in consumer decision making. *Journal of Consumer Research*, 26 (4), 401-418.

- Turban, E., Lee, J., King, D. & Chung, H. M. (2000). *Electronic commerce a managerial perspective*. New Jersey: Prentice Hall International Inc.
- Turner, J.C., Oakes, P.J., Haslam, S.A. & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality and Social Psychology Bulletin*, 20, 454-463.
- Urban, G. L., Sultan, F. & Quails, W. J. (2000). Placing trust at the center of your internet strategy. *Sloan Management Review*, 42 (1), 39-48.
- van Iwaarden, J., van der Wiele, A., Ball, L. & Millen, R. (2003). Applying SERVQUAL to Web sites: An exploratory study. *International Journal of Quality and Reliability Management*, 20 (8), 919-935.
- van Iwaarden, J. & van der Wiele, A. (2003). A study on the applicability of SERVQUAL dimensions for web sites. *International Journal of Production Engineering and Computers*, 5 (6), 43-53.
- van Iwaarden, J., van der Wiele, A., Ball, L., & Millen, R. (2004). Perceptions about the quality of Web sites: A survey amongst students at Northwestern and Erasmus university. *Information & Management*, 41, 947-959.
- VanYperen, N. W. & Buunk, B. P. (1990). Equity Theory and Exchange and Communal Orientation from a Cross-National Perspective. *The Journal of Social Psychology*, 13 (1), 5-20.
- VanYperen, N. W., Buunk, B. P., & Schaufeli, W. B. (1992). Communal orientation and the burnout syndrome among nurses. *Journal of Applied Social Psychology*, 22 (3), 173-189.
- Venkatraman, N. (1989). Strategic orientation of business enterprises: The construct, dimensionality, and measurement. *Management Science*, 35 (8), 942-962.
- Vijayasarathy, L. R. (2004). Predicting consumer intentions to use on-line shopping: the case for an augmented technology acceptance model. *Information & Management*, 41, 747-762.
- Voss, C. (2000). Developing an e-service strategy. *Business Strategy Review*, 11 (1), 21-33.
- Waite, K. & Harrison, T. (2002). Consumer expectations of online information provided by bank Websites. *Journal of Financial Services Marketing*, 6 (4), 309-322.
- Walczuch, R. & Lundgren, H. (2004). Psychological antecedents of institution-based consumer trust in e-retailing. *Information & Management*, 42, 159-177.

- Walker, J. H., Sproull, J. & Subramani, R (1994). Using a human face in the interface. *Proceedings of the 1994 ACM Conference on Human Factors in Computing Systems (CHI '94)*, New York: ACM Press, 85-91.
- Walther, J. B., & Burgoon, J. K. (1992). Relational communication in computer-mediated interaction. *Human Communication Research*, 19 (1), 50-88.
- Warrington, T.B., Abgrab, N, J. & Caldwell, H. M. (2000). Building trust to develop competitive advantage in e-business relationships. *Consumer Research*, 10 (2), 160-168.
- Watson, D., Clark, L. A. & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.
- Webster, F. E. (1992). The changing role of marketing in the corporation. *Journal of Marketing*, 56 (October), 1-17.
- Wells, N & Wolfers, J. (2000). Finance with a personalized touch. *Communications of the ACM*, 43 (8), 31-34.
- Wernerfelt B. (1991). Brand loyalty and market equilibrium. *Marketing Science*, Summer, 229-245.
- West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with nonnormal variables: Problems and remedies. In R. H. Hoyle (Ed.), *Structural equation modeling: Issues, concepts, and applications*, (pp. 56-75). Thousand Oaks, CA: Sage.
- Westbrook, R. A. (1981). Sources of consumer satisfaction with retail outlets, *Journal of Retailing*, 57(fall), 68-85.
- Westbrook, R. A. (1987). Product/consumption based affective responses and postpurchase processes. *Journal of Marketing Research*, 24, 258-270.
- Westbrook, R. A. & Oliver, R. L. (1991). The dimensionality of consumption emotion patterns and consumer satisfaction, *Journal of Consumer Research*, 18, 84-92.
- Wheeler, R. W., Baron, J. C., Michell, S., & Ginsburg, H. J. (1979). Eye contact and the perception of intelligence. *Bulletin of the Psychonomic Society*, 13 (2), 101-102.
- Wiens, A. N., Harper, R. G., & Matarazzo, J. (1980). Personality correlates of nonverbal interview behavior. *Journal of Clinical Psychology*, 36 (1), 205-215.

- Wiener, M. & Mehrabian, A. (1968). *Language within language: Immediacy, a channel in verbal communication*. New York: Appleton-Century-Crofts
- Williamson, G. M. & Shaffer, D. R. (2001). Relationship quality and potentially harmful behaviors by spousal caregivers: How we were then, how we are now. *Psychology and Aging, 16* (2), 217-226.
- Wilson, D. T. & Mummalaneni, V. (1986). Bonding and commitment in buyer-seller relationships: A preliminary conceptualization. *Industrial Marketing and Purchasing, 1* (3), 44-58.
- Wilson, C. & Williams, E. (1975). Watergate words: A naturalistic study of media and communication. *Unpublished Communications Studies Group paper*.
- Wirtz, J. (2001). Improving the measurement of customer satisfaction: A test of three methods to reduce halo. *Managing Service Quality, 11* (2), 99-112.
- Wolfenbarger, M. & Gilly, M. C. (2001). Shopping online for freedom, control, and fun. *California Management Review, 43* (2), 34-56.
- Woo, S.-S. & Ennew, C. T. (2004). Business-to-business relationship quality: an IMP interaction-based conceptualization and measurement. *European Journal of Marketing, 38* (9-10), 1252-1271.
- Wood, W. (1982). Retrieval of attitude-relevant information from memory: effects on susceptibility to persuasion and on intrinsic motivation. *Journal of Personality and Social Psychology, 42* (May), 798-810.
- Woodruff, R. B. (1997). Customer value: The next source of comparative advantage. *Journal of the Academy of Marketing Science, 25* (Spring), 139-153.
- Woodside, A., Frey, L. & Daly R. (1989). Linking service quality, customer satisfaction and behavioral intentions. *Journal of Health Care Marketing, 9* (December), 5-17.
- Wright, P. H. (1985). The acquaintance description form. In S. Duck & D. Perlman, (eds.), *Understanding personal relationships: An interdisciplinary approach*, (pp. 39-62). London: Sage Publications.
- Wu, J. & Padgett, D. (2004). A direct comparative framework of customer satisfaction: An application to internet search engines. *Journal of Interactive Marketing, 18* (2), 32-51
- Xue, M., Harker, P. T. & Heim, G. R. (2000). Website efficiency, customer satisfaction and customer loyalty: A customer value driven perspective. *Working Paper: 00-12-03*, The Wharton School, University of Pennsylvania, Philadelphia, PA.

- Yasin, R. (2000). E-Bank enters crowded waters. *InternetWeek*, 834 (11). Retrieved January 16, 2001, from <http://www.internetwk.com/>
- Yoo, B., & Donthu, N. (2001). Developing a scale to measure the perceived quality of an internet shopping site (SITEQUAL). *Quarterly Journal of Electronic Commerce*, 2 (1), 31-46.
- Yoon, Y. & Uysal, M. (2005). An examination of the effects of motivation and satisfaction on destination loyalty: A structural model. *Tourism Management*, 26, 45-56.
- Youniss, J. & Smollar (1985). *Adolescent relations with mothers, fathers and friends*. Chicago: University of Chicago Press.
- Zabava Ford, W. S. (1998). *Communicating with customers*. Cresskill, New Jersey: Hampton Press, Inc.
- Zaichkowsky, J. L. (1985). Measuring the involvement construct. *Journal of Consumer Research*, 12, 341-352.
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52 (July), 2-22.
- Zeithaml, V. A., Berry, L.L. & Parasuraman, A. (1991). The nature and determinants of customer expectations of services. *Working Paper No. 91-113*. Marketing Science Institute.
- Zeithaml V. A., Berry L. L., Parasuranam, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60 (2), 31-46.
- Zeithaml, V. A. & Bitner, M. J. (1996). *Services marketing*. New York, New York: McGraw Hill.
- Zeithaml, V. A. & Gilly, M. C. (1987). Characteristics affecting the acceptance of retailing technologies: A comparison of elderly and nonelderly consumers. *Journal of Retailing*, 63 (1), 49-68.
- Zeithaml, V. A., Parasuraman, P., & Malhotra, A. (2001). A conceptual framework for understanding e-service quality: Implications for future research and managerial practice. *Working Paper*. Retrieved July 28, 2001, from <http://www.kenanflagler.unc.edu/Marketing/wpapers/papers/e-Service.pdf>
- Zeithaml, V. A., Parasuraman, P., & Malhotra, A. (2002). Service quality delivery through Web sites: A critical review of extant knowledge, *Academy of Marketing Science. Journal*, 30 (4), 362-375.

Zemke, R. (2000). The best customer to have is the one you've already got. *The Journal for Quality and Participation*, 23 (2), 33-36.

Zhang, P. & von Dran, G. (2001-2002). User expectations and ranks of quality factors in different Website domains. *International Journal of Electronic Commerce*, 6 (3), 9-34.

Zhu, K. & Kraemer, K. L. (2002). E-commerce metrics for net-enhanced organizations: Assessing the value of e-commerce to firm performance in the manufacturing sector. *Information Systems Research*, 13 (3), 275-296.

Zhu, F. X., Wymer, W. & Chen, I. (2002). IT-based services and service quality in consumer banking. *International Journal of Service Industry Management*, 13 (1), 69-90.

Zins, A. H. (2001). Relative attitudes and commitment in customer loyalty models. *International Journal of Service*, 12 (3), 269-294.

APPENDIX 1

Initial Pool of Items and Purification Results for Dimensions of Site-Communality

[illegible]

company toward visitors.												
This Web site was designed so as to convey positive feelings to customers.	B	B	B	B	B	B	B	B	B	B	10	GC4
C. Approachability	The extent to which the Web site's content makes the visitor feel that the company facilitates, encourages and is receptive to customer contact.											
The design of this Web site makes me feel comfortable about having to contact this company.	C	C	C	A	C	C	B	C	C	C	9	Dropped in EFA
This Web site encourages users to seek assistance when needed.	C	C	C	C	Uns	C	C	C	C	C	9	AP1
This Web site makes it easy for users to turn to this company for help.	C	C	C	C	C	C	Uns	C	C	C	9	AP2: Dropped in CFA
This Web site wants users to ask for help when they need it.	C	C	C	C	C	C	C	C	C	C	10	AP3
This Web site suggests that I will not get frustrated or angry if I seek this company's assistance.	C	C	C	C	C	C	C	C	C	C	10	Dropped in EFA (cross loading)
This Web site which suggests that this company expects customers to contact the company only as a last resort (Reverse Coded).	Uns	C	B	C	Uns	C	C	C	A	B	6	Dropped in Card Sorting
This Web site invites users to get in touch with the company whenever they need to.	C	C	C	C	C	C	C	C	C	C	10	AP4
D. Authenticity / Non-instrumentality	The extent to which Web site content conveys that a company's feelings and concerns for its customers are genuine rather than simply instrumental in achieving some goal.											
This Web site makes me believe that this company has a genuine concern for its customers.	D	D	D	D	D	D	D	D	D	D	10	AU1
This Web site has persuaded me that this company has real feelings for its customers.	D	A	D	D	B	D	D	D	C	D	7	AU2
I got a sense of heartfelt kindness toward customers when I was on this company's Web site.	D	A	D	Uns	D	A	D	A	D	F	5	Dropped in Card Sorting
This Web site has convinced me that this company honestly wants to help customers, not just sell them something.	D	D	D	D	D	D	D	D	D	D	10	AU3
After visiting this site, I suspect that this company only helps people when doing so is good for business (Reverse Coded).	D	D	D	D	Uns	C	C	D	D	D	7	Dropped in EFA
Based on its Web site, my impression of this company is that it is primarily guided by profit (Reverse Coded).	D	D	D	D	D	A	D	D	D	D	9	Dropped in EFA
After seeing its Web site, I feel that this company would help a	D	D	D	D	D	D	Uns	E	D	D	8	Dropped in EFA

customer only to get something in return (Reverse Coded).												
E. Role Spanning	<i>The extent to which Web site content demonstrates that the company sees the visitor/user as 'a person' rather than strictly 'a customer' and attempts to relate with the visitor/user on a personal as well as on a commercial level.</i>											
This Web site reminded me of people, places, or things I care about.	E	A	E	E	Uns	E	E	A	E	E	7	RS1
This Web site reminds visitors of other important things in life aside from business.	E	E	E	Uns	E	E	E	E	E	E	9	RS2: Dropped in CFA
This Web site contains pictures or information which I related to on a deeper, human level.	E	E	A	E	E	E	D	E	E	E	8	RS3
This Web site tells me this company sees visitors "as people", not only "as customers".	E	E	E	A	E	E	E	Uns	E	E	8	RS4
This Web site shows that this company's interest in me does <u>not</u> go further than my business (Reverse Coded).	E	E	E	A	E	E	E	E	E	E	9	Dropped in EFA
This Web site shows this company tries to relate to visitors on a personal as well as on a commercial level.	E	A	E	E	E	E	Uns	A	E	E	7	RS5
F. Self-Disclosure:	<i>The extent to which Web site content reveals to users/visitors the company's non-commercial related activities, involvements, and/or interests.</i>											
After having visited this Web site, I feel like I know whom I am dealing with, not just what they are selling.	F	F	Uns	F	F	F	Uns	F	F	F	8	Dropped in EFA
This Web site provides more than simply business information about this company.	F	F	F	F	F	F	F	F	F	F	10	SD1
This Web site reveals interesting facts about this company not directly related to its business.	F	F	F	F	F	F	Uns	Uns	F	F	8	SD2
This Web site shows that this company feels that it's important to tell visitors about itself.	F	F	F	F	F	Uns	F	F	Uns	F	8	SD3: Dropped in CFA
This Web site contains more than just information about this company's business activities.	F	F	F	F	F	F	F	F	F	F	10	SD4
Judge's correct assignment of items out of total of 39	37	31	35	31	33	34	28	28	35	36		

Uns: Judge indicated that (s)he was unsure of assignment

Mis: Card was missing when returned by the judge

APPENDIX 2

Instruction for Card Sorting Exercise

March 28, 2003

Card Sorting Exercise

Thank you for participating as judge for the purpose of validating the items of a questionnaire. Your task, which is known as card sorting, is to associate a set of items (i.e., sentences) to different concepts. This task will take you less than 15 minutes and your efforts will be very much appreciated.

The material provided to you includes:

- A. **Four (6) small envelopes.** On each one is written the name of a concept and its definition.
- B. **One (1) small envelope** entitled “Unsure”.
- C. **39 pieces of paper.** On each is written a sentence as it will appear on the questionnaire we intend to develop.
- D. **A larger return envelope.**

Your task is to associate each sentence to one (1) concept you believe this sentence pertains to and to place the piece of paper on which this sentence is written into the appropriate envelope. Two examples are given below:

Example 1: A piece of paper on which is written “*I am happy with this Web site*” would likely go into an envelope entitled “**Satisfaction with Web site**”.

Example 2: A piece of paper on which is written “*This Web site is not very intuitive (Reverse coded)*” would likely go into an envelope entitled “**Perceived Ease of Use**”.

Important: If you unsure of what envelope a particular sentence should go into, simply place it into the envelope entitled “Unsure”.

Finally, please seal each envelope before returning them to me.

Thank you for your help.

Daniel Tomiuk

If you have any question at all,
please feel free to contact me at:
398-5189 (Office)
578-5941 (Home).

APPENDIX 3

Initial Pool of Items and Purification Results for Dimensions of Site-Loyalty and Other Scales

	Judge 11	Judge 12	Judge 13	Judge 14	Judge 15	Judge 16	Judge 17	Judge 18	Judge 19	Judge 20	Correct Assignment Out of 10	
A. Relative Attitude	<i>A preferential attitudinal bias toward the Web site relative to other Web sites the customer may be familiar with.</i>											
This Web site is an excellent choice.	A	A	A	A	A	A	A	A	A	A	10	RA1
Compared to others I've seen, I like this Web site.	A	A	A	A	A	B	A	A	A	A	9	RA2
There is nothing special about this Web site (Reverse Coded).	A	Uns	A	A	A	A	A	A	A	A	9	RA3: Dropped in CFA
Compared to other Web sites, I have a good feeling about this one.	B	A	A	A	A	A	A	B	A	Uns	7	RA4
I'd feel quite confident in choosing this Web site rather than another.	D	A	A	A	A	Uns	A	A	A	A	8	RA5
B. Emotional Attachment	<i>The extent to which the customer cares about and wants to support and see the company succeed and do well.</i>											
It would pain me to see this company fail.	B	B	B	B	A	B	B	B	A	B	8	EMO1
I would like to see this company succeed.	B	B	B	B	B	B	B	B	B	B	10	EMO2
I'd feel sorry to hear that this company was having trouble competing online.	Uns	F	B	A	B	B	B	F	B	Uns	5	Dropped in Card Sorting
It would bother me to know that competitors were trying to put this company out of business.	B	Uns	B	B	B	B	B	A	B	B	8	EMO3: Dropped in CFA
I think that it is important for Internet users to show their support for this company.	D	B	B	B	D	B	B	D	B	B	7	EMO4
I can understand how some customers can develop feelings for this company	A	B	A	B	Uns	B	B	Mis	B	B	6	Dropped in Card Sorting

H. Overall Site-Loyalty	The extent to which the customer is loyal towards the Web site/online company.											
This Web site promotes customer loyalty.	H	H	H	H	H	H	H	H	H	H	10	LOY1
It would not surprise me to learn that this company has loyal customers.	H	H	H	H	H	H	H	H	H	H	10	LOY2
I feel that this Web site is worthy of its customers' loyalty.	H	H	H	H	H	H	H	H	H	H	10	LOY3
Judge's correct assignment of items out of total of 44	32	36	37	37	34	34	39	36	35	36		

Uns: Judge indicated that (s)he was unsure of assignment

Mis: Card was missing when returned by the judge

APPENDIX 4

Items Included into Questionnaire 3 (Items Which Remaining After Card Sorting and Exploratory Factor Analysis)

PANAS (taken from Watson, Clark and Tellegen, 1988)	Item
Interested	PA1
Distressed	NA1
Excited	PA2
Upset	NA2
Strong	PA3
Guilty	NA3
Hostile	NA4
Scared	NA5
Enthusiastic	PA4
Proud	PA5
Irritable	NA6
Alert	PA6
Ashamed	NA7
Inspired	PA7
Nervous	NA8
Determined	PA8
Jittery	NA9
Attentive	PA9
Active	PA10
Affraid	NA10

Good Cheer <i>The extent to which the content of the Web site conveys a sense of friendliness and positive feelings to customers.</i>	Item	Retained in CFA Analysis
This Web site shows this company wants to convey good feelings toward visitors.	GC1	Yes
This Web site indicates that this company is keen on expressing good cheer toward visitors.	GC2	Yes
This Web site conveys positive feelings on the part of the company toward visitors.	GC3	Yes
This Web site was designed so as to convey positive feelings to customers.	GC4	Yes

Role Spanning <i>The extent to which Web site content demonstrates that the company sees the visitor/user as 'a person' rather than strictly 'a customer' and attempts to relate with the visitor/user on a personal as well as on a commercial level.</i>	Item	Retained in CFA Analysis
This Web site reminded me of people, places, or things I care about.	RS1	Yes
This Web site reminds visitors of other important things in life aside from business.	RS2	<i>Dropped in CFA</i>
This Web site contains pictures or information which I related to on a deeper, human level.	RS3	Yes
This Web site tells me this company sees visitors "as people", not only "as customers".	RS4	Yes
This Web site shows this company tries to relate to visitors on a personal as well as on a commercial level.	RS5	Yes

Approachability <i>The extent to which the Web site's content makes the visitor feel that the company facilitates, encourages and is receptive to customer contact.</i>	Item	Retained in CFA Analysis
This Web site encourages users to seek assistance when needed.	AP1	Yes
This Web site makes it easy for users to turn to this company for help.	AP2	<i>Dropped in CFA</i>
This Web site wants users to ask for help when they need it.	AP3	Yes
This Web site invites users to get in touch with the company whenever they need to.	AP4	Yes

Demonstration of Caring <i>The extent to which Web site content indicates that the company behaves in a caring and nurturing manner with its customers.</i>	Item	Retained in CFA Analysis
This Web site wants me to know that the company behaves in a caring manner with customer.	C1	Yes
This Web site shows this company nurtures its customers.	C2	Yes
This Web site suggests customers are well looked after.	C3	Yes
This Web tries to convey a strong sense of caring for the customer.	C4	Yes

Self-Disclosure <i>The extent to which Web site content reveals to users/visitors the company's non-commercial related activities, involvements, and/or interests.</i>	Item	Retained in CFA Analysis
This Web site provides more than simply business information about this company.	SD1	Yes
This Web site reveals interesting facts about this company not directly related to its business.	SD2	Yes
This Web site shows that this company feels that it's important to tell visitors about itself.	SD3	<i>Dropped in CFA</i>
This Web site contains more than just information about this company's business activities.	SD4	Yes

Authenticity / Non-instrumentality <i>The extent to which Web site content conveys that a company's feelings and concerns for its customers are genuine rather than simply instrumental in achieving some goal.</i>	Item	Retained in CFA Analysis
This Web site makes me believe that this company has a <i>genuine</i> concern for its customers.	AU1	Yes
This Web site has persuaded me that this company has <i>real</i> feelings for its customers.	AU2	Yes
This Web site has convinced me that this company <i>honestly</i> wants to help customers, not just sell them something.	AU3	Yes

Overall Site-Communality <i>The extent to which Web site content signals that a company's relationship with its customers goes beyond the formal, 'tit for tat' business dealings that are typically expected from purely commercial exchanges, and instead, more closely abide by the norms and behaviours evocative of friendships and/or family relations.</i>	Item	Retained in CFA Analysis
This Web site makes users feel like they are dealing with friends rather than strangers.	SiteComm 1	Yes
This Web site makes you feel like you can expect more than a "strictly business" relationships from this company.	SiteComm 2	Yes
This Web site makes visitors feel like they will be treated "like family"	SiteComm 3	Yes
This Web site shows this company has many of the qualities which I'd look for in a friend.	SiteComm 4	Yes

Overall Site-Loyalty <i>The extent to which the customer is loyal towards the Web site/online company.</i>	Item	Retained in CFA Analysis
This Web site promotes customer loyalty.	LOY1	Yes
It would not surprise me to learn that this company has loyal customers.	LOY2	Yes
I feel that this Web site is worthy of its customers' loyalty.	LOY3	Yes

Relative Attitude	Item	Retained in CFA Analysis
This Web site is an excellent choice.	RA1	Yes
Compared to others I've seen, I like this Web site.	RA2	Yes
There is nothing special about this Web site (reverse - recoded).	RA3	<i>Dropped in CFA</i>
Compared to other Web sites, I have a good feeling about this one.	RA4	Yes
I'd feel quite confident in choosing this Web site rather than another.	RA5	Yes

Emotional Attachment	Item	Retained in CFA Analysis
It would pain me to see this company fail.	EMO1	Yes
I would like to see this company succeed.	EMO2	Yes
It would bother me to know that competitors were trying to put this company out of business.	EMO3	<i>Dropped in CFA</i>
I think that it is important for Internet users to show their support for this company.	EMO4	Yes

Word Of Mouth <i>The user's willingness to recommend the Web site to others.</i>	Item	Retained in CFA Analysis
I would recommend this site to others.	WOM1	Yes
I would <i>discourage</i> others from using this site (Reverse Coded)	WOM2	Yes
I would say good things about this site.	WOM3	Yes
I would encourage others to have a look at this site.	WOM4	Yes

Intention to Use/Revisit <i>The customer's desire to use/revisit the Web site.</i>	Item	Retained in CFA Analysis
I would use this Web site.	USE1	Yes
I would do business with this Web site.	USE2	Yes
I would revisit this Web site.	USE3	Yes

Resistance to Switching/to Competitors' Attempts at Counter Persuasion <i>The customer's unwillingness to switch to other Web sites and resistance to competitor's attempts at counter persuasion.</i>	Item	Retained in CFA Analysis
If I were already a customer of this Web site, it would take a lot to get me to switch.	RES1	Yes
If I were already a customer of this Web site, I'd stay with this site rather than look for another.	RES2	Yes
If I were already a customer of this Web site, I would quickly switch to another site offering <i>slightly</i> better deals (Reverse Coded).	RES3	<i>Dropped in CFA</i>
If I were already a customer of this Web site, I'd stay with this Web site even if others charged a <i>little</i> less.	RES4	Yes

Willingness to Invest More <i>The customer's willingness to invest more time and effort to familiarize oneself with the Web site.</i>	Item	Retained in CFA Analysis
Getting to know more about what this Web site has to offer is worth it.	INV1	Yes
It is worth investing time in familiarizing oneself with this site.	INV2	Yes
Even if navigating this Web site was a little more difficult than others, it would still be worth using it.	INV3	<i>Dropped in CFA</i>
In the future, I may invest more time to get to know this site better.	INV4	Yes

Integrity (Trust Dimension – Adapted from McKnight et al. 2002)	Item
This company is truthful in its dealings with me.	INTEG1
I would characterize this company as honest.	INTEG2
This company would keep its commitments.	INTEG3

Competence (Trust Dimension – Adapted from McKnight et al. 2002)	Item
This company is competent and effective in providing its products/services.	COMP1
This company performs its role of selling of selling products/providing services very well.	COMP2
Overall, this is a capable and proficient Internet company.	COMP3
In general, this company is very knowledgeable about the business it is in.	COMP4

Benevolence (Trust Dimension – Adapted from McKnight et al. 2002)	Item
I believe that this company would act in my best interest.	BENE1
If I required help, this company would do its best to help me.	BENE2
This company is interested in my well-being, not just its own.	BENE3

Overall Web site Satisfaction	Item	Retained in CFA Analysis
Overall, I am (<i>ranges from</i> Very Pleased <i>to</i> Very Displeased) with this Web site.	SAT1	Yes
Overall, this Web site was (<i>ranges from</i> Better than expected <i>to</i> Worse than expected).	SAT2	Yes
Overall, I am (<i>ranges from</i> Very delighted <i>to</i> Very disappointed) with this Web site.	SAT3	Yes
Overall, I am (<i>ranges from</i> Very satisfied <i>to</i> Very dissatisfied) with this Web site.	SAT4	Yes

Communal-Oriented in Commercial Environments <i>the extent to which a consumer enjoys 'getting to know' employees (i.e., waitress, bank teller, hair stylist) and relating with them on a more personal-level than is typically required for the effective delivery of a service.</i>	Item	Retained in CFA Analysis
In traditional commercial settings, I usually prefer to have strictly business-like relationships with employees (Reverse Coded).	ComOri1	Yes
In traditional commercial settings, I often start chatting with employees.	ComOri2	Yes
In traditional commercial settings, I usually like getting to know at least one of the employees on a personal basis.	ComOri3	Yes

APPENDIX 5

Questionnaire 3 (Final Questionnaire)



McGill

This study has been approved by the Ethics Committee of McGill University

Please note that our ability to deliver quality research depends on you reading the questions carefully and answering honestly. Thank you for your support.

Instructions:

- (1) Checkmark the Web site of a company (see below) which you are not familiar with.**
- (2) Open this Web site and explore it as though you were deciding on whether to do business with this company or not (a period of 10 or more minutes).**
- (3) Once you feel confident of your impressions about the Web site, answer the questionnaire provided below. This will automatically enter you into the draw.**

Enter your contact information (The following information will only be used to contact you in case you win the draw).

First Name (last name is optional):

Email or Tel.No with area code:

Indicate the web site you are evaluating:

- ☐ IMB (Click [here](#) to open this site)
- ☐ DuBose & Associates (Click [here](#) to open this site)
- ☐ AMFAM Insurance (Click [here](#) to open this site)
- ☐ CIBC (Click [here](#) to open this site)
- ☐ Canameds (Click [here](#) to open this site)
- ☐ WebPharmacy (Click [here](#) to open this site)
- ☐ First Metro Bank (Click [here](#) to open this site)
- ☐ Manchester Unity (Click [here](#) to open this site)
- ☐ Laurentian Bank (Click [here](#) to open this site)
- ☐ RBC Insurance (Click [here](#) to open this site)
- ☐ WestPac (Click [here](#) to open this site)
- ☐ Alexander Insurance Incorporated (Click [here](#) to open this site)
- ☐ Scotia Bank (Click [here](#) to open this site)
- ☐ Priority Pharmacy (Click [here](#) to open this site)
- ☐ Man-Health Online Pharmacy (Click [here](#) to open this site)
- ☐ International Student Insurance (Click [here](#) to open this site)
- ☐ J. Weinberg & Associates (Click [here](#) to open this site)

- ☐ Colonial Savings Bank (Click [here](#) to open this site)
- ☐ M.A.M.I Insurance (Click [here](#) to open this site)
- ☐ 1Drugstore-Online (Click [here](#) to open this site)
- ☐ Aetna Insurance (Click [here](#) to open this site)
- ☐ Royal and Sun Alliance Canada (Click [here](#) to open this site)
- ☐ Macquarie Bank (Click [here](#) to open this site)
- ☐ Canadian Drugs (Click [here](#) to open this site)
- ☐ County Bank (Click [here](#) to open this site)
- ☐ LEM Insurance Services (Click [here](#) to open this site)
- ☐ Citizen's Bank of Canada (Click [here](#) to open this site)
- ☐ Amica Insurance (Click [here](#) to open this site)

1. After visiting this Web site, I feel...

	Extremely	Quite a bit	Moderately	A little	Not at all
Interested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Distressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Excited	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Upset	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strong	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Extremely	Quite a bit	Moderately	A little	Not at all
Guilty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hostile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enthusiastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proud	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Irritable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ashamed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspired	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nervous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Determined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jittery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attentive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Afraid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. This Web site...

[illegible]

3. This Web site...

[illegible]

... shows this company tries to relate to visitors on a personal as well as on a commercial level.

...invites users to get in touch with the company whenever they need to.

...makes it easy for users to turn to this company for help.

...encourages users to seek assistance when needed.

[illegible][illegible]

5. This Web site...

[illegible]

6. This Web site...

[illegible]

7. This Web site...

[illegible]

8. Overall, this Web site...

[illegible]

[illegible][illegible][illegible]

	Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree
another.							
Compared to other Web sites, I have a good feeling about this one.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is nothing special about this Web site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Indicate the degree to which you agree/disagree with the following:

	Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree
I would encourage others to have a look at this site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would say good things about site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would recommend this site to others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would <u>discourage</u> others from using this site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Indicate the degree to which you agree/disagree with the following:

14. Indicate the degree to which you agree/disagree with the following:

[illegible]

15. Indicate the degree to which you agree/disagree with the following:

[illegible]

Strongly Agree Moderately Agree Slightly Agree Neither Agree nor Disagree Slightly Disagree Moderately Disagree Strongly Disagree

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree
----------------	------------------	----------------	----------------------------	-------------------	---------------------	-------------------



Strongly Agree Moderately Agree Slightly Agree Neither Agree nor Disagree Slightly Disagree Moderately Disagree Strongly Disagree



	Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree
In general, this company is very knowledgeable about the business it is in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. Indicate the degree to which you agree/disagree with the following:

	Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree
I believe that this company would act in my best interest.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I required help, this company would do its best to help me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This company is interested in my well-being, not just its own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. Overall, I am with this Web site.

Very Pleased	Neither Pleased nor Displeased			Very Displeased
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. Overall, this Web site was

**Better
than
expected**

**Just as
expected**

**Worse
than
expected**



21. Overall, I am with this Web site.

**Very
Delighted**

**Neither
Delighted
nor
Disappointed**

**Very
Disappointed**



22. Overall, I am with this Web site.

**Very
Satisfied**

**Neither
Satisfied
nor
Dissatisfied**

**Very
Dissatisfied**



23. In traditional commercial settings,...

	Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree
...I often start chatting with employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...I usually like getting to know at least one of the employees on a personal basis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...I usually prefer to have strictly business-like relationships with employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What is your gender?

- ☐ Male
- ☐ Female

What is your age?

- ☐ Under 18
- ☐ 18-21
- ☐ 22-24
- ☐ 25-29
- ☐ 30-39
- ☐ 40-49

- ☐ 50-59
- ☐ 60-69
- ☐ 70 and over

What is your marital status?

- ☐ Married
- ☐ Single, never married
- ☐ Widowed
- ☐ Separated or divorced

Which of the following best describes your total income before taxes last year?

- ☐ Under \$10,000
- ☐ \$10,000 - \$19,999
- ☐ \$20,000 - \$29,999
- ☐ \$30,000 - \$39,999
- ☐ \$40,000 - \$49,999
- ☐ \$50,000 - \$59,999
- ☐ \$60,000 - \$69,999
- ☐ \$70,000 - \$79,999

- ☐ \$80,000 - \$89,999
- ☐ \$90,000+

Which of the following best describes your family's total household income before taxes last year?

- ☐ Under \$10,000
- ☐ \$10,000 - \$19,999
- ☐ \$20, 000 - \$29,999
- ☐ \$30,000 - \$39,999
- ☐ \$40,000 - \$49,999
- ☐ \$50,000 - \$59,999
- ☐ \$60,000 - \$69,999
- ☐ \$70,000 - \$79,999
- ☐ \$80,000 - \$89,999
- ☐ \$90,000+

Which of the following best describes your current living situation?

- ☐ Currently living at home with my parents
- ☐ Living temporarily away of home due to studies (e.g., University residence)
- ☐ Living permanently in own home or in apartment

Indicate the highest level of education you have attained?

- ☐ Elementary School
- ☐ High School
- ☐ Community College or Technical School
- ☐ Undergraduate University Degree
- ☐ Graduate University Degree (MBA, MSc, PhD, etc.)

What is your occupation?

Occupation

What race/ethnicity do you identify yourself with?

- ☐ Black / African American
- ☐ Hispanic / Latino
- ☐ Asian
- ☐ White / Caucasian
- ☐ American Indian / American Native
- ☐ Native Hawaiian / Pacific Islander

☐ Other (please specify)

☐ Would rather not say

Thank you for participating. This research project is being conducted by Daniel Tomiuk (Assistant Professor of IS at Prairie View A&M - Texas) and Alain Pinsonneault (Professor of IS at McGill University). If you have any questions or concerns about this study, please email daniel_tomiuk@pvamu.edu

Survey by: 10/10/2011 10:00:00 AM

APPENDIX 6

**Email to and Response from
M.S. Clark
(Spring 2001)**

Email Sent to M. S. Clark

Dear Professor Clark

I am a Ph.D. student at McGill University in Montreal and I am currently working on my thesis which deals with how Self-Service technologies may impact on customer loyalty. While reviewing research on relationships in both Marketing and Psychology, I came across your work on communal versus exchange relationships and it caught my attention.

My questions:

(1) Is it correct for me to assume that the "desire for communal-relationship" is relatively stable in a person over time given a particular situation (e.g., interacting with bank personnel). I understand that it is not a personality trait but would it be correct for me to say that some people are relatively more communally-oriented while others are more exchange-oriented in particular social situations. For instance, the idea that certain persons may be more communally-oriented than others has been suggested in research founded on your work and where the authors speak of "orientation" (which suggests stability)...

Buunk, B. P., Doosje, B. J., Jans, G. J., Hopstaken, L. (1993). Perceived reciprocity, social support, and stress at work: The role of exchange and communal orientation. *Journal of Personality and Social Psychology*, 65(4), 801-811.

(2) If it is something that may be considered as stable, is it correct to hypothesize that communally-oriented customers would most likely prefer establishing "interpersonal relationships" with persons behind the counter while exchange-oriented customers may be more content with "role-prescribed" relations with employees where interaction is considered as more instrumental (a means to an end). In other words, for persons who prefer exchange relationships, any employee would do if he/she gets the job done.

Finally, I would greatly appreciate if you could suggest any additional readings on the topic. Here are the list of articles I have found on your work:

Clark, M. S., and Mills, J. (1979), Interpersonal attraction in exchange and communal relationships. *Journal of Personality and Social, Psychology*, 37,12-24

Clark, M. S., Ouellette, R., Powell, M. C., and Milberg, S. (1987). Recipient's mood, relationship type, and helping. *Journal of Personality and Social Psychology*, 53(1), 94-103.

Clark, M.S. and Mills, J. (1993). "The difference between communal and exchange relationships: What it is and is not", *Personality and Social Psychology Bulletin*. 19, 684-691

Mills, J., and M. S. Clark (1982) "Communal and exchange relationships." *Review of Personality and Social Psychology*, 3, 121-144.

Mills, J., and Clark, M. S. (1994). "Communal and Exchange Relationships: Controversies and Research." Pp. 29-42 in *Theoretical Frameworks for Personal Relationships*, edited by Ralph Erber and Robin Gilmour. Hillsdale, NJ: Erlbaum

Clark, M. S. (1985). "Implications of Relationship Type for Understanding Compatibility". Pp. 119-140 in *Compatible and Incompatible Relationships*, edited by William Ickes. Springer-Verlag. NY: New York

Thank you for your time and help.

Respectfully
Daniel Tomiuk
tomiuk@management.mcgill.ca

Response from M. S. Clark

Dear Daniel,

I've read your message just once. I think your reasoning does make sense.

The Clark, Ouellette, Powell and Milberg (1987) piece that you have already found includes the original report of the communal orientation scale. There is a chapter in which this scale and an exchange orientation scale are discussed in more detail and I'll send that to you.

I'd also like to think about your comments further and get back to you.
I'll do that soon.

Margaret Clark

APPENDIX 7

Ethics Form

**ETHICS REVIEW
ANNUAL STATUS REPORT/RENEWAL REQUEST/FINAL REPORT**

Continuing review of human subjects research requires, at a minimum, the submission of an annual status report to the REB. This form must be completed to request renewal of ethics approval. If a renewal is not received before the expiry date, the project is considered no longer approved and no further research activity may be conducted. When a project has been completed, this form can also be used as a Final Report, which is required to properly close a file. To avoid expired approvals and, in the case of funded projects, the freezing of funds, this form should be returned at least 1 month before the current approval expires.

REB File #: 2-0603

Project Title: The Impact and Relative Importance of Site-Communitality on Site-Loyalty

Principal Investigator: Daniel Tomiuk

Department/Phone/Email: Faculty of Management/Daniel.tomiuk@mail.mcgill.ca

Faculty Supervisor (for student PI): Alain Pinsonneault

1. Were there any significant changes made to this research project that have any ethical implications? ___ Yes ___X___ No
If yes, describe these changes and append any relevant documents that have been revised.

2. Are there any ethical concerns that arose during the course of this research? ___ Yes ___X___ No. If yes, please describe.

3. Have any subjects experienced any adverse events in connection with this research project? ___ Yes ___X___ No
If yes, please describe.

4. ___X___ This is a request for renewal of ethics approval.

5. ___ This project is no longer active and ethics approval is no longer required.

6. List all current funding sources for this project and the corresponding project titles if not exactly the same as the project title above. Indicate the Principal Investigator of the award if not yourself.
SSHRC: The Impact of Information Technology on Organizations: A Mutli-level Analysis, Alain Pinsonneault (PI)

Principal Investigator Signature: _____

Date: 04/23/04

Faculty Supervisor Signature: _____
(for student PI)

Date: 04/23/04

For Administrative Use	REB: ___ AGR ___ EDU <input checked="" type="checkbox"/> REB-I ___ REB-II
___ The closing report of this terminated project has been reviewed and accepted	
<input checked="" type="checkbox"/> The continuing review for this project has been reviewed and approved	
<input checked="" type="checkbox"/> Expedited Review ___ Full Review	
Signature of REB Chair or designate: _____ Date: May 10, 2004	
Approval Period: June 3, 2004 to June 2, 2005	

Submit to Lynda McNeil, Research Ethics Officer, James Administration Bldg., rm 429, fax: 398-4853

APPENDIX 8

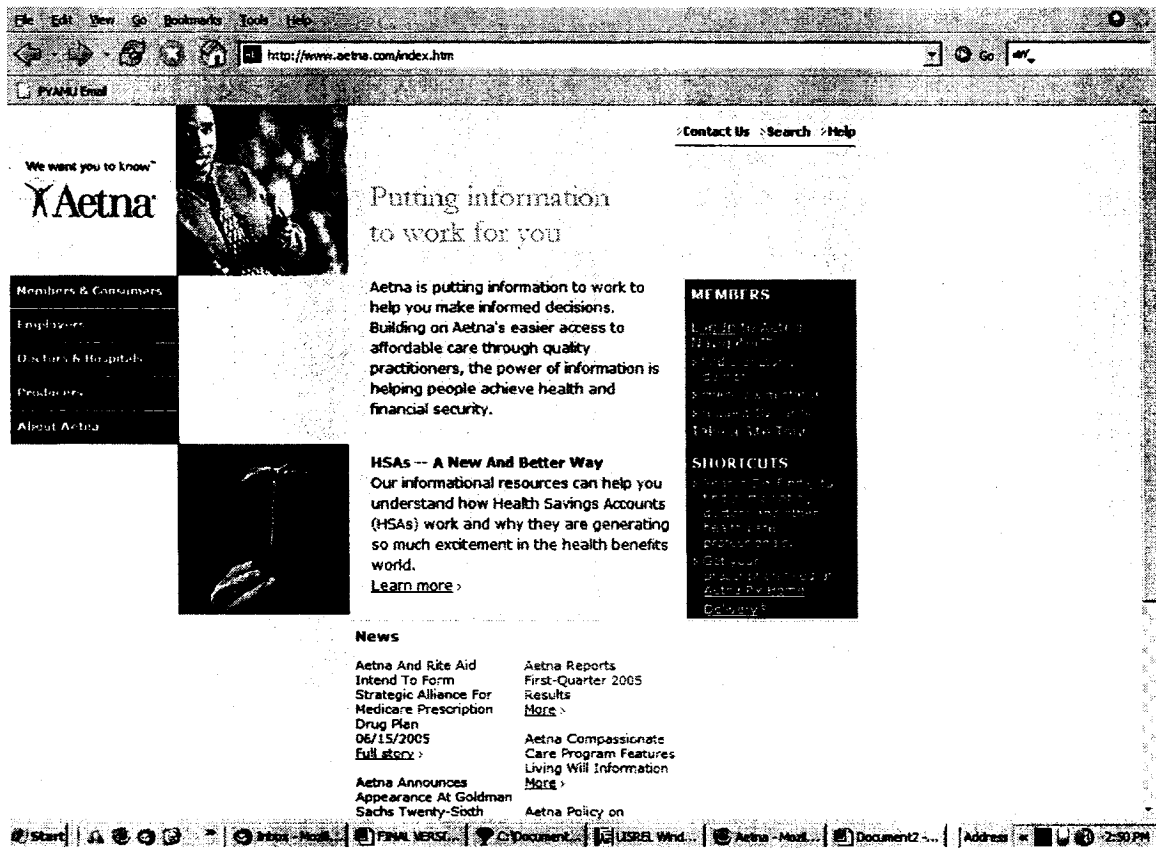
Description of Web sites

1Drugstore-Online



1Drugstore-Online is an online pharmacy which describes itself as an alternative to both the disreputable online pharmacies companies and the high prescription cost of the big chain pharmacies. Moreover, along with access to a vast online pharmacy, the company promises customers reliable and prompt delivery service to most locations around the world. The company also guarantees that it has the lowest prices for prescriptions on the Web. It continuously scans many other pharmacy sites and adjusts its pricing accordingly. Overall, the company's Web site appears to have little affective/relational content and pricing seems to be its primary means of attracting customers.

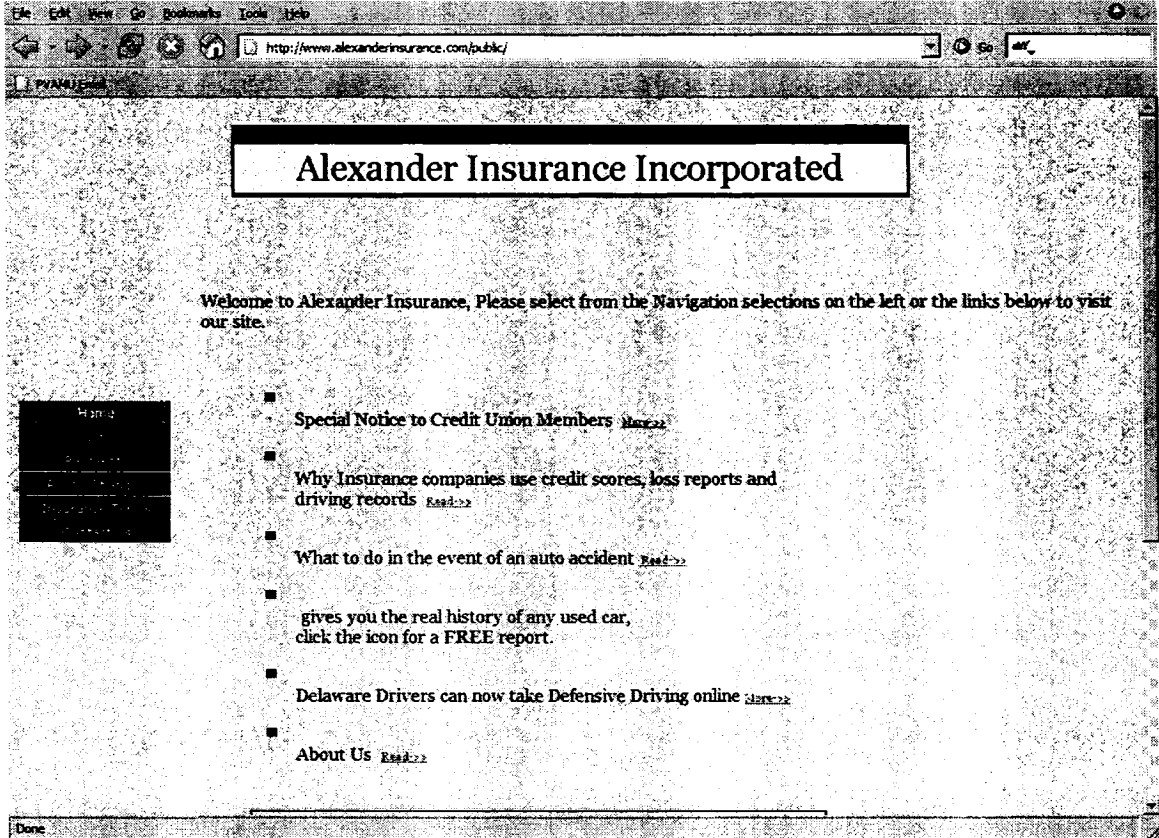
Aetna Insurance



Aetna describes itself as a leader in providing of health, dental, group, life, and disability insurance. The company boasts that their focus is on meeting customers' needs by introducing innovative products, delivering strong customer service and providing easy-to-understand information on its Web site.

There is some content which visitors may perceive as communal. For instance, in their frequently asked questions section, the Web site

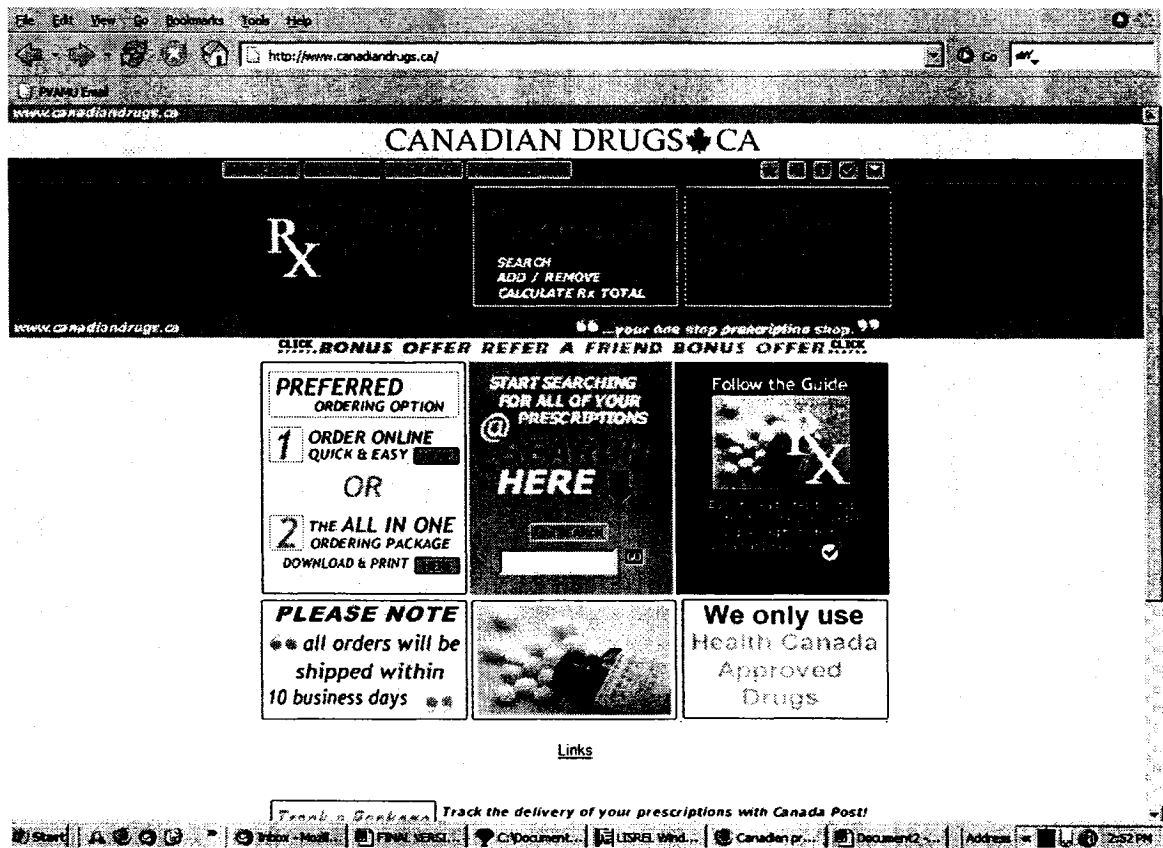
Alexander Insurance Incorporated



Alexander Insurance Incorporated provides automobile, property, and business insurance. The company was founded by Alex Gonzales whose insurance career spans forty years. Its headquarters are in Delaware and includes 6 licensed agents.

There appears to be little affective/relational content on this site. The Web site allows customers to make payments, get quotes, make changes to their policies, and ask questions about policies.

Canadian Drugs



Canadiandrugs.ca is owned and operated by the Well-Being Pharmacy of Winnipeg. The company serves both the Canadian and US market. The Web site allows customers to place orders quickly and easily online and allows visitors to email questions to the company. It has a frequently asked question section which gives US customers information about drugs sold in Canada and shipping information.

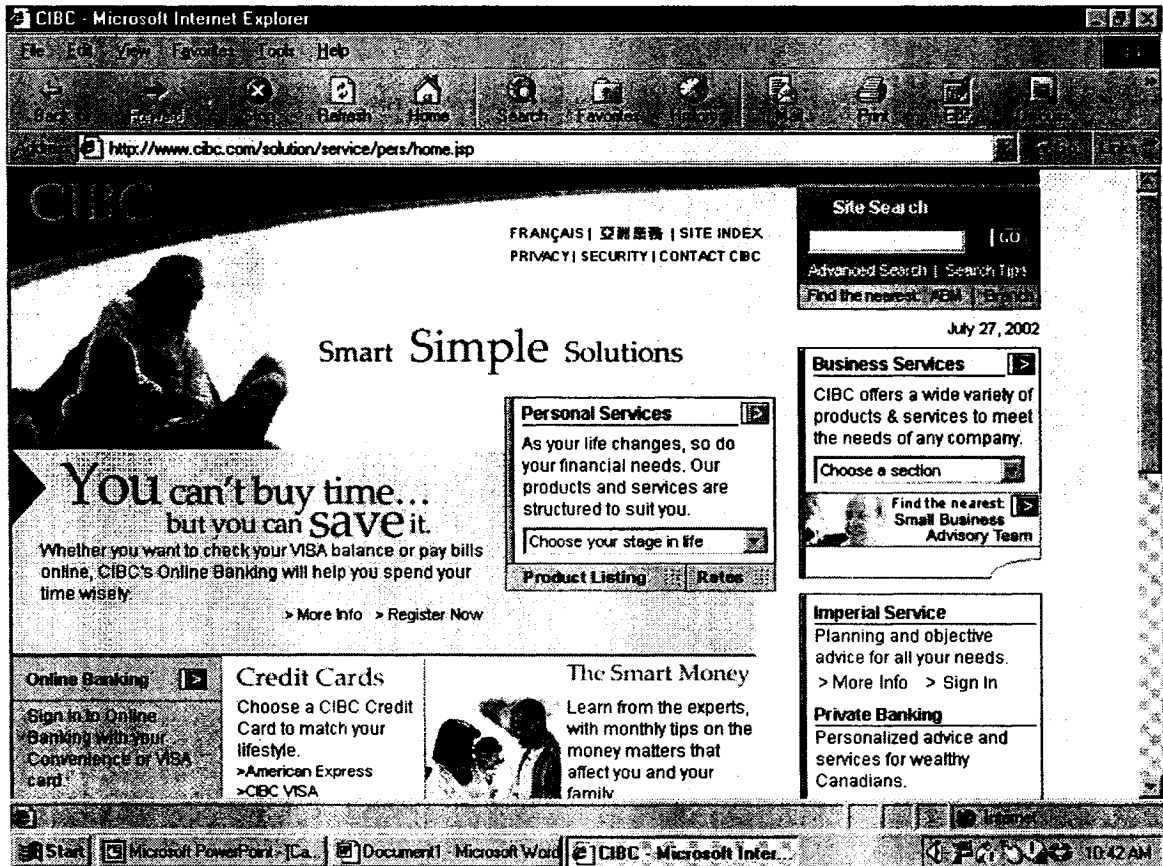
Although the company encourages comments and suggestions from customers/visitors, overall, there appears to be little affective/relational content on the Web site aside from one message in the 'about us' section of the site which states "come on and join our family!"

Canammeds



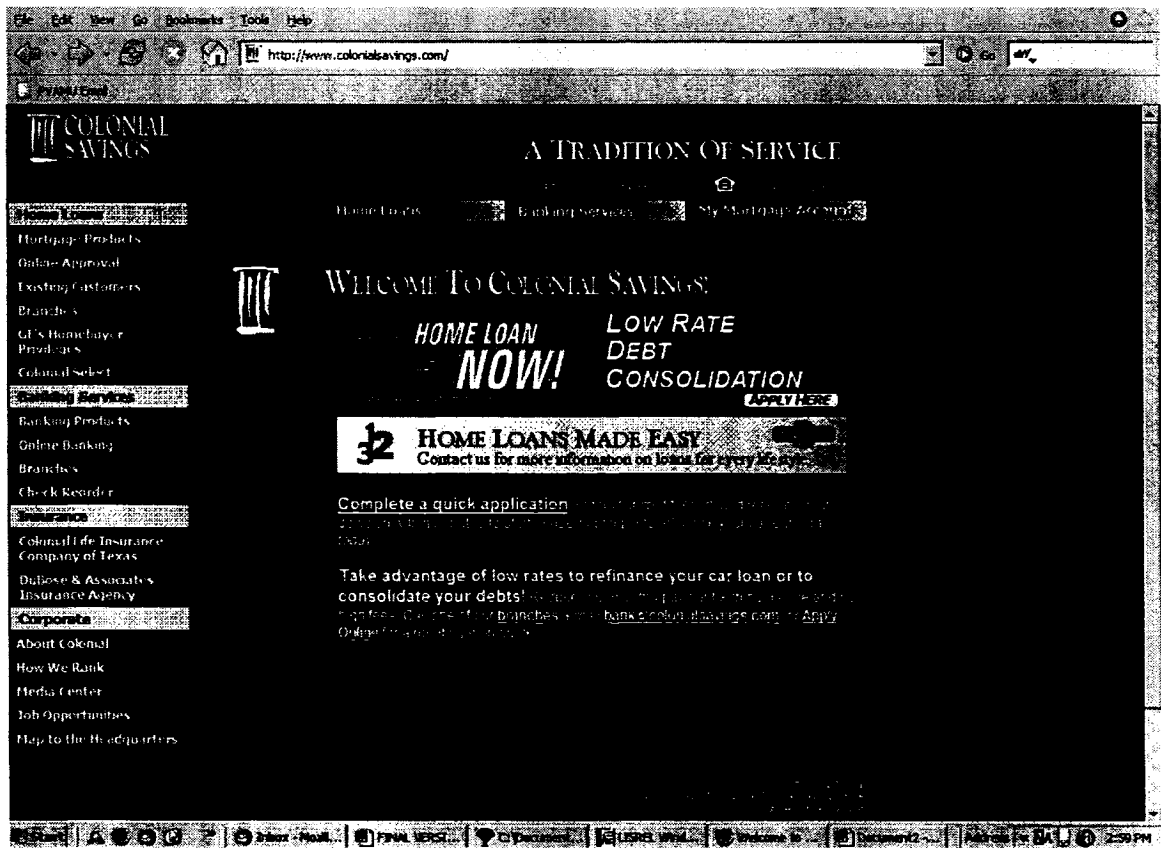
Canammeds/Meds4Mail is a Canadian company operating out of Manitoba offering pharmaceutical products to both the Canadian and US market. Although the Web site suggests that the company's main purpose is to provide customers with low cost medication, there also appears to be considerable affective/relational content on the site. For instance, there are messages which seemingly attempt to convey attention, caring, understanding, and an attempt to relate with customers. For instance, "(w)e understand the difficulties that many of our patients face with rising high health care costs and we are committed to finding the right solution and best prices for you". The site includes customer testimonials and encourages customers to contact the company 'at any time' and prides itself in the dedication of their team to provide customers with the best possible service every time.

Canadian Imperial Bank of Commerce



CIBC is a leading North American financial institution. CIBC provides its financial services to more than nine million clients which includes retail, small business, as well as corporate and investment banking clients. The CIBC Web site contains much content which may lead visitors to perceive it as company which is likely to treat its customers in a warm and caring manner. For instance, they write “At CIBC, we are in business to help our clients, employees, and shareholders achieve what matters to them”. Pictures of smiling employees also welcome visitors. Moreover, there are several pictures which seem to suggest that the company understands what customers deem important outside of doing business (e.g., their family, achieving personal goals).

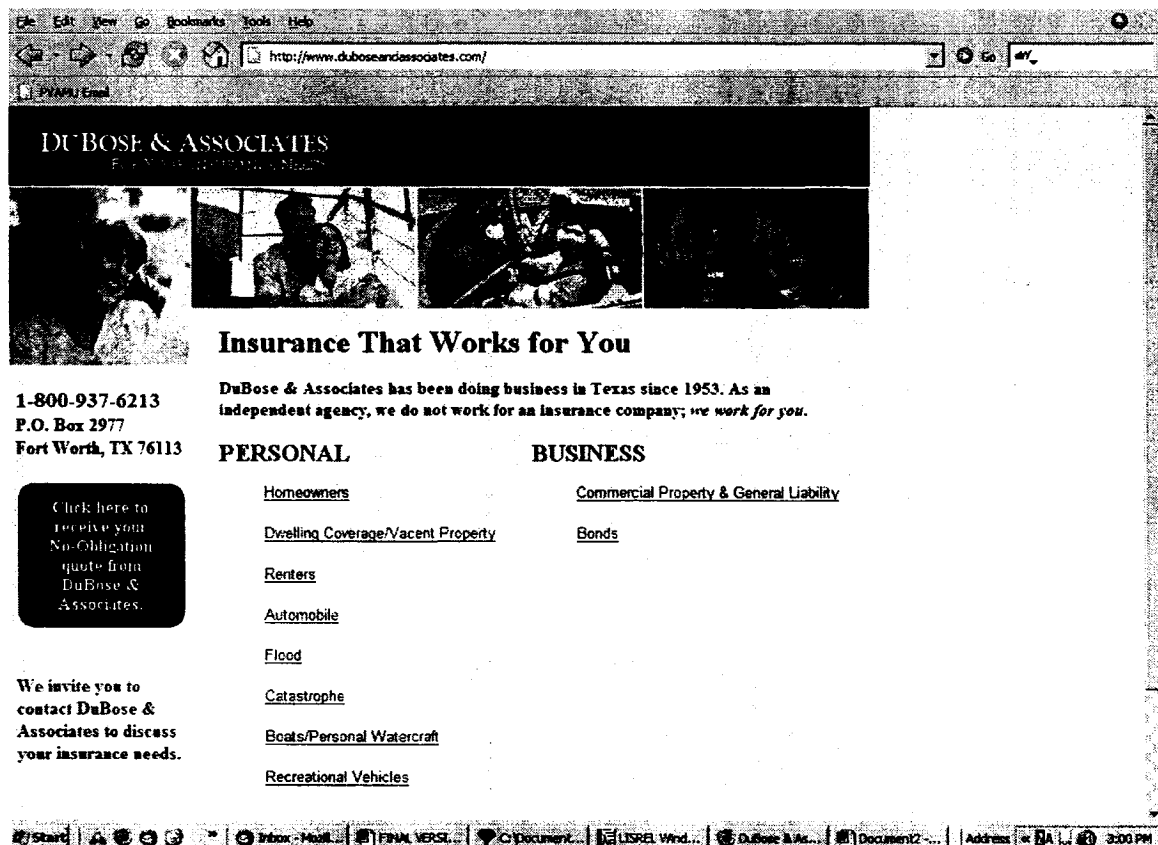
Colonial Savings Bank



In 1972, Colonial Savings expanded its mortgage operations by offering banking, mortgage lending and insurance under one corporate roof. The company boasts that it is among the largest mortgage servicing operations in the US.

The Web site appears to place a focus on utilitarianism and, overall, the site does not seem to contain much content which may be interpreted by visitors as affective/relational. There is an exception on its 'About Colonial' page. Here the company writes that "(t)he company is privately held – by choice – ensuring our focus remains on our customers, not on the expectations of Wall Street". This content, however, does not particularly stand out and is located completely at the bottom of the page.

DuBose & Associates



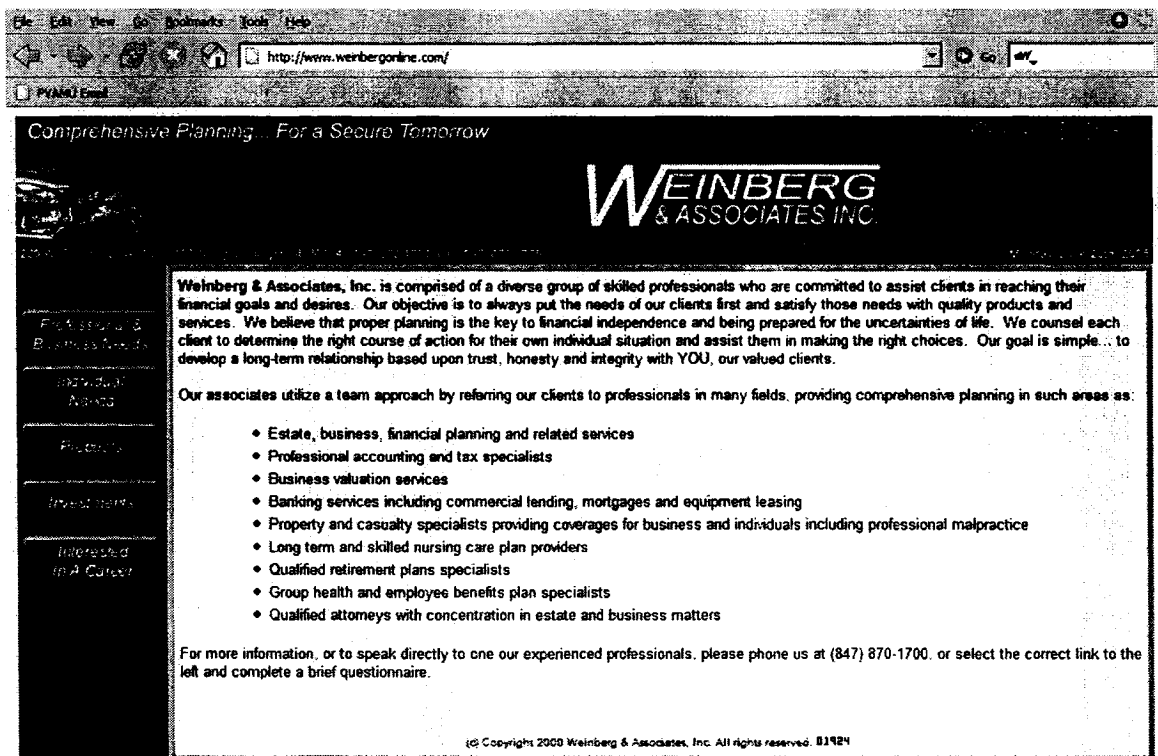
Dubose & Associates is an insurance company operating out of Texas since 1953. Their Web site is minimalist but seemingly utilizes pictorial cues in an attempt to convey a sense of warmth and friendliness to visitors. The site provides information about the company's products and allows visitors to ask for insurance quotes online. Each page includes the company's contact information and invites customers to contact the company.

IMB Banking and Financial Services



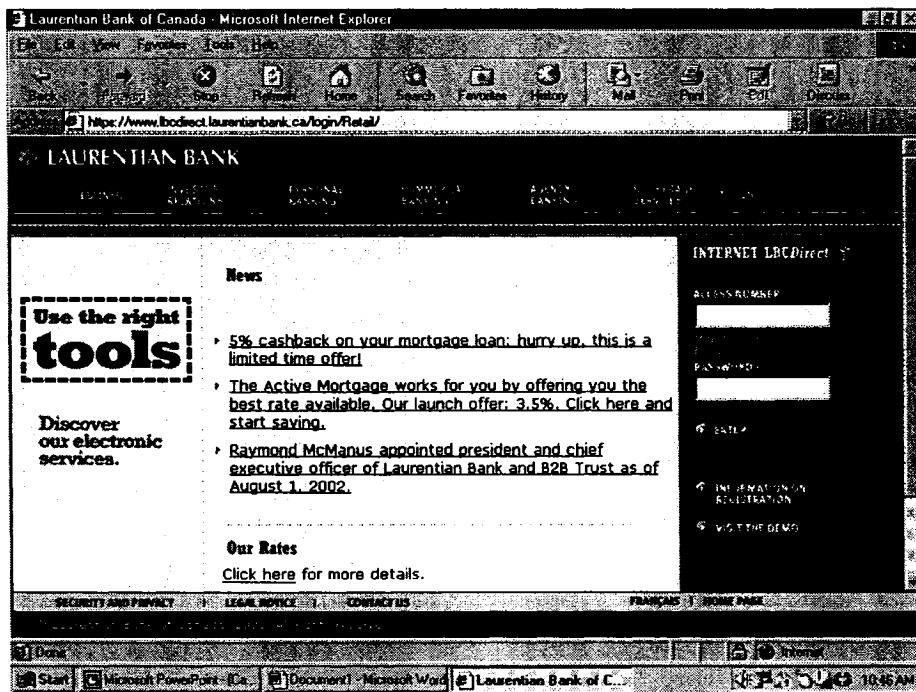
The IMB bank provides financial services to customers in Australia. Their Web site allows for both personal and business online banking and aims to inform visitors as to the company's financial products. With the exception of a page which describes IMB's involvement in the community, there appears to be very little content which visitors are likely to perceive as affective/relational. The page which describes their community involvement includes messages such as "IMB wants to improve the future prosperity and quality of life for its customers" which may convey caring and an interest in more than simply providing efficient transactions, however, the font used is quite small and we suspect that these messages can easily be missed by visitors.

Weinberg and Associates, Inc.



Weinberg and Associates provides financial services such as banking, financial planning, retirement planning, insurance, etc. Their Web site has changed address from www.room100.com/insurance to www.weinbergonline.com. Although the Web site is mostly informational it does provide some transactional features such as enabling visitors to get insurance quotes online and provides an online application for visitors interested in working for the company. This gives the site an overall "strictly business" feel. On the whole, the Web site seems to focus on conveying professionalism but there appears to be very little in terms of affective/relational content.

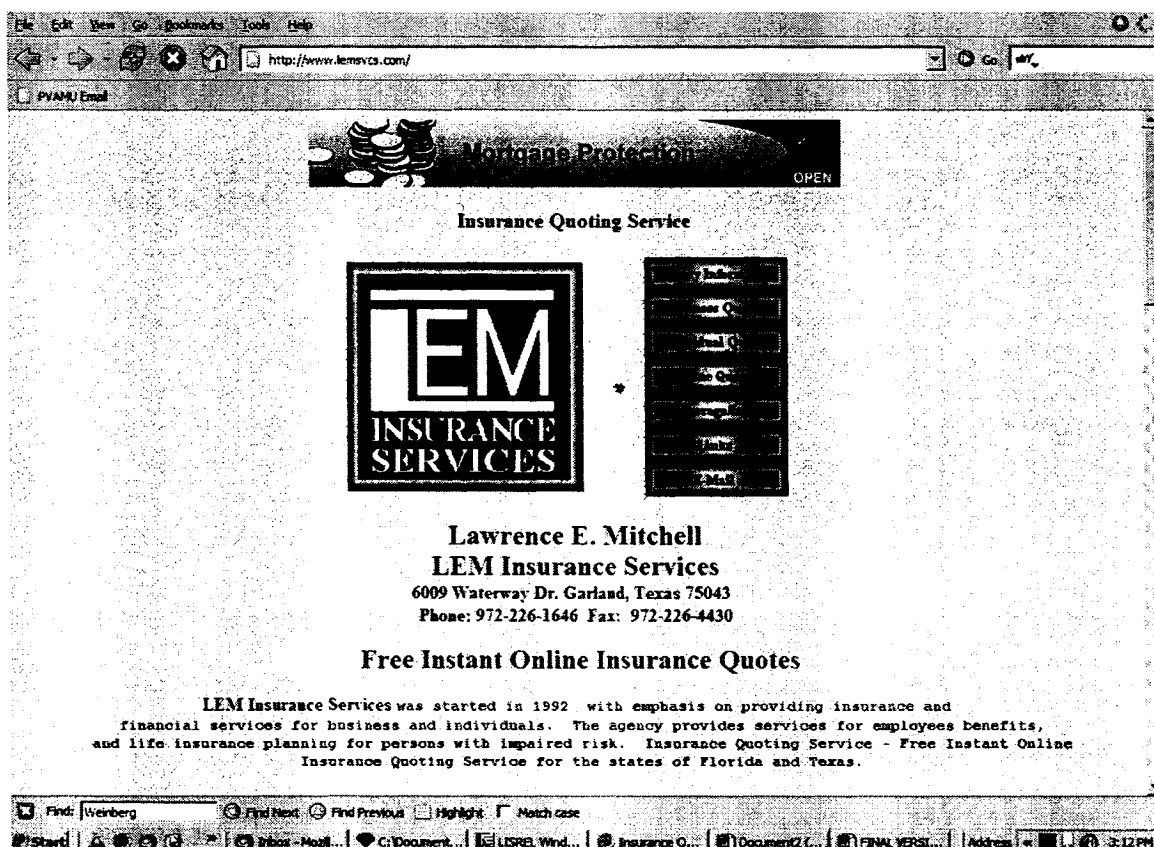
Laurentian Bank



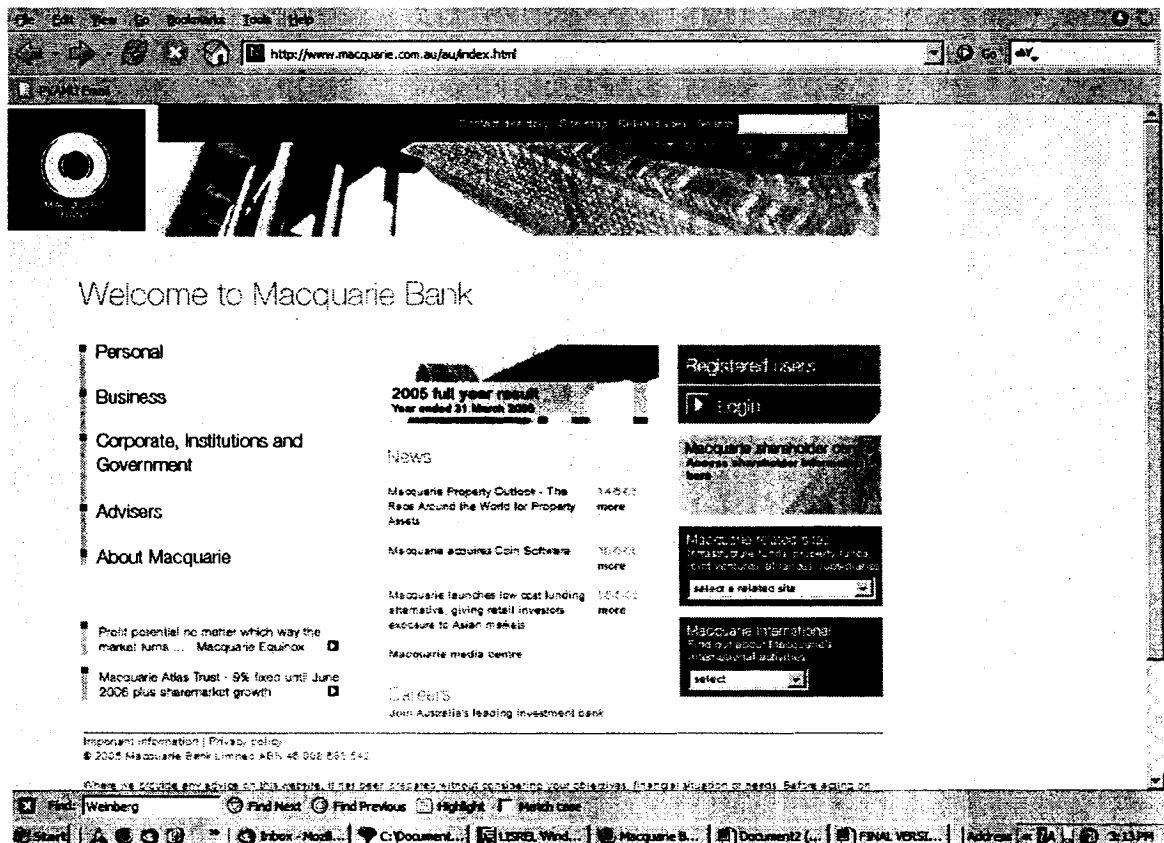
Founded in 1847, the Laurentian Bank ranks in the top 10 of Canadian chartered banks. Although its Web site now includes more pictorial content which visitors may perceive as conveying warmth (see below), at the time of data collection, the design of the site was much more utilitarian (see above).



LEM Insurance Services



LEM Insurance Services, established in 1992, offers insurance and financial services to both businesses and individuals. Primarily, the company's Web site offers information about the company and its products. It also enables visitors to request insurance quotes online. Although the company welcomes customer comments and requests, overall, it appears that the Web site contains little content which would suggest to visitors that this company relates with its customers in a communal fashion.



Macquarie Bank was established in Australia in 1969. Today, it offers a range of investment banking, commercial banking and retail financial services (e.g., personal banking, online bill pay, online stock trading) in Australia and overseas.

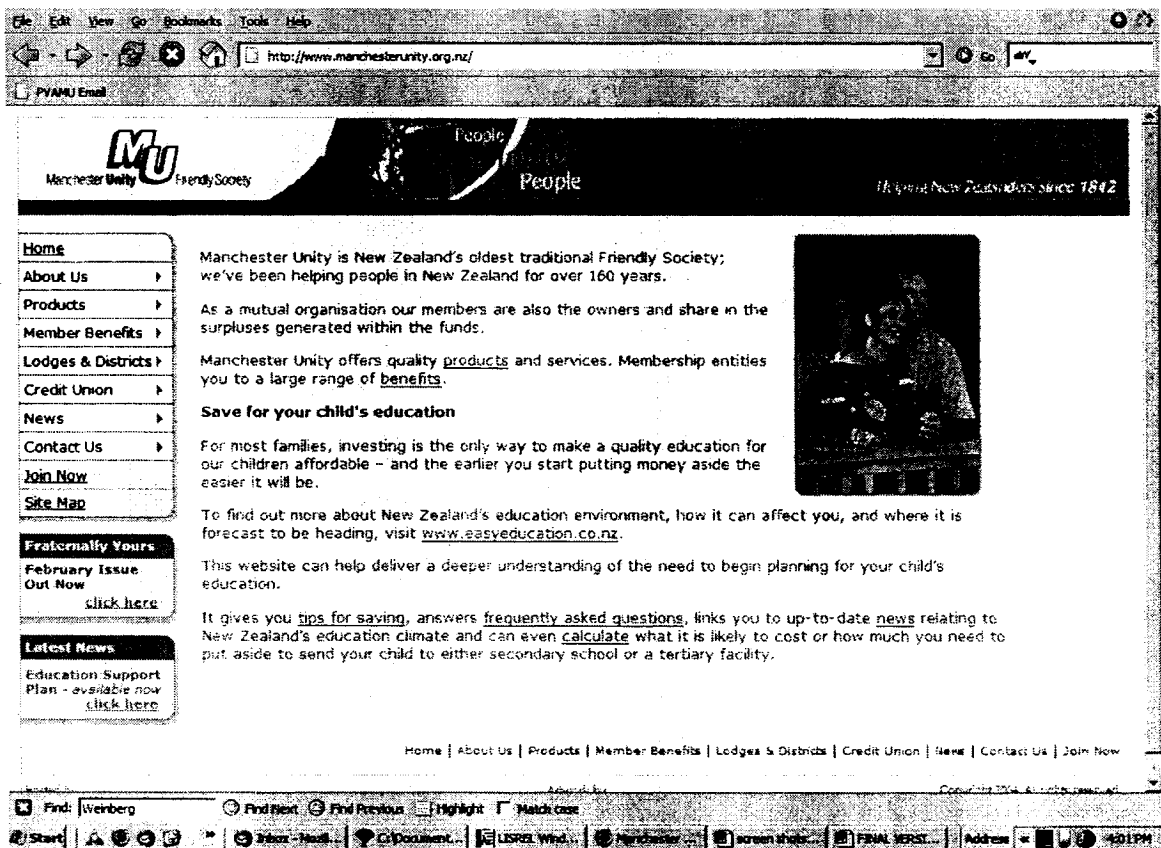
In terms of affective/relational content, there is very little. Although Macquarie Bank's Web site is rich in content, this pertains almost exclusively to describing the company's products and history information. In fact, the company's choice of content seems to suggest that it tries to communicate professionalism above all. The site even includes a diagram showing the company's organizational structure which may leave some visitors with a sense of formality.

Man-Health Online Pharmacy

(Screen shot unavailable)

At the time the survey was conducted, Man-Health Online was an online pharmacy offering its products to customers in the Canada and the US. More recently, however, the Web site has ceased operations. Even with an extensive search on several internet search engines, no explanation could be found by the authors so as to give an indication as to what had happened to the online company (i.e., buy out, bankruptcy, etc). The Web site was operational during data collection. The Web site itself was chosen for our study given that it was deemed high in affective/relational content.

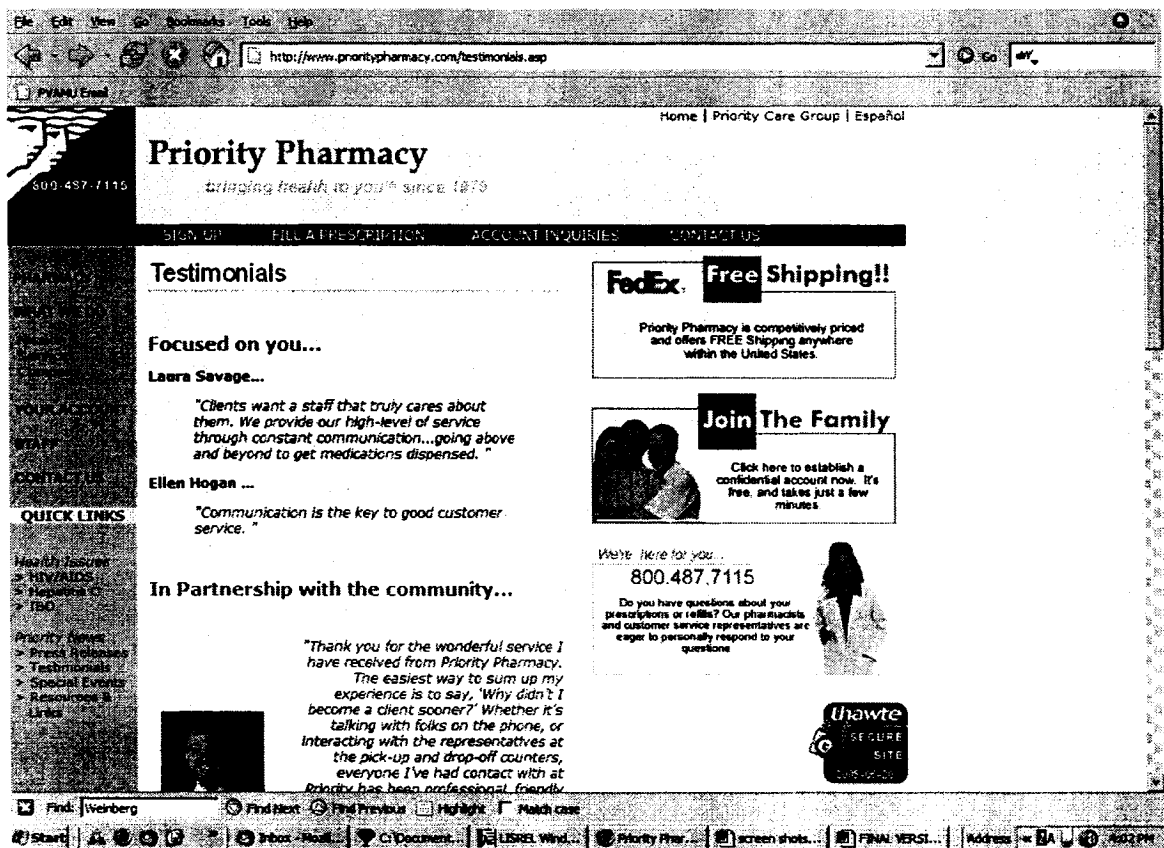
Manchester Unity Credit Union



Established in 1842 in New Zealand, Manchester United is a credit union which came into existence as a result of no adequate health care assistance, no insurance and no form of government funding for social welfare. The Web site allows customers to purchase such things as health insurance and even book their travel accommodations online. It is replete with content which visitors may qualify as communal. For instance, in the 'about us' section of the site, the company writes:

"The original idea behind a friendly society came about in Great Britain over 400 years ago. A simple idea, but brilliant for its time. People who knew and trusted each other pooled funds so that, in the event of sickness or hardship, individual members could draw upon funds from the pool that they had contributed to. Today the philosophy hasn't changed and we take pride that it is still People Helping People."

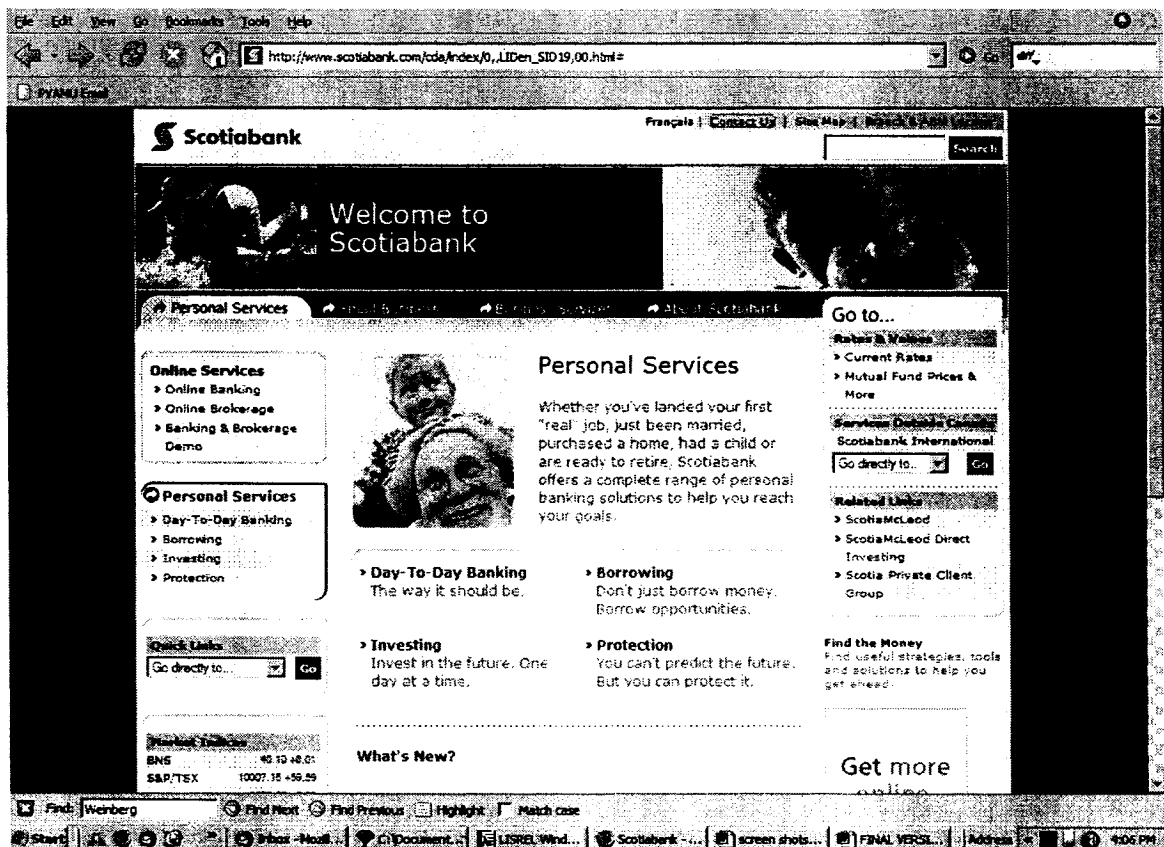
Priority Pharmacy



Priority Pharmacy, a US-based company established in 1979, provides next-day home delivery pharmaceutical products to consumers and specializes in medications for chronic life threatening illnesses. The site allows customers to fill prescriptions online.

Affective/relational content appear to abound on every page of the Web site. The Web site has pictures and includes testimonials such as "(...) a staff that truly cares about them" and "Thank you (...) I'll spread the word to my friends that if they want a pharmacy that really cares about their needs, they need to go to Priority" which appear to convey warmth, caring, and attempts to relate to customers on a personal rather than simply a professional level.

Scotia Bank



Scotia Bank offers customers online banking and brokerage services. Its Web site would likely be perceived as high in Site-Communality given its rich affective/relational content. Pictures are cheerful showing people in everyday activities and messages such as “Whether you've landed your first “real” job, just been married, purchased a home, had a child or are ready to retire, Scotiabank offers (...) solutions to help you reach your goals” suggesting the company is attempting to relate to customers on more than simply a commercial level.

WebPharmacyRX

File Edit View Go Bookmarks Tools Help
http://www.web-pharmacy-rx.us/english/
PRAMU.html

Transfer Factor

4life transfer factor plus

For Wholesale Pricing Information

Email:

First Name:

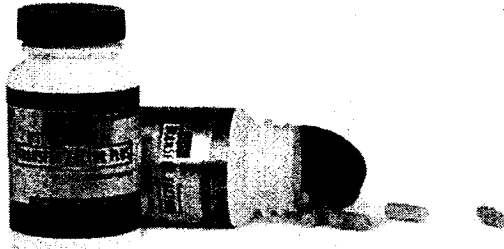
☒ Submit

4-Life Products.

[Home](#)
[Learn More](#)

Order Products!
[Visit my4life.com Site](#)
[4Life Business Opportunity](#)

4Life
RESEARCH
Independent Distributor



4Life Transfer Factor Plus
[Secure Online Order](#)
[Product Pricing](#)

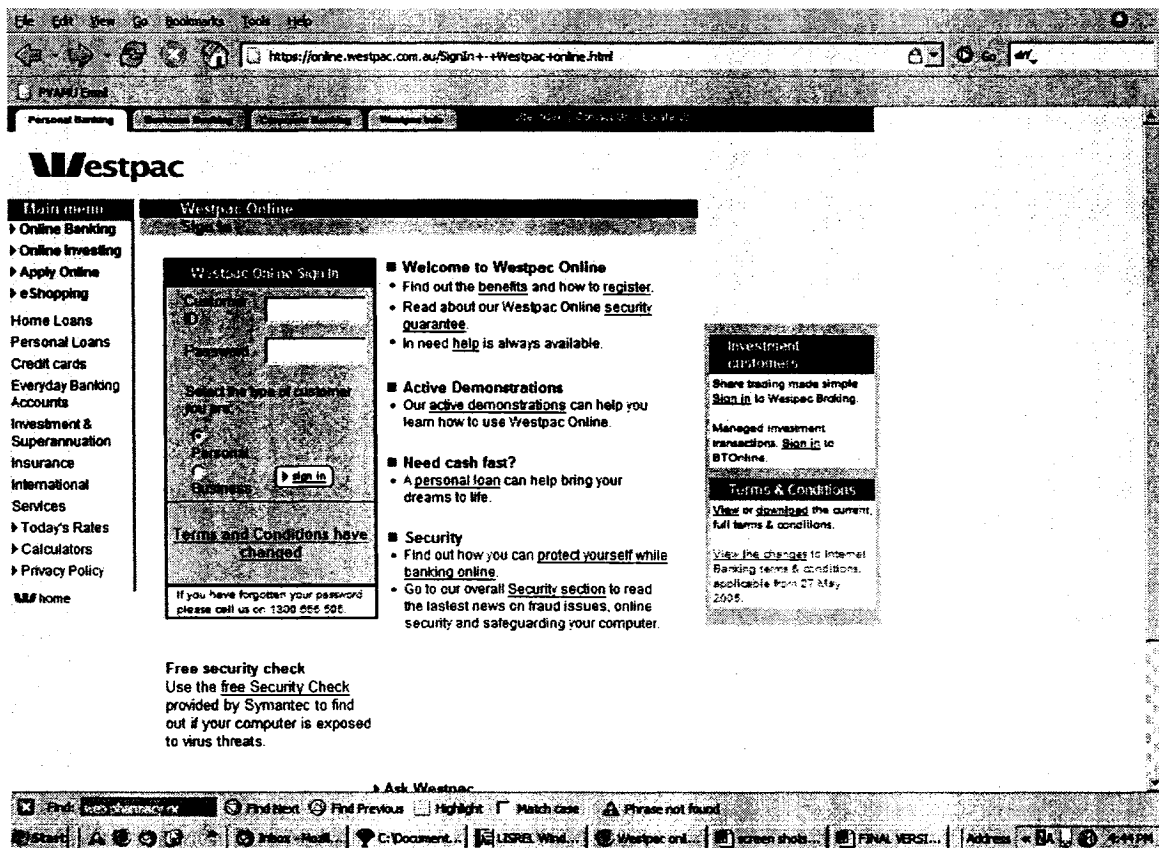
Transfer Factor Plus

Transfer Factor Plus is the next generation in immune system science. It combines the benefits of Transfer Factor XF with ThymuPro and Cordyvant to activate the whole immune system at once, giving you superior protection.

Find: web pharmacy rx Find Next Find Previous Highlight Match case Phrase not found
Start Inbox Mail Document LISREL Wind life transfer screen photo FINAL VERST Address BA 4:42 PM

WebPharmacyRX is a Canadian online drugstore offering mail order low cost drugs and medications to US customers. The company boasts over 300 medications available with savings of between 40%-90% off their US counterparts. Their Web site enables online consultations with doctors. It appears that the company's Web site was changed from <http://www.webpharmacyrx.com/> to <http://www.web-pharmacy-rx.us/>. Overall, it appears that the Web site contains little affective/relational content.

WestPac Bank



Westpac bank is headquartered in Australia and offers financial services.

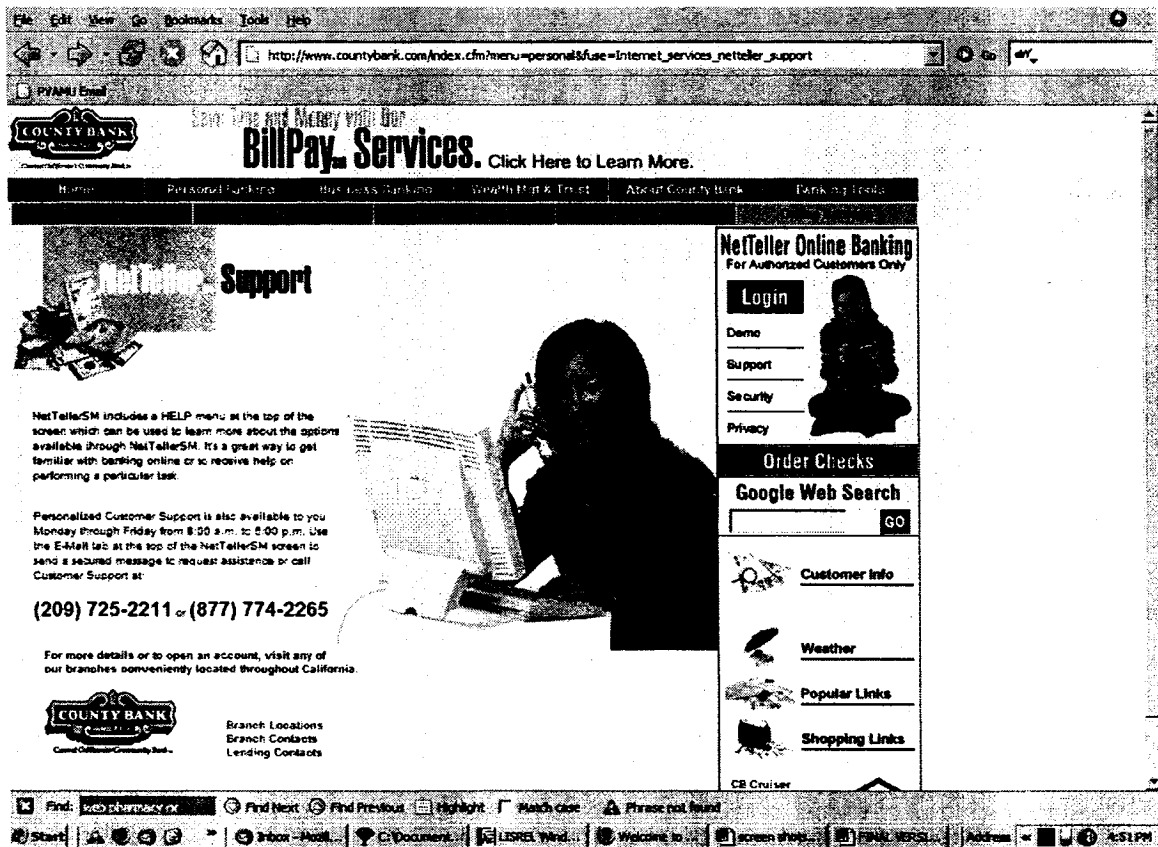
Although most of the Web site's pages appear to contain little affective/relational content, visitors can follow two links; 'corporate accountability' and 'in the community' which contain information regarding the company's social charter and community involvement. Arguably, if visitors are exposed to this information, it may reflect a caring quality on the company.

First Metro Bank



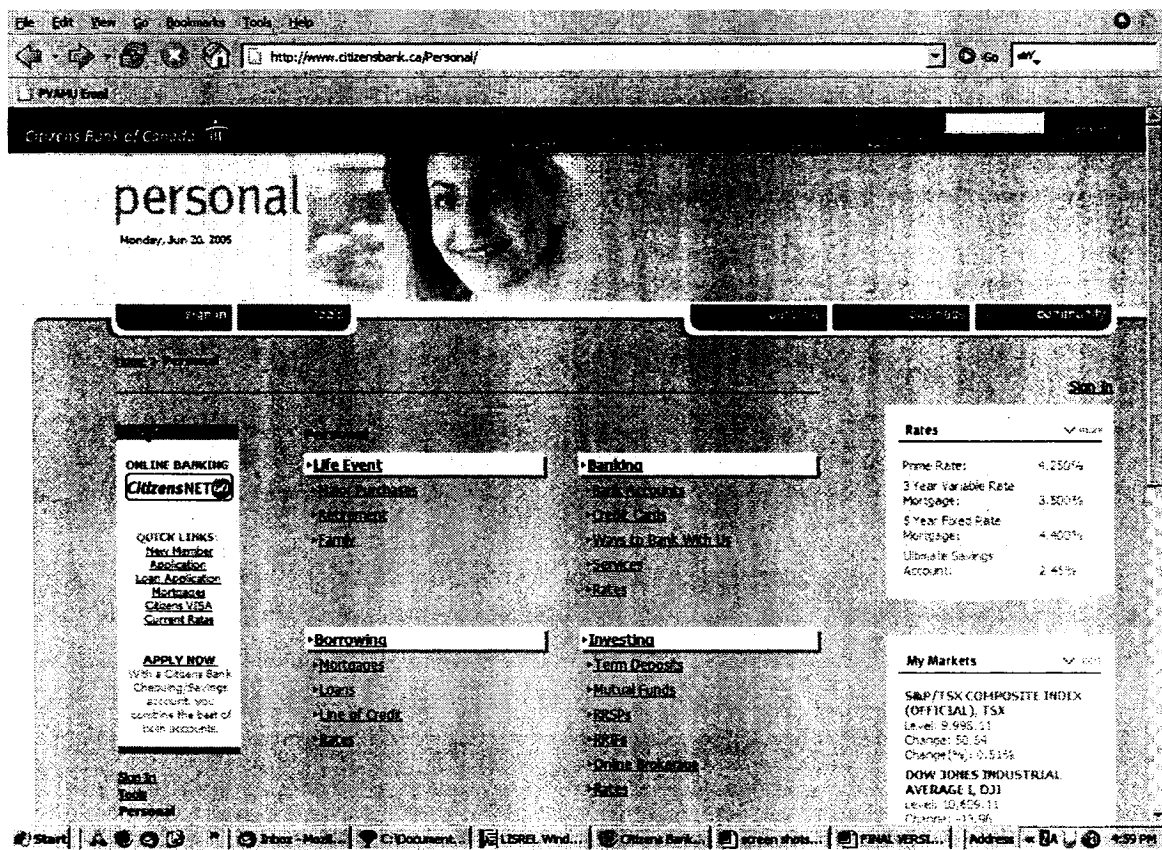
First Metro Bank came into operations in 1988 in the southern US. It offers customers online personal and commercial banking and mortgages as well. Mainly, information on their Web site are descriptions of their products and services. Overall, there appears to be little affective/relational content on the company's Web site.

County Bank



Located in California, County Bank was established in 1977. The company has been listed on the Fortune Small Business 100 list for two consecutive years. The company provides financial services to both businesses and individuals and the company's Web site offers online banking. The Web site reads that "County Bank has become known for the brand of friendly, personalized customer service they deliver and the wide range of products and banking services". Overall, the company has opted to express their affective/relational message on the Web site via images of smiling employees to convey helpfulness and positive emotions to visitors. In fact, the Web site contains not only the names of contact employees but their pictures as well.

Citizens Bank of Canada



In 1997, Citizens Bank was formed by Vancouver City Savings Credit Union, one of the best known financial institutions in Western Canada. The bank operates as a branchless national bank. The company describes itself as a company operates on the belief that it is possible to “do good while doing well”.

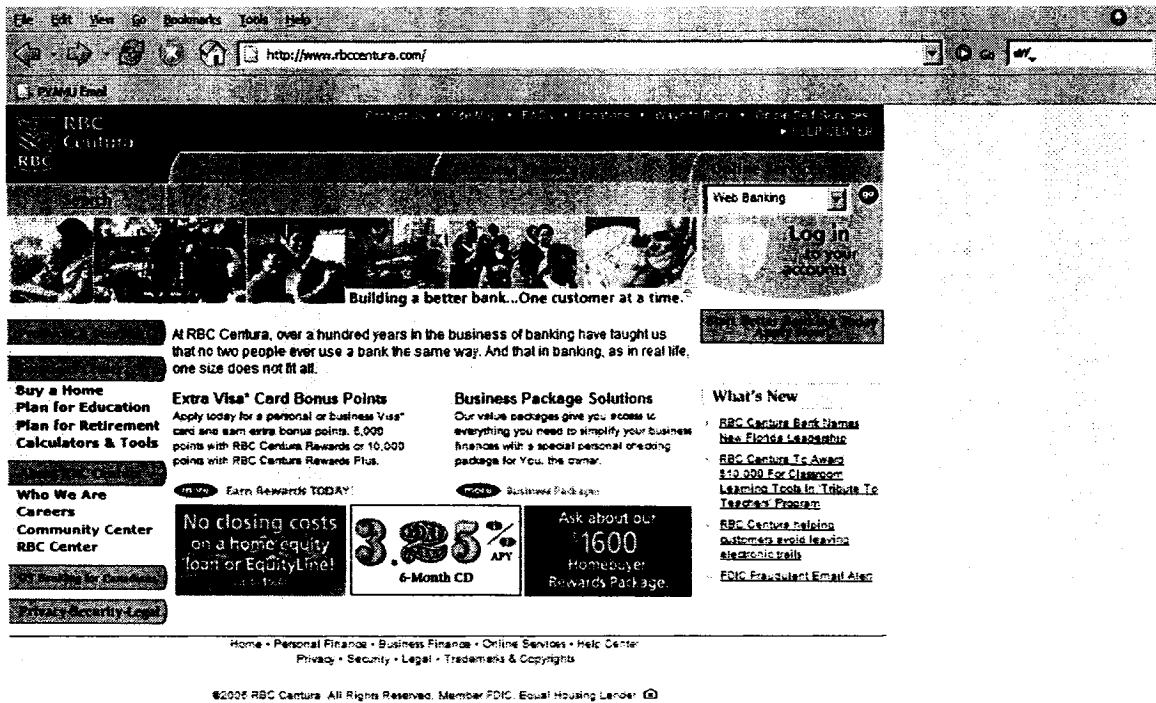
Content which may convey communality to visitors is plentiful across the company’s Web site. For instance, approachability is signaled by such content as “If you have any questions, anytime, anywhere, (...t)here's always someone here to take your call and help you handle everything you need” and “At Citizens Bank, we want to hear what you have to say”. The Web site also contains pictures of smiling persons which, arguably, may help convey caring and positive feelings to visitors.

Royal & Sun Alliance



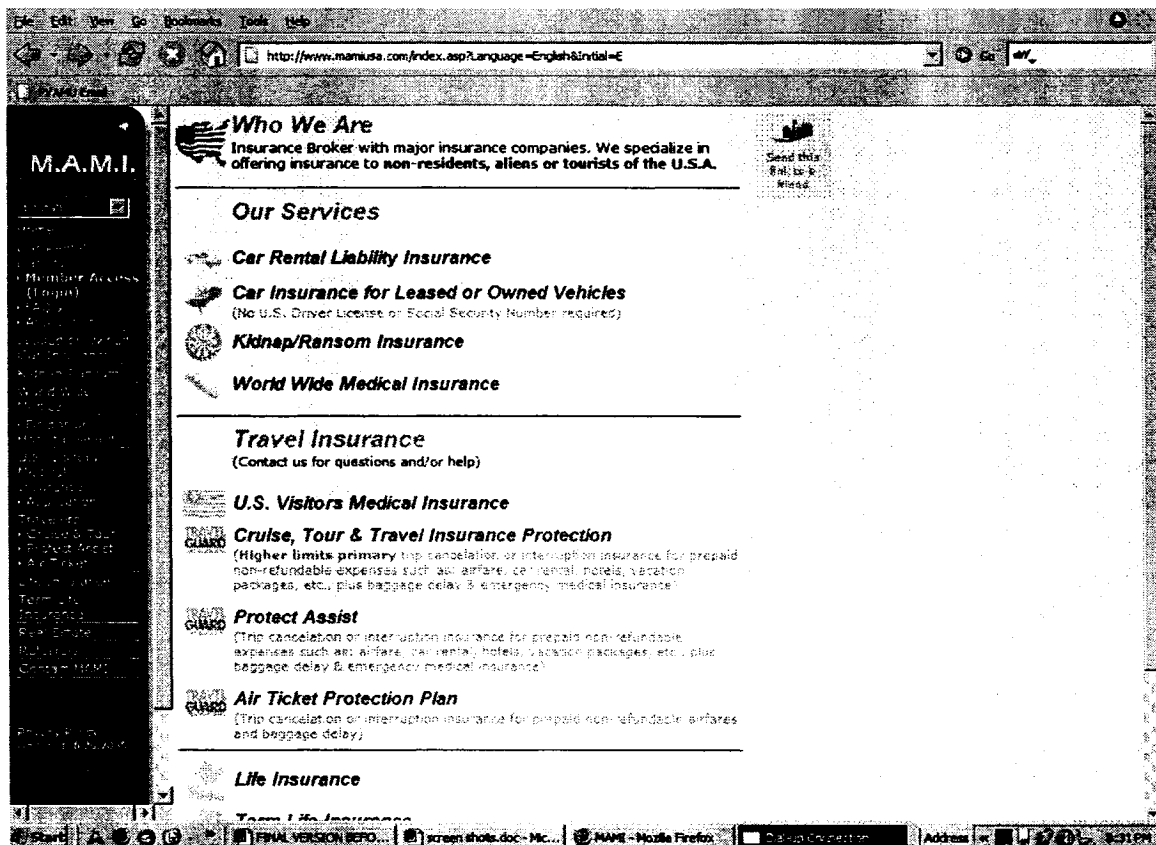
Sun Alliance is one of the oldest insurance companies in Canada with roots dating back to 1845. The company has seemingly chosen to communicate affective/relational messages mainly through the use of images and informing visitors of its corporate citizenship. Pictures of what appear to be caring, attentive and helpful employees are plentiful potentially leaving customers with a sense that the company is approachable. Moreover, messages such as “We recognize that you have responsibilities outside the work environment” suggests an attempt at role-spanning.

RBC Insurance



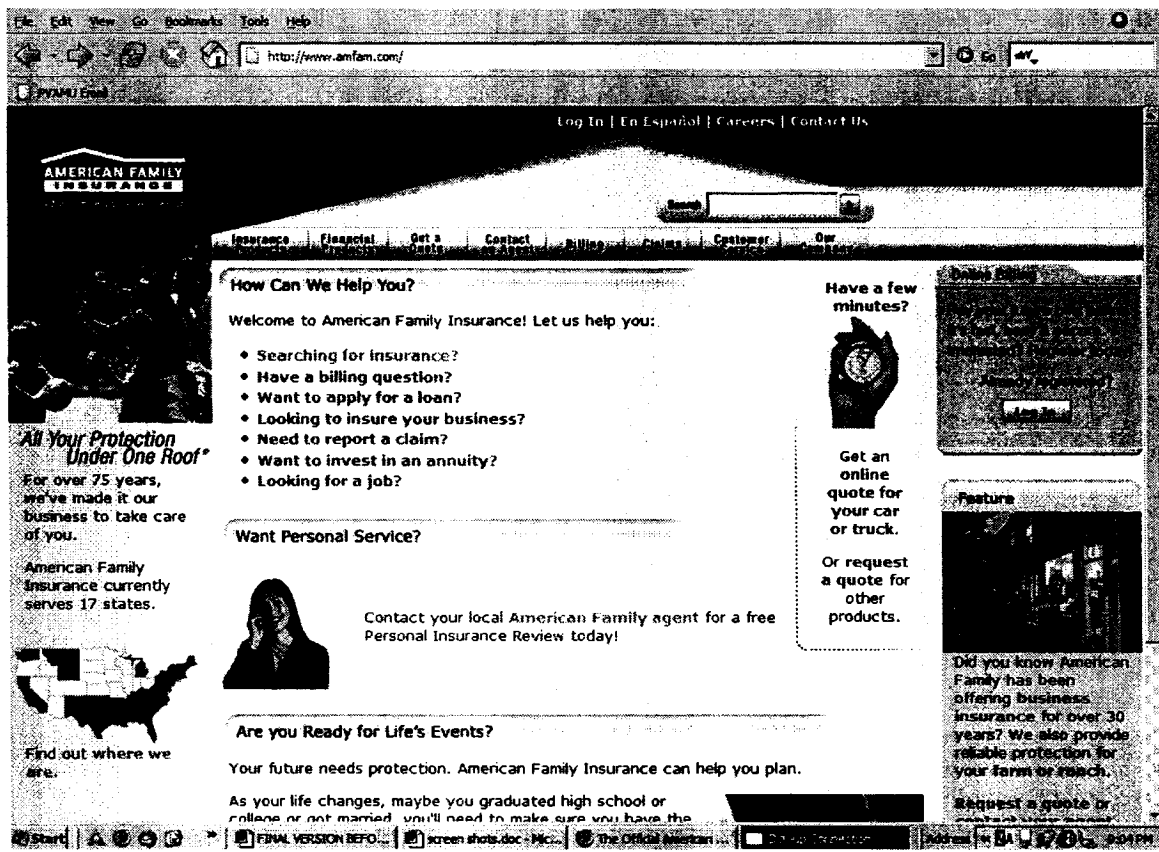
RBC's trademark "First for you" attests to the company's customer focus. Chartered in 1869 as the Merchants' Bank of Halifax, it was renamed The Royal Bank of Canada in 1901. The company provides financial services (i.e., online banking, investment, and insurance). Arguably, pictures of employees with messages such as "We are continuously working to identify ways to serve you better, to simplify your banking affairs, and to minimize your cost of borrowing" may help convey a sense of attention and caring to visitors. Pictures of what appear to be happy customers engaged in everyday activities may also help communicating to visitors that, for the company, the importance of customer happiness goes beyond simply providing good service (i.e., role-spanning).

M.A.M.I Insurance



M.A.M.I Insurance specializes in offering insurance to non-residents, aliens or tourists of the U.S. Their Web site allows customers to request an online quote and to explore their offerings. The Web site's design perhaps focuses more on utilitarian aspects. Seemingly, there is little content which may be categorized as affective/relational and from which a visitor can get an impression as to whether the company behaves with its customers in a communal manner.

AMFAM Insurance



American Family Insurance has been in business for more than 75 years. Its Web site informs visitors as to its products and allows customers to request quotes online. There appears to be considerable affective/relational content on this Web site as well. Pictures of smiling employees interacting with customers may help convey caring, warmth and approachability. In addition, the Web site contains several written relational messages which may strengthen these impressions, such as, "We've made it our business to take care of you by providing the products you need and the excellent service you expect". The company also appears to try to relate to customers on a personal level by recognizing events in life which may be important to customers. It states, "Life is full of twists and turns, ups and downs. (...) These life events and more make us who we are. (...) We'll be there to assist you...every step of the way". Finally, there is also considerable self-disclosure on

this site into the company's activities outside of business (e.g., community involvement).

International Student Insurance

ISI International Student Insurance.com

International Student Insurance! Here you will find information on the best international health, medical and travel insurance programs tailored to fit the needs of the international student abroad at the most affordable rate.

Please select the appropriate category below:

US Citizens **International**

or let our policy picker find the right plan for you - click here

Student Plans Student Insurance for US Citizens & non-US Citizens dental | evacuation | international insurance | etc.

Agents / Affiliates If you would like to offer our international health | travel insurance products, please visit our agent center.

College/ Universities Provide your students with top class insurance - please visit our schools center for more information.

Group Plans If you are looking for an international group coverage plan, visit our group insurance center to learn more.

Other Languages:
En Espanol En Français

Not a student but need international health Insurance?
Then visit internationalCitizens.com

Services:
International Student.com
English Language Schools
Study Abroad Programs
ESL International
Scholarship Search
Student Travel and Flights
Student Health Insurance
Essey Edge: Harvard Editors

Acting Principals:
F1 Students After Graduation
International Travel Insurance
Trip Cancellation / Interruption
Evacuation & Repatriation
Study Abroad Insurance
Dental Coverage
Au-Pair Insurance

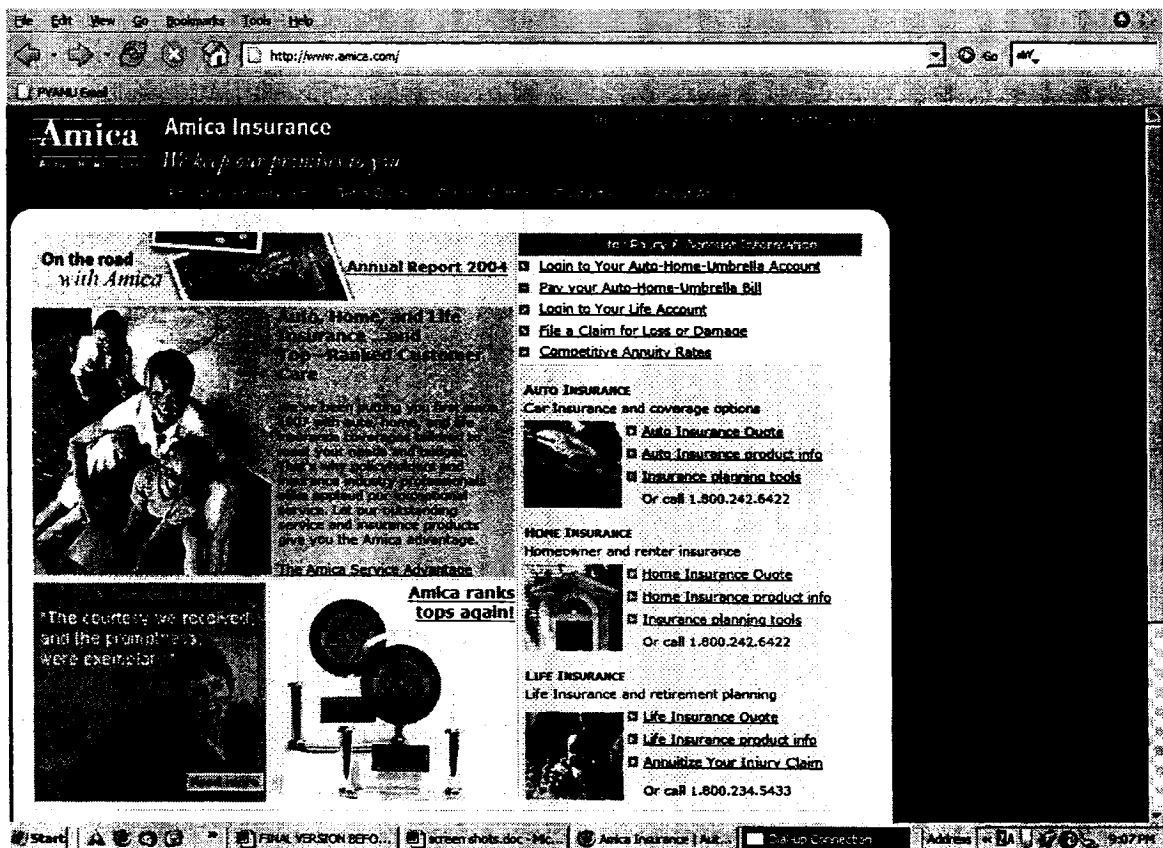
Contact Us:
Head Office (USA)
Toll Free: (877) 328-1565
Direct: (617) 328-1565
Fax: (617) 328-0615
Email Us
Bookmark ISI now! (Ctrl+D)

Logos: SIRIUS, 2000 Online Reliability Program, ISI

© International Student Insurance.com

International Student Insurance (ISI) is a company which primarily offers students health insurance. The Web site allows customers to apply for an online policy online. This Web site would likely be considered by visitors as having little communal content. Instead, its purpose appears to be to inform visitors as to the products the company offers.

Amica Insurance



Amica insurance offers customers auto, home, marine, and life insurance products. Its Web site appears to contain significant communal content. The company boasts that offering customer care is of prime importance. Customer testimonials abound and the Web site also contains a "How are we doing?" page which encourages customers feedback and inputs. The site also prompts customers to ask for help whenever needed. Moreover, the Web site acknowledges the importance of, what the company calls, "customer life events" which suggests that the company relates to aspects of the customer's life unrelated to business. Finally, the company adds numerous customer testimonials which attest to the company's communal behaviours toward customers. For example, "There are good insurance companies and there are great insurance companies. But then there are unique and really special ones, and that's where Amica fits in. You're working with people and not just with a business" (Deb P., Farmington, ME).

APPENDIX 9

Correlations between items of Site-Communality and Site-Loyalty remaining after confirmatory factor analysis

	GC1	GC2	GC3	GC4	RS1	RS3	RS4	RS5	AP1	AP3	AP4	C1	C2	C3	C4	SD1	SD2	SD4	AU1	AU2	AU3
GC1	1	.669	.761	.740	.356	.387	.509	.492	.433	.425	.369	.510	.462	.458	.492	.347	.293	.397	.465	.392	.441
GC2	.669	1	.731	.732	.408	.440	.538	.512	.452	.480	.391	.516	.490	.476	.545	.375	.288	.392	.475	.408	.446
GC3	.761	.731	1	.760	.328	.401	.480	.480	.412	.403	.378	.491	.451	.433	.462	.364	.314	.402	.421	.365	.400
GC4	.740	.732	.760	1	.361	.409	.490	.488	.444	.470	.413	.532	.505	.480	.515	.309	.263	.357	.448	.377	.445
RS1	.356	.408	.328	.361	1	.653	.584	.657	.386	.375	.280	.425	.468	.424	.469	.407	.348	.437	.490	.482	.438
RS3	.387	.440	.401	.409	.653	1	.597	.743	.396	.385	.340	.462	.548	.433	.528	.483	.433	.495	.571	.590	.509
RS4	.509	.538	.480	.490	.584	.597	1	.697	.460	.446	.375	.572	.639	.547	.624	.510	.490	.546	.656	.630	.608
RS5	.492	.512	.480	.488	.657	.743	.697	1	.432	.407	.363	.496	.579	.493	.616	.479	.406	.512	.578	.553	.547
AP1	.433	.452	.412	.444	.386	.396	.460	.432	1	.833	.811	.541	.460	.498	.498	.316	.320	.327	.426	.420	.421
AP3	.425	.480	.403	.470	.375	.385	.446	.407	.833	1	.747	.576	.453	.473	.516	.311	.313	.322	.412	.399	.434
AP4	.369	.391	.378	.413	.280	.340	.375	.363	.811	.747	1	.529	.431	.489	.445	.247	.284	.243	.408	.365	.386
C1	.510	.516	.491	.532	.425	.462	.572	.496	.541	.576	.529	1	.713	.721	.700	.377	.402	.437	.611	.588	.595
C2	.462	.490	.451	.505	.468	.548	.639	.579	.460	.453	.431	.713	1	.767	.731	.458	.444	.500	.680	.629	.644
C3	.458	.476	.433	.480	.424	.433	.547	.493	.498	.473	.489	.721	.767	1	.729	.381	.416	.414	.634	.561	.607
C4	.492	.545	.462	.515	.469	.528	.624	.616	.498	.516	.445	.700	.731	.729	1	.408	.415	.468	.661	.602	.647
SD1	.347	.375	.364	.309	.407	.483	.510	.479	.316	.311	.247	.377	.458	.381	.408	1	.778	.847	.517	.526	.508
SD2	.293	.288	.314	.263	.348	.433	.490	.406	.320	.313	.284	.402	.444	.416	.415	.778	1	.769	.594	.570	.567
SD4	.397	.392	.402	.357	.437	.495	.546	.512	.327	.322	.243	.437	.500	.414	.468	.847	.769	1	.527	.542	.556
AU1	.465	.475	.421	.448	.490	.571	.656	.578	.426	.412	.408	.611	.680	.634	.661	.517	.594	.527	1	.854	.878
AU2	.392	.408	.365	.377	.482	.590	.630	.553	.420	.399	.365	.588	.629	.561	.602	.526	.570	.542	.854	1	.820
AU3	.441	.446	.400	.445	.438	.509	.608	.547	.421	.434	.386	.595	.644	.607	.647	.508	.567	.556	.878	.820	1