

**CULTURAL INFLUENCES ON CONSUMER INTERACTIONS IN
THE CONTEXT OF ELECTRONIC COMMERCE**

HAYTHAM SIALA

A Dissertation submitted to the Department of Information System of
Brunel University, in partial fulfilment of the requirements for
the award of the Degree of Doctor of Philosophy

04 August 2001

DEDICATION

To my dear family, and especially my beloved father (passed away) - without you, there would have been no incentive to complete this PhD.

ACKNOWLEDGEMENTS

I would like to thank first God the Almighty for providing me with the energy and health throughout these difficult years of endeavour to complete this dissertation.

I would like to thank my supervisor Prof. Bob O'Keefe for his encouragement, continuous guidance and advice that he provided throughout the research period of my thesis.

I would like to thank Prof. Guy Fitzgerald for his time and constructive feedback on issues related to qualitative research methodologies. I am indebted to Prof. Robert Macredie for his generosity in providing me with supportive documents and letters whenever I had encountered problems during my stay in the UK.

I would also like to thank Prof. John Richardson from the psychology department in Brunel University, for his advice on statistical issues related to my research study.

I would also like to express my deepest gratitude to those PhD colleagues who stood by me whenever I encountered problems during my research period.

Last but not least, I would like to thank my sponsors, the Libyan Interest Section, for paying my University fees for the last three years.

DECLARATIONS

The following section will display the publications that arose during the progress of this research study:

Cole, M., O'Keefe, R. M. and Siala, H. (2000), "From the User Interface to the Consumer Interface", *Information System Frontiers*, 1(4): p. 349-361.

ABSTRACT

Researchers and academics from diverse disciplines have highlighted the role of 'trust' for establishing and strengthening existing relationships between individuals and organisations in the commercial and the social context. Trust in the cultural context specifically, is credited with being the social 'glue' for sustaining bonds between members of cultural groups. The 'trust' phenomenon has become a 'hallmark' of success for organizations as they become more involved with Information Technology (IT). A precondition for trust to manifest is the natural presence of risk or uncertainties in a potential decision. Since the fears and risks associated with online transactions in the context of e-commerce are high, gaining a customer's trust becomes a must.

Some studies have found the ingrained cultural values, which form an essential part of the cultural heritage of a person, to be influential in evoking an individual's trust. Various sources in the marketing and consumer behaviour literature have highlighted the role that religious subcultures play in the purchase decisions of their members. The customs, values, and norms set by a religious group are highly esteemed by its members. The objective of this thesis is to investigate if religious Web sites are more likely to instil trust in online fellow-members than their generic counterparts. From a HCI point of view, we can say that our research will investigate an "abstract" interface of e-commerce systems: the 'theological' interface of a commercial Web site. Consequently, we can also ascertain if religious consumers basing their purchasing decisions on 'religious' trust alone overlook more important issues such as the privacy and security problems associated with financial transactions performed over the Internet.

Our empirical findings have discovered that conservative Muslims, who are not very familiar with the Internet, trust a Muslim Web site more than a Christian Web site and a generic Web site. In contrast, conservative Muslims with higher Internet experience were found to be more cautious. They based their 'trust' on more appropriate criteria such as the extent of privacy and security safeguards adopted by a Web site. A qualitative analysis of the post-experimental interviews that we conducted purports that Web-based trust develops with a company's good reputation, previous personal purchasing experiences, and through word-of-mouth recommendations from friends and family or peers.

In light of our findings, we argue that the time experience gained in using the Internet plays a major role on how consumers perceive culturally or religiously oriented Web sites. We believe that less experienced Internet users are unaware of the security vulnerabilities inherent in the Internet environment. Therefore, we assume that they are context-blind: they do not differentiate between

traditional and the digital marketing environments. Consequently, they would trust purchasing from an electronic store (Web site) in the same manner they would trust purchasing from a 'brick-and-mortar' store. In contrast, experienced Internet users deem reputable Web sites adopting good security and privacy safeguards for online transactions to be trustworthier than Web sites designed with a 'religious' interface.

We conclude that in the context of e-commerce, one cannot expect to establish a trustworthy commercial relationship based on religious trust alone. From the findings of this study, it has become apparent that the trait of strict religious affiliation seems to disappear in the context of e-commerce. The threats and risks inherent in online transactions seem to restructure the religious community by merging it into a traditional global community of e-consumers. When contemplating a purchase from a Web site, traditional e-consumers pay more attention to the company's reputation and the extent of data security measures adopted by a Web site rather than basing their purchase decisions on the religious affiliations and cultural values taught by parents and ancestors. Thus, Web sites aiming to sell products behind a 'religious' interface could become disappointed. Having said that, we reiterate that the time experience in using the Internet seems to play an influential role in how users' perceive cultural or religious Web sites.

TABLE OF CONTENTS

1	Introduction.....	11
1.1	RESEARCH BACKGROUND AND MOTIVATION.....	11
1.2	E-COMMERCE: THE EMERGENCE OF GLOBAL MARKETS.....	14
1.3	TRUST AND THE COMPUTER USER.....	15
1.4	CONSUMER BEHAVIOUR.....	16
1.5	CULTURE AND ITS IMPACT ON PURCHASE DECISIONS IN THE CONTEXT OF ELECTRONIC COMMERCE...	17
1.6	TRUST AND ITS IMPACT ON PURCHASE DECISIONS.....	20
1.7	RESEARCH OBJECTIVE.....	20
1.8	SCOPE OF THIS RESEARCH.....	22
1.9	THE STRUCTURE OF THIS THESIS.....	23
1.10	SUMMARY.....	24
2	Literature Review.....	26
2.1	OVERVIEW.....	26
2.2	AN OVERVIEW OF THE TRUST PHENOMENON.....	29
2.2.1	<i>Definition of Trust.....</i>	<i>29</i>
2.2.2	<i>Preconditions for the Establishment of Trust.....</i>	<i>29</i>
2.2.3	<i>The Socio-Psychological Perspective on Trust.....</i>	<i>30</i>
	Individualistic Trust.....	30
	Relational Trust.....	31
	Transactional-economic Trust.....	33
	Organisational Trust.....	34
	Emotional Trust.....	34
	In-group Trust.....	35
2.3	THE TRUST MATRIX.....	35
2.4	VALUES, ATTITUDES, EMOTIONS AND TRUST.....	37
2.4.1	<i>Values.....</i>	<i>37</i>
2.4.2	<i>Attitudes.....</i>	<i>37</i>
2.4.3	<i>Moods and Emotions.....</i>	<i>38</i>
2.5	AN OVERVIEW OF A TRADITIONAL CONSUMER BEHAVIOUR MODEL.....	38
2.5.1	<i>Steps in Consumer Purchase Process.....</i>	<i>39</i>
2.5.2	<i>Consumer Background Characteristics.....</i>	<i>40</i>
2.5.3	<i>Behavioural Processes.....</i>	<i>42</i>
	Motivation.....	43
	Perception.....	43
	Learning.....	43
	Attitude formation.....	43
	Decision making.....	44
2.6	THE THREE LEVELS OF CONSUMER DECISION MAKING.....	46
2.6.1	<i>Extensive Problem Solving (EPS).....</i>	<i>46</i>
2.6.2	<i>Limited Problem Solving (LPS).....</i>	<i>46</i>
2.6.3	<i>Routine Problem Solving (RPS).....</i>	<i>47</i>
2.7	THE IMPACT OF TRUST ON BUYERS' BEHAVIOUR.....	47
2.8	CONSUMER BEHAVIOUR IN CYBERSPACE.....	48
2.8.1	<i>Cyber-Shopping.....</i>	<i>48</i>
2.8.2	<i>Telepresence and Bricolage.....</i>	<i>49</i>
2.9	TRUST IN VIRTUAL ORGANISATIONS.....	50
	Individual Trust (the Personality Theorist Perspective).....	52
	Societal Trust (the Socio-economical Perspective).....	52
	Relationship Trust (the Socio-psychological Perspective).....	52
2.9.1	<i>Trust on the Web.....</i>	<i>53</i>
2.9.2	<i>The Emergence of Cyber-Security Organisations.....</i>	<i>55</i>
	VeriSign.....	55
	TRUSTe.....	56

2.10	HUMAN-COMPUTER INTERACTION.....	58
2.10.1	<i>An Overview of HCI</i>	58
2.10.2	<i>HCI and Software Engineering</i>	58
2.10.3	<i>Culture and HCI</i>	60
2.10.4	<i>HCI and the World Wide Web</i>	61
	The Significance of Response Time to Usability	61
	Auditory Elements	62
	The Need for Accessibility.....	62
	Trustworthy Customer Interfaces in Electronic Commerce	62
	The Role of Electronic Media in the Cultivation of Trust	63
2.11	CULTURAL INFLUENCES ON THE COGNITIVE AND BEHAVIOURAL PROCESSES OF HUMANS.....	64
2.11.1	<i>Properties and Components of Culture</i>	65
2.11.2	<i>Components of Culture</i>	66
2.11.3	<i>Manifestations of Culture at Different Levels</i>	67
2.11.4	<i>Cultural Layers</i>	68
2.11.5	<i>Aspects and Dimensions of Culture</i>	69
2.11.6	<i>Culturability and the Web</i>	70
2.11.7	<i>Trust in Individualist Versus Collectivist Cultures</i>	71
2.11.8	<i>Trust in Collectivist Religions Versus Private Religions</i>	74
	Collectivist Religions	74
	Individualistic Religions	76
	Religious Consumer Segments	76
2.12	SUMMARY.....	78
3	Research Methodology	79
3.1	OVERVIEW	79
3.2	POSITIVISM	82
3.2.1	<i>Positivism Versus Relativism</i>	85
3.3	POST-POSITIVISM	86
3.4	POSITIVISM VERSUS POST-POSITIVISM	87
3.4.1	<i>A Shift in Paradigm: from Positivism to Post-Positivism</i>	89
3.5	TRIANGULATION.....	89
3.5.1	<i>Qualitative versus Quantitative Inquiry: Interpretivism Versus Positivism</i>	92
3.5.2	<i>Qualitative Analysis in Positivism</i>	93
3.5.3	<i>Mixed Methodologies</i>	95
3.5.4	<i>Content Analysis</i>	96
	Coding in Content Analysis	99
3.6	TYPE OF STUDY ADOPTED FOR THIS RESEARCH	102
3.6.1	<i>Experimental Method</i>	102
3.6.2	<i>Experimental settings</i>	106
	Sampling.....	106
	Participants.....	107
	Procedure.....	108
	Web Sites.....	108
3.6.3	<i>Quantitative Data Collection Technique</i>	109
3.6.4	<i>Qualitative Data collection Technique</i>	110
3.7	STATISTICAL ANALYSIS	112
3.7.1	<i>Normality of the Sample</i>	112
3.7.2	<i>Construct Validity</i>	112
	Validity of Modified Constructs	113
3.7.3	<i>Construct Reliability</i>	115
3.7.4	<i>Within-Group and Between Group Analysis</i>	116
3.8	SUMMARY.....	116
4	Model, Hypotheses and Measurement Constructs	117
4.1	OVERVIEW	117
4.1.1	<i>Research Questions and Hypotheses</i>	117
4.1.2	<i>The Conceptual Model of this Research</i>	119
4.2	ORIGIN OF THE CONSTRUCTS	120
4.3	MEASUREMENT TECHNIQUES AND SCALING PROCEDURE.....	122
4.4	CONSTRUCTS	123

4.5	CONSTRUCT VALIDITY REVISITED	124
4.5.1	Rotated Factor Solutions	125
4.5.2	Sample Size	125
4.5.3	Multivariate Normality	126
4.5.4	Normality of the First Test	126
4.5.5	Normality Test for the Second Sample	128
4.5.6	Construct Validity and Internal Consistency	131
4.5.7	Factor Scores	133
4.6	CONCEPTUALISATION AND OPERATIONALISATION OF THE CONSTRUCTS	135
4.6.1	Technology Familiarity: TECHFM	137
4.6.2	Internet Usage: IUSE	139
4.6.3	Religiosity: RELIG	141
4.6.4	Group Trust and Integrity: GTI	143
4.6.5	Intention to Buy: INTTOBUY	144
4.6.6	Consumer Ethnocentrism: CETSCALE	146
4.6.7	Religious-centrism: RELSCALE	148
4.6.8	Attitude: ATTR, ATTN	150
4.6.9	Web-based Trust: WBTR, WBTN	152
4.6.10	Post-Experimental Interviews	155
	Method of Transcription	155
	Analysing Respondents' Answers to Trust-Related Issues	158
4.7	SUMMARY	159
5	Experiment I	160
5.1	AN OVERVIEW	160
5.2	EXPERIMENTAL SETTINGS	161
5.2.1	Experimental Tasks	161
5.2.2	Data Collection Instrument	163
5.2.3	Constructs Related to Web-based Trust	163
5.2.4	Sampling Procedure	165
5.2.5	Time and Place	166
5.2.6	Demographics	167
5.2.7	Discussions	170
5.3	PRELIMINARY STATISTICAL ANALYSES	171
5.3.1	Normality and Skewness of the Distribution	171
5.3.2	Statistical Outliers	171
5.3.3	Missing Values	172
5.4	EXPLORATORY FACTOR ANALYSIS	172
5.4.1	Construct Validity	172
5.4.2	Factor Analysis of the Demographics Section of the Questionnaire	174
5.4.3	Factor Analysis of the Web sites Evaluation Section of the Questionnaire	175
5.5	CONSTRUCT RELIABILITY	176
5.5.1	Discussions	177
5.5.2	Revised Research Model	178
5.6	WITHIN-GROUP ANALYSIS	179
5.6.1	Hypotheses for this Experiment	179
5.6.2	Descriptive Statistics	181
	Descriptive Statistics for the First Experiment	182
5.6.3	Discussions	183
5.6.4	Non Normal Data Transformations Versus Non-Parametric Tests	184
5.6.5	Non-Parametric Test	187
5.6.6	Non-Parametric Results of Muslim Sample	188
5.6.7	Discussions and Implications	188
5.6.8	Non-Parametric Results of Christian Sample	189
5.6.9	Discussions and Implications	190
5.7	SUMMARY	191
6	Experiment II	192
6.1	OVERVIEW	192
6.1.1	Experimental Tasks	192
6.1.2	Data Collection Instrument	194

6.1.3	<i>Sampling Procedure</i>	194
6.1.4	<i>Time and Place</i>	195
6.1.5	<i>Demographics</i>	195
6.1.6	<i>Discussions</i>	198
6.2	PRELIMINARY STATISTICAL ANALYSES	200
6.2.1	<i>Normality and Skewness of the Distribution</i>	200
6.2.2	<i>Statistical Outliers</i>	201
6.2.3	<i>Missing Values</i>	202
6.3	EXPLORATORY DATA ANALYSES.....	203
6.3.1	<i>Construct Validity</i>	203
6.3.2	<i>Factor Analysis of the Demographics Section of the Questionnaire</i>	205
6.3.3	<i>Factor Analysis of the Web sites Evaluation Section of the Questionnaire</i>	208
6.4	CONSTRUCT RELIABILITY	209
6.4.1	<i>Discussions</i>	210
6.4.2	<i>Revised Research Model II</i>	211
6.5	WITHIN-GROUP AND BETWEEN GROUP ANALYSIS	212
6.5.1	<i>Hypotheses for this Experiment</i>	212
6.5.2	<i>Descriptive Statistics</i>	213
	Descriptive Statistics of the second Experiment.....	214
6.5.3	<i>Discussions</i>	215
6.5.4	<i>Parametric Tests for Analysing Potential Differences Between the 3 Religious Groups</i>	217
	Preconditions for using ANOVA.....	217
	Between-Subjects ANOVA	218
	Within -Subjects ANOVA	218
	Mixed-factorial ANOVA	218
	Significant Effects in ANOVA	219
6.5.5	<i>Preliminary Tests of ANOVA</i>	220
	Normality	220
	Equal sample sizes.....	220
	Homogeneity of Variance	221
6.5.6	<i>Results of the Multivariate Test</i>	221
6.5.7	<i>Discussions</i>	223
6.5.8	<i>Post Hoc Analysis</i>	226
6.5.9	<i>Discussions and Implications</i>	228
6.6	A CONTENT ANALYSIS OF TRUST-RELATED CONSTRUCTS.....	231
6.6.1	<i>Coding Procedure</i>	232
6.6.2	<i>Identifying Traits of Constructs in Interviewees' Responses</i>	234
6.7	INTERPRETING THE TEXTUAL DATA: A QUALITATIVE POINT OF VIEW	237
6.7.1	<i>Extracts from the Muslim Group</i>	237
	Discussions.....	239
6.7.2	<i>Extracts from the Christians Group</i>	241
	Discussions.....	242
6.7.3	<i>Extracts from the Others Group</i>	242
	Discussions.....	245
6.8	A CROSS-GROUP COMPARATIVE ANALYSIS OF EXPERIMENTAL DATA.....	246
6.8.1	<i>Chi-Square Test for Unrelated Data</i>	253
	Limitations on the use of Chi-square.....	254
6.8.2	<i>Discussions</i>	256
6.8.3	<i>General Implications and Conclusion</i>	258
6.9	SUMMARY AND CONCLUSION.....	259
7	Analysis and Conclusion	262
7.1	OVERVIEW	262
7.2	REVIEW OF RESEARCH OBJECTIVE.....	262
7.3	RESEARCH QUESTIONS AND SUMMARY OF RESULTS.....	263
7.4	CONTRIBUTIONS	270
7.4.1	<i>Implications for the Field of Electronic Commerce</i>	270
	COMMERCIALY-ORIENTED RELIGIOUS WEB SITES	270
	TECHNOLOGICAL INCENTIVES TO WEB-BASED TRUST.....	271
	SOCIOLOGICAL INCENTIVES TO WEB-BASED TRUST	272

7.4.2	<i>Contribution to Information System Research</i>	273
7.4.3	<i>Measurement Constructs for E-commerce</i>	275
7.5	LIMITATIONS OF THIS RESEARCH	276
7.6	AVENUES FOR FUTURE RESEARCH.....	277
7.7	SUMMARY.....	281
Appendices	283
A-1	QUESTIONNAIRE	283
A-2	RESPONDENTS VERBATIM ANSWERS TO QUESTIONS OF THE INTERVIEW	299
A-3	POST HOC TESTS FOR ANALYSIS OF VARIANCE (ANOVA).....	334
A-4	ORIGINAL DISTRIBUTIONS AND COMMON TRANSFORMATIONS TO PRODUCE NORMALITY	336
A-5	CONSTRUCT VALIDITY	337
A-6	RESPONDENTS TRANSCRIBED ANSWERS TO THE OPEN-ENDED QUESTIONS OF THE QUESTIONNAIRE	340
References	381

LIST OF FIGURES

FIGURE 1-1: CONTEXT OF THIS RESEARCH	13
FIGURE 1-2: SCOPE OF THIS RESEARCH	23
FIGURE 2-1: THE SEQUENCE OF TOPICS IN THIS LITERATURE REVIEW	28
FIGURE 2-2: STEPS IN THE CONSUMER PURCHASE PROCESS (WELLS AND PRENSKY 1996).....	39
FIGURE 2-3: THE IMPACT OF CONSUMER BACKGROUND CHARACTERISTICS AND BEHAVIOURAL PROCESSES ON CONSUMER PURCHASE ACTIVITIES (WELLS AND PRENSKY 1996).....	41
FIGURE 2-4: EFFECTS OF REFERENCE GROUPS ON PRODUCT AND BRAND PURCHASE (BEARDEN AND ETZEL 1982). 42	
FIGURE 2-5: PROPOSED BUSINESS FRAMEWORK OF TRUST AND THE VIRTUAL ORGANIZATION (HOLLAND AND LOCKETT 1998).	51
FIGURE 2-6: AN INTEGRATED MODEL OF TRUST (KINI AND CHOUBINEH 1998).	53
FIGURE 2-7: A VERISIGN-CERTIFIED SITE (WWW.ACOP.COM)	56
FIGURE 2-8: A TRUSTE-CERTIFIED SITE (WWW.AMERICANGREETINGS.COM)	57
FIGURE 2-9: HUMAN-COMPUTER INTERACTION (HEWETT ET AL. 1996).....	60
FIGURE 2-10: SOCIAL INFLUENCES (HOWARD 1994).	64
FIGURE 2-11: THREE LEVELS OF UNIQUENESS IN HUMAN MENTAL PROGRAMMING (HOFSTEDE 1998).	65
FIGURE 3-1: THE STEPS INVOLVED IN THE SCIENTIFIC RESEARCH BASED ON (COOLICAN 1994)	82
FIGURE 3-2: RESEARCH METHODOLOGY ADOPTED FOR THIS RESEARCH	92
FIGURE 3-3: A CONCEPTUALISATION OF A COMBINED APPROACH BETWEEN QUALITATIVE AND QUANTITATIVE METHODS (TASHAKKORI AND TEDDLIE 1998)	96
FIGURE 3-4: THE FOUR APPROACHES TO TEXTUAL ANALYSIS BASED ON ROSENGREN (1981).....	98
FIGURE 3-5: PROCEDURES IN CONTENT ANALYSIS (KRIPPENDORFF 1980)	101
FIGURE 4-1: A HYPOTHETICAL CONCEPTUAL MODEL ILLUSTRATING THE IMPACT OF CULTURAL FACTORS ON A BUYER'S PURCHASE DECISIONS (RESEARCH CONTEXT: ELECTRONIC COMMERCE).	120
FIGURE 5-1: MUSLIM WEB SITE (WWW.DAR-US-SALAM.COM).....	162
FIGURE 5-2: CHRISTIAN WEB SITE (WWW.TRINITYZONE.COM).....	162
FIGURE 5-3: NEUTRALLY-ORIENTED WEB SITE (WWW.BOL.COM).....	163
FIGURE 5-4: REVISED RESEARCH MODEL (I).....	179
FIGURE 5-5: CHARTS ILLUSTRATING THE MEANS OF THE ATT CONSTRUCT FOR THE 2 RELIGIOUS GROUPS	183
FIGURE 5-6: CHARTS ILLUSTRATING THE MEANS OF THE WBT CONSTRUCT FOR THE 2 RELIGIOUS GROUPS	184
FIGURE 5-7: DATA DISTRIBUTIONS OF THE 4 DEPENDENT VARIABLES	186
FIGURE 6-1: CHRISTIAN WEB SITE (WWW.CHRISTIANBOOKS.COM)	193
FIGURE 6-2: PROPORTION OF RELIGIOUS BACKGROUNDS IN THE SAMPLE.....	198
FIGURE 6-3: AN ILLUSTRATION OF THE CORRELATION BETWEEN THE DIFFERENT FACTORS EXTRACTED FROM THE DEMOGRAPHICS SECTION	206
FIGURE 6-4: AN ILLUSTRATION OF THE CORRELATION BETWEEN THE DIFFERENT FACTORS EXTRACTED FROM THE WEB-SITE EVALUATION SECTION	209
FIGURE 6-5: REVISED RESEARCH MODEL (II)	211
FIGURE 6-6: CHARTS ILLUSTRATING THE MEANS OF THE ATT CONSTRUCT FOR THE 3 RELIGIOUS GROUPS	215
FIGURE 6-7: CHARTS ILLUSTRATING THE MEANS OF THE WBT CONSTRUCT FOR THE 3 RELIGIOUS GROUPS	216
FIGURE 6-8: EXPERIENCE IN USING THE INTERNET	250
FIGURE 6-9: FAMILIARITY WITH SEARCH ENGINES	250
FIGURE 6-10: FAMILIARITY WITH WEB BROWSERS.....	251
FIGURE 6-11: PERCEIVED USER SKILL.....	252
FIGURE 7-1: A HYPOTHETICAL CONCEPTUAL MODEL ILLUSTRATING THE IMPACT OF CULTURAL FACTORS ON A BUYER'S PURCHASE DECISIONS (RESEARCH CONTEXT: ELECTRONIC COMMERCE).	264
FIGURE 7-2: DIAGRAM ILLUSTRATING THE TECHNOLOGICAL AND SOCIOLOGICAL INCENTIVES TO THE ESTABLISHMENT OF WEB-BASED TRUST	273
FIGURE 7-3: TRUST IN EXPERIENCED VERSUS INEXPERIENCED INTERNET USERS.....	275

LIST OF TABLES

TABLE 2-1: DIMENSIONS OF RELATIONAL TRUST (ATHOS AND GABARRO 1978; BUTLER 1991; BUTLER AND CANTRELL 1984).....	32
TABLE 2-2: RISKS ASSOCIATED WITH TRUST (SHEPPARD AND SHERMAN 1998)	36
TABLE 2-3: THREE FORMS OF REFERENCE GROUP INFLUENCE (SOLOMON 1999)	45
TABLE 2-4: CHARACTERISTICS OF STAGES OF DECISION-MAKING (HOWARD 1994).....	46
TABLE 2-5: A PORTRAYAL OF THE COMPONENTS OF CULTURE (WELLS AND PRENSKY 1996).	66
TABLE 2-6: RELATIVE ATTITUDINAL AND BEHAVIOURAL DIFFERENCES ASSOCIATED WITH INDIVIDUALISM VERSUS COLLECTIVISM (AAKER AND DURAIRAJ 1997).....	72
TABLE 2-7: A FOUR-WAY TYPOLOGY OF COLLECTIVIST AND INDIVIDUALIST CULTURES BASED ON (ZEYNEP AND MAHESWARAN 2000)	73
TABLE 3-1: INFORMATION SYSTEMS RESEARCH APPROACHES IN THE CONTEXT OF THE SCIENTIFIC AND INTERPRETIVIST PHILOSOPHIES (GALLIERS 1994).....	80
TABLE 3-2: INFORMATION SYSTEMS RESEARCH APPROACHES: A REVISED TAXONOMY (GALLIERS 1994).....	81
TABLE 3-3: A SUMMARY OF THE POSITIVIST AND POST-POSITIVIST RESEARCH PARADIGMS (GUBA AND LINCOLN 1998)	87
TABLE 3-4: SOME DIFFERENCES BETWEEN QUANTITATIVE AND QUALITATIVE RESEARCH (BRYMAN 1988)	91
TABLE 3-5: CODING UNITS (COOLICAN 1994)	100
TABLE 3-6: A TAXONOMY OF TRADITIONAL DATA COLLECTION TECHNIQUES IN THE SOCIAL AND BEHAVIOURAL SCIENCES (TASHAKKORI AND TEDDLIE 1998).....	105
TABLE 4-1: LIST OF CONSTRUCTS USED IN THIS RESEARCH STUDY	123
TABLE 4-2: DESCRIPTIVE STATISTICS OF ITEMS OF THE RELIGION SECTION OF THE QUESTIONNAIRE (SAMPLE 1)...	127
TABLE 4-3: DESCRIPTIVE STATISTICS OF ITEMS OF THE WEB SITES SECTION OF THE QUESTIONNAIRE (SAMPLE 1) .	128
TABLE 4-4: DESCRIPTIVE STATISTICS OF ITEMS OF THE RELIGION SECTION OF THE QUESTIONNAIRE (SAMPLE 2)...	130
TABLE 4-5: DESCRIPTIVE STATISTICS OF ITEMS OF THE WEB SITES SECTION OF THE QUESTIONNAIRE (SAMPLE 2) .	131
TABLE 4-6: EXAMPLES OF STUDIES USING FACTOR ANALYSIS AS A TEST FOR CONSTRUCT VALIDITY.....	134
TABLE 4-7: DEFINITIONS OF TRUST	154
TABLE 5-1: DEFINITION OF CONSTRUCTS DERIVED FROM USERS	164
TABLE 5-2: CHARACTERISTICS OF SAMPLE CROSS-TABULATED AGAINST RELIGION	168
TABLE 5-3: SKEWNESS AND KURTOSIS TEST FOR SCALES	171
TABLE 5-4: FACTOR LOADINGS ¹ OF ITEMS OF SECTION III & IV IN THE FIRST PART OF THE QUESTIONNAIRE.....	173
TABLE 5-5: FACTOR CORRELATION MATRIX.....	174
TABLE 5-6: FACTOR LOADINGS ¹ OF ITEMS FROM THE WEB SITES EVALUATION QUESTIONNAIRE	175
TABLE 5-7: FACTOR CORRELATION MATRIX.....	175
TABLE 5-8: RESULTS OF THE CRONBACH ALPHA TEST OF THE CONSTRUCTS.....	177
TABLE 5-9: BASIC DESCRIPTIVE STATISTICS APPROPRIATE FOR DIFFERENT TYPES OF VARIABLES (BABBIE ET AL. 2000)	181
TABLE 5-10: BASIC DESCRIPTIVE STATISTICS APPROPRIATE FOR DIFFERENT LEVELS OF MEASUREMENT (BABBIE ET AL. 2000).....	181
TABLE 5-11: DESCRIPTIVE STATISTICS OF CONSTRUCTS USED IN THE FIRST EXPERIMENT	182
TABLE 5-12: SKEWNESS AND KURTOSIS TEST FOR SCALES	187
TABLE 5-13: WILCOXON SIGNED RANKS FOR THE MUSLIM GROUP	188
TABLE 5-14: WILCOXON SIGNED RANKS TEST STATISTIC FOR THE MUSLIM GROUP	188
TABLE 5-15: WILCOXON SIGNED RANKS FOR THE CHRISTIAN GROUP	189
TABLE 5-16: WILCOXON SIGNED RANKS TEST STATISTIC FOR THE CHRISTIAN GROUP	189
TABLE 5-17: RELIGIOUS CATEGORY VERSUS TRUST AND ATTITUDE TOWARDS A WEB SITE	190
TABLE 6-1: CHARACTERISTICS OF SAMPLE CROSS-TABULATED AGAINST RELIGION	196
TABLE 6-2: SKEWNESS AND KURTOSIS OF SCALES	201
TABLE 6-3: FACTOR LOADINGS ¹ OF ITEMS IN SECTION III & IV OF THE FIRST PART OF THE QUESTIONNAIRE.....	204
TABLE 6-4: FACTOR CORRELATION MATRIX.....	205
TABLE 6-5: FACTOR LOADINGS ¹ OF ITEMS FROM THE WEB SITES EVALUATION QUESTIONNAIRE	207
TABLE 6-6: FACTOR CORRELATION MATRIX.....	208
TABLE 6-7: RESULTS OF THE CRONBACH ALPHA TEST OF INTERNAL CONSISTENCY FOR THE CONSTRUCTS	210
TABLE 6-8: DESCRIPTIVE STATISTICS OF CONSTRUCTS USED IN THE SECOND EXPERIMENT	214
TABLE 6-9: BETWEEN-SUBJECTS FACTORS FOR THE ATT CONSTRUCT	220
TABLE 6-10 BOX'S TEST OF EQUALITY OF VARIANCE-COVARIANCE MATRICES (HOMOGENEITY OF VARIANCE) ...	221
TABLE 6-11: WITHIN-SUBJECTS EFFECT OF THE ATT CONSTRUCT FOR THE 3 RELIGIOUS GROUPS	222
TABLE 6-12: WITHIN-SUBJECTS EFFECT OF THE WBT CONSTRUCT FOR THE 3 RELIGIOUS GROUPS	223

TABLE 6-13: RESULTS OF THE SCHEFFE TEST FOR THE ATT DEPENDENT VARIABLE.....	226
TABLE 6-14: HOMOGENEOUS SUBSETS FOR THE ATTM DEPENDENT VARIABLE	227
TABLE 6-15: HOMOGENEOUS SUBSETS FOR THE ATTC DEPENDENT VARIABLE	227
TABLE 6-16: HOMOGENEOUS SUBSETS FOR THE ATTN DEPENDENT VARIABLE	227
TABLE 6-17: CORRELATION TABLE OF THE DEPENDENT VARIABLES	229
TABLE 6-18: QUESTIONS USED IN THE POST-EXPERIMENTAL INTERVIEWS.....	231
TABLE 6-19: CONTENT ANALYSIS CODING-SHEET SHOWING FREQUENCIES OF TRUST-RELATED CONSTRUCTS (INCENTIVES FOR TRUSTING A WEB SITE).....	235
TABLE 6-20: FREQUENCIES OF CONSTRUCTS.....	236
TABLE 6-21: DEMOGRAPHICS OF THE TWO CONSERVATIVE MUSLIM GROUPS	248
TABLE 6-22: CHOOSING A TEST FOR COMPARING THE AVERAGES OF TWO OR MORE SAMPLES OR SCORES FROM AN EXPERIMENT (KINNEAR AND GRAY 1999).....	253
TABLE 6-23: OBSERVED AND EXPECTED FREQUENCIES OF THE CATEGORICAL VARIABLES FOR THE 2 MUSLIM CONSERVATIVE GROUPS	255
TABLE 6-24: CHI-SQUARE TEST FOR THE 2 CONSERVATIVE MUSLIM SAMPLES.....	255
TABLE 6-25: RESULTS OF THE PHI COEFFICIENT (SYMMETRIC MEASURE).....	256
TABLE 7-1: SUMMARY OF RESULTS AND CONCLUSIONS	265

1 INTRODUCTION

1.1 *Research Background and Motivation*

Researchers and academics from diverse disciplines have highlighted the role of 'trust' for establishing and strengthening existing relationships between individuals and organisations in the commercial and the social context (Brandt 1997; Coutu 1998; Fukuyama 1996; Hirsch 1978; Naumann 1992). Some studies have found the ingrained cultural values, which form an essential part of the cultural heritage of a person, to be influential in evoking an individual's trust (Hofstede 1998; Staw and Cummings 1980a). In general, trust in the cultural context is credited with being the social 'glue' for sustaining bonds between members of cultural groups (Brewer 1979; Triandis 1995; Turner 1987). Despite its mention in numerous sources, there is no consensus on a unique definition of trust and what actually causes it.

The 'trust' phenomenon has become a 'hallmark' of success in organizations as they become more involved with Information Technology (IT). The significance of trust increases when the perceived risks and uncertainties in adopting Information System (IS) applications are high. The risk inherent in interacting with a network of distributed systems is perceived by the potential stakeholders to be quite high (Schneider, 1999). A significant degree of uncertainty and risk was also associated with online shopping and trading on the Internet (Wang et al., 1998).

There remains a 'niche' of undiscovered potential topics related to the trust concept in the IS research agenda. These potential research topics could include developing trust models applicable in the context of e-commerce and testing and extending the extant theories of trust, which can be found in the traditional literature to the context of e-commerce.

The host platform of e-commerce is contingent upon a network of global IS hosted on geographically dispersed computer servers. This network of geographically dispersed computer systems represents the pervasive phenomenon known as the Internet. The dependence on a network of computers with all its corresponding levels and kinds of vulnerabilities has raised the demand for research about the potential factors that can help instil trust in electronically mediated environments (Schneider 1999). For users to adopt Business-to-Consumer (B2C) e-commerce, it becomes

imperative that the benefits of using this new commercial medium significantly outweigh the potential risks and inconveniences that might be encountered through its use. Indeed, 'difficulty-of-use' and 'lack of trust' with respect to online payment, privacy and consumer service have been found to raise psychological barriers to e-commerce (Cassell and Bickmore 2000; Clarke 1999; Egger 1999; Jarvenpaa and Todd 1997). Creating a broader range of choices and more robust tools for building trustworthy networked information systems (NIS) is essential. To accomplish this, ongoing research in the field of information/ computer system security is attempting to address these problems.

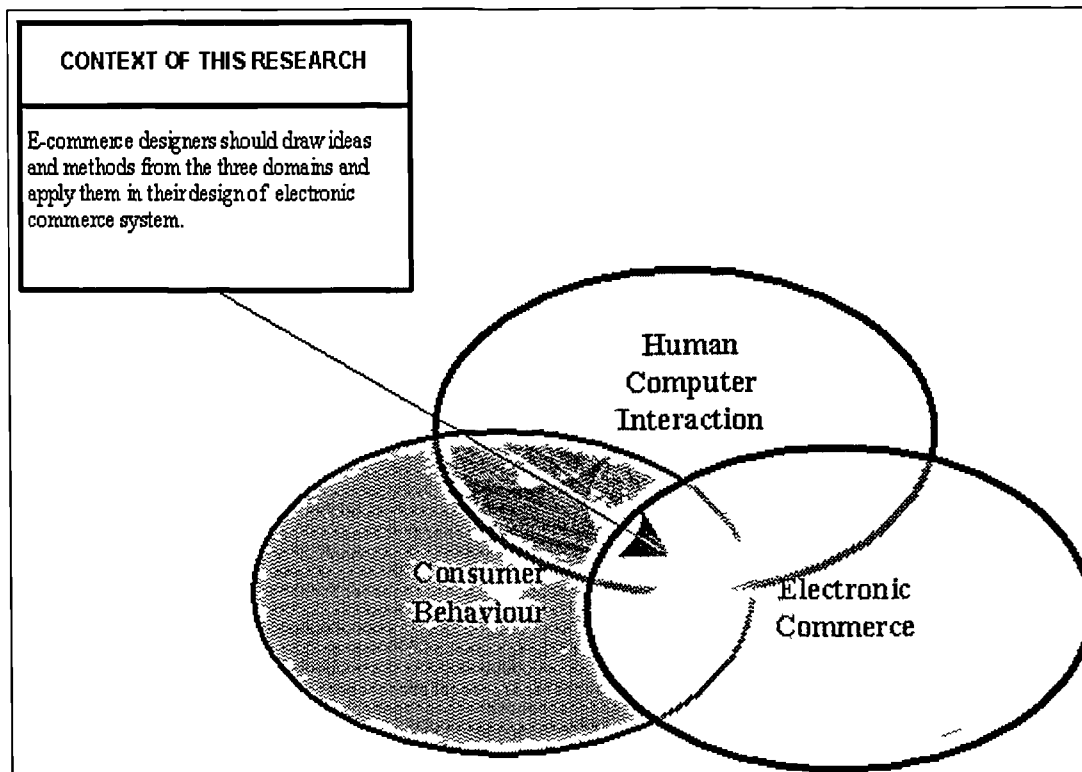
Research in IS targeting specifically Web site design and development issues must go beyond technological and traditional usability issues in order to come up with effective design guidelines for commercial Web sites. One cannot argue against the significance of good usability and a positive user experience as preconditions for establishing a successful commercial Web site. It is however of equal importance to realise that the areas exclusively bound to the domain of traditional and online marketing require a 'dip' into the domain of Human-Computer Interaction (HCI) in order to better understand what maximizes the online trust and experience of e-consumers. The areas or constituent topics of marketing that we have mentioned above that could benefit from intersecting with the domain of HCI are brand loyalty, customer service, product displays, privacy, trust, and investigations related to interface design features that impact the traffic and sales of commercial Web sites.

Although it is not up to interaction designers and usability engineers to solve issues related to Web site legitimacy, security, and cryptography, they can nevertheless play an important role in ensuring that trustworthiness is communicated in user interface designs. This is where traditional HCI analysis comes into the research picture. The discipline of HCI currently lacks substantive knowledge about how trust is formed, maintained and lost between buyers and sellers in the context of e-commerce (Egger and McElhaw 2001). Accordingly, without investigating the origin of trust and how it operates in this context, it is difficult to gain valid and reliable knowledge about how trustworthiness can be incorporated in the interface design of e-commerce systems. The scope of investigation related to interface design of e-commerce systems should address the visible (for example text, graphics, colours and the Web page layout) and the invisible (for example message behind the Web-advertisement and the cultural nuances portrayed by a Web site) elements of interface design.

While the deployment of extant technologies can improve trustworthiness towards online organisations, there are some questions that are left unanswered in some critical areas of e-commerce. In e-commerce, the actual interaction with the consumer has become of paramount importance. Users

and consumers in e-commerce are in fact the same persona. One needs not to emphasise the need for Web site designers to understand the intersection between the disciplines of consumer behaviour, HCI and e-commerce (see Figure 1-1), as this will lead to the producing of better design guidelines for e-commerce systems, specifically commercial Web sites (De Groot et al. 2001).

Figure 1-1: Context of this Research



The challenges of e-commerce from this research's point of view are summarised in the following steps: (1) attract users, (2) make them visit the Web site, (3) establish trust, (4) lure them to buy, and finally (5) make sure that they come back and revisit the Web site. It seems apparent that in order for us to conduct this type of research we need to gain a collective understanding of traditional consumer behaviour, consumer behaviour in e-commerce or cyberspace, and finally the trust concept and the various sources that instigate it in different contexts. The concept of trust will be the central focus of this research since our research is entirely based on this subject. In order for us to come up with some research questions related to this study, we will now briefly cover topics of the various potential sources of the trust concept which as mentioned previously represents the 'heart' of this research study.

1.2 E-commerce: the Emergence of Global Markets

E-commerce has been heralded as a new business paradigm that will be increasingly adopted in organisations around the world to improve communications and transactions, reduce operation costs and increase market share. Traditional businesses are adopting e-commerce as a new way of doing business with their stakeholders such as business partners, consumers, financial institutions, government, and the general public. The advent of the Internet has also led to the emergence of many online businesses that are competing with brick-and-mortar commercial organisations. Research findings however indicate that e-commerce acceptance and diffusion has not been as smooth as initially predicted and that it also faces many challenges before its full potential is realised. Some of the identified challenges that need to be addressed are the need for an appropriate culture, an integrated technological infrastructure, security safeguards for financial transactions, reliable delivery times, re-engineering processes, changing business models, and socio-technical issues. These challenges clearly highlight the growing demand for research studies that investigate on how to support the diffusion and acceptance of e-commerce.

What are the obstacles and/or problems associated with achieving success in e-commerce? Are there any heuristics (rules of thumb) that can be developed to guide businesses interested in conducting e-commerce? What are the critical success factors for national, regional (continental), and global e-commerce? What are the technological issues specific to e-commerce? What are the data and platform integration issues specific to e-commerce? What cultural issues have to be considered in the context of e-commerce? These are all important questions facing IS professionals and academics alike as we move into a new world of global electronic data interchange and communications.

The "interactive economy" has dominated the press for the past few years and put both the fear of financial uncertainty and the hope of unlimited opportunities into business executives across the globe. First came the forecasts of doom for bricks-and-mortar stores, given the optimistic forecasts of business-to-consumer (B2C) e-commerce (Hoffman et al. 1995; Lohse and Spiller 1998). Then came the involvement with anything related to business-to-business (B2B) e-commerce (Bolin 1998). This trend has a number of impacts on commercial organisations.

Online organisations willingly or unwillingly tend to be global or at least regional in their marketing scope. This trend imposed on organisations to reconsider the scope of their organisational infrastructure and stretch it to the bounds of the global consumer market. This is a daunting task, as the marketing strategies and techniques must be revised to operate successfully in the online

marketing environment and contemporary advertisements must also be redefined to target a now global population of consumers.

Although traditional marketing highlighted the importance of studying consumers' behaviour and the consumer decision-making processes in particular there was a shortage of research material on these particular topics in the context of e-commerce. Advances in online consumer behaviour or cyber-shopping, as it became now known mainly take into consideration the marketer's point of view. Web-based and other electronic marketing models have been proposed but consumer models and consumer-related research studies reporting the cyber-shopping experience from a consumer's perspective are a 'minority' in the extant literature.

1.3 Trust and the Computer User

To be labelled as trustworthy, an IS must not only behave as expected but it must also reinforce the belief that it will continue to produce behaviour that will not be detrimental or susceptible to subversion (Schneider 1999). Design and implementation errors must be avoided, eliminated, or somehow tolerated. In the terminology of the computer security literature, "vulnerability," "attack," and "threat" are technical terms. A "vulnerability" is described as an error or weakness in the design, implementation, or operation of a system. An attack is a means of exploiting some vulnerability in a system. A threat is an opportunistic adversary that is motivated and capable of exploiting flaws/ vulnerabilities inherent in the system. It is not sufficient to address only some of these dimensions, nor is it sufficient simply to assemble components that are themselves trustworthy. Trustworthiness is a holistic and multidimensional concept.

The infrastructure of the Internet by itself is based on a network of IS (Schneider 1999). In the context of e-commerce, users use Web browsers installed on a computer system to interact with Web sites on the Internet. Contemporary research studies report that the main reason people feel uncomfortable with shopping on the Internet is due to lack of trust in the online environment (Friedman et al. 2000; Hoffman et al. 1999). According to these studies, the financial insecurity inherent in online transactions is the major disincentive for users to transact online. Other studies reported that the potential financial insecurities inherent in online transactions are not the only inhibitors. Lack of trust is rather related to a number of factors, such as the legitimacy of the online company and the products that they sell and the lack of privacy and personalised service amongst others (Bellman et al. 1999; Cassell and Bickmore 2000; Jarvenpaa et al. 1999; Lohse and Spiller 1999). Questions like what factors, 'off'- and 'on-line', influence a user's perception of a Web site's

trustworthiness and which of these factors can be manipulated in user interface designs are currently still undergoing extensive research (Egger 1999).

Unlike traditional IS most of the buyer-seller interactions in e-commerce are taking place exclusively through the interface provided by the e-commerce system. Stores on the Internet become interactive electronic pages and therefore it is imperative that this system is designed from the users'/ consumers' perspective. The general problem of concern in Web-HCI research is how to draw interdisciplinary methods and techniques from the field of HCI and incorporate them into the interface design of e-commerce systems. Research in e-commerce in the context of HCI can help the researcher in his/her quest to identify the human factors that might be responsible for increasing the general appeal, usability and trustworthiness of a commercial Web site (Egger, 1999). The working assumption of this study is that a user-centred approach of investigating trust-related factors is more likely to explain what makes Web sites trustworthy from others than the traditional technology-centred approach.

1.4 Consumer Behaviour

The goal of consumer behaviour research is to understand how marketers identify and utilize sources of influence on consumer behaviour. These sources are dominated by the various media, which compete with other stimuli to inform, persuade, and influence purchase decisions. In studying consumer behaviour, the main goal is to understand how consumers make product choices and purchase decisions. Consumer behaviour research is wide in scope, and the theory and research in the social sciences relevant to buyer's behaviour as well as the research methods used to study consumers are diverse.

Wells and Prensky (1996) defined consumer behaviour as the exchange of something of value for a product or service that can satisfy someone's needs. Products can be either tangible (food, beverages, cars, etc.) or intangible (talkshows, films, travelling, services, etc.). Consumer behaviour commences from the awareness of a want, through to the search and evaluation of possible means of satisfying it, the act of purchase itself, and terminates at the post-purchase evaluation process after purchasing an item (Alba et al. 1991). The post-purchase experience can either persuade or dissuade the buyer from re-purchasing the product depending on the consumer's utilitarian and arbitrary judgement of the product.

1.5 Culture and its Impact on Purchase Decisions in the Context of Electronic Commerce

Cultural groups and subcultures usually consist of congenial individuals sharing similar interests and lifestyles. Culture is the character of a society that distinguishes it from other societies. It refers to the set of values, ideas, attitudes and views shared by homogeneous members of a society. Culture entails all things that consumers do subconsciously because cultural values, customs, and rituals are ingrained in their daily habits (Howard 1994; Solomon 1999). Solomon (1999: p. 495) describes the cultural impact on an individual's purchase decision in the following account:

Culture, a concept crucial to the understanding of consumer behaviour, may be thought of as a society's personality. It includes both abstract ideas, such as values and ethics, as well as the material objects and services, such as automobiles, clothing, food, art, and sports, that are produced or valued by a society... consumption choices simply cannot be understood without considering the cultural context in which they are made: Culture is the "lens" through which people view projects. Ironically, the effects of culture on consumer behaviour are so powerful and far-reaching that this importance is sometimes difficult to grasp or appreciate. Like a fish immersed in water, we do not always appreciate this power until we encounter a different environment, in which suddenly many of the assumptions we had taken for granted about the clothes we wear, the food we eat, the way we address others, and so on no longer seem to apply. The effect of encountering such differences can be so great the term "culture shock" is not an exaggeration.

The Culture to which an individual affiliates has an impact on his/ her purchase decisions through the values it teaches them (Mariampolski 1999). These values dictate on the members of a culture or society what is considered ethical and appropriate behaviour. A subculture is a segment of a larger culture whose members share distinguishing patterns of behaviour. These subcultures adhere to the dominant culture's beliefs, values, and behavioural patterns of the larger society. The character of a subculture can be based on the demographic variables of a consumer population such as ethnicity, religion, region or age groups (Solomon 1999).

Mariampolski (1999: p. 78-79) summarized the significance of culture on individuals as follows:

Although the human capacity for culture is biological, cultural content itself is not innate... the various elements of culture are interrelated and the whole is larger than the sum of its parts... Culture is the source of any group's collective memory and provides a basis for

consciousness...the values that people hold dear, their collective sense of self and their aspirations are rooted in cultural learning. Moreover, the material components of culture- the tools and trappings used in daily life- have deep roots in these ideational aspects. In this way culture comes to play an important role in product choice, usage and resistance.

A cross-cultural experiment conducted by Applbaum and Jordt (1996) generated empirical results that corroborate Mariampolski's statements about the impact that cultural forces have on consumer behaviour.

Cultural differences have to be considered when advertising and launching new products in conventional and electronic markets. The consequences of not following such a practice could otherwise range from poor sales to consumers ostracizing a company's products depending on the extent to which a consumer has misinterpreted the message behind the advertisement of a product. The cultural background of a consumer can manipulate how a consumer perceives a product. The following are excerpts of cross-cultural incidents demonstrating mainly how culture and religion can affect consumers' perception of foreign products. Most stories were extracted from Wells and Prensky (1996) and Solomon (1999):

The common American Pepsi slogan, "Come Alive", was interpreted differently all over the world...the Chinese understood it as 'it brings your ancestors back from the grave.

Gerber's advertised baby food in an African country using a full-page photo of a beautiful African baby with a small jar of baby food in the corner. The custom in that country was to depict the contents of any packaged product in its advertising, and the unpleasant implication was that Gerber was selling cut-up babies!

Colours have different connotations and traditional uses across cultures. In Southeast Asia, for example, light blue symbolizes death and mourning...In China, white is associated with death, and traditional brides dress in red.

In a fashion show, supermodel Claudia Schiffer wore a strapless evening gown designed by Karl Lagerfeld. The dress included Arabic letters that the designer believed spelled out a love poem. Instead, the message was a verse from the Koran, the Muslim holy book. To add insult to injury, the word "God" happened to appear over the model's right breast. Both the designer and the model received death threats, and the controversy subsided only after the three versions of the dress that had been made (and priced at almost \$23,000) were burned.

These examples can also be extended to the context of e-commerce. For instance, the third story contends that white wedding dresses could deter Chinese would-be brides because the white colour reflects events related to death in the Chinese conventions. Similarly, in the context of e-commerce, one can argue that Chinese online visitors could find Web pages with a white background apprehensive.

Reference groups may be based on family, friends, colleagues or role models (opinion leaders). These groups have a strong influence on an individual's beliefs, evaluations and the purchase decision process (Howard 1994). Devout members affiliating to certain reference groups including the religious type are expected to honour and conform to the predetermined cultural values, attitudes and behaviour set up by their group leaders (Solomon 1999). Such individuals use reference groups as a reference point to check if their attitudes and preferences are consistent with those of the group (Phipps and Simmons 1998-99).

Glock and Stark (1965: p. 262) describe religious groups as 'the most ubiquitous of social institutions'. Strong and intimate interpersonal bonds unite members of a religious congregation or group. Fellow-members are expected to sustain relationship ties to their religious groups (Stark and Glock 1968). In the religious context, reference groups are based on religious doctrines or dogma. The customs, values and norms set by a religious group are highly esteemed by its members. The 'influential' role that religious subcultures play in the purchase decisions of devout members of such groups has been highlighted in the contemporary literature (Iannaccone 1995; Solomon 1999). Trust in religious groups is usually nurtured by the cultural values that are acquired through the teachings of parents, the older generation and ministers of religions.

In the traditional world, the in-group trust between fellow-members together with strict conformity to the religious values and rules set by the group leaders are key factors for sustaining strong relationship bonds between members of religious groups. Members of a collectivist religious subculture usually turn to their group leaders for advice regarding social and other mundane affairs (Iannaccone 1995; Stark and Glock 1968). This includes consulting religious group leaders if a product they intend to purchase is in line with the group's religious practices since devout followers of a collectivist religion are expected to buy only products that agree with their religious practices. In the context of collectivist religions, religious consumers are expected to prefer shopping from stores whose owners follow the same religion as these individuals.

1.6 Trust and its Impact on Purchase Decisions

As mentioned previously, there is no unique or comprehensive definition of trust. What actually triggers trust and how it is developed is still undergoing extensive research. Its importance however has been highlighted in multi-disciplinary literature sources. For example, some researchers argue that trust plays a significant role in buyer-seller relationships (Brandt 1997; Coutu 1998; Fukuyama 1996; Hirsch 1978; Naumann 1992). Others stress that trust is a key actor in forging and strengthening existing interpersonal co-operation (Butler 1991; Carnevale et al. 1982; Mecker 1983; Ring and Van de Ven 1992). The available material discussing the trust concept, its antecedents and how it develops are hypothetical and dynamic. There is a general consensus in the literature that a necessary precursor to the establishment of trust is the presence of a certain amount of risk in the environment where a trading decision is being contemplated (Deutsch 1958; Lewis and Weigert 1985; Mayer et al. 1995).

The potential sources of trust that have been identified by different studies are the cultural, religious and the emphatic components of the human nature (Clawson 1989; Doney and Cannon 1997; Doney et al. 1998; Gambetta 1988; Holmes and Rempel 1989; Iannaccone 1995; Lewis and Weigert 1985; Lewis 1994; McAllister 1995; Pearce 1974; Rempel et al. 1985; Shapiro 1987; Stark and Glock 1968). Howard (1994) argues that positive attitudes towards a product are an indication of a buyer's intention to purchase the product. Subsequently, if the premise that considers trust to be some kind of a positive attitude (Deutsch 1958; Giffin 1967; Kini and Choobineh 1998) is assumed to be valid, one can hypothesize that trust is a potential precursor to the actual purchase of a product.

The literature discussing cultural groups has attributed the presence of strong in-group bonds to the cultivation of trust between members of such groups. Religious groups are not different. In fact, religion is a prominent subsidiary of a culture, also known as religious subcultures (Hofstede 1998; Solomon 1999; Wells and Prensky 1996).

1.7 Research Objective

Research in e-commerce seems to focus more on the marketing side rather than the consumer side of e-commerce. The importance of learning about consumer behaviour and the factors that affect buyers' purchase decisions has been highlighted in many traditional marketing and consumer behaviour studies (Darling and Wood 1990; Foxall 1996; Sharma et al. 1995; Solomon 1999; Wang and Petrison 1993; Wells and Prensky 1996). Consumer behaviour in the context of e-commerce has

been discussed in some studies (Jarvenpaa and Todd 1997; Liang and Huang 1998; Raman and Leckenby 1998; Venkatesh 1998; Wang et al. 1998) but the research perspective adopted was from the marketing viewpoint.

One major factor that was identified to strengthen the relationship between buyers and sellers is trust. There are a few studies that investigated the impact of trust on the buyer-seller relationship in the context of e-commerce (Jarvenpaa et al. 1999). Most research related to online trust focuses on technological aspects and not the sociological or cultural aspects related to the online trust-building process. Kim and Moon (1998) found that the embedding of cultural nuances in the interface design of Web sites could make users' perceive a Web site as 'trustworthy'. In spite of the importance of designing appropriate user interfaces for e-commerce systems, most contemporary research focuses on the technological issues related to their implementation, such as encryption, security, and methods for realising electronic payments. This does not mean that technological issues are less important, but human-side issues, such as the design of appropriate customer interfaces for online users/ consumers are paramount and of equal importance for the global acceptance and portrayal of a 'trustworthy' e-commerce system (Kim and Moon 1998). The customer interface is defined as the user interface through which online users/ consumers interact with a commercial Web site to search for specific products and to purchase selected items from a Web site (Kim and Moon 1997).

For trust to become significant, a potential decision must bear a degree of risk or uncertainty (Deutsch 1958; Lewis and Weigert 1985; Mayer et al. 1995). Since a significant degree of uncertainty and risk is associated with online shopping and trading on the World Wide Web (Wang et al. 1998) and since distrust is said to be a 'dominant' obstacle to the trading process when the merchants are remote (Brandt 1997; Friedman et al. 2000), one can justify the World Wide Web as being an eligible venue for testing consumers' trust in the context of e-commerce. It is this 'uncertainty' aspect inherent in the World Wide Web that has initiated our research proposition.

Reference groups were found to influence significantly the purchasing decisions of their members (Bearden and Etzel 1982; Howard 1994). Our primary research objective is to investigate if the cultural influences on an individual's attitude and trust towards a vendor, which are cited to exist in the traditional marketing context, persist in the context of e-commerce. We will specifically concentrate on religious subcultures and the influence of religious trust on fellow-members of such groups when it comes to trusting "religious" Web sites.

The focal point of this research is to compare a religious category of Web sites to a generic category of Web sites, both selling an identical variety of goods, and then see which category of Web

site scores higher in terms of trust and attitude from the perspective of online visitors. Subsequently, we can ascertain if religious consumers basing their purchasing decisions on 'religious' trust alone overlook more important issues such as the privacy and security problems that are associated with online financial transactions. From a HCI point of view, we can say that our research will investigate an "abstract" interface of e-commerce systems- the 'theological' interface of a commercial Web site. Our research will confirm if Web sites designed with a 'religious' interface can evoke the trust of online religious users following the same religion that is portrayed by the Web site. Subsequently, we can ascertain if religious consumers basing their purchasing decisions on 'religious' trust alone overlook more important issues such as the privacy and security problems associated with financial transactions performed over the Internet.

There is a secondary objective of this thesis that is actually inversely related to the first research objective. The literature discourse on the World Wide Web and its revolutionary achievements credits the World Wide Web with establishing a global society that converges geographically dispersed individuals and enable them to share their ideas and opinions with others in remote locations. The potential findings of this research will confirm whether there is an emergent trend of a 'United Web Culture'. This latent culture is expected to integrate people from different religious, ethnic and cultural backgrounds who pay more attention to the extent of privacy and safeguards adopted by a Web site rather than to depend on religious trust alone when they contemplate purchasing a product over the Internet.

Our research aims can be summed up into the following research questions:

Q1. Do religious individuals trust virtual religious stores in the same way as they trust physical religious stores?

Q2. Does the "borderless" global structure of the World-Wide Web cultivate the presence of a united Web culture that encompasses individuals devoid of any religious and other cultural influences?

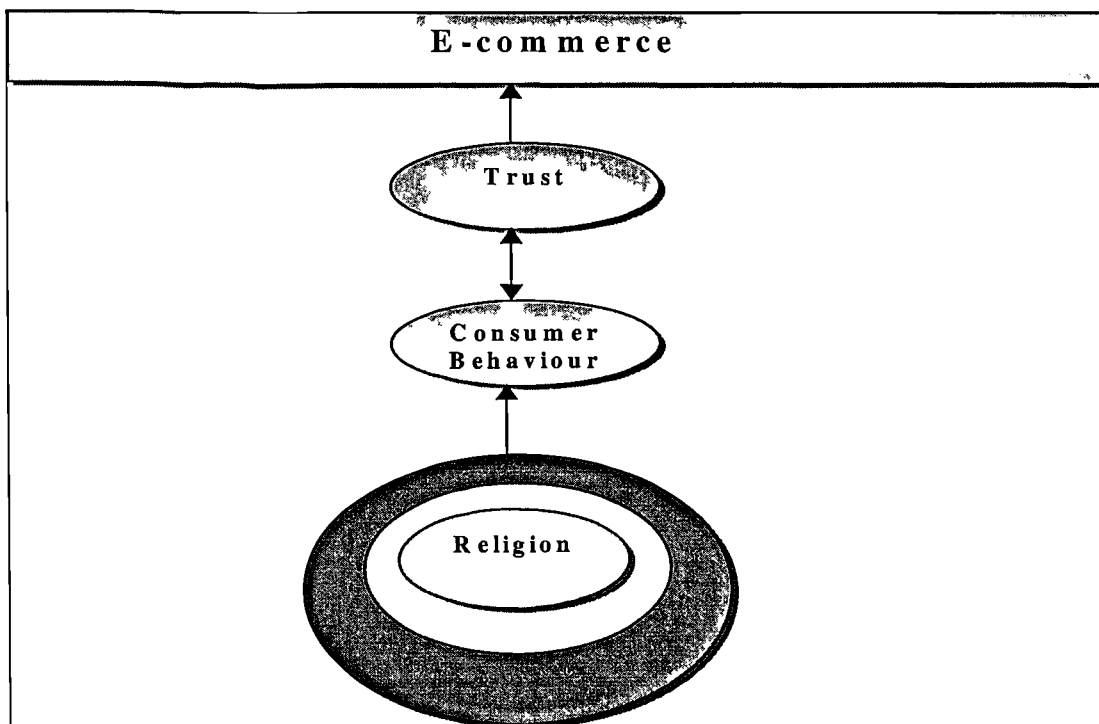
1.8 Scope of this Research

The main aim of this thesis is to investigate if cultural variables can manipulate an individual's perception of a Web site. Culture is a multi-dimensional construct and since it is impossible to study each and every dimension of it, the scope of this research is constrained to study one particular aspect of culture- religion. Other dimensions of culture, such as national identity, power

distance, masculinity-femininity, uncertainty avoidance and individualism-collectivism (Hofstede 1998) will only be discussed in the literature but they will not be part of our research plan.

We will also narrow our research focus on cultural influences in collectivist religions. The collectivist religions that we will investigate in this research are Christianity and Islam. Judaism and other collectivist religions will not be included in the scope of our research. These limitations will directly affect the interpretations that will be based on the findings of this research. Generalising the results beyond the scope of this study will become a questionable issue. One cannot assume that the potential findings of this research will reflect characteristics that may be found in the global population. Thus, these limitations have to be addressed in future research.

Figure 1-2: Scope of This Research



1.9 The Structure of this Thesis

We proceed now by providing a roadmap for this thesis. This will clarify the structure that will be followed for this research study. The sections that follow will outline briefly what each chapter focuses on:

Chapter 2 will review the literature discussing the topics that we identified to be relevant to our research.

Chapter 3 will describe the research methodology adopted for this research. The different paradigms of research methods will be discussed in detail. Quantitative and qualitative methods and their differences will also be covered together with the concept of plurality and theoretical and methodological triangulation.

Chapter 4 will discuss the hypotheses that will be developed and the measurement constructs that will be drawn for the purpose this research. A conceptual model will be derived accordingly to portray the hypothetical relationships between the different constructs.

Chapter 5 will describe in detail the first experiment that will be conducted for this research. Discussions will encompass the experimental settings, the data collection techniques, the instruments used to analyse the results, and all other essential topics pertinent to the experiment.

Chapter 6 will discuss the second experiment in a similar manner to Chapter 5 in order to maintain consistency in the writing style and layout of the text across the two experiments. The final sections will compare the findings of this experiment with that of the previous experiment to see if they are consistent. The interpretations of the results and their implications for this research in general will then be provided in the remaining sections of that chapter.

Chapter 7 will provide a synopsis of the conclusions and findings drawn from this research. At the end of this chapter, a section will be dedicated to topics for future research.

1.10 Summary

This chapter presented the research objective of this thesis. The incentives and motivations behind this research have also been discussed. We have identified a set of different topics to be related to our research of which *trust*, *culture* and *consumer behaviour* form part. The main focus of this research is to investigate if religious trust remains active in collectivist-religious individuals when the context of a potential purchase is e-commerce. We are specifically interested in investigating if religiously oriented Web sites are more likely to instil trust in their fellow-members than generic Web sites. Subsequently, this will show if religious consumers basing their purchasing decisions solely on 'religious' trust overlook more important issues such as the "privacy" and "security" problems

associated with online financial transactions. In the end, our findings will confirm whether the “borderless” global structure of the World-Wide Web cultivates the presence of a united Web culture that encompasses individuals devoid of any religious or other cultural influences.

2 LITERATURE REVIEW

2.1 Overview

The aim of this chapter is to review the literature that covers the concept of trust in different contexts. This research focuses on the impact of culture on user interactions in the context of e-commerce. Specifically, we want to investigate from a HCI perspective if cultural forces can manipulate a user's trust towards a Web site. The contexts of interest for this research include consumer behaviour, conventional commerce and e-commerce. After identifying a list of topics and notions that we believe pertain to our research interests and scope, we proceed by discussing each topic in detail. The theoretical discussions and concepts draw and integrate the theories and principles of various disciplines. The topics that are considered to be relevant to this research include the basic psychological processes underlying consumer behaviour, social and cultural influences on a consumer, the consumer decision making process, and the role that trust plays on the purchasing decisions of consumers in the traditional and digital marketing context.

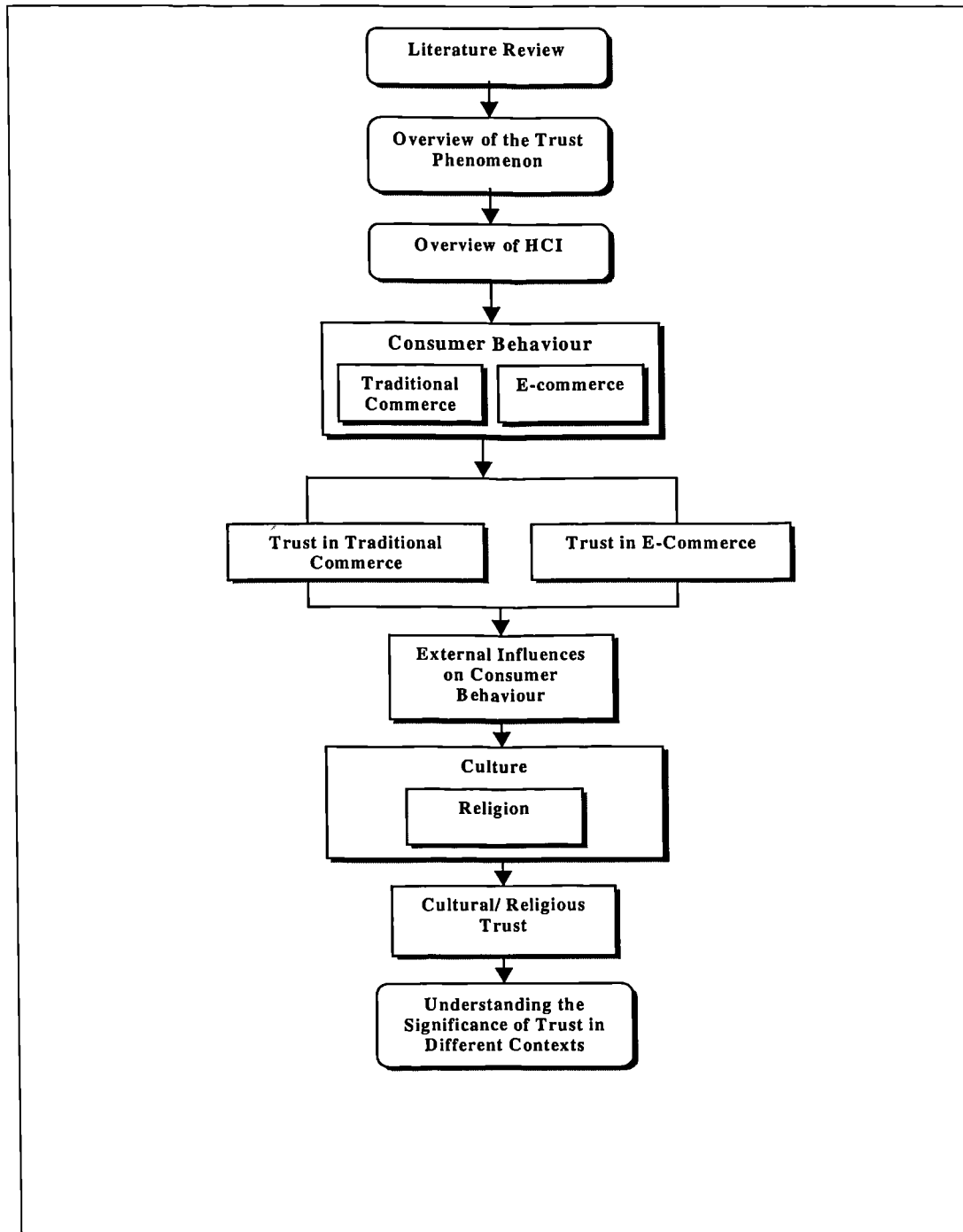
First we will start this Chapter by providing an overview of the trust concept. Trust has been mentioned in several sources to be a significant catalyst for accomplishing successful business transactions between buyers and sellers and in establishing and sustaining commercial relationships. We will then provide an overview of the HCI literature including sources discussing HCI issues in the context of electronic commerce and finally we will review the literature discussing the concept of consumer behaviour in the context of traditional and electronic commerce. The focus of the literature review about consumer behaviour will entail discussions about the psychological and behavioural factors involved in a buyer's purchase decision.

After forming an understanding of why consumers behave the way that they do, we proceed to the next level of the reviewing process, which involves the understanding of the potential sources of influences on the consumer decision-making process. The potential sources that we have identified to be 'influential' in the consumer decision-making process are the cultures and religious subcultures to which an individual affiliates. In between the sections discussing these different topics, we will

insert where applicable, a section discussing trust in the context of each topic. The purpose of these added trust sections is to highlight the significance of trust in different contexts. Figure 2-1 displays the sequence of the topics, which will be reviewed in this Chapter.

To sum up, the prime objective of this 'synthesised' literature review of these different topics is to identify any potentially underlying interrelationships that may exist between these different concepts and the trust concept. We assume that the literature review of each selected topic will serve as an essential building block that can help us in our aim of constructing a conceptual model for this research whose foundations will be based mainly on the concept of trust.

Figure 2-1: The Sequence of Topics in this Literature Review



Note that the shaded grey boxes represent the 'primary' topics, which will be the focus of this research study. As mentioned previously, the review process of the literature related to these topics will help us understand the different sources of the trust concept and how trust establishes in different contexts.

2.2 An Overview of the Trust Phenomenon

Researchers and academicians from diverse disciplines have highlighted the importance of trust to the success of an organization (Bok 1978; Lewis and Weigert 1985; Owen 1996). The significance of trust to the context of management was stressed in many managerial and psychological literature sources (Bartolome 1989; Clawson 1989; Covey 1989). Owen (1996: p.36) stressed that 'companies die from lack of trust and openness which cascades down from board level'. Golembiewski and McConkie (1975: p. 131) contend that trust is the crucial factor that 'thoroughly influences interpersonal and group behaviour'. In the traditional marketing context, some marketing researchers regard trust as a catalyst for completing successful economic transactions between buyers and commercial organizations (Doney and Cannon 1997; Hirsch 1978).

2.2.1 Definition of Trust

There is a lack of consensus amongst multiple disciplines on assigning a unique definition to the trust concept. This difficulty can be ascribed to the paucity of contemporary literature sources available that cover this phenomenon. Several sources had studied trust in different contexts (Barber 1983; Husted 1989) but the complicated nature of the trust phenomenon together with the miscellany of factors hypothesized in the multi-disciplinary sources to be responsible for eliciting trust has made the task of assigning a unique definition to the trust concept considerably difficult (Butler 1991; Reichmann 1989; Shapiro 1987).

2.2.2 Preconditions for the Establishment of Trust

This section will provide a brief summary of the preconditions to the establishment of trust in different contexts, which have been found in multi-disciplinary sources.

The role of social networks in forming trustworthy conditions has hardly been mentioned. The existence of prior trust relationships and strong social networks is seen to be a prerequisite to the establishment of a successful network of computers. Fukuyama (1995: p. 80) stresses this point quite clearly: 'Societies where computer networking will really take off are the ones in which the technology can ride on top of existing social networks'. Fukuyama later extended his theory to the context of e-commerce.

According to Owen (1996), lack of trust is the main obstacle to communication, delegation, empowerment, quality and teamwork in an organisation. Andrews (1994) argues that the key to overcome distrust in employee empowerment emanates from the three Ps: promises, people and persistence. Success of a self-sustaining organization was linked to an environment where mutual trust between managers and employees strongly coexisted. Distrust was described by Andrews (1994) to be the 'hidden' obstacle to the initiative of delegating a task to subordinates. Self-esteem was seen as the impetus to the construction of trusty relationships. Leadership in trusting teams is centrally driven, not flowing from top management to the bottom of the organizational hierarchy. The general implications are that leadership is based on mutual trust not hierarchical respect (Owen 1996).

Lewicki et al. (1998) contend that trust and distrust are simultaneously present in effectively functioning teams. Fukuyama (1996) asserts that trust is contingent on moral reciprocity and experience when dealing with merchants, vendors and suppliers of goods. The importance of trust manifests itself when a client deals with a stranger whose identity and reputation is unknown to the client. This seems to be the case when customers trade with merchants over the Internet. A good reputation and effective marketing communication channels can overcome the fear that emanates from trading with remote traders (Brandt 1997). It is argued that in the context of conventional commerce, the reputation of a company is a significant instigator for the establishment of trust between a consumer and a merchant (Anderson and Weitz 1989; Doney and Cannon 1997; Ganesan 1994; Resnick et al. 2000). Coutu (1998) found that trust in digital commerce is established and strengthened through incessant interactions between online visitors and host Web sites.

2.2.3 The Socio-Psychological Perspective on Trust

As mentioned previously, definitions of trust seem to vary from one context to another. Husted (1989) argues that the trust is a complicated construct due to the wide spectrum of approaches that define and describe it. The main types of trust extracted from the socio-psychological literature are individualistic, relational, transactional-economic, organisational, emotional, and in-group trust. Brief definitions for each type of trust are provided below:

INDIVIDUALISTIC TRUST

A rudimentary definition of trust is that it represents an individual's optimistic expectation about an outcome of an event (Deutsch 1958; Zand 1972). More specifically, it is seen as the irrational confidence in an outcome of an uncertain event given conditions of personal vulnerability (Deutsch 1958). Zand (1972) adds that trust is a positive expectation about an outcome, given a lack

of control on the actions of others. Golembiewski and McConkie (1975) envisage trust as a continuum where trust increases when optimism about an outcome increases. Pearce (1974) has proposed a model for interpersonal trust. Pearce's trust model portrays trust as a cognitive state that is achieved when the trustor assumes, in a risky situation, that the trustee will not engage in detrimental behaviour or in the author's own words: 'not confer unacceptably negative outcomes upon him' (p. 246). Barber (1983) stresses that the expectations of an outcome depend on the entrusted party's perceived diligence, competence and rationality of not engaging in irrational behaviour that is detrimental to the trustor.

RELATIONAL TRUST

This type of trust is defined as the optimism held by an individual or group in that the entrusted individual or group will keep its promise and is reliable (Rotter 1967). Michalos (1990) and Gambetta (1988) have added the notion of 'net good' to this definition of trust. Net good is perceived as a tendency to make oneself susceptible to harm in the interests of some perceived 'greater good' (Michalos 1990: p. 620). The perceived greater good can be at an individual, group or at an organizational level (Michalos 1990; Rotter 1967). The concept of relational trust was associated to a willingness in interpersonal cooperation- the trusting person expects the entrusted other to reciprocate and subsequently initiate a mutual cooperation (Carnevale et al. 1982; Mecker 1983). Thus relational trust is reflected by cooperative behaviour.

Empirical investigations that examined superior/ subordinate relationships led to the suggestions that there are five dimensions to relational trust (Athos and Gabarro 1978; Butler 1991; Butler and Cantrell 1984) as shown in Table 2-1:

Table 2-1: Dimensions of Relational Trust (Athos and Gabarro 1978; Butler 1991; Butler and Cantrell 1984)

Dimension	Description
Integrity	This depends on the honesty of the entrusted individual/ party.
Competence	The skill and adept knowledge to carry out one's duties diligently.
Consistency	The reliability, predictability and sound judgement in anticipating and managing situations.
Loyalty	This includes altruistic behaviour where the entrusted party is bound to an implicit promise not to be detrimental to the trustor and to protect and support the trustor.
Openness	The intention to share ideas and information without any hesitation with others.

Ring and Van de Ven (1992) identified relational trust to be dual in nature: confidence in one's own judgement and confidence in the bona fides of others. The interpersonal or relational trust approach in the management literature accentuates the superior/ subordinate relationships and the personal characteristics of individuals participating in a trusting relationship. Articles and investigations in the organizational sciences reflect the importance of interpersonal trust relationships for sustaining individual and organizational effectiveness. Ambler (1997) argues that relationships are "hard to measure and still harder to value financially" and that relationships can be explained by "behavioural and attitudinal traits the most significant of which is trust" (p. 283). Research has recognized trust's influence on co-ordination and control at the institutional (Shapiro et al. 1992; Shapiro 1987) and the interpersonal level of an organization (Granovetter 1985). Because economic action is embedded within networks of social relationships (Bradach and Eccles 1989; Granovetter 1985), proponents of the organisational trust theory argue that the efficiency in complex systems depends on coordinated action, which in turn increases when the interdependent actors co-operate effectively. Relational trust was found to be crucial in developing interpersonal co-operation and it was also found to play a significant role in promoting managerial careers (Butler 1991).

TRANSACTIONAL-ECONOMIC TRUST

In this context, trust is defined as the responsibility of an individual, group, or organization to protect the rights and interests of all others participating in a joint economic exchange. This is portrayed in the principal-agent relationship theory. Trust in the principal-agent theory is defined as the economically rational expectation that the entrusted party will deliver what it promised in a contract or else if it fails, it would put its reputation at stake. Unlike other theories of trust, the principal-agent trust perspective focuses more on the opposite pole of trust namely distrust. The terms principal and agent could refer to individuals, groups and organisations as a whole (Williamson 1975). Transactional-economic trust highlights the relationship between the principal and his/ her agents or alternatively a corporation versus its stakeholders from the viewpoint of the economic exchange theory. This type of trust is based on the premise that an agent in a principal-agent relationship can engage in deceptive and opportunistic behaviour. As a result, the perceived risk associated with the agent potentially engaging in egoistic or selfish behaviour is quite high (Hill 1990). In the long run, distrust can also raise barriers to future contract opportunities.

Bromily and Cummings (1992) contend that trust if initiated by the trustor would reduce transactional costs. Chiles and McMackin (1996) agree with Bromily and Cummings' (1992) argument that trust can reduce transaction costs. Chiles and McMackin (1996) explain this argument in their own words: 'If I trust you, I will let you make choices that take my perspective into account: because there is less need for verification of your behaviour, information exchange is reduced, leading to lower transaction costs.' (p. 86)

To recap, the transactional-cost theory of trust contends that a potential trustor assesses the cost and benefit inherent in trusting another party. The cost is assessed on the basis that the trustee may engage in opportunistic or detrimental behaviour (to maximize self-interest, selfish behaviour). The benefit is evaluated on the basis of the potential rewards that would be reaped when the trustee agrees to cooperate with the trustor (Lindskold 1978; Shapiro et al. 1992). Granovetter (1985) asserts that economic behaviour is an innate component of informal social relationships and the commitments made in those relationships. According to Granovetter (1985), if a person confirms that a company or an individual continue to keep their promises, the trust bond between both parties will as a result strengthen.

ORGANISATIONAL TRUST

Staw and Cummings (1980b) stated that trust is a set of social expectations shared by individuals involved in an economic transaction. These expectations are the principles and rules imposed by reference groups who dictate what is 'right' or 'wrong' to their members. The background expectations or agreed-upon rules originate from three sources of trust:

1. **Process-based trust** depends on a record of past operations. Here, exchanges are usually limited to those whose exchange histories were good.
2. **Person-based trust** is tied to people with identical interests. Here exchanges are limited to those sharing cultural aspects and background characteristics.
3. **Institution-based trust** is tied to social mechanisms such as reputation or third-party insurance. Here exchanges are confined to those providing guarantees for potential transactions.

In the organisational context, the main aim of trust is usually an attempt to augment or foster interpersonal or inter-organizational cooperation. Hwang and Burgers (1997: p. 67) contend that trust is key to the 'interaction between parties who will benefit from cooperation with one another' but who must also heed the potential threat of being unfairly taken advantage of. Ring and Van de Ven (1992) contend that equity behaviour, which involves the sharing of benefits (rewards) and burdens (risks) between two parties, increases the trust between two parties at the inter-organizational level. Moore's (1998) empirical findings substantiate Ring and Van de Ven's (1992) theory.

A precondition for trust to become significant is the presence of uncertainty and risk in a potential decision (Deutsch 1958; Lewis and Weigert 1985; Mayer et al. 1995). This is common sense or otherwise if the trustor was absolutely certain about an outcome, decisions can be made 'blindfolded' without consulting the trust instinct. Thus for trust to materialize, decisions must bear a potential risk and uncertain circumstances of an outcome are primary prerequisites.

EMOTIONAL TRUST

Lewis and Weigert (1985) contend that trust is a collective attribute that can be induced by either affective components towards the object (emotional trust) or by rational reasoning before eliciting trust (cognitive trust). Affective foundations of trust consist of emotional links between individuals (Lewis and Weigert 1985). People who invest emotionally in trust relationships are

compassionate and express concern for the welfare of partners and they expect such sentiments to be reciprocated by the entrusted party (Rempel et al. 1985). McAllister (1995) implied from the findings of an experiment that cognition-based and affect-based trust reflects different states of mind. Cognition-based trust is a prerequisite to the development of affect-based trust. Johnson-George and Swap (1982) identified two dimensions of trust that they labelled "reliableness" and "emotional trust". Similarly, Rempel et al. (1985) discriminated between 'dependability' and 'faith' (emotional security) as dissimilar constructs of trust. Granovetter (1985) contends that organizations abound with relationships based on dependability and faith in which moderate expressions of interpersonal care and concern are not uncommon.

IN-GROUP TRUST

When a number of people share common values and personality traits usually induced by cultural forces, they form a group, which they identify with known in marketing and consumer behaviour terminology as reference groups or group affinities. Reference groups were found to foster a trust ambience amongst their members (Hofstede 1998; Light 1984). Individuals are more likely to perceive members outside their social circles as untrustworthy and uncooperative than they are to perceive their in-group members (Brewer 1979). Turner (1987) also observed that individuals tend to affiliate to others who possess identical demographical attributes. Team-members feel closer when they share social norms and values, and therefore display a higher degree of trust.

2.3 The Trust Matrix

Sheppard and Sherman (1998) developed a matrix portraying their conception of trust. According to these authors, trust exists in four different forms: shallow dependence, shallow interdependence, deep dependence, and deep interdependence. The risks inherent in a trust relationship and the mitigations that may be applied to counter for these risks are, according to the authors, contingent upon the extent of interdependence existing in the relationship. Table 2-2 shows the risks associated with these four different forms of trust:

Table 2-2: Risks Associated with Trust (Sheppard and Sherman 1998)

Form of Dependence \ Relational Depth	Shallow	Deep
	Dependence	Indiscretion, Unreliability
Interdependence	Poor Coordination	Misanticipation

Sheppard and Sherman (1998) describe the relational form entries (columns) of the matrix as 'the type of interdependence in a given relationship' and the relational depth entry (rows) as a 'structural feature of a relationship that is a product of the importance, range, and number of points of contact among parties' (p. 425).

Shallow Dependence. This is a unidirectional dependency where a person's outcomes depend on the actions of another party. The risks inherent in this relationship are the risk of unreliability- the concern that the trustee will engage in irrational behaviour- and the risk of indiscretion- the concern that the trustee will share private or sensitive information with the trustor's competitors or adversaries. Each risk is strongly associated with the delegation of responsibilities to another party, thus forming a dependency on the delegated party.

Shallow Interdependence. Here both parties co-operate in order to achieve a common objective. The main risk here is the risk of inconsistent behaviours. For example, car manufacturers must coordinate the activities of different suppliers or otherwise they may face the consequences of inferior products or behind-schedule launches of their products.

Deep Dependence. In this particular case, the trustee is in full control of the trust relationship. In this kind of relationship the trustor is often kept in the dark about his/ her prospects. This kind of dependence usually exists in organizational relationships. For example, a manager controls the employee's wages, task allocation and promotion. The risk associated with deep dependence encompasses the misuse of information by the trustee for his/ her own good.

Deep Interdependence. The prime concern or risk inherent in this relationship is to not anticipate co-worker's or partner's needs or actions. Trust for deep interdependence manifests itself over time (Rempel et al. 1985).

Sheppard and Sherman (1998: p. 436) summarizes their viewpoint on trust as follows:

Although we believe trust varies quite distinctly across relational forms, we also predict it will deepen... one form serves as the building block for the other, creating relationship having quite different bandwidths of trust ...by understanding the form and depth of a given relationship, trust and its associated risks can be managed.

2.4 Values, Attitudes, Emotions and Trust

Jones and George (1998) proposed a trust framework that encompasses interactions amongst people, values, attitudes, moods and emotions.

2.4.1 Values

Values are innate human components that dictate to a person or group what is ethical, honest, reliable and competent (Wells and Prensky 1996). People normally embed values in their value system and rank them in weights of their importance to guide them in their decision making process (Rokeach 1973). The ingrained value system dictates what behaviour is considered appropriate, which people are desirable/ undesirable, and all other attitude-related perceptions. There are findings that suggest that the origin of trust is rooted in the intrinsic values held by individuals or groups (Butler 1991; Butler and Cantrell 1984; Jennings 1971).

2.4.2 Attitudes

According to Butler (1991), individuals experience trust through forming favourable attitudes towards an object or person based on their knowledge, beliefs, and sensory feeling towards that object or person. Individual/ Group attitudes towards others are likely to incorporate elements of perceived trust towards the trustee, which are also normally based on previous encounters, previous knowledge and previous interactions (Rempel et al. 1985). Jones and George (1998) contend that 'attitudes structure the experience of trust in specific ongoing relationships' (p. 534). Kini and Choobineh (1998) describes attitude as a mental and neural state of readiness that is organized through experience, exerting a directive or dynamic influence upon the individual response to objects and situations that are perceived to be related to it. The intention to buy a product involves bringing together the weighted benefits made up of the personal attitudes and confidence of the customer in the product/ vendor. Research showing that attitude affects the intention to buy a product is well accepted (Howard 1994; Lutz 1991).

2.4.3 Moods and Emotions

According to Jones and George (1998: p. 534): 'Emotions and moods are fundamental aspects of the experience of trust'. The same authors justify their argument by giving three reasons:

First, the experience of trust embodies affect... People often decide if they can initially trust someone by examining the feelings they have toward that person... Second, one's current affective state may colour one's experience of trust and thus, the way a person forms opinions and makes judgements about the trustworthiness of others...Third, trust is built on expectations that are, in part, emotional. When these expectations are broken, an individual often experiences strong emotions, which signal the individual about the violation of trust and the need to attend to the relationship (p. 534-535).

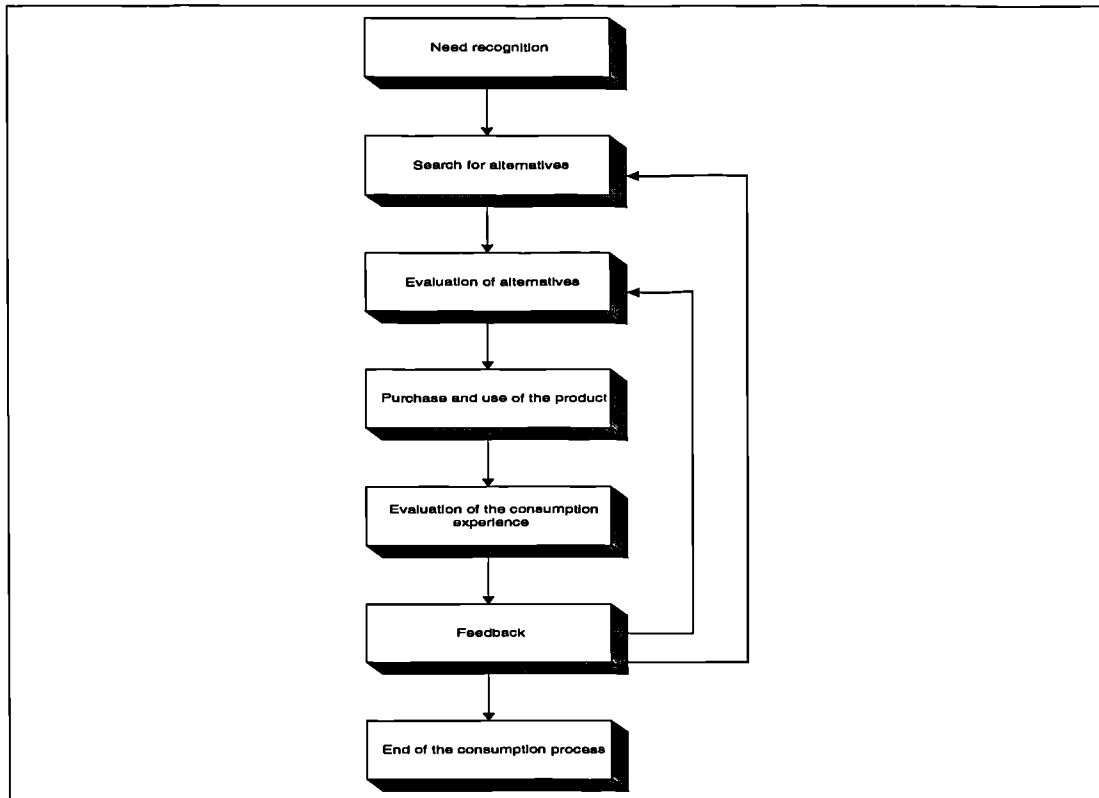
2.5 An Overview of A Traditional Consumer Behaviour Model

Whether an organisation is a profit or a non-profit, a brick-and-mortar store or an online business, it exists because there are people who "consume" what the organisation "produces". Yet, in most cases the consumers are taken for granted and it is assumed that their attitudes, needs, and behaviour are well understood when they probably aren't. The failure to understand consumer behaviour causes such organisations eventually to lose out customers to competing organisations because these competitors understand better what the customer wants and subsequently they provide him/ her with a better customer service and products. The study of consumer behaviour is at the heart of successful marketing. Successful marketing begins with understanding why and how consumers behave as they do. Consumer behaviour can be defined as the actions a person takes in purchasing and using products and services, including the mental and social processes that precede and follow these actions. Consumer behaviour not only involves the specific actions taken by individuals when buying and using products and services, but it also encompasses all the social and psychological factors that affect these actions.

Wells and Prensky (1996) define consumer behaviour as the exchange of something of value for a product or service that can satisfy a consumer's needs. Products can be either tangible (food, beverages, cars, etc.) or intangible (talkshows, films, travelling, etc.). Consumer behaviour commences from the awareness of a want, through to the search and evaluation of possible means of satisfying it, the act of purchase itself, and terminates at the post-purchase evaluation process of the purchased item (Alba et al. 1991). The post-purchase process can either persuade or dissuade the

buyer from re-purchasing the product depending on the consumer's utilitarian/arbitrary judgement of the product. Figure 2-2 illustrates the stages of the consumer buying process.

Figure 2-2: Steps in the Consumer Purchase Process (Wells and Prensky 1996).



2.5.1 Steps in Consumer Purchase Process

Need recognition. This is usually initiated by a physiological urge (for example hunger, nicotine craving, and so on), or some other psychological or hedonic stimuli.

Search for alternatives. There are two types of information searches: *internal* and *external*. Internal searches involve consumers consulting their personal prior experience with a product that lies within the *evoked set*. External searches are invoked if additional information is required. This is usually the case when a consumer is contemplating the purchase of an unfamiliar product. Sources for external information include *friends and family* (word of mouth), *consumer magazines and reports*, *government agencies*, *reference groups*.

Evaluation of Alternatives. Here, a set of criteria is invoked to select the best option available. Evaluative criteria are the various features or benefits a consumer seeks in a product such as price, size and colour. They represent performance indicators or characteristics consumers use to compare brands before buying a product. Each alternative is ranked and different weights are assigned to each desired attribute of a product and the overall highest-scoring candidate is usually selected.

Purchase Decision and Use of the Product. This involves the actual purchase, and consumption of the product. Purchase decisions are contingent upon situational factors and the motive behind the purchase decision.

Evaluation of the Consumption Experience. This is a post-purchase evaluation of the product; the outcome can be either a satisfactory or an unsatisfactory branding of the product (cognitive dissonance). Warranties, after-sales communication and gift vouchers usually influence the outcome of this process.

2.5.2 Consumer Background Characteristics

Consumer's innate background characteristics and behavioural processes are the driving forces that initiate and control his / her purchasing activities. Consumer background characteristics describe consumer's tastes, preferences and utility. These intrinsic elements are permanently associated with each consumer and cannot be altered. Demographics such as gender, age, or ethnic background are examples of consumer background characteristics. Figure 2-3 portrays how consumers background characteristics and behavioural processes influence consumer purchase activities.

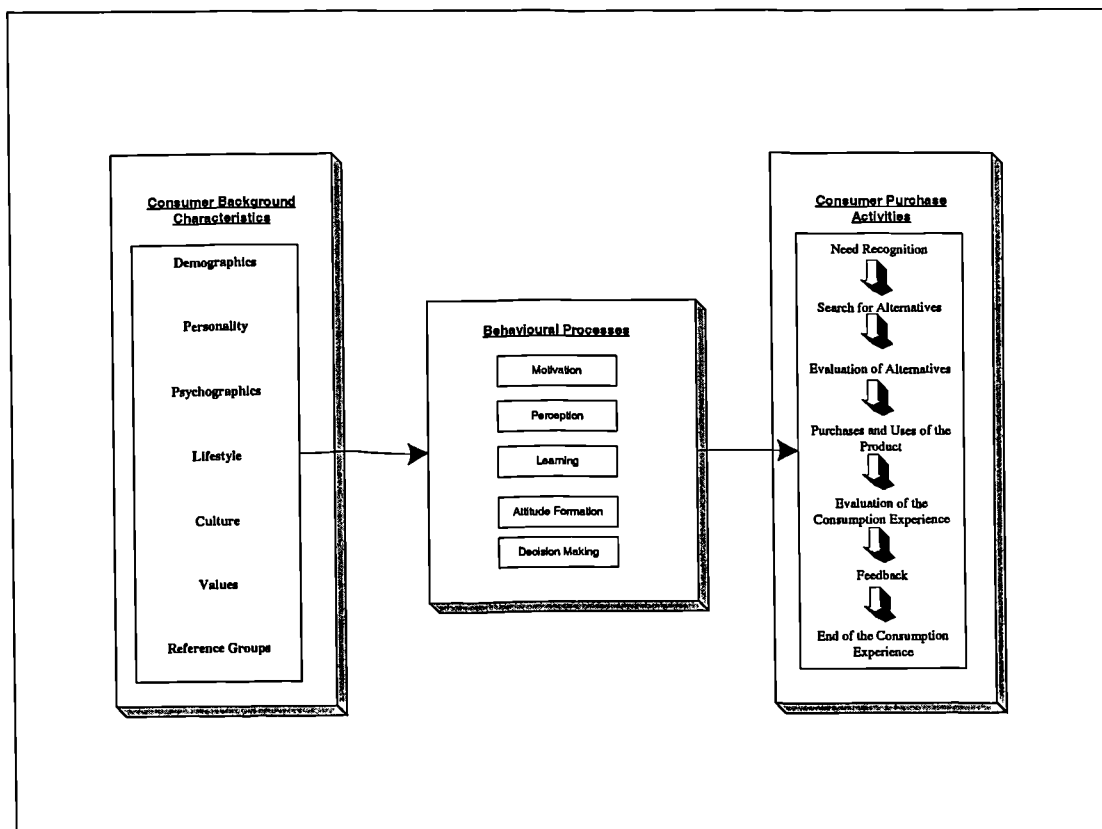
Culture and Values. Culture is the character of a society that distinguishes it from other societies. It refers to the set of values, ideas, attitudes and views held by homogeneous members of a society on what they consider is ethical and appropriate behaviour. Culture entails all things that consumers do subconsciously because cultural values, customs, and rituals are ingrained in their daily habits.

Demographics are the physical, social, geographical, and economical attributes of individuals and are innate components of their daily lives.

Personality, lifestyle and psychographics represent the necessary psychological features that influence a person's action and behaviour. Personality is a measure of the underlying psychological characteristics, lifestyle and psychographics.

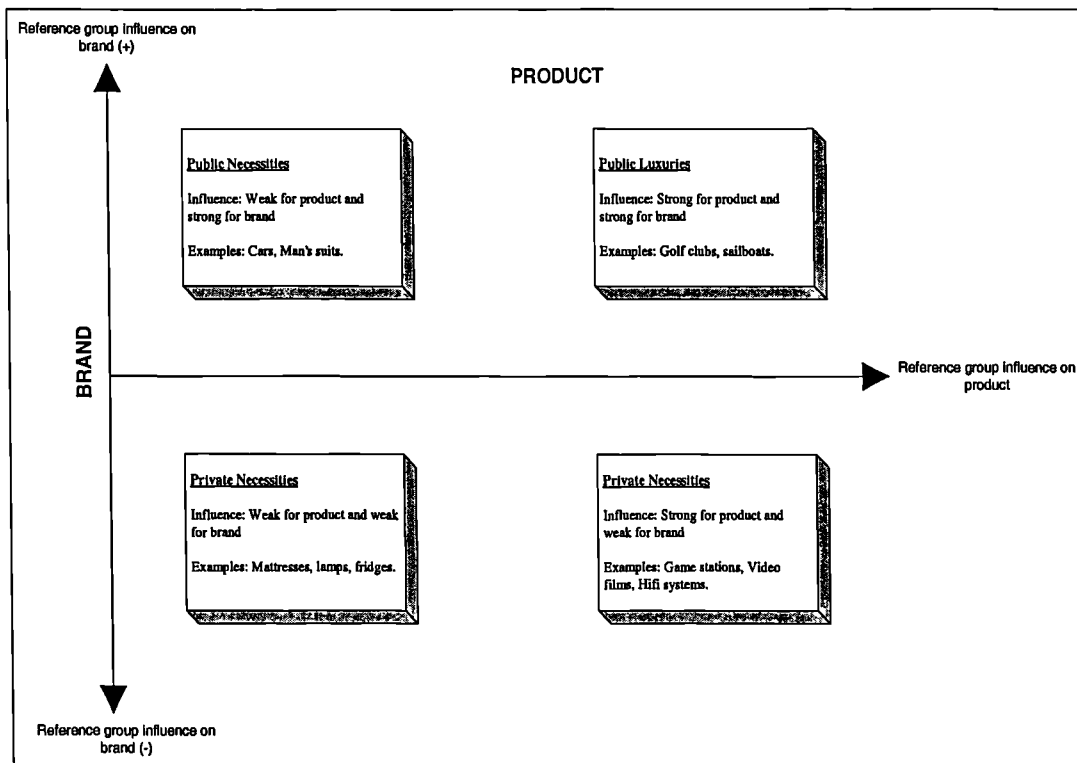
Reference groups, also known as affinity groups, are a consumer's panel, consisting of a set of people responsible for determining the ethical and legal infrastructure of a homogeneous group. Members who affiliate to such groups are expected to honour and conform to the predetermined cultural values, attitudes and behaviour set up by their group leaders. Consumers use reference groups or individuals such as role models/ opinion leaders as a reference point to form their own attitudes and behaviour (Phipps and Simmons 1998-99). Many marketers have recognised the buying power behind influential opinion leaders, and as a result they have concentrated their efforts on advertising their products and services through widely admired role models such as athletes, actors and pop singers (Solomon 1999). Affinity groups have a strong influence on an individual's beliefs, evaluations and purchase decision processes. Reference groups may be based on family, friends, colleagues or role models (opinion leaders). Opinion leaders are the most influential members of a reference group to whom other members turn to for advice. Homophilous opinion leaders (same age, sex, education, and social status) enhance positive attitudes in other members more effectively than non-homophilous leaders (Howard 1994).

Figure 2-3: The Impact of Consumer Background Characteristics and Behavioural Processes on Consumer Purchase Activities (Wells and Prensky 1996).



Reference groups were found to influence high-involvement decisions of consumers such as purchasing luxuries or choosing an appropriate health insurance or mortgage option (Bearden and Etzel 1982). Figure 2-4 illustrates this process. Reference groups, in general, play a significant role in shaping the purchase process adopted by consumers who affiliate to such groups. The continuously growing versatility of the Internet contributed to the establishment of electronic Newsgroups and chat-rooms enabling geographically dispersed individuals with identical background characteristics and lifestyles to form virtual/ global reference groups whose members can share ideas and opinions online, anytime and from anywhere in the world.

Figure 2-4: Effects of Reference Groups on Product and Brand Purchase (Bearden and Etzel 1982).



2.5.3 Behavioural Processes

Social and psychological processes of motivation, perception, learning, attitude formation and decision-making generate behavioural processes. A brief definition of the behavioural processes is discussed below. Behavioural processes are the instruments people use to recognize their needs; to collect and analyse relevant information about potential candidate products that may be included in

the evoked set; to develop opinions and attitudes towards a product and finally to make a decision on which alternative makes the best choice.

MOTIVATION

Motivation is the psychological urge that incites consumers to recognize a need and subsequently to take the appropriate actions necessary to satisfy that need. Because motivations vary across different circumstances, different evaluation criteria may be invoked that is appropriate for the circumstances that one finds himself/ herself in.

PERCEPTION

Perception is the process consumers use to select stimuli on objects in their environment. They glean and interpret pertinent information about these objects to take the appropriate actions. The information search process entails the following sub-processes: searching for alternatives, re-evaluating the evoked set, and finally performing a post-purchase evaluation.

LEARNING

Learning is the process by which consumers organize knowledge and experience that they have stored previously in their long-term memory to use it for future purchase decisions. Long-term memory holds information from previous purchasing experiences that are stored for future use. This information undergoes continuous restructuring as new information is acquired about a product or product category. The source for knowledge can be either internal (personal experience) or external (journal and media reviews, newsgroups, word-of-mouth and friends and family).

ATTITUDE FORMATION

Attitude formation is the process by which consumers develop a feeling or opinion about an object in their environment. Consumers form attitudes towards people, products and services that exist in their living space. They also form attitudes towards the attributes and dimensions of a product such as the colour, scent, shape and size, which would be used as selective criteria in their potential purchase decisions. Attitude has been defined by Zikmund (1997: p. 352) as: 'an enduring disposition to consistently respond in a given manner to various aspects of the world, including persons, events, and objects'. According to Zikmund (1997), attitude consists of three components: affective, cognitive and the behavioural component.

Zikmund (1997: p. 352) defined these three components as follows:

The affective component reflects an individual's general feeling or emotions toward an object. Statements such as "I love my job", "I liked that book...", or "I hate cranberry juice" reflect the emotional character of attitudes. The way one feels about a product, person, or object is usually tied to one's beliefs or cognitions. The cognitive component represents one's awareness of and knowledge about an object. A woman might feel happy about her job because she "believes that the pay is great" or because she knows "that my job is the biggest challenge in Arlington." The third component of an attitude is the behavioural component. Intentions and behavioural expectations are reflected in this component, which therefore reflects a predisposition to action.

DECISION MAKING

By the time the consumers have reached this stage, the other behavioural processes of motivation, perception, learning and attitude formation should have been completed. Decision-making is the terminal process where consumers select an alternative from the evoked set. One important thing to note is that humans are never completely rational in making decisions. A completely rational individual would carefully scrutinize every alternative product out there before coming to a purchase decision (Howard 1994). However this is impossible for a couple of reasons. First, as will be shown in the next section, individuals have limited mental resources and they also have limited free time to spare. Reasons behind a purchase decision are sometimes contingent on the situation that the customer finds himself in. For example, a customer may purchase an alternative brand just because the desired brand is out-of-stock. To choose among the alternatives, a consumer must be able to identify available options, establish criteria for evaluating each option, devise a method for combining them into a simple rule and then apply that rule when making the purchase. Usually, consumers assign different weights to the several aspects of each alternative and they then select the alternative that scores highest in aggregate (Wells and Prensky 1996).

Solomon (1999) contends that there are 3 types of reference group influences: *informational*, *utilitarian* or *value-expressive*. These 3 types of influences are shown in Table 2-3:

Table 2-3: Three Forms of Reference Group Influence (Solomon 1999)

Type of Influence	Examples
Informational Influence	<ul style="list-style-type: none"> • The individual seeks information about various brands from an association of professionals or independent group of experts. • The individual seeks information from those who work with the product as a profession. • The individual seeks brand-related knowledge and experience (such as how Brand A's performance compares to Brand B's) from those friends, neighbours, relatives, or work associates who have reliable information about the brands. • The brand the individual selects is influenced by observing a seal of approval of an independent testing agency (such as Good Housekeeping). • The individual's observation of what experts do (such as observing the type of car that police drive or the brand of television that repairmen buy) influences his or her choice of a brand.
Utilitarian Influence	<ul style="list-style-type: none"> • So that he or she satisfies the expectation of fellow work associates, the individual's decision to purchase a particular brand is influenced by their preferences. • The individual's decision to purchase a particular brand is influenced by the preferences of people with whom he or she has social interaction. • The individual's decision to purchase a particular brand is influenced by the preferences of family members. • The desire to satisfy the expectations that others have of him or her has an impact on the individual's brand choice.
Value-Expressive Influence	<ul style="list-style-type: none"> • The individual feels that the purchase or use of a particular brand will enhance the image others have of him or her. • The individual feels that those who purchase or use a particular brand possess the characteristics that he or she would like to have. • The individual sometimes feels that it would be nice to be like the type of person that advertisements show using a particular brand. • The individual feels that the people who purchase a particular brand are admired or respected by others. • The individual feels that the purchase of a particular brand would help show others what he or she is or would like to be (such as an athlete, successful business person, good parent, etc.)

2.6 The Three Levels of Consumer Decision Making

Consumer decision-making is classified into three cognitive stages: (1) extensive, (2) limited and (3) routine. Table 2-4 summarizes each stage's informational requirements and the concomitant cognitive speed of taking a decision at each stage.

Table 2-4: Characteristics of Stages of Decision-Making (Howard 1994).

Stage of Decision	Amount of Information Used	Speed of Decision
Extensive Problem Solving (EPS)	Large	Slow
Limited Problem Solving (LPS)	Medium	Medium
Routine Problem Solving (RPS)	Small	Fast

2.6.1 Extensive Problem Solving (EPS)

At this stage, consumers are not familiar with a new product category, and so they increase their effort in searching for information about the product to form a conception (brand image) of it. Consumers then produce a set of criteria to judge the product's benefits and to identify the matching category to which it belongs. For example, when consumers first encountered 'instant coffee' they associated it to the coffee category. They then began to distinguish it from regular coffee using certain criteria such as 'convenience' and 'taste' and eventually contrived a separate category for it: instant coffee (Howard 1994).

2.6.2 Limited Problem Solving (LPS)

In the LPS stage, consumers start to develop a set of brand images. LPS involves applying existing criteria to a recurrent purchase decision. For example, when more brands of instant coffee were launched, such as Maxwell House, consumers compared it (with less cognitive effort) to the original Nescafe brand. Since consumers in this case encounter a new brand (Maxwell House) that affiliates to a familiar category (instant coffee), they seek less information, saving on cognitive resources. Purchase decisions, at the LPS stage, turn out to be faster than at the EPS stage.

2.6.3 Routine Problem Solving (RPS)

At this stage, consumers have developed an evoked set of candidate brands that is stored in their long-term memory. Availability and pricing become the decisive factors. RPS involves the repetition of a previous decision making process to a recurrent purchase decision. Consumer purchase behaviour becomes habitual and less thoughtful- they incessantly buy the same product to become what is known as brand loyal. Usually, this level of decision-making is applied in frequently purchased low-involvement items such as soft drinks, toothpaste, etc. but it is usually the situation in which the consumer finds himself, which determines what level of decision-making is more appropriate.

In general, the level of cognitive effort that is invoked when making a purchase decision depends on the risk inherent in the purchase in conjunction with the circumstances that led to the purchase decision. For example, if someone has borrowed a friend's shirt and then accidentally stained it with coffee, s/he is unlikely to compromise on a cheap detergent that may at the end not remove the stain from the shirt (Howard 1994). The concept behind the consumer's cognitive levels of decision making can be summarized as follows: the importance that is associated with a purchase decision changes with the consumer's subjective judgement and the situation that lead to the purchase decision.

2.7 *The Impact of Trust on Buyers' Behaviour*

Doney & Cannon (1997) argue that a customer's trust in a certain merchant can be a prelude to the actual purchase of a product from that merchant. Manufacturing low-quality products, lack of focus on the corporate image, and poor after sales customer service are all negative factors that can make customers lose their trust in the vendor's firm (Naumann 1992). Pearce (1974) believes that trustors base theory assumption on the expectancy of the trustee's competence, skill, motives, and knowledge. Past experiences with a marketer or marketing entity (product, firm, and so on) are salient factors that can influence consumers' cognitive processes. Subsequently, the consumer's cognitive processes shape how consumers perceive the trustee's motives (well-intentioned or badly-intentioned), competence and knowledgeability (Cowles 1997). There is corroborative evidence supporting the argument that the relationship period (past experiences with a marketer or marketing entity) and the consumer's perception of trustworthiness are highly correlated (Crosby et al. 1990).

Blackston (1992) discovered that trust and consumer satisfaction are the building blocks for a successful marketing relationship. Brand equity is established from interactive consumer-brand relationship and therefore to a certain extent trust may be used as a surrogate measure for assessing commercial relationships. Brand equity is a measure of the premium customers are willing to pay for a particular product or service rather than to switch to a competitor's product (NCR Financial Services Knowledge Lab Review Symposium, 1997-1998).

2.8 Consumer Behaviour in Cyberspace

The marketing and consumer behaviour literature has been reticent about research related to consumer behaviour in the context of e-commerce. A possible explanation for this shortage of research studies is that although the stage of e-commerce has been set, its infrastructure is still undergoing evolutionary modifications both in theoretical and technical terms. The importance of understanding consumer behaviour in the context of e-commerce needs no special emphasis. Marketers have recognized the potential buying power behind online consumers and since then strive to introduce a marketing mix that is appropriate for virtual markets. Commercial organizations delaying their move to the online marketing arena risk losing customers to online competitors that could offer these customers a more convenient way of shopping with the additional benefit of lower prices for the same products sold by the 'lagging' organisations.

2.8.1 Cyber-Shopping

According to Venkatesh (1998), cyber-shopping consists of elements from physical and catalogue shopping. The authors contend that the problem inherent in online shopping is that it deprives consumers from using their prominent senses such as feeling and smelling, which may justify why it cannot replace traditional shopping. However, cyber-shopping enables consumers to shop in their own convenience, at any time and from anywhere, without the hassle of fellow-consumers, shop assistants and the inevitable long snake of customer queues pending at the cashier.

Shih (1998) investigated how consumer behaviour changes in the context of e-commerce. His findings led him to suggest that by embedding a combination of audio-visual components in Web pages, the consumer perception of the advertised product or service is enhanced and as a result the consumer develops a favourable attitude towards the advertised product.

In their quest for 'predictors of online buying behaviour', Bellman et al (1999) found from an empirical study that the task of searching for product information precedes a potential online

purchase. Time starvation, caused by long working hours, was found to be another major incentive to online buying. Consumers in this category usually prefer a fast and convenient way of shopping due to their busy lifestyles. One prominent 'trait' found in frequent online shoppers is that they lead a 'wired lifestyle'. This category of people has been classified as representing the 'elites' of Internet users whose Internet experience is measured in years not in months. Bellman et al (1999: p. 35) described them as follows:

They receive a large number of email messages every day, they work on the Internet in their offices every week, and they agree that the Internet and other developments in communication technology have improved their productivity at work. Just as they use the Internet for most of their activities (such as reading the news at home), these people naturally turn to the Internet to search for product information and in many cases to buy products and services.

A contradictory finding to conventional expectations is that the results in the same study also showed that online consumers did not regard privacy and security to be important issues. Another study found that frequent online buyers were less concerned about the security issues associated with electronic exchanges of information, but it also revealed that they wanted to see 'stricter' privacy laws being imposed on online commercial organizations (Swaminathan et al. 1999). Jarvenpaa (1997) reported in an earlier study that experienced Internet users exhibited higher levels of perceived risk and as a result they were more reluctant to shop over the Internet than their inexperienced counterparts. This contradicts the findings of other researchers (for example, Swaminathan et al.'s (1999)).

The general trend however is that experienced Internet users are less likely to elicit trust in the online environment possibly due to their awareness about the problems associated with the Internet environment such as the security vulnerabilities that are presumably inherent in online transactions. Conversely, users with shorter Internet experience are expected to be more willing to trust a Web site. This can be attributed to their lack of experience in using the Internet and as a result their lack of awareness about the problems that are associated with the online commercial environment.

2.8.2 Telepresence and Bricolage

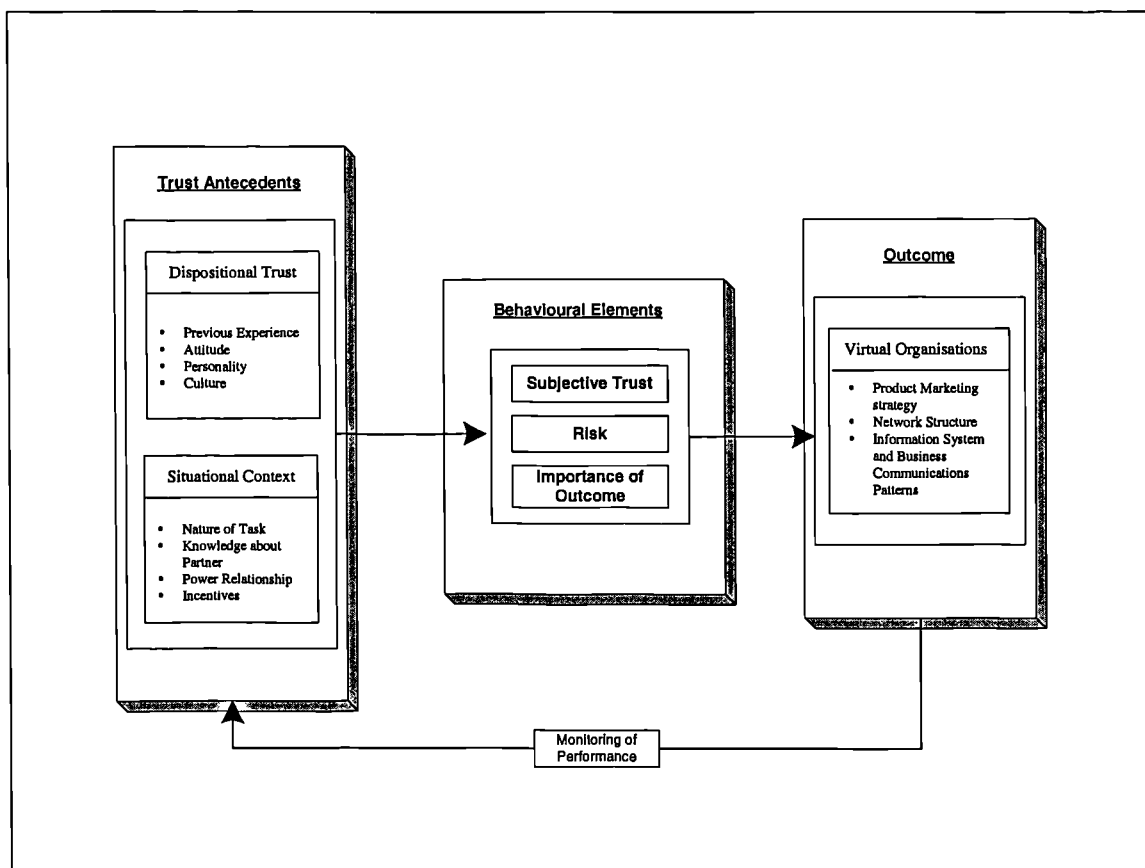
Shih (1998) described telepresence and bricolage to be the key factors to a successful e-commercial environment. Telepresence is the extent to which a virtual/ cyber technology can simulate and reproduce sensory experiences in a user. Users playing 3D Games were found to show a high

degree of the telepresence trait (Shih 1998). For example, user's moves and reflexes when driving a virtual car in a computer game are identical to their moves and reflexes when driving a car in real life. According to Li et al (1999), online stores that can reproduce the consumers' familiar shopping experiences are more likely to attract online sales. Bricolage is a means of allowing consumers to explore adverts and interact with the object of interest in a manner that best suits them. This is what actually happens on the Web. Users choose to either click or skip ad banners or hyperlinks without being compelled to either finish the ad or switch to a different channel, which happens to be the case when advertisements are played on TV and radio channels.

2.9 Trust in Virtual Organisations

Holland and Lockett (1998) studied the relationship between trust, the virtual organization, and the business environment. According to these authors, trust is a multi-dimensional construct, which can only be defined specifically to its relative context. Ring and Van de Ven (1994) contend that the existence of trust is 'key' for establishing co-operation between organizations. Trust is described by Ring and Van de Ven (1994) as a recurrent chain of activities, which is constantly checked to increase efficiency and equity. Holland and Lockett (1998) agree that cooperation among organizations is directly attributable to organizational trust. They developed a trust model that builds on some earlier models of organizational trust (Mayer et al. 1995; Ring and Van de Ven 1994). Holland and Lockett (1998) model takes four groups of variables into consideration: trust antecedents, behavioural elements, outcome and performance monitoring.

Figure 2-5: Proposed Business Framework of Trust and the Virtual Organization (Holland and Lockett 1998).



Holland and Lockett's (1998) study emphasizes that the evolution in IT (for example, mobile communications, inter/ intra/ extranets) caused the formation of complex virtual organizations. They claim that trust is the prominent factor in sustaining the existence of such organisations. Malhorta (1997) asserts that virtual organizations are contingent upon both 'technological infrastructure as well as the cultural infrastructure', and that the central issue in a virtual society focuses on how to facilitate 'a culture of information sharing, relationship building and trust' (p. 4).

Kini and Choobineh (1998) describe trust as a belief in a system's characteristics, specifically in the competence, dependability and security of the system under conditions of risk. They derived a theoretical framework that measures the impact that certain factors have on user's trust when trading in an online market. According to Kini and Choobineh (1998), risk and trust are mutually interrelated concepts given the spontaneous intrinsic tendency to calibrate one's trust to the level of risk inherent in a certain decision. Financial transactions or the submission of private

information over the Internet are two such decisions that bear a significant amount of risk. In contrast, the risk involved in obtaining plain information from the World-Wide Web is negligible. Deutsch (1958) contends that trust is based on the aggregate payoff from the positive and negative expectations inherent in making a certain decision. Deutsch statements purport that the importance of trust becomes more salient when the uncertainty variable in an outcome escalates. Since the perceived risk associated with online trading is significantly high (when a user submits private or financial information to a Web site), the subtle influence of trust on the dilemma of whether to transact or not, becomes salient. Kini and Choobineh (1998) tested the impact of individual trust, societal trust and relationship trust on Web site visitors.

INDIVIDUAL TRUST (THE PERSONALITY THEORIST PERSPECTIVE)

This model highlights an individual's propensity to trust in a certain situation. It describes trust as an inherent characteristic of personality that is affected by the surrounding environment. In an empirical investigation on how trust differs from one person to another. Rotter (1967) contrived a measurement scale known as the Interpersonal Trust Scale (ITS), which measures the intensity of trust present between individuals. He inferred from the results that people whose expectations have been promised into effect by others were prone to spontaneously trust strangers while suspicious individuals who have been previously misled were naturally more reluctant to confide in any future promises made by strangers.

SOCIETAL TRUST (THE SOCIO-ECONOMICAL PERSPECTIVE)

This level of trust establishes itself from individuals generalizing 'their personal trust to large organizations made up of individuals with whom they have low familiarity, low interdependence, and low continuity of interaction.' Examples include citizen's trust in their country's judiciary system, clients' trust in solicitors; and patients' trust in health care institutions (Kini and Choobineh 1998).

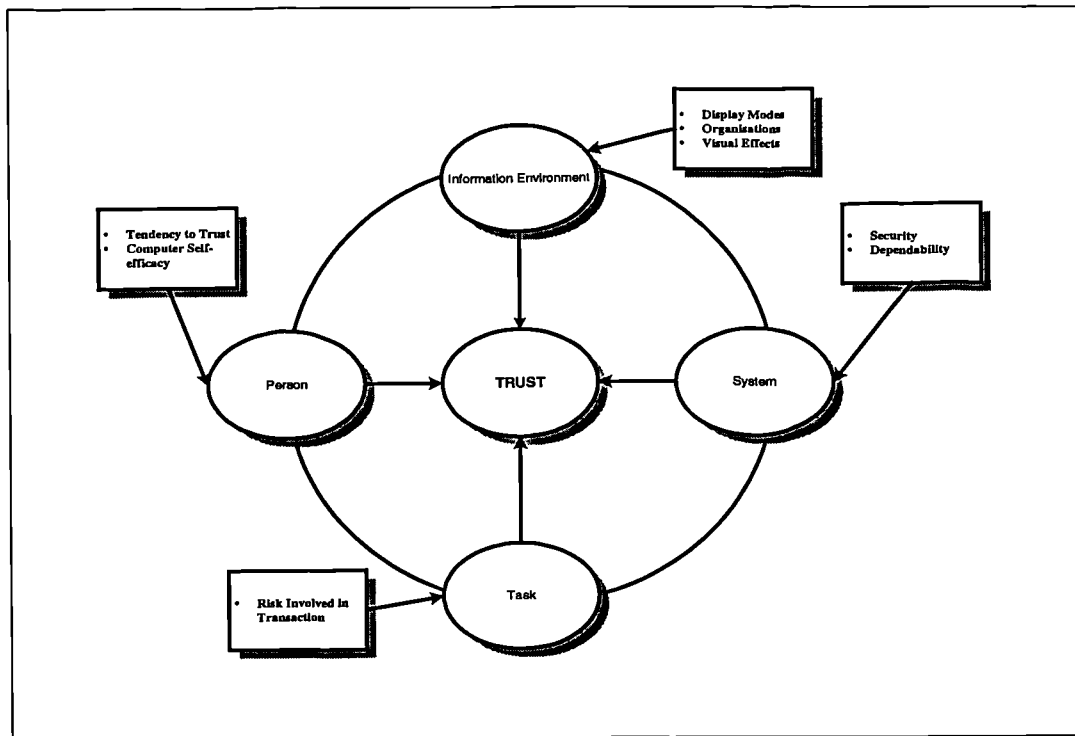
RELATIONSHIP TRUST (THE SOCIO-PSYCHOLOGICAL PERSPECTIVE)

This kind of trust is more specific to a process involving delegation. Here the decision is related to the extent to which the person is vulnerable and the risk involved in the interaction between the two parties in a relationship.

The findings assisted Kini and Choobineh (1998) in developing an integrated model of trust that summoned theories from the three perspectives of trust and extended them to the context of e-

commerce. The model reflects what factors are responsible for inducing trust in e-commerce from the perspective of the individual, societal and relationship trust. Figure 2-6 illustrates this model:

Figure 2-6: An Integrated Model of Trust (Kini and Choobineh 1998).



2.9.1 Trust on the Web

The digital marketing arena is the latest phenomenon that is believed to have caused a 'stir' in the marketing strategies of commercial organisations. Advertising campaigns and marketing techniques had to be revised and changed accordingly to become consistent with the online marketing conventions. Brick-and-mortar commercial stores and their constituent components such as pay-in counters have been transformed into a set of intangible electronic pages of a Web site. Although the expectations about online markets were quite high given the convenience of shopping from home and the promise of lower prices, these benefits are overshadowed by mainly two issues: consumer fears about loss of privacy and the security vulnerabilities associated with Web-based financial transactions. The 'credibility' of a Web site is another major concern that worries online users. The authenticity of the information and contact details published on Web sites is questionable. Consumers contemplating a purchase from a non-reputable Web site still face a major risk. Even if consumers trade off the online privacy and security concerns in favour of some financial savings that they may gain from an online purchase, consumers cannot predict the future of these Web sites. When an online

organisation runs into a 'bankruptcy' it can close its Web site without giving any prior notice and in the future it can reappear online under a different name. Understandably, the accumulations of all these problems in conjunction with other 'covert' subtleties can diminish the likelihood of a consumer opting to shop online. Trust in these situations becomes a salient factor.

According to Hoffman et al (1999: p. 80), the reason for the lack of increase in the number of online shoppers is 'the lack of faith between most businesses and consumers on the Web today'. This lack of faith can be attributed to the lack of control that the consumers have on their private data. The majority of Web sites provide no information about the purpose of the data collection or what it will be used for (Hoffman et al. 1999). Consumers suspecting Web sites of misusing their personal data for marketing purposes sometimes retaliate by submitting false information to 'suspicious' Web sites (Bolin 1998; Hoffman et al. 1999).

Clarke (1999) described 'information privacy' as the act of protecting users' data and not disclosing it to a third party organization or company without obtaining the prior consent of the owner. Wang (1998: p. 64) defines the invasion of online privacy as the act of 'unauthorised collection, disclosure, or other use of personal information as a direct result of e-commerce transactions'. There are two types of personal information: *static private information* and *dynamic personal information*. Wang (1998: p. 64) describe each type of information as follows:

Personal information that is not expected to change dramatically over time can be referred to as static private information, such as referential information, historical financial information, health information, personal affiliations and beliefs, and personal documents. Other private information includes information that changes dramatically over time, but nevertheless can be collected and analysed in such a way that a well-informed individual profile may be generated. This information is referred to as dynamic personal information, such as activity history and activity content

Wang et al. (1998) findings lead to the conclusion that consumers identified the act of selling consumers' personal information to a third party for marketing purposes without obtaining the owner's approval as the worst 'breach' of privacy. Recent surveys substantiate Wang et al. (1998)'s argument that privacy is a primary concern in e-commerce (Benassi 1999; Wang and Petrison 1993; Wright and Kakalik 1997). Benassi (1999)'s survey identified that Web visitors' privacy concerns on the Internet transcend other issues such as ease-of-use, spam, security and cost.

Clarke (1999: p. 61) described the potential ‘barriers’ to trust in e-commerce as follows:

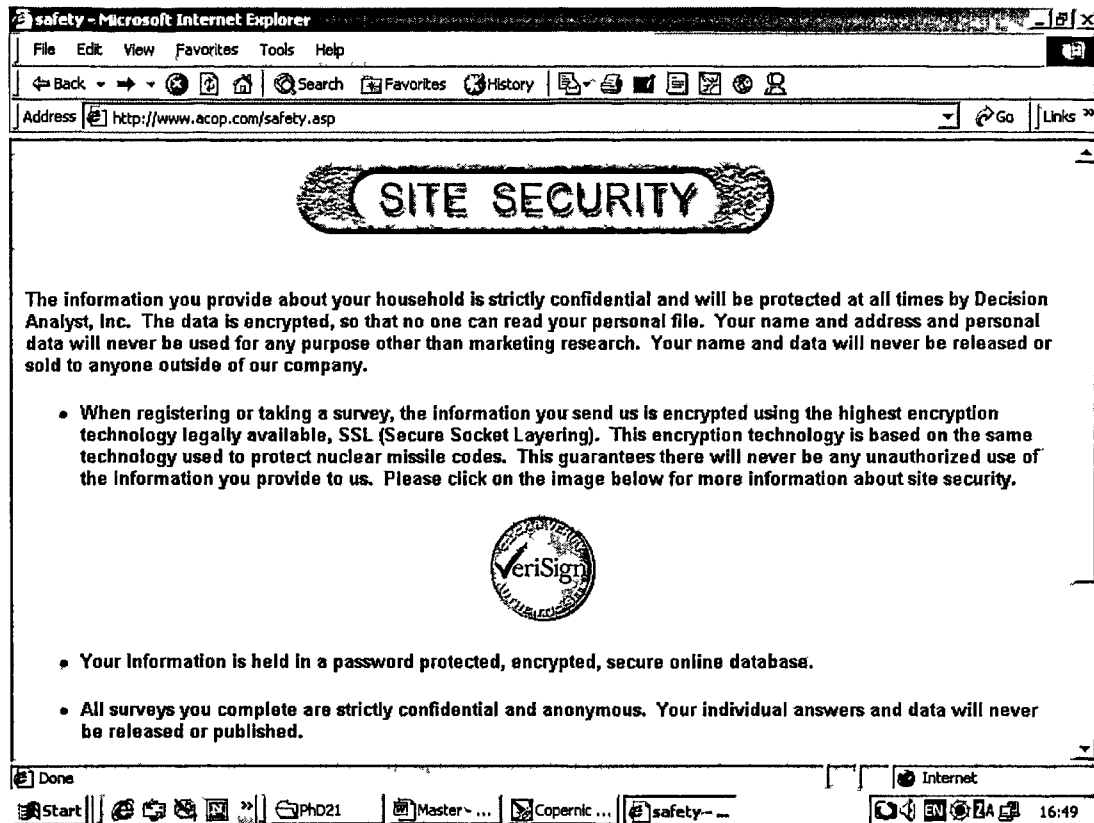
Business and governments in most advanced countries have attributed the slow adoption of e-commerce to a severe lack of trust by consumers and small business in corporations and governments. Trust in e-commerce is dependent on multiple, interacting complex factors including consumer rights, freedom of expression, and social equity.

2.9.2 The Emergence of Cyber-Security Organisations

The consumers’ cry for ‘information privacy’ led to the emergence of the P3 (Platform for Privacy Preferences) standard initially proposed by W3C (World-Wide Web Consortium), a non-profit organization that specializes in suggesting and enforcing regulations and standards that address legal and privacy issues amongst other issues, in the context of e-commerce. The P3 standard enables online consumers to be informed by Web sites about any collections, usage and disclosure of their private information. The VeriSign (www.verisign.com) and TRUSTe (www.truste.org) cyber-intermediary sites strive to provide the necessary safeguards to make online transactions between trading parties as safe as possible without compromising on privacy issues.

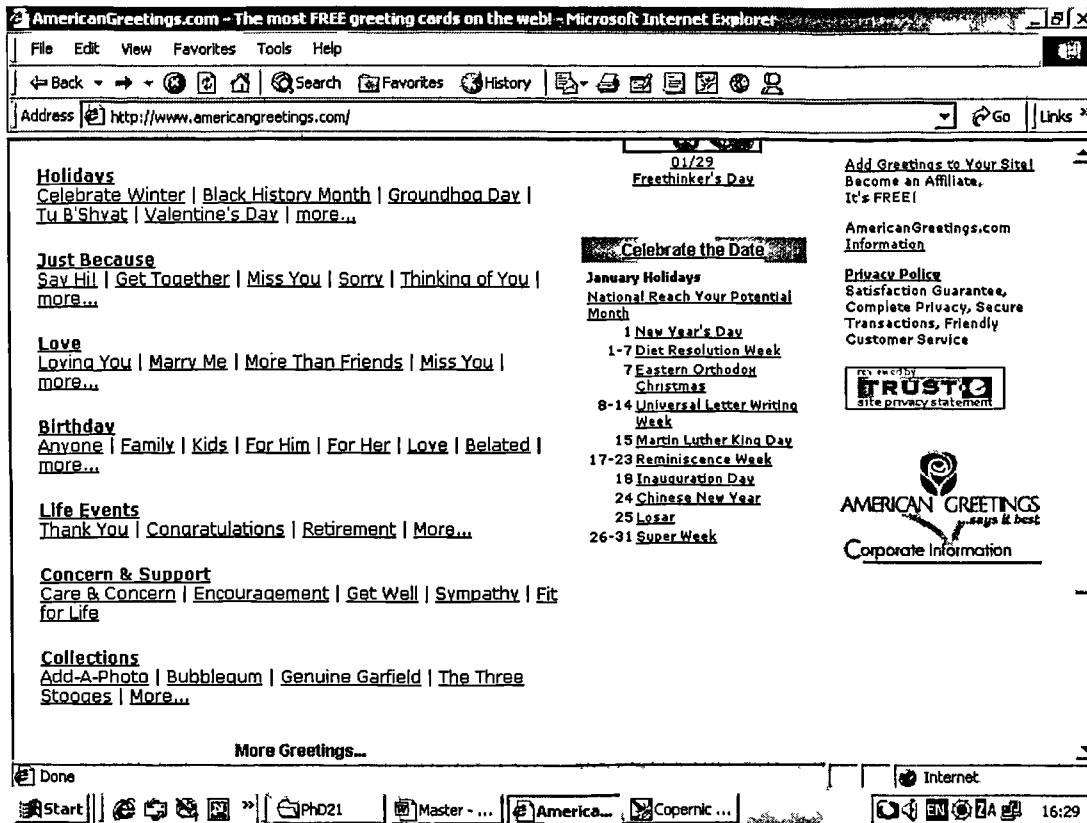
VERISIGN

The aim of the VeriSign organization is to deal with the problem of establishing a trusted identity. This process is achieved by producing what is known as digital certificates. The identity of the public key is checked through a process known as Digital Signature, where the Web-site certificate is checked for Verisign’s authentication signature. From the consumer’s privacy perspective, this procedure helps online consumers verify if the trading party is a Verisign-certified trusted party. Online consumers will feel that their data is safe when dealing with a ‘trusted’ online merchant.

Figure 2-7: A Verisign-certified site (www.acop.com)

TRUSTe

TRUSTe is an independent, non-profit initiative whose mission is to ensure user information is not disclosed to a third-party organisation only after obtaining the permission to do so from the user. TRUSTe offers services that are aimed at providing online consumers with a trusted 'brand' of privacy practices. TRUSTe can review and audit sites to see if they correctly disclose their information practices. The TRUSTe program is backed by a multi-faceted assurance process that establishes Web site credibility, thereby making users more comfortable when making online purchases or providing personal information. Web sites that incorporate the TRUSTe seal of approval remain committed to disclose user information only after the user gives the permission to do so. A failure to abide by these rules can result into the legal prosecution of the Web site.

Figure 2-8: A TRUSTe-certified site (www.americangreetings.com)

In summary, these initiatives try to introduce some form of intellectual property (IP) rights in personal data that passes control to the owners and can only be traded after obtaining the approval from the owner of this information.

Hoffman et al (1999: p. 82-85) conclusions that were based on the findings related to consumers' online privacy are summarized below:

Overall, the most important reasons nonbuyers uninterested in online shopping give for not shopping online are not functional but are related to issues of control over their personal information... Web users said that they would give Web sites their demographic information if the sites would only provide a statement regarding how the information collected would be used... Trust [between online consumers and online organisations] is best achieved by allowing the balance of power to shift toward more cooperative interaction between an online business and its customers... Recognising consumers' rights to data ownership on the Internet is an important first step in this rebalancing process.

Similarly, Clarke (1999: p. 66) concluded that:

The information economy is dependent on trust. Trust must be earned, and intrusion-permissive and intrusion-enabling arrangements preclude trust. Privacy is both sustainable and a necessary focal point of the information society, first as a means of resisting the commoditisation of human beings, and secondly as a means enabling e-commerce and electronic service delivery.

2.10 Human-Computer Interaction

2.10.1 An Overview of HCI

Human Computer Interaction (HCI) is defined as the area of intersection that lies between the disciplines of psychology, social science, computer science and technology (Carroll 1997). Indeed, the inception of Human-Computer Interaction (HCI) as a field originally emerged from intertwined roots in a miscellany of disciplines including computer graphics, operating systems, cognitive psychology, ergonomics, industrial engineering, and computer science (Hewett et al. 1996).

The field of computer graphics itself was inaugurated after the invention of the Cathode Ray Tube (CRT) screens and pen devices, which then later opened up the potential for research into different human-computer interaction techniques. HCI researchers have already contributed in the analysis and the design of several user-interface technologies (for example 3D pointing devices, interactive video, and the pervasive mouse & keyboards peripherals). The hallmark of the HCI agenda is its dynamic nature: it continues to evolve as new concepts and techniques from other disciplines are included into it.

2.10.2 HCI and Software Engineering

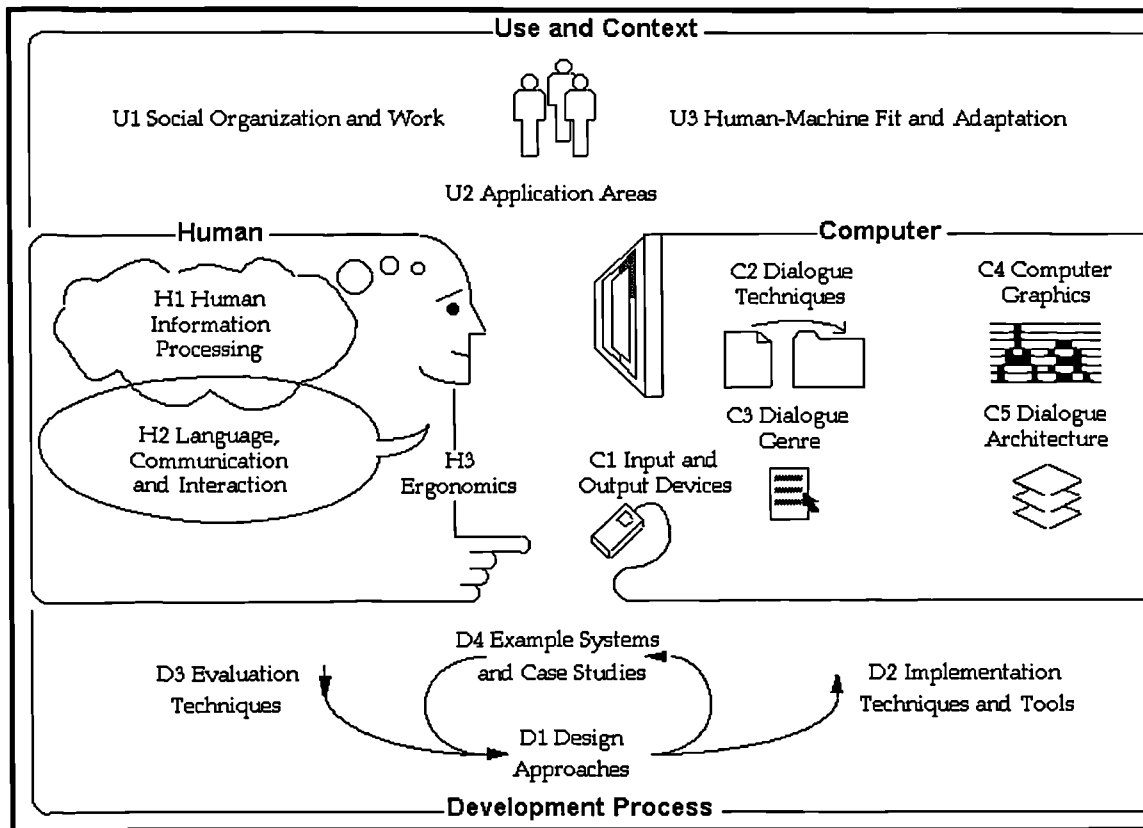
Preece and Rombach (1994: p. 553) described the Human Computer Interaction (HCI) discipline as being involved in the 'design, evaluation and implementation of interactive computer systems for human users'. However, there is more to HCI than is covered by the previous definition. As mentioned previously, HCI at large is an interdisciplinary area. It is emerging as a field that intersects with several other disciplines including 'computer science (application design and engineering of human interfaces), psychology (the application of theories of cognitive processes and the empirical analysis of user behaviour), sociology and anthropology (interactions between technology, work, and organization), and industrial design (interactive products)' (Hewett et al. 1996).

Because HCI specifically focuses on the interactions between a human and a computer system, it summons knowledge about design issues that are related to both the human and machine aspect that will potentially be involved with the computing system. From the machine perspective, the different methods and techniques of operating systems, computer graphics, programming languages, and development environments pertain to the design of an interactive system. From the human perspective, communication theory, graphic and industrial design disciplines, linguistics, social sciences, cognitive psychology, and human performance are relevant. Alongside the advances in the technological aspects of computer systems, researchers and designers took the initiative of developing specification techniques for user interfaces and testing techniques for the practical production of interfaces to keep up with this trend of continuous change in technology (Hewett et al. 1996).

Imbuing software applications with social as well human cognitive attributes was found to augment human-software interaction significantly (Cockburn 1996; Nass and Fogg 1997; Nass et al. 1996; Wiedenbeck and Davis 1997). Some researchers hold alternative views on HCI (Bertelsen 1994; Nardi 1998). HCI has also entered the dimension of *virtual reality* in the form of sophisticated 3D-Visualization of complex systems. According to the findings of some studies, the use of 3D technologies has improved Human-Web interactions and could therefore hold promising prospects for online traders contemplating the incorporation of 3D technologies in their commercial Web sites (Bederson et al. 1996; Card et al. 1991; Eick and S. 1993; Hollan et al. 1997).

Figure 2-9 illustrates Hewett et al's (1996) perception of the potential constituent topics of HCI representing the relative aspects of the design and analysis of human-computer interaction systems.

Figure 2-9: Human-Computer Interaction (Hewett et al. 1996)



Details about each entity illustrated in Figure 2-9 can be found on the Web site containing Hewett et al's (1996) propositions of topics for teaching courses in the HCI discipline. The URL of this Web site can be found in the reference section of this dissertation.

2.10.3 Culture and HCI

Barber and Badre (1998) contend that cultural and usability issues intertwine and can be integrated into a single concept: culturability. The principal premise of culturability postulates that cultural preferences can directly affect a user's performance. Cultural preferences and characteristic such as colour, text versus graphics and spatial orientation to an extent control what is deemed as "user-friendly" and therefore usability issues must adapt, according to Barber and Badre (1998), to a cultural context. In one study, the Asian perception of the HCI model was found to be different from how Westerners perceive the HCI model. Asian users preferred 'speech-to-text' in conjunction with 'handwriting-recognizing' peripherals as input devices in contrast to the ubiquitous Western model of

mouse and keyboard (Sacher 1998). The similarity between travellers finding themselves in unfamiliar places can be applied to the situation of online visitors browsing unfamiliar international web sites. Subtle things such as colour, which may be considered trivial, can attract or repel new visitors. For example, in an experiment conducted by Bourges-Waldegg and Scrivener (1998), a participant was found to associate the background colour of a Web site with his/ her religious creed.

2.10.4 HCI and the World Wide Web

The means by which humans interact with computers continues to evolve rapidly. The World Wide Web is the latest means of human-computer interactions to have caused a stir in the HCI research agenda. The emergence of the World Wide Web as the host platform for new interactive systems (Web sites) called for the attention of researchers to investigate how users interact with Web sites in the Internet environment. For example, Hollan (1997) points out that the prime challenge facing HCI researchers is the 'urban' planning for electronic communities. Myers (1998) has ascribed the 'frenetic' success of the World Wide Web to HCI research and particularly to the improvements in interfaces and the use of hypertext technology. Hollan (1997) agrees with Myers and elaborated on this issue as follows:

It was changes at the level of the interface, making access to information systems almost anywhere only a matter of clicking on a link, that has opened the web to users and resulted in its massive impact not only on scientific activities but also on commercial and social interactions.

Results from a WAMMI (Web Analysis and MeasureMent Inventory) questionnaire survey corroborated the hypothesis that higher user satisfaction is achieved with sites that had some explicit HCI involvement in their construction (Kirakowski et al. 1998).

THE SIGNIFICANCE OF RESPONSE TIME TO USABILITY

Ramsay et al (1998) described web response time as the 'crucial intersection' between HCI and the World Wide Web communities. Response times of computer applications in general have been identified as a paramount issue in HCI (Johansson and Aronsson 1984; Schneiderman 1992) and findings from some studies have shown that longer retrieval times degenerate the psychological state of content of online visitors (Basu et al. 1997; Kuhman 1989). Torpid sites are usually caused by Web pages that are cluttered with superfluous graphics, Java applets and other resource-voracious components (O'Keefe and McEachern 1998). We can argue that, although the incorporation of some graphic components can make a Web site more appealing to a potential online visitor, the slow

response times which usually accompanies the use of graphic components could frustrate this “would-be” consumer by reducing his/ her consumption experience which in this case is linked to the browsing of an online product catalogue that is displayed on a Web site.

AUDITORY ELEMENTS

Findings of some research studies suggest that the incorporation of auditory elements in Web interface design could increase the global usability of the World Wide Web. For example, the inclusion of sound in Web-related actions (such as playing a ‘dinging’ sound when receiving a new mail message) was found to enhance the situational awareness of users from diverse cultures and eventually caused them to be more interactive with the system (Scholtz et al. 1998; Tannen 1998). Users were found to ‘relish the chance’ of using a combination of speech commands and gestures in Web-specific tasks (searching, browsing, etc.). A conclusion was drawn on this issue stipulating that user interface design should encompass multi-disciplinary techniques and concepts such as speech recognition, linguistics and computer science (Czerwinski and Larson 1998).

THE NEED FOR ACCESSIBILITY

Alvarez et al (1998) emphasized that people with sensory, motor or cognitive disabilities should not be discounted from the contemporary e-consumer base: ‘Internationalisation and accessibility are basic tenets of good design and development in the modern marketplace’. The ADA (Americans with Disabilities Act) enforced regulations in the United States that require developers to make their final product accessible to people with disabilities. One can see the manifestation of the call from ADA in the Windows operating system, which has been recently revamped to include interface features that are appropriate for people with disabilities.

TRUSTWORTHY CUSTOMER INTERFACES IN ELECTRONIC COMMERCE

Kim and Moon (1998) stress that cultural considerations in designing the customer interface using a combination of visual elements such as colour, shapes and pictorial objects could contribute to users’ perception of a trustworthy Web-customer interface. Their findings revealed that Web sites with customer interfaces consisting of a right combination of visual elements, such as colour and 3-dimensional clipart were found to instil “trust” in online visitors browsing such Web sites. Olson and Olson (2000: p. 43) state that ‘the more interactive a media is the more effective it is at engendering trust’ Displaying personal information such as background details and including photos was also found to be effective in engendering some trust in users. ECAs (Embodied Conversational Agents) mimicking human interaction rituals such as small talk and gestures are currently being tested to see if

they have a potential effect on the trust-building process in the online environment (Cassell and Bickmore 2000).

THE ROLE OF ELECTRONIC MEDIA IN THE CULTIVATION OF TRUST

Findings from a study revealed that telephone interactions were found to produce less trust than face-to-face communications (Drolet and Morris 2000). Apparently, the greatest trust is developed through vis-à-vis communication, followed by voice communications (telephones), and ephemeral communications such as electronic chat-rooms and e-mail (Jensen et al. 2000; Rocco 1998). Olson and Olson (2000: p. 44) argue that: 'Meeting face-to-face provides a lot of information about the trustworthiness of other people. Just from seeing them, we infer nationalities, social class, demeanour, and whether they are like us'.

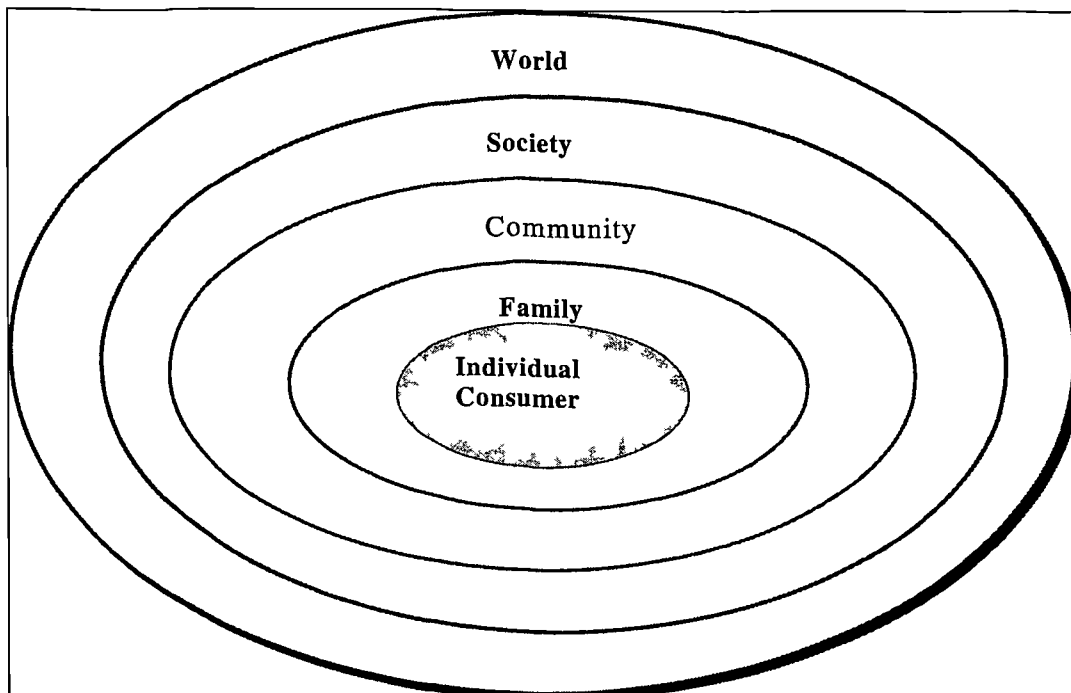
Friedman et al (2000: p. 40) summarized the difference between the establishment of trust in the online environment and its establishment in other contexts:

Perhaps the greatest difference between trust online and in all other contexts is that when online, we have more difficulty (sometimes to the point of futility) of reasonably assessing the potential harm and good will of others, as well as what counts as reasonable machine performance. That is why people can engage in virtually identical online interactions, yet reach widely disparate judgements about whether the interactions are trustworthy.

2.11 Cultural Influences on the Cognitive and Behavioural Processes Of Humans

The 'onion' diagram in Figure 2-10 illustrates Howard's' (1994) perception of cultural influences on a consumer's purchase decisions. According to Figure 2-10, the greatest source of cultural influence is the consumer's family. Next in priority is the community, which includes personal influences such as salespeople in retail stores and people in advertising media. Society, which consists of social structures such as social classes and cultures, is the third major influence. The least powerful source of cultural influence comes is the world, which encompasses all cultures.

Figure 2-10: Social Influences (Howard 1994).



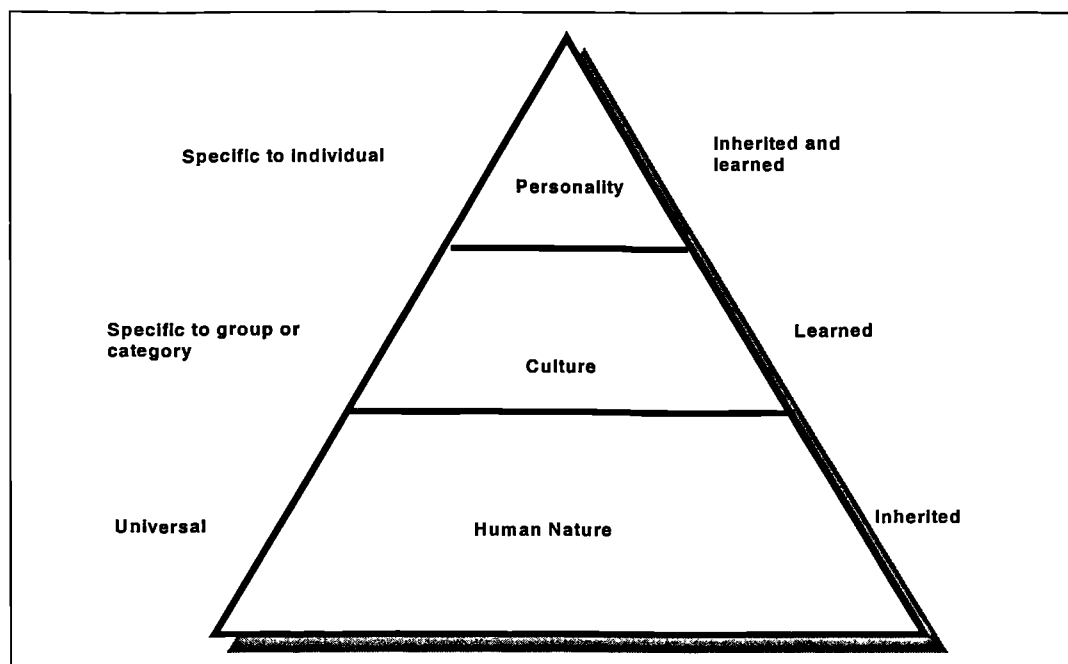
According to Hofstede (1998), people acquire 'patterns of thinking, feeling and potential acting' which remain intact until the later stages of their lives. These patterns of thinking, feeling and acting delineate what is known as culture and were described analogically by Hofstede (1998) as the 'software of the mind' or 'mental programs' (p. 4). The social environment surrounding the individuals influences mental programs.

Personality is an innate component ingrained in an individual and is not shared by others. It is composed of traits that are partly genetically inherited and partly learned. Learned in the sense that cultural forces as well as personal experiences influence the personality of a person.

Culture is defined by Hofstede (1998) as ‘the collective programming of the mind which distinguishes the members of one group or category of people from another’ and emphasized that culture is ‘learned, not inherited’ (p. 5). It is not genetically contingent but it is affected by the social milieu where people are interacting.

Human nature has been described as the ‘operating system’, which controls the physiological, physical and cognitive operations of humans. Human feeling of frustration, affection, compassion, and sadness are all part of human nature. Culture affects Human nature- it alters how people express their feelings. Figure 2-11 illustrates the difference between human nature and culture.

Figure 2-11: Three Levels of Uniqueness in Human Mental Programming (Hofstede 1998).



2.11.1 Properties and Components of Culture

This section briefly summarize points extracted from Wells and Prensky (1996: p. 124-125) describing the properties and the components of culture, respectively:

- Culture is *functional* in providing guidelines for consumer behaviour;
- Culture is *learned* by consumers from family and friends and reinforced by books, movies, television, and advertising;
- Culture is *dynamic*, as it evolves to reflect changes in the environment. A possible example portraying this point is a person that is bound by kinship and tradition to an ethnic minority group but by occupation and work commitment to the dominant culture where s/he works or resides. When facing this dilemma the person would probably, for the sake of his/her own interest, adopt and adapt to the new culture's values and norms. This process is known as acculturation (Wells and Prensky 1996).

2.11.2 Components of Culture

Table 2-5: A Portrayal of the Components of Culture (Wells and Prensky 1996).

Component	Examples
Values	<ul style="list-style-type: none"> • Success through hard work. • Materialism demonstrated through possession of consumer goods.
Language	<ul style="list-style-type: none"> • Personal freedom to control one's own time. • English, Japanese.
Myths	<ul style="list-style-type: none"> • Santa Claus emphasizes the importance of material goods. • Benjamin Franklin is the example of success through hard work in a capitalist system.
Customs	<ul style="list-style-type: none"> • Bathing and washing one's hair daily.
Rituals	<ul style="list-style-type: none"> • Wedding ceremony and banquet. • Thanksgiving dinner.
Laws	<ul style="list-style-type: none"> • Legal safeguards for private property. • Equal access to education.
Material artefacts	<ul style="list-style-type: none"> • Diamond engagement ring. • Clothing styles.

2.11.3 Manifestations of Culture at Different Levels

Differences in culture crystallize at the following stages: Symbolic, heroic, ritual and at the value-level. The symbolic level is the most superficial and the values level is the in-depth manifestations of culture with heroic and rituals residing in the middle layers of cultural manifestations.

Symbols are slogans, images, logos, and other objects that appeal to identity groups—individuals who share cultural traits. Hairstyles, customized team T-shirts, Versace logos, Nescafe instant coffee brand, etc. all constitute the symbolic manifestation of culture. The symbolic facet of culture is not specific to a particular culture but can be adopted by any culture. It is the weakest form of a cultural identity since it is not limited to a specific culture but can be shared by any cultural group.

Heroic manifestations of cultures are based on the concept of role models or opinion leaders of a culture. Cartoon figures, Hollywood actors/ actresses, are examples of heroes who possess characteristics valued highly by certain cultures.

The ritual level of cultural manifestations encompasses collective activities such as religious ceremonies, greeting protocols, and other social activities.

Cultural values are the 'heart' of a culture. They are highly appreciated by the members of a group to the extent that any challenges to these adopted norms in some instances can result into the challenger being ostracized (Schein 1985). For example, Ford's cultural norm is to build cars. When these norms are challenged or no longer fit reality, members will persist in denying and rejecting what has come to change their culture (Laudon and Laudon 1996). Values pertinent to religious cultures include righteousness, piety, etc. (Glock and Stark 1965).

Symbols, heroes, and rituals can be organized under the category of overt practices. Outsiders can only observe them by their meaning but their weighted importance is only appreciated and known to the insiders of these practices. Outsiders on the other hand cannot observe values since they are covert psychological practices ingrained and established internally in an individual's mind.

2.11.4 Cultural Layers

Members of affinity groups hold a number of intrinsic layers of cultural traits or mental programming specific to each individual.

National: This is more related to the national culture acquired from one's native country or the country that s/he has migrated to in his/ her lifetime.

Regional, ethnic, religious and linguistic affiliation: Here cultural groups are identified with their religious creeds, ethnic backgrounds, regional settings, or linguistic aspects. Groups can also be categorized in this layer according to a combination of those aspects: for example, ethno-religious cultures such as the Bosnian-Serb Christian Orthodox community living in the Balkan state of Bosnia.

Gender: Gender-specific cultural group establish a separate identity that consists purely of either male or female affiliates. The Feminist movement is an example of a gender-specific culture.

Generation layers: This layer cascades down from the ancestors to the offspring descendants. Here influential family members or relatives pass on cultural values to the younger generation who are expected to adopt and abide by the values and rules held by the older generation.

Social class: This layer encompasses the academic, educational, and professional achievements of an individual.

Organizational/ corporate layer: This layer is found in the workplace context where employees are expected to abide by some predetermined rules imposed by directors and managers of a firm or an organization. Organizational cultures are different from other cultural layers in the sense that members are bound to the organizational cultures only during office hours and once they join other organizations, they will gradually adopt and adapt to the new organization's culture. National cultures, on the other hand, are persistent in the personality and nature of an individual (Hofstede 1998).

2.11.5 ASPECTS AND DIMENSIONS OF CULTURE

Solomon (1999: p. 496) defined 3 functional areas that pertain to a cultural system:

Ecology: the way in which a system is adapted to its habitat. This area is shaped by the technology used to obtain and distribute resources (e.g., industrialized societies versus third World countries). The Japanese, for example, greatly value products that are designed for efficient use of space because of the cramped conditions in that island nation.

Social structure: the way in which orderly social life is maintained. This includes the domestic and political groups that are dominant within the culture (e.g., the nuclear family versus the extended family; representative government versus dictatorship).

Ideology: the mental characteristics of a people and the way in which they relate to their environment and social groups. This revolves around the notion that members of a society possess a common worldview. They share certain ideas about principles of order and fairness. They also share an ethos, or a set of moral and aesthetic principles.

According to Hofstede (1998), there are 4 dimensions to culture:

Power distance: the way in which interpersonal relationships form when differences in power are perceived. Some cultures emphasise strict, vertical relationships (for example, Japan), whereas others, such as the United States, stress a greater degree of equality and informality.

Uncertainty avoidance: the degree to which people feel threatened by ambiguous situations and have beliefs and institutions that help them to avoid this uncertainty (e.g., organized religion).

Masculinity-femininity: the degree to which sex roles are clearly portrayed. Traditional societies are more likely to possess very explicit rules about the acceptable behaviors of men and women, such as who is responsible for certain tasks within the family unit.

Individualism-collectivism: the extent to which the personal interests and welfare of an individual versus that of the group is valued. Cultures differ in their emphasis on individualism versus collectivism. In collectivist cultures, people subordinate their personal goals to those of a stable in-group. In contrast, consumers in individualist cultures attach more importance to personal goals, and

people are more likely to change memberships when the demands of the group (for example, workplace, church, etc.) become too costly. Whereas a collectivist society will stress values such as self-discipline and accepting one's position in life, people in individualist cultures accentuate personal interests, equality, and freedom. Some strongly individualistic nations are the United States, Australia, United Kingdom, Canada, and the Netherlands. Pakistan, China, Taiwan and Turkey are exemplify strong collectivist cultures.

2.11.6 Culturability and the Web

By using the premise of "culturability" (Barber and Badre 1998) in the context of electronic commerce we can assume that the principal premise changes its postulation to cultural preferences directly affecting user performance and attitude towards a Web site. Since the original premise claims that cultural preferences and characteristic such as colour, text versus graphics and spatial orientation control what is deemed as "user-friendly" and acceptable to computer users, we can assume that if the same premise applies to Web site visitors in the context of electronic commerce, Web site design and usability issues must also adapt to a cultural context (Barber and Badre 1998).

The similarity between travellers finding themselves in an unfamiliar place applies to the concept of online visitors browsing unfamiliar international Web sites. Subtle things such as colour, which may be considered trivial, can be a decisive factor in attracting or repelling new visitors. By applying Boor & Russos's (1998) Culture-Culture chart in the context of the World Wide Web, one can conjecture that in the general context, Chinese online visitors may find a web page with a white background colour apprehensive because in the Chinese culture, the white colour reflects death.

Bourges-Waldegg et al (1998) found that it is important to identify shared contexts for the interface between heterogeneous cultures and the Web sites. This objective is attained through explaining the meaning (M) of a Representation (R) in its context (C). For example, Netscape's STOP sign (R) is meant to cancel (M) the downloading of a Web page (C). Kerne (1998) stressed that by identifying and taking benefit of the multi-cultural heritages of netizens on the Web, digital interactive environments will have hybrid interfaces that are more responsive to different users.

According to Barber and Badre (1998), the success of a global interface will only be achieved when the interface design reflects the seized cultural nuances of a targeted audience. For example, the multiple-award winning CNN site embeds cultural icons (for example national flags) and cues to attract a wider pool of visitors to its site. Kerne (1998) contends that in order to take

benefit of the multi-cultural heritages of Web visitors, digital interactive environments must have hybrid interfaces that are responsive to different users.

2.11.7 Trust in Individualist Versus Collectivist Cultures

Research on cultural differences suggests that cultures can be characterized as having either an individualist or a collectivist orientation (Hofstede 1998; Triandis 1995). Collectivist cultures are mostly found in Eastern countries (China, Japan, Taiwan) while individualist cultures mostly exist in Western countries (United States, Australia, and Canada).

Hofstede (1998: p. 51) describes the differences between individualist and collectivist cultures as follows:

Individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family. In a collectivist culture, people from birth onwards are integrated into strong, cohesive groups, which throughout their lifetime continue to protect them in exchange for unquestioning loyalty.

In an individualist culture, the individual takes centre stage and independence is highly valued. Individuals hold flexible ties to social groups, and their behaviour is often guided by self-interest. In an individualist culture, a single person can earn the credit or blame for the success or failure of a project. Priority is given to private interests and goals when group and individual goals conflict with each other. In a collectivist culture, an individual is regarded as a part of the group and a high degree of interdependence among individuals prevails in the group. Collectivists' behaviour is usually regulated by group norms. The credit or blame issue in collectivist cultures is a 'group' responsibility. In collectivism, strong distinctions are made between in-group and out-group members while in individualist cultures the distinction between in-group and out-group members often overlaps or is altogether non-existent (Zeynep and Maheswaran 2000). In such a culture, individuals are not eager for personal fame but rather they pay more attention to the reputation of the group as a whole (Varner and Beamer 1995). Collectivists value homogeneity within in-groups (Triandis 1995). Aaker (1997) summarises the attitudinal and behavioural differences between individualism and collectivism in Table 2-6:

Table 2-6: Relative Attitudinal and Behavioural Differences Associated with Individualism Versus Collectivism (Aaker and Durairaj 1997)

	Individualism	Collectivism
Self-construal	Defined by internal attributes, personal traits.	Defined by important others, family, friends.
Role of others	Self-evaluation (e.g., standards of social comparison, sources of appraisal regarding self).	Self-definition (e.g., relationships with others define self and impact personal preferences).
Values	Emphasis on separateness, individuality.	Emphasis on connectedness, relationships.
Motivational drives	Focus on differentiation, relatively greater need to be unique.	Focus on similarity, relatively greater need to blend in.
Behaviour	Reflective of personal preferences and needs.	Influenced by preferences, needs of close others.

Zeynep (2000) investigated the individualism-collectivism concept further by dividing each culture into vertical and horizontal axes. Each quadrant represents a vertical or horizontal social dimension of each culture. The horizontal dimension assumes that an individual is equal to other group members whereas the vertical dimension assumes that group members can differ from one another in a hierarchical manner. Such a differentiation leads to a four-way typology that consists of vertical individualism (VI), horizontal individualism (HI), horizontal collectivism (HC), and vertical collectivism (VC). In-group preference is usually associated with the vertical dimension of individualism and collectivism.

Zeynep (2000: p. 312) describes briefly the impact of each dimension on the collectivist and the individualist cultures:

Vertical individualists are concerned with hierarchy and strive to achieve higher status by competing with other group members. They value self-enhancement and self-serving biases over group affiliation. Horizontal individualists want to be distinct and unique from other group members and emphasise self-reliance. They would like to do their own thing. Horizontal collectivists are interdependent with the group and share common goals. They want to be similar to other members but do not subordinate themselves to group norms. Vertical collectivists are committed to and accept the superiority of the group over the individual. They often sacrifice their personal goals to further the group interest

Table 2-7: A Four-way Typology of Collectivist and Individualist Cultures based on (Zeynep and Maheswaran 2000)

Cultural Emphasis on Social Relationship	Collectivism	Individualism
Horizontal	<p><u>Horizontal collectivism (HC)</u></p> <ul style="list-style-type: none"> • Interdependence amongst group members is high. • Individuals share a common goal. 	<p><u>Horizontal individualism (HI)</u></p> <ul style="list-style-type: none"> • Individuals want to be distinct and unique. • Group emphasis is on autonomy or self-reliance.
Vertical	<p><u>Vertical collectivism (VC)</u></p> <ul style="list-style-type: none"> • Individuals strive to maintain group cohesion. • The collective good of the group is valued more than individual interests. 	<p><u>Vertical individualism (VI)</u></p> <ul style="list-style-type: none"> • Strive to achieve a higher status. Interdependence amongst group members is high. • Individuals consider self-enhancement and self-serving biases to be higher in priority than maintaining cohesion within group members.

In summary, collectivists accentuate the benefits of the in-group as a whole (versus the individual). In contrast, individualists hold no emphatic affiliation to in-group values and benefits and are therefore more likely to focus on personal benefits and private interests (versus the group). From the previous discussions describing the differences between individualist and collectivist cultures, we can make the following inferences:

First, collectivists are expected to perceive in-group members to be trustworthier than out-group members. Strong collectivists generally have less trust in outsiders than individualists and thus they will engage in fewer trusting behaviours with outsiders. As a result, when developing a trusting relationship with an outsider, trustors from collectivist societies will typically be more cautious, and develop trust more slowly than trustors from individualist societies. Members of minority groups tend to perceive an advertising spokesperson from their own group as more trustworthy and this trust in turn translates into a more positive attitude towards brands (Deshpande and Stayman 1994).

Collectivists base trusting attitudes on societal norms, values, and opinions more than individualists who normally base their trust on personal beliefs and experiences.

An emergent theme suggests that both specific and general expectancies to trust grow in individualists with experience. Because individualists feel less vulnerable than collectivists they usually establish trust relationship with outsiders. This gives them an edge over the more conservative collectivists in that they are able to develop global business relationships more rapidly than their collectivist counterparts. In order for collectivists to become competitive in world markets, they might have to develop strategies for overcoming these relative weaknesses. Identifying different strategies can be a worthwhile investigation topic of future research.

2.11.8 Trust in Collectivist Religions Versus Private Religions

Consumers' lifestyles are influenced by group memberships that form part of the general population of the society where they live. These groups are known as subcultures. Members of a subculture share beliefs and opinions that are specific to that particular group (Solomon 1999). A consumer can affiliate to more than one subculture. Subculture can be based on similarities in age, ethnicity, creed, or a 'strong identification with an activity or art form' (Solomon 1999: p. 437).

According to Glock and Stark (1965: p. 262), religion is 'the most ubiquitous of social institutions'. Strong and intimate interpersonal bonds unite members of a religious community or group. They form religiously oriented reference groups known as "primary groups" in which individuals feel obliged to sustain the relationship ties to their religious groups (Stark and Glock 1968). According to Hofstede (1998), most Western religions display traits of collectivism. Hofstede (1998) defined collectivism in the social organizational context as a pattern in which the individual is seen as being subordinate to a social collectivity such as a state, a nation, a race, or a social class.

COLLECTIVIST RELIGIONS

According to Iannaccone (1995), Islam, Judaism and Christianity especially in their sectarian forms (Southern Baptists, Ultra-orthodox Jews, Sunni Muslims, Shiite Muslims) share the traits of collectivist cultures. Followers of such religions are expected to abide by the rules set by their religious doctrines. For example, attending regularly the weekly worship services and being strictly committed to the religious practices and membership of the group. Iannaccone (1995: p. 290) stresses that 'exclusivity and membership are fundamental' to Islam, Christianity and Judaism. What follows

is a comprehensive explanation by Iannaccone (1995: p. 290-291) of the theory behind collectivist religions:

There is an "in" group and an "out" group, and the distinction between the two is of great, even eternal, consequence. Defining and guarding the membership boundary is a central concern and transitions across the membership boundary- conversion and apostasy-are major events. Members are expected to remain loyal to their particular "brand" of religion, and loyalty is, in fact the norm. Those who attempt to "diversify" their religious practices through participation in different groups are condemned as backsliders or even excommunicated as heretics...renouncing all other faiths is as important as affirming the group's faith. The archetypal example appears in the Ten Commandments: "I am the Lord your God ... You shall have no other gods before me ... for I the Lord your God am a jealous God" [Deuteronomy 5: 6-91]. In like manner, Muslims are expected to reaffirm at every private or congregational prayer, "There is no God but Allah, and Muhammad was his last messenger on Earth". Western religions often employ sacrifice and stigma, restricting the diet, dress, or social and sexual behaviour of their members.

The religious practices in Islam and Judaism further reveal the trait of collectivism. For example, Muslim consumers are obliged to buy 'Halal' products and the consumption of pork meat, alcohol and drugs is forbidden. Females are expected to wear Hijab (veil) and long-garment clothes only. Judaism also dictates on Jews to buy 'Kosher' food and to avoid Alcohol and pork meat. Metwally (1997) contends that in Islam it is expected that the principle of co-operation between a buyer and a seller should be practiced at both the corporate and individual level of commerce. Thus, in the context of collectivist religions, religious consumers are expected to prefer shopping from stores whose owners follow the same religion as these individuals.

Private profits and personal benefits are considered as secondary objectives in Islam. The Muslim community's prime objective is rather to strive for the good of the community as a whole. So when personal interests conflict with that of the community, Islamic Shariah (laws) decrees that personal interests should be regarded as a subsidiary to the more important global interests of the community and thus the individual is expected to sacrifice his/ her personal interests in favour of the common good of the community. Fundamental Islamic laws decree that Muslims in the commercial and general context should co-operate on the basis of mutual good will as demonstrated by the following verse that was extracted from the holy Qu'ran: 'let there be amongst you traffic and trade, by mutual goodwill' (The Qur'an, 4:29). Interests and profits in individualistic scopes are despised by the following fragment of a Qu'ranic verse: 'O ye who believe! Eat not up your property among yourselves in vanities' (The Qu'ran, 4:29). It is rather the collective good of the Muslim community

as a whole that should be placed on the top of an individual's list of priorities. Metwally (1997) contends that in Islam it is expected that the principle of co-operation between a buyer and a seller should be practiced at both the corporate and individual level of commerce. According to Solomon (1999: p. 462), Muslims are conservative individuals that strive to sustain 'a close knit family structure'. All these previous discussions solidify the argument that Islam is a collectivist religion and therefore devout Muslims are expected to behave in a similar manner to the members of a collectivist culture.

The growing number of emerging Muslim associations and organizational bodies throughout the UK further substantiates the trait of collectivism in Islam (Lewis 1994). These bodies strive to preserve the cultural values and identity of the Muslim ethnic minorities by providing them with an educational, business and consumerist alternatives that are in line with Islamic traditions and customs.

INDIVIDUALISTIC RELIGIONS

Private religions on the other hand such as Asian religions, New Age, etc. with the exception of Hindus communes, Buddhist monasteries and some of Japan's new religions, such as Shokagakkai are more flexible in religious obedience and commitment. Non-exclusivity and plural membership is the distinctive trait of such religious groups. They allow their affiliates 'to patronize more than one priest, more than one temple, or even more than one religion' (Iannaccone 1995: p. 291) and membership in this context, is 'at best a matter of secondary concern and at worst a meaningless construct' (Ibid).

RELIGIOUS CONSUMER SEGMENTS

The potential marketing power of religious subcultures is an undisputable issue (Solomon 1999). In an article titled *Selling Christianity*, Wells and Prensky (1996) state that the contemporary Christian music market is flourishing, through the lucrative sales of approximately one billion dollars of records and concert tickets. Schiffman (2000) reported that Dannon's decision to produce a kosher-certified yoghurt resulted in an increase of \$2 million in annual revenues.

Solomon (1999: p. 456 - 459) also reported on a few marketing successes and pitfalls that occurred as a result of targeting religious consumer segments:

Christian bookstores now make less than 40 percent of their sales in books and Bibles, as consumers buy up religion-oriented merchandise including apparel (such as a clothing line

for born-again Christians called Witness Wear that sells over \$ 1 million worth of apparel per year), framed art, and inspirational gifts. In fact, sales of Christian merchandise now exceed \$3 billion per year. Clearly, religion is big business...the little evidence that has been accumulated indicates that religious affiliation has the potential to be a valuable predictor of consumer behaviour. Religious subcultures in particular may exert a significant impact on consumer variables such as personality, attitudes toward sexuality, birthrates and household formation, income, and political attitudes

An ad in a Danish campaign for the French car manufacturer Renault had to be withdrawn after protests from the Catholic community. The ad described a dialogue during confession between a Catholic priest and a repenting man. The man atones for his sins by praying Ave Marias until he confesses to having scratched the paint of the priest's new Renault- hen the priest shouts "heathen" and orders the man to pay a substantial penalty to the church

One of the most significant Jewish-related marketing developments is the increase in demand for kosher food. Each year, about 500 new kosher products appear on the market to satisfy this demand. This trend is being driven by two developments: The increased religious observance by young Jews, and the belief among many gentiles that kosher food is of higher quality. Seventh-Day Adventists and Muslims have very similar dietary requirements and are good customers for kosher food. It is estimated that less than a third of the 6 million consumers who buy kosher products are Jewish.

2.12 Summary

We have started this Chapter with an overview of the trust phenomenon. In reviewing the literature on trust we found differences in the definition and conception of the trust phenomenon. Despite the lack of consensus on a unique definition of trust there is a consensus that trust contributes significantly to the strengthening of existing relationships and the establishment of co-operations between parties at the individual, group and organizational level. A precondition for trust to become significant is the natural presence of uncertainty and risk in the environment where a trading decision is being contemplated. Thus, the World Wide Web's eligibility to become a suitable venue for testing consumers' trust is unquestionable due to the security and privacy problems associated with online transactions. We then provided an overview of the HCI discipline and then followed it with discussing a traditional consumer behaviour model in order to help us understand the behavioural and psychological processes involved prior and post a consumer's purchasing decision. The literature has reported only scant evidence of consumer behaviour and trust studies in the context of e-commerce. We have included these discussions in this Chapter. Finally, we have discussed the literature pertaining to the differences between individualist and collectivist cultures and we then eventually focused the review process on collectivist religious subcultures in particular. There are two reasons why we have reviewed the literature of topics in this sequence. The first reason of following this sequence is to explore the different sources of trust that are responsible for evoking trust in different contexts. The second motive is to understand how religious subcultures influence consumers' purchasing decisions and trust towards a vendor or product in the context of traditional commerce. The outcome of this synthesized literature review will help us draw concepts reflecting the theoretical foundations of trust, which we came across during our review of the contemporary multi-disciplinary literature. These concepts will then be translated at a later stage of our research program into hypotheses that we will test in the context of electronic commerce.

3 RESEARCH METHODOLOGY

3.1 Overview

The objective of this thesis is to identify potential causal relationships that we have hypothesized to exist between the dependent and independent variables related to the culture phenomenon under investigation. The positivistic research method seems to be consistent with our quest for corroborative evidence to test these hypothetical relationships between the dependent and independent constructs. Positivists view the world as an objective entity where anything that is observed directly or indirectly can be quantified and subsequently measured (Coolican 1994; Rubin and Rubin 1995). Cause-and-effect relationship models are examples of positivistic research (Winfield 1991). Most of the dependent and independent variables were drawn from the literature discussing these various constructs and their effect on the psychological and behavioural aspects of an individual.

Table 3-1 shows that empirical research involving survey and laboratory experiments fall within the realm of the positivistic approach to conducting research. Our investigation will use a hybrid approach that involves the use of questionnaires and interviews for data collection in a laboratory environment. This hybrid approach cannot be classified as purely positivistic research. It incorporates elements of the interpretivist approach and uses triangulation as a means for securing the validity of the findings. One can argue that this type of mixed research methodology resembles the post-positivist research that stresses the use of a multiplicity of techniques from the positivist and interpretivist paradigms to analyse the data collected for a research study.

Table 3-1: Information Systems Research Approaches in the Context of the Scientific and Interpretivist Philosophies (Galliers 1994)

Scientific	Interpretivist
Laboratory experiments	Subjective/ argumentative
Field experiments	Reviews
Surveys	Action research
Case studies	Descriptive/ interpretive
Theorem proof	-
Forecasting	Futures research
Simulation	Role/ game playing

Galliers (1994: p. 158-159) proposed a revamped table of IS approaches that serves as a guideline for selecting a suitable approach that matches the kind of study that is being conducted. This is illustrated in Table 3-2. The guideline supports the choice of both the survey and laboratory experiment approach as suitable for studying group- and individual-oriented topics. Galliers (1994: p. 160-161) states that in his point of view 'the survey, descriptive/ interpretive and action research approaches appear to have the widest applicability in IS research'. Since we are interested in studying cultural influences in religious groups and individuals, our hybrid approach that involves conducting lab experiments to collect data is consistent with Gallier's guidelines.

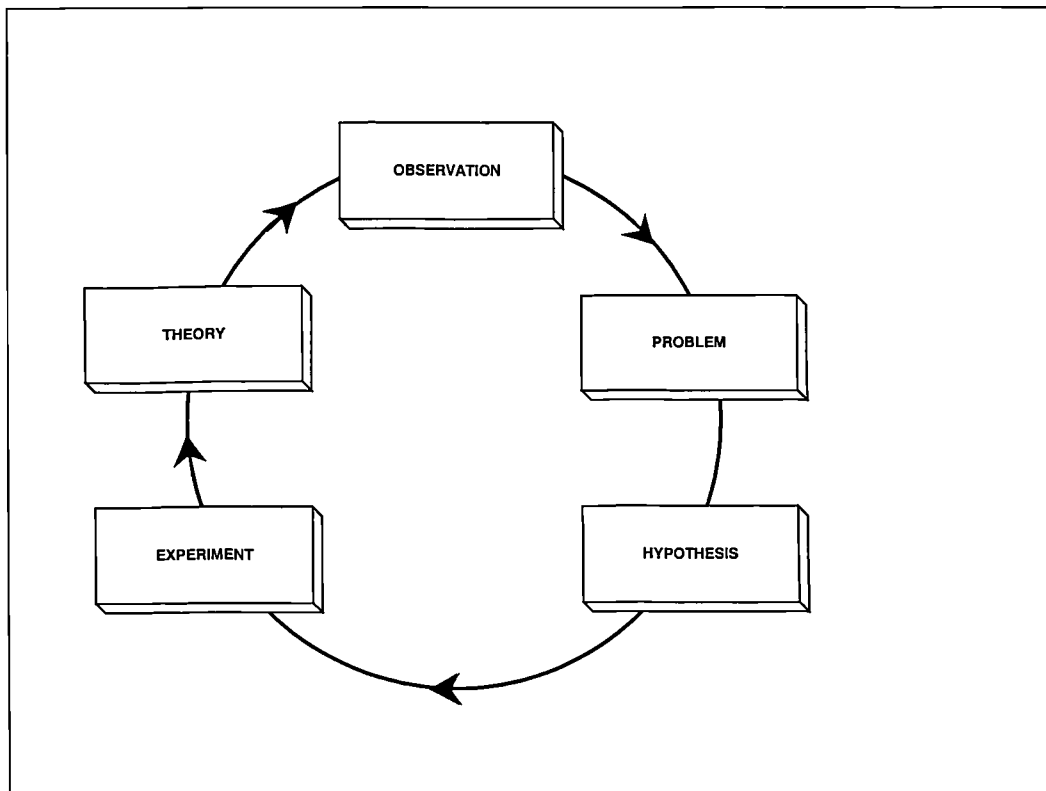
Table 3-2: Information Systems Research Approaches: a Revised Taxonomy (Galliers 1994)

Object	Modes for newer approaches (interpretations)						Modes for traditional empirical approaches (observations)					
	Theorem Proof	Laboratory experiment	Field experiment	Case study	Survey	Forecasting and futures research	Simulation and game/role playing	Subjective/argumentative	Descriptive/Interpretive (including reviews)	Action research		
Society	No	No	Possibly	Possibly	Yes	Yes	Possibly	Yes	Yes	Possibly		
Organization/group	No	Possibly	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Individual	No	Yes	Yes	Possibly	Possibly	Possibly	Yes	Yes	Yes	Possibly		
Technology	Yes	Yes	Yes	No	Possibly	Yes	Yes	Possibly	Possibly	No		
Methodology	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes		
Theory building	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Theory testing	Yes	Yes	Yes	Yes	Possibly	No	Possibly	No	Possibly	Yes		
Theory extension	Possibly	Possibly	Possibly	Possibly	Possibly	No	No	No	Possibly	Possibly		

3.2 Positivism

Coolican (1994: p. 184) defined positivism as 'the scientific belief that hard facts in the world can be discovered only through measurement of what is observable'. The operating assumption of positivism is that anything that is real can be objectively perceived and counted. Positivist researchers hold the corollary that if it cannot be quantified it does not exist (Mariampolski 1999; Weick 1984). The steps involved in scientific positivistic research are illustrated in Figure 3-1:

Figure 3-1: The Steps Involved in the Scientific Research based on (Coolican 1994)



1. Observe some aspects of the universe;
2. Invent a tentative description, a hypothesis, that describes what you have observed;
3. Use the hypothesis to make predictions;
4. Verify those predictions by experiments or further observations and change the hypothesis accordingly in the light of the results (for example, if the outcome of an analysis was found to be inconsistent with the laid out theory);
5. Repeat steps three and four until there are no discrepancies between theory and experiment and / or observations.

One of the prime advantages of the positivist approach is that it is unprejudiced in the sense that one does not have to believe a given researcher but can repeat an experiment and determine whether the published results are true or not. When a theory is found to be consistent with the known facts, the theory is then extended to the unknown to make new predictions. These predictions can then be tested by searching for additional data, exceptions and confirmations. A new scientific theory or model remains intact until new facts emerge that contradict the model or until a simpler theory emerges that can better explain the facts. In the former case, the model is updated to reflect the new findings and in the latter case it is replaced with the simpler version. The newly derived theory is accepted based on the results obtained through observations and/ or experiments. Anyone can attempt to replicate the findings in a different study or in a different context. In fact, most experiments and observations are repeated incessantly. If the original claims cannot be verified, the origin of such discrepancies is chased and scrutinized.

A repeated criticism made about the positivist approach in research claims that positivism cannot accommodate anything that has yet to be proved. The argument then points out that many things thought to be impossible in the past are now everyday realities. The criticism is based on a misinterpretation of the scientific method. When a hypothesis is supported by empirical evidence, it is adopted as a theory that explains a range of phenomena, which is prone at any time in a future investigation to be falsified by new experimental evidence. When exploring a new set of phenomena scientists do use existing theories but since this is a new area of investigation, it is always kept in mind that the old theories might fail to explain the new experiments and observations. When an accepted theory cannot explain some new data, the researcher(s) will strive to construct a new theory that is consistent with the new data. If this happens to be the case, new hypotheses are developed and tested to generate new theories. This task gets increasingly more difficult as knowledge about a phenomenon evolves since the new theory should not only explain the new data, but it should also be consistent with the old one. The foundation of the new theory must build on its valid predecessors.

Positivists view science as the primary way to get at truth, to understand the world well enough so that one might predict and control an outcome. In the positivist point of view, the world and the universe are deterministic- they operate by laws of cause and effect that can be discerned if one applies the unique approach of the scientific method (Winfield 1991). Science is largely a mechanistic or mechanical affair where deductive reasoning is used to postulate testable hypotheses. Based on the results, one may learn that his/ her theory is inconsistent with the facts and so a revision of the theory has to be contemplated to bring the theory in line with reality.

The conception of science in the West is based on the positivistic viewpoint, which 'posits beliefs (emerging from the search for regularity and causal relationships) and scrutinizes them through empirical testing' (Galliers 1994: p. 33).

Hirschheim (1994: p.33) summarized positivism as being based on the following five pillars:

1. **The unity of the scientific method.** This means that the knowledge-acquisition approach of the scientific method is applicable to all kinds of research investigations.
2. **The search for human causal relationship.** This search seeks to discover causal relationships amongst the constituents of the study. This involves the use of reductionism where the main problem in the investigation is broken down into its smaller constituent parts.
3. **The belief in empiricism.** This belief refers to the strict opinion that the only valid data is the one that is experienced through the senses. Subjective perception and other extrasensory experiences are considered invalid in this viewpoint.
4. **The value-free nature of science (and its process).** This reflects the belief that the 'undertaking of science has no relationship to political, ideological, or moral beliefs. It transcends all cultural and social beliefs held by the scientist' (Galliers 1994: p. 36).
5. **The logical and mathematical foundation of science.** This stresses the point that logic and mathematics are the foundations of science. They both together form the basis for quantitative analysis- the prime instrument used in the quest for causal relationships.

Tashakkori (1998: p. 7) states that there are 5 philosophical properties to positivism:

- *Ontology* (nature of reality): Positivists believe that there is a single reality.
- *Epistemology* (the relationship of the knower to the known): Positivists believe that the knower and the known are independent.
- *Axiology* (role of values in inquiry): Positivists believe that inquiry is value-free.
- *Generalizations*: Positivists believe that time- and context-free generalizations are possible.
- *Causal linkages*: Positivists believe that there are real causes that are temporally precedent to or simultaneous with effects.

The positivist mainly believes in empiricism- the idea that observation and measurement is the core of scientific endeavours. Keller (1985) argues that scientific research is related to a patriarchal view of the world. The prime instrument of the scientific approach is the experiment, the attempt to discern natural laws through direct manipulation and observation. The positivistic approach involves an objective enquiry that focuses on 'the explanation and prediction of observable events' (Maykut and Morehouse 1998a: p. 3). Positivism is contingent upon measurable variables and provable propositions known as hypotheses (Maykut and Morehouse 1998a). Positivistic research is dedicated to explaining and predicting social events. It stresses strict conformity to the hypothetico-deductive method. In the hypothetico-deductive approach assumptions are formulated from which experimentally testable results are inferred and then these assumptions are subjected to rigorous empirical examinations. Positivist researchers believe that psychology should be objective in the same manner as physical sciences. The only way through which this belief can be realized requires adopting and using the hypothetico-deductive method (Hirschheim 1994).

3.2.1 Positivism Versus Relativism

The philosophy of positivistic research is that of the realist. Realism assumes that the universe consists of objective entities and structures that are of an empirical nature and are perceived similarly by any observer (Hirschheim 1994: p. 42). This is inconsistent with how relativists view the world. Relativists assume that reality is a subjective concept that is perceived differently in the eye of the beholder. Reality in the relativist point of view varies with different languages and cultures.

3.3 Post-Positivism

There has been a shift away from positivism to what is known as post-positivism. Post-positivism asserts the need of 'methodological pluralism' -the assertion that there is no single correct method of science but many methods (Hirschheim 1994). The correct method depends on the kind of research problem that is being studied and the kind of knowledge that is being sought (Kuhn 1970). Hirschheim (1994: p. 60) stresses that post-positivism is 'a belief about knowledge; it is not a particular school of thought with any agreed set of propositions or tenets'. One of the most common forms of post-positivism is *critical realism*. A critical realist believes that there is a reality that can be studied regardless of whether science can investigate it or not. Reality in the post-positivist point of view does not necessarily require to be studied using an objective approach. Positivists are also realists. The difference is that the post-positivist critical realist recognizes that all observation is fallible and has error and that all theory is prone to revision. Positivists believe that the goal of science is to uncover the truth. In contrast, the post-positivist or critical realist believes that the goal of science is to persist in studying reality bearing in mind that there is a possibility that one may never be able to achieve that goal. Because all measurement is fallible, the post-positivist emphasizes the importance of multiple measures and observations (Winfield 1991), a process known as triangulation, each of which may possess different types of error.

Positivist and post-positivist paradigms view the world from 'within a realist and critical realist ontology and objective epistemologies and rely upon experimental, quasi-experimental, survey, and rigorously defined qualitative methodologies' (Denzin and Lincoln 1998: p. 27). Most post-positivists are constructivists who believe that each person constructs his/ her view of the world based on his/ her personal perception of it. Because perception and observation is fallible, a researcher's constructions would also tend to be error-prone. Positivistic objectivity is believed to be a characteristic inherent in the individual scientist. Scientists are responsible for putting aside their biases and beliefs and seeing the world as it really is. In contrast to positivists, post-positivists reject the idea that any individual can see the world perfectly as it really is. Everyone is biased and all observations made can be affected (theory-laden). The only way to achieve objectivity in post-positivism is to triangulate across multiple fallible perspectives. Thus objectivity is not the characteristic of an individual, it is inherently a social phenomenon. It is what multiple individuals are trying to achieve when they criticize each other's work. Proximity to objectivity in post-positivism is achieved through incessant interaction between a contentious community of truth-seekers (positivist scientists) who each participate in revising a theory after it had been refuted by the results. The evolutionary theories that survive such intense scrutiny have adaptive values and are probably as close

as our species can come to being objective and understanding reality. Pragmatism is important in post-positivistic research.

3.4 Positivism Versus Post-Positivism

A summary of the differences between positivism and post-positivism and their purpose of inquiry, summoned from Guba and Lincoln (1998), is illustrated in Table 3-3:

Table 3-3: A Summary of the Positivist and Post-Positivist Research Paradigms (Guba and Lincoln 1998)

Item	Positivism	Post-positivism	Purpose of Inquiry
Ontology	<p><i>Realism</i> (also known as "naïve realism").</p> <p>An apprehensible reality is assumed to exist, driven by immutable natural laws and mechanisms. Changes in the events and objects under investigation are believed to be mainly due to the 'cause-and-effect' phenomena. Hesse (1980) contends that the basic premise behind this paradigm is both reductionist and deterministic.</p>	<p><i>Critical realism.</i></p> <p>Reality is assumed to exist as in positivism but more cautiously to be imperfect based on two premises: that human cognitive mechanisms are flawed and the fundamentally intractable nature of phenomena. Claims about reality are subjected to the widest possible critical examination to facilitate the understanding of reality as closely as possible. Findings are never interpreted as reflecting perfect explanation about the phenomena under investigation.</p>	<p>For both of these paradigms the aim of inquiry is explanations of phenomena, ultimately the prediction and control of the phenomena (Wright, 1971). The ultimate criterion for progress in both paradigms is that the scientist's capability of prediction and control should improve over time (Hesse, 1980).</p>

<p>Epistemology</p>	<p><i>Dualist and objectivist.</i></p> <p>The investigator and the investigated 'object' are assumed to be independent entities, and the investigation to be capable of studying the objects without affecting it or being affected by it. Replicable findings are assumed to reflect true explanations of an event or the behaviour/ action of an object.</p>	<p><i>Modified dualist/ objectivist.</i></p> <p>Dualism is turned down. Preference is given instead to critical traditions (do the findings match contemporary knowledge?) and the critical community (such as editors, referees, and professional peers). Replicated findings are probably true but always subject to falsifications.</p>	
<p>Methodology</p>	<p><i>Experimental and manipulative.</i></p> <p>Questions and/ or hypotheses are stated in propositional form and subjected to empirical tests to verify them; possible confounding conditions must be carefully controlled to prevent outcomes from being improperly biased by extraneous events or variables.</p>	<p><i>Modified experimental/ manipulative.</i></p> <p>Hypotheses are initially assumed to be false. More emphasis is placed on refuting rather than supporting hypotheses. The methodology aims to redress some of the problems of the positivistic paradigm by doing inquiry in more natural settings, collecting more situational information, and reintroducing discovery as an element in inquiry, and, in the social sciences particularly, soliciting different viewpoints to assist in determining the meanings and purposes that people ascribe to their actions, as well as to contribute to grounded theory.</p>	

3.4.1 A Shift in Paradigm: from Positivism to Post-Positivism

As Table 3-3 indicates, many researchers see a paradigm shifting from the traditional world-view to an alternate world-view (Guba and Lincoln 1998; Maykut and Morehouse 1998b). Having noted briefly the positions that proponents of each paradigm might take with respect to the three paradigm-defining questions, it is useful to look across rows to compare and contrast those positions between these 2 different paradigms. Moving from left to right across Table 3-3 each shift in the position of each paradigm is described below:

Ontology: In Table 3-3, one can note the move from the positivistic position of naïve realism that assumes an objective external reality upon which inquiry can converge; to post-positivism's critical realism, which still assumes an objective reality but grants that it cannot be perfectly understood. Findings in post-positivistic research tend also somehow to be inconclusive since the findings are explained in a probabilistic manner.

Epistemology: One can note the shift from positivism's dualist, objectivist assumption that enables an investigator to determine 'how things really are' and 'how things really work'; to that of the post-positivistic modified dualist/ objectivist assumption that it is possible to approximate but never fully know reality.

Methodology: Finally, we note a move from positivism's experimental/ manipulative methodology that focuses on verification of hypotheses to that of post-positivistic modified experimental/ manipulative methodology, which focuses more on falsification of hypotheses.

3.5 Triangulation

Triangulation stresses the use of multiple independent measures in a research project. The term triangulation was borrowed from the field of navigation and surveying which refers to the notion of fixing an object from at least three independent locations in order to increase the accuracy of the sighting (Smith 1975). Abrahamson (1983) points out that the triangulation approach prevents the research from becoming method-bound. The strength of almost every measure is flawed in some way or other, and therefore counterbalancing the strengths from one measure to another can amend the research designs and strategies. Winfield (1991: p. 12) also argues that 'Methodological pluralism-obtaining as many perspectives as possible on things- inevitably helps the exploratory theory-testing process along'.

Theoretical triangulation involves drawing conceptual models and frameworks from other disciplines and using them to explain situations in another discipline or context while methodological triangulation is achieved through the use of mixed methods that are quantitative as well as qualitative in nature (Easterby-Smith et al. 1995). Janesick (1998: p. 66) adds the following statement in relation to methodological triangulation:

Because different "lenses" or perspectives result from the use of different methods, often more than one method may be used within a project so the researcher can gain a more holistic view of the setting. Two or more qualitative methods may be used sequentially or simultaneously, provided the analysis is kept separate and the methods are not muddled.

Hammersley (1996: p. 161) gave an explanatory account on the use of a combination of methods from the quantitative and qualitative paradigms:

It is certainly not the case that there are just two kinds of researcher, one who uses only numbers and another who used only words. It is true that there are research reports that provide only numerical data and others that provide only verbal data, but there is also a large proportion of studies that use both. Thus, many researchers' reports (including some that are regarded as examples of qualitative research) combine tables and statistical analysis with the use of quoted extracts from documents, interviews or field notes...the distinction between numerical and verbal data is itself of questionable value...it has frequently been pointed out that qualitative researchers regularly make quantitative claims in verbal form, using formulations like 'regularly', 'frequently', 'sometimes', 'generally', 'typically', 'not atypically' and so on; on the fact that they use words instead of numbers does not alter the character of their claims.

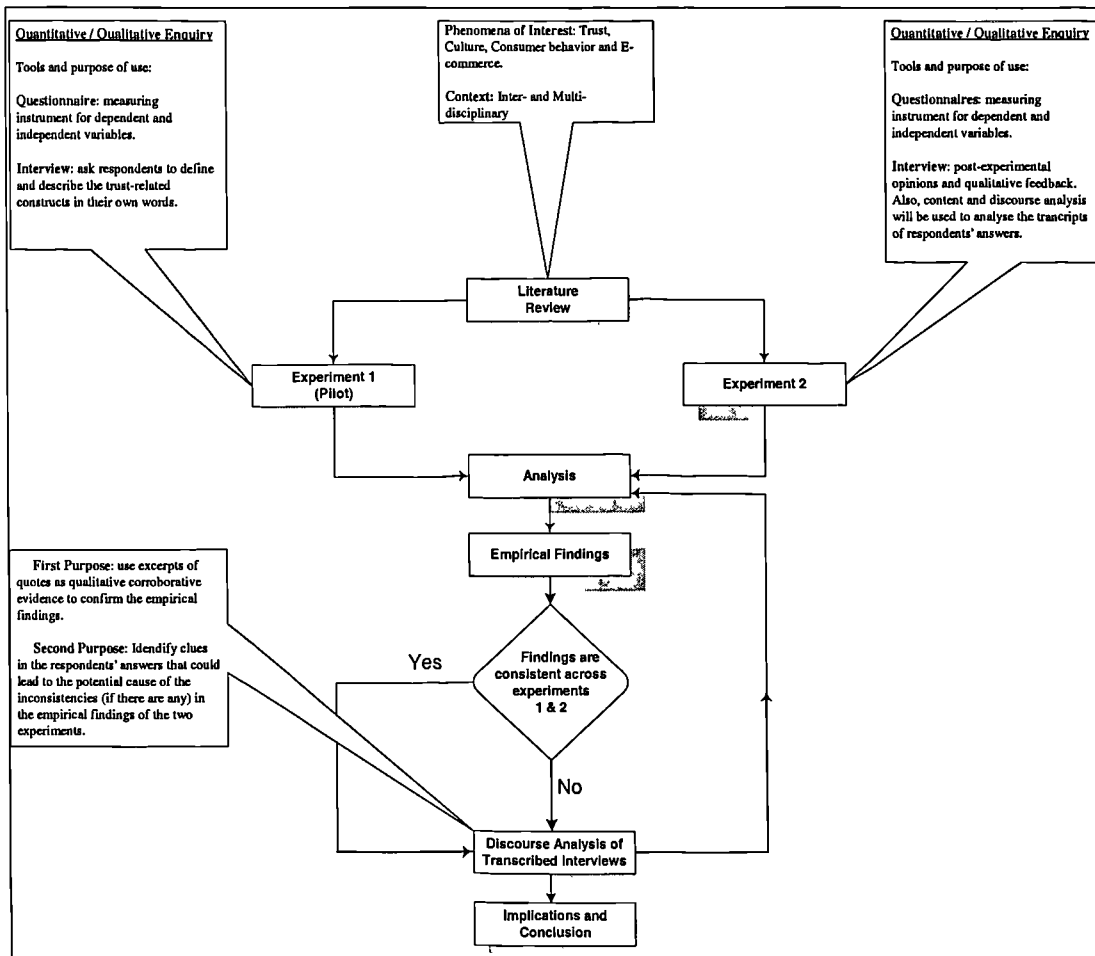
Henwood (1996: p. 30) also pointed out that researchers strive to incorporate a 'principled mixture of quantitative and qualitative methods' in their research projects. Bryman (1988: p. 94) summarized the differences in the contrasting aspects between the quantitative and qualitative paradigms as shown in Table 3-4.

Table 3-4: Some Differences between Quantitative and Qualitative Research (Bryman 1988)

	Quantitative	Qualitative
Role of Research	Preparatory	Exploring actor's interpretations
Relationship between Researcher and Subject	Distant	Close
Researcher's Stance in Relation to Subject	Outsider	Insider
Relationship between Theory/ Concepts and Research	Confirmation	Emergent
Research Strategy	Structured	Unstructured
Scope of Findings	Nomothetic	Ideographic
Image of Social Reality	Static and external to actor	Processual and socially constructed by actor
Nature of Data	Hard, reliable	Rich, deep

This thesis has drawn theories from diverse disciplines such as consumer behaviour, religious studies, and so on (*theoretical triangulation*). We have also used a combination of quantitative, semi-qualitative (open-ended questions and ranking exercise) and qualitative (recorded interviews) instruments to collect different types of data from the participants (*methodological triangulation*). It is however important to stress that this study's claim of methodological and theoretical triangulation is not meant to stress the presence of solid triangulation in our research. This research study can only claim, to a certain extent, to have conformed to the preconditions required for methodological and theoretical triangulation by having adopted a mixed methodology.

Figure 3-2: Research Methodology Adopted for this Research



3.5.1 Qualitative versus Quantitative Inquiry: Interpretivism Versus Positivism

In contrast to quantitative research, qualitative research focuses on understanding a concept by looking closely at people's words, actions and records. Words and sentences are important human artefacts. What people say and write can be a source of evidence about individual and social processes. On the other hand, the traditional or quantitative approach to research looks past these words, actions and records and concentrates more on the statistical significance of the results generated from the statistical tests used in an empirical study (Rubin and Rubin 1995). Rubin (1995: p. 33) argues that the common drawback in positivism is that 'positivists routinely reduce complex information to summary measures, often ignoring what is difficult to quantify and eliminating subtleties' and that positivist researchers accentuate 'overall sums and averages of their measures,

ignoring the detail and richness of individual behaviour. The result is often bloodless' (Ibid: p. 34). The qualitative researcher seeks patterns that emerge from the data. The assumption is that the analyst is interested in investigating a concept viewed through the lens of the respondent in order to learn about the respondent's psychological or social world (Smith 1995). In this type of analysis, the objective is to 'extract' meanings from the data and not just 'take some measure of frequency' (op. cit.: p. 18). The qualitative investigator's role is that of an interpretivist who must be constantly engaged in construing the data (text, transcribed tape recordings, etc.) collected in the research project (Rubin and Rubin 1995). This is what Rubin (1995: p. 35) had to say about interpretivist researchers:

The interpretive social researcher examines meanings that have been socially constructed and consequently accepts that values and views differ from place to place and group to group. There is not one reality out there to be measured; objects and events are understood by different people differently, and those perceptions are the reality- or realities- that social science should focus on.

In contrast, the quantitative researcher produces an educated guess or hypothesis, which is then used to examine the data. Causality is central to the positivistic paradigm. (Maykut and Morehouse 1998a). The goal of qualitative research is to discover patterns, which emerge after close observation, careful documentation, and thorough analysis of the research topic. What can be discovered by qualitative research are not generalizations but contextual findings. In contrast, the traditional approach of positivism is more concerned with generating hypotheses, testing them, and generalizing the findings to the larger population (Maykut and Morehouse 1998a). The traditional approach to research quantifies the results of these observations. Mathematics, or more specifically statistics, plays an important part in the shaping of this view of science. A major difference between the two approaches is not the frequency of a particular word or behaviour, but rather the meaning given to the words, behaviours or documents as interpreted through quantitative or statistical analysis as opposed to patterns of meaning which emerge from the data and are often presented in the participants' own words. Rubin (1995: p. 35) described the difference of interpreting results between positivism and interpretivism using this analogy: 'It matters less whether a chair is 36 inches high and 47 years old than that one person perceives it as an antique and another views it as junk'.

3.5.2 Qualitative Analysis in Positivism

Coolican (1994) contends that due to the predominant paradigm of natural science it is often assumed that hypotheses can only be tested with quantitative, empirical data. The positivist treats qualitative data collected in the same research as a subsidiary to quantitative data. It is mainly used in

the positivist paradigm as a complementary tool to consolidate and enlighten on otherwise neutral and uninspiring statistics obtained from the research instruments. Cornford (1996: p. 124) warns that for doctoral research 'a quantitative approach alone, based on structured questionnaires, can be too insensitive to capture complex and subtle social and behavioural data'.

In traditional quantitative research, the open-ended interviews are used in preliminary research when information about a research topic is not readily available. This is common in cross-cultural and multicultural research (Tashakkori and Teddlie 1998). For example, 'the construction of attitude scales, the open-ended interview is used to obtain statements related to the object of the study. These statements are then organized in the form of an initial "item pool." The items are then used in more structured interviews or questionnaires to measure attitudes and/ or opinions (Likert scale, Thurstone scale, and so on)' (Tashakkori and Teddlie 1998: p. 101). Smith (1995: p.18) warned that taped interviews omit non-verbal behaviour from the analysis but he believes that the benefits of tape-recording outweigh the disadvantages that are associated with its usage.

Tashakkori (1998: p. 110) agrees with Smith on this point:

For a mixed model researcher, even when inferences are based on highly systematic quantitative data, personal observations of the context of data collection as well as interactions with the individuals who are the sources of data are valuable sources of information. Even in highly structured experimental studies, such observations provide additional strength to the quality of inferences on the basis of the results.

Smith (1995), however, warns that there is no such thing as a 'correct' way to perform qualitative analysis. This is what he had to say about the qualitative analysis of data:

The assumption here is that the analyst is interested in learning something about the respondent's psychological world. This may be in the form of beliefs and constructs that are made manifest or suggested by the respondent's talk or it may be that the analyst holds that the respondent's story can itself be said to represent a piece of his or her identity... Either way, meaning is central and the aim is to try to understand the content and complexity of those meanings rather than take some measure of frequency. This involves the investigator engaging in an interpretive relationship with the transcript. While one is attempting to capture and do justice to the meanings of the respondent, to learn about his or her mental and social world, those meanings are not transparently available, they must be obtained through a sustained engagement with the text and a process of interpretation.

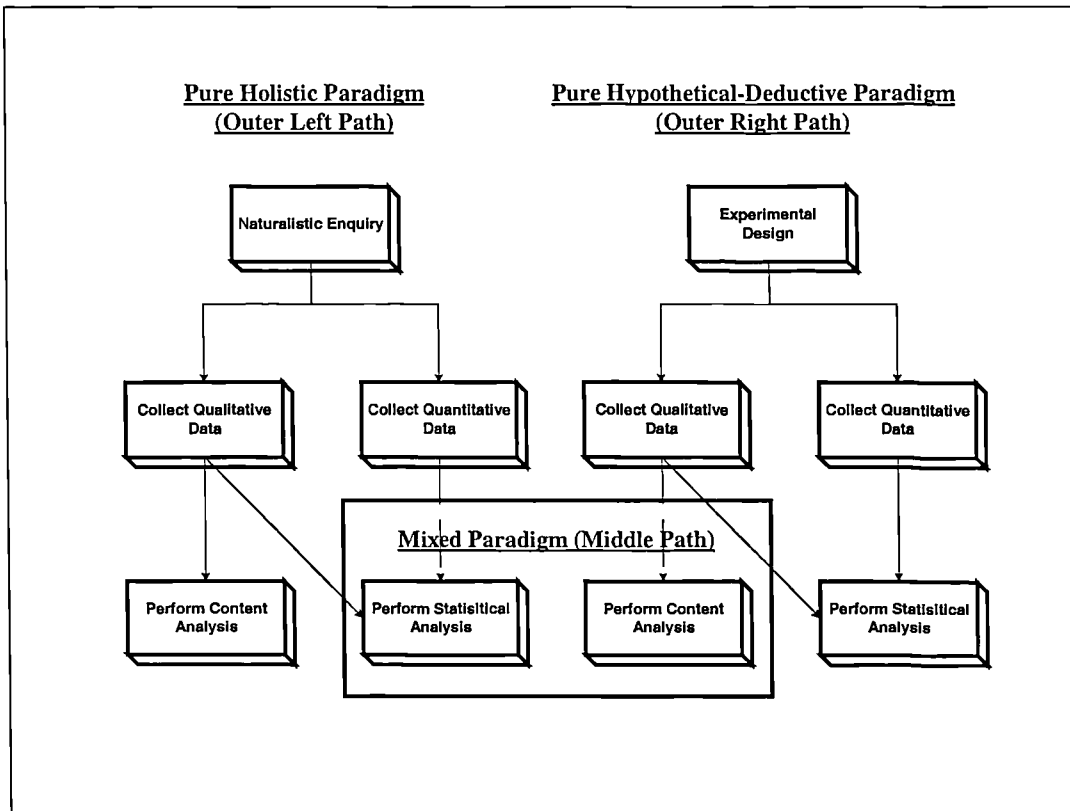
3.5.3 Mixed Methodologies

Tashakkori (1998: p. 19) believes that mixed model studies are 'products of the pragmatist paradigm and that combine the qualitative and quantitative approaches within different phases of the research process'. Howe's (1988) concept of pragmatism claims that there is compatibility between quantitative and qualitative methods and thus researchers could use instruments from both paradigms in their investigations. Sources investigating the differences between quantitative and qualitative methods came to the general conclusion that there is a similarity in the basic values underlying both types of methods (Reichardt and Rallis 1994; Tashakkori and Teddlie 1998). Data collection involving both closed-ended questions with numerical responses and open-ended questions placed in the same questionnaire fall under the mixed methodology category. Data analysis techniques that combine factor analysis of Likert scaled items in a questionnaire together with using a constant comparative method such as content analysis to analyse the narrative response to open-ended questions are also classified to fall under the mixed methodology paradigm (Tashakkori and Teddlie 1998).

Tashakkori (1998: p. 18) provided a summary of cases that represent the mixed model paradigm:

- *Sequential studies* (or what Creswell calls two-phase studies): The researcher first conducts a qualitative phase of a study and then a quantitative phase, or vice versa. The two phases are separate.
- *Parallel/simultaneous studies*: The researcher conducts the qualitative and quantitative phase at the same time.
- *Equivalent status designs*: The researcher conducts the study using both the quantitative and the qualitative approaches about equally to understand the phenomenon under study.
- *Designs with multilevel use of approaches*: researchers use different types of methods at different levels of data aggregation. For examples, data could be analysed quantitatively at the student level, qualitatively at the class level, quantitatively at the school level, and qualitatively at the district level.

Figure 3-3: A Conceptualisation of a Combined Approach Between Qualitative and Quantitative Methods (Tashakkori and Teddlie 1998)



3.5.4 Content Analysis

Content analysis is an instrument used by researchers for quantifying descriptive information (Crano and Brewer 1973). This is known as *traditional quantitative content analysis* (Rosengren 1981). It is a tool used in indirect observation of communications that are produced by people. The communications under study were usually those from secondary sources of published material such as verbal dialogues, films, advertisements, theatre and prominent speeches of politicians (Henwood 1996). Some researchers use content analysis to analyse communications from primary sources, such as taped interviews (Coolican 1994). Content analysis assists researchers in developing an understanding of the phenomena of interest that they are investigating. The technique of content analysis involves counting the frequency of key phrases or words occurring in the text of transcribed responses to open-ended questions in questionnaires or in transcribed recorded interviews and then analysing the frequencies of each key phrase or word (Easterby-Smith et al. 1995). These key phrases or words are known as coding units (Coolican 1994). Coding units are used to categorize the

qualitative data. The option of which key phrase or word to analyse is left to the researcher's discretion but it usually depends on the hypotheses that the researcher is testing.

Rosengren (1981: p. 111) argues that content analysis 'sets out to characterize, to condense and elucidate the content, to bring out the essentials or point out certain typical characteristics. It is a matter of describing the content not by itemizing all the words and clauses, but by revealing features that are not immediately apparent to readers, listeners, or viewers'. There are various approaches, scientific and interpretivist, to interpret and derive meanings from textual or audiovisual content. The choice depends on the motives and the assumptions made by the researcher (Rosengren 1981: p. 111). Rosengren (1981: p. 113) cautions of two traps that are inherent in the traditional scientific and humanistic approaches to content analysis of verbal messages:

One is the temptation to analyse exclusively from the outside, to look upon the text in question as an abstract system unto itself. The other, opposite danger is the tendency to analyse totally from within, looking upon the text as a subjective artefact of the individual creator

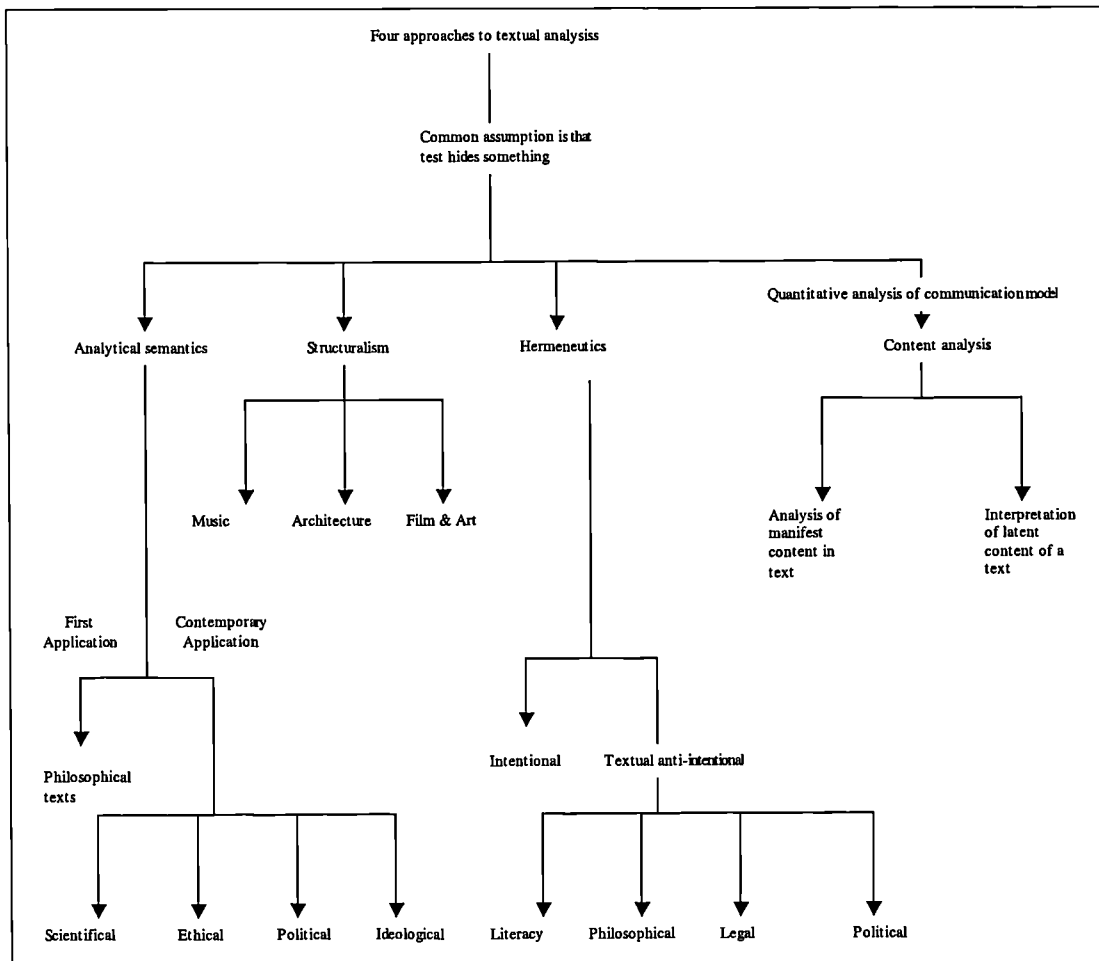
According to Rosengren (1981: p. 113), human interpretation of text is 'neither entirely individual/ subjective nor a faithful copy of the words and clauses it is made up of...It is not arbitrary, but follows certain principles that apply to all who live under the same material conditions and share the same experiences and history' and that content analysts should concentrate on 'what links words, clauses, and pictures into meaningful wholes' (Rosengren 1981: p. 115).

Rosengren's conclusion about the traditional scientific and qualitative approach to content analysis is as follows:

Qualitative analyses will always be necessary to produce actual understanding, to give detailed descriptions and analyses, which are to describe and comprehend overall media content. But they will always be unable to cope with large amounts of data, and their results will be difficult to communicate and will have low general credibility. Traditional positivistic quantitative content analyses will always be suitable for describing many simple forms of data, and their results are easily communicated and normally enjoy considerable credibility. But they are always inadequate when it comes to understanding the texts and explaining their content, especially in a broader societal context (p. 155).

The four approaches to textual analysis shown in Figure 3-4 are based on Rosengren's (1981) discussions about these approaches:

Figure 3-4: The Four Approaches to Textual Analysis Based on Rosengren (1981)



Janis (1965: p. 33 cited in Krippendorff, 1980) defined various applications and types of content analysis:

(1) *Pragmatical content analysis- procedures which classify signs according to their portable causes or effects (e.g., counting the number of times that something is said which is likely to have the effect of producing favourable attitudes towards Germany in a given audience).*

(2) *Semantical content Analysis- procedures which classify signs according to their meanings (e.g., counting the number of times that Germany is referred to, irrespective of the particular words that may be used to make the reference).*

(a) Designation analysis- provides the frequency with which certain objects (persons, things, groups or concepts) are referred to, that is, roughly speaking subject-matter analysis (e.g., references to German foreign policy).

(b) Attribution analysis- provides the frequency with which certain characterizations are referred to (e.g. references to dishonesty).

(c) Assertion analysis- provides the frequency with which certain objects are characterized in a particular way, that is, roughly speaking, thematic analysis (e.g., references to German foreign policy as dishonest).

(3) Sign-vehicle analysis- procedures which classify content according to the psychophysical properties of the signs (e.g., counting the number of times the word Germany appears).

Berelson (1952: p. 34 cited in Krippendorff, 1980) also mentions some uses of content analysis:

(1) To assist the investigator in technical research operations by for example coding open-ended questions in survey interviews;

(2) To reflect the attitudes, interests, and values or "cultural patterns" of different population groups.

CODING IN CONTENT ANALYSIS

Coding data is the formal representation of analytical thinking. After generating categories and themes from the data, the researcher is then faced with the task of applying some coding scheme to those categories and themes that occur in the passages of the analysed text or in the speech of a taped interview (Marshall and Rossman 1999). Codes can be in the form of abbreviations of keywords, coloured dots, or numbers. The choice is entirely up to the researcher (Marshall and Rossman 1999). Table 3-5 displays the different levels of coding units:

Table 3-5: Coding Units (Coolican 1994)

Unit	Examples
Word	Analyse for sex-related words in different magazines
Theme	Analyse for occasions, in children's literature, on which boy/ girl initiates and gets praised.
Item	Look for whole stories e.g., article on Northern Ireland.
Character	Analyse types of character occurring in TV cartoons.
Time and space	Count space or time devoted to particular issue in media.

Weber (1990: p.21) mentioned that the coding procedure is important in content analysis. According to Weber (1990: p. 21-22), the three most commonly used recording units are the following:

- *Word*- One choice is to code each word. As noted, some computer software for text analysis cannot distinguish among the various senses of words with more than one meaning, and hence may produce erroneous conclusions.
- *Word sense*- other computer programs are able to code the different senses of words with multiple meanings and to code phrases that constitute a semantic unit, such as idioms (e.g., *taken for granted*) or proper nouns (e.g., *the Empire State Building*). These issues are discussed in detail later.
- *Sentence*- an entire sentence is often the recording unit when the investigator is interested in words or phrases that occur closely together. For example, coders may be instructed to count sentences in which either positive, negative, or affectively neutral references are made to the Soviet Union. A sentence with the phrase *evil empire* would be counted as NEGATIVE EVALUATION, whereas *Talks with the Soviet Union* would be coded POSITIVE EVALUATION.

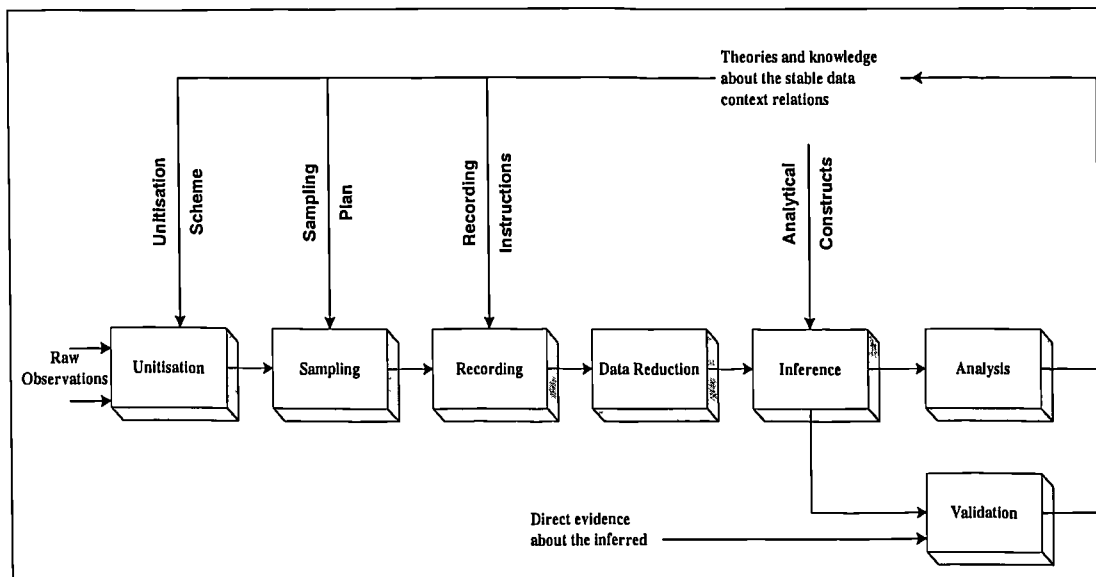
Babbie (1992: p. 67) states that the sampling unit in content analysis can be in the form of 'words, phrases, sentences, paragraphs, sections, chapters, books, writers, or the contexts relevant to the words. Other forms of communication may also be sampled at any of the conceptual levels appropriate to them'. Figure 3-5 illustrates the different techniques used for the different types of analytical studies. The common indices used for applying content analysis in mass communication research (Krippendorff 1980: p. 40) are:

- The *frequency* with which a symbol, idea, or subject matter occurs in a stream of messages tends to be interpreted as a measure of *importance*, *attention*, or *emphasis*.

- The balance in numbers of *favourable and unfavourable* attributes of a symbol, idea, or subject matter tends to be interpreted as a measure of the *direction or bias*.
- The kind of qualifications made and associations expressed towards a symbol, idea, or subject matter tends to be interpreted as a measure of the *intensity or strength* of a belief, conviction, or motivation.

Krippendorff (1980: p. 40) defined an index as ‘a variable whose significance in an investigation depends on the extent to which it can be regarded as a *correlate of other phenomena*’.

Figure 3-5: Procedures in Content Analysis (Krippendorff 1980)



The analysis phase of content analysis is the process that involves the ‘identification and representation of patterns that are noteworthy, statistically significant, or otherwise accounting for or descriptive of the content analysis results’ (Krippendorff 1980: p. 55). During the analysis, the responsibilities of the researcher include:

1. To summarize the data, to represent them so that they can be better comprehended, interpreted, or related to some decision the user wishes to make;
2. To discover patterns and relationships within data that the “naked eye” would not easily discern, to test relational hypotheses;

3. To relate data obtained from content analysis to data obtained from other methods or from other situations so as to either validate the methods involved or to provide missing information.

Content analysis can be used to test theories that involve variables that are assessed by different techniques. The ability to correlate information obtained from content analysis with data obtained through other techniques makes content analysis suitable for a mixed methodology study (Krippendorff 1980).

3.6 Type of Study Adopted for this Research

3.6.1 Experimental Method

Experimental science is concerned with the search for cause-and-effect relationships in nature (Dannehl 1998). A hypothesis is the researcher's educated guess of what this cause-and-effect relationship is. The results from the experiment enable the researcher to predict the outcome of a future cause-and-effect relationship. Coolican (1994: p. 66-67) describes the tasks involved in the experimental method as follows:

In experiments, the ideal is to control all relevant variables whilst altering only the IV (independent variable). A strong and careful attempt is made to even out random variables and to eliminate constant errors. The reason for this is that, if all other variables are controlled, only the IV can be responsible for changes in the DV (dependent variable).

The experimental scientific method requires as a precondition for using it that the question or problem be formulated in terms of tentative statements or hypotheses, which can then be tested. When performing an experiment, replication is a necessity. Everything should be tried several times on several participants. Performing an experiment on one person only and once, does not give sufficient ground to justify an outcome that can be generalised to the global population level. The outcome could just have occurred by chance. A good experimental design must include an educated guess (based on the theories related to the concept(s) of interest) about what factors affect the phenomena that is being investigated by a research study.

Dannehl (1998) stresses that the experimental method is the only method that can be used to establish cause-and-effect relationships. It is the only method that can be used to explain the bases of behaviour and mental processes. There are two types of observational methods: naturalistic observation and laboratory observation. Naturalistic observation involves observing behaviour as it

naturally happens, and where it naturally happens. The nature of a naturalistic enquiry is unobtrusive: the investigator in this case does not interfere with the behaviour in any way. In an ideal laboratory experiment, experimental methods involve doing observations where the circumstances (independent and extraneous variables) affecting the dependent variables are controlled by the experimenter. The advantage of a laboratory experiment is that observations are relatively easy to do. The situation in which people are observed may approximate to real-life situations and therefore observational research in general, may be more ecologically valid than other forms of research. Its disadvantage however is that in laboratory experiments, once the observation is set up, the observer has little control over the behaviour that is being monitored. The observer may not be aware of all the factors that are affecting the behaviour and actions of the participants in an experiment and as a result s/he may draw incorrect conclusions. Factors other than the ones set up by the experimenter that could affect the outcome of an experiment are called extraneous variables (Coolican 1994).

The main aim of this thesis is to test existent hypothesis drawn from the traditional literature and extend them to the context of e-commerce. If these hypotheses are verified in the context of e-commerce and the findings of the traditional theories replicate in the context of e-commerce, these theories about cultural forces can then be extended to the context of e-commerce.

The nature of this research is to test how cultural forces surrounding a person, influence his/her interactions in the context of e-commerce. Specifically, this research is focusing on the religious aspect of culture namely religious sub-cultures and their impact on how in-groups perceive and interact with religious Web sites in contrast to generic Web sites. In this research study, trust is the main issue and the hypotheses that are to be tested are related to existing theories drawn from the traditional literature.

The research objective of this thesis, as has been mentioned previously, will test if the influence of religious affiliation in members of a religious group that is hypothesised to exist in the traditional context replicates in the context of electronic commerce.

The nature of our investigation seems to be consistent with that of the experimental method. If one assumes that there are psychological constructs for measuring the extent of religious affiliation, attitude towards objects, and trust and if these constructs are then operationalised and organised into sets of independent and dependent variables, the choice of using the experimental method becomes more justifiable to test for the underlying hypothetical relationships between these different variables.

In addition, the context adopted for testing the hypotheses posited in this study suggests the use of a laboratory experiment for our research investigation: The reader is reminded that the hypotheses that were posited in this research are investigating mainly cultural influences on consumer interactions in the context of e-commerce. The objects of “interaction” that we intend to study are Web sites. Since this type of empirical investigation entirely depends on a computer-based environment, it seems plausible that the settings of this experiment and the context of our hypotheses justify the use of a laboratory as the venue for running the potential experiment. For example, it would not be very appropriate to conduct a field study (for example for 6 months) or a naturalistic enquiry/ observation of consumers interacting with Web sites at their homes, as this would prove to be inconvenient for both, the investigator and the investigated. Alternatively, we could study users’ interactions with Web sites in an Internet café as part of a naturalistic observational study. Besides being similar to an extent to a laboratory environment, the data collection technique that has been adopted (questionnaire) will make the “unobtrusive” investigator somehow appear as “obtrusive”. Table 3-6 shows a diversity of data collection techniques used for different types of social and behavioural studies.

Table 3-6: A Taxonomy of Traditional Data Collection Techniques in the Social and Behavioural Sciences (Tashakkori and Teddlie 1998)

Data Collection Technique	Setting		Manipulation		Orientation	
	Controlled	Natural	Yes	No	Confirmatory	Exploratory
Lab experiment	X		X		X	
Single-subject study	X		X		X	
Field experiment		X	X		X	
Survey study		X		X	X	X
Relationship studies		X		X		X
Prediction studies		X		X	X	
Archival studies		X		X		X
Causal-comparative		X		X	X	X
Historical research		X		X	X	X
Case/ field study		X		X	X	X
Descriptive research		X		X		X
Developmental research*	X	X		X		X

*Developmental research includes longitudinal, cross-sectional, shortened longitudinal, and similar research (Salkind 1997). Although these methods are classified as either descriptive or survey, we think they should be classified as a separate category because the investigators might use a combination of methods in such studies, from qualitative case studies to correlation/ prediction and quasi experiments.

To sum up, the empirical, cause-and-effect nature of the hypotheses posited in this study and the context of our research both strongly suggest the use of the experimental method and a laboratory environment as the venue for conducting this research investigation. Also, as mentioned previously, since our research investigates cultural influences on the members of religious groups, Galliers's (1994) guidelines support the use of laboratory experiments for studies that relate to group-behaviour, theory testing and theory extension. These three points- group-behaviour, theory testing and theory extension- all form part of the research objectives of this study.

Finally, the nature of this research seems to "fit" the hypothetico-deductive or cause-and-effect method of conducting research. The hypothetico-deductive method falls within the realm of the positivistic research paradigm. Since our research is mainly positivistic, the choice of adopting the experimental method for our research is consistent with the positivistic approach of conducting research (Galliers 1994; Hirschheim 1994; Keller 1985; Maykut and Morehouse 1998a).

3.6.2 Experimental settings

Two experiments have been conducted to observe the causal effect of cultural factors on the actions and behaviours of a cosmopolitan sample of consumers. The main reason for performing these two similar experiments was to see whether findings in one experiment replicate in the other experiment. Given the fact that religion is a prominent aspect of culture (Hofstede 1998), a cross-cultural study was performed to test the different hypotheses that have been postulated in this study. A cross-cultural study compares measures of some psychological construct or scale across samples whose participants come from different cultural backgrounds (Coolican 1994). Differences in the results are then ascribed to the causal variables that are hypothesized to influence the participants' responses.

SAMPLING

Sampling aims to accumulate a sub-set of a population, which is used to represent the population as a whole, which is under investigation. It would then be possible to infer statistically the likelihood that a pattern observed in the sample will also replicate in the population. Choosing an appropriate sampling design for a research project, according to Zikmund (1997), depends on three constraining factors: the *degree of accuracy* sought in the study or said alternatively the extent to which the sample represents the population under investigation, the *resources* or *costs* for running the project such as the availability of the financial and human resources and the *time* available for completing the study.

The researcher's choice of a sampling design usually depends on the deadline that has been imposed for finishing the research project. The degree of accuracy depends entirely on the researcher's willingness to trade off accuracy for cost savings. For example, if an exploratory study is being performed, the researcher usually places less priority on how representative the sample is of the population's characteristic (accuracy). For more conclusive studies however, the precision of the sample in representing the actual population's characteristic becomes a major issue. This demands putting more effort in the sample selection procedure by choosing for example a probability sampling technique which usually requires more time and money (Zikmund 1997).

Due to the time constraints and the limited resources available for both experiments, we have adopted the convenience sampling technique to select a sample for each experiment. The convenience sampling technique enables the researcher to select a number of cases whose size depends mainly on the availability of the participants. A sample is sought on the basis of availability and ease of data collection rather than in terms of suitability based on research objectives or questions (Zikmund 1997). Some researchers argue that convenience samples include what is known as "captive samples" which consist of groups of individuals who are easily accessible to a researcher. Students fall in this category (Tashakkori and Teddlie 1998). The advantage of this sampling technique is that it enables the researcher to improvise with the resources available for the experiment. Its disadvantage is that it limits the interpretation of the findings- the generalization of the results beyond the sample is questionable because the sample may not represent the characteristics inherent in the general population (DeVellis 1991; Singleton et al. 1993; Zikmund 1997). The accuracy or confidence level of the sample test indicates the likelihood that the true attributes of the population lie close to those identified in the sample (Easterby-Smith et al. 1995).

PARTICIPANTS

The sample size for both experiments was contingent upon the number of potential volunteers who were willing to participate in each experiment. The ideal sample sought for both experiments should consist of participants from different ethnic and religious backgrounds. More importantly, the sample should consist of an equal number of males and females to avoid any kind of gender-specific bias. The main venue for conducting both experiments was the MSc computer lab at Brunel University. For those participants who have requested a different venue for one reason or another, we have arranged to run the experiment for these participants individually at a venue that was convenient for them.

PROCEDURE

One major benefit of running two similar experiments is that the first experiment can be used as a pilot study. A pilot is an essential prerequisite to an experiment. Easterby-Smith et al (1995: p. 121) argues that:

However good the design, or prior testing of questions, it is always advisable to pilot the questionnaire on a small number of people before using it "for real".

The experimental tasks set for both experiments include visiting and browsing three different Web sites, two of which are religiously exclusive and one is devoid of any religious orientation. At the end of each experiment, a questionnaire was administered to the participants asking them to answer a number of Likert-type questions related to the different areas of interest of this study. Easterby-Smith et al. (1995: p. 119) recommends questionnaires as suitable instruments for research investigating 'political opinions and consumer preferences'. Likert-scale questions ask respondents to circle one answer in each category to reflect their strength of agreement or disagreement with the initial statement.

WEB SITES

The ideal category of Web sites that was sought for our type of experiment would have been an on-line convenience store or shopping mall selling a variety of religiously exclusive and generic product categories. The religious-exclusive product category entails the set of specific products manufactured by a fellow-religious manufacturing firm. The generic category entails all products manufactured by individuals or organizations that are devoid of specific religious affinities. These two categories would serve the purpose of comparing a consumer's cultural affiliation with his /her purchase decision and choice of a product. Two problems caused us to change our mind in selecting such a Web site category for this study: (1) the lack of Muslim convenience stores and shopping malls on the Internet and (2) the fact that Christianity does not impose specific restrictions on the ingredients of food or clothing products which happens to exist in Judaism and Islam (for example, Halal, Kosher and Hijab). Religious centric attitudes would not be as effective in the Christian sample as in the Muslim sample since Islam demands loyalty from its members, which is promised into effect by purchasing and consuming only religiously conforming products.

We have therefore decided that the online bookstore category was the most suitable for running the experiments. The Web sites that were selected for conducting this cross-cultural experiment were three online bookstores selling books, CDs, DVDs, and VHS Video tapes. The Web

site addresses/ URLs of the 3 sites that were used in the experiments are <http://www.bol.com/>, <http://www.dar-us-salam>, and <http://www.trinityzone.com>. The latter two focus on selling mainly a religious variety of items. These 3 Web sites share similar interface features and the services provided by these 3 Web sites are also very similar. For instance, all three sites share the following features: a shopping-cart interface, a synopsis explaining each item, and a reader's review section where buyers can give their rating of an item that they have purchased.

Since the choice of buying from a site depends on the reason behind the purchase decision, one has to stress that the online bookstore category of Web sites cannot be used to test a consumer's choice of a product in relation to his/ her extent of cultural or religious affinity. For example, consider the case of a religious Muslim student who is studying sociology and is seeking to investigate the difference in upbringing and family values that are taught in Islam in contrast to Christianity. If the person wants to purchase some books related to his/ her research topic, s/he would probably buy from any site selling Muslim- and Christian-related books that cover his/ her research interests. In a different scenario, if his/her research interests were in the field of IT, s/he would buy books from any online bookstores selling IT-related books. The 2 previous examples emphasize the point that the intention to buy a product is not always related to a person's level of religious affiliation. It rather depends on user needs and the reason behind the purchase intention. Trust, on the other hand, is a construct that can be assumed to be sensitive to a person's extent of religious affinity and thus the Web-based trust concept is potentially a better indicator for detecting traits of religious affiliation in consumers when they are purchasing items from a Web site. According to some sources in the literature, religious or cultural trust persists in a person regardless of the context or the reason behind purchasing a certain product (Doney et al., 1998, Iannaccone, 1995). Thus, a religious individual is expected to trust a Web site that represents his religious creed. Since the online marketing arena is full of uncertainties, it therefore represents a suitable venue for measuring a consumer's trust when buying a product from online commercial Web sites (Kini and Choobineh, 1998, Wang et al., 1998).

3.6.3 Quantitative Data Collection Technique

The main instrument that has been used to collect data from the participants is a self-report questionnaire. The first part of the questionnaire was designed to collect some demographics including educational level, age, gender, ethnicity and religious background. Questions assessing the extent to which a participant is familiar with the Internet and its relative Web technologies were also included in the questionnaire. The demographics sections helped us develop a basic demographic profile for each respondent in order to determine if the sample can be stratified into religiously

identical groups. We then checked the respondent's results for differences across sub-groups such as gender, religion, ethnic background or age.

The remaining sections of the questionnaire displayed items representing questions asking respondents about religiously oriented issues (for example, the extent to which they feel committed to their religious group or congregation). The wording of most items in the questionnaire was carefully chosen so that it was consistent with the precautionary guidelines of designing questions set by DeVellis (1991). Most items were made sure not to contain questions that are either lengthy or double-barrelled. Double-barrelled items 'convey two or more ideas so that an endorsement of the item might refer to either or both ideas' (DeVellis 1991: p. 59).

One of the questions in the first version of the questionnaire was later divided into two separate questions the reason being is that the question seemed to be "double-barrelled". None of the participants in the first experiment complained but we decided to take this approach as a precautionary measure. In addition, to counter for the response set of acquiescence, some ratings have been reversed in some instances and the direction of the wording of some items has been reversed in other instances (DeVellis 1991). After collecting the data, the data from each experiment was tested for statistical outliers and missing values

3.6.4 Qualitative Data collection Technique

As mentioned previously, the data of qualitative inquiry is most often people's words and actions, and thus requires methods that allow the researcher to capture language and behaviour. The most useful ways of gathering these forms of data are participant observation, in-depth interviews, group interviews, and the collection of document relevant to the research topic (Maykut and Morehouse 1998b). Open-ended questions are the key components for obtaining comprehensive qualitative data from surveys and interviews (Maykut and Morehouse 1998b; Tashakkori and Teddlie 1998). Easterby-Smith et al.(1995: p. 120) stress that open-ended questions 'allow the possibility of asking deeper questions and obtaining unanticipated perspectives on an issue'.

Respondent's verbatim answers can be quoted as corroborative evidence to reinforce newly developed theories (Charmaz 1995). Cornford (1996: p. 116) states that: 'it is useful to intersperse quotes from the respondents amongst the tables and descriptive text...one often finds that a respondent who has been facing a particular problem in practice for some time is able to put it into words in an interesting fashion (often quite colourfully)' The same author also mentions that 'the judicious use of verbatim quotes from the actors themselves often adds an authenticity of tone and

colour to the narrative. Actors often have powers of expression based upon many years of involvement with the situation that cannot be achieved by even the most sensitive researcher' (Cornford and Smithson 1996:p. 129). Such quotes may come from open-ended questions found in survey or interviews.

We have used semi-structured interviews to collect post-experimental opinions from the participants. Semi-structured interviews assist researchers in acquiring 'a detailed picture of a respondent's beliefs about, or perceptions or accounts of, a particular topic' (Smith 1995: p. 9). The researcher can then search the first-hand accounts of the respondents' speech for new and existent themes relevant to the research topic. Smith (1995) contends that using quantitative techniques to count for instance the frequency of certain themes occurring in an interview could deprive the analyst from extracting meanings hidden in the sentences and words of the text. In a semi-structured interview, every respondent is asked the same questions not necessarily in the same order. Interviewers can add questions on the fly to delve into more detail when an answer given by an interviewee is considered to be interesting or important and requires elaboration or further coverage. The sequence of asking questions in semi-structured interviews involves first asking the interviewee general questions and then following up with questions that are more specific to the research topic. In-between these two modes of questioning, the interviewer can switch the mode of the questions between the general level and the more specific levels of questions (Smith 1995).

Smith (1995: p. 11) cautions that structured interviews in contrast to their semi-structured counterparts, although easier to manage, could 'close off certain theoretical avenues' and adds the following caution:

It deliberately limits what the respondents can talk about- this having been decided in advance by the investigator. Thus the interview may well miss out on a novel aspect of the subject, an area considered important by the respondent but not predicted, or prioritised, by the investigator. Moreover, the topics which are included are approached in a way which makes it unlikely that it will allow the unravelling of complexity or ambiguity in the respondent's position. The structured interview can also become stilted because of the need to ask questions in exactly the same format and sequence to each participant.

Semi-structured interview require the use of pre-coded response categories that will be used by an interviewer to match 'what the respondent says against one of the categories on the schedule' (Smith 1995: p. 11). All questions used for the interview were open-ended questions. This helps reduce the interpersonal bias and makes the responses easier to compare and code (Coolican 1994).

Coolican (1994: p. 105) contends that the survey by questionnaire approach and interviewing the participants both lack the time 'to establish trust and to dissipate suspicions'. The research encounter is too brief to ensure genuine cooperation. Participant observation may sometimes be the only way to discover what truly makes such groups 'tick' and to find out which expressed attitudes stem from prior and perhaps deeper values and beliefs. Easterby-Smith et al. (1995: p. 74), on the other hand, advises that interviews are the appropriate tools for researchers who are interested in understanding 'the constructs that the interviewee uses as a basis for her opinions and beliefs about a particular matter or situation'. Interviews also provide the opportunity to identify emergent themes and traits that could crop up along the progress of the interview (Cornford and Smithson 1996; Jones 1985).

We have used the content analysis technique to identify emergent themes in the respondents' answers. The themes that were identified in the respondents' answers serve the purpose of validating the items used for those constructs derived from the theoretical excerpts found in the literature. The frequency of the actual words, and their synonyms, that were used by the participants to answer trust-related questions helped us determine if the variables used for measuring trust that were extracted from the literature are valid indicators of the trust construct. The frequency of the words occurring in the respondents' answers matching the terms used in the theoretical definition of trust were used as indicators to the validity of the measurement construct.

3.7 Statistical Analysis

We have carried out an exploratory factor analysis to identify items (questions) that load high on common hypothetical factors. The number of factors extracted and the high/low factor loading of the items helped us in retaining the most consistent items and removing the inconsistent ones from the questionnaire.

3.7.1 Normality of the Sample

Since most of the statistical tests employed for this experiment require as a precondition that the data from the variables to be normally distributed, we have conducted a Skewness test to check if the sample is normally distributed. A low significance value (generally less than 0.05) would indicate that the distribution of the data differs significantly from a normal distribution.

3.7.2 Construct Validity

The aim of an exploratory factor analysis is to 'determine the underlying dimensions (constructs) of a set of measures/ variables' (Tashakkori and Teddlie 1998: p. 117). Construct validity

is mainly concerned with whether the items forming a composite measure are logically related to one another (Kline 1994; Loehlin 1998). Exploratory factor analysis is the statistical tool for testing construct validity. Similar items are expected to converge by loading significantly on one latent construct (factor) while dissimilar items should diverge and load significantly on separate latent constructs (factors). If the latent constructs show a low correlation amongst each other, they are said to be discriminately valid. This would further support the validity of the constructs.

Our first experimental task involves extracting an appropriate number of factors that load significantly on the different items making up the questionnaire. The method for extraction that was used is the Principal Component Analysis (PCA) in conjunction with the Scree test. After identifying the appropriate number of factors a Direct Oblimin rotated solution was applied to identify which items load significantly on which factors. Direct Oblimin rotation is recommended when the latent variables are expected to correlate with each other (Kline 1994). As has been initially predicted, the results from our experiments have shown that both the independent and dependent variables displayed trends of correlations amongst each other. We did initially predict this outcome due to the fact that these variables represent similar phenomena. For example, religious affiliation and religious fundamentalism both represent concepts that share similar characteristics: the former is expected to reflect a person's extent of religious involvement/ commitment while the latter is expected to reflect the extent of religious fundamentalism ingrained in a person. Attitude and trust constructs also reflect a common phenomenon. Both constructs are expected to measure some positive attitudinal attribute and correlations tests later showed that there were significantly correlations between the two constructs (see Table 6-17).

Most of the books discussing factor analysis differ in their interpretations and rules about how factors are extracted in an exploratory factor analysis (Kline 1994; Loehlin 1998; Tabachnick and Fidell 1996). The rules and procedures for interpreting factors lack objectivity and the suggestions of most authors seem to be filled with an air of subjectivity. The decision of determining whether some variables are logically related to a factor is, according to these books, left to the analysts' discretion.

VALIDITY OF MODIFIED CONSTRUCTS

In this section we will provide examples of studies that used modified versions of original constructs. The aim here is to demonstrate the extent to which the validity of a construct is affected by an increase/ decrease in the number of items constituting the measurement scale of the original construct.

In a study investigating the extent of consumers' animosity towards foreign products, Klein et al. (1998) used a modified version of the CETSCALE (a measure of consumer ethnocentrism), which consisted of 6 items instead of the 10-items making up the original version. They then tested the validity of the modified scale using factor analysis and used it later, assuming that it validly represents the underlying construct, in statistical analyses to determine if there are potential differences between the sub-groups that were defined in that study.

Bearden et. al. (1993) showed a plethora of studies that derived modified versions of original constructs the procedure of which sometimes involved reducing the number of items composing the original scale of the construct. In the sections discussing the validity of the modified constructs, there was hardly any mention of whether the reduction of items affected the validity of the original construct. Rather, these studies often use a combination of factor analyses and an internal reliability test such as Cronbach Alpha, to assess the validity of the modified construct.

For example, in Reynolds and Darden's (1971) adaptation of the opinion leadership construct originally devised by Rogers and Cartano (1962), the number of items in the modified version was reduced from 7 to 5. The instrument that was used to report the validity of the modified construct was factor analysis and the split-halves internal reliability test. In the end, the scale was assumed to be valid after the results of both the factor analysis and split-halves test confirmed that the modified scale reflected the underlying construct (Bearden et al. 1993; Reynolds and Darden 1971; Rogers and Cartano 1962). In a similar study, the construct of Innovativeness (Leavitt and Walton 1975) was modified by reducing the number of items making up the original scale of the construct. At the end of the study, results from a factor analysis and an internal reliability test were reported to support the validity of the modified construct (Bearden et al. 1993; Leavitt and Walton 1975).

Similar examples of studies that have used factor analysis as an instrument to test the validity of a "reduced-item" version of an original construct can be found in abundance in Bearden et. al.'s (1993) book titled *Handbook of Marketing Scales*. Most of these examples reported the modified versions of the original constructs as valid for use in future studies.

The main point to emphasise at this stage is that there was no evidence in the examples drawn from Bearden et. al.'s (1993) that a reduction in the number of constituent items making up the original scale of the construct "degenerates" the validity of the construct. Instead, most studies used factor analysis in conjunction with an internal reliability test as their assessment criteria to confirm if the construct remained valid after the number of its constituent items has been reduced. This seems to purport that the validity of a construct, after being subjected to a modification can be reconfirmed

with the help of statistical tests, such as factor analysis and the Cronbach alpha test of internal reliability.

Finally, it is noteworthy to stress that the type of validity that is being referred to in this section is that of “convergent” validity. Convergent validity reflects the extent to which items representing a measure of the same construct are logically related to each other. Whether a “modified” construct potentially loses in terms of *content*, *face*, *discriminant* or *criterion* validity is not the subject of this discussion. Detailed discussions about the different types of construct validity can be found in Appendix A-5.

3.7.3 Construct Reliability

Reliability analysis allows one to study the properties of measurement scales and the items that make them up. Construct reliability is concerned with whether a measure yields the same outcome every time it is used in different instances (Coolican 1994). The Reliability Analysis procedure calculates a number of commonly used measures of scale reliability and also provides information about the relationships between individual items in the scale. Using reliability analysis, one can determine the extent to which the items of a questionnaire are related to each other. One can get an overall index of the repeatability or internal consistency of the scale as a whole, and problematic items can be identified so that they can be discarded from the battery of items making up the potential measurement scale of a latent construct. The rule of thumb is to reject an item if its item-total correlation scores below the value of 0.2.

The most famous form for testing a construct's reliability is the internal consistency test, which is usually performed using the statistical test of Cronbach's alpha (Cronbach 1951). Tashakkori (1998: p. 85) defined internal consistency as the 'degree to which items in a test measure the attribute in a consistent manner'. DeVellis (1991) believes that the Cronbach alpha statistic is a prominent indicator of a scale's quality. The technical part of the Cronbach alpha test focuses on the internal consistency between items and reflects the extent to which different items intending to measure the same thing correlate with each other. Items of a composite measure (construct) are expected to display high inter-item correlation amongst each other (Coolican 1994; Easterby-Smith et al. 1995). We have adopted the internal consistency test of Cronbach Alpha for testing the reliability of the constructs, which have been identified from the results of the exploratory factor analysis

Tashakkori (1998: p. 86) warns that interpretations made from statistical results could be unreliable due to the 'lack of control over "extraneous variables" that might affect the variables of

interest' of a study. Strategies that can help counter for this kind of threat include assigning participants randomly to experimental groups and homogeneous grouping that involves dividing a sample on the basis of the suspect extraneous variable such as gender, ethnicity or education. One frequent technique used to statistically remove variations caused by extraneous variables is ANCOVA (Analysis of Covariance). ANCOVA compares group means 'while controlling for the effects of an extraneous variable (covariate) on the dependent variable' (Tashakkori and Teddlie 1998: p. 88).

3.7.4 Within-Group and Between Group Analysis

The experimental design of both experiments involves 5 latent constructs. Three of these latent constructs are between-subject factors, which means that they vary between subjects: Religious group (Muslim, Christian and Others), religious category (conservative, moderate or liberal), and religious centrism (high, medium and low). The other two factors, 'attitude' and 'trust' are within-subject factors, which represent the separate instances of attitude and trust displayed by an individual towards the three different Web sites. A within-analysis test on the dependent variables (attitude and trust) would show if the three religious categories (conservatives, moderate and liberals) for each religious group (Christians, Muslim and Other) are significantly different in their attitudes and trust towards the three Web sites. On the other hand, a between-subjects test for each Web site would reveal if the three religious groups (Christians, Muslims and Others) hold significantly different attitudes and trust towards each Web site.

3.8 Summary

The empirical nature of this research study has led us to adopt a positivist research methodology for conducting this investigation although one can argue that the methodological techniques that were adopted for conducting this research are not purely positivistic but embed some characteristics of the post-positivistic paradigm. The nature of most of the data collected in this research is quantitative but some semi-qualitative and 'purely' qualitative instruments will also be employed in an attempt to achieve some kind of methodological triangulation. The sampling technique that was adopted is convenience sampling. It is easy to handle but its results cannot be generalized to reflect the characteristics found in the general population of the sample. We have conducted two experiments to test our hypotheses and to confirm if there is replicable empirical evidence for the potential causal relationships that are hypothesised to exist in theory, between the independent and dependent variables constituting the hypothetical research model of this study.

4 MODEL, HYPOTHESES AND MEASUREMENT CONSTRUCTS

4.1 Overview

This Chapter will first explain the conceptual model of this research. We will develop hypotheses from the literature related to our research interests, the validity of which will be later tested after analysing the results of the experiments. These hypotheses will be used to build a conceptual model representing the hypothetical relationships between the various constructs that pertain to this research study. The psychological or behavioural concept behind each construct will be explained by providing a definition from the relevant literature. Subsequently, the measurement scales of each construct will be discussed to show how they represent and measure the latent variables in the domain of statistical analysis. Newly conceived constructs will also be explained. For new constructs, we will quote evidence from the literature discussing either the construct by itself or its relative dimensions or aspects to support us in the process of developing a suitable measurement scale for these constructs.

4.1.1 Research Questions and Hypotheses

The sections below displays the discussions and arguments raised by several researchers about the significance of culture and its effect on a group's and individual's attitudes and behaviour. A hypothesis is then posited in line with each discussion.

Findings of some studies revealed that the inducing of a common identity amongst employees in an organization through the process of socialization, teamwork, and empowerment instilled mutual trust in the members of a team (Chatman 1991; Dyer 1995; Sabel 1993; Van Maanen and Schein 1979). Dorey et al. (1998) investigated the impact that affinity groups have on the development of trust and found that members of identity groups sharing cultural traits and values tend to trust one another more than those who lack these characteristics. Turner (1987) observed that individuals tend to group themselves with others on the basis of objective attributes such as race, age, and gender and that such internal classifications influence the beliefs and attitudes of the group's members. In-group members in collectivist cultures were also found to perceive out-group members as dishonest, untrustworthy and uncooperative than their own (Brewer 1979; Triandis 1995; Yamagishi and

Yamagishi 1994). We hypothesize that such traits will be evident in the followers of religious faiths, who are assumed to form a collectivist culture (Glock and Stark 1965; Hofstede 1998; Iannaccone 1995). A collectivist religion conforms to a congregational structure that emphasizes high levels of religious commitment and primarily views 'fellow members as more trustworthy than strangers' (Iannaccone 1995: p. 286). Accordingly, we postulate the following hypotheses:

Hypothesis 1: The level of attitude and trust held by a consumer towards a vendor will increase when both parties are from an identical religious background.

According to Butler (1991), individuals experience trust through forming favourable attitudes towards an object or person based on their knowledge, beliefs, and sensory feeling towards that object/ person. Jones and George (1998) argue that 'attitudes structure the experience of trust in specific ongoing relationships' (p. 534). Other sources describe trust as a positive, persistent attitude (Deutsch 1958; Giffin 1967) or as some kind of a belief that affects an individual's attitude towards an object (Kini and Choobineh 1998). Howards (1994) verified that positive attitudes could influence a consumer's intention to buy. We posit the following hypothesis in line with these statements:

Hypothesis 2a: As the attitude towards a vendor changes favourably, the buyer's intention to buy will increase accordingly.

Since trust is considered to be some kind of positive attitude, accordingly, we posit the following hypothesis:

Hypothesis 2b: As the trust between a buyer and vendor increases, the buyer's intention to buy will become stronger.

Ethnocentric consumers believe that their culture is superior to other cultures (Wells and Prensky 1996). Ethnocentric consumers have a predilection towards domestic commodities; they regard the imported alternative as inferior in quality to the domestic product. This kind of bias can be a 'patriotic' stand against all foreign imports or it can be the result of an old grudge that stemmed from previous military events or recent economic or diplomatic disputes (Klein et al. 1998). Religious fundamentalists stress to their religious members the practice of strict affiliation and adherence to one's religious group. Loyal religious individuals are expected to give priority to products manufactured by individuals or organizations that follow the same religion. The following two hypotheses are posited in line with this discussion:

Hypothesis 3a: Consumer religious-centrism will instil negative attitudes in consumers towards other religious Web sites.

Hypothesis 3b: Religious-centric consumers will feel reluctant to buy from other religious Web sites.

We will sum up now the collective objective of these Hypotheses in the following research questions:

Q1. Do religious individuals trust virtual religious stores in the same way as they trust physical religious stores?

The literature discoursing on the World Wide Web seems to credit the World Wide Web for establishing a global society that converges geographically dispersed individuals so that they can share their ideas and opinions online with others from remote locations. Our findings will attempt to confirm whether there is an emergent trend of a 'United Web Culture'. This latent culture is expected to integrate people from different religious, ethnic and cultural backgrounds by making individuals accentuate issues such as security, reliability and reputation rather than religious affiliations.

Consequently, the following research question is posited:

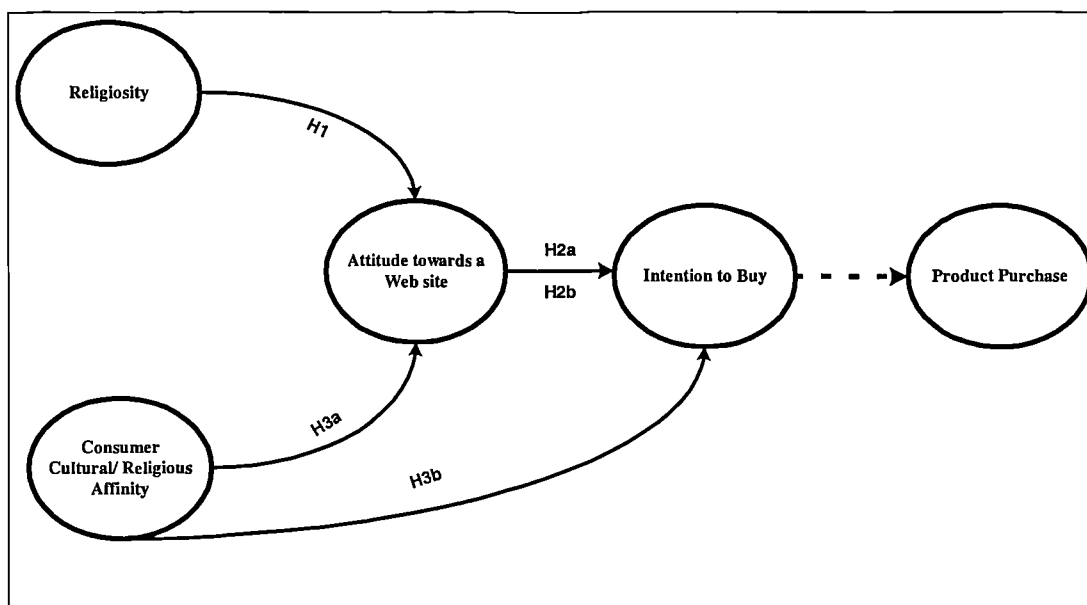
Q2. Does the "borderless" global structure of the World-Wide Web cultivate the presence of a united Web culture that encompasses individuals devoid of any religious or other cultural influences?

This research question is in fact inversely related to the first question.

4.1.2 The Conceptual Model of this Research

The Diagram below portrays the conceptual framework formulated for this research. The nodes in this diagram represent the constructs and the arrows represent the hypotheses derived from the discussions. After taking into consideration that some literature sources describe trust as some kind of positive attitude, we decided to represent the Web-based attitude (ATT) and Web-based trust (WBT) construct in a single node: "Attitude towards a Web site".

Figure 4-1: A Hypothetical Conceptual Model Illustrating the Impact of Cultural Factors on a Buyer's Purchase Decisions (Research Context: Electronic Commerce).



Note that the dotted lines going towards the 'Product Purchase' construct signify that this construct will not be covered in this research study. It has been placed in this diagram for the purpose of clarity to show that the final stage of a consumer decision-making process is the actual purchase of a product.

4.2 Origin of the Constructs

Almost all of the measurement scales used in this study, with the exception of the Web-based trust and attitudinal scales, have been drawn from the literature. Most of these scales were quoted in their source literature to be reliable and valid constructs of the phenomena that they intend to represent. Some of these scales were modified by either changing the wordings of the items or by reducing the number of items making up the original scale to attune them to the needs and purpose of this study. Items for the trust and attitude scale were generated from the theoretical excerpts and definitions discussing these latent constructs and their relative dimensions or aspects. DeVellis (1991) and Bearden (1999) have recommended this technique of generating a 'pool' of items to develop measurement scales for psychological and latent constructs.

DeVellis (1991: p. 51-52) states that:

Thinking clearly about the content of a scale requires thinking clearly about the construct being measured. Although there are many technical aspects involved in developing and validating a scale, one should not overlook the importance of being well grounded in the substantive theories related to the phenomenon to be measured... Relevant social science theories should always be considered before developing a scale... If it turns out that extant theory offers no guide to the scale developers, then they may decide that a new intellectual direction is necessary.

DeVellis (1991: p.54-55) describes the procedure involving the development of measurement scales for latent constructs as follows:

Once the purpose of a scale has been clearly articulated, the developer is ready to begin constructing the instrument in earnest. The first step is to generate a large pool of items that are candidates for eventual inclusion in the scale... Obviously, these items should be selected or created with the specific measurement goal in mind ... Recall that all items making up a homogeneous scale should reflect the latent variable underlying them. Each item can be thought of as a "test" in its own right, of the strength of the latent variable. Therefore, the content of each item should primarily reflect the construct of interest. Multiple items will constitute a more reliable test than individual items, but each must still be sensitive to the true score of the latent variable... The properties of a scale are determined by the items that make it up. If they are a poor reflection of the concept you have worked long and hard to articulate, then the scale will not accurately capture the essence of the construct.

DeVellis (1991: p. 55) warns about the inherent problems when it comes to developing scales for constructs that represent dimensions or aspects of an 'attitudinal' concept:

Just because items relate to a common category does not guarantee that they have the same underlying latent variable. Such terms as attitudes, barriers to compliance, or life events often define categories of constructs rather than the constructs themselves. A pool of items that will eventually be the basis of a unidimensional scale should not merely share a focus on attitudes, for example, but on specific attitudes, such as attitudes toward punishing drug abusers ... It is quite a challenge to imagine a characteristic that accounts for attitudes in general.

4.3 Measurement Techniques and Scaling Procedure

Zikmund (1997) provides some guidelines for developing scales that measure hypothetical constructs (unobservable variables) such as attitude. The author mentions that the ranking, rating, sorting and choice techniques are appropriate for measuring attitudes indirectly (Tull and Albaum 1973). The rating, ranking and choice techniques were used to develop the items that reflect the attitude held by a user towards a Web site. These items were then incorporated in the experiments' questionnaires. The scaling procedures used for the items incorporated in the questionnaire include the Likert scales, categorical scales and ranking (Zikmund 1997: p. 353-367). Attitude rating scales include Likert scales where respondents usually indicate their extent of agreement with a statement from a scale of 1 to 5 (1 = "Strongly Disagree" and 5 = "Strongly Agree"). DeVellis (1991: p. 69) states that 'Likert scaling is widely used in instruments measuring opinions, beliefs, and attitudes'.

Categorical scales consist of a set of response categories that reflect quality, importance, interest, satisfaction, frequency or truth. For example, "Never", "Rarely", "Sometimes", "Often" and "Very often" is an example of a categorical scale designed to reflect frequency. Category scales measuring the behavioural component of an attitude usually incorporate items that reflect an intention to seek additional information or a "likelihood" to perform some future action like purchasing a product. Items including the response sets that ranges from "Extremely likely" to "Extremely unlikely" or "I definitely will..." to "I definitely will not..." are both examples of categorical scales that measure the behavioural intentions and expectations of an individual (Zikmund 1997). Ranking scales show the ranking of an object or an event by an individual. It is intended to show the extent to which an individual prefers an object or event on other objects or events in the environment.

Zikmund (1997: p. 367) suggests regarding the development of ranking scales: 'An ordinal scale may be developed by asking respondents to rank order (from most preferred to least preferred) a set of objects or attributes'. Zikmund (1997: p. 353) also adds that 'Galvanic skin response, measures of blood pressure, pupil dilation, and other physiological measures may be utilized to assess the affective component of attitudes'. This type of attitude measurement technique is beyond the scope of this research since it requires the use of sophisticated equipments.

4.4 Constructs

Our research model uses nine constructs some of which will be used to test the hypotheses while others will be kept in the background as 'reserves' for such situations as when there is a lack of fit between the data and the research model or when the findings or results are inconsistent with our research model. Table 4-1 Illustrates these constructs:

Table 4-1: List of Constructs Used in this Research Study

Name of Construct	Description	Type of Variables
TECHFM	The extent of an individual's familiarity with the basic technologies of the Internet: search engines and web browsers.	IV
IUSE	The time experience of an individual in using the Internet.	IV
RELIG	The extent of religious commitment or affiliation	IV
GTI	The extent of in-group trust and integrity displayed by an individual to his/ her fellow members.	IV
SECUL	The extent of secularism in an individual or said alternatively the extent an individual heeds worldly affairs in contrast to spiritual or religious affairs.	IV
INTTOBUY	The intention to buy a product.	IV
RELSCALE	Religio-centrism. The extent of religious patriotism or fundamentalism present in an individual.	IV
ATT	Attitude towards a Web site.	DV
WBT	Web-based trust.	DV

Note that DV = dependent variable and IV = independent variable

Each variable represents a latent construct. The independent variables are TECHFM, IUSE, RELIG, GTI, SECUL, INTTOBUY, RELSCALE while the ATT and WBT are assumed to represent the dependent variables. Note that the RELSCALE construct failed to load on a separate factor during the factor analysis in the first experiment. Its items shared loadings with the items of religiosity

construct (RELIG) and therefore disappeared from further analysis. In the second experiment, the items reflecting the secularism (SECUL) construct loaded significantly on a separate factor but had failed the internal consistency test. Therefore it was not included in subsequent analyses.

If one can assume that the extraneous variables (accidental) have been controlled for by holding them constant, a researcher can study if there is a relationship between the independent and the dependent variables by observing if changes in the dependent variables are caused by changes in the independent variables. This is known as the cause-and-effect relationship, which is commonly found in empirical research models (Winfield 1991).

4.5 Construct Validity Revisited

To recap on the definition of this term, the factor analysis technique involves the grouping of variables representing a similar construct (Loehlin 1998). Each subset of variables, loading on a common factor signifies the manifestation of the dimensions of a latent construct.

Principal component analysis (PCA) and factor analysis (FA) are used primarily by researchers to reduce a large number of items or variables to a smaller number of components. By reducing the larger number of variables into a smaller number of homogeneous subsets or factors, the task of interpreting the data becomes easier. Tabachnick and Fidell (1996: p. 636) provide a detailed discussion about factor analysis:

A major use of PCA (Principal Component Analysis) and FA (Factor Analysis) in psychology is in development of objective tests for measurement of personality and intelligence and the like. The researcher starts out with a very large number of items reflecting a first guess about the items that may eventually prove useful. The items are given to randomly selected subjects and factors are derived. As a result of the first factor analysis, items are added and deleted, a second test is devised, and that test is given to other randomly selected subjects. The process continues until the researcher has a test with numerous items forming several factors that represent the area to be measured. The validity of the factors is tested in research where predictions are made regarding differences in behaviour of persons who score high or low on a factor... Steps in PCA and FA include selecting and measuring a set of variables, preparing the correlation matrix (to perform either PCA and FA), extracting a set of factors from the correlation matrix, determining the number of factors, (probably) rotating the factors to increase interpretability, and, finally, interpreting the results. Although there are relevant statistical considerations to most of these steps, an important test of the analysis is its interpretability.

Factor analysis is also often used to validate new scales. DeVellis (1991: p. 107) describes the use of factor analysis for testing the validity of new constructs as follows:

Items from new scales could be factor analysed along with items of established scales measuring either the same or different constructs. If the items from the new scales load on different factors than items from established scales of different constructs, this would provide evidence of discriminant validity. Conversely, if the items from a new scale loaded on the same factor as the items of an established measure of the same construct, this would be evidence of convergent validity.

The interpretation and naming of a factor depends on the meaning of the combination of observed variables that correlate highly with each factor. Factor loadings on the items explain to what extent the factor accounts for the variances in items loading on it. Tabachnick and Fidell (1996: p. 677) suggest that interpretations should be based on variable loadings of .32 and above and that the higher the loading on the factor the more likely it is that the variable is 'a pure measure of the factor' (Ibid: p. 677). Comrey and Lee (1992) suggest that loadings of greater than or equal to 0.71, 0.63, 0.55, 0.45 and 0.32 can be classified respectively as excellent, very good, good, fair, and poor.

4.5.1 Rotated Factor Solutions

Rotations in factor analysis are used to arrive to a simple factor structure solution. A simple factor solution, as its name implies, provides results that are lucid, enabling an analyst to identify and interpret factors more easily (Kline 1994). There are two types of rotations that can be applied in factor analysis: orthogonal and oblique. Orthogonal rotations assume that the underlying processes (factors) are uncorrelated while oblique rotations assume that there is a potential correlation between the latent factors. Tabachnick and Fidell (1996) contend that an oblique rotation is more appropriate than an orthogonal rotation because it seems more likely that factors will be correlated to a certain extent. If correlations between factors are found to be greater than 0.32, 'there is 10% (or more) overlap in variance among factors, enough variance to warrant oblique rotation' (Ibid: p. 674).

4.5.2 Sample Size

Tabachnick and Fidell (1996) argue that sample sizes of 50 are very poor, 100 are poor, 200 are fair, 300 are good, 500 are very good, and 1000 are excellent for exploratory factor analysis. Kline (1994) argues that small sample sizes (less than 100) can produce larger standard errors of

correlations and consequently errors in the interpretation of the factor analysis. The sample size of our first experiment was 50 and thus, according to Tabachnick and Fidell's (1996) guidelines for factor analysis, it can be classified as very poor. The guidelines however, have not mentioned that the use of such a sample size is "unacceptable" or "prohibited", but rather stressing that the factor analysis results in such cases should be interpreted with caution.

4.5.3 Multivariate Normality

In the exploratory factor analysis guidelines specified by Kline (1994), there was no mention of the "normality" assumption as a prerequisite for conducting an exploratory factor analysis. Tabachnick and Fidell (1996: p. 640) state that as long as factor analysis is used for descriptive purposes such as 'to summarise the relationships in a large set of observed variables' the assumption of a normal distribution can be relaxed. However, the assumption of multivariate normality becomes a precondition when the purpose of the factor analysis is related to statistical inference.

4.5.4 Normality of the First Test

Table 4-2 and Table 4-3 display the descriptive statistics of the variables used in the first experiment. Most of the items, except for 4, showed skewness values of less than 1 indicating that the distribution of these variables is "normal". There are 4 items however, that displayed a skewness value of greater than 1. The first step to overcome this problem was to apply an appropriate data transformation technique that would hopefully normalise the distribution of these variables. We have consulted Tabachnick and Fidell's (1996) guidelines for selecting a transformation technique. After applying the transformation techniques on these variables, the outcome was that all 4 variables have successfully normalised. We have realised however, that since only a few of these variables are non-normal a successful transformation of such variables could confuse the relative means between the normally distributed variables and the non-normal distributed variables. Another alternative that we have considered was to transform each normal variable using the transformation technique that was applied on the non-normal variables. The problem that restrained us from performing such as task is our using of different transformation techniques on the non-normal variables. The ideal task of matching the relative means of both the normal and non-normal variables becomes in this case a "mission impossible". We decided to proceed with the factor analysis using an ad hoc cost-benefit assessment that involved counting the number of normal and non-normal variables and determining which count is significantly larger. In this experiment, the number of normal variables (39 / 43 = 91%) significantly outweighed the number of non-normal variables (4 / 43 = 9%). Thus, the final decision was to proceed with conducting the factor analysis on the data collected for this experiment.

Table 4-2: Descriptive Statistics of Items of the Religion Section of the Questionnaire (Sample 1)

Item	Mean	Std. Deviation	Skewness	Std. Error
Q1 (section III)	4.02	1.20	-.771	.337
Q2 (section III)	3.64	1.05	-.556	.337
Q3 (section III)	3.92	1.43	-.821	.337
Q4 (section III)	3.96	1.29	-.690	.337
Q5 (section III)	3.48	1.18	-.414	.337
Q6 (section III)	3.80	.53	-1.002	.337
Q7 (section III)	3.42	1.46	-.288	.337
Q8I (section III)	3.72	1.70	-.730	.337
Q8II (section III)	3.90	1.49	-.867	.337
Q8III (section III)	4.16	1.25	-1.096	.337
Q8IV (section III)	3.92	1.38	-.816	.337
Q8V (section III)	3.96	1.40	-.951	.337
Q9 (section III)	3.94	1.19	-.646	.337
Q10 (section III)	3.80	1.29	-.495	.337
Q11 (section III)	4.24	1.04	-1.298	.337
Q12 (section III)	4.04	1.35	-1.204	.337
Q13 (section III)	3.86	1.23	-.547	.337
Q14 (section III)	3.96	1.21	-.638	.337
Q1 (section IV)	4.96	2.18	-.628	.337
Q2 (section IV)	4.02	1.96	-.147	.337
Q3 (section IV)	3.76	2.10	-.001	.337
Q4 (section IV)	3.54	1.94	.094	.337
Q5 (section IV)	4.90	2.12	-.559	.337
Q6 (section IV)	3.68	2.18	.035	.337
Q7 (section IV)	3.90	1.56	.037	.337

N = 50. Note that the values typed in bold are significant

Table 4-3: Descriptive Statistics of Items of the Web sites Section of the Questionnaire (Sample 1)

Item	Mean	Std. Deviation	Skewness	Std. Error
Q1	3.82	1.29	-.604	.337
Q2	3.72	1.36	-.590	.337
Q3	3.58	1.36	-.457	.337
Q4	3.84	1.42	-.776	.337
Q5	3.70	1.16	-.508	.337
Q6	3.74	1.27	-.595	.337
Q7	3.42	1.16	-.489	.337
Q8	3.40	1.28	-.563	.337
Q9	3.60	1.74	-.588	.337
Q10	3.26	1.48	-.312	.337
Q11	3.42	1.39	-.522	.337
Q12	3.68	1.71	-.731	.337
Q13	3.66	1.22	-.423	.337
Q14	3.62	1.26	-.378	.337
Q15	3.72	1.36	-.744	.337
Q16i	3.46	1.42	-.700	.337
Q16ii	3.48	1.40	-.742	.337
Q16iii	3.42	1.42	-.618	.337

N = 50. Note that the values typed in bold are significant

4.5.5 Normality Test for the Second Sample

Table 4-4 and Table 4-5 display the descriptive statistics of the variables used in the second experiment. Again, like the previous experiment, most of the items except for a few, scored skewness values of less than one implying that the distribution of these variables is “normal”. The 5 items displaying a skewness value of greater than 1 were retained like in the previous experiment after performing an ad hoc cost-and benefit test for the normal and non-normal variables (for further details, see section 4.5.4). Again, like in the previous sample, the number of normal variables exceeded significantly the number of non-normal variables (normal = 89% versus non-normal = 11%).

Another justification for keeping these variables is the assumption of the central limit theorem, which contends that as the size of the sample becomes larger, the distribution of the data will approximate to that of a normal distribution and the variables can then be assumed to be normal regardless of the outcome from the normality tests (Kachigan 1991; Newbold 1995). The question of how large is large is answered differently by different statistics books. For example, most of the examples presented in Newbold (1995) to demonstrate the application of the central limit theorem used the sample size of 100 quite frequently to exemplify the “larger sample size”. Kachigan (1991: p. 89-90), on the other hand, states that ‘based on various empirical sampling studies, it has been found somewhat surprisingly that a sample size as small as $n = 30$ will often result in a sampling distribution that is very nearly normal in form, even when the original population deviates quite markedly from a normal distribution’. According to Kachigan’s (1991) statement, we can assume that the distribution of the data in the two experiments (sample 1 = 50; sample 2 = 91) is “normal”.

Table 4-4: Descriptive Statistics of Items of the Religion Section of the Questionnaire (Sample 2)

Item	Mean	Std. Deviation	Skewness	Std. Error
Q1 (section III)	3.53	1.35	-.528	.225
Q2 (section III)	2.99	1.25	.043	.225
Q3 (section III)	3.62	1.65	-.618	.225
Q4 (section III)	3.53	1.47	-.457	.225
Q5 (section III)	2.93	1.46	.204	.225
Q6 (section III)	3.55	1.08	-1.274	.225
Q7 (section III)	2.61	1.41	.330	.225
Q8I (section III)	2.68	1.36	.169	.225
Q8II (section III)	3.17	1.58	-.210	.225
Q8III (section III)	3.97	1.27	-.888	.225
Q8IV (section III)	3.92	1.26	-.756	.225
Q8V (section III)	3.81	1.21	-.574	.225
Q9 (section III)	2.95	1.28	-.015	.225
Q10 (section III)	3.27	1.05	-.249	.225
Q11 (section III)	3.31	1.07	.001	.225
Q12 (section III)	3.59	1.33	-.508	.225
Q13 (section III)	3.22	1.02	-.271	.225
Q14 (section III)	3.43	.97	-.177	.225
Q1 (section IV)	2.77	1.57	.264	.225
Q2 (section IV)	2.38	1.59	.651	.225
Q3 (section IV)	1.47	.93	2.030	.225
Q4 (section IV)	1.68	1.04	1.425	.225
Q5 (section IV)	2.07	1.26	.829	.225
Q6 (section IV)	1.81	1.18	1.228	.225
Q7 (section IV)	2.04	1.24	.920	.225

N = 116. Note that the values typed in bold are significant.

Table 4-5: Descriptive Statistics of Items of the Web sites Section of the Questionnaire (Sample 2)

Item	Mean	Std. Deviation	Skewness	Std. Error
Q1	3.27	1.08	-.179	.147
Q2	3.18	1.15	-.094	.147
Q3	3.04	1.21	-.109	.147
Q4	3.63	1.13	-.505	.147
Q5	3.22	1.18	-.211	.147
Q6	3.15	1.25	-.166	.147
Q7	2.56	1.34	.337	.147
Q8	2.71	1.43	.216	.147
Q9	2.97	1.22	.056	.147
Q10	2.51	1.24	.240	.147
Q11	2.49	1.19	.164	.147
Q12	3.05	1.33	.031	.147
Q13	3.59	1.08	-.448	.147
Q14	3.48	1.06	-.313	.147
Q15	3.32	1.07	-.310	.147
Q16	1.04	.28	1.536	.147
Q17I	3.50	.91	-.469	.147
Q17II	3.37	.92	-.348	.147
Q17III	3.27	1.03	-.419	.147

N = 91. Note that the values typed in bold are significant.

4.5.6 Construct Validity and Internal Consistency

In psychological research, it is quite common to derive measures for variables representing abstract concepts (Coolican 1994). The abstract category of concepts includes attitudes, motivation, and intelligence. The measurements scales that psychologists compose to measure abstract constructs often serve as operational definitions of the concepts being investigated. Once these measures have been developed they are usually subjected to two types of tests: construct validity and internal consistency or reliability.

DeVellis (1991) suggests in his guidelines for scale development that the first step is to read the extant theories discussing the construct of interest. Relevant theories from social sciences are considered to be a primary source for developing items representing elusive concepts. DeVellis (1991: p. 51) explained this procedure in his own words:

Thinking clearly about the content of a scale requires thinking clearly about the construct being measured. Although there are many technical aspects involved in developing and validating a scale, one should not overlook the importance of being well grounded in the substantive theories related to the phenomenon to be measured... Theory is a great aid to clarity.

Another suggestion made by DeVellis (1991) is to present the initial pool items that are supposedly representing the latent construct to a panel of expert in the domain of the construct. This review process usually assists the analyst in maximising content validity. DeVellis (1991: p. 75-76) described the advantages inherent in this procedure as follows:

First, having experts review your item pool can confirm or invalidate your definition of the phenomenon... In essence, your thoughts about what each item measures is the hypothesis, and the responses of the experts are the confirming or disconfirming data. The mechanics of obtaining evaluations of item relevance usually involve providing the expert panel with your working definition of the construct. They are then asked to rate each item with respect to its relevance vis-à-vis the construct as you have defined it. This might entail merely rating relevance as high, moderate, or low for each item. In addition, you might invite your experts to comment on individual items as they see fit... Reviewers also can evaluate the items' clarity and consciousness. The content of an item may be relevant to the construct, but its wording may be problematic. This bears on item reliability because an ambiguous or otherwise unclear item, to a greater degree than a clear item, can reflect factors extraneous to the latent variable. A third service that your expert reviewers can provide is pointing out ways of tapping the phenomenon that you have failed to include.

However DeVellis (1991: p. 76) cautions that:

The final decision to accept or reject the advice of your experts is your responsibility as the scale developer. Sometimes content experts might not understand the principles of scale construction. This can lead to bad advice.

The common bad advice given by expert reviewers is to remove items that appear to be redundant. DeVellis (1991: p. 76) cautions that 'removing all redundancy from an item pool or a final scale would be a grave error because redundancy is an integral aspect of internal consistency'.

Coolican (1994: p. 152) defines construct validity as the extent to which the construct measures what it intends to measure. Construct validity is mainly concerned with whether the items forming a composite measure are logically related to one another (Kline 1994; Loehlin 1998). Exploratory factor analysis is the statistical tool for testing construct validity. Coolican (1994: p. 154) states that 'Intelligence factors and personality variables are supported as valid by the use of factor analysis'. Similar items are expected to converge by loading significantly on one latent construct (factor) while dissimilar items should diverge and load significantly on separate latent constructs (factors). If the latent constructs show a low correlation amongst each other, they are said to be discriminately valid which further consolidates the validity of the construct.

Internal consistency or reliability analysis allows one to study the properties of a measurement scale and its constituent items. Construct reliability is concerned with whether a measure yields the same outcome every time it is used in different instances (Coolican 1994). Using reliability analysis, one can determine the extent to which the items composing a questionnaire are related to each other. One can get an overall index of the repeatability or internal consistency of the scale as a whole, and problematic items can be identified so that they can be discarded from the battery of items making up the potential measurement scale of the latent construct.

The rule of thumb is to reject an item if its item-total correlation scores below the value of 0.2. The most famous form for testing a construct's reliability is the internal consistency test, which is usually performed using the statistical test of Cronbach's alpha (Cronbach 1951). DeVellis (1991) believes that the Cronbach alpha statistic is a prominent indicator of a scale's quality. The Cronbach alpha test focuses on the internal consistency between items and reflects the extent to which different items intending to measure the same thing are correlated with each other. Items of a composite measure (construct) are expected to display high inter-item correlation amongst each other (Coolican 1994; Easterby-Smith et al. 1995)

4.5.7 Factor Scores

Kachigan (1991) describes factor scores as representing a weighted aggregate measure of the latent construct. The simplest procedure for calculating factor scores involves summing up the respondents' scores on the items that loaded significantly on a factor (Kline 1994; Loehlin 1998).

According to Tabachnick and Fidell (1996: p. 678), for research purposes ‘this “quick and dirty” estimate of factor scores is entirely adequate’.

Finally, we will provide some examples that we found in the literature to support the technique that we have adopted for deriving the new scales that were developed for this study. Table 4-6 shows some examples of studies that have also used exploratory factor analysis in conjunction with an internal consistency test to develop new measurement scales for abstract concepts, which were later used to represent dependent or independent variables in statistical analyses that in some instances were subsequently conducted in the same study.

Table 4-6: Examples of Studies Using Factor Analysis As A Test for Construct Validity

Source	Description
Wernimont and Fitzpatrick (1972)	In that study, 7 factors were extracted from responses to 40 adjective pairs that have been developed on a 7-point scale. After labelling each factor, Wernimont and Fitzpatrick (1972) then proceeded and divided the sample of participants into 11 categories by using occupational status as the determinant of each category. Later in that study, they performed separate ANOVAs for each factor using the occupational category as an independent variable and the scores on each factor as the dependent variable to represent the “personal perception of what money means” from the viewpoint of employees holding different occupations.
Pessemier et al (1977)	Pessemier et al (1977) used factor analysis on a 10-item questionnaire. The items were meant to collectively represent the “willingness to donate”. The results of the factor analysis identified 3 factors that had loaded separately on the 10 items. The factors were named: “donation of blood, skin or marrow”, “donations upon death”, and “donation of kidney”, respectively. Factor scores were then produced from each factor by summing the responses to the constituent items that loaded on each factor to represent an aggregate measure of the construct. These 3 factors were then used as dependent variables in separate ANOVA tests.
Ruch et al (1991)	Ruch et al (1991) developed a new instrument for clinicians to assess the severity of trauma experienced by victims who had been sexually assaulted. A factor analysis was used with an oblique rotation solution on 19 items representing diverse trauma symptoms. A Cronbach alpha test was then performed to see if the newly derived scale that was extracted from the factor analysis was adequately reliable. In the conclusion of that study, the authors described the several potential applications of the “newly derived” CTA scale.

Reynolds and Santos (1999)	Reynolds and Santos (1999) demonstrated in a study similar to Ruch et al's (1991) how they used an exploratory factor analysis in conjunction with a Cronbach alpha test to develop new measurement scales for 3 different constructs: subsidy policy (SUBSIDY), regulatory policy (REGULATE) and food safety policy (FSAFETY).
DeVellis (1991)	DeVellis (1991) demonstrated an example that involved developing a new measurement scale for a construct that assesses parents' beliefs of what factors affect their children's health. Cronbach alpha was then used to test the internal consistency of the new scale.
Kline (1994)	<p>Kline (1994) in his book titled "An Easy Guide to Factor Analysis" demonstrated some examples on developing measurement scales through the use of the exploratory factor analysis technique.</p> <p>Kline (1994) stressed in his guidelines to avoid interpreting the first principal component as a general factor and then subsequently assume that it represents a measure of the latent construct. Factors should only be interpreted after applying an appropriate rotation technique. Kline (1994) also suggested the use of an appropriate internal consistency test (for example, Cronbach alpha) in conjunction with factor analysis to determine if the factor represents an appropriate measure of the latent construct.</p>

4.6 Conceptualisation and Operationalisation of the Constructs

The following sections will explain each construct in detail. The description section of the constructs is divided into 3 parts: conceptualisation, operationalisation, and source. What follows are brief descriptions of these three sections, respectively:

Conceptualisation: this discusses the origin of the construct and the theoretical foundation behind it. Its main focus is to provide a brief definition of the construct and what it actually represents.

Operationalisation: during the investigation of a cause-effect relationship, one has a theory (implicit or otherwise) of what the cause is (the cause construct). Similarly, on the effect side, one has an idea of what one is ideally trying to affect and measure (the effect construct). But each of these constructs has to be translated into operational things, into a program or treatment and a measure or observational method to test the hypothetical relationships between different variables.

Operationalisation is the act of translating a construct into its manifestation. The process involves translating abstract concepts into concrete, measurable variables. In effect, the idea is taken and is then translated into a series of operations or procedures. This section will show how each scale was developed from the variables used to measure the latent construct. It includes discussions of any quantitative and/ or qualitative method(s) that might have been used to finalize the items that constitute the measurement scale of the construct. It will also explain the different dimensions of the construct and the scaling procedures that have been adopted for measuring the construct (for example, Likert, Semantic differential, Guttman or Thurstone).

Source(s): this section shows the original source of the construct (name of author and year of publication). Full details of the source where the original article discussing the construct was published can be found in the reference section of this thesis.

4.6.1 Technology Familiarity: TECHFM

Conceptualisation: This construct attempts to measure the level of a participant's familiarity with a variety of Internet-related technologies. The scope of this construct will perhaps be narrow to specifically test participants' familiarity with two pervasively used Internet-based technologies namely, search engines and Web browsers. A shorter version of the original scale will be used in our experiments as a qualitative instrument to determine the extent to which the participants are familiar with these two basic Internet technologies. This reduced version of the scale will by no means be incorporated in the statistical analyses. Its sole purpose is to demonstrate the different categories of participants defined by the extent of being familiar with these basic Internet technologies.

Operationalisation: The original measurement scale for this construct consists of 18 items. The questions composing the measurement scale of this construct were modified after being drawn from an ongoing research at the University of Indiana and the HomeNet project at Carnegie Mellon. The original study of the HomeNet project aimed to study the social and psychological impact of Internet usage on an individual (Kraut et al. 2000). Respondents for this construct indicate their familiarity with the listed technologies by ticking the appropriate box that reflects their frequency of using these Internet technologies ("Never", "Rarely", "Occasionally" and "Frequently"). This construct was also used as part of a questionnaire in an empirical study funded by NCR that aimed to investigate how cultural and national differences from an individual's or a Web site's point of view, influence an individual's reaction to a Web site (O'Keefe 1998). The results from the reliability analysis in the NCR research project showed that it is a reliable measure.

Source: URL: O'Keefe et al. (2000).

TECHNOLOGY FAMILIARITY: TECHFM

(O'Keefe et al. 2000)

Below are a couple of Internet-based technologies and services. Please tick the appropriate check box that represents your extent of using each of the technologies/ services:

	Never	Rarely	Occasionally	Frequently
1. Chat-rooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Electronic Mail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. File Transfer Protocol (FTP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. HTML	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Java	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. JavaScript	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. VBScript	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Active Server Pages (ASP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. CGI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. List Servers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Newsgroups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Telnet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. URLs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. VRML	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. WAIS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. WWW (World Wide Web)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Web Search engines (e.g. Yahoo, Lycos, Infoseek, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Browsers (e.g. Netscape, Internet Explorer, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note that the 2-item reduced version of the scale in the second experiment consists of items 17 and 18.

4.6.2 Internet Usage: IUSE

Conceptualisation: This construct is designed to show the extent to which participants make use of the Internet and how often they have purchased items over the Internet.

Operationalisation: This construct is made up of 4 items. The first two items making up the construct were derived from the same source of the TECHFM construct (O'Keefe et al. 2000). The last two items were developed in this study to determine if respondents have ever purchased items from an online store. Respondents tick the appropriate box for each question that reflects their extent of using the Internet. The reason for using the IUSE instrument was again like the TECHFM for qualitative research purposes. The first two items were meant to show how participants classify themselves as users of the Internet ("novice", "intermediate" and "professional") and the last two items are meant to determine if a participant had already committed him/ herself to an online purchase. This would show the extent of a participant's preliminary trust when it comes to submitting financial information over the Internet. It must however be stressed that this measure of preliminary trust can only be processed and interpreted qualitatively since it consists of two dissimilar variables: one is dichotomous and the other is an ordinal variable.

Source: O'Keefe et al. (2000).

INTERNET USAGE: IUSE

(O'Keefe et al. 2000)

- | | | | | |
|---|---|---|--|--|
| 1. For how long have you been using the Internet and the World Wide Web? | Less than
6 months
<input type="checkbox"/> | One
Year
<input type="checkbox"/> | 2-3
Years
<input type="checkbox"/> | More than
3 Years
<input type="checkbox"/> |
| 2. How would rate yourself as a user of the Internet and the WWW technologies and services? | Novice
<input type="checkbox"/> | Intermediate
<input type="checkbox"/> | Professional
<input type="checkbox"/> | |
| 3. Have you ever purchased anything online via the Internet? | Yes
<input type="checkbox"/> | No
<input type="checkbox"/> | | |
| 4. If yes, how often did you purchase items online? | Never
<input type="checkbox"/> | Rarely
<input type="checkbox"/> | Occasionally
<input type="checkbox"/> | Frequently
<input type="checkbox"/> |

4.6.3 Religiosity: RELIG

Conceptualisation: This construct is intended to measure the extent of one's religious commitment. To obtain a nation-wide generic measure of religiosity (Stark and Glock 1968), only the most common indices of religious commitment (religiosity) were selected for the survey. They are *Communal Involvement (CInv)*, *Ritual Involvement (RInv)*, and *Religious Devotionalism (RDev)*. In addition a modified version of the constituent items of the *GT (Group Trust)* and *GI (Group Integrity)* scale was also added to the measurement scale of the composite construct of religiosity.

The definitions of all these 3 dimensions (RINV, RDEV and CINV) were extracted from Glock (1965):

Ritual Involvement reflects the frequency with which individuals attend religious services in their places of worship. It also reflects their overall opinion on how important religion is in their daily and personal decisions. *Religious Devotionalism* reflects the extent to which a person is devoted to their religion. This includes how often a participant prays privately and how often, if applicable, s/he recites the scriptures or verses from the holy books of his/ her religion. *Communal Involvement* measures the strength of interpersonal relationship existing between the fellow members of a religious group or congregation.

Using mean score of the religiosity scale as a mid-point, the participants' religiosity scores will be used to split each religious group into three different categories: Conservatives, Moderates and Liberals. This will help us discern the extent to which a participant is committed to his/ her religion or congregation.

Operationalisation: Development of the RELIG scale generally involved drawing the scale items from the original source, which represents the different dimensions of the religiosity construct. Some minor modifications were introduced in the wording of the items but most items were left in their original state. These items will then be administered as part of a questionnaire to a number of participants who hopefully will volunteer to take part in our experiments. The total number of items making up the measurement scale of this construct is 8. The scaling procedure for each item varied from a temporal range ("Once a day or more" = 1, "Never" = 5), perceived importance ("Extremely important" = 1, "Not at all" = 5), a quantifiable range ("All" = 1, "None" = 5), and finally a Likert scale ("Strongly Disagree" = 1, "Strongly Agree" = 5).

Source: Stark and Glock (1968).

RELIGIOSITY: RELIG

(Stark and Glock 1968)

1. How important is religion to your way of life and your daily decisions?
2. How often do you attend services such as congregational prayers at your place of worship (church, mosque, synagogue, etc.)?
3. How often do you pray at home?
4. How important is prayer in your life?
5. How often do you read / recite verses from the scriptures of your holy book?
6. How many of your best friends belong to the same religion / congregation as yours?
7. How often do you hold religious meetings with fellow members of your religious community?
8. People without religious beliefs can lead just as moral and useful lives as people with religious beliefs.

4.6.4 Group Trust and Integrity: GTI

Conceptualisation: *Group Trust and Integrity (GTI)* is a modified, composite scale that consists of a set of items compiled from (Cook and Wall 1980; Pearce et al. 1992). It is intended to reflect a measure of the level of integrity in a group and the strength of interpersonal trust that may be present amongst the members of a religious group.

Operationalisation: This scale consists of 4 items. The scaling procedure adopted for this scale follows the Likert-scale format where respondents indicate their agreement with a statement from a scale of 1 to 5 (“Strongly Disagree” = 1, “Strongly Agree” = 5). Three categories will be generated from the scores to reflect the level of perceived in-group trust held by an individual towards his/ her religious group or congregation.

Source: Cook (1980); Pearce (1992).

GROUP TRUST AND INTEGRITY: GTI

(Cook and Wall 1980; Pearce et al. 1992)

1. If I got into any kind of difficulties (financial, emotional, etc.), I am confident that fellow worshippers of my religion/ congregation would lend me a hand.
2. My fellow worshippers and I are very considerate of one another's feelings.
3. I consider my fellow worshippers to be very reliable in fulfilling whatever they promise.
4. Overall, fellow members of my religion/ congregation are very trustworthy.

4.6.5 Intention to Buy: INTTOBUY

Conceptualisation: This is a measure of the extent to which a consumer is willing to buy a product. It is a mental state that 'reflects the consumer's plan to buy some specified number of a particular brand in some specified time period' (Howard 1994: p. 587). The items for this scale were derived from (Howard 1994). Howard's (1994) elaboration on this concept is as follows:

Intention are formed by the effects of the consumers' attitude toward the brand and their confidence in their judgement of its quality... and low confidence is expected to have a negative effect. These are, of course, crucially important links in persuading consumers to buy. Early research by economists who were trying to predict business cycles by measuring consumers' intention to buy important durable goods showed the tremendous role that intentions played in predicting consumer purchases. This encouraged marketers to take advantage of intention as a variable. The marketer must understand a buyer's intention. By surveying them, a quantitative study can be made of consumers' intentions. At the same time, other elements of the customer's thinking- information, brand recognition and attitude and confidence- can be tapped. Consequently, by determining intention to buy, the manager can measure and predict the effects of the other variables on intention. This works well for frequently purchased products; for infrequently purchased items, however, problems may arise because of the time lag between the measurement of intention and purchase. In addition, events in the buyers' lives other than information may affect their intentions, and these also can be factored into intention. The marketer thus is often able to identify these events and estimate their indirect effects on purchase. For example, consumers' expectations about future income can strongly shape their intentions to buy consumer durables...attitude and confidence affect intention, which in turn affects purchase (p. 41).

Operationalisation: This scale consists of a single item. The intention to buy something can itself be described as some kind of a positive attitude that is triggered when a user likes an object and consequently the likelihood of buying the object (intention to buy) becomes stronger. It seems plausible to predict the existence of a strong positive correlation between the variables representing the attitude construct and the variables representing the intention to buy construct. It is also reasonable to expect that the intention to buy and attitude variables to load on one common factor signifying the common construct of 'positive' attitude that is reflected in these variables.

Source: Howard (1994).

INTENTION-TO-BUY: INTTOBUY

(Howard 1994)

How likely are you to buy Lean Strips in the next month? Would you say you:

- 5 Definitely will
- 4 Probably will
- 3 Am not sure one way or the other
- 2 Probably will not
- 1 Definitely will not

The wording of the item above has been changed to reflect a consumer's intention to buy from a commercial web site. Another construct, *Willingness-to-Buy* was used in Klein's (1998) study of consumer ethnocentrism. This construct is meant to measure the extent to which a consumer is willing to buy a product.

The items composing the Willingness-to-Buy scale were as follows:

1. I would feel guilty if I bought a Japanese product.
2. I would never buy a Japanese car.
3. Whenever possible, I avoid buying Japanese products.
4. Whenever available, I would prefer to buy products made in Japan.
5. I do not like the idea of owning Japanese products.
6. If two products were equal in quality, but one was from Japan and one was from China, I would pay 10% more for the product from China.

The items were drawn from (Klein et al. 1998: p. 99). The original sources of the construct that the author referred to in his paper are: Darling and Arnold (1988); Darling and Wood (1990) and; Wood and Darling (1993). The *Intention-to-Buy* construct was chosen in preference to the *Willingness-to-Buy* construct for this study. It reflected a neutrally designed item that dissociates from any ethnocentrically designed wording of items.

4.6.6 Consumer Ethnocentrism: CETSCALE

Conceptualisation: The CETSCALE was designed originally to measure consumers' ethnocentric tendencies of purchasing imported product versus products manufactured in America. Consumer ethnocentrism represents the beliefs held by consumers about the appropriateness and ethics involved when purchasing foreign-made products when a domestic alternative is available (Shimp and Sharma 1987: p. 280). The purchase of foreign-made products, in the minds of ethnocentric consumers, is wrong because it hurts the domestic economy, job redundancies, and in the extreme case is perceived as 'unpatriotic'.

Operationalisation: The measurement scale for this construct is made up of 17 items designed in a Likert-style format. Respondents indicate their agreement (on a 1 = "strongly disagree" to 7 = "strongly agree" scale). A shorter version of this scale, which consisted of ten-items using a measurement range from 1 to 5, was tested in a national consumer goods study. Both the shortened and the original version of the scale were found to model a unidimensional construct (Bearden and Netemeyer 1999: p. 66). Bearden and Netemeyer (1999) contends that the CETSCALE is not confined to measuring American consumers' ethnocentrism but that it is equally suitable for measuring consumer ethnocentrism in other cultures as well.

Source: Bearden and Netemeyer (1999); Klein (1998); Shimp and Sharma (1987).

ETHNOCENTRISM-CONSUMER ETHNOCENTRISM: CETSCALE

(Bearden and Netemeyer 1999; Klein et al. 1998; Shimp and Sharma 1987)

1. American people should always buy American-made products instead of imports.
2. Only those products that are unavailable in the U.S. should be imported.
3. Buy American-made products. Keep America working.
4. American products, first last and foremost.
5. Purchasing foreign-made products is un-American.
6. It is not right to purchase foreign products.
7. A real American should always buy American-made products.
8. We should purchase products manufactured in America instead of letting other countries get rich off us.
9. It is always best to purchase American products.
10. There should be very little trading or purchasing of goods from other countries unless out of necessity.
11. Americans should not buy foreign products, because this hurts American business and causes unemployment.
12. Curbs should be put on all imports.
13. It may cost me in the long run but I prefer to support American products.
14. Foreigners should not be allowed to put their products on our markets.
15. Foreign products should be taxed heavily to reduce their entry into the U.S.
16. We should buy from foreign countries only those products that we cannot obtain within our own country.
17. American consumers who purchase products made in other countries are responsible for putting their fellow Americans out of work.

Note that items composing the 10-item reduced version are items 2, 4 through 8, 11, 13, 16, and 17.

4.6.7 Religious-centrism: RELSCALE

Conceptualisation: This is a religiously oriented version of the CETSCALE (Klein et al. 1998) that we have modified, to represent the extent of religious centrism or fundamentalism in an individual. The RELSCALE intendeds to reflect the trait of fundamentalism, which stresses strict affiliation and adherence to one's religious group and/ or the rejection of products made by manufacturers/ producers following other religions. It also reflects the propensity of religious consumers to purchase from shops and stores whose owners follow the same religion.

Operationalisation: This construct incorporated a measurement scale that consisted of 7 items designed in a Likert-style format. Participants rate each question (making up the scale) from a scale of 1 ("strongly disagree) to 5 ("strongly agree"). The items for this scale were mainly modified from the original CETSCALE to reflect consumer religious-centrism instead of consumer ethnocentrism. Items that were thought either to be too 'harsh' or hard to translate for this scale were eliminated from the list of candidate items. The scores of the individuals of this scale will be used to create three different categories: high, medium and low to show the extent of religious centrism inherent in an individual. This categorisation exercise is based on an ad hoc procedure, which divides the sample into three groups according to the overall mean score of the construct.

Source: New

RELIGIOUS-CENTRISM: RELSCALE

(Modified from CETSCALE, see page 146)

1. I only purchase products that are in conformity with my religious traditions and beliefs.
2. I only shop from religiously exclusive places (for e.g. Halal shops, Kosher meat shops).
3. I only shop from places whose owners are members of my religion/ congregation.
4. Religious consumers, who purchase religiously non-conforming products when a religiously conforming alternative is available, should be banned from the religious community/ congregation.
5. I believe that shop owners and manufactures who follow the same religion / congregation as I are the ones who should benefit the most from the money I spend on purchases.
6. I hold myself responsible for putting fellow members of my religion / congregation out of business when I buy from places owned by individuals following another religion / congregation.
7. I would buy from shops managed or owned by individuals who are from a different religious / congregational background.

4.6.8 Attitude: ATTR, ATTN

Conceptualisation: The ATT scale was developed in this study to measure the general attitude held by a participant towards a Web site. The construct was designed to cover three types of positive attitudes: the attitude of finding a site attractive, the attitude of finding a site interesting, and the general attitude held towards a Web site. The ATT scale was twice labelled differently as ATTR and ATTN to reflect a measure of the general attitude held towards religious site, and to reflect a measure of the general attitude held towards a generic site, respectively. We have already discussed in Chapter 2 the key role that attitude plays in consumers' buying decision.

Operationalization: The development of this composite scale followed the design guidelines that are provided by Proctor (1997) and Howard (1994). Another source of inspiration that was used to design the items for this scale was the NCR questionnaire (O'Keefe et al. 2000). Some of the questions (items) used in the questionnaire of the NCR experiment seemed to represent the attitude concept and thus they were selected to build the measurement scale of this construct. The scaling procedure used for this scale followed the Likert scale format where respondents circle a number from a scale of 1 ("Strongly Disagree") to 5 (" Strongly Agree") to indicate their extent of agreement or disagreement with a number of statements.

Source: Designed in line with the guidelines provided by Howard (1994) and Proctor (1997). Other supplementary sources: O'Keefe et al. (2000).

ATTITUDE: ATTR, ATTN

(New)

1. In general I like this site very much.
2. I enjoyed browsing this site.
3. This site seems to me very beneficial.
4. Overall this site is dull.
5. I liked the content of this Web site.
6. After I had finished browsing this Web site, I felt happy that there is such a Web site available on the World Wide Web.
7. This site offers an excellent array of attractive products that I would add to 'my favourites' list.
8. I will definitely revisit this site.
9. This site made me feel at home.
10. How likely would you buy from this site in the nearest future? Would you say you:

Definitely will not	Probably will not	I am not sure	Probably will	Definitely will
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note that question 10 represents the INTTOBUY construct but since this item loaded on the *same* factor as the constituent items of the ATT construct, it was assumed to represent an 'attitudinal' measure that is logically related to the ATT construct and thus it was included to form part of the measurement scale of the ATT construct.

4.6.9 Web-based Trust: WBTR, WBTN

Conceptualisation: The literature reviewed in this research has not revealed any study that covered the measurement of consumer trust in the context of electronic or conventional commerce. This has led us to resort to the extant definitions and excerpts of trust in the literature in order to derive a measurement scale for the trust concept. Items of the scale were contrived in accordance with the theoretical definitions of the trust concept found in the various sources. This new scale was labelled WBT (Web-based trust) to reflect the context of e-commerce for testing this construct. In brief, the WBT construct can be conceptualised to reflect the extent of trust that a consumer holds towards a commercial Web site. The same scale was labelled differently as WBTR to reflect a measure of the trust held towards a religious site, and as WBTN to reflect a measure of the trust held towards a generic site.

Operationalisation: As mentioned in the previous paragraph, the development of the WBT scale had to be carried out after going through the literature discussing the theory related to the trust phenomenon. Table 4-7 lists excerpts (verbatim or otherwise) of definitions and descriptions about the trust concept that were extracted from the literature sources discussing trust and its relative constructs. An initial pool of 7 items was derived from the theoretical definitions of the construct. This approach of item generation has been recommended by Churchill (1979) and was also seen as a good assessment exercise for testing the content validity of a measurement scale. Churchill (1979) defined content validity as the adequacy with which the scale captures the domain of the characteristic of interest. These items were embedded in the questionnaire that will be administered to a number of participants who we hope will volunteer to take part in our experiments. The scaling procedure used for this construct is the Likert scale where respondents select a number from a scale of 1 ("Strongly Disagree") to 5 ("Strongly Agree") to indicate their extent of agreement or disagreement with a number of statements.

Source: New.

WEB-BASED TRUST: WBTR, WBTN

(New)

1. If you were to buy a product online from this site, how confident are you going to be in terms of safety;
2. If you were to buy a product online from this site, how confident are you going to be in terms of security;
3. If you were to buy a product online from this site, how confident are you going to be in terms of privacy;

Table 4-7: Definitions of Trust

Reference Source	Conceptual or Operational Definition:
(1) Pearce (1974)	Individualistic trust is a cognitive state that is achieved when the entrusting party assumes in a risky situation that the trustee will not engage in detrimental behaviour.
(2) Rotter (1967), Michalos (1990) and Gambetta (1988).	Relational trust is the optimism held by an individual or group that the entrusted individual or group will keep its promise and is reliable.
(3) Williamson (1975), Shapiro et al. (1992)	In transactional-economic theory, trust is defined as the responsibility of an individual, group, or organization to protect the rights and interests of all the others participating in a joint economic exchange.
(4) Johnson-George and Swap (1982)	There are two dimensions to trust: "emotional trust" and "reliableness".
(5) Wang et al. (1998)	'The most crucial issue that Internet consumers have identified is fear and distrust regarding loss of personal privacy associated with the emerging electronic commerce marketplace' (p. 64)
(6) Kini and Choobineh (1998)	Trust is a belief in the system characteristics, specifically in the competence, dependability and security of the system, under conditions of risk.
(7) Butler (1991), Jones and George (1998); Deutsch (1958) and Giffin (1967)	According to Butler (1991), individuals experience trust through forming favourable attitudes towards an object or person based on their knowledge, beliefs, and sensory feeling towards that object/ person. Jones and George (1998) argue that 'attitudes structure the experience of trust in specific ongoing relationships' (p. 534). Other sources describe trust as a positive, persistent attitude (Deutsch 1958; Giffin 1967)
(8) Coutu (1998)	Coutu (1998) argues that trust in digital commerce is established through incessant interactions between visitors and the hosts of Web sites.

The definitions display a recurrent pattern of some words that either describes the trust concept per se or aspects of the trust concept. In lieu of defining and investigating a single measure for Web-based trust, a composite scale was developed consisting of items that incorporate the most common words that were identified in the different definitions of the trust concept. Content analysis was used to identify the most frequent words cited in the literature describing the trust concept

(Coolican 1994; Easterby-Smith et al. 1995; Marshall and Rossman 1999). The list of recurrent words that were identified includes *security, reliability, privacy* and *positive attitude*. Since source (7) defines trust as a positive attitude towards an object or person, one can expect that either some of the ATT (attitude) items' loadings will be shared between the hypothetical factors of both the WBT and the ATT construct or that the items of both the ATT and WBT construct will load on one common factor. The item(s) composing the INTTOBUY are also expected to load on the ATT and WBT scale since the intention to buy an item has been described as some kind of a favourable attitude that is experienced prior to the actual purchase of a product (Howard 1994).

4.6.10 Post-Experimental Interviews

In our second experiment, we have conducted post-experimental interviews with a randomly selected number of participants asking them about issues related to trust and online purchasing. Four of the interview questions were designed to elicit trust-related conversations and concepts related to the trust phenomenon. We have then used the content analysis technique to identify emergent themes in the respondents' answers. The themes that were identified in the respondents' answers serve the purpose of validating the items that have been used for developing the measurement scale of the trust construct. Most of the items representing the trust concept were derived from the theoretical excerpts from the literature discussing the trust concept. The frequency of the words occurring in the respondents' answers that matched the terms used in the theoretical definition of trust have been used as an indicator of the validity of the measurement construct. Said alternatively, the frequency of the actual words and their synonyms, which have been used by the participants to answer trust-related questions, helped us determine if the trust-related items that were derived from the literature are valid indicators of the trust construct.

METHOD OF TRANSCRIPTION

In this section, we will discuss the transcription method that we have adopted to translate the audio taped interviews into a readable format. Du Bois (1991: p. 72 cited in O'Connell & Kowal, 1995) defined the process of transcription as 'creating a representation in writing of a speech event so as to make it accessible to discourse research'. Many researchers showed their interest in a field-wide transcription standard that would be used by researchers to transcribe audio-visual material (Bruce 1992; Edwards and Potter 1992). O'Connell (1995: p. 96) condemns the introduction of a 'universal' transcription convention accusing it of being 'by definition a closed system' and continues that 'scientific standards must emerge from need rather than from adherence to a mandate imposed

without proof of usefulness. Hence part of our job becomes a clarification of the relationship between research purposes, on the one hand, and the choice of transcription system, on the other'.

O'Connell & Kowal (1995: p. 145) suggests the criteria of 'manageability (for the transcriber), readability, learnability, and interpretability (for the analyst and for the computer)' to be used as a guideline for choosing an appropriate transcription system for spoken discourse.

Some important elements that are usually included with the transcriptions of the verbal discourse are the *prosodics*, *paralinguistics* and *extralinguistics*, which represent three additional levels of input (O'Connell and Kowal 1995). The prosodics component includes the tone used when answering a question, for example if an answer was said loudly. The paralinguistic component reveals any emotional expressions used during a discourse, for example if the respondent showed expressions of anger or if s/he was laughing or smiling when answering a question. Extralinguistic components concentrate on the bodily movements (gestures) exercised by a respondent when answering questions in an interview. For example, if the respondent was wiggling, this could signify that s/he was nervous or uncomfortable with answering some of the questions.

The inclusion of these three verbal components is sometimes essential to further understand respondents' answers. For our purpose of discourse analysis, the paralinguistic and extralinguistic elements seem to be important as they could reveal some subtle psychological or behavioural expressions that cannot be detected in the plain textual transcription of the respondents' answers. However, the lack of a video-camera and the initial reluctance displayed by some respondents to participate in an audio-visual interview led us to use audio-taped interviews for recording the respondents' answers and thus the prosodics and paralinguistic elements were the only elements that have been included in the transcripts.

O'Connell (1995: p. 96) contends that for a transcript to be useful for analytical purposes, it should consist of 'an array of notations that reflect distribution or allocation, frequency of occurrence, and relevance of behavioural components'. There are different ways for quoting passages from the transcribed discourse and it ultimately depends on the context for which the transcription would be used.

O'Connell (1995: p. 96) summarizes the different ways of embedding transcriptions in a publication as follows:

- (1) They may be only referred to, without inclusion in the text.
- (2) They may be sampled to provide examples
- (3) They may be included in their entirety, typically as an appendix to the text.

We have adopted a mixed approach that involved all three techniques the choice of which entirely depends on the clarity of the discourse. If the answers to the questions were sufficiently clear and articulate, verbatim quotes of the respondents' answers will be cited in the text else, we have quoted a modified version reflecting the *in vivo* answers in order to maintain ease of readability (Bruce 1992). This will eventually help us in making further interpretations of the textual data. This 'mixed' approach has also been used by Charmaz (1995) to code a set of categories from an interview that was conducted as part of that study.

O'Connell and Kowal (1995) caution in their self-proposed guidelines that the process of following a strict notational procedure to transcribe a verbal discourse or an interview could result into the transcribed text becoming unintelligible to the analyst. The use of graphemes, supernumerary symbols and other symbolic notations in transcribing audio taped data can transform the transcript into an incomprehensible textual representation of the verbal discourse (Ibid).

The main aim behind the transcription procedure is to produce a lucid textual representation of the verbal discourse to enable a researcher to derive meaningful explanations from the text (O'Connell and Kowal 1995). The question of what notational format to use for transcribing a verbal discourse of an interview is not an important issue. The 'what' and 'how' question depends entirely on 'what the author wishes to illustrate and must be decided in terms who the audience is and what purpose the transcribed material is to serve' (O'Connell and Kowal 1995: p. 97). Transcripts should be written according to the researcher's interest and aims.

O'Connell and Kowal (1995) praised to an extent the transcription technique adopted by Hasan (1992). An example of a passage from Hasan's idiosyncratic encoding of a transcript was shown in O'Connell (1995: p. 97). The answers were sequentially numbered and explanatory remarks about a passage together with evidence of prosodic, paralinguistic and extralinguistic features in a speech were placed between parentheses. The following are fragments of O'Connell and Kowal's

(1995: p. 105) general conclusion about transcription systems: 'Transcription as 'a genuine photography of the spoken word'...is not possible... In a scientific context, no transcript can speak for itself'.

O'Connell and Kowal (1995: p. 22-23) shared this final thought about qualitative analysis in general:

Qualitative analysis is not mechanical; what will determine the value of the analysis produced is the quality of the interpretive work done by the investigator. So it is important to be systematic but it is also important to be analytical, creative (and hopefully insightful)... Some qualitative researchers are also wary of allowing too complete an immersion in the existing literature to influence too strongly the way in which they interview and analyse respondents' data... therefore different researchers take different positions on the amount of literature that should be read before the empirical investigations begins.

ANALYSING RESPONDENTS' ANSWERS TO TRUST-RELATED ISSUES

Four of the interview questions (3, 4, 5 and 6) as will shown in Chapter 6 (see Table 6-18), were designed to elicit trust-related conversations and concepts about trust. Quotes from the respondents' answers to such questions, verbatim or otherwise will help us discern the potential factors that might be responsible for instigating consumers' trust or distrust towards a Web site. We have adopted partially Hasan's (1992) notational presentation for verbatim quotes (see sections 6.7.1-6.7.3).

Each respondent was assigned a code which reflects the respondents religious group and a number to distinguish him/ her from the others in the same group. The first Muslim respondent was assigned the code of M1 the next respondent was assigned the code of M2 and so on. The Christian and the "Others" group will be coded in a similar way but the 'C' prefix and the 'O' prefix will replace the 'M' prefix, to denote the "Christian" and "Others" religious group. These codes will be used if necessary, to relate any extracts of verbatim quotes to their original source. Respondents' answers from each religious group will be studied separately to discover if a common pattern of themes exists in the respondents' answers so that one can generalize the findings and draw a conclusion that is specifically applicable to each religious group.

4.7 Summary

We have started this Chapter by introducing a research model that involves constructs that were drawn from different disciplines. Five hypotheses were postulated in line with the theoretical discussions about these various constructs. We have then devoted sections for discussing the various constructs used in the research model in detail. Details of the measurement scales of the constructs include the original literature source, the modifications, if any, that were introduced to the scales and finally the scale development methods for the new constructs. The definitions of the constructs have been divided into 3 sections: *conceptualisation*, *operationalisation*, and *source*. Conceptualisation shows the definition of the construct and it also explains the theoretical concept of the construct. Operationalisation is the act of translating a construct into its manifestation. The process involves translating abstract concepts into concrete, measurable variables. The source section shows the source from which the construct was drawn. Some measurement scales were used in their original format. Others were derived after introducing some modifications to the original measurement scale of the constructs in order to make them more appropriate measures of the construct for the domain of this study. New constructs that represent some new concepts in this study required the prior consultation of the literature discussing the construct per se or its relative dimensions or aspects. The results of a content analysis procedure that was later conducted to identify the most recurrent words or themes showed that the respondents' answers to trust-related questions constructs contained words that matched the descriptive terms and words used in the theoretical literature discussing the trust concept. This corroborates the notion that the Web-based trust construct (WBT) is a valid concept. Details about the content analysis technique and the results of the content analysis of the interviewees' data can be found in Chapter 3.

5 EXPERIMENT I

5.1 *An Overview*

After developing a set of hypotheses from the extant multi-disciplinary theories discussing cultural influences on consumer behaviour and the significance of trust on buyers' decisions, we will perform an experiment to test these hypotheses. The experimental task involves a sample of participants browsing three online bookstores. Two of these Web sites are religiously oriented selling mainly religious items. The third site is a 'generic' site selling items from various categories.

This experiment will be conducted for two purposes. Each purpose has a different degree of importance. The secondary or less-important purpose of this experiment is that it will take the role of a preliminary pilot study that serves the purpose of ironing out potential anomalies or discrepancies that may be present in the data collected in the empirical part of this research. A preliminary analysis will be carried out on the data collected from the questionnaires to check if the data is normally distributed and free of statistical extremes such as positive/ negative skewness and outliers. After testing the data to see if it is compliant with the prerequisites for running parametric tests, the next step that we will take is to run statistical tests that explore the validity and reliability of the measurement scales representing the different latent constructs used in this study.

To briefly recap on the meaning of both terms: construct reliability tests whether a measure produces the same outcome every time it is used in different instances (Coolican 1994) and construct validity shows if the constituent items of a composite measure are logically related to one another (Kline 1994; Loehlin 1998). An exploratory factor analysis will be conducted to show if our hypothetical constructs are valid. Construct validity is established when the items composing the measurement scales show significant loadings on a common factor and insignificant loadings on all other factors. This implies that the items are logically related to each other and that they portray a common concept. A Cronbach alpha statistic test will show if the measurement scales of the constructs are reliable. We will discuss the results from the reliability and validity tests that we carried out on the measurement scales of each construct. A summary of the conclusions and implications based on the results of the two tests will be provided in this Chapter.

Since the primary goal of this experiment is to test our initial hypotheses, a within-group analysis will be carried out to ascertain if there is corroborative empirical evidence supporting the relationships hypothesized to exist between the independent (causal) and dependent (effect) variables that constitute our research model.

5.2 Experimental Settings

In Chapter 3, we provided a theoretical template that serves as an outline for the experimental settings. We will follow the style of this outline to write the relevant sections in this Chapter. A theoretical part involved in the experimental settings has already been discussed in the research methodology Chapter (Chapter 3) of this dissertation. The writing in the sections of this Chapter will follow the pattern of the experimental settings mentioned in Chapter 3. The main focus of this Chapter here is on the practical side of the experiment and on the interpretations that will be based on the statistical results. A summary of the results and the implications are provided at the end of this Chapter.

5.2.1 Experimental Tasks

After administering the questionnaires to the participants, the volunteers will be asked to browse two Web sites: one religious and the other neutral. Muslims were asked to browse the www.dar-us-salam.com Web site and Christians were asked to browse the www.trinityzone.com religious Web site to represent the Muslim, and the Christian religious Web site respectively. Both groups of participants shared the task of browsing a second neutral Web site, which is represented by the www.bol.com Web site. The time required to complete the experiment should approximate to one hour. After they finish browsing the two Web sites the participants will be asked to fill in the questionnaire that was administered to them at the beginning of the experiment. The questionnaire contains items representing some latent psychological constructs that we intend to measure for the purpose of this research study. Screenshots of all three sites are displayed below:

Figure 5-1: Muslim Web site (www.dar-us-salam.com)

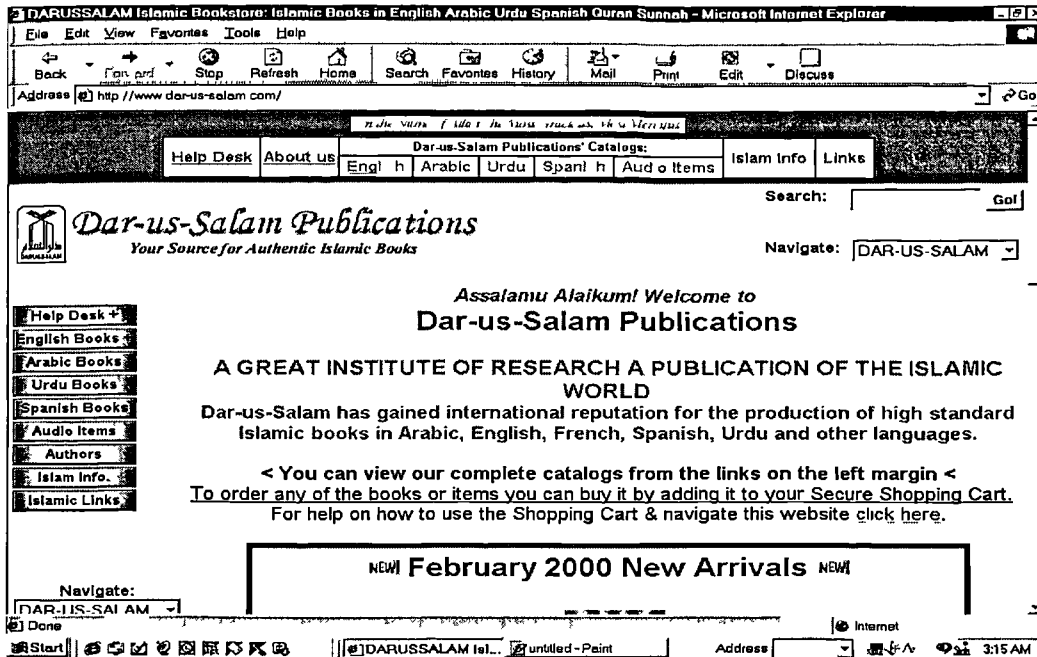


Figure 5-2: Christian Web Site (www.trinityzone.com)

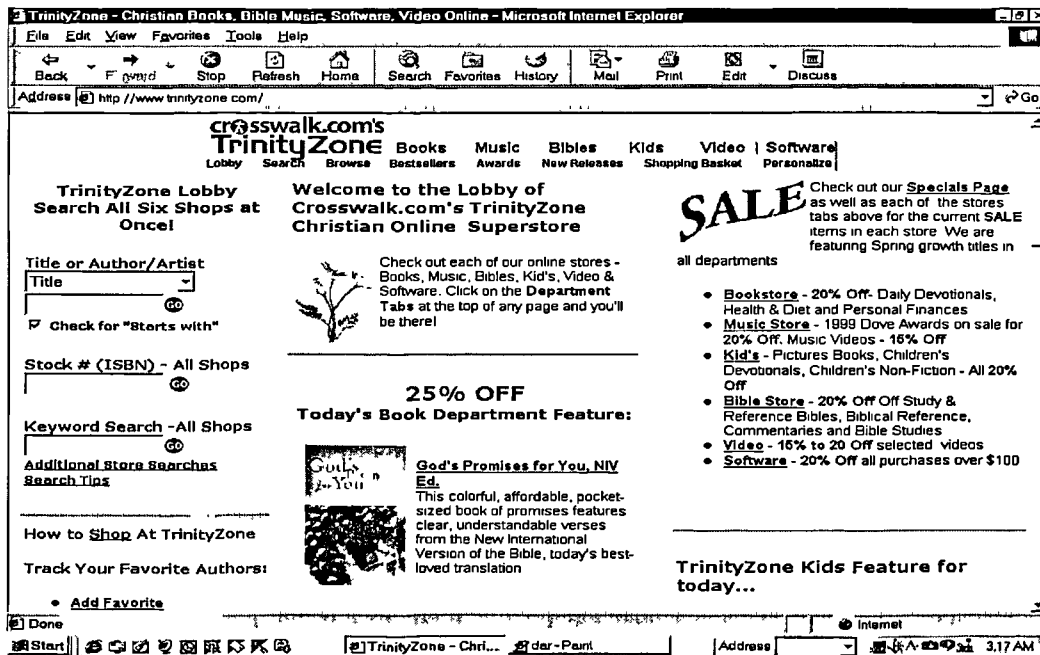
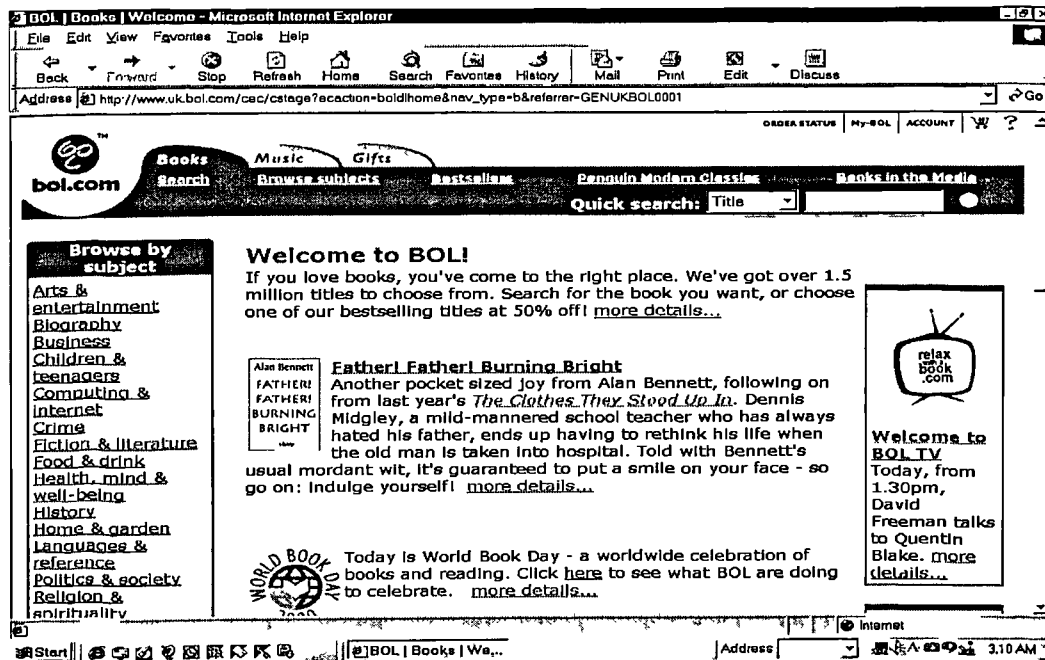


Figure 5-3: Neutrally-oriented Web Site (www.bol.com)

5.2.2 Data Collection Instrument

As mentioned in the previous chapter, the instrument that we have used for collecting the empirical data of this research is a questionnaire. A pilot version of the questionnaire was revised with a number of participants for clarity purposes. Comments and suggestions from the participants regarding the clarity, validity and consistency of the questions were recorded and were later used to delete or rewrite some of the questions for the final version of the questionnaire.

5.2.3 Constructs Related to Web-based Trust

The definitions of the constructs related to Web-based trust have been derived after consulting, in the first experiment, some of the participants to define each term. Only participants with at least one-year experience of Internet-browsing were considered eligible for selection for this consultation session. Written notes of the participants' opinions were taken down and after introducing some refinements, the definitions were later revised with the participants by e-mailing them to confirm if each definition is in accordance with their initial definitions. Table 5-1 displays the summarized final version of the definitions of each construct that were derived after processing the respondents' answers in the interviews.

Table 5-1: Definition of Constructs Derived from Users

Construct	Perceived Meaning of Construct
Familiarity	This develops when a user purchases frequently from a site. Familiarity, according to the respondents, is enhanced through recommendations from peers, relatives or friends.
Established reputation	This construct has been defined as the extent to which a site has established a reputable name.
Reliability	This reflects the personal perception of a user that the Web site is reliable in delivering any purchased goods in time and in a good condition.
Privacy	This represents the perception that a site will honour the privacy agreement of not disclosing demographic and personal data submitted by a user to that site without obtaining the consent to do so from the user.
Security	This represents the perception that the server to which personal and financial details are submitted during a transaction is secure in handling and protecting the data from fraudulent infringements.
Safety	Ambiguous Definitions

None of the participants in the pilot could provide a unique definition for the safety construct. Some defined it to be a synonym of the 'security' construct while others defined it to be identical to the 'privacy' construct. One respondent described this construct as 'too vague to be described meaningfully... A lot of ambiguous definitions can be associated with this word'. We however procrastinated the decision to keep or remove this construct after consulting with some other participants in future interviewing sessions. The construct was temporarily kept and an item in the questionnaire was incorporated to represent it. During the first experiment, only a few have enquired about the meaning of this construct. After asking the enquirers to describe this construct one participant described it as the act of 'dispatching products ordered from a site in a good condition'. Another believed that safety and security have virtually the same meaning. It would have been a good idea to obtain further clarification about the definition of the 'safety' construct by asking some participants in the second experiment about its perceived meaning. Constraining circumstances however (contiguous five one-hour session booked for a group of seven participants per session and the sudden collapse of the 'Trinityzone.com' site that was later replaced with the 'Christianbook.com' site) caused us to waive the execution of this task.

Mangham (1986) reported on a similar incident that occurred in a study investigating managerial competence. A significant number of managers in that study argued that they required subordinates who are capable of motivating staff. When the author of that study asked the managers to describe what they meant with motivation, they became confused and gave ambiguous answers.

Easterby-Smith et al. (1995: p. 75-76) commented on this situation that:

From a "positivistic" standpoint, the fact that there is a contradiction as to the meaning of "motivation" invalidates the research but for the in-depth interviewer who probes, questions and checks, this is important data. The fact that people are confused and can't agree on what they mean by motivation or the way they construct particular situations is the essence of the research and is the learning that is acquired.

There was no inherent harm in keeping this construct for the initial exploratory factor analysis by assuming that it would load on a common factor together with the 'privacy' and 'security' constructs. If this happens to be the case then the general implication is that the 'safety' construct reflects the same perceived meaning as the 'privacy' and 'security' constructs.

5.2.4 Sampling Procedure

In this experiment, the selection criteria used for gathering the sample mainly focused on volunteers who stem from either a Muslim or Christian background. The reason for imposing this constraint is that the study focused on two collectivist religions: Islam and Christianity. The number of participants who have volunteered to take part in this experiment is 50. We have used different methods to draw volunteers for this experiment. Copies of an invitation in the form of an advertisement flier, which displays the purpose of the experiment, were distributed in several places. Some fliers were placed on the notice board inside the mosque at Brunel University others were passed over by friends and colleagues to others at different places of worship and at their workplaces. Another method that we adopted for inviting potential participants to our experiment was to send invitations via e-mail. On-line religious organizations such as his.people@brunel.ac.uk (a Christian on-line society) were contacted by e-mail.

The number of fliers that were initially distributed was 100. The response rate that we received was 50%. There was no response at all from the his.people@brunel.ac.uk Christian online society. One potentially plausible reason for this poor response rate can be ascribed to the lack of funding and the 'time and place' chosen to run the experiment. A scheme for rewarding potential

volunteers would have been a good incentive for attracting a larger number of participants. The sampling technique that we adopted for this experiment blends the techniques used for convenience sampling and 'snowballing'. Snowballing is based on an iterative process that involves contacting friends, family members of friends and friends of friends who would then in turn spread the invitation to their friends and family members. The convenience sampling procedure is based on selecting participants on the basis of availability rather than 'in terms of suitability based on research objectives/ questions' (Tashakkori and Teddlie 1998: p. 76). The advantage of this sampling technique is that it enables the researcher to improvise with the resources available for the experiment. Its disadvantage, however, is that it limits the interpretation of the findings: the generalization of the results beyond the sample is questionable because the sample may not represent characteristics inherent in the general population (DeVellis 1991; Singleton et al. 1993; Zikmund 1997).

We cannot claim that our hybrid sampling technique meets the criteria of the 'snowballing' technique but it conforms to the rules set by the convenience sampling technique. This restricts the claim of having performed the experiment on a random sample and generalizing the results to the global population of the sample becomes a dubious and a questionable issue.

5.2.5 Time and Place

The initial venue selected to run the pilot was a computer lab at Brunel University. Only three respondents were willing to participate for the experiment at this venue. This number of volunteers was too low to consider booking a one-hour time slot to run the experiment at the University's lab. The poor response rate resulted in running the pilot in different locations. Alternative arrangements were made for the three volunteers who were willing to participate in the experiment at Brunel University. Individual sessions for each of those participants were held on one of the local PCs. Most of the other volunteers preferred either their own homes or their universities as suitable venues for performing the experiment. The reasons given by the participants for choosing a different venue included confidentiality, transport expenses, lack of time, and work- and study-related commitments. The first experiment was scheduled initially for September 1999. In September, students are usually highly involved in preparing themselves for their examinations or submissions of final projects depending on the requirements of their university's courses. Since the sample is expected to consist mainly of students, the need to modify the initial timetable and venue for running the experiment seemed inevitable. Customized schedules were arranged to run the experiment at the different locations, which suited the participants. Due to these modifications, suspicions of uncontrollable variables that could bias the results could not be discounted from the interpretations of the final analysis.

5.2.6 Demographics

Table 5-2 shows the characteristics of this sample. The columns in Table 5-2 represent the percentage scores of each demographic variable according to religious background. Using the overall mean score of the RELIG scale as a mid-point, the individual scores on the religiosity scale were used to place participants in three different categories. Participants who scored in the range of 0 to 1.5 were placed in the 'liberal' category. Participants whose scores lie between 1.5 and less than or equal to 3 were placed in the 'moderate' category and finally participants whose scores lie in the range of higher than 3 and less than or equal to 5 were placed in the 'conservative' category.

Table 5-2: Characteristics of Sample Cross-tabulated Against Religion

	Christians (%)	Muslims (%)	Total within sample (%)
<i>Gender</i>			
Male	52	52	52
Female	48	48	48
<i>Age</i>			
20-25	17	28	22.5
26-30	28	35	31.5
31-35	47	29	38
>35	4	12	8
<i>Educational level</i>			
Undergraduate	32	48	40
Graduate	40	32	36
N/A	28	20	24
<i>Mode of Study</i>			
FT	60	80	70
PT	4	0	2
N/A	36	20	28
<i>Ethnicity</i>			
African	0	4	2
Arab	10	60	35
Berber	0	4	2
Celt	4	0	2
European/White	52	0	26
Hispanic	34	0	17
Indian	0	4	2
Pakistani	0	24	12
Persian	0	4	2
<i>Work Experience</i>			
None	18	44	32
< 2 years	28	28	28
2-5 years	30	12	21
>5 years	24	16	20

N = 50.

Table 5-1: Characteristics of Sample Cross-tabulated Against Religion (continued)

	Christians (%)	Muslims (%)	Total within sample (%)
<u>Usage of Internet</u>			
< 6 months	4	67	36
1 year	12	16	14
2-3 years	84	4	44
> 3 years	0	13	6
<u>Usage of Web-browsers</u>			
Never	0	8	4
Rarely	12	16	14
Occasionally	23	38	30
Frequently	65	38	52
<u>Usage of Search engines</u>			
Never	0	8	4
Rarely	4	32	18
Occasionally	92	48	70
Frequently	4	12	8
<u>Frequency of purchasing online</u>			
Never	4	56	30
Rarely	16	32	24
Occasionally	68	12	40
Frequently	12	0	6
<u>Perceived user skill</u>			
Novice	8	24	16
Intermediate	92	76	84
Experienced	0	0	0
<u>Religious level/category¹</u>			
Conservative	72	60	66
Moderates	28	40	34
Liberals	0	0	0

N = 50

5.2.7 Discussions

Both the Christian and Muslim groups consisted of a similarly distributed number of males (52%) and females (48%) in each group. This comes to no surprise as the volunteers were selected on a non-random basis, which at a later stage evolved into an even more systematic technique of selecting participants to produce a sample of two religious groups that is balanced on the gender aspect. The religion and gender variable can be controlled using this selection technique but this sampling technique to a certain extent renders invalid the claim that the experiment was run on a 'random' sample of participants (Zikmund, 1997).

By comparing the percentage scores of each group displayed in the columns of Table 5-2, the following inferences can be made:

1. The Muslim sample ($28 + 35 = 63\%$) is on average younger than the Christian sample ($17 + 28 = 45\%$);
2. The Muslim sample (40%) consists of a higher number of postgraduates than the Christian sample (32%);
3. The Christian sample consists of predominantly European / White individuals (52%) while the majority in the Muslim sample are ethnically Arabs (60%). The second highest ethnic frequency in the Christian sample is Hispanic (34%) and in the Muslim sample, the second highest frequency is the Pakistani origin (24%).
4. More than half of the Christian sample has at least 2 years work experience (54%). In contrast, only 28% of the Muslim sample possesses over 2 years of work experience.
5. In general, the Christian sample has collectively more Internet experience ($12+84=96\%$) than the Muslim sample ($16+4+13 = 33\%$).
6. Individuals in the Christian sample have been using Web-browsers ($23+65=88\%$) and search engines ($4+92=96\%$) more frequently than the Muslim sample (browsers = $38+38= 76\%$; search engines = $48+12= 60\%$).
7. The Christians (80%) have purchased items more frequently from on-line stores than their Muslim counterparts (12%).
8. The Christian sample consists of more religious conservatives and less religious moderates in contrast to the Muslim sample (Christian conservatives = 72%, Muslim conservatives = 60%; Christian moderates = 28%, Muslim moderates = 40%).
9. In general, the whole sample mainly consists of nearly twice as many conservatives (66%) than moderates (34%). No liberals at all could be identified in either of the religious groups.

Consequently, this failure to identify any liberals in both religious groups has led to the decision of merging the liberal category into the moderate category.

5.3 Preliminary Statistical Analyses

5.3.1 Normality and Skewness of the Distribution

Table 5-3: Skewness and Kurtosis Test for Scales

Construct	Mean	Median	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
RELIG	3.8992	4.5800	-.490	.337	-1.500	.662
WBTR	3.7502	4.0000	-1.274	.337	1.365	.662
WBTN	3.6914	4.0000	-1.096	.337	.048	.662
ATTR	3.8905	4.3236	-1.321	.337	.362	.662
ATTN	3.8515	4.2879	-.895	.337	-.822	.662

N=50. Note the values typed in bold represent values of non-normal distributions

Measures of distribution, such as skewness and kurtosis, indicate how much a distribution varies from a normal distribution. Skewness measures the asymmetry of a distribution. A positive skewness value indicates a positively skewed distribution. A skewness value of greater than '1' indicates that the distribution of the data is significantly different from the normal distribution (SPSS Inc. 1998). As can be shown in Table 5-3, the WBTR (Web-based trust towards religious site), ATTR (attitude towards religious site) and the WBTN (Web-based trust towards neutral site) variables scored above the significant value of negative skewness (-1) and thus the data distribution of these constructs violates the assumption of normality. This outcome shows traits of the data deviating from a normal distribution and as a result we decided to use a nonparametric test for analysing these data since non-parametric tests do not require as a precondition for their use the data to be normally distributed (Kinnear and Gray 1999; SPSS Inc. 1998).

5.3.2 Statistical Outliers

There was no evidence in the data of the presence of any statistical outliers. The lack of statistical outliers can perhaps be attributed to the distribution of the data. Since traits of negative skewness were found in the data, the mean score values could be quite high and deviations from the mean would therefore be marginal and thus extremes (one of the manifestations of outliers) would virtually be absent from the sample's data. Since we have used non-parametric tests for analysing the

data and since non-parametric tests are not affected by the distribution of a curve the presence of statistical outliers in this sample's data would anyway not invalidate or influence the results obtained through the non-parametric tests.

5.3.3 Missing Values

There were no missing values to report in this experiment. All questions in the questionnaire have been answered in full. One possible reason for this success can perhaps be ascribed to the lack of a time constraint being placed on the participants to finish browsing the selected Web sites. Although the time assigned for the experiment was initially 1 hour, the participants took their time in browsing the two Web sites at a pace that suited them best.

5.4 Exploratory Factor Analysis

5.4.1 Construct Validity

A factor analysis attempts to identify underlying variables, or factors (latent/ hypothetical constructs), that explain the pattern of correlations within a set of observed variables (indicators). Indicators or observed variables can be in the form of questions that are composing a questionnaire. Factor analysis is often used in data reduction to identify a small number of factors that explain most of the variance observed in a much larger number of manifest variables. Factor analysis can help answer questions such as: what underlying attitudes lead people to respond to the questions on a political survey as they do? Examining the correlations among the survey items may reveal that there is significant overlap among various subgroups of items and that each of these subgroups of items loads significantly on separate factors. Questions about taxes tend to correlate with each other, questions about military issues correlate with each other, and so on. With factor analysis, one can investigate the number of underlying factors and, in many cases one can identify what the factors represent conceptually. Additionally, factor scores can be computed for each respondent, which can then be used in subsequent analyses.

This experiment involves conducting an exploratory factor analysis (EFA) to determine the validity of each hypothetical construct. The Principal Components method of extraction was adopted with a Direct Oblimin rotation. This combination of extraction method and factor rotation technique is claimed to yield a simple factor structure that makes the task of interpreting factors easier (Kline 1994). The Direct Oblimin rotation is used when one expects the hypothetical factors to be correlated with each other (Kline 1994; Tabachnick and Fidell 1996). Since the WBT, ATT and the INTTOBUY are theoretically some kind of positive attitudes, the Direct Oblimin oblique rotation method was

adopted in order to anticipate the potential correlations between these factors. It will be shown later that items from both the WBT and INTTOBUY scales shared significant loading with the items of the ATT scale on a common factor. Factors extracted from a factor analysis are assumed to represent the underlying latent constructs being investigated in a research study (DeVellis, 1991, Loehlin, 1998, Tashakkori and Teddlie, 1998). Therefore, we will use the factors extracted from the factor analysis as measurement scales for the latent constructs that have been involved in this research study.

Table 5-4: Factor Loadings¹ of Items of Section III & IV in the First Part of the Questionnaire

ITEM	FACTOR 1	FACTOR 2
Q1 (section III)	0.865	0.1504
Q2 (section III)	0.7626	0.0407
Q3 (section III)	0.8485	0.0065
Q4 (section III)	0.8297	0.2683
Q5 (section III)	0.8112	0.0121
Q6 (section III)	0.3556	0.6957
Q7 (section III)	0.8246	-0.2587
Q8I (section III)	0.9051	0.1588
Q8II (section III)	0.8785	0.1402
Q8III (section III)	0.8627	-0.0091
Q8IV (section III)	0.9006	-0.3273
Q8V (section III)	0.8331	-0.4391
Q9 (section III)	0.8759	-0.1501
Q10 (section III)	0.8802	0.0621
Q11 (section III)	0.6297	0.0481
Q12 (section III)	0.8234	0.1719
Q13 (section III)	0.8576	0.1071
Q14 (section III)	0.8423	0.2198
Q1 (section IV)	0.8558	-0.0162
Q2 (section IV)	0.7792	0.1335
Q3 (section IV)	0.8324	-0.0543
Q4 (section IV)	0.7980	-0.1089
Q5 (section IV)	0.8643	0.1285
Q6 (section IV)	0.8370	-0.0220
Q7 (section IV)	0.7949	-0.0653

¹r = 0.354; N = 50; p < 0.01. Note that the values in bold signify that a loading is significant.

Table 5-5: Factor Correlation Matrix

	FACTOR1	FACTOR2
FACTOR1	1.000	
FACTOR2	0.137	1.000

5.4.2 Factor Analysis of the Demographics Section of the Questionnaire

The output of the factor analysis test is shown in Table 5-4. FACTOR1 loaded significantly on all the items of section III and IV of the questionnaire. Item Q6 loaded significantly more on the second factor extracted from the factor analysis. Nevertheless, the loading of FACTOR1 on item Q6 is also significant. FACTOR2 will be discarded following Tabachnick and Fidell's (1996) advice that: 'factors that are defined by just one or two variables are not stable' (p. 642). FACTOR1 seems to reflect a unidimensional construct consisting of items from the RELIG (religiosity) and the RELSCALE (religious-centric consumer behaviour) measurement scales. It could represent a second-order factor for the RELIG and the RELSCALE factors. We will however stick to the first assumption as the second assumption can complicate and drag the interpretation of the factor analysis beyond the scope of this dissertation.

Table 5-6: Factor Loadings¹ of Items from the Web Sites Evaluation Questionnaire

ITEM	FACTOR1	FACTOR2
Q1	0.9326	-0.0602
Q2	0.8986	-0.0529
Q3	0.8402	0.0082
Q4	0.7838	0.0294
Q5	0.8648	0.0253
Q6	0.8761	0.0012
Q7	0.9005	-0.0947
Q8	0.9658	-0.1620
Q9	0.6694	0.3053
Q10	0.6851	0.2329
Q11	0.8191	0.0962
Q12	0.6892	0.2538
Q13	0.7431	0.2115
Q14	0.6854	0.2649
Q15	0.1818	0.7322
Q16I	0.0186	0.9431
Q16II	0.0215	0.9402
Q16III	0.0129	0.9455

¹r = 0.354; N = 50; p < 0.01. Note that the values in bold signify that a loading is significant.

Table 5-7: Factor Correlation Matrix

	FACTOR1	FACTOR2
FACTOR1	1.000	
FACTOR2	0.740	1.000

5.4.3 Factor Analysis of the Web sites Evaluation Section of the Questionnaire

The results shown in Table 5-6 portray a simple factor structure that can be interpreted in a simple manner. FACTOR1 loaded significantly on items Q1 to Q14 while FACTOR2 loaded significantly on the rest of the items of the Web site evaluation questionnaire (Q15, Q16I, Q16II, and Q16III). Note that Q13 of the questionnaire was later divided into 2 separate questions as we suspected that it was a double-barrelled question. Q13 was initially: *Overall I consider this site to be trustworthy when dealing with my online purchases in terms of credit / debit card transactions and in*

meeting the enlisted time of delivery. The two components in the question that we have identified to represent separate constructs are the “trust when dealing with online purchases in terms of credit card transactions” and “trust in meeting the enlisted time of delivery”. We have therefore represented each construct in a separate question (Q13 and Q14) in the final version of the questionnaire (see Appendix A-1). The construct validity test that was performed through an exploratory factor analysis shows that the intention-to-buy item (INTTOBUY) and the attitude (ATT) items share significant loading on a common factor and thus the intention to buy construct cannot be represented by an independent measure of its own.

FACTOR1 seems to reflect items representing positive attitudes such as the 'intention to buy' (INTTOBUY) from a Web site and the general opinion held about the site (ATT). This factor has been labelled ATT to reflect the general attitude held by a user towards a Web site. FACTOR2 reflects the questions concerning the reliability, privacy and security issues, which have been found to be theoretically related to the trust concept (see sections 4.6.9 and 4.6.10). FACTOR2 was named WBT (Web-based trust) to reflect a measure of the trust held by a consumer towards a Web site. The factor correlation matrix in Table 5-7 shows that a significant correlation (0.74) exists between FACTOR1 and FACTOR2. This correlation outcome corroborates the arguments raised by some researchers that *trust and attitude are similar concepts and mutually interdependent* (Butler, 1991, Deutsch, 1958, Giffin, 1967, Jones and George, 1998, Kini and Choobineh, 1998). To clarify further on the previous statement, the sources quoted in the previous paragraph believe that trust can generate positive attitudes and vice versa and also that both concepts complement each other and are constituents of a single process responsible for inducing a positive attitude in an individual.

5.5 Construct Reliability

Reliability analysis allows you to study the properties of measurement scales and the items that make them up. Construct reliability is concerned with whether a measure yields the same outcome every time it is used in different instances (Coolican 1994). The most famous form for testing a construct's reliability is the internal consistency test, which is usually performed using the statistical test of Cronbach's alpha (Cronbach 1951). Table 5-8 displays the construct's name, some descriptive statistics, the Cronbach alpha for the construct, and the number of items that constitute the measurement scale.

Table 5-8: Results of the Cronbach Alpha Test of the Constructs

Construct	Factor Name	N	Cronbach Alpha
Religiosity	RELIG	25	.9779
Web-based Attitude	ATT	14	.9746
Web-based Trust	WBT	4	.9751

N = Number of questions that loaded significantly on the factor.

5.5.1 Discussions

The value of 0.7 for the Cronbach alpha coefficient was adopted as a threshold to denote that a measurement scale is reliable. This threshold value was based on the average of the values recommended by different sources (Davis 1964: p. 24; Kaplan and Saccuzzo 1982: p. 106; Murphy and Davidshofer 1988: p. 89; Nunnally 1978: p. 245-246). The results of the Cronbach alpha in Table 5-8 clearly show that all three constructs scored well above the threshold value of 0.7. Therefore, there is no evidence against the internal consistency of these 3 measurement scales and one can assume that they are reliable measures of the relevant constructs. The only suspicion that arose during the interpretation of the results of this statistical test is that multicollinearity may be present in the data. Multicollinearity signifies that some of the items making up the scales could bear identical meanings and thus they could result into a high inter-item correlation between the items constituting the same scale. The main discrepancy that emerges from the multicollinearity problem is that some items could be redundant and should therefore be deleted from the list of items composing the measurement scale of a construct. There is however no indications in the statistical books that it could distort the results of the statistical tests. DeVellis (1991: p. 56-58) in fact supports the use of redundant items in a questionnaire:

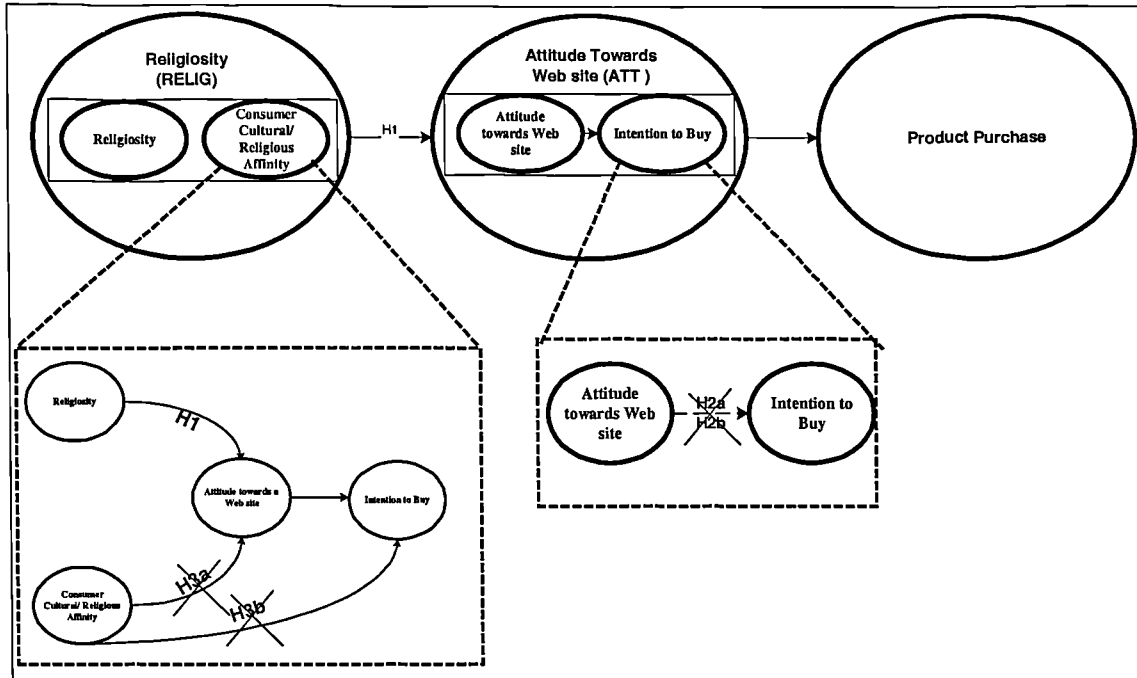
By using multiple and seemingly redundant items, the content that is common to the items will summate across items while their irrelevant idiosyncrasies will cancel out. Without redundancy, this would be impossible. Useful redundancy pertains to the construct, not incidental aspects of the items...it is better to be overinclusive.

5.5.2 Revised Research Model

The factor analysis results in conjunction with the Cronbach Alpha reliability tests have affected the infrastructure of our research model, which was initially presented in Chapter 4 (see Figure 4-1). In this experiment, most of the constructs involved in our research model have been rendered invalid by the results of the factor analysis: the exploratory factor analysis has identified the presence of only 3 significant factors instead of the 5 (RELIG, RELSCALE, INTTOBUY, ATT/WBT) that we have expected initially. The latent factors extracted from the factor analysis are assumed to represent the underlying latent constructs being investigated in a research study (DeVellis 1991; Loehlin 1998; Tashakkori and Teddlie 1998). Since our original research model portrays a hypothetical relationship of interaction between 4 different constructs, the initial model had to be revised to reflect the changes that have to be introduced as a result of the outcome of the factor analysis.

The only hypothesis that can be tested in this experiment is hypothesis 1, since the INTTOBUY and RELSCALE constructs have failed to load on separate factors. In addition, the foundation of Hypothesis 1 itself is not very reliable since we are assuming in this experiment that the independent variables RELIG (religious commitment) and religious centrism (RELSALE) represent the same concept. The revised model is illustrated in Figure 5-4. The crosses on the diagram show the hypotheses that have been affected by the outcome of the factor analysis and as a result were eliminated from future analyses.

Figure 5-4: Revised Research Model (I)



5.6 Within-Group Analysis

5.6.1 Hypotheses for this Experiment

As has been mentioned previously in section 5.5.2, the outcome of the exploratory factor analysis conducted on the data of this experiment invalidated nearly all hypotheses and left us with only one hypothesis to test. This was due to the latent constructs failing to load significantly on separate factors. Constructs loading successfully on separate factors signify that the construct is valid. A “valid” latent construct represents an “acceptable” measure of the psychological (or other) concept that it intends to model in the real world. The results of our factor analysis for this experiment showed that the items representing both the RELIG and the RELSCALE constructs shared significant loadings on a common factor. A similar scenario occurred between the INTTOBUY and ATT constructs where the constituent items of these constructs have loaded significantly on a single factor, thus causing us re-express the hypotheses, which have been posited initially in this research study (see section 4.1.1). The initial hypotheses are:

Hypothesis 1: The level of attitude and trust held by a consumer towards a vendor will increase when both parties are from an identical religious background.

Hypothesis 2a: As the attitude towards a vendor changes favourably, the buyer's intention to buy will increase accordingly.

Hypothesis 2b: As the trust between a buyer and vendor increases, the buyer's intention to buy will become stronger.

Hypothesis 3a: Consumer religious-centrism will instil negative attitudes in consumers towards other religious Web sites.

Hypothesis 3b: Religious-centric consumers will feel reluctant to buy from other religious Web sites.

As has been mentioned previously in section 5.5.2, the only hypothesis that can be tested in this experiment is hypothesis 1, since the constituent items of the INTTOBUY construct shared significant loadings on a common factor with the constituent items of the ATT construct and similarly, the items constituting the RELSCALE construct and the RELIG construct have loaded significantly on a single factor. By collapsing all 5 hypotheses into a single hypothesis, the meaning and the foundation of Hypothesis 1 becomes affected by future outcomes since in this experiment, we are now assuming that the combination of independent variables RELIG (religious commitment) and RELSCALE (religious centrism) and the combination of dependent variables ATT (Web-based attitude) and INTOBUY (intention to buy) each represent a similar concept.

After presenting our revised research model for this experiment (see Figure 5-4), we will now present the “revised” hypothesis and the corresponding null hypothesis that will be tested in this experiment.

H₁: The level of attitude and trust held by a consumer towards a vendor will increase when both parties are from an identical religious background.

H₀: There is no association between religious affiliation and the extent of trust and attitude held towards a vendor.

5.6.2 Descriptive Statistics

In this section, we will go through the descriptive statistics describing the basic measures of central tendency and dispersion of the constructs, which have been used in this experiment. Table 5-9 and Table 5-10 show which measures of central tendency and dispersion are considered appropriate for different types of data and different levels of data measurement (Babbie et al. 2000).

Table 5-9: Basic Descriptive Statistics Appropriate for Different Types of Variables (Babbie et al. 2000)

	Measures Of Central Tendency			Measures of Dispersion	
	Mode	Median	Mean	Range	Variance & Standard Deviation
Type of Variable					
Nominal / Categorical	√	√			
Continuous		√	√	√	√

Note that a check mark (√) indicates that the measure is generally considered both appropriate and useful, whereas a dash (-) indicates that the measure is permissible but not generally considered very useful.

Table 5-10: Basic Descriptive Statistics Appropriate for Different Levels of Measurement (Babbie et al. 2000)

	Measures Of Central Tendency			Measures of Dispersion	
	Mode	Median	Mean	Range	Variance & Standard Deviation
Level of Measurement					
Nominal	√				
Ordinal	-	√		√	
Interval/ Ratio	-	√	√	√	√

Note that a check mark (√) indicates that the measure is generally considered both appropriate and useful, whereas a dash (-) indicates that the measure is permissible but not generally considered very useful.

Measures of Central Tendency

The three most common measures of central tendency shown in Table 5-9 are the mode, the median and the mean. The mode represents the most frequent value in a given distribution. The median is the middle category of a distribution after the data has been ranked in numerical order. The mean represents the average value of the data from a given distribution.

Measures of Dispersion

The most commonly used measures of dispersion is standard deviation. The standard deviation measures the extent to which values are clustered around the mean or diverge away from it.

DESCRIPTIVE STATISTICS FOR THE FIRST EXPERIMENT

Table 5-11 shows the descriptive statistics of the constructs used in the first experiment for each religious group. The numerical representation of data does not really explain or reveal any potentially underlying relationships between the data. A graphical representation of the data is more likely to explain any potential differences that could be inherent in the data collected from the two religious groups.

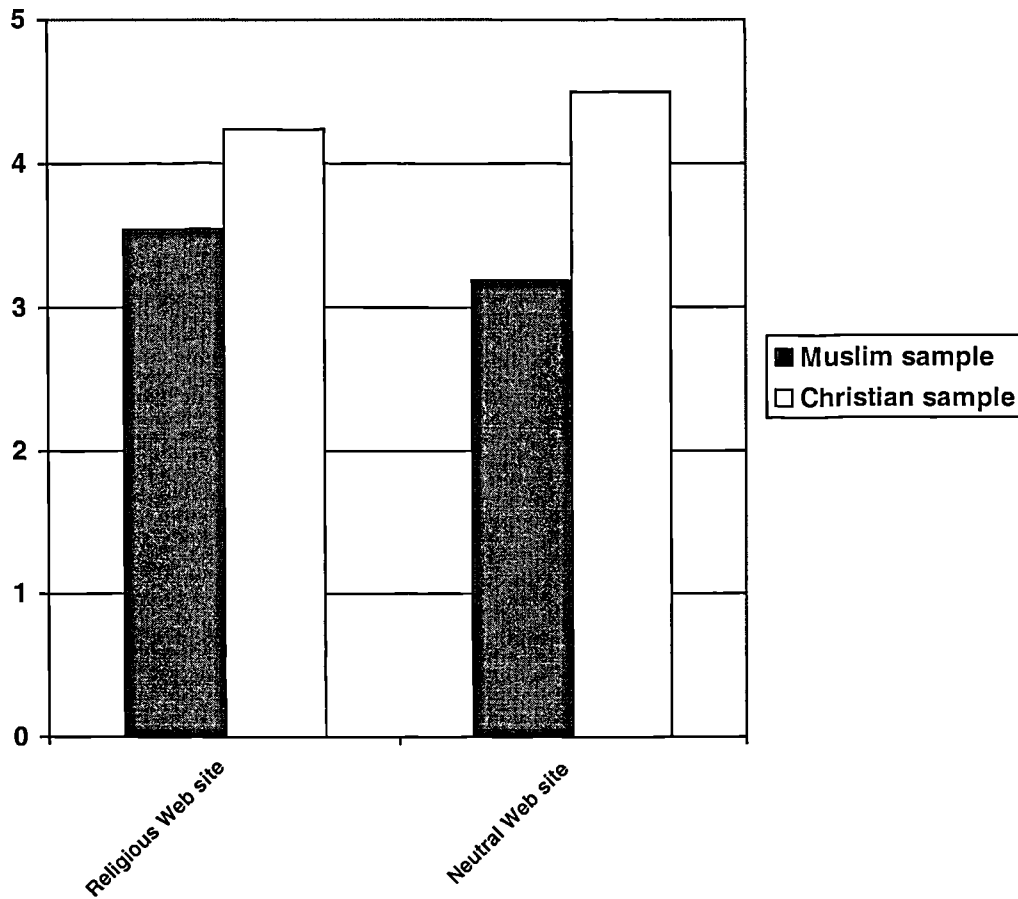
Table 5-11: Descriptive Statistics of Constructs used in the First Experiment

Construct	Religion	N	Mean	Median	Std. Deviation
WBTR	Muslim	25	3.68	4	1.13
	Christian	25	3.82	4	0.46
WBTN	Muslim	25	3.21	4	1.24
	Christian	25	4.17	4	0.44
ATTR	Muslim	25	3.54	4	1.15
	Christian	25	4.24	4.36	0.65
ATTN	Muslim	25	3.19	2.79	0.99
	Christian	25	4.5	4.5	0.27

Note that WBTR and ATTR represent the Web-based trust and Web-based attitude towards a religious Web site while WBTN and ATTN represent the Web-based trust and Web-based attitude towards a generic Web site.

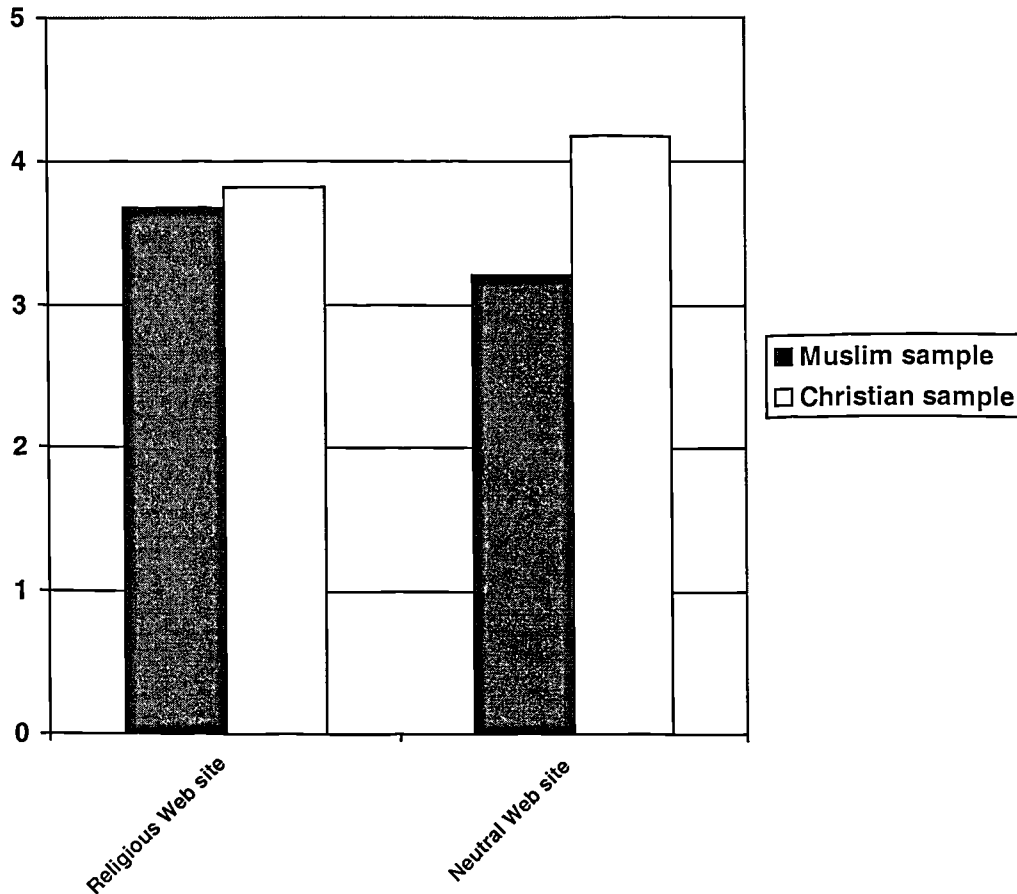
The bar charts in Figure 5-5 and Figure 5-6 show the means of the WBT and ATT constructs, measured for each religious group separately. Within each cluster, the two bars represent a measure of web-based attitude (ATT) and web-based trust (WBT) for the Muslim and the Christian group. The height of each bar represents the extent of attitude (see Figure 5-5) and trust (see Figure 5-6) held by each religious group towards the religious and the neutral Web site, respectively.

Figure 5-5: Charts Illustrating the Means of the ATT construct for the 2 Religious Groups



5.6.3 Discussions

By comparing the heights of the bars within each cluster in Figure 5-5 and Figure 5-6, it seems apparent that the Christian group when compared to their Muslim counterpart displays on average a “higher” attitude and trust towards the Christian and neutral Web site. However, by comparing the bars representing the Muslim sample in Figure 5-5 and Figure 5-6, it seems that the Muslim group collectively holds a higher attitude and trust towards the Muslim Web site in contrast to the neutral Web site. The opposite is true for the Christian group, which seems to prefer and trust the neutral Web site more than the Christian Web site. To corroborate these findings, we will conduct appropriate statistical tests to confirm if the difference in the “attitude” and “trust” held by these two religious groups is statistically significant.

Figure 5-6: Charts Illustrating the Means of the WBT Construct for the 2 Religious Groups

5.6.4 Non-Normal Data Transformations Versus Non-Parametric Tests

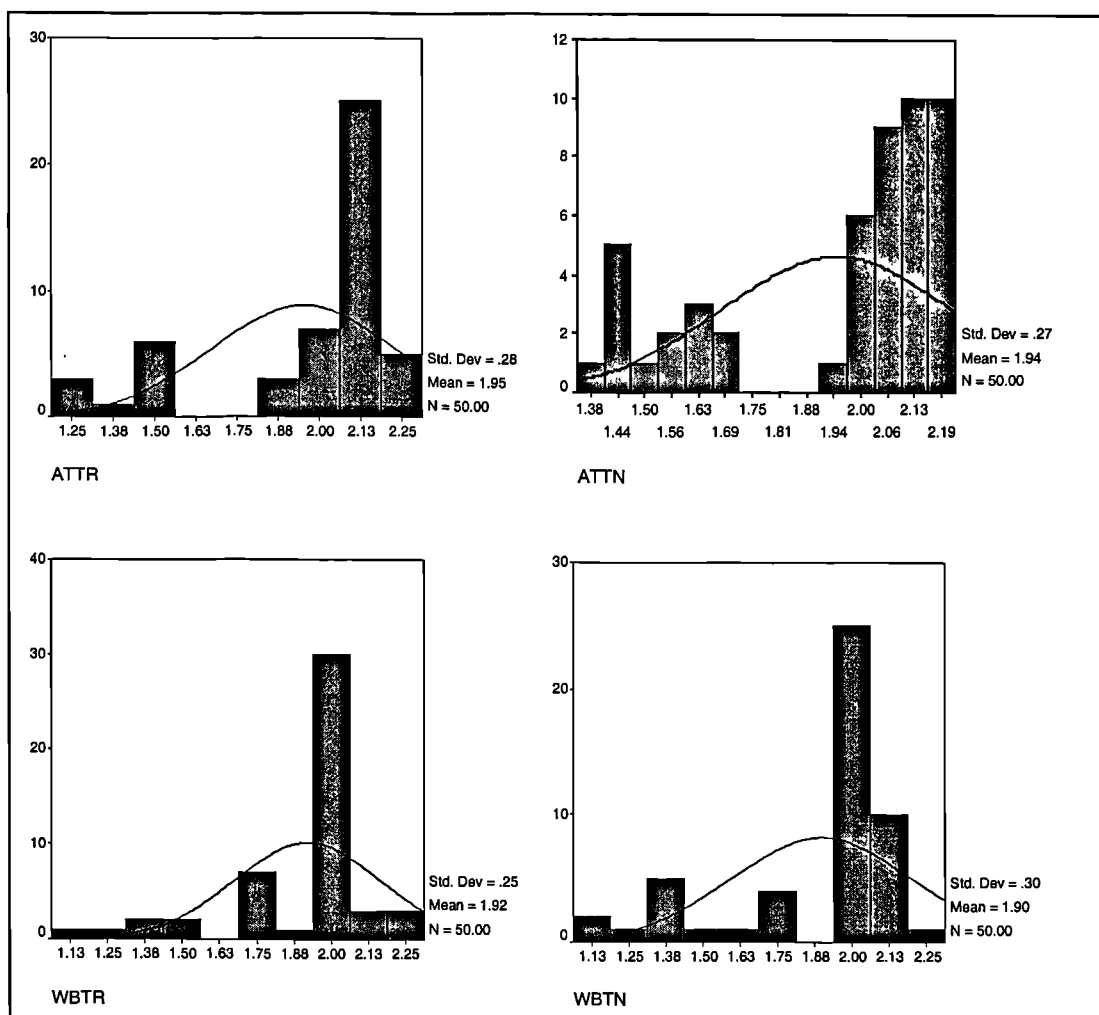
Although data transformations are recommended to overcome the problem of a “failed” normality test, they are ‘not universally recommended’ (Tabachnick and Fidell 1996: p. 81). The purpose of an analysis is to interpret the values in the variables. Transformed variables are according to Tabachnick and Fidell (1996: p. 82) ‘harder to interpret’. For example, the natural form of an IQ score would make more sense to the analyst than its logarithmic transformation. Tabachnick and Fidell (1996: p. 82), however, argue that ‘transformations may improve the analysis, and may have the further advantage of reducing the impact of outliers’ and suggest using ‘transformation of variables in all situations unless there is some reason not to’. They also caution that if the decision is taken to transform the data, it is important to make sure that the data becomes normally distributed after the transformation process. According to Tabachnick and Fidell (1996: p. 82), if the transformation did not normalise the data, the analyst should try a number of transformation

techniques on a trial-and-error basis until the transformation successfully 'produces the skewness and kurtosis values nearest to zero'.

Non-Parametric tests are often used in place of their parametric counterparts when certain assumptions about the underlying population are questionable. Non-parametric tests do not require as a precondition the distribution of the data to be normal. They are what is known as distribution-independent and thus can be used as alternatives to the parametric tests when the normality assumption is violated (Coolican 1994). For example, when comparing two independent samples, the Wilcoxon Mann-Whitney non-parametric test does not assume that the difference between the samples is normally distributed whereas its parametric counterpart, the two-sample t-test does require the difference between the samples to be normally distributed.

To be on the safe side, we have decided first to transform our non-normal data using one of the appropriate transformation techniques after checking the distribution curve of each dependent variable, as has been suggested by Tabachnick and Fidell (1996) (see Appendix A-4). There was no need to transform the RELIG independent variable since its "skewness" was less than one and thus the distribution of the data of this variable can be assumed to be normal (see Table 5-3). Figure 5-7 shows the shape of the distributions of the dependent variables (ATTN, ATTR, WBTN and WBTR). By comparing the shape of our variable's distribution to those distributions in Appendix A-4, we decided that the "Reflect and Square Root" transformation is the most appropriate for our data. If the data distribution of the dependent variables becomes normal after the transformation procedure, we will subsequently run a paired t-test for each pair of dependent variables (ATTR-ATTN; WBTR-WBTN) to compare the mean of each construct for the two religious groups. Otherwise we will resort to a non-parametric test for the original data (non-normal) to identify potential differences between the means of the two groups. Even if the transformation successfully normalises the distribution of our data we can still use the results of the non-parametric test to substantiate the potential results of the t-test.

Figure 5-7: Data Distributions of the 4 Dependent Variables



After transforming the data of the 4 dependent variables, we have then conducted another “skewness” test to see if the data distribution of these variables has been “normalised”. Table 5-12 shows that the data distribution of most “transformed” variables has normalised (skewness < 1), except for the ATTR variable. To counter for this problem, we proceeded and applied other transformation techniques on the ATTR variable but without any success and thus, we have no option but to perform a “distribution-independent” non-parametric test.

Table 5-12: Skewness and Kurtosis Test for Scales

Construct	Mean	Skewness	Std. Error of Skewness
WBTR	1.48	0.81	0.34
WBTN	1.49	0.82	0.34
ATTR	1.37	1.12	0.34
ATTN	1.39	0.75	0.34

N=50. Note the values typed in bold represent values of non-normal distributions

5.6.5 Non-Parametric Test

The Wilcoxon signed-rank test is a nonparametric alternative to the paired samples t-test for two groups. The absolute differences between the variables are ranked and the ranks are split into three groups. Negative ranks represent cases for which the value of the second variable exceeds the value of the first variable. Positive ranks on the other hand represent those cases for which the value of the first variable exceeds the value of the second variable and finally ties reflect cases for which the two variables are equal. If the two variables are identical, the sum of the positive ranks will approximately equal the sum of the negative ranks. The Wilcoxon test statistic represents the sum of the ranks for the less frequent sign. The Wilcoxon Signed-Rank test is used to detect differences in the distributions of two related variables. Small significance values (<0.05) indicate that the two variables differ in distribution.

5.6.6 Non-Parametric Results of Muslim Sample

Table 5-13: Wilcoxon Signed Ranks for the Muslim Group

MUSLIM GROUP		N		MEAN RANK		SUM OF RANKS	
		CONS	MODS	CONS	MODS	CONS	MODS
ATTN – ATTR	Negative Ranks	12 ^a	2 ^a	9.50	3.00	114.00	6.00
	Positive Ranks	3 ^b	8 ^b	2.00	6.13	6.00	49.00
	Ties	0 ^c	0 ^c				
	Total	15	10				
WBTR – WBTR	Negative Ranks	10 ^d	3 ^d	7.40	4.33	74.00	13.00
	Positive Ranks	2 ^e	7 ^e	2.00	6.00	4.00	42.00
	Ties	3 ^f	0 ^f				
	Total	15	10				

- a. ATTN < ATTR (negative ranks)
 b. ATTN > ATTR (positive ranks)
 c. ATTN = ATTR (ties)
 d. WBTR < WBTR (negative ranks)
 e. WBTR > WBTR (positive ranks)
 f. WBTR = WBTR (ties)

Table 5-14: Wilcoxon Signed Ranks Test Statistic for the Muslim Group

WILCOXON SIGNED RANKS TEST	Z (CONS)	Z (MODS)
ATTR – ATTN	3.068 ^a (.002)	2.194 ^b (.028)
WBTR – WBTR	2.754 ^a (.006)	1.483 ^b (.138)

Note that the numbers in parentheses show the significance level (2-tailed) for the Wilcoxon Signed Ranks test.

- a. Based on positive ranks.
 b. Based on negative ranks.

5.6.7 Discussions and Implications

Note that negative ranks (10) of the Wilcoxon signed ranks for the WBT variable reflect cases for which the value of the WBTR (trust towards religious Web site) exceeds the value of the WBTR (trust towards neutral Web site). Conversely, the positive ranks (2) for the same variable contain cases for which the value of the WBTR exceeds the value of WBTR. The WBT and the ATT variables of the conservative Muslim sample displayed in Table 5-14 showed a significant value for the Wilcoxon statistic ($p < 0.01$). The implications from these values are that the conservative Muslims in this sample display different measures of attitudes and trust across the two Web sites. The significant positive values of the Wilcoxon signed ranks statistic indicate that the conservative Muslim group holds a more favourable attitude towards the Muslim Web site and they also seem to

place more trust in the Muslim Web site than in the generic Web site. The null hypothesis of equal means of the distributions can therefore be rejected at the $p < 0.01$ level of confidence.

The moderate Muslims in this sample show indifferent trust towards both Web sites ($p > 0.01$) but the attitude held towards the two Web sites is different (significant at $p < 0.05$). The overwhelming number of positive ranks (8) in contrast to the negative ranks (2) imply that the majority of the moderate Muslims in this sample seem to prefer the generic Web site to the Muslim Web site. There is however no empirical evidence to support the statement that the moderate Muslims trust one Web site significantly more than the other. To recap on the meaning of positive and negative ranks of the Wilcoxon signed ranks in the context of this analysis: the negative ranks contains those cases for which the value of the WBTR (trust towards religious Web site) exceeds the value of the WBTN (trust towards neutral Web site) while the number of positive ranks represent the cases for which the value of the WBTN exceeds the value of the WBTR.

5.6.8 Non-Parametric Results of Christian Sample

Table 5-15: Wilcoxon Signed Ranks for the Christian Group

CHRISTIAN GROUP		N		MEAN RANK		SUM OF RANKS	
		CONS	MODS	CONS	MODS	CONS	MODS
ATTN – ATTR	Negative Ranks	5 ^a	2 ^a	9.80	4.00	49.00	8.00
	Positive Ranks	12 ^b	5 ^b	8.67	4.00	104.00	20.00
	Ties	1 ^c	0 ^c				
	Total	18	7				
WBTN – WBTR	Negative Ranks	0 ^d	0 ^d	.00	.00	.00	.00
	Positive Ranks	11 ^e	3 ^e	6.00	2.00	66.00	6.00
	Ties	7 ^f	4 ^f				
	Total	18	7				

a. ATTN < ATTR (negative ranks)

b. ATTN > ATTR (positive ranks)

c. ATTR = ATTN (ties)

d. WBTN < WBTR (negative ranks)

e. WBTN > WBTR (positive ranks)

f. WBTR = WBTN (ties)

Table 5-16: Wilcoxon Signed Ranks Test Statistic for the Christian Group

WILCOXON SIGNED RANKS TEST	Z (CONS)	Z (MODS)
ATTR – ATTN	1.302 ^a (.193)	1.014 ^a (.310)
WBTR – WBTN	2.952 ^a (.003)	1.604 ^a (.109)

Note that the numbers in parentheses show the significance level (2-tailed) for the Wilcoxon Signed Ranks test

a. Based on negative ranks.

5.6.9 Discussions and Implications

Table 5-16 shows that the only significant result to report for this religious group emerged from comparing their Web-based trust towards the 2 Web sites (WBTR-WBTN). The conservative Christian sample produced a significant Wilcoxon signed rank statistic for the WBT variable ($p < .001$) but with a meaning opposite to the one found in the analysis of the conservative Muslim group. The frequency of the positive ranks for the WBT variable was found to be 11, which implies that the conservative Christians in this sample seem to perceive the generic Web site to be trustworthier than the Christian Web site. This is in contradiction with the hypothetical assumptions that were made in this research study and which have been based on the literature discussing cultural influences in the context of religious subcultures. It also challenges the findings of the conservative Muslim group.

The Wilcoxon signed rank statistic for the ATT variable was not significant ($p > 0.05$) and thus the implications are that the conservative Christians hold indifferent attitudes towards both Web sites or said alternatively they don't have a preference to either of the Web sites that they browsed in the experiment. The moderate Christian group in this sample failed to produce a significant result for both variables: WBT and ATT ($p > 0.05$). This indicates that the moderate Christians in this sample are indifferent towards both Web sites when it comes to trusting and preferring one Web site to another. A summary of the findings for both religious groups and for both categories of each group is summarized in Table 5-17:

Table 5-17: Religious Category Versus Trust and Attitude Towards a Web Site

	Dar-us-salam.com		Trinityzone.com		Bol.com	
	Trust	Prefer	Trust	Prefer	Trust	Prefer
Muslims						
Conservatives	Y**	Y**	N/A	N/A	N	N
Moderates	N	N	N/A	N/A	N	Y*
Christians						
Conservatives	N/A	N/A	N	N	Y**	N
Moderates	N/A	N/A	N	N	N	N

N = 50; * $p < .05$; ** $p < .01$

Note that a 'Y' indicates that there is statistical evidence for the existence of an association between the religious category of a group (for example, conservatives) and the trust or attitude held towards a Web site. A 'N' reflects the absence of such evidence, which would support the null hypothesis of no association between religious affiliation and Web-based attitude/ Web-based trust. N/A means that the site was not part of the list of Web sites browsed by that group.

5.7 Summary

In this Chapter, we have discussed the results of our first experiment. A factor analysis was performed on the questionnaire items to determine the validity of the items underlying the latent constructs that were hypothesized in this research study. The factor analysis produced only three factors, which were labelled WBT (Web-based trust), ATT (general attitude held towards a Web site) and RELIG (religiosity or religious commitment). Each factor was named after checking the content of each question/ item loading significantly on the factor. Factors loading on a couple of items were discarded following Tabachnick and Fidell (1996)'s advice that factors represented by two items are unreliable. The factor analysis result failed to show any evidence to support the validity of the latent constructs of RELSCALE (religious centrism) and INTTOBUY (intention to buy) as the items constituting the original scales of these constructs failed to load on separate factors. The RELSCALE items loaded on a common factor with the RELIG items. The INTTOBUY construct shared its item loadings with the ATT items on a single factor. Thus, there is no evidence that the RELSCALE and INTTOBUY constructs are valid in the sense that they do not exist according to this experiment's factor analysis in their own sovereignty. Since our research model is contingent upon a hypothetical relationship between latent constructs and since some of these constructs could not be validated by the results of the factor analysis, most of the hypotheses postulated in Chapter 4 could not be tested in this experiment. The normality test performed on the data from the sample showed that the sample's distribution is different from the normal distribution and therefore parametric tests cannot be conducted to further analyse the data. Alternative non-parametric tests, which are distribution-independent, were carried out to generate inferential statistics from the data. The results of these tests differed for the two religious categories- conservatives and moderates- of both religious groups- the Muslims and the Christians. The statistical results for the Muslim group showed that the conservative Muslims in general prefer the Muslim Web site to the generic Web site and they were also found to perceive the Muslim Web site to be trustworthier than the generic Web site. The findings of the conservative Christians group were opposite in inference to their conservative Muslim counterpart. Conservative Christians seem to trust the generic Web site more than their own religious Web site. Moderate Muslims showed traits of preferring the generic Web site on the Muslim Web site while moderate Christians in general seemed to be indifferent when it comes to trusting and preferring one Web site to another.

6 EXPERIMENT II

6.1 Overview

As has been mentioned previously, our research plan involves conducting two experiments with similar experimental tasks and settings but involving two different samples. The motive behind conducting two similar experiments is to verify if the findings are replicable across the two experiments. If on the affirmative, this will reinforce the confidence in the interpretations and conclusions based on the results: By demonstrating that the findings of the previous experiment reproduce in this experiment the concept of our hypothetical research model is supported by two similar outcomes.

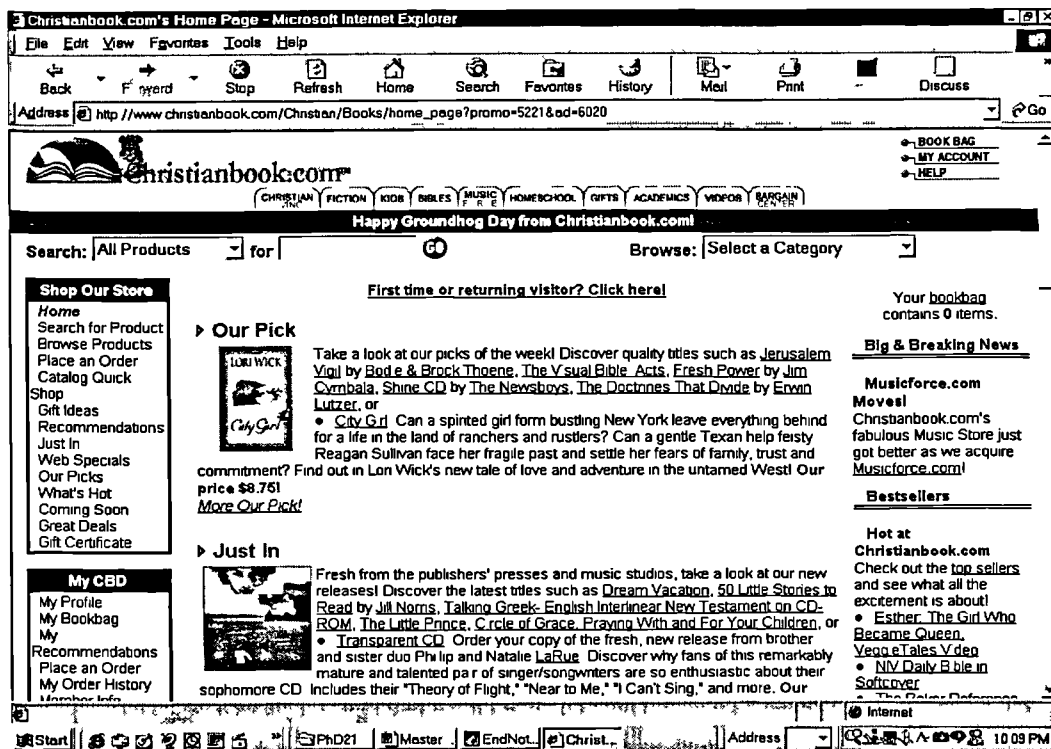
By using different participants in similar experiments is that the experimenter can also reduce to an extent the problem of subjects becoming aware of the objective of the experiment, which is known as *respondents' reactivity* (Babbie 1992). Repeating an experiment twice with the same participants can make the participants realize the experiment's goal and as a result respondents' bias in the answers could become a problem. The final sections will compare the findings of this experiment with that of the previous experiment to see if they are consistent.

6.1.1 Experimental Tasks

There is a difference in the experimental task that is required to be carried out between this experiment and the previous one. In the first experiment, the participants were asked to browse only two Web sites: one religious and the other neutral. The main reason behind that decision was to save some time for the participants, as the total time available to complete the experiment was one hour. This would also allow the participants to explore each Web site more thoroughly given the extra time to do so. The experimental tasks however in this experiment were altered for a few reasons. Participants were asked to browse three Web sites: a Christian, a Muslim and a generic Web site devoid of any cultural orientation. The main incentive that drove us to change the experimental task for this experiment is that participants from various religious backgrounds have volunteered to take part in this experiment. The sampling technique adopted for this experiment is similar to the previous one but the selection criterion for this experiment has been expanded to accommodate participants from any and no religious background at all, in the sample of this experiment.

We have encountered an initial fallback in the very first day of the experiment. One of the three Web sites that have been selected for this experiment, the Christian site Trinityzone.com, was 'down' during the first lab session of the experiment. Fortunately, a number of candidate sites were bookmarked as 'Favourites' during our preliminary search for candidate Web sites reflecting different religions and cultures. The 'reserve' Christianbooks.com Web site was chosen from the list of candidate Christian Web sites to substitute the 'collapsed' Trinityzone.com Web site. The prime incentive for choosing the Christianbooks.com site was that it is similar in many aspects to the Trinityzone.com site. Christianbooks.com not only sells products that are similar to the ones sold at Trinityzone.com but it also provides similar services and its graphical interface resembles that of the Trinityzone.com Web site. Like in the previous experiment, once the participants finished browsing the three Web sites they were asked to fill in a questionnaire that was administered to them at the beginning of the experiment.

Figure 6-1: Christian Web Site (www.christianbooks.com)



6.1.2 Data Collection Instrument

The data collection instrument used for this research is the very same questionnaire that was used in the previous experiment. Minor changes were introduced to this questionnaire by adding new questions that reflect some new findings that we later came across related to Web-based constructs. Coutu (1998) contends that trust in digital commerce is established through incessant interactions between online visitors and host Web sites. A battery of items/ questions was developed to reflect and test this theory. Since the source of Coutu's statement was retrieved after the first experiment, the scale's items representing this construct were only added to the questionnaire in this experiment. These items will be used as indicators for measuring trust that develops through frequent interactions between online users and Web sites.

6.1.3 Sampling Procedure

A covering letter explaining the purpose of the experiment in the form of an advertisement flier was distributed to potential participants using different methods. The advertising activity for drawing a sample for this experiment included the distribution of advertisement fliers to MSc students at Brunel university, placing the ad flier on the notice-board of Brunel's internal mosque and e-mailing two religious groups. A Christian and a Muslim e-mailing list, the online Christian group that was targeted was the his.people@brunel.ac.uk. The Muslim group that we e-mailed the invitation to this experiment consists of individuals whose names and e-mails were compiled and provided upon request by a Muslim organization called Hizb'ul Tahrir operating at Brunel University. Hizb'ul Tahrir emphasised that the prior consent of these individuals was obtained before including their private details (names and e-mails) in the list that was sent to me.

The main source for potential volunteers willing to participate came from the Muslim e-mail list, the MSc class and PhD colleagues studying in the department of Information System at Brunel University. The his.people@brunel.ac.uk Christian online community were contacted twice by e-mail but we have not received any response to our e-mail. To ascribe the failure of obtaining a response to a technical fault present in the mail server was discounted. The Brunel mail-server is programmed to reply to the sender with a 'postmaster delay' or 'account not found' error message when an e-mail request fails to go through.

Unlike the previous experiment, this experiment included a scheme for rewarding potential volunteers. A payment of £20 in cash was handed over to the participants at the end of the experiment. The response rate received in this experiment was successful when compared to the

previous experiment. All 116 questionnaires were returned signifying a successful response rate of 100%. Eventually, however, the number of people who participated in this experiment is 91, which indicates a success rate of 78% (91 /116). This is however a far better response rate than the one in the previous experiment where participants had to be selected on an individual basis to make up for a decent sample size.

6.1.4 Time and Place

Permission was obtained from the head of the department to run multi-sessions of the experiment at the MSc computer lab in Brunel University. The MSc lab was booked for two days from 9am to 7pm. All individuals who showed their intention to participate were notified by e-mail of the times and dates available for performing the experiment. Due to the limited number of computer machines available in the lab, the booking of some participants had to be rescheduled to a later time slot and in some cases reservations were rescheduled to the second and only alternative date available for conducting the experiment.

6.1.5 Demographics

Table 6-1 shows the characteristics of this sample cross tabulated according to their religion. Using the mean score of the RELIG (religiosity) scale as a mid-point, participants were classified into three religious categories: *conservatives*, *moderates* and *liberals*. This scoring policy was chosen after going through the descriptive statistics of this sample. Participants who scored in the range of 0 to 3 were placed in the 'liberal' category. Participants whose scores lie between 3.1 and 3.5 were placed in the 'moderate' category and finally participants whose scores lie between 3.51 and to 5 were placed in the 'conservative' category.

Table 6-1: Characteristics of Sample Cross-tabulated Against Religion

	Christian (%)	Muslim (%)	Others (%)	Total within sample (%)
<i>Gender</i>				
Male	62	79	50	65.9
Female	38	21	50	34
<i>Age</i>				
<20	0	8	0	3.3
20-25	52	34	59	46.2
26-30	34	37	34	35.2
31-35	7	10	4	7.7
>35	7	10	4	7.7
<i>Educational level</i>				
Undergraduate	17	29	4	18.7
Graduate	79	71	97	80.3
N/A	3	0	0	1.1
<i>Mode of Study</i>				
FT	86	94	100	93.1
PT	10	5	0	5.5
N/A	3	0	0	1.1
<i>Ethnicity</i>				
Arab	0	29	0	12.1
Asian (Other)	3	8	17	8.8
Bangladeshi	0	3	0	1.1
Black African	3	3	0	2.2
Caucasian	3	0	0	1.1
Chinese	0	0	25	6.6
European/White	83	8	21	35.2
Hispanic	3	0	0	1.1
Indian	0	3	34	9.9
Kurdish	0	3	0	1.1
Mauritian	3	0	0	1.1
Pakistani	0	39	0	16.5
Persian	0	5	0	2.2
Srilankan	0	0	4	1.1
<i>Work Experience</i>				
None	21	16	21	18.7
< 2 years	52	37	47	44
2-5 years	17	24	34	24.2
>5 years	10	24	0	13.2

N = 91.

Table 6-1: Characteristics of Sample Cross-tabulated Against Religion (Continued)

	Christians (%)	Muslim (%)	Others (%)	Total within sample (%)
<u>Usage of Internet</u>				
< 6 months	0	0	0	0
1 year	10	3	4	5.5
2-3 years	28	39	30	33
> 3 years	62	58	68	61.6
<u>Usage of Web-browsers</u>				
Never	0	0	0	0
Rarely	3	0	4	2.2
Occasionally	7	5	0	4.4
Frequently	89	94	97	93.5
<u>Usage of Search engines</u>				
Never	0	0	0	0
Rarely	0	0	4	1.1
Occasionally	24%	24	17	22
Frequently	76	76	80	77
<u>Frequency of purchasing online</u>				
Never	31	63	38	46.2
Rarely	28	18	17	20.9
Occasionally	38	16	38	28.6
Frequently	3	3	8	4.4
<u>Perceived user skill</u>				
Novice	3	0	0	1.1
Intermediate	58	76	51	63.8
Experienced	38	24	51	35.2
<u>Religious level/category</u>				
Conservative	24	86	0	44
Moderates	34	10	38	25.3
Liberals	41	3	63	30.8

N = 91.

6.1.6 Discussions

The proportion of religious backgrounds of individuals making up the sample consisted of Muslims, Christians and other religions that we combined into one group and were courteously called the "Others". The "Others" religious group consisted of individuals who adopt the faiths of Buddhism, Hinduism, Judaism, Paganism and individuals with no religious affiliation at all. Figure 6-2 shows the percentage proportions of religions constituting this experiment's sample. The Muslim group in the sample represented the dominant percentage of 42%. The remaining proportions were divided between the Christian participants who made up 32% of the sample and the 'Others' who made up the remaining 26%. A quick look at the gender percentage of each religious group reveals that gender bias could potentially affect the findings of future statistical analyses that will be conducted to produce inferential statistics.

Figure 6-2: Proportion of Religious Backgrounds in the Sample

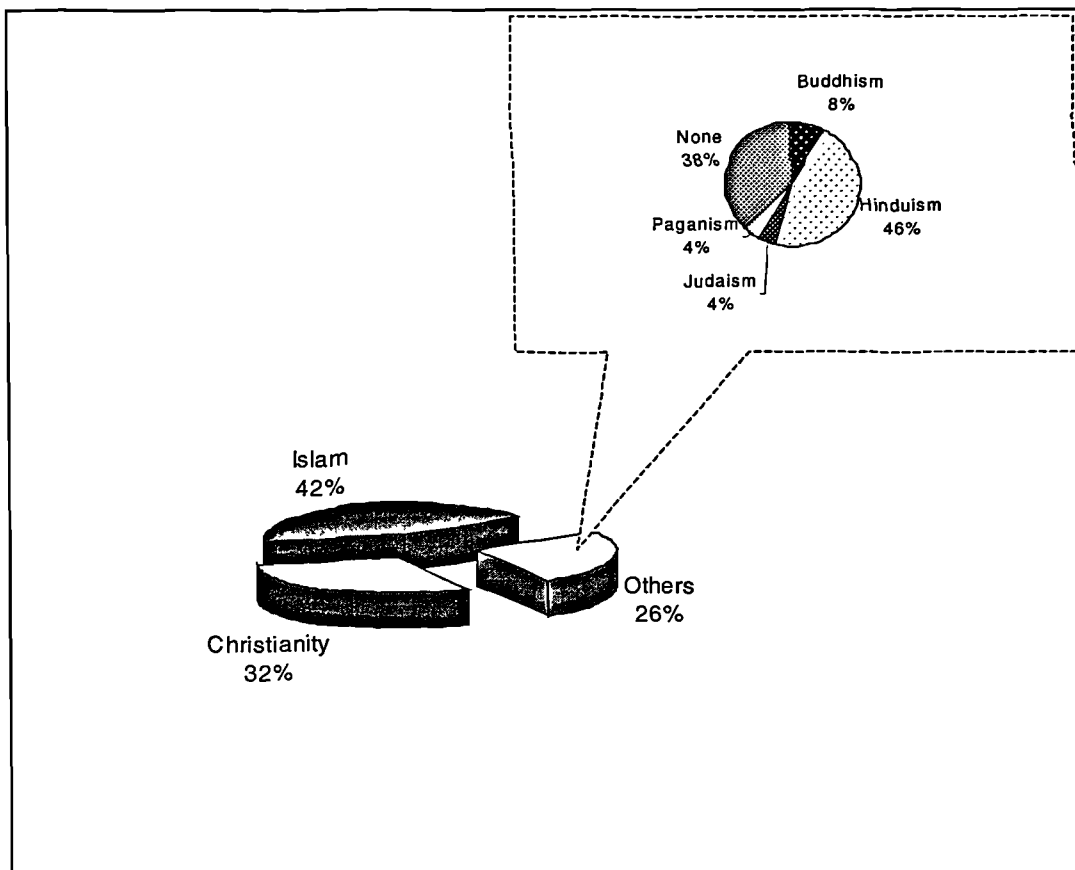


Table 6-1 shows that the worst imbalance in gender in this sample is present in the Muslim group. By focusing specifically on the Muslim group it can be shown that it consists of a massive 79% of male participants in contrast to the marginal 21% of female participants that make up the remainder of the Muslim group. The participants of the 'Others' sub-sample displays a perfect balance of the gender attribute (50% for both males and females) and finally the Christian sub-sample comprises more male participants (62%) than female participants (38%). Results produced from future statistical tests have to be cautiously interpreted by taking into consideration the imbalance of the gender attribute in this sample.

An age group comparison between the three religious groups cannot be performed in this experiment due to the conspicuous inequality in the number of participants that make up each religious group (N for Muslims = 38, N for Christians = 29 and N for Others = 24). All other cross-group comparison analyses performed in the previous experiment will be repeated in this experiment. If the difference in the group sizes in this sample is temporarily ignored, one can make the following notes from the results of the cross-group analyses that have been performed for the different categorical variables of interest:

1. The Graduate variable shows that the 'Others' group consists of a significantly higher educated number of individuals (97%) than the other two groups combined. The Christian group consists of 79% of graduates while the Muslim group contains the least number of graduates (71%) when compared to the other two religious groups;
2. The dominant ethnicity in the Muslim sample is the Pakistani origin (39%) followed closely by the Arab origin (29%). The Christian sample is predominantly European / White (83%) and the majority constituting the 'Others' group are of an Indian origin (34%) followed closely by those who are from a Chinese origin (25%).
3. Nearly half of the Muslim sample has at least 2 years of work experience (48%) and 34% of individuals from the 'Others' group possess the same work experience. In contrast, only 27% of the Christian sample possesses a work experience of at least 2 years.
4. In general, the majorities in all the 3 religious groups have been using the Internet for at least 3 years (61.5%).

5. All 3 groups collectively are quite familiar with Web-browsers (93.5%) and search engines (77%).
6. A moderate 41% of the Christian group and 46% of the 'Others' group have either purchased items from an online store on an occasional or on a frequent basis but the same cannot be said about the Muslim group whose dominant majority has never purchased anything from an online store (63%).
7. The Muslim sample consists predominantly of religiously conservative individuals (86%). In contrast, the majority in the other two religious groups falls under the liberal or the moderate category (**Christians:** conservatives = 24%; moderates = 35%; liberals = 41%, **Others:** conservative = 0%; moderates = 37%; liberals = 63%).

6.2 Preliminary Statistical Analyses

6.2.1 Normality and Skewness of the Distribution

As is the previous experiment, the Kurtosis and Skewness tests were performed on the data to test for the normality and the extent of skewness that is inherent in the sample's data distribution. To recap briefly on the meaning of the skewness test, the skewness test measures the asymmetry of a distribution. A positive skewness value indicates a positively skewed data distribution and a negative skewness value signifies a negatively skewed distribution of the data. In general, a skewness value greater than one indicates a distribution that differs significantly from a normal, symmetric distribution (SPSS Inc. 1998). Table 6-2 shows that all scales in this test have scored below the critical value of 1.

Table 6-2: Skewness and Kurtosis of Scales

Construct	Mean	Median	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
RELIG	3.15	3.22	-0.25	.25	-1.21	.50
GTI	3.17	3.22	-0.24	.25	.39	.50
RELSALE	2	1.71	.72	.25	-.66	.50
SECUL	3.92	4.00	-.3	.25	-1.14	.50
WBTM	3.34	3.00	-.2	.25	.52	.50
WBTC	3.32	3.33	-.53	.25	.63	.50
WBTN	3.48	3.33	-.46	.25	.58	.50
ATTM	2.98	2.80	.21	.25	-1.12	.50
ATTC	2.54	2.40	.38	.25	-.17	.50
ATTN	3.41	3.40	-.52	.25	.02	.50

N=91. Note the values typed in bold represent values of non-normal distributions

Several statisticians argue in their textbooks that when the size of the sample is moderately large, the distribution of the data can be assumed to follow a normal distribution (Kachigan 1991; Newbold 1995; Tabachnick and Fidell 1996; Norusis 1998). If this happens to be the case parametric tests can be performed on the data regardless of the outcome of a normality test. This is known as the Central Limit Theorem. Although none of the statistical textbooks mentioned earlier specified the minimum size for a theoretically 'moderately' large sample, according to some of the books, a sample size of 30 or higher is sufficient for assuming that the Central Limit theorem holds (Kachigan 1991; Newbold 1995).

The results of the skewness test together with the assumption of the Central Limit Theorem indicates that there is no evidence against the notion that our data is normally distributed and thus parametric tests will be used to analyse our data.

6.2.2 Statistical Outliers

A test for outliers performed for this experiment revealed that some extreme cases were present in the data. According to Norusis (1998), cases with extreme values do not necessarily signify the presence of outlying cases in the data. Norusis (1998: p. 94) contends that extreme cases represent

'one of the largest or smallest values' in the data and the decision of whether extreme cases represent 'unusual' outlying cases in the data is left to the researchers' discretion. We assume that the extreme cases found in the RELIG (religiosity) variable represent cases of very religious individuals and therefore we retained these cases for subsequent analyses. The rationality behind this assumption can be questioned but the point to be emphasized is that the religiosity variable measures a subjective hypothetical construct that is assumed to reflect the extent of religious commitment in an individual. If cases with extreme values were identified during the analysis of an objective variable such as a person's 'blood pressure', the inclination to speculate that these extreme cases represent 'outliers' in the statistical data would be more justifiable than when extreme cases of religious commitment (religiosity) are detected in the sample's data.

6.2.3 Missing Values

Some questions in the religious section and in the Web site evaluations section of the questionnaire were left unanswered by some participants. The motive behind skipping these questions cannot be confirmed but side-comments left by some participants beside these questions gave us a clue on why some of the participants skipped answering these questions.

In the religious section of the questionnaire, the highest number of missing cases was found in questions 9 to 14. These questions represent the constituent items of the GTI scale (Group Trust and Group Integrity). Most of the respondents who haven't answered these questions commented that some of these items were not applicable to the context of their religion. To elaborate on this issue, some respondents stated that congregational or group duties are not part of their religious commitment and others stated that group activities such as congregational prayers are constrained to the male worshippers only. Whatever the reason turns out to be for these missing cases the total percentage of missing cases for each of these questions was not very significant (Q9 = 4.3%, Q10 = 4.3%, Q11 = 6%, Q12 = 4.3%, Q13 = 6% and Q14 = 6%). To offset this problem, an appropriate statistical estimation technique was used to counter for the missing values of these questions. The Series mean estimation method replaces the missing values with the calculated mean of the entire series (SPSS Inc. 1998). This is the estimation method that was eventually adopted to correct for the missing cases problem. The percentage of missing cases found in the Web-site evaluation section of the questionnaire was significantly higher than those found in the religious section. Questions 9 and 12 were found to contain a significant number of missing cases. The overall percentage of missing values for both questions was 22.7% and 16.5%, respectively. The percentage represents the missing values found for all three instances of Web-site evaluations. Since the percentage of missing cases here is

significantly higher than in the previous case, especially in the case of question 9 where nearly a quarter (22.7%) of the answers were missing, the decision to discard both items from future analyses seemed to be more appropriate for this case.

6.3 Exploratory Data Analyses

6.3.1 Construct Validity

To recap briefly on the meaning of this term, construct validity tests if the items of a scale are logically related to each other. The statistical tool used for exploratory studies is factor analysis. A detailed discussion describing both techniques can be found in Chapters 3 and 4. A construct is said to be valid if the items constituting the measurement scale of this construct load significantly on a common factor and simultaneously display insignificant loadings on all other factors. The same extraction and rotation methods that were used in the previous experiment have been adopted for this experiment. Table 6-3 shows the results of the factor analysis test:

Table 6-3: Factor Loadings¹ of Items in Section III & IV of the First Part of the Questionnaire

ITEM	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5
Q1	0.6909	0.0094	0.0620	0.0770	0.1802
Q2	0.6846	0.1374	0.1089	0.1178	0.0297
Q3	0.7099	0.0435	-0.0802	0.2214	0.2087
Q4	0.7551	0.0737	-0.0317	0.1424	0.1919
Q5	0.6802	0.1434	0.0113	0.1887	0.1011
Q6	0.5887	-0.2064	0.0904	-0.2085	-0.0600
Q7	0.5542	-0.0295	0.2894	0.0556	0.0372
Q8I	0.5867	0.2884	0.0491	-0.1645	0.0675
Q8II	0.6085	0.2255	-0.0653	-0.1915	0.0508
Q8III	0.2255	-0.2618	0.1253	-0.1335	0.4743
Q8IV	0.1191	-0.0065	0.0973	0.0148	0.6637
Q8V	-0.0618	0.0687	-0.0619	0.0246	0.7497
Q9	0.0791	0.0937	0.6704	-0.0225	0.0048
Q10	-0.0908	-0.1121	0.7970	0.0002	0.0567
Q11	0.1096	0.1049	0.2981	0.4553	-0.0059
Q12	0.3767	0.0266	0.1935	-0.1639	0.2581
Q13	0.1191	0.2048	0.6766	0.0839	-0.0494
Q14	0.0492	0.1439	0.7044	0.0892	0.0695
R2_Q1	0.4586	0.4496	0.1396	-0.0164	0.0785
R2_Q2	0.3298	0.5528	0.0162	0.1046	0.1031
R2_Q3	-0.1591	0.6492	0.2150	-0.1210	0.1217
R2_Q4	0.1556	0.7361	-0.0144	0.027	-0.1121
R2_Q5	0.0971	0.6069	0.1062	0.0205	0.1686
R2_Q6	0.0573	0.5446	0.3312	-0.0895	-0.1106
R2_Q7	0.0425	0.3985	0.0176	-0.5372	0.0174

¹r = 0.354; N = 50; p < 0.01. Note that the values in bold signify that the loading is significant.

Table 6-4: Factor Correlation Matrix

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5
FACTOR1	1.000				
FACTOR2	0.316*	1.000			
FACTOR3	0.426**	0.365**	1.000		
FACTOR4	-0.025	-0.021	0.042	1.000	
FACTOR5	0.505**	0.133	0.293	0.031	.000

*Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

6.3.2 Factor Analysis of the Demographics Section of the Questionnaire

Table 6-3 shows that the first 10 questions (Q1 to Q8ii) of the religious section loaded on a common factor: FACTOR1. The first 8 questions represent the 3 dimensions of religiosity- ritual involvement, religious devotionism and communal involvement- while the two remaining questions were 2 out of the 5 religiously related 'trick' questions that were incorporated in the questionnaire to counter for the problem of the acquiescent response set. The contents of all 10 questions seem to reflect the common concept of religious involvement or commitment and thus we can assume that FACTOR1 represents the latent construct of religiosity. The convergent loadings of all 10 items on a common factor (FACTOR1) substantiate the argument that the religiosity construct is valid or said alternatively, these 10 questions can be assumed to collectively represent a valid measure of the religiosity construct.

Another of the latent constructs that was identified from the significant factor loadings is the RELSCALE. This construct is hypothesized to reflect the extent of religious centrism or fundamentalism inherent in an individual. All seven questions of the RELSCALE construct loaded significantly on one common factor, which signifies that they portray a common concept. Although a couple of these questions did share their loadings with other factors, these 7 questions were the only items that have loaded significantly on FACTOR2. This further attests to the validity of the RELSCALE construct.

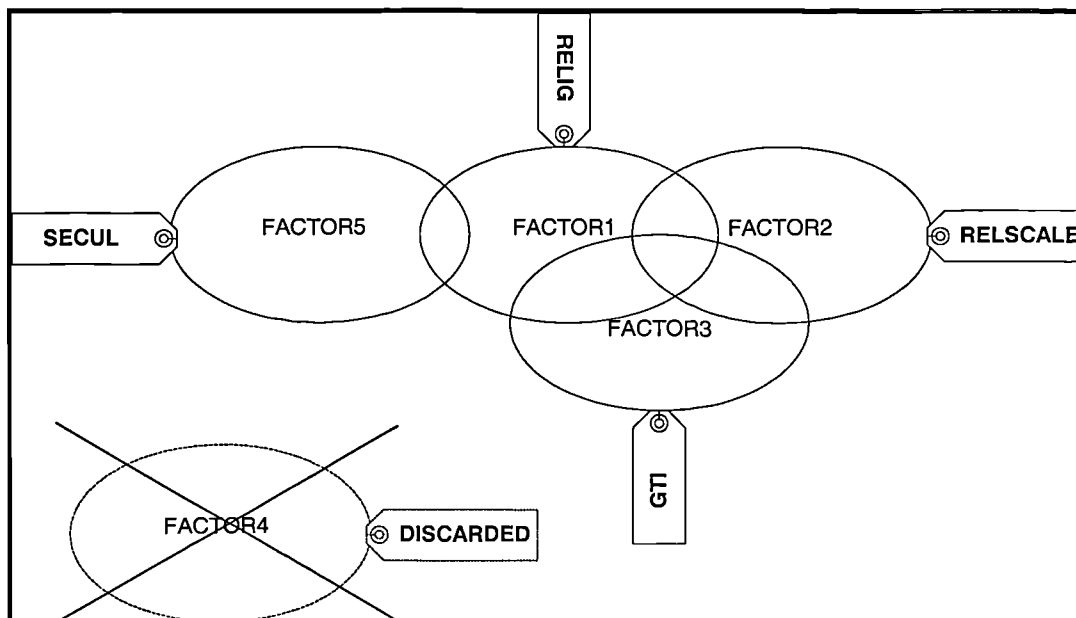
FACTOR3 shared loadings with 4 out of the 6 items that represent the GTI (Group Trust and Integrity) construct. The questions that were meant to reflect the GTI construct were questions 9 to 14. One cannot be absolutely confident that the loadings of these 4 items on FACTOR3 can be

interpreted as a confirmation that these items represent the GTI construct. At the same time, one can argue that the loadings of these 4 items on FACTOR3 partially explain the GTI construct (only 4 out of the initial 6 questions of the GTI scale shared significant loadings with FACTOR3).

The significant loadings on FACTOR 4 came from items representing 2 different constructs: GTI and RELSCALE. The final decision was however to discard this factor from future analyses. This decision was based on Tabachnick's (1996) advice that factors composed of only 2 items are unreliable.

Finally, FACTOR 5 shared significant loadings with 3 out of the 5 items that were incorporated in the questionnaire to counter for the problem of the response set. Some of these 5 items consisted of statements that oppose the conventional religious beliefs of Muslims and Christians, which assert the existence of one God who has in the past created the universe and is still managing its affairs until this very day. The context of these 3 items seems to reflect the secular or naturalistic tendency of an individual. Hence, the construct was named 'Secularism' (SECUL). It is intended to be a measure of how secular an individual is or alternatively if the character of an individual bears the traits of a naturalist. Table 6-3 displays the relationships between these factors.

Figure 6-3: An Illustration of the Correlation Between the Different Factors Extracted from the Demographics Section



The factor correlation matrix displayed in Table 6-4 shows that all three religiously oriented factors (FACTOR1, FACTOR2 and FACTOR3) are significantly correlated with each other. This comes to no surprise as all three factors represent the common concept of religious commitment and some other theological aspects such as religious trust, which is believed to form a significant part of the religiosity concept.

Table 6-5: Factor Loadings¹ of Items from the Web Sites Evaluation Questionnaire

ITEM	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
Q1	0.7764	0.0211	0.0541	0.0456	0.1226
Q2	0.8232	-0.0552	0.0374	0.0289	0.0834
Q3	0.8076	0.0505	0.0112	-0.0027	0.0158
Q4	0.4853	-0.0019	0.1201	0.1444	0.1327
Q5	0.8318	0.0045	0.0151	-0.0071	0.0149
Q6	0.8029	-0.0287	-0.1163	0.0271	-0.0060
Q7	0.7939	0.0396	0.0562	-0.0364	-0.0944
Q8	0.8018	0.0034	0.1254	-0.0608	-0.0397
Q9	0.2056	0.0563	0.6443	0.1308	-0.0606
Q10	0.7264	-0.0007	-0.0848	-0.0278	-0.0791
Q11	0.5892	0.1237	0.2170	0.0126	-0.0645
Q12	0.1025	0.0532	0.7158	0.0628	0.0058
Q13	0.0249	0.0156	0.0023	0.8142	-0.0353
Q14	-0.0729	0.0192	0.0815	0.8311	0.0368
Q15	0.1307	0.0946	-0.1576	0.1114	0.6516
Q16	0.1925	0.0593	-0.2667	0.1830	-0.5273
Q17I	0.0102	0.8364	-0.0403	0.0010	0.0767
Q17II	-0.1082	0.8528	0.0543	0.0654	0.0044
Q17III	0.0537	0.7955	0.0097	-0.0563	-0.0420

¹r = 0.354; N = 50; p < 0.01. Note that the values in bold signify that the loading is significant.

Table 6-6: Factor Correlation Matrix

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5
FACTOR1	1.000				
FACTOR2	0.353**	1.000			
FACTOR3	0.320*	0.181	1.000		
FACTOR4	0.421**	0.482**	0.142	1.000	
FACTOR5	-0.057	0.103	0.130	0.046	1.000

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

6.3.3 Factor Analysis of the Web sites Evaluation Section of the Questionnaire

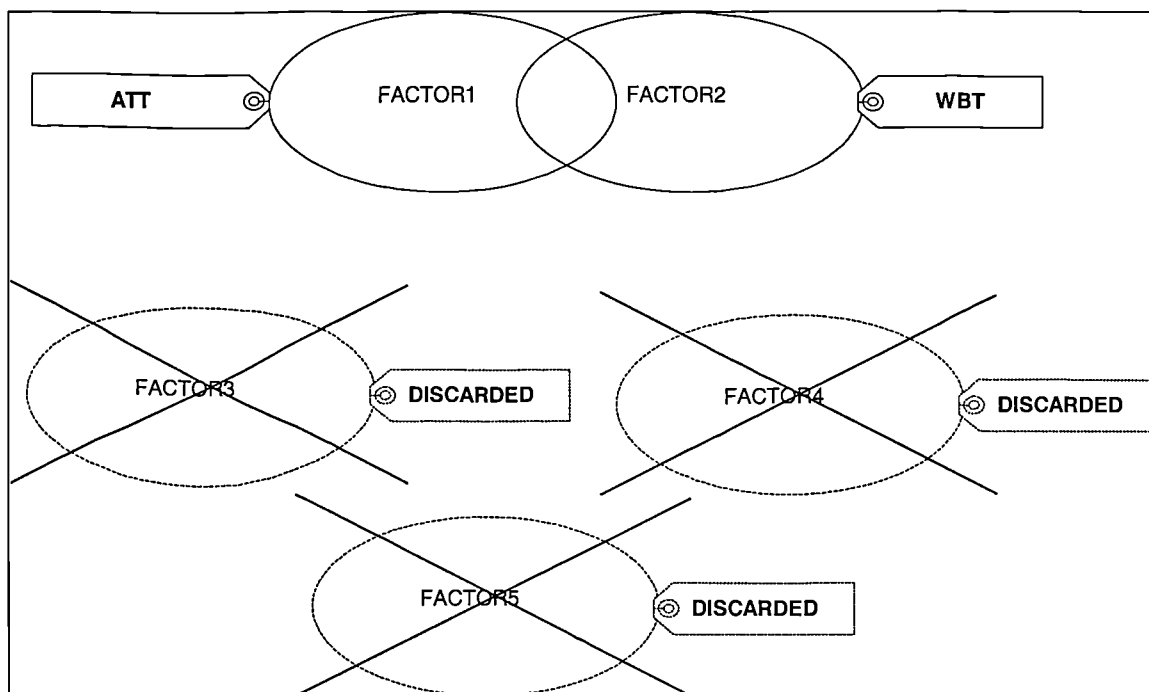
Table 6-5 shows the results of the factor analysis for the Web-site evaluation section. Five factors were extracted of which only 2 were retained for further analyses. FACTOR1 and FACTOR2 were retained and FACTOR3, 4 and 5 were discarded from further analysis. The main reason for discarding these 3 factors is that all three were described by the loadings of two items and according to Tabachnick (1996) they are unstable factors.

Most of the items that have loaded significantly on FACTOR 1 are attitude-related questions and include the item that represents the intention to buy construct. Howard (1994) described the intention-to-buy a product as a positive attitude that is felt towards an object or product of interest, which eventually can result into the actual purchase of the product. Therefore, we will assume that the constituent items of FACTOR1 represent the latent construct of positive attitudes. FACTOR1 was labelled ATT to represent a general measure of the positive or negative attitudes that an individual holds towards a Web site.

The other factor, FACTOR2, shared loadings with 3 items reflecting the three concepts, which have been repeatedly cited in the literature to be related to the trust-building process of an individual in an online environment. This factor was labelled WBT (Web-based trust) to reflect the context of trust that this factor supposedly represents. Figure 6-4 displays the relationship between these factors. The correlation matrix Table 6-6 shows that FACTOR1 and FACTOR2 are reasonably correlated with each other. The reader is reminded that FACTORS 3, 4, and 5 have been discarded from future analyses due to some reasons that we have discussed in the first paragraph of this section. These findings are in line with the theoretical discussions about trust, which claim that trust is

strongly associated with attitude and vice versa. Butler (1991), for example, contends that individuals experience trust through the process of forming favourable attitudes towards an object or person based on their knowledge, beliefs, and sensory feeling towards that object/ person. Jones and George (1998) argued that 'attitudes structure the experience of trust in specific ongoing relationships' (p. 534). Other sources have also described trust to be a positive, persistent attitude (Deutsch 1958; Giffin 1967) or some kind of a belief that affects an individual's attitude towards an object (Kini and Choobineh 1998).

Figure 6-4: An Illustration of the Correlation Between the Different Factors Extracted from the Web-site Evaluation Section



6.4 Construct Reliability

We have demonstrated in the previous section that as a result of the factor analyses that have been performed on the data collected from the participants via the questionnaires, 5 factors were identified from the significant factor loadings of the various questionnaire items. These 5 factors will subsequently be used to represent the measurement scales of the underlying latent constructs. The factor analyses mainly dealt with the validity issue of the constructs. The next important stage of our analysis is test the reliability of the constructs. Construct reliability is concerned with whether a measure yields the same outcome every time it is used in different instances (Coolican 1994). The

most famous form for testing a construct's reliability is the internal consistency test, which is usually performed using the statistical test of Cronbach's alpha (Cronbach 1951). The internal consistency test of Cronbach Alpha was adopted to test the reliability of the measurement scales, which have been identified by the exploratory factor analysis.

Table 6-7: Results of the Cronbach Alpha Test of Internal Consistency for the Constructs

Construct	Factor Name	N	Cronbach Alpha
Web-based Attitude	ATT	10	.9347
Group Trust and Integrity	GTI	4	.8580
Religo-centrism	RELSCALE	7	.8565
Religiosity	RELIG	9	.9211
Secularism	SECUL	3	.7000
Web-based Trust	WBT	3	.8807

N = Number of questions that loaded significantly on the factor.

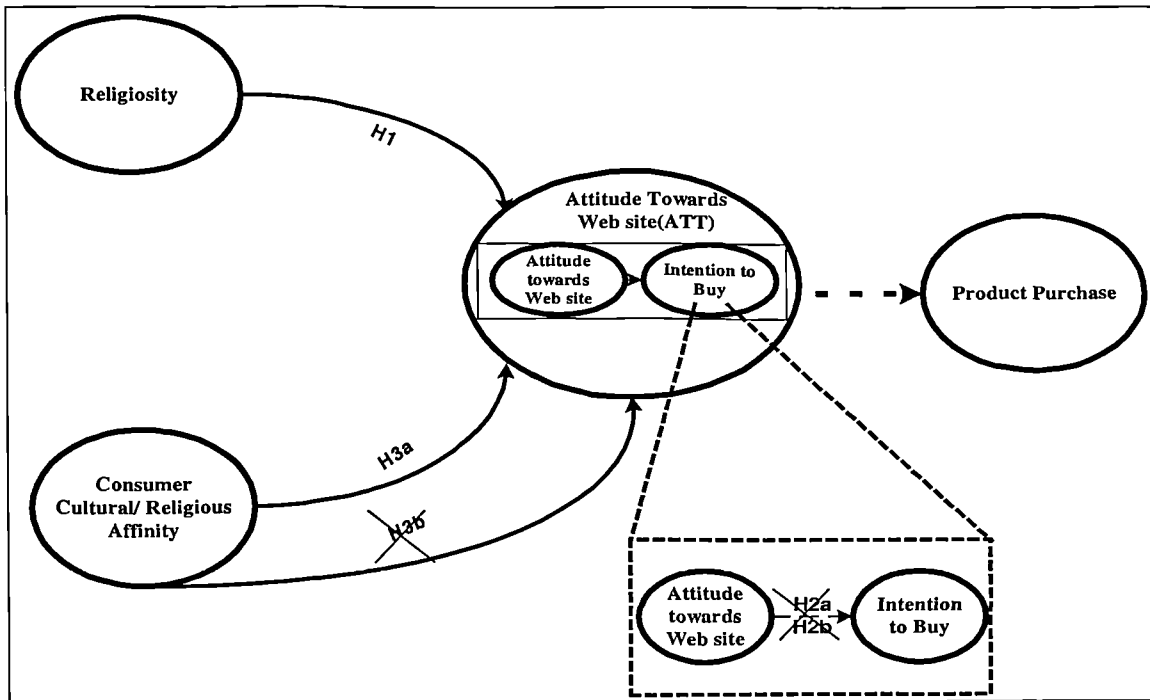
6.4.1 Discussions

As has been mentioned previously, The Cronbach alpha coefficient value of 0.7 was adopted as the threshold measure of a construct's reliability (see section 5.5). Table 6-7 shows that most scales, apart from the SECUL scale, scored above the threshold value of 0.7. Thus there is no evidence against the internal consistency of the three measurement scales/ constructs and therefore, they can be assumed to be reliable. The SECUL scale however, produced a Cronbach alpha of exactly 0.7, which raised the argument of whether to retain it or not. The factor analysis results show that most of the items that represent the different latent constructs loaded on separate factors. This is far from being a confirmation that all constructs reflected by the constituent items are valid but the convergent loadings of these items on separate factors is an evident trait of construct validity (Bearden and Netemeyer 1999; Coolican 1994; DeVellis 1991).

6.4.2 Revised Research Model II

Unlike in the previous experiment, the factor analysis and the Cronbach Alpha reliability tests have produced results that enable us to test most of the hypotheses represented by our research model. The factor analysis in this experiment has identified 6 significant factors. Most of these factors reflect characteristics that are similar to the latent constructs involved in the hypothetical relationship portrayed by our research model. The only latent construct that failed to manifest in the factor analysis is the intention-to-buy construct. Like in the previous experiment, the items of the INTTOBUY construct shared loading with the items representing the ATT (attitude towards a web site) construct on a single factor. This has, however, rendered 3 hypotheses invalid- H2a, H2b and H3b- due to their dependence on the INTTOBUY construct. Overall, however, the factor analysis did not refute the validity of the other latent constructs constituting our research model. Figure 6-5 illustrates the revised “second” version of the research model. The crosses on the diagram show the hypotheses that have been affected by the factor analysis result and as a result these hypotheses were eliminated from the next phase of our analysis.

Figure 6-5: Revised Research Model (II)



6.5 Within-Group and Between Group Analysis

6.5.1 Hypotheses for this Experiment

In section 6.4.1 we have discussed that the factor analysis in this experiment has identified 6 significant factors. Most of these factors reflect characteristics that are similar to the latent constructs involved in the hypothetical relationship portrayed by our research model. The only latent construct that had failed to manifest in the factor analysis is the intention-to-buy construct (INTTOBUY). Like in the previous experiment, the items representing the INTTOBUY construct and the items representing the ATT (attitude towards a web site) construct loaded significantly on a single factor. As has been mentioned previously, this resulted into rendering hypotheses H2a, H2b and H3b invalid since these hypotheses depend on the INTTOBUY construct and thus leaving us with two hypotheses to test: H1 and H3a. Figure 6-5 illustrates the second version of our research model that has been revised to reflect the outcome of the exploratory factor analysis. The crosses on the diagram show the hypotheses that have been affected by the factor analysis result and as a result these hypotheses were eliminated from the next phase of our analysis.

The initial hypotheses that were portrayed in our research model are:

Hypothesis 1: The level of attitude and trust held by a consumer towards a vendor will increase when both parties are from an identical religious background.

Hypothesis 2a: As the attitude towards a vendor changes favourably, the buyer's intention to buy will increase accordingly.

Hypothesis 2b: As the trust between a buyer and vendor increases, the buyer's intention to buy will become stronger.

Hypothesis 3a: Consumer religious-centrism will instil negative attitudes in consumers towards other religious Web sites.

Hypothesis 3b: Religious-centric consumers will feel reluctant to buy from other religious Web sites.

As mentioned previously, the failure of the constituent items of the INTTOBUY construct to load on a separate factor deprives us from testing H2a, H2b and H3b, due to their dependence on this

construct. Thus, the following are the hypotheses (each is presented with a corresponding null hypothesis), which remained for us to test in this experiment:

(1) H_1 : *The level of attitude and trust held by a consumer towards a vendor will increase when both parties are from an identical religious background.*

H_0 : *There is no association between religious affiliation and the extent of trust and attitude held towards a vendor.*

(2) H_2 : *Consumer religious-centrism will instil negative attitudes in consumers towards other religious Web sites.*

H_0 : *The extent of religious-centrism in a person does not affect his/ her attitude towards a vendor.*

6.5.2 Descriptive Statistics

We will here follow the tradition of the descriptive statistics section (see section 5.6.1) in the previous Chapter by first presenting the descriptive statistics of the constructs that have been used in this experiment in tabular format, then following it with a graphical presentation of the data and a discussions section of the results.

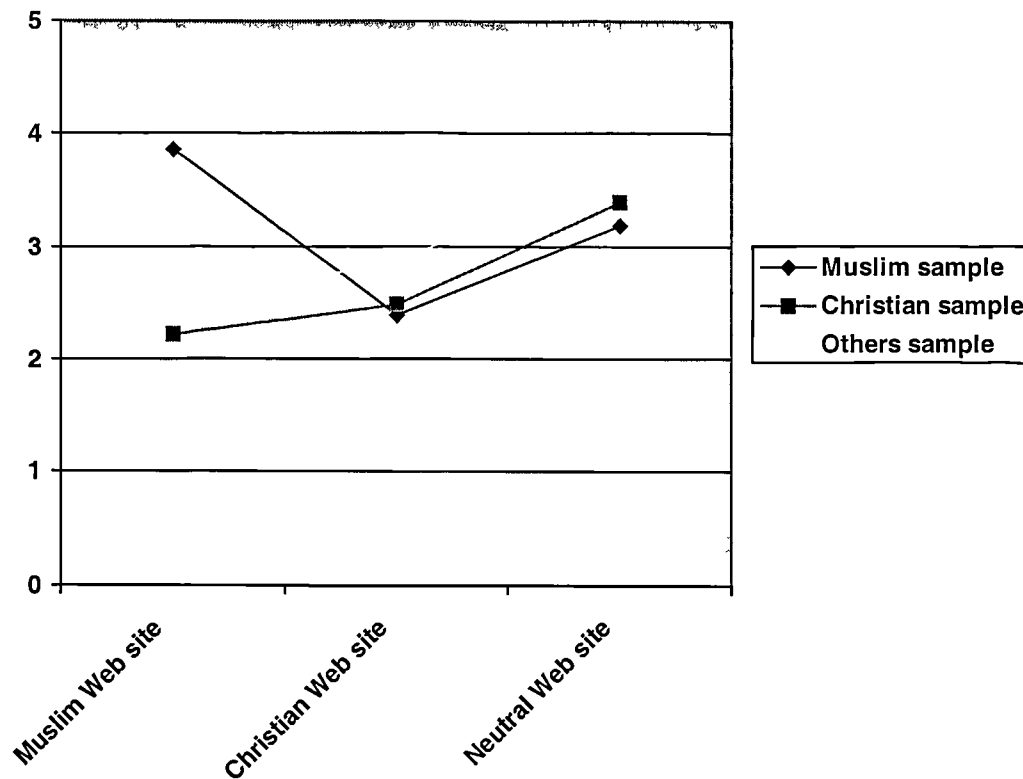
DESCRIPTIVE STATISTICS OF THE SECOND EXPERIMENT

Table 6-8 shows the descriptive statistics of the constructs used in the second experiment, for the three religious groups.

Table 6-8: Descriptive Statistics of Constructs used in the Second Experiment

Construct	Religion	N	Mean	Median	Std. Deviation
WBTM	Muslim	38	3.62	3.67	0.78
	Christian	29	3.21	3	1.03
	Others	24	3.1	3	0.54
WBTC	Muslim	38	3.18	3.33	0.88
	Christian	29	3.4	3	1.04
	Others	24	3.44	3.33	0.75
WBTN	Muslim	38	3.4	3.33	0.81
	Christian	29	3.5	3.33	0.86
	Others	24	3.6	3.67	0.85
ATTM	Muslim	38	3.85	4.05	0.94
	Christian	29	2.22	2.2	0.7
	Others	24	2.53	2.4	0.51
ATTC	Muslim	38	2.39	2.4	0.77
	Christian	29	2.49	2.3	0.935
	Others	24	2.85	2.75	0.7
ATTN	Muslim	38	3.18	3.4	0.92
	Christian	29	3.39	3.2	0.65
	Others	24	3.78	3.8	0.71

Each line in the charts of Figure 6-6 and Figure 6-7 shows a graphical representation of the means of the WBT and ATT constructs for each religious group.

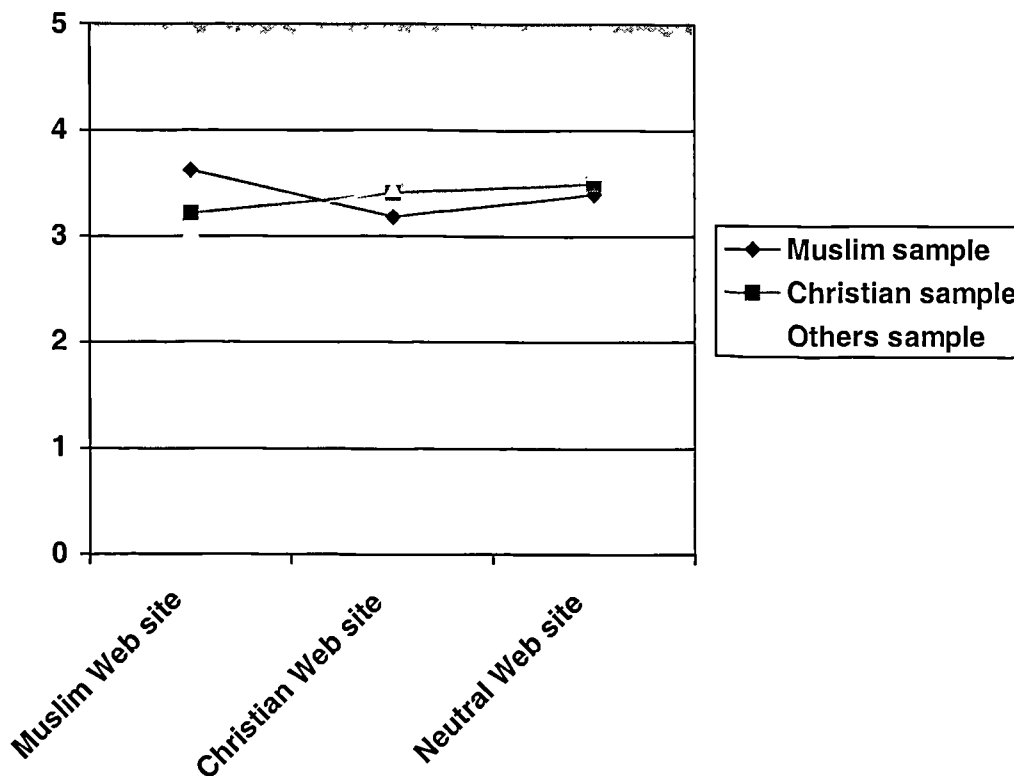
Figure 6-6: Charts illustrating the means of the ATT construct for the 3 religious groups

6.5.3 Discussions

Figure 6-6 shows the attitudes held by each religious group towards the three different Web sites. It is quite apparent that the only significant difference between the three religious groups emanates from the Muslim sample. The Muslim sample seems to prefer to a “higher” extent (illustrated by the high ATT score) the Muslim Web site on the other two Web sites. In addition, when comparing the ATT score of the three religious groups, the Muslim sample collectively displays a higher attitude (preference) towards the Muslim Web site in contrast to the other two religious groups (this is illustrated by the wide gap between the marker of the ‘Muslim sample’ line on the left-hand side of the chart and the corresponding markers of the other two lines). The Christian sample as in the previous experiment seems to prefer the neutral Web site to the Christian Web site. In fact, the attitudes displayed by the Christian group towards the two religious Web sites are quite low and not that different from each other. This could perhaps signify that religious Web sites are not the Christian sample’s “cup of tea”. Note also that the shape and distribution of the “Christian sample” line is

similar to that of the “Others sample” line indicating to perhaps that these two religious groups share similar opinions about what features constitute a “likeable” Web site. We cannot confirm the validity of any of these statements as they have yet to be proven “statistically”.

Figure 6-7: Charts illustrating the means of the WBT construct for the 3 religious groups



In Figure 6-7, we can see that there seems to be no significant differences in Web-based trust between the three religious groups. The three religious groups seem not to be very discordant in their trust towards the three different Web sites. It is unlikely that there is any significant interaction between the religious affiliation of a user and the religiosity of a Web site. Although the Muslim group seems to trust the Muslim Web site more than the other two Web sites, unlike in the previous experiment, the difference in this experiment is marginal (see Table 6-8). The same statement applies to the Christian and the “Others” group.

The validity of the previous statements made about the ATT and WBT constructs will further manifest after running an appropriate statistical test. The aim of the statistical test will be two-fold: to investigate if the trust and attitude displayed by each religious group varies significantly from one Web site to another (within-subjects effect) and if the web-based trust and attitude displayed by one

religious group, towards a Web site, is significantly different from that of the other two groups (between-subjects effect).

6.5.4 Parametric Tests for Analysing Potential Differences Between the 3 Religious Groups

Analysis of variance (ANOVA) is a statistical method for testing hypotheses about means for more than 2 groups. If there were only 2 groups involved in an experiment, the t-test would be a more appropriate statistical test for testing differences about the means of a distribution. A "main effect" in an ANOVA represents the direct effect of an independent variable on the dependent variable. An "interaction effect" is the joint effect of two or more independent variables on the dependent variable.

PRECONDITIONS FOR USING ANOVA

This section will discuss the preconditions for running an ANOVA test. The three major prerequisites for using an ANOVA test include homogeneity of variance, normality of data, and finally equal sample or group sizes (Jaccard 1998; Tabachnick and Fidell 1996).

Homogeneity of Variance: One key assumption of the ANOVA is that the data in each cell comes from populations with similar variances. When there is more than one independent variable involved in the analysis, there must be homogeneity of variances in the cells formed by the independent categorical variables. Groups formed by the independent variable(s) are assumed to have similar variances on the dependent variable.

Normality: ANOVA is a parametric procedure which therefore requires that the distribution of the data to be normal. In addition it assumes multivariate normality: each dependent variable has a normal distribution for each value category of the independent variable(s).

Equal sample sizes: Another key assumptions in ANOVA is that the groups formed by the independent variable(s) are relatively equal in size: the cells of each independent variable must contain an equal number of cases.

ANOVA has different experimental designs the most commonly used are: Between-Subjects ANOVA, Within-Subjects ANOVA, and Mixed-Factorial ANOVA, which actually is a "blended" between-subjects and within-subjects design.

BETWEEN-SUBJECTS ANOVA

In a between-groups ANOVA design, independent samples or groups are exposed to different conditions. The groups correspond to conditions, which are categories of a categorical independent variable. For instance, four random groups might all be asked to take a performance test (the interval dependent variable) but each group might be exposed to different levels of noise distraction (the categorical independent variable).

WITHIN -SUBJECTS ANOVA

In the within-groups or repeated measures design, there is only one group of participants. The conditions are the categories of the independent variable, which is the repeated measures factor, and each participant is exposed to each condition and measured. For instance, four random groups might all be asked to take a performance test (the interval dependent variable) four times, once under each of the four levels of noise distraction (the categorical independent variable).

The object of repeated measures design is to test for the differences in means within the same group of participants at each category (for example, levels of distraction) of the independent variable. Each level of the independent variable must be independent from the other levels (for example, a participant's performance under one type of distraction should not affect his/ her performance under a different type of distraction). Each participant is his or her own "control": the different "groups" are really the same people tested at different levels of the independent variable. The Repeated measures ANOVA design is more vulnerable to violations in the homogeneity of variances (and covariances in ANCOVA) than the between-subjects ANOVA design (Tabachnick and Fidell 1996).

MIXED-FACTORIAL ANOVA

Some experimental designs consist of both between- and within-subjects variables. This type of design is known as a mixed-factorial design. Mixed designs is a term which refers to the fact that in repeated measures ANOVA there also may still be one or more between-subjects factors in which each group of the dependent variable is exposed to a separate and different category of an independent variable. Said alternatively, a mixed factorial design involves one or more independent variable(s) that is/ are measured both between subjects and within subjects.

Mixed designs are common. For instance, a performance test might be the interval dependent variable, noise distraction might be the within-subjects repeated factor administered to all subjects in a counterbalanced sequence, and the between-subjects factor might be the mode of testing (for example, having a pen-and-paper test group and a computer-tested group). Tabachnick and Fidell (1996) caution that factorial designs including more than one between-subjects independent variable can be affected by unequal sample sizes.

SIGNIFICANT EFFECTS IN ANOVA

Of all the information presented in an ANOVA table, the most prominent to a researcher is most likely to be the p value, which is located in the "Sig." column of the ANOVA output. If the number found in this column is less than the critical value set by the experimenter, then the effect is said to be significant. Since this value is usually set at .05, any value less than this will result in significant effects, while any value greater than this value implies an insignificant effect.

If the effects are found to be significant, it implies that the differences in the means are too significant to have occurred by chance alone. On the other hand, if the effects were found to be insignificant, then the differences between the means are not large enough to enable the researcher to imply that they are different. In the latter case, no further interpretation is attempted. When the effects are significant, the means must then be examined in order to determine the nature of the effects. There are procedures called "post-hoc tests" to assist the researcher in this task, but often the analysis is fairly evident simply by looking at the size of the different means. For example, in this experiment, the attitudes held by the three religious groups (see section 6.5.2 and Figure 6-6) towards the Muslim Web site (ATTM) seem to be significantly different.

The mixed-factorial ANOVA design fits the description of our experimental settings quite comfortably. In this experiment, we are investigating if there is a potential interaction between religious affiliation, religio-centrism (between-subject factors) and a Web site's religiosity (within-subjects factors: The reader is reminded that we are investigating if the attitude and trust of each participant varies between the three different Web sites). Therefore, the mixed-factorial ANOVA design seems to be the most appropriate for our research study.

6.5.5 Preliminary Tests of ANOVA

In this section, we will present the tests that we have conducted to see if the data collected in this experiment meets the prerequisites for conducting an ANOVA.

NORMALITY

We have already shown in section 6.2.1 that the skewness test conducted for all constructs used in this experiment showed no evidence that the distribution of the data collected for this experiment is non-normal.

EQUAL SAMPLE SIZES

Table 6-9: Between-Subjects Factors for the ATT Construct

INDEPENDENT VARIABLES	N
<u>RELIGION</u>	
Christian	29
Muslim	38
Others	24
<u>RELICAT</u>	
Conservatives	40
Liberals	28
Moderates	23
<u>RELIGIOUS-CENTRISM</u>	
High	12
Low	53
Medium	26

Table 6-9 shows that the cell sizes are unequal across the categories of each independent variable. As mentioned previously, the ANOVA test becomes less reliable when the sample size of the groups are different from each other (Jaccard 1998; Tabachnick and Fidell 1996). Toothacker (1993) recommends to run the Games-Howell (GH) as a post hoc test with an ANOVA for situations of unequal (or equal) sample sizes and unequal or unknown variances. GH can be liberal when sample size is small and it is recommended for experimental designs where group sample sizes are not less than 5. Since the sample size of each category of independent variable is greater than 5 (see Table 6-9), we have therefore included the GH post-hoc test in our ANOVA design to offset the problem of unequal sample sizes.

HOMOGENEITY OF VARIANCE

Box's M tests the null hypothesis that the observed variance-covariance matrices of the dependent variables are equal across groups. Box's M test of homogeneity of variance is computed by SPSS to test the ANOVA assumption that each group/ category of the independent variable(s) has the same variance. If the Box's M statistic is significant at the 0.05 level or better, the researcher rejects the null hypothesis that the groups have equal variances. The test is vulnerable when within-group sample sizes are large and when the assumption of multivariate normality is violated (SPSS Inc. 1998).

Table 6-10 Box's Test of Equality of Variance-Covariance Matrices (Homogeneity of Variance)

Construct	Box's M Value	Sig
ATT	78.435	.998
WBT	82.288	.996

According to the values displayed in Table 6-10, neither of the constructs showed a significant M value ($p > 0.05$) and thus we can assume that data in this sample has similar variances for each group/ category of independent variables. The 'hallmark' issue is that the outcome of this test shows that the data of this sample did not violate the assumption of homogeneity of variance, which is one of the prerequisites for running an ANOVA. Even if the homogeneity of variance assumption would have been violated, we have already taken a precautionary measure by adopting the GH post-hoc test (see the discussion of the previous section on equal sample size), which is used in situations that involve unequal sample sizes and unequal or unknown variances (Toothacker 1993).

6.5.6 Results of the Multivariate Test

A mixed-factorial analysis of variance was carried out on the six dependent variables and the three independent variables used in this study. The dependent variables were grouped into 2 within-groups factors: ATT and WBT. Each of these factors represents the three different instances of attitude and trust displayed by each group towards the three different Web sites (ATTC = attitude towards Christian site, ATTM = attitude towards Muslim site and ATTN = attitude towards neutral site, WBTC = trust towards Christian site, WBTM = trust towards Muslim site and WBTN = trust towards neutral site). The Independent variables or predictors were RELTYPE (Muslims, Christians, and Others), RELCAT (conservatives, moderate or liberal), and RELSCALE (high, medium and low).

The GTI construct was discarded from our analysis for the simple reason that it has not been involved in our research model. The three independent variables were used in the ANOVA test to represent the between-groups factors of this experiment.

The three categories of the RELCAT predictor were derived from the participants' scores on the RELIG scale. Participants who scored in the range of 1 to 3 were placed in the 'liberal' category. Participants whose scores lie between 3.1 and 3.5 were placed in the 'moderate' category and finally participants whose scores lie between 3.51 and up to 5 were placed in the 'conservative' category. The same procedure was applied on the scores of the RELSCALE variable in order to generate three different categories (low, medium and high). These three different categories will be used to reflect the extent of religio-centrism inherent in an individual.

SPSS produces 4 different rows of output listings for the within-subjects effect section of an ANOVA test: Sphericity Assumed, Greenhouse-Geisser, Huynh-Feldt, and Lower-bound. Kinnear and Gray (1999) suggest that if the data did not violate the test of homogeneity of variance, the researcher can use the "Sphericity Assumed" row for reading the results.

Table 6-11: Within-Subjects Effect of the ATT Construct for the 3 Religious Groups

Source	Type III Sum of Squares	Df	F	Sig.
ATT	3.190	2	3.482	.033
ATT * RELTYPE	5.267	4	2.874	.025
ATT * RELCAT	1.515	4	.827	.510
ATT * RELSCAL2	2.540	4	1.386	.242
ATT * RELTYPE * RELCAT	.647	6	.235	.964
ATT * RELTYPE * RELSCAL2	.673	4	.367	.832
ATT * RELCAT * RELSCAL2	2.690	6	.979	.442
ATT * RELTYPE * RELCAT * RELSCAL2	.547	4	.299	.879
Error (ATT)	67.804	148		

Note that the values in bold signify that the p value was significant

Table 6-12: Within-Subjects Effect of the WBT Construct for the 3 Religious Groups

Source	Type III Sum of Squares	Df	F	Sig.
WBT	.180	2	.213	.808
WBT * RELTYPE	.723	4	.428	.789
WBT * RELCAT	.271	4	.160	.958
WBT * RELSCAL2	2.188	4	1.294	.275
WBT * RELTYPE * RELCAT	1.073	6	.423	.863
WBT * RELTYPE * RELSCAL2	.781	4	.462	.764
WBT * RELCAT * RELSCAL2	.433	6	.171	.984
WBT * RELTYPE * RELCAT * RELSCAL2	.435	4	.257	.905
Error (WBT)	62.560	148		

6.5.7 Discussions

We start this section by recapping on the conclusions made earlier in the descriptive statistics section 5.6.2. We have mentioned in the previous discussions of the descriptive statistics that the only significant effect to report seems to emanate from the Muslim sample. The Muslim sample seems to display a “higher” preference towards the Muslim Web site on the other two Web sites (Figure 6-6). In addition, when comparing the ATT score of the three religious groups, the Muslim sample collectively displayed a higher attitude (preference) towards the Muslim Web site in contrast to the other two religious groups (which is illustrated in Figure 6-6 by the wide gap between the marker of the ‘Muslim sample’ line on the left-hand side of the chart and the corresponding markers of the other two lines). The Christian sample as in the previous experiment was found to prefer the neutral Web site to the Christian Web site. The general attitude held by the Christian group towards the two religious Web sites was quite low in contrast to the attitude they held towards the neutral Web site. We concluded that this could indicate that the Christian sample has no preference for religious Web sites in general. Lastly, we also noted that the shape and distribution of the “Christian sample” line is similar to that of the “Others sample” line leading perhaps to the conclusion that these two religious groups share similar opinions about what features constitute an “attractive” Web site. We concluded that we could only confirm the validity of any of these findings after conducting an appropriate statistical test to see if the differences between these three religious groups are significant.

Table 6-11 and Table 6-12 show the results of the ANOVA test for the ATT and WBT dependent variables that was conducted for the three religious groups. It is evident that the only significant effect is found to lie in the first two rows of Table 6-11, which presents the ANOVA results for the ATT dependent variable. The significant effects lie in the ATT dependent variable ($p < 0.05$) and in the interaction between the ATT dependent variable and the RELTYPE independent variable ($p < 0.05$). The result of the ATT variable implies that the three religious groups hold quite different attitudes towards the three different Web sites. The interaction effect (ATT * RELTYPE) signifies that there is a relationship between the attitude displayed towards a Web site and the religious affiliation of the group or said alternatively, religious affiliation has an effect on the attitude displayed towards a Web site. This can further lead to the general conclusion that there is a relationship between a Web site's "religiosity" and the religious affiliation of a user but further test have to be conducted to confirm these findings. One point has to be clarified at this stage: the results showed no significant interactions between the extent of religious commitment of a person (RELCAT) and the attitude (ATT) or trust (WBT) displayed towards a Web site. The RELTYPE variable differs from the RELCAT variable in the respect that the former is a nominal variable that represents only the religious background of a person while the latter represents the extent to which a person feels committed to his/ her religion.

The results of these inferential statistics seem to be in line with the conclusions made earlier from the descriptive statistics. The remaining task now is to confirm if these "significant" differences between the three religious groups originate from the Muslim sample as has been predicted in the discussions of the results of the descriptive statistics (see section 0).

At this point, there is a temptation to conduct three independent sample t-tests for each pair of religious group as post hoc tests to identify the origin of the difference in the attitudes (ATT) held by the three religious groups towards the three Web sites. There are two problems however that are associated with this approach:

First, because the number of t-tests increases geometrically as a function of the number of groups, the analysis becomes complicated somewhere in the neighborhood of a certain number of different tests. Second, by doing a greater number of analyses, the probability of committing at least one Type I error (thinking that you found a significant effect when you actually didn't) somewhere in the analysis greatly increases. The probability of committing at least one type I error in an analysis is called the experiment-wise error rate. The researcher may desire to perform a fewer number of hypothesis tests in order to reduce the experiment-wise error rate. The probability of a Type I error is

called the significance level and is usually set by the experimenter. The Type I error rate is almost always set at 0.05 or at 0.01, the latter being more conservative since it requires stronger evidence to reject the null hypothesis at the 0.01 level of significance than at the 0.05 level. The ANOVA procedure in SPSS by default sets the experiment-wise error rate to the 0.05 level of significance.

An alternative and better solution is to conduct an appropriate multiple comparison post-hoc test to determine the source of the significant differences. Tabachnick and Fidell (1996) recommend running the Scheffe test as a post hoc test to an ANOVA to determine the source of a significant difference lying in a sample. We have therefore decided to run the post hoc tests of Scheffe in conjunction with our mixed-factorial ANOVA design to identify the source of the differences between the three religious groups. Appendix A-3 presents a detailed description of the different post hoc tests available for the ANOVA test.

6.5.8 Post Hoc Analysis

Table 6-13: Results of the Scheffe Test for the ATT Dependent Variable

Dependent Variable	(I) RELIGION	(J) RELIGION	Mean Difference (I- J)	Sig
ATTM	Christian	Muslim	-1.63**	0.001
		Others	-0.31	0.343
	Muslim	Christian	1.63**	0.001
		Others	1.32**	0.001
	Others	Christian	0.31	0.343
		Muslims	-1.32**	0.001
ATTC	Christian	Muslim	0.1	0.873
		Others	-0.36	0.282
	Muslim	Christian	-0.1	0.873
		Others	-0.46	0.097
	Others	Christian	0.36	0.282
		Muslims	0.46	0.097
ATTN	Christian	Muslim	0.21	0.55
		Others	-0.39	0.21
	Muslim	Christian	-0.21	0.55
		Others	-0.60*	0.02
	Others	Christian	0.39	0.21
		Muslims	0.60*	0.02

A * denotes that the mean difference is significant at the 0.05 level ($p < 0.05$) and a ** denotes that the mean difference is very significant ($p < 0.001$).

Table 6-14: Homogeneous Subsets for the ATTM Dependent Variable

	RELIGION	N	Subset	
			1	2
Scheffe ^{a,b}	Christian	29	2.22	
	Others	24	2.53	
	Muslim	38		3.85
	Sig.		.304	1.000

Means for groups in homogeneous subsets are displayed. Based on Type III Sum of Squares The error term is Mean Square(Error) = .591.

a. Uses Harmonic Mean Sample Size = 29.278.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = .05.

Table 6-15: Homogeneous Subsets for the ATTC Dependent Variable

	RELIGION	N	Subset
			1
Scheffe ^{a,b}	Christian	38	2.39
	Others	29	2.49
	Muslim	24	2.85
	Sig.		.098

Means for groups in homogeneous subsets are displayed. Based on Type III Sum of Squares The error term is Mean Square(Error) = .652.

a. Uses Harmonic Mean Sample Size = 29.278.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = .05.

Table 6-16: Homogeneous Subsets for the ATTN Dependent Variable

	RELIGION	N	Subset	
			1	2
Scheffe ^{a,b}	Christian	38	3.18	
	Others	29	3.39	3.39
	Muslim	24		3.78
	Sig.		.584	.172

Means for groups in homogeneous subsets are displayed. Based on Type III Sum of Squares The error term is Mean Square(Error) = .621.

a. Uses Harmonic Mean Sample Size = 29.278.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = .05.

6.5.9 Discussions and Implications

Table 6-13 displays the results of the Scheffe post hoc test. The table shows that the Muslim group differs significantly ($p < 0.001$), from both the Christian and the Others group, in the attitude they hold towards the Muslim Web site. This is more clearly shown in Table 6-14, where the groups are divided into homogeneous subsets. Each subset shows the group mean(s), which are close to each other, and thus they show the means that are not that different from each other. The other subset will contain the group mean(s), which differs most from the other groups. In Table 6-14, the Muslim group is displayed in a separate subset from the other two religious groups implying that the Muslim sample holds a significantly different attitude from the other two religious groups, towards the Muslim Web site. The group mean of the Muslim sample is also the highest (the different subset could contain either the “highest” or “lowest” significant value found by the post hoc comparison test) indicating that the difference in the attitude held by the Muslim groups towards the Muslim Web site is a positive one: the Muslims group seems to prefer the Muslim Web site to a much higher extent than the other two groups.

Table 6-15 shows the group means of the three religious groups for the ATTC dependent variable. Since all means are displayed in one subset, it is clear that these three religious groups do not differ significantly in their attitude towards the Christian Web site. Finally, Table 6-16 shows the group means of the three religious groups for the ATTN dependent variable. *In this case, the mean of the Christian group appears twice in two different subsets implying that the attitude held by the Christian group towards the neutral Web site is not very different from that of the other two religious groups. It seems that the group mean score for the Christian group lies somewhere in the middle between the mean scores of the other two religious groups. The Muslim and the Others group are placed in different subsets indicating that their attitudes towards the neutral Web site are significantly different from each other. Since the “Others” group has the higher mean score it seems plausible to conclude that the “Others” group seems to prefer the neutral Web site much more than the Muslim group but their attitude towards this Web site is very different from that of the Christian group. The finding for the “Others” group will not be discussed any further in this Chapter as the scope of this research is constrained to the collectivist religions of Christianity and Islam. The discussions and the implications of the findings for this particular group have been deferred to section 7.6 of Chapter 7, which presents a list of potential topics for future research.*

Table 6-17: Correlation Table of the Dependent Variables

	ATTN	WBTN	ATTC	WBTC	ATTM	WBTM
ATTN	1.000	.260*	.353*	.130	-.067	-.159
WBTN	.260*	1.000	.093	.524**	-.076	.158
ATTC	.353**	.093	1.000	.245*	.049	.057
WBTC	.130	.524**	.245*	1.000	-.048	.473**
ATTM	-.067	-.076	.049	-.048	1.000	.442*
WBTM	-.159	.158	.057	.473**	.442**	1.000

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Both the ATT and WBT dependent variables were predicted in theory to be correlated and Table 6-17 shows that most instances of the ATT and WBT variables share significant correlations. When focusing on each pair of variables with or without a cultural emphasis [ATTC, WBTC], [ATTM, WBTM], and [ATTN, WBTN] they seem to be significantly positively correlated at $p < .05$. These significant positive correlations between each pair of variables substantiate the validity of hypothesis 2b, which forms part of our research model.

The post hoc test results however showed that the Muslim sample holds a significantly higher attitude towards the Muslim Web site than the other two religious groups. The same cannot be said however, about their trust towards the Muslim Web site. The ANOVA results did not report a significant effect for trust towards the Muslim Web site (WBTM). This could imply that trust and attitude are dissimilar constructs. The significant effect found for the ATTM construct (and since no significant effect was found for the WBTM construct) could perhaps indicate that the intention to buy from a Web site could be instigated more by an “attractive” Web site than a “trustworthy” one. Trust in the context of electronic commerce could perhaps not be a necessary precondition for convincing a user to purchase from a Web site. If a user finds a Web site appealing, he might purchase something from that Web site regardless of whether s/he trusts it or not. We contend however, that the intention

to buy a certain product has not been proven to result into the actual purchasing of that product and also if a user does not trust a Web site with his/ her private and financial details it seems unlikely that s/he will buy something from that Web site.

The ATT and WBT constructs were found to be significantly correlated (see Table 6-17). Although our post hoc analysis did not show any significant effects for the WBT construct one could not discount the possibility that these two constructs are interdependent: the intention to buy from a Web site could be instigated by trust or that a “likeable” Web site could subsequently be perceived as trustworthy. It is difficult to justify either of these statements since we do not know which component of attitude (the INTOBUY component of ATT or the other remaining component(s) of the ATT) is affected by the religious affiliation of a group (RELTYPE). The reader is reminded that the exploratory factor analysis conducted on the data collected in this experiment showed that the items representing both the INTOBUY and ATT constructs shared significant loadings on a common factor and thus both the ATT and INTOBUY were assumed to represent a similar concept of general attitude towards a Web site.

The same can be said about the significant correlations between the Web-based attitude (ATT) and Web-based trust (WBT) construct: Does a trustworthy Web site instigate in a user, an intention to buy (INTTOBUY) or just a general positive attitude (remaining component(s) of the ATT) towards the Web site?

These statements can perhaps be investigated by a future research study, as we cannot ascertain which component of attitude, ATT or INTOBUY, is affected by the religious affiliation (RELTYPE) of the Muslim group. Future research should also investigate if the intention to buy a product eventually translates into the actual purchase of a product.

6.6 A Content Analysis of Trust-Related Constructs

After transcribing the recorded interviews', we adopted content analysis as a semiotics tool to see if we can identify any themes or constructs in the textual data that harmonize with the theoretical discussions about the trust concept in the literature. Prior to the interview, respondents were told that their answers will be held confidential and that they will remain anonymous. The interviewees were also made aware that they could stop the interview at any time if they wanted to do so. Interview questions 3, 4, 5 and 6 were designed to elicit discussions about trust or trust-related issues from the participants' point of view. Table 6-18 displays the questions used in the post-experimental interview that was conducted with a randomly selected number of participants:

Table 6-18: Questions Used in the Post-Experimental Interviews

Question	Focus
1. What is your religion if I may ask?	General
2. Did any of these sites appeal to you? If yes, which one and why?	Preference/ Attitude
3. Do you trust purchasing from any of these sites? If yes, which one and why?	Trust
4. Do you think that there is a relationship between trust and religion?	Trust
5. Do you trust religious sites more than non-religious sites? If yes, which one and why?	Trust
6. What are your criteria for trusting a Web site?	Trust
7. If you had the option of buying the same product from an online store or a conventional/ physical store, which option would you go for and why?	Preference/ Attitude
8. Did you find any of the questions in the questionnaire inquisitive or personal? If yes, which ones?	General
9. Did you enjoy the experiment?	General

6.6.1 Coding Procedure

The coding of variables is a crucial element in content analysis. Weber (1990: p. 12) described the coding procedure in content analysis as follows:

A central idea in content analysis is that many words of the text are classified into much fewer content categories. Each category may consist of one, several, or many words. Words, phrases, or other units of text classified in the same category are presumed to have similar meanings. Depending on the purposes of the investigator, this similarity may be based on the precise meaning of the words (such as grouping synonyms together), or may be based on words sharing similar connotations (such as grouping together several words implying a concern with a concept such as WEALTH POWER).

Content analysts need to produce reliable and reproducible observations. The reliability of coding can be established by using more than one observer to code the textual data. Inter-coder reliability measures the similarities and differences between different coders (Coolican 1994).

Weber (1990: p. 12) discusses the concept of inter-coder reliability as follows:

To make valid inferences from the text, it is important that the classification procedure (coding) be reliable in the sense of being consistent: Different people should code the same text in the same way.

The process of inter-coding has its fair share of advantages and disadvantages. Its main advantage is that it reinforces the reliability of the coding technique that is adopted by the content analyst. Ambiguous or inconsistent coding rules for rendering text explicit can however, reduce reproducibility. Also, the cognitive differences between coders may produce different “codings” of the same text.

Weber (1990: p. 17) stresses that high inter-coder reliability is quite important for content analysis because it reflects a measure of the ‘consistency of shared understandings (or meaning) held by two or more coders’. We have not performed an inter-coder consistency test to determine if other coders agree with our coding of the text. However, our coding procedure is based mainly on the literature discussing the constructs of interest and thus we can claim to a certain extent that our coding of the textual data reflects the corresponding theoretical definitions of the constructs we intend to investigate, as cited in the literature. Said alternatively, we have assigned “tags” or “codes” to those words and sentences composing the textual data, which resemble the construct definitions that have been found in the relevant literature.

The themes or constructs that were sought include sentences and words that are similar or bear similar meanings to those quoted in the literature discussing the trust construct per se or trust-related issues. For example, the words *privacy*, *security*, *reliability* and *positive attitude* have been cited very frequently in the literature sources discussing the trust concept. The coding technique used for our content analysis approach is known as *Key-word-in-context* (KWIC). KWIC involves a search for 'valid indicators of concepts' such as key words or phrases that delineate a certain concept (Weber 1990: p. 52). Whenever such a term is found in the text, we "tag" the term with an appropriate code and keep a record of how often each term was encountered in the text. The list of "sought" terms is sometimes called a "dictionary" (Weber 1990).

The frequency of each trust-related construct extracted from the respondents' answers matching the descriptive terms used for the trust concept that were found in the literature will be displayed on a "grid". The grid displays the most frequent words used by the respondents when answering the trust-specific questions 3, 4, 5 and 6. Each respondent's speech has been audio-analysed to check if it contains words that match or resemble the constructs drawn from the literature discussing the trust phenomenon. The frequencies of these words would then be analysed to identify the most recurrent words used when defining or describing trust-related issues. These words will then be checked to see if they match the theoretical constructs of trust that were drawn from the literature.

A deductive approach has been adopted to code the textual data using theoretically predetermined code categories. The predetermined categories will be compared with the textual data in order to identify potential evidence of the data matching the pre-constructed categories. A similar technique has been used by Easterby-Smith (1995). All instances of "coding" units (for example words, sentences or paragraphs) that are found to be consistent with these pre-constructed categories will be counted and recorded in a coding sheet. The content analysis coding sheet generated for this research follows an exemplary study found in Easterby-Smith et al. (1995: p. 106-108) that demonstrates the use of content analysis for analysing qualitative data that is produced from a set of interviews. Easterby-Smith et al. (1995: p. 106) stated that 'using this method, it was possible to compare answers derived from interviews with those derived from questionnaires'. New themes that were identified in every other interview were also recorded in the coding sheet and tagged with a '*'. The list of themes could occasionally build up with each interview and therefore the coding sheet has to be re-compiled to reflect the changes that occur as a result of identifying new themes. These themes can then be used to develop a new theory that is pertinent to the observed phenomena. In Table 6-19, the columns of the table represent the predetermined constructs that are assumed to represent the trust construct.

6.6.2 Identifying Traits of Constructs in Interviewees' Responses

Table 6-19 illustrates a matrix that shows the frequencies of words or sentences found in respondent's answer to trust-specific questions, matching the predefined constructs drawn from the literature. As mentioned previously, the questions we focused our analysis on were question number 3,4,5, and 6. Question 3 enquires about a respondent's religious trust. Questions 6 asks respondents to define their personal criteria for trusting Web sites while Questions 4 and 5 asks the participants to discuss from their perspective the concerns and issues that they consider to be related to the trust-building process on the Web. The whole list of the transcribed interviews is displayed in detail in Appendix A-2.

The first row in Table 6-19 represents an arbitrary ranking of the respondents. A higher ranking does not reflect that one respondent is more important than the others. It rather indicates that that particular respondent preceded the next-in-ranking respondent in taking part in the interview. The columns on the top of the grid show both the predefined constructs of trust that were drawn from the literature and the new constructs derived from the respondents' answers to trust-specific questions in the interview.

Table 6-19: Content Analysis Coding-Sheet Showing Frequencies of Trust-Related Constructs (Incentives for Trusting a Web site)

	Familiarity	Established Reputation	Reliability	Privacy	Security	Safety	Contact Information	Personal Previous Experience*	Country-of-host effect*	Certification Logo*	Total
1	1	2	1	0	0	0	0	0	0	0	4
2	1	0	0	0	0	0	2	0	0	0	3
3	0	2	0	0	0	0	0	0	0	0	4
4	0	0	0	0	1	0	0	0	0	0	1
5	0	1	0	0	0	0	0	0	0	0	4
6	2	1	0	0	1	0	0	0	0	0	4
7	1	2	0	1	1	0	0	0	0	0	6
8	0	1	0	0	2	0	0	0	0	0	3
9	0	2	0	0	1	1	0	0	0	0	5
10	0	1	0	0	1	0	0	2	0	0	5
11	1	1	2	2	3	0	0	0	0	0	12
12	1	1	0	0	0	0	0	1	0	0	7
13	1	2	0	1	1	0	0	0	0	0	10
14	0	0	0	0	3	1	0	0	0	0	5
15	0	0	0	0	0	0	0	0	0	0	1
16	0	0	0	0	0	0	0	1	0	0	1
17	1	2	0	0	1	0	0	0	0	0	6
18	0	0	2	1	2	0	0	0	0	0	5
19	1	1	0	1	2	0	0	0	1	1	7
20	0	0	0	0	0	0	0	0	0	0	0
21	0	0	1	0	2	0	0	0	0	0	3
22	0	0	0	0	0	0	0	0	2	0	3
23	3	0	0	0	0	0	0	0	0	0	3
Total	12	18	6	6	20	2	2	3	3	1	

Table 6-19 shows the results of the content analysis. Note that the numbers in the rows represent the frequency of words or sentences that were identified in the respondents' answers to be consistent with the predefined constructs drawn from the literature. A '0' indicates that no instances of matching words or phrases have been found for that particular construct. An asterisk '*' attached at the end of a constructs name indicates that the construct is new and emerged from the content analysis that was performed on the respondents' answers. Also, notice that the columns in the last row (labelled 'Total') show the total number of trust-related constructs that were identified in a respondent's answer while the last column (also labelled 'Total') displays the total number of words

or sentences found in the respondents' answers to be consistent with the predefined constructs that were extracted from the literature.

The technique of content analysis adopted for the purpose of this research is to count the frequencies of the matching words or themes that are identified in the text (Krippendorff 1980; Weber 1990) The advantage of the 'frequency' technique is that it is simple and very basic and it avoids the technical peculiarities that have been cautioned in Weber (1990).

Weber (1990: p. 13) contends that:

There is no simple right way to do content analysis. Instead, investigators must judge what methods are most appropriate for their substantive problems. Moreover, some technical problems in content analysis have yet to be resolved or are the subject of ongoing research and debate.

Table 6-20: Frequencies of Constructs

Construct	Frequency
Security	20
Established Reputation	18
Familiarity	12
Privacy	6
Reliability	6
Personal Previous Experience	3
Country-of-host effect*	3
Safety	2
Contact Information*	2
Certification Logo*	1

*This construct is new and emerged from the content analysis that was performed on the respondents' answers

Table 6-20 lists the-most frequently cited constructs. The results suggest that the most frequently mentioned factors related to Web-based trust are: *Security*, *Established Reputation* and *Familiarity*. *Privacy* and *Reliability* are the next frequently cited themes. Weber (1990: p. 51) states that in the analysis mode, 'the most frequently appearing words reflect the greatest concerns'. Thus, according to Weber (1990), the extent of security measures adopted by a Web site, the Web site's reputation and the extent of being familiar with a Web site are the most highly ranked issues by the

individuals constituting this sample. Table 6-20 reveals that privacy and reliability are the next highly regarded concerns in the 'concerns agenda' of these participants.

In general, most of the constructs cited in the literature discussing trust (security, privacy, and reliability) correspond with the terms used by the respondents when defining their personal criteria for trusting a Web site. These are indications to a certain extent, of the validity of the constituent items used to build the measurement scale of the WBT construct (Web-based trust). The items making up the WBT scale reflect the hypothetical properties or attributes of the trust concept, which were found in the literature. There was no evidence of the "positive attitude" construct (the fourth frequently cited construct in the trust literature) in the respondents' answers. It seems that the respondents in this sample do not regard positive attitude as an essential dimension of trust or a prerequisite for establishing Web-based trust. It is important to stress that these interpretations cannot be generalized to the global population of online users. The findings of the content analysis are based on a sample consisting predominantly of students who by no means represent the general population of online consumers.

6.7 Interpreting the Textual Data: A Qualitative Point of View

The following three sections show only excerpts of the respondents' verbatim quotes representing highlights of the relevant and important portions of the text. The full "transcribed" text can be found in Appendix A-2. The coding process and the method of transcription that we have adopted for our recorded interviews are discussed in detail in section 4.6.10.

6.7.1 Extracts from the Muslim Group

Question: *Do you trust purchasing from any of these sites? If yes, which one and why?*

M7:

Dar-us-salam.com... I have trust in this site eeeh as it is my religion I mean it has a relationship to my religion

M8:

I might buy from the Christian site and somehow I trust same case is with the Muslim site as well because the religion factor is involved in these sites so what I believe eeeh doesn't matter what religion it is but every site eeh in my opinion they wont break trust in their within their religious community ... Yeah. I would say I would always trust religious sites more than non-religious sites just due to the factor of religion .

M11:

I actually ehm not fully trust any site to purchase any product because it is not very secure [Security] but I think I have not enough confidence but I will trust dar-us-salam even though I think it is not in relation to but I would do it .

M12:

the dar-us-salam site I wouldn't buy from them because eeh like eeh I think that they are so much into religion they don't really...wouldn't spend much money on securing their site [Security]

Question: Do you think that there is a relationship between trust and religion?

M2:

Eeehm yes there is a relationship (between trust and religion)

M4:

No it is not I don't think so. If you want to test somebody from a different religion you need to know him it is not enough to say I am Muslim to be trusted by somebody or I am Christian to be trusted by somebody.

M5:

Not really no. Basically the sites are not religious there are commercial concerns as well so the religious factor is incidental really.

M7:

Yes I think so definitely (trust is associated with religion).

M8:

Religion is associated with trust like as I mentioned earlier on eeh as well say if I buy anything religious for any religion not just Islam any religion eeh and if I have convenience to buy via online I will buy from the religious site because eeh religion is something to do with belief and trust anyway so I will prefer obviously...no one not well you will find every type of person everywhere but the majority no one is gonna break anyone's trust like in the name of the religion.

M9:

It's not it's not I hold the same level of trust in all three sites.

M10:

Yeah obviously but the people using the name of the religion it depends on them as well . So trust builds on the people so you don't know who is making this site Muslims or others so they can deceive you in a way.

M12:

In the case of buying from a site no I am Muslim and I like what they sell there but when it comes to money it is not a religious thing and it's a 'I sweated for my money thing' so (LAUGHS) I wouldn't... wouldn't just blindly put my money there because I think they will do the right thing with it or not.

M14:

No.

Question: Do you trust religious sites more than non-religious sites? If yes, which one and why?

M3:

Eeehm well (PAUSES) I can't say I trust all the Muslims on earth but when you think about trust you should be .

M7:

My religion I trust sites which have to do with my religion most of them because I believe in my religion and people following my religion if they are following it 'as is' should be trusted .

M8:

...yes religious sites are more trustworthy due to the aim of keeping the trust or otherwise the reputation of the religion will be affected as a result of breaking the trust or doing anything inappropriate

M9:

I wouldn't say that religious sites are more trustworthy. Past experiences with religious people made me more cautious.

Question: What are your criteria for trusting a Web site?

M1:

Eeh.. if it is a very famous site [Reputation] and possibly (PAUSES) if the people who run it are religious .

DISCUSSIONS

Most of the respondents' answers to these 4 trust-related questions seem to display a common pattern of themes: security, privacy, reputation, familiarity (recommendations from friends

and family, peer reviews and word-of-mouth) and previous experience. These were the most popular themes that were identified in the respondents' answers and they seem to reflect the Muslim group's general concerns and fears that are associated with the online purchasing process. The presence of such themes in our data corroborates to an extent the previous findings about consumers' online concerns. Recent studies found that Web sites using strong 'security' and 'privacy' measures for online transactions are perceived as 'trustworthy' and subsequently they would be more likely to secure online sales. The respondents scarcely mentioned the reliability factor. The issue of 'religious' trust however has been mentioned a few times but some of the respondents played down the argument that religion is a significant instigator of trust.

There was also an air of doubt about the authenticity of the Muslim Web site. To elaborate, some respondents were suspicious of the credibility of the owners or Webmasters of the Muslim Web site. Some feared that the owners of the Web site are non-Muslims selling Muslim items through an Islamic interface. Others suspect that intelligence-agents or other secret bodies are constantly monitoring the Web site for some political purposes. When studying the speeches of some of these suspicious individuals it is hard to make sense about the reason that resulted into this suspicion since the Dar-us-salam.com Web site sells mainly books and audio-visual items and not 'lethal' weapons. If the presence of any monitoring bodies is on the affirmative the data that may be collected from the monitoring process can be used at most for marketing and not political purposes. These individuals can only be described as either being over-cautious with their privacy or they can be plainly described as 'paranoid'. The following are quotes extracted from some of these respondents' answers:

Question: *Do you trust purchasing from any of these sites? If yes, which one and why?*

M3:

...I wouldn't feel comfortable giving my address and my credit card details over the Internet. I feel that the Islamic Web site is being monitored definitely [Security/ Privacy].

M12:

I just thought of when I looked at who the actual owners were, the Saudi Arabians, now one has to be realistic with lots of hype about Islam and Saudi Arabians and all that and the site is an American-based site not English-based site [Country of host effect]... people like that have a lot of people watching them. Anything you dropped on that Web site I wouldn't be surprised if someone is watching it [Privacy]. I may be pessimistic but that's the way I am somebody in America is monitoring us and that site and whatever details you drop they're gonna like just print out your whole details in front of them [Privacy].

Question: *Do you think that there is a relationship between trust and religion?*

M10:

...trust builds on the people so you don't know who is making this site Muslims or others so they can deceive you in a way.

Question: *Do you trust religious sites more than non-religious sites? If yes, which one and why?*

M13:

Yes and no (trusting religious sites more than non-religious sites) depends on who is running the Web site [Country of host effect]. Undercover agents against the religion make phoney Web sites [Country of host effect]... could happen (LAUGHS SLIGHTLY).

6.7.2 Extracts from the Christians Group

Question: *Do you trust purchasing from any of these sites? If yes, which one and why?*

C1:

Yeah the Christianbook.com as I said before eeh I found it interesting and worth trusting because it sells items that agree with eeeh my taste and preferences.

C2:

Well all I can say is that I don't have a reason not to trust to them.

Question: *Do you think that there is a relationship between trust and religion?*

C1:

No no I don't think generally based on my profile there is no relation between trust eeh and religion and neither there is a relationship between religion and preferences.

C2:

No. Not really.

Question: *Do you trust religious sites more than non-religious sites? If yes, which one and why?*

C1:

Eeh as I told you before it is not a matter of trust but a matter of preferences and wishes so all in all I do not have a problem with trusting a Web site if it matches my preferences and tastes.

C2:

Not really.

Question: *What are your criteria for trusting a Web site?*

C1:

First of all, the brand name of the site [Reputation] for example Amazon.com or Tesco I think that this is the basic criteria for trusting a Web site and in addition whether the site provides information about itself regarding security and this kind of issues [Security]. So I want to be able to read some information to see for example if this site is properly secured [Security] and abides by the set of standard protocol.

C2:

Probably experience my past experiences [Previous Personal Experience] because I purchased something from the Web and everything was fine so I think it's that.

DISCUSSIONS

The Christians group were not that responsive to religious trust when compared to the Muslim group. Motives for trust seem to be vaguely related towards personal preferences and tastes. One Christian respondent states that:

the Christianbook.com as I said before eeh I found it interesting and worth trusting because it sells items that agree with eeeh my taste and preferences.

In general, religiosity and trust according to this group are disparate concepts that are by no means related. According to this group, incentives to trust a Web site include the presence of proper security and privacy technologies in online transactional processes, a good reputation of a Web site and positive personal experiences from previous purchases made from a Web site.

6.7.3 Extracts from the Others Group

Question: *Do you trust purchasing from any of these sites? If yes, which one and why?*

O1:

I think I would trust from...I have bought from the Internet before, so generally I would trust especially the BOL one...seems like a sort of big site [Reputation] so I generally would trust the... I think I would buy from all of them if I had to yeah.

O2:

Yes, umh, I will trust the BOL firstly aaaand second one was it the Christian thing because it gives the address and the phone numbers [Contact Info.] whereas the other site Islamic it didn't give any address or phone number so I don't think I would (PAUSES) try to purchase from them online.

O3:

No (LAUGHS QUIETLY).

O4:

I never tried any of them so I couldn't tell you but they all look like they'll be okay they all look like that had secure services [Security] or whatever but until I tried them I wouldn't know.

O5:

Not a 100 percent, maybe I should (LAUGHS) but no.

O6:

Not really.

O7:

Eehm, no I don't because I haven't actually bought anything on the Web I don't trust the security of it [Security] I don't know who it's going to or when I am going to get the books [Reliability].

Question: Do you think that there is a relationship between trust and religion?

O1:

Well you might think that religious people would be trustworthy (GRINS)... I don't think not in terms of Internet especially ehm if it is a proper site on the Internet you should trust them [Reputation] as much as you trust anyone handing over your credit card to in a shop or (PAUSES) in a restaurant or anything like that I think.

O2:

No it is with respect of your information that you provide.

O3:

Not particularly. No. There can be a case but not in general.

O4:

Not necessarily, no.

O5:

No. It has nothing to do with religion it is how the process will carry on the other end

O6:

No.

O7:

No.

Question: *Do you trust religious sites more than non-religious sites? If yes, which one and why?*

O1:

Eeh, no I don't think so not something I thought about really no generally they are about the same.

O2:

No, certainly not.

O3:

No no not at all.

O4:

No not really no.

O5:

Not particularly.

O6:

I have never looked about my religion in a Web site.

O7:

No.

Question: *What are your criteria for trusting a Web site?*

O1:

Well if I've had heard about it from other people [Familiarity] and they've successfully ehm done something on it already...(PAUSES) even that would help ehm and if it looks professionally done ehm with links to other sites in it ehm which also ehm proper sites ehm I'd probably buy from it. In the end sometimes you gotta try and see what happens I think... I am not sure (LOW TONE)... Other wise if it doesn't look right then I wouldn't buy from it.

O2:

First is I need the address and the phone number and the people to contact [Contact Info.] and also then if I heard about the Web sites before to use familiarity [Familiarity] or whatever.

- O3: *Right eeh for example they have some security system [Security] when you need to buy something that's important. Eeehm (PAUSES) yeah I think it's basically that.*
- O4: *Usually if someone has recommended it [Familiarity] eehm you tend to know if they've tried ordering from it it usually okay eehm but unless you either found out from word-of-mouth or through media [Familiarity/Reputation]] or something like that.*
- O5: *To see that they are going to deal with my details very securely [Security] when I am purchasing something eehm to encrypt the information and either to take me to a private window [Security/ Privacy] so that I can maybe interact with somebody else or submit the information very privately [Privacy] and to have somebody get back to me very straight away so I'd know that they have received my details [Reliability]. I don't like giving my details over the Internet and not hearing from someone for days and days [Reliability].*
- O6: *Nothing.*
- O7: *I don't really think I should buy something from a Web site I don't feel confident when buying from a Web site [Security]. Amazon.*

DISCUSSIONS

Respondents of the 'Others' religious group seem to mention very frequently the predefined terms drawn from the trust literature which were hypothesized to be theoretically related to the trust concept. Reputation, security, privacy and familiarity are the most frequently mentioned words in the respondents' answers. There is a general consensus amongst the individuals in this group regarding the Web-based trust issue. This group rejects the notion that there is a strong link between a person's extent of religiosity/ religious commitment and the trust towards a Web site. Religious trust is believed to be impertinent to the trust-building process between a user and a Web site when the perceived risks are high. This group's findings purport that it takes more than religious trust alone to overcome the fears and concerns of online consumers about the security vulnerabilities that are associated with online transactions.

6.8 A Cross-group Comparative Analysis of Experimental Data

In this section, we will compare the results that originated from the two experiments to trace the origin of the contradictions in findings that occurred in the Muslim group. We will again briefly go through the crucial inferences, which were based on the empirical results produced by the two experiments. The main goal of the two experiments was to investigate if there are significant interactions between the dependent and independent variables that were summoned for this study. If the findings replicate consistently in both experiments, a solid conclusion can be made about the results.

Contrary to the initial expectations, the findings of the first experiment contradict the findings of the second experiment for one specific group: the Muslims. In the first experiment, a strong association between religious trust (religiosity) and Web-based trust (trust towards a Web site) was found to exist in the Muslim group. This previous association can be rephrased in the form of a relationship statement: the stronger the religious commitment of an individual the more likely that s/he will trust a Web site based on his or her religious creed. The conservative Muslims from the first sample were found to display such a relationship with the Muslim Web site. The statistical results in the first experiment purport that conservative Muslims trust the Muslim Web site (www.dar-us-salam.com) more than the generic or religiously neutral Web site (www.bol.com). These findings however failed to replicate in the second experiment and thus unlike the first experiment, the results of the second experiment could not corroborate the hypothesis that there is a relationship between the extent of an individual's religious commitment (religiosity) and then the trust that s/he places in a religious Web site.

One can ascribe the contradiction in the results to statistical differences or differences in the settings of the experiments. For instance, in the first experiment the participants browsed only two Web sites while in the second experiment the participants were asked to browse three Web sites. Statistical differences include the difference in the sample size between the two experiments (N=50 in the first experiment while N=91 in the second experiment) and the "failed" normality test in the first experiment. Also, the venue for running the previous experiment was dynamic and thus extraneous variables could have affected the results of that experiment. We believe however, that this will not clarify the cause of the contradiction in findings between the two experiments. We seek a more rational and useful explanation to what might have caused this 'contradiction'. Ascribing the statistical differences or the differences in experimental settings to the contradiction in findings, even

if this happens to be the case, seems to be an evasive strategy to avoid analysing the source of the problem.

Our suggestion was to conduct a cross-group analysis that compares the categorical variables such as Internet usage (IUSE) and technology familiarity (TECHFM) that have been used in both experiments to generate a demographics profile for each participant. If a significant difference between the categorical variables is found across the Muslim groups, plausible inferences can then be made about what might have caused this “contradiction”.

We do not claim that our approach will guarantee an explanation of the contradiction. The choice of conducting a cross-group analysis approach is based on our speculation that differences in the data of the categorical variables across the 2 Muslim groups could explain why the findings from these two similar experiments are different.

Table 6-21: Demographics of the Two Conservative Muslim Groups

	Sample 1 (%)	Sample 2 (%)	Total within sample (%)
<i>Gender</i>			
Male	46.7	81.8	70.8
Female	53.3	18.2	29.2
<i>Age</i>			
<20	0	9.1	6.3
20-25	26.7	30.3	29.2
26-30	40	36.4	37.5
31-35	20	12.1	14.6
>35	13.3	12.1	12.5
<i>Educational level</i>			
Undergraduate	46.7	33.3	37.5
Graduate	26.7	66.7	54.2
N/A	26.7	0	8.3
<i>Mode of Study</i>			
FT	73.3	97	89.6
PT	0	3	2.1
N/A	26.7	0	8.3
<i>Work Experience</i>			
None	40	15.2	22.9
< 2 years	26.7	36.4	33.3
2-5 years	13.3	21.2	18.8
>5 years	20	27.3	25

N = 48

Table 6-21: Demographics of the Two Conservative Muslim Groups (continued)

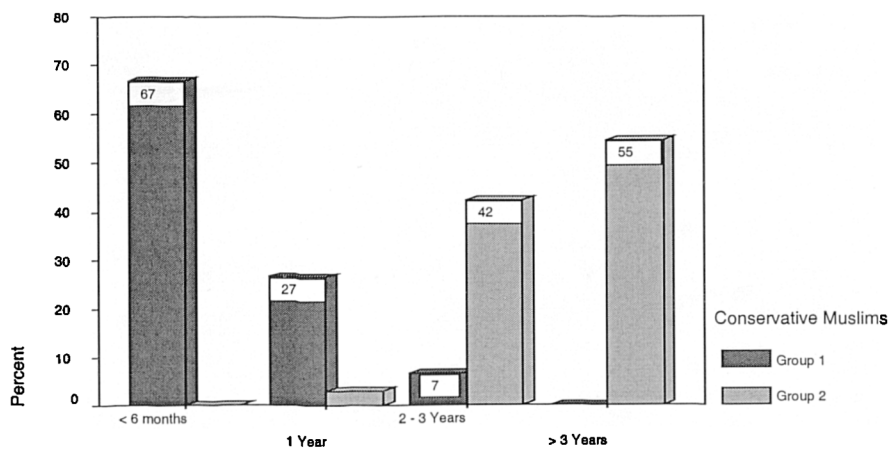
	Sample 1(%)	Sample 2(%)	Total within sample (%)
<u>Usage of Internet</u>			
< 6 months	66.7	0	20.8
1 year	26.7	3	10.4
2-3 years	6.7	42.4	31.3
> 3 years	0	54.5	37.5
<u>Usage of Web-browsers</u>			
Never	13.3	0	4.2
Rarely	20	0	6.3
Occasionally	33.3	6.1	14.6
Frequently	33.3	93.9	75
<u>Usage of Search engines</u>			
Never	13.3	0	4.2
Rarely	53.3	0	16.7
Occasionally	20	24.2	22.9
Frequently	13.3	75.8	56.3
<u>Frequency of purchasing online</u>			
Never	53.3	63.6	60.4
Rarely	40	21.2	27.1
Occasionally	6.7	15.2	12.5
Frequently	0	0	0
<u>Perceived user skill</u>			
Novice	40	0	12.5
Intermediate	60	78.8	72.9
Experienced	0	21.2	14.6

N = 48

Table 6-21 displays the demographics of the two conservative Muslim groups. We will try to identify any notable differences that we might come across between the demographics data of these two groups. By comparing the categorical variables of the two conservative Muslim groups, some interesting differences can be discerned:

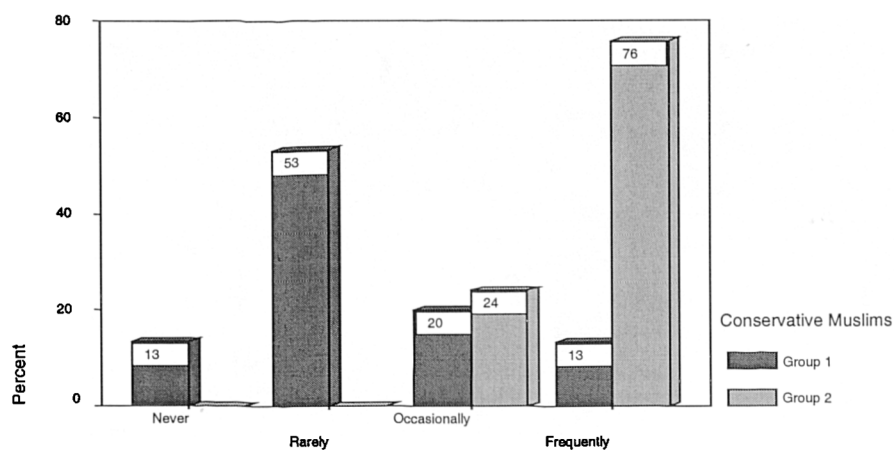
1. Participants in the first group are less familiar with the Internet and the basic Web-based technologies such as Web browsers and search engines. 66.7% of the participants in the first group have used the Internet for less than 6 months while 54.5% of participants in the second group have been using the Internet for more than 3 years;

Figure 6-8: Experience in Using the Internet



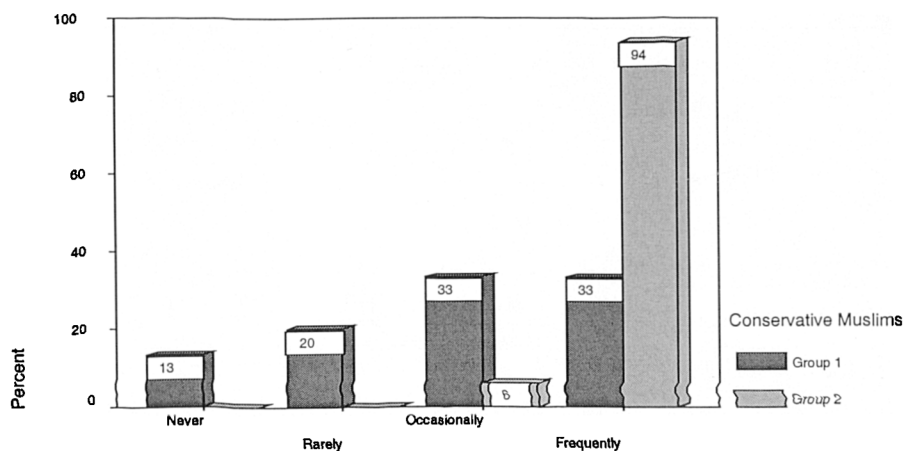
2. 53.3% of participants in the first group have rarely used search engines and 13.3% have never used them before. In contrast, 75.8% of the participants in the second group have used search engines on a frequent basis;

Figure 6-9: Familiarity with Search Engines

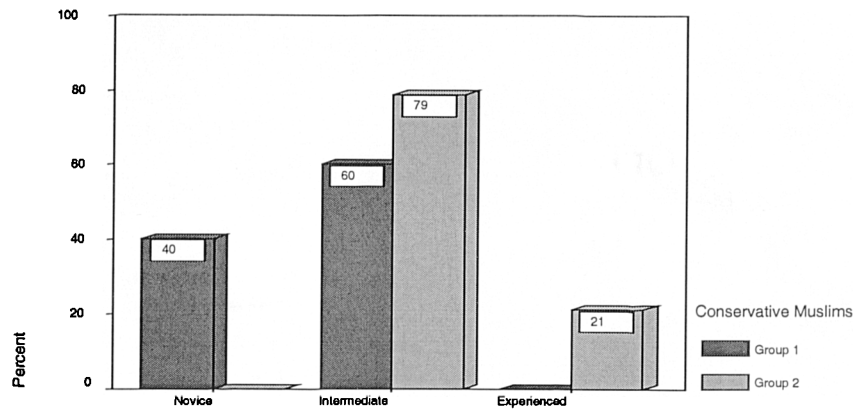


3. Also, 93.9% of the second group used Web browsers on a frequent basis while only 33.3% of the first group had used Web browsers on a similar basis. In fact, a paucity of participants (13.3%) from the first group had never used Web browsers and another 20% scarcely used Web browsers, which leaves one to wonder about the purpose that these individuals used the Internet for for since browsing and searching Web sites for information and products is usually the main reason for using the Internet. They could have just used the Internet for reading their e-mails or for some other online tasks but the details of this issue seem not to be important to the context of this investigation;

Figure 6-10: Familiarity with Web Browsers



4. Finally, 78.8% and 21.2% of the individuals in the second group place themselves at the intermediate and experienced level of perceived user skill. On the other hand, 40% of participants in the first group define themselves as 'novice' users. Collectively, the second group perceive themselves as more skilled in terms of using the Internet and its pertinent technologies than the other group.

Figure 6-11: Perceived User Skill

To confirm that these differences can be supported with statistical evidence, an appropriate statistical test will be selected to test for potential significant differences in the categorical variables between the two samples. Table 6-22 shows Kinnear and Gray's (1999) proposition of a guideline for selecting an appropriate statistical test to analyse differences between two samples for different types of data.

Table 6-22: Choosing a Test for Comparing the Averages of Two Or More Samples Or Scores from An Experiment (Kinnear and Gray 1999)

	Experimental Design	
	Between Subjects (Independent Samples)	Within Subjects (Related Samples)
Type of Data	TWO SAMPLES	TWO SAMPLES
Interval	Independent samples t-test	Paired samples t-test
Ordinal	Wilcoxon-Mann-Whitney test	Wilcoxon signed ranks test, Sign test
Nominal	Chi-square test	McNemar test
Type of Data	THREE OR MORE SAMPLES	THREE OR MORE SAMPLES
Interval	One-way ANOVA	Repeated measures ANOVA
Ordinal	Kruskal-Wallis k-sample test	Friedman test
Nominal	Chi-square test	Cochran's Q test (dichotomous nominal data only)

According to Kinnear and Gray's (1999) guidelines, the most appropriate statistical tool for conducting our cross-group comparison analysis is the Chi-square test since the variables we intend to cross-analyse are categorical or nominal and the samples that we will involve in the analysis are different and thus independent (each participant took part in only one of the experiments).

6.8.1 Chi-Square Test for Unrelated Data

Chi-square is a non-parametric test of statistical significance for bivariate tabular analysis that is commonly used to compare observed data with data we would expect to obtain according to a specific hypothesis. In other words, Chi-square tests for significant differences between observed frequencies in data and the frequencies that were expected in an effort to determine whether the samples are independent or related. Typically, the chi square statistic tests the hypothesis of whether or not two samples (for example people, textbooks or cars) are different enough in some characteristic or aspect of their behaviour. If on the affirmative, one can then generalize from the differences between the two samples that the population represented by the samples is also different in the behaviour or characteristic (Newbold 1995).

LIMITATIONS ON THE USE OF CHI-SQUARE

Independent Observations

One major prerequisite for conducting a Chi-square test is that the observations have to be independent. One has to be sure that the observations appear in one cell only (Coolican 1994). An individual can only appear in one of the categorical groups which are to be tested for statistical difference by the chi-square test or else the results of the chi-square test are rendered invalid. The participants who have been selected to take part in our experiments appeared in one experiment only and we can therefore argue that the validity of the chi-square test for this particular aspect has not been violated since we have used a different sample for each experiment

Expected Counts

Another precondition for using the Chi-square test is that most of the expected counts for each category must be greater than 5 (Babbie et al. 2000; Norusis 1998). The general rule of thumb is to ensure that not more than 20% of the cells have an expected count of less than 5 (Babbie et al. 2000; Norusis 1998). The results of our Chi-square have shown that for nearly each categorical variable more than 25% of the cells had expected counts of less than 5. We followed the advice of Norusis (1998) and collapsed the number of categories for each categorical variable, by combining them into not more than two categories. In addition, since the Chi-square test is sensitive to unequal sample sizes, we have included the Phi test as a supplement measure of association. The Phi coefficient modifies the chi-square statistic so that it becomes insensitive to sample size. It also transforms the Chi-square value so that it falls between the range of 0 and 1. Norusis (1998: p. 352) contends that without adjusting the Chi-square, by using a suitable measure of association (for example, Phi and Cramer's V), one would not be able to 'compare chi-square values from tables with different sample sizes and different dimensions'.

Sample Size

According to Coolican (1994), since the Chi-square test is a non-parametric test another precondition for using this statistical test is to ensure that the sample of each group is not too large. Coolican (1994) argues that a moderate size of a sample for a non-parametric test should not be more than 25. The conservatives Muslims constituting our two samples are 15 and 33, respectively. Coolican (1994) suggests that if the sample size exceeds the recommended size of 25, the data to be analysed should be transformed into z-scores. Since the sample size of the second group exceeded the

sample size recommended by Coolican (1994), we have therefore transformed the categorical data variables into z-scores prior to conducting the Chi-square test.

Table 6-23: Observed and Expected Frequencies of the Categorical Variables for the 2 Muslim Conservative Groups

Conservative Muslims Categorical Variables	Sample 1	Sample 2
<i>Experience in Using the Internet</i>		
Inexperienced (Low)	10 (3.1)	0 (6.9)
Experienced (High)	5 (11.9)	33 (26.1)
<i>Familiarity with Search Engines</i>		
Occasionally (Low)	2 (0.6)	0 (1.4)
Frequently (High)	13 (14.4)	33 (31.6)
<i>Familiarity with Web Browsers</i>		
Occasionally (Low)	2 (0.6)	0 (1.4)
Frequently (High)	13 (14.4)	33 (31.6)
<i>Perceived User Skill</i>		
Unskilled (Low)	6 (1.9)	0 (4.1)
Skilled (High)	9 (13.1)	33 (28.9)

Note that the values displayed in brackets are the expected frequencies of each category.

Table 6-24: Chi-square Test for the 2 Conservative Muslim Samples

Categorical Variable	N ¹	Df	Pearson Chi-Square	Sig.
Experience in Using the Internet	48	1	27.79	0.001
Familiarity with Search Engines	48	1	4.591	0.03
Familiarity with Web Browsers	48	1	4.591	0.03
Perceived User Skill	48	1	15.1	0.001

1. Valid Cases. Note that the values typed in bold are significant.

Table 6-25: Results of the Phi Coefficient (Symmetric Measure)

Categorical Variable	N ¹	Phi Coefficient	Sig.
Experience in Using the Internet	48	0.761	0.001
Familiarity with Search Engines	48	0.309	0.03
Familiarity with Web Browsers	48	0.309	0.03
Perceived User Skill	48	0.561	0.001

1. Valid Cases. Note that the values typed in bold are significant.

Table 6-23 shows the observed and expected frequencies of the categorical variables for the 2 conservative Muslim groups. Table 6-24 shows that the chi-square test was significant ($p < 0.05$) for the variables representing the experience in using basic Internet technologies (Web browsers and search engines) and it was very significant ($p < 0.001$) for the remaining two variables (general experience in using the Internet and perceived user skill). Thus the null hypothesis that assumes that there are *no significant differences between the two groups* is rejected at $p < 0.05$ for some of the variables and at $p < 0.001$ for the remaining others. The significant p value indicates that the differences in the categorical variables between the two samples did not occur by chance. For example, in the case of the categorical variable representing the general Internet experience of a user, the p value of less than 0.001 implies that there is a 0.1% probability that the difference in Internet experience between the two samples occurred by chance alone or said alternatively the differences in the Internet experience between the 2 Muslim groups could result from some sampling error less than once in 1000 samples. The results of the Phi coefficient test (see Table 6-25) for the categorical variables were also significant. This substantiates further the accuracy of the results produced by the Chi-square test, which was performed on the categorical variables. Statistical significance means that the pattern of distribution and relationship between the variables, which is found in the data from a sample can be confidently generalised to the larger population that the sample represents (Babbie et al. 2000).

6.8.2 Discussions

The results from the cross-group comparison of the two conservative Muslim samples seem to imply that the second group of conservative Muslims is much more aware of the Internet and its relative technologies than the first group. One can assume that the second group is more aware about the security and privacy problems associated with online transactions. The quotes extracted from the transcribed interviews can serve as a further proof for this conjecture. The first group, in contrast,

clearly lacks the experience and skill of the second group and they are also less familiar with the Internet and its relative basic Web technologies. Based on these results, one can make the assumption that due to their lack of experience in using the Internet and the basic Web-based technologies, the individuals in the first conservative Muslim group are less aware of the security and privacy vulnerabilities that are usually associated with online transactions.

The *uncertainty* factor is a necessary prerequisite that must be present in the environment where a trust relationship is to be tested (Deutsch 1958). The online shopping environment is believed to host its fair share of uncertainties (Wang et al. 1998). The first group seems to be unaware of the uncertainties that are associated with the Internet environment. One can assume that this group is context-blind: they behave and act in the context of e-commerce in the same way that they would behave and act in conventional commerce. Based on our empirical findings we argue that the time experience gained by using the Internet structures how the online consumers perceive religious Web sites. We believe that the less experienced conservative Muslim group is less aware of the security vulnerabilities of the Internet environment and thus they seem not to differentiate between buying online from a 'virtual' store and buying from a 'brick-and-mortar' store and as a result they trust purchasing from a Muslim Web site as much as they would trust purchasing from a Muslim physical store. It could be very interesting to conduct a statistical test to investigate this issue further from a quantitative perspective but the difference in sample sizes together with the 'failed' normality test in the first experiment complicates considerably the execution of such a task. In addition, the experimental task in each experiment differs. This can as a result produce findings that are specific to one of the experiments only.

We chose to examine the 'contradictory' findings using our own subjective judgement, by conducting a cross-group comparison analysis for the context-related categorical variables (*Experience in using the Internet, Familiarity with search engines, Familiarity with Web browsers and Perceived user skill*). A cross-group comparison for these variables revealed that the conservative Muslim group that participated in the second experiment is much more experienced in using the Internet and the basic Web technologies (Web browsers and search engines) than the one that participated in the first experiment. Although we cannot claim that our interpretations and assumptions have followed a robust quantitative or qualitative technique, our inferences about these possible causes of the contradictory findings are in line with the findings of an empirical study that investigated the potential factors affecting the consumers' perceptions of Internet stores (Jarvenpaa et al. 1999).

6.8.3 General Implications and Conclusion

There is a general consensus in the findings for the three religious groups that trust in the context of e-commerce is not culturally or religiously oriented but is induced or produced by previous personal positive purchasing experience, a Web site's good reputation and the presence of robust data processing technologies that are competent when it comes to protecting the consumers' financial and personal details. In a cross-cultural study, Jarvenpaa (1999) found the reputation of a company to be very significant for evoking consumers' trust towards a Web site. Our results agree with Jarvenpaa's (1999) findings and add that the reliability of an online merchant in dispatching orders on time and positive references from friends and family or peers are two other influential sources for evoking Web-based trust. The results for this experiment implicate that the trust-building process is a context-sensitive procedure when taking the Internet experience of online consumers into consideration. The uncertainties inherent in the online marketing arena seem to be significantly influential in causing users' to turn down the 'naïve' religious or cultural trust instinct and instead follow the Web-based trust instinct that accentuates security, privacy, reputation, familiarity and personal previous experience as the decisive factors for perceiving a Web site as trustworthy. Because the surroundings and the commercial context are different, in the real world Muslims would trust the Muslim brick-and-mortar stores but in the virtual world the decision to trust Muslim online stores depends on other contextual factors.

The conservative Muslims in the first experiment were found to display a significant trust relationship towards the Muslim Web site. This contradicts the findings of the second experiment where no such association was found to exist in the Muslim group. The statistical tests conducted for the Muslim group in the second sample showed no significant interaction between religious commitment and trust towards a religious Web site.

To investigate this problem, we decided to take a closer look at the categorical variables that are related to the context of this research study. After conducting a cross-group comparison analysis for the two conservative Muslim samples, we noted that the conservative Muslims in the first sample are less familiar with the Internet and the basic Web technologies (search engines and Web browsers) than their counterparts in the second sample. We assumed that their lack of experience in using the Web could have over-clouded the fears and concerns usually associated with online shopping. We suspect that due to their lack of experience in using the Internet in general they could be insensitive to the context of the commercial environment. Presumably, they are not capable of differentiating between the process of buying from the Internet and the process of buying from a conventional store and thus they trust purchasing from the Muslim Web site as much as they would trust purchasing from

a conventional Muslim store. This finding is consistent with previous findings that found trust and experience in using the Internet to be positively correlated (Jarvenpaa and Todd 1997; Jarvenpaa et al. 1999). In another study, participants who were less familiar with the Internet and online shopping were found to display higher trust and lower risk perception (Jarvenpaa et al. 1999). Conversely, Jarvenpaa (1997) reported in an earlier study that experienced Internet users exhibited higher levels of perceived risk and as a result they were more reluctant to shop over the Internet than their inexperienced counterparts (Jarvenpaa and Todd 1997).

To sum up the previous points discussed earlier, experienced Internet users are less likely to trust a Web site possibly due to their awareness of the vulnerabilities that are inherent in the Internet environment. Conversely, users with shorter Internet experience are expected to be prone to trust a Web site due to their lack of experience in using the Internet and as a result their lack of awareness about the problems that are associated with the online commercial environment such as the security vulnerabilities that are presumably inherent in online transactions.

We assume that Muslims in the first sample consult their intrinsic religious trust instinct instead of the Web-based trust instinct. The latter form of trust we believe depends and develops through positive peer reviews, recommendations from friends and family, and previous personal positive purchasing experiences with a Web site. It seems that the less Internet-aware conservative Muslim group is context-blind to the commercial environment. They remain committed to the ingrained cultural values and rules and apply them in the context of both, conventional and e-commerce. In contrast, the conservative Muslims in the second group who possess a superior experience in using the Internet and the basic Web technologies, base their purchase decisions on the Web-based trust instinct. When purchasing over the Internet, they focus on the precautionary measures that pertain to the context of e-commerce prior to trusting a Web site. The conventional religious trust and cultural values are replaced with the more appropriate Web-based trust. The Web-based trust construct represents a generic and multicultural concept. Consumers from all religious backgrounds are expected to summon the Web-based trust instinct when they contemplate purchasing something over the Internet.

6.9 Summary and Conclusion

Both, the quantitative and qualitative results show a unanimous agreement of findings. The majority of participants from all groups, except a paucity of the Muslim group, found religion or religious commitment to be irrelevant to the trust-building process between an online user and a Web site when the context of the purchase decision is the Internet. There is a general consensus in the

findings from all three religious groups that trust in the context of e-commerce is not culturally or religiously oriented but is induced or produced by previous positive purchasing experience, a Web site's good reputation and the presence of robust data processing technologies that are competent when it comes to protecting the consumers' financial and personal details. According to the qualitative results, other incentives for Web-based trust include recommendations from friends and family and peers and reliability in dispatching orders on time.

The findings of this experiment implicate that the trust-building process is a context-sensitive procedure for experienced Internet users. The uncertainties inherent in the online marketing arena seem to be significantly influential in causing users' to turn down the 'naïve' religious or cultural trust instinct when a purchase is contemplated over the Internet and instead to follow the Web-based trust instinct that accentuates security, privacy, reputation, familiarity and personal previous experience as the decisive factors for developing trust in the context of e-commerce.

The findings from the two experiments were contradictory for one particular group – the Muslim group. Conservative Muslims in the first experiment were found to place significant trust in the Web Muslim site. That finding did not replicate in the results of this experiment. By performing a cross-group comparative analysis for the context-related categorical variables of the two conservative Muslim groups, the results showed some notable differences between these two groups. The second group possessed a superior experience in using the Internet (time experience) and its relative Web-based technologies: search engines and Web browsers. We have assumed that the first groups' short online experience could have caused them to be indifferent to the context of the commercial environment. They may be unaware of the problems surrounding the Internet environment and thus we have assumed that the first groups' ingrained cultural values persevere in the context of e-commerce and as a result their purchasing behaviour is identical to that when they are buying from a physical store. As a result of their 'context-blindness', we argue that they trust purchasing from the Muslim Web site in the same way that they would trust purchasing from a conventional Muslim store. In contrast, the conservative Muslims in the second group with their superior experience in using the Internet and its basic technologies, base their purchase decisions on the Web-based trust instinct when they contemplate purchasing something over the Internet. They focus on the precautionary measures that pertain to the context of e-commerce prior to trusting a Web site. Findings from two studies corroborate the notion that trust and Internet experience are negatively correlated (Jarvenpaa and Todd 1997; Jarvenpaa et al. 1999). The conventional religious trust and cultural values are replaced with the more appropriate Web-based trust when purchases are contemplated in the context of e-commerce. The Web-based trust construct is a generic and multicultural concept. Consumers from all

religious backgrounds are expected to consult the Web-based trust instinct when they contemplate purchasing an item over the Internet.

Finally, the post hoc test results showed that the Muslim sample holds a significantly higher attitude towards the Muslim Web site than the other two religious groups. Since the ANOVA results did not report a significant effect for trust towards the Muslim Web site (WBTM), the implications could be that trust and attitude are dissimilar constructs. The significant effect found for the ATTM construct (and since no significant effect was found for the WBTM construct) could perhaps indicate that the intention to buy from a Web site could be instigated more by an “attractive” Web site than a “trustworthy” one. Trust in the context of electronic commerce could perhaps not be a necessary precondition for convincing a user to purchase from a Web site. If a user finds a Web site appealing, he might purchase something from that Web site regardless of whether s/he trusts it or not. We contend however, that the intention to buy a certain product has not been proven to result into the actual purchasing of that product. In addition, if a user does not trust a Web site with his/ her private and financial details it seems unlikely that s/he will buy something from that Web site.

7 ANALYSIS AND CONCLUSION

7.1 Overview

This Chapter provides a synopsis of the conclusions drawn from the results and findings of this research. Significant conclusions for this research will be discussed and explained in light of our findings. First, the entire research process will be revised. We will briefly go through what each chapter has covered. The conclusions of this dissertation and its relevance to the field of e-commerce in the context of the cross-cultural research paradigm will be discussed. Finally, the contributions to the field of this research are presented, the limitations of this research are discussed, and subsequently the avenues for future research that we have identified after completing this dissertation will be provided at the remaining sections of this Chapter.

7.2 Review of Research Objective

The purpose of this research study was to investigate the validity of the premise that cultural influences on consumer behaviour in the context of conventional commerce persist in the context of electronic commerce. This study specifically focuses on investigating the hypothetical relationship that might exist between an individual's pre-existing or learnt cultural beliefs and values, and his/ her perception of a cultural Web site. The research question of interest attempts to investigate if the religious category of Web sites, which are designed in line with a religious group's beliefs and creed, are more likely to instil trust in on-line visitors than their generic counterparts.

We will now briefly go through the purpose of each Chapter constituting this thesis:

Chapter 1 introduced the incentives and the motivations that lead to the proposal for conducting this research. The topics and phenomena that have been identified to be pertinent to this research study were briefly discussed in order to come up with a research objective for this thesis.

Chapter 2 reviewed the literature discussing the topics that we identified to be relevant to our research. A synthesized literature review of the topics related to this research helped us in developing a conceptual research model whose core foundations are mainly based on the concept of trust.

Chapter 3 described the research methodology adopted for this research. The different paradigms of research methods will be discussed in detail. Quantitative and qualitative methods and their differences have also been covered together with the concept of plurality and triangulation.

Chapter 4 discussed the hypotheses, the measurement constructs and the conceptual model that was developed to portray the hypothetical relationships between the different constructs that were to be tested in this research.

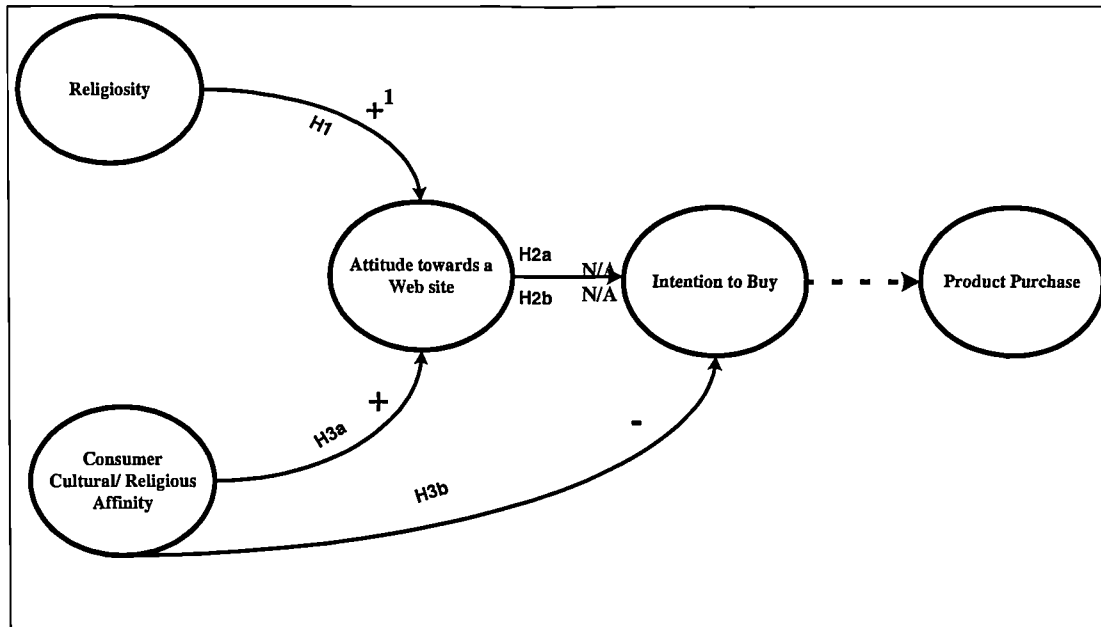
Chapter 5 described the first experiment that was conducted as part of this research. Details included the experimental settings, the data collection techniques, the instruments used to analyse the results, and all other essential topics pertinent to the experiment.

Chapter 6 discussed the second experiment in a similar manner to Chapter 5 in order to maintain consistency in the writing style and layout of the text across the two experiments. The findings from the first and second experiments were compared to see if they are consistent. The interpretations of the results and their implications for this research have been provided in the subsequent sections of that chapter.

7.3 Research Questions and Summary of Results

As mentioned previously, this study attempts to provide an insight on how cultural variables may manipulate an individual's perception of a Web site. Specifically, this research attempts to investigate if Web sites designed with a cultural interface are more likely to instil trust in on-line visitors than Web sites with a generic interface. We investigated the validity of such a hypothetical relationship through the testing of five hypotheses that were posited mainly from the literature discussing cultural influences on consumer behaviour in the traditional marketing context. Two experiments were conducted to test the validity of this relationship in the context of e-commerce. The questions, hypotheses, and results are summarized in Table 7-1. Figure 7-1 displays the results of our findings on the conceptual model, which portrays the hypotheses, and the relationships between the different constructs adopted in this research.

Figure 7-1: A Hypothetical Conceptual Model Illustrating the Impact of Cultural Factors on a Buyer's Purchase Decisions (Research Context: Electronic Commerce).



¹Finding were significant in the first experiment only.

Note also that:

- (1) A '+' indicates that there is a significant effect in the relationship between the two constructs;
- (2) A '-' indicates that no significant effects were found to exist between the two constructs and
- (3) A 'N/A' indicates that the hypotheses could not be tested due to the outcome of statistical results.

Table 7-1: Summary of Results and Conclusions

Research Questions and Hypotheses	Results and Findings
<p>Q1. Does religious trust influence consumers' purchase decisions when they are in a commercial online environment?</p>	<p>Yes and no. Our findings show that for the Muslim sample, familiarity and a high Internet experience was found to cause religious consumers in the digital marketing arena to consult their Web-based trust instinct when they contemplate purchasing from an online store even if the Web site is a Muslim Web site. We believe that Web-based trust develops with good reputation, previous personal purchasing experiences, the presence of good security measures for dealing with online transactions and finally through word-of-mouth recommendations from friends and family or peers. Inexperienced users, however, were found to depend rather more on the religious trust instinct when they contemplate purchasing from an online store. They seem to place equal trust in religious stores in both the virtual and physical world..</p>
<p>Q2. Does the "borderless" global structure of the World-Wide Web cultivate the presence of a united Web culture that encompasses individuals devoid of any religious or other cultural influences?</p>	<p>Yes and No. As we have mentioned previously, our results purport that the time experience in using the Internet plays a significant role in how users perceive religious Web sites. Inexperienced Muslim users were found to trust religious sites and seemed to overlook the security and privacy vulnerabilities of the Internet environment. The same cannot be said about those users following the Christian or other faiths.</p> <p>Experienced users on the other hand were found to trust Web sites that have good reputations and that implement good protective technologies for tackling issues related to online security and privacy. These findings seem to portray that an increase in Internet usage causes religious users to replace the 'naïve' religious trust instinct with the more appropriate Web-based trust instinct when the context of the purchase decision is the Internet. Experienced users are more aware of the Internet and its vulnerabilities. In contrast,</p>

	<p>as mentioned earlier, religious trust remains intact in inexperienced users whether they are in a traditional or in a digital marketing environment. Their lack of experience and consequently their lack of awareness about the Internet and its associated vulnerabilities causes these users to 'blind-foldedly' depend on religious trust regardless of whether they are in the traditional or in the digital marketing context.</p>
<p>H1: The level of attitude and trust held by a consumer towards a vendor will increase when both parties are from an identical religious background.</p>	<p>In the context of e-commerce, "pre-existing" religious trust is not sufficient to evoke trust towards a "religious" Web site. The findings of this research study indicate that trust towards a Web site is developed through good reputation, recommendations from friends and family or peers, and proper security safeguards for protecting a user's financial and private details.</p> <p>The post hoc test results in the second experiment showed that the Muslim sample holds a significantly higher attitude towards the Muslim Web site than the other two religious groups. Since the ANOVA results did not report a significant effect for trust towards the Muslim Web site (WBTM), the implications could be that trust and attitude are dissimilar constructs. The significant effect found for the ATTM construct (and since no significant effect was found for the WBTM construct) could perhaps indicate that the intention to buy from a Web site could be instigated more by an "attractive" Web site than a "trustworthy" one. Trust in the context of electronic commerce could perhaps not be a necessary precondition for convincing a user to purchase from a Web site. If a user finds a Web site appealing, he might purchase something from that Web site regardless of whether s/he trusts it or not. We argue however, that the intention to buy a certain product has not been proven to result into the actual purchasing of that product and also if a user does not trust a Web site with his/ her private and financial details it seems unlikely that s/he will buy something from that Web</p>

site. Since this finding needs a “deeper” investigation, we have decided to include it in the list of topics for future research (see section 7.6).

The results for the conservative Muslims in both samples were inconsistent. In the first experiment, the results of the statistical tests indicate that the conservative Muslims trust the Muslim Web site (significant at $p < .001$) more than the other Web sites that they browsed in that experiment. These findings however failed to replicate in the second experiment.

We have ascribed this contradiction to the difference in Internet experience possessed between the individuals from the two conservative Muslim groups. We believe that due to their short experience in using the Web, the individuals in the first Muslim group are not aware of the vulnerabilities and security flaws inherent in the online shopping environment. They use religious trust as a motivation when shopping from a Muslim Web site rather than concentrating on issues related to the establishment of Web-based trust such as data security and privacy. Their purchase behaviour in the context of e-commerce and traditional commerce are similar. In summary, this group perceives Muslim virtual stores in the same manner as their brick-and-mortar counterparts and thus they don't differentiate between the two different marketing contexts.

The Christian sample in the first experiment seems to place more trust in the generic Web site than the Christian Web site (see section 5.6.9). This finding did not replicate in the second experiment. One interesting finding in the second experiment purports that the Christian sample's attitude and trust seemed to be similar to that of the “Others” religious group. Since the first experiment did not include individuals from other religions, the finding in the first experiment could not be compared to the “Others” religious group and thus

	<p>future research could perhaps investigate more thoroughly if Christian individuals' trust co-varies with that from other religions backgrounds. For example, if participants from other religious backgrounds were found to significantly trust a certain Web site, it would be quite interesting to note if the Christian participants' trust towards that particular Web site will also be significant. Discussions about this finding are deferred to the future research section 7.6.</p>
<p>H2a: As the attitude towards a vendor changes favourably, the buyer's intention to buy will increase accordingly.</p>	<p>The construct of attitude (ATT) and intention to buy (INTTOBUY) could not be separated from each other. In the exploratory factor analysis, the INTTOBUY items shared the same factor with the ATT items and as a result this hypothesis could not be tested. It is worth noting however, that the intention-to-buy can be regarded as some kind of positive attitude towards an object and thus the implications are that attitude and intention-to-buy can represent the same concept of positive attitude.</p>
<p>H2b: As the trust between a buyer and vendor increases, the buyer's intention to buy will become stronger.</p>	<p>Again, due to the failure of the intention to buy (INTTOBUY) construct to load on a separate factor in the exploratory factor analysis hinders the process of falsifying or confirming this hypothesis. If we were to assume that the intention to buy (INTTOBUY) construct generally represents a positive attitude towards an object (ATT), we can say that the correlation table (Table 6-9) shows that for all relative pairs of ATT (attitude towards a site) and WBT (Web-based trust), there are significant positive correlations. The point to stress however is that these are statistical results and thus represent the statistical perspective of the relationship between each pair of variables (for example, WBTC and ATTC). The discourse analysis however revealed a different story. Some individuals liked the religious Web site but they did not trust it. To be more specific, although Web-based trust and attitude are correlated statistically, there is no qualitative evidence for such a relationship in the context of e-commerce.</p>

<p>H3a: Consumer religious-centrism will instil negative attitudes in consumers towards other religious Web sites.</p>	<p>There is a dilemma in this situation. The response of the participants produced mixed results. Some of the religious individuals preferred Web sites designed for other religious groups. For instance, one Muslim participant preferred the Christian Web site on the Muslim Web site. Having said that, both Muslim samples collectively preferred the Muslim Web site on the other Web sites. It has to be stressed, however, that there was no high-level religious-centrism inherent in the participants constituting both samples</p>
<p>H3b: Religious-centric consumers will feel reluctant to buy from other religious Web sites.</p>	<p>We could neither confirm nor reject this hypothesis due to a couple of reasons.</p> <p>First, the exploratory factor analysis conducted in both experiments failed to validate the INTTOBUY construct due to its items sharing significant loadings with the items of the ATT construct which eventually resulted into the assumption that the concepts of intention to buy and Web-based attitude both represent a measure of general attitude towards a Web site.</p> <p>Even if we assumed that the ATT construct partially represented the INTTOBUY construct, the results of the ANOVA test showed no significant interactions between religious-centrism (RELSCALE) and Web-based attitude (ATT).</p> <p>Also, the fact that no individual who took part in our second experiment displayed a high or even moderate level of religious centrism deprived us from dividing the religious groups into a “high” and “medium” category of religious-centric participants. We would therefore only be able to investigate how low religious-centric users trust and perceive a Web site.</p>

7.4 Contributions

In the following sections, we will draw inferences from the results of this research study and link them to the field of e-commerce, which we believe will benefit the most from our findings.

7.4.1 Implications for the Field of Electronic Commerce

COMMERCIALLY-ORIENTED RELIGIOUS WEB SITES

Commercial Web site designers and owners should heed that a good reputation is more likely to evoke the trust of religious consumers than the extent of religious orientation displayed on a Web site. In other words, a religious interface on its own is not sufficient to trigger the trust of potential religious consumers. Although the findings in our first experiment revealed that conservative Muslims exhibited significant traits of trust towards the Muslim Web site, a closer look at the demographics of these participants showed that they were not very familiar with the World Wide Web and its relative basic technologies: search engines and Web browsers. We therefore concluded that their lack of experience in using the Internet could have made them overlook the security vulnerabilities inherent in the Internet environment. This was also found to be the case of inexperienced Internet users in another study (Jarvenpaa and Todd 1997; Jarvenpaa et al. 1999). Further theoretical and empirical work is needed to demonstrate that these findings are not unique to this sample and study. Religious participants with a moderate Internet experience were found to consult their Web-based trust instinct when they contemplate purchasing an item over the Internet. The experienced religious participants see the Web-based trust instinct to be more appropriate when the risks at stake are high, which is usually the case when proceeding with a financial transaction over the Internet. This type of trust develops through the implementation of robust security safeguards in online transactional processes, a good reputation, recommendations from friends and family, positive peer reviews, and personal previous purchasing experiences with a Web site.

Our findings purport that Web sites selling to religious consumers products under the camouflage of religious banners should reconsider their marketing strategy. Therefore, for a religious Web site to evoke the trust of potential religious e-consumers, the dependency on religious trust alone to lure customers to purchase from a Web site is not sufficient. Web-based trust is seen to be more important than religious trust when the context of the purchase decision is the Internet. The weaknesses in the security aspect of online transactions deter consumers from submitting personal and

financial details to any Web site in general. The following section provides a set of guidelines that may help a Web site in establishing a good reputation and consequently in acquiring a trustworthy perception from the consumers' point of view.

TECHNOLOGICAL INCENTIVES TO WEB-BASED TRUST

In Chapter 2, when reviewing the literature discussing security issues in the context of e-commerce, findings from several sources indicate quite obviously that Web sites incorporating powerful security safeguards in their online transactional processes are perceived as trustworthier than those adopting less powerful security safeguards. Accordingly, we advise Web site owners to invest in good security measures to protect consumers' personal and financial information from accidental loss or disclosure. Installing secure digital encryption technologies for online transactions can be a major boost to establish trust on the Internet. Powerful security and privacy technologies, which use strong encryption algorithms to encrypt consumers' personal and financial information during an online transaction, could help evoke the trust of potential consumers. Furthermore, as required by the UK Data Protection Acts of 1984 and 1998, Web sites should try to abide by the strict security procedures in the storage and disclosure of consumers' personal details to prevent unauthorised access. The security procedures might involve requesting a proof of identity to make sure that private sensitive data is only disclosed to the consumer and not an illegitimate intruder. The better the encryption technology adopted by a Web site the more the consumers will feel that their credit card and personal details are secure and in safe 'hands'.

Also, results from the qualitative analysis conducted in this study suggest that embedding of seals of approval such as TRUSTe (<http://www.truste.org>) and VeriSign (<http://www.verisign.com>) into the Web site's main home page can effectively portray a Web site as trustworthy. VeriSign authenticates the licensee Web site, enabling end users to verify that a VeriSign-approved site uses strong encryption technologies during online transactions. TRUSTe, an independent non-profit organization, strives to ensure that user private data is not disclosed to a third-party organisation without the prior consent of the user.

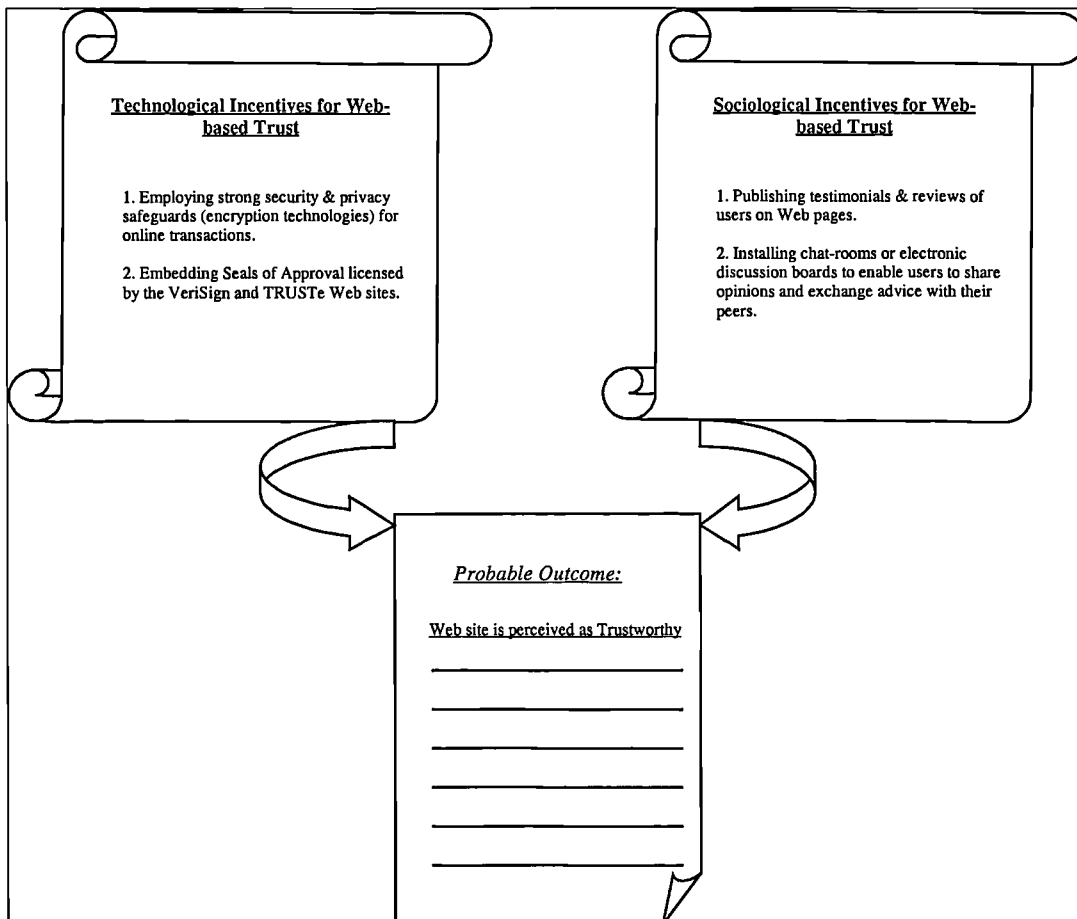
SOCIOLOGICAL INCENTIVES TO WEB-BASED TRUST

In the traditional marketing context of consumer behaviour, reference groups were found to be influential in shaping the purchase process adopted by in-group members (Howard 1994). Members, who affiliate to certain reference groups, including religious groups, are expected to honour and conform to the predetermined cultural values, attitudes and behaviour set up by their group leaders (Solomon 1999). Reference groups may be based on family, friends, colleagues or role models (opinion leaders). Opinion leaders, specifically homophilous opinion leaders (same age, sex, education, and social status) and peers, are the most influential members of a reference group to whom other members turn to for advice (Howard 1994). Phipps and Simmons (1998-99) contend that reference groups can reduce for consumers the perceived risk associated with a purchase decision and that this can also increase brand awareness in affiliating individuals. Resnick et al (2000) states that a good online reputation is built through communication channels the most effective of which are word-of-mouth, rumours and mass media.

Accordingly, the theoretical implications are that if these arguments hold in the context of electronic commerce and if trust is some form of positive attitude, by publishing product reviews and testimonials from other customers on Web sites, trust can develop between a user and a Web site. If customers read an excerpt review of a person that they identify as a peer or a role model, there is a possibility that they will buy the recommended product. Commercial Web sites should also provide electronic chat rooms or some other forms of online discussion boards to enable a global community of like-minded individuals to share their opinions and advice over the Internet. This suggestion complements the previous one.

One way of identifying a person as possessing opinion-leadership is to incorporate the items of the Opinion Leadership Scale (Flynn et al. 1994) in an online registration form. The OLS is a measurement scale that was developed for the self-designation of opinion leaders. These leading individuals can then be targeted with promotional gifts and discount vouchers to potentially gain their trust and the trust of those identifying with these individuals. Content opinion leaders would be glad to recommend 'generous' Web sites presenting these individuals with discounts and promotional gifts, to their followers. Figure 7-2 illustrates the sociological and technological incentives to the establishment of Web-based trust.

Figure 7-2: Diagram Illustrating the Technological and Sociological Incentives to the Establishment of Web-based Trust



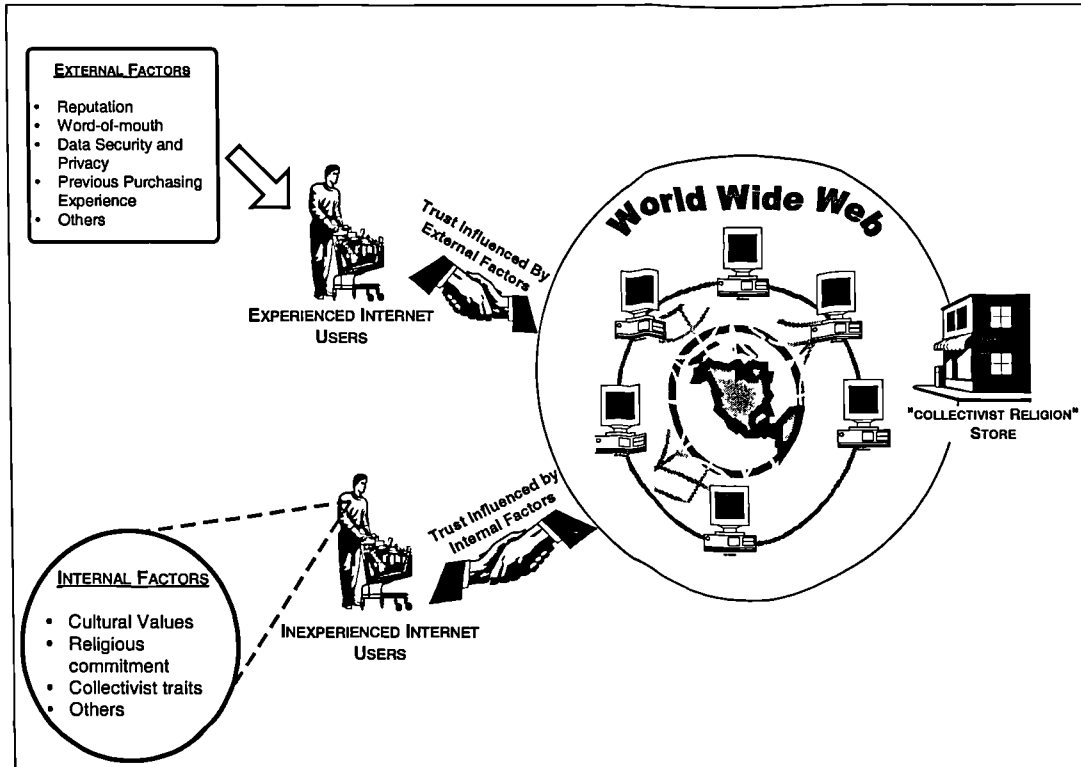
7.4.2 Contribution to Information System Research

One major contribution of this thesis is that this is the first attempt of a research study to replicate contemporary findings about religious subcultures drawn from the traditional disciplines in the context of e-commerce. We are not aware of any other studies to date that have performed an investigation about the effect of of religious subcultures on consumer behaviour in the context of e-commerce. We can claim to an extent that this research study employed a novice approach for conducting an investigation and thus we have produced a 'new' contribution to the area of e-commerce that is by itself part of the global IS research agenda. The authenticity of this claim of being the first study to attempt replicating cultural findings in the context of e-commerce is subject to revision if there are other studies that have investigated the same or a similar topic, during the period of this research.

Findings drawn from the traditional marketing and consumer behaviour literature state that trust towards a merchant develops with a merchant's good reputation (Anderson and Weitz 1989; Doney and Cannon 1997; Ganesan 1994), incessant interactions with a merchant organisation (Geyskens et al. 1998), previous personal experiences (Geyskens et al. 1998; Rempel et al. 1985) and word-of-mouth recommendations from friends and family or peers (Howard 1994; Wells and Prenskey 1996). These findings were found to replicate in the context of e-commerce. Our results show that most of the terms mentioned above were cited very frequently in the respondents' answers in an interview, which has been conducted as part of a qualitative investigation. A content analysis performed on transcripts of these interviews revealed that these terms represent the crucial determinants of the trust-building process between a consumer and a Web site.

Our findings also confirm the findings of other studies, which found that less experienced Internet users to be more prone to trust Web sites than their experienced counterparts (Jarvenpaa and Todd 1997; Jarvenpaa et al. 1999). This case was confirmed to be present in the conservative Muslim sample that took part in the first experiment. We have therefore concluded that due to this group's lack of experience in using the Internet, they could be unaware of the security vulnerabilities inherent in the Internet environment and therefore their purchase behaviour in e-commerce is identical to that in conventional commerce. Religious trust remains intact in these individuals whether the commercial environment is traditional or digital. They would trust purchasing from a Muslim Web site in the same manner, as they would trust buying from a physical Muslim store. However, the findings of the second experiment were different. The individuals of the second conservative Muslim group possessed a much better experience in using the Internet and its relative basic technologies- search engines and Web browsers. We therefore concluded that this group is more aware of the Internet and its surrounding problems and therefore they consult criteria that pertains to the establishment of Web-based trust, which according to our findings develops through previous personal experience, good reputation of a Web site, recommendations from friends and family or peers and the presence of good security measures for protecting e-consumers' private and financial data during an online transaction. A comparative cross-group analysis between the two Muslim samples showed that religious trust gives way to the Web-based trust instinct when a consumer is purchasing from an online store. When the risks at stakes are high, users take a defensive stance by consulting their Web-based trust instinct instead of the 'naïve' religious trust instinct. The relationship between Web-based trust and Internet experience of a user is illustrated in Figure 7-3.

Figure 7-3: Trust in Experienced Versus Inexperienced Internet Users



7.4.3 Measurement Constructs for E-commerce

Another major contribution that we have identified is that we have managed to develop a set of validated measurement constructs of trust (WBT) and attitude (ATT) that can be used in the context of e-commerce. In the traditional context, we have verified the validity of the religiosity construct and other constructs including the RELSCALE (religious-centrism), which we have modified from the CETSCALE (consumer ethnocentrism). Our factor analyses showed that most constituent items of the constructs have loaded on separate factors, which implicates that our constructs are valid from a statistical point of view. This is known as construct validity (Coolican 1994; Kachigan 1991; Kline 1994; Loehlin 1998; Zikmund 1997). The main point to be stressed, however, is that in order for these constructs to become valid, further empirical work is needed to confirm that the measurement scales of these constructs are valid indicators of the phenomena that they intend to measure. Repetitions of these findings in the outcomes of future exploratory and confirmatory factor analyses will consolidate further the validity of these constructs.

7.5 Limitations of this Research

We have mainly used convenience sampling to gather participants for both experiments. The convenience sampling procedure enables the researcher to select a number of cases whose size mainly depends on the availability of the participants rather than 'in terms of suitability based on research objectives/ questions' (Tashakkori and Teddlie 1998: p. 76). The advantage of this sampling technique is that it enables the researcher to improvise with the resources available for the experiment. Its disadvantage, however, is that it limits the interpretation of the findings: the generalization of the results beyond the scope of the sample is questionable because the sample may not represent the characteristics inherent in the general population (DeVellis 1991; Singleton et al. 1993; Zikmund 1997). The other sampling limitations that have to be pointed out are that both samples mainly consisted of students, so generalization beyond this sample is again a questionable issue. The participants in both experiments were assumed to represent the general population of cosmopolitan e-consumers regardless of their socio-economic status, age groups and all other attributes that form part of the purchasing profile of a real e-consumer. The differences in age, experimental tasks, and gender distributions in the sample could have also biased our results.

The domain of commercial Web sites chosen for this research was that of online bookstores. The religious sites (www.trinityzone.com, www.dar-us-salam.com) mainly focus on selling religious product categories while the generic bookstore sells a variety of product categories including a religious variety of items. The findings and results could have been different for other categories of merchant sites. For example, virtual shopping malls selling specifically religious items such as groceries, clothes, and other religious merchandise could have produced different results. This limitation could perhaps inaugurate a new perspective on research focusing on the area of cultural influences/ differences in the context of e-commerce.

Our research study used real-world sites for both experiments. An attempt was made to localise the sites on the network servers at Brunel University but some technical problems that we encountered during the 'localization' process have made the realization of such an objective difficult. Therefore, the time lags across the three Web sites could have introduced changes in content, user interface and other elements specific to the Web site design and layout. In fact, the trinityzone.com Web site collapsed on day one of the experiment and as a result, we had to replace it with the Christianbooks.com Web site. We have not evaluated or controlled for the Web site content, Web site layout, perceived usability, ease-of-use and other variables that could have played a significant role in the outcomes of the experiments.

Participants from both experiments who were either following the Christian or Muslim faith were assumed to represent the general population of Christian and Muslim consumers. In real life, however, both of these religions have experienced profound schisms that resulted into the inception of several religious factions such as Roman Catholics, Eastern Orthodox, and various Protestant groups in Christianity and the Sunni and Shia sects in Islam (Hofstede 1998). Since the questionnaires used in both experiments did not include questions asking the participants to either select or write down which specific Christian or Muslim sect they follow, we cannot assume that our samples of Christian and Muslim participants represent the general population of Muslim and Christian consumers.

Finally, the research model that we employed was exploratory. Our research model portrays the hypothetical causal relationship between the dependent and independent variables related to the context of this research. A confirmatory factor analysis would have confirmed the goodness-of-fit of the hypothesized model. Since the requirements for conducting a confirmatory factor analysis are quite demanding (for example the sample size must be at least 200) we abandoned the confirmatory test knowing that if it would have been conducted it could have significantly substantiated the findings of this research study.

7.6 Avenues for Future Research

1. A number of respondents were concerned about the actual location of the server hosting the Muslim Web site. We preliminarily called this concern the *country-of-host effect*. A further investigation of this issue could perhaps resolve or at least further elaborate on this issue and its potential effect on the establishment of trust in the context of e-commerce.
2. In both experiments, we have specifically focused our investigation on cultural influences on the online consumer interactions of individuals following the Muslim and Christian collectivist religions, hence the choice of the Muslim and the Christian Web sites. Some Hindu participants were quite keen to explore Web sites based on the Hindu religion. Participants who came from other religious backgrounds have also showed an interest in evaluating Web sites representing their religion. These requests intrigued us in raising a topic for future research that should involve participants from different ethnic and religious backgrounds browsing religiously oriented Web sites representing different religions.
3. It would also be interesting to perform a similar experiment to the one adopted in this research on the cultivation of trust in collectivist versus individualist cultures, in the context of e-commerce. Specifically, future research should investigate the influence of other cultural

dimensions such as national identity, power distance, uncertainty avoidance, and masculinity-femininity (Hofstede 1998) on the cultivation of trust in the context of e-commerce.

4. This research study focused only on the Web site category of online bookstores. In the limitations section of this Chapter we have argued that the results might have been different for Web sites selling other merchandise or services such as health foods, clothes, commodities and life insurance quotes. In the future, it would be worth investigating if the findings and results replicate in other Web sites, specifically religious Web sites selling high-involvement categories of products and services such as life insurance quotes, mortgage quotes, automobiles, travel tickets, properties and other products that fall under the high-involvement product category. At the time of this research, we were unable to find Muslim online organizations of the following categories: estate agents, automobile trading agents, banks, and insurance companies. In the future, if such Web sites emerge on the Internet, research involving religious trust versus consumers' high-involvement purchase decisions in the context of e-commerce can become a "worthwhile" investigation topic.

There is one major advantage inherent in the potential outcomes of this future research topic. If the INTTOBUY construct loads on a separate factor, its effect will no longer become context-dependent on user requirements and the reason behind the purchase intention. For example, a devout Muslim would purchase a computer book from a "neutral" online bookstore. In this case, his purchase decision and intention-to-buy will definitely not be based on the extent of religious affiliation/ trust that is inherent in this individual. In the case of a high-involvement purchase decision (for example an online quote for a life insurance) the intention to buy becomes no longer context-dependent: if the prices provided by the religious alternative are competitive and the results show significant interactions between the extent of religious affiliation and the intention to buy from a Web site, one could then imply that if a vendor and a buyer come from identical religious backgrounds, an individual's intention to buy from a Web site is affected by the extent of religious trust inherent in that individual, rather than being dependent on the context of the purchase decision (see the previous example and section 3.6.2, paragraphs 3 and 4 under the section titled Web sites)

5. Another intriguing potential research study could involve an investigation of whether Klein (1998)'s findings of Chinese consumers' ethnocentrism replicate in the context of the World Wide Web.

6. The results of the ANOVA test that we conducted to test for differences between the three religious groups showed that there was a very significant interaction ($p < 0.001$) between the religious background of a group (RELTYPE) and the attitude towards a Web site (ATT). The post hoc test that we have conducted to determine the source of this difference between the three religious groups showed that the Muslim group differs significantly ($p < 0.001$), from both the Christian and the Others group, in their attitude towards the Muslim Web site (ATTM) (see section 6.5.9). This implies that the Muslim group prefers the Muslim Web site to a much higher extent than the other two groups. Since both the ATT and WBT dependent variables were predicted in theory to be correlated and found to be so in practice (see Table 6-17) and since the INTTOBUY construct is a component of the ATT construct there are several possible implications to these statements:
- Since the ANOVA results did not report a significant effect for trust towards the Muslim Web site (WBTM), this could imply that trust and attitude are dissimilar constructs despite their significant correlation with each other. Another possible explanation to this correlation is that trust is mainly correlated with the INTTOBUY (intention to buy) component of the ATT construct (Web-based attitude) and thus trust can affect the intention to buy (the INTTOBUY component of ATT) from a Web site but it cannot make the user perceive the Web site to be “attractive” (the remaining other components of ATT).
 - The significant effect found for the ATTM could perhaps indicate that the intention to buy from a Web site could be instigated more by an “attractive” Web site than a “trustworthy” one. Trust in the context of electronic commerce could perhaps not be a necessary precondition for convincing a user to purchase from a Web site. If a Web site appeals to a user, he might purchase something from that Web site (the reader is reminded that the intention-to-buy construct (INTTOBUY) in this study is a component of the ATT construct after the results of the exploratory factor analysis showed that both the ATT and INTTOBUY construct loaded on a common factor and not on separate factors each, as was initially expected) regardless of whether s/he trusts it or not. At this stage however, it is important to emphasise that the intention to buy a certain product has not been proven to result into the actual purchasing of that product. The other point to stress is that if a user does not trust a Web site with his/ her private and financial details it seems unlikely that s/he will buy something from that Web site.

These implications can perhaps be investigated by a future research study, as we cannot ascertain which component of attitude, ATT or INTTOBUY, is affected by the religious affiliation (RELTYPE) of the Muslim group. The exploratory factor analysis conducted for the data collected from both experiments showed that the items representing both the INTTOBUY and ATT constructs shared significant loadings on a common factor and thus both the ATT and INTTOBUY led us to assume that they both represent a general measure of Web-based attitude. Future research could perhaps successfully separate these two constructs and confirm if our findings are valid. If on the affirmative, the implications could be quite interesting for the design component of the e-commerce discipline. If confirmed, the potential outcomes of future research could benefit Web site designers specifically and e-commerce systems developers in general.

7. The attitude of the “Others” group towards the neutral Web site was found to be significantly different from that of the Muslim group.
8. The Christian sample in the first experiment seems to place more trust in the generic Web site than the Christian Web site (see section 5.6.9). This finding did not replicate in the second experiment. In the second experiment however, the Christian sample’s attitude and trust seemed to be similar to that of the “Others” religious group. This could imply that the participants from the Christian and the “Others” sample share preferences and tastes on what constitutes an “attractive” Web site. Since the first experiment did not include individuals from other religions, the finding of the Christian group in the first experiment could not be compared to the non-existent “Others” religious group and thus future research could perhaps investigate more thoroughly if Christian individuals’ trust co-varies with the trust of individuals from other religions backgrounds (excluding Islam). For example, if participants from other religious backgrounds were found to significantly trust a certain Web site, it would be quite interesting to investigate if the Christian participants’ trust towards that particular Web site is also significant. The implications can be quite interesting if these findings can be generalised to the general population of these two religious groups.
9. Finally, Future research should also address if the intention to buy a product eventually translates into the actual purchase of a product.

7.7 Summary

In this research, we were unable to find significant interactions between the hypothetical independent and dependent variables, which have been subjected to an empirical investigation in this research study.

According to our findings, online merchants ‘camouflaging’ their homepages with Islamic or Christian slogans and symbols hoping to attract religious customers and to boost their online sales could become disappointed. Our findings led us to suggest that religious Web sites should rather focus on how to incorporate protective and preventive security measures in their online transactional processes or else they risk losing out customers to more secure Web sites. In particular, experienced online users consider a Web site’s reputation and the presence of proper security safeguards in online transactions to be more important than religious trust per se, for establishing trustworthy commercial relationships over the Internet.

Religious trust and Web-based trust are dissimilar constructs. Religious trust is intrinsic and is usually *inherited from parents or learned in the culture that one grows in*. On the other hand, according to the results of our qualitative analysis, Web-based trust develops with a company’s good reputation, the extent of security measures adopted by a Web site, word-of-mouth recommendations from peers or friends and family, and previous personal purchasing experiences with a Web site. Religion by itself is not sufficient to encourage consumers with strong religious backgrounds to submit their personal and financial information to a religious Web site. The naïve ‘religious’ trust gives way to the Web-based trust ‘instinct’ when a purchase decision is contemplated in the context of e-commerce. An exception stands out when the users lack Internet experience. Muslim users with low Internet experience were found to trust the Muslim Web site. This trait however was not evident in the other religious groups.

Users with a moderate Internet experience hold a different perception of what factors are responsible for establishing trust in the context of e-commerce. Prior to purchasing from a Web site, they consult criteria that relates to the establishment of Web-based trust. In contrast, the inexperienced users would rather summon the ‘naïve’ religious trust when they are purchasing from an online store or a physical store. We have assumed that the inexperienced Muslim users are unaware of the problems surrounding online transactions and we therefore expect them to trust Muslim stores regardless of the marketing context (traditional or electronic) they find themselves in. We have to stress, however, that this finding is specific to the Muslim sub-sample. There was no evidence of such a trait in the Christian or the “Others” religious group. Our findings also confirm the findings of another study, which showed that inexperienced Internet users are more prone to trust over the

Internet than experienced Internet users (Jarvenpaa et al. 1999). Further theoretical and empirical work is needed to demonstrate that these findings are not unique to this particular sample and the cultural context of this study. The Web-based trust 'instinct' is seen by the experienced religious participants to be a more appropriate purchasing consultant when the perceived risks at stake are high such as in the case of proceeding with an online financial transaction.

The argument that reference groups influence the attitudes and purchase decisions of in-group members seems to hold in the context of e-commerce. Web site designers and owners of religious Web sites should take benefit from these implications by incorporating a 'review' section showing other customers' comments and opinions about products that they purchased from the Web site. Potential religious consumers might identify one of these reviewers as a peer or a role model and if the review was positive, the religious consumer could follow suit and purchase the 'recommended' product. Commercial Web sites should also provide electronic chat rooms or some other forms of online discussion boards to enable a global community of like-minded individuals to share opinions and advice about products and Web sites over the Internet. This could simulate hosting a 'cafeteria' in an online store where friends, relatives and peers take a break from the shopping environment to chat about the online shopping environment provided by the Web site, what products they have purchased, or if they faced problems with any previously purchased products.

Finally, The trait of strict religious affiliation seems to disappear in the context of e-commerce. The threats and risks inherent in online transactions seem to restructure the religious online community by merging it into a global community of e-consumers who accentuate issues such as security, reliability and reputation rather than intrinsic religious affiliations. Having said that, we reiterate, as mentioned previously, that the time experience in using the Internet seem to play an influential role on how users' perceive Web sites.

APPENDICES

A-1 Questionnaire

The following is the content of the e-mail that was sent to invite potential participants to join the experiment:

Hi,

I am a PhD student in the department of IS. I am running an experiment that aims to investigate the cultural influences on consumer behaviour in the context of electronic commerce. We will pay volunteers a one-off payment of £20.

The experiment will take approximately 60 min. If you are interested please e-mail me. The first part of the experiment involves filling in a questionnaire so that I can register you for the experiment.

Yours truly,

HAYTHAM SIALA.

Student ID: _____ E-mail: _____

SURVEY (PART A)

I. TECHNOLOGY FAMILIARITY

Below are a couple of Internet-based technologies and services. Please tick the appropriate check box that represents your extent of using each of the technologies/ services:

I.I Internet-Based Technologies and Services.

- | | Never | Rarely | Occasionally | Frequently |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. Web Search engines (e.g. Yahoo, Lycos, Infoseek, etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Browsers (e.g. Netscape, Internet Explorer, etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

I.II Internet Use.

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. For how long have you been using the Internet and the World Wide Web? | Less than
6 months | One
Year | 2-3
Years | More than
3 Years |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. How would rate yourself as a user of the Internet and the WWW technologies and services? | Novice | Intermediate | Professional | |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. Have you ever purchased anything online via the Internet? | Yes | No | | |
| | <input type="checkbox"/> | <input type="checkbox"/> | | |
| 4. If yes, how often did you purchase items online? | Never | Rarely | Occasionally | Frequently |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

II. DEMOGRAPHICAL INFORMATION

- | | | | | | |
|--------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. Age: | < 20 | 20-25 | 26-30 | 31-35 | >35 |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Gender: | Male | Female | | | |
| | <input type="checkbox"/> | <input type="checkbox"/> | | | |
| 3. Student status: | Part-time | Full-time | | | |
| | <input type="checkbox"/> | <input type="checkbox"/> | | | |

4. Program level: Graduate Undergraduate

5. Full-time work experience: < 2 Years 2-5 Years > 5 Years N/A

6. Nationality:

7. Please indicate your ethnicity:

Afro Caribbean	Black African	Black (other)	Indian	Pakistani
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bangladeshi	Chinese	Asian (other)	White	Caucasian
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
European	Hispanic	Arab		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Other, please specify:.....

8. Religion:

Muslim	Christian	Jewish
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Buddhist	Hindu	None
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other, please specify:.....

III. RELIGION

1. How important is religion to your way of life and your daily decisions?

Extremely important	Quite important	Fairly important	Not too important	Not at All
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. How often do you attend services such as congregational prayers at your place of worship (church, mosque, synagogue, etc.)?

Once a day or more	Once a week or more	Once a month or more	Once a year or more	Never
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. How often do you pray at home?

Once a day or more	Once a week or more	Once a month or more	Once in a year	Never
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. How important is prayer in your life?

Very important	Quite important	Fairly important	Not too important	Not at All
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. How often do you read / recite verses from the scriptures of your holy book?	Once a day or more <input type="checkbox"/>	At least once a week <input type="checkbox"/>	Quite often but not regularly <input type="checkbox"/>	Rarely <input type="checkbox"/>	Never <input type="checkbox"/>	
6. How many of your best friends belong to the same religion / congregation as yours?	All <input type="checkbox"/>	Most <input type="checkbox"/>	Only A Few <input type="checkbox"/>	One <input type="checkbox"/>	None <input type="checkbox"/>	
7. How often do you hold religious meetings with fellow members of your religious community?	Once a week or more <input type="checkbox"/>	Once a month or more <input type="checkbox"/>	Once a year or more <input type="checkbox"/>	Less than once a year <input type="checkbox"/>	Never <input type="checkbox"/>	
8. Please circle the appropriate number to indicate your level of agreement/ disagreement with the following statements?		Strongly Disagree		Strongly Agree		
i) People without religious beliefs can lead just as moral and useful lives as people with religious beliefs.		1	2	3	4	5
ii) To lead a good life it is necessary to have some religious belief.		1	2	3	4	5
iii) The existence of disease, famine, and war makes one doubt the existence of God and Religion.		1	2	3	4	5
iv) The truth of the Holy Scriptures diminishes with the advances of science and technology.		1	2	3	4	5
v) Religious faith is contrary to reason.						
9. If I got into any kind of difficulties (financial, emotional, etc.), I am confident that fellow worshippers of my religion/ congregation would lend me a hand.		1	2	3	4	5
10. My fellow worshippers and I are very considerate of one another's feelings.		1	2	3	4	5
11. There is lack of trust amongst members of our religion/ congregation.		1	2	3	4	5
12. I do not feel too much attached to my religion / congregation.		1	2	3	4	5

- | | | | | | |
|---|---|---|---|---|---|
| 13. I consider my fellow worshippers to be very reliable in fulfilling whatever they promise. | 1 | 2 | 3 | 4 | 5 |
| 14. Overall, fellow members of my religion/ congregation are very trustworthy. | 1 | 2 | 3 | 4 | 5 |

IV. RELIGION (Part 2)

Please indicate your level of agreement with each statement by circling a number for each statement

- | | Strongly Disagree | | | | | Strongly Agree | |
|---|-------------------|---|---|---|---|----------------|--|
| 1. I only purchase products that are in conformity with my religious traditions and beliefs. | 1 | 2 | 3 | 4 | 5 | | |
| 2. I only shop from religiously exclusive places (for e.g. Halal shops, Kosher meat shops). | 1 | 2 | 3 | 4 | 5 | | |
| 3. I only shop from places whose owners are members of my religion/ congregation. | 1 | 2 | 3 | 4 | 5 | | |
| 4. Religious consumers, who purchase religiously non-conforming products when a religiously conforming alternative is available, should be banned from the religious community/ congregation. | 1 | 2 | 3 | 4 | 5 | | |
| 5. I believe that shop owners and manufactures who follow the same religion / congregation as I are the ones who should benefit the most from the money I spend on purchases. | 1 | 2 | 3 | 4 | 5 | | |
| 6. I hold myself responsible for putting fellow members of my religion / congregation out of business when I buy from places owned by individuals following another religion / congregation. | 1 | 2 | 3 | 4 | 5 | | |
| 7. I would buy from shops managed or owned by individuals who are from a different religious / congregational background. | 1 | 2 | 3 | 4 | 5 | | |

**Haytham Siala,
Brunel University,
Department of Information Systems & Computing,
Uxbridge,
Middlesex UB8 3PH,
United Kingdom**

Tel. : +44-1895-274000, Ext. 2532

Fax : +44-1895-251686

E-mail: cspghs@brunel.ac.uk.

General Information

This is the second part of the experiment. The aim of this part of the experiment is to study how users interact with and perceive cultural Web sites. The experimental task involves browsing different Web sites after which you will be asked to assess each Web site by filling in another questionnaire. The time required to complete the experiment is approximately 60 minutes.

Please note that your participation is voluntary. You may choose not to participate. You may skip any questions that you are uncomfortable with and you can discontinue this exercise at any time without any penalty. Completing and returning the questionnaire verifies your voluntary participation. All your responses will be used for research purposes only and will be held completely confidential.

Please write down your e-mail address: _____

Thank you for your participation,

HAYTHAM SIALA.



WWW.DAR-US-SALAM.COM

	Strongly Disagree				Strongly Agree
1. In general I like this site very much.	1	2	3	4	5
2. I enjoyed browsing this site.	1	2	3	4	5
3. This site seems to me very beneficial.	1	2	3	4	5
4. Overall this site is dull.	1	2	3	4	5
5. I liked the content of this Web site.	1	2	3	4	5
6. After I had finished browsing this Web site, I felt happy that there is such a Web site available on the World Wide Web.	1	2	3	4	5
7. This site offers an excellent array of attractive products that I would add to 'my favourites' list.	1	2	3	4	5
8. I will definitely revisit this site.	1	2	3	4	5
9. I prefer another site from the selection of sites that I had browsed.	1	2	3	4	5
	Particularly, the (name of site):				
site				
	Strongly Disagree				Strongly Agree
10. This site made me feel at home.	1	2	3	4	5

	Definitely will not	Probably will not	I am not sure	Probably will	Definitely will
11. How likely would you buy from this site in the nearest future? Would you say you:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Strongly Disagree		Strongly Agree	
		1	2	3	4
12. I'd prefer buying from another site that I had browsed in this experiment.				5	
		Particularly, the (name of site):			
	site			
13. Overall I expect this site to be trustworthy when dealing with my online purchases in terms of credit / debit card transactions.		1	2	3	4
					5
14. Overall I expect this site to be reliable in meeting the enlisted time for delivery.		1	2	3	4
					5
15. I doubt that the owners of this site will deliver purchased products within the time that is advertised on the site.		1	2	3	4
					5
16. Have you ever purchased something online from this site?	Never	A few times	Sometimes	Often	Very often
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. If you were to buy a product online from this site, how confident are you going to be in terms of:	Extremely confident	Somewhat confident	I'm not sure	Somewhat doubtful	Not at all
i) safety;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) security;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) privacy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. What particular aspect of the site (colour, images, graphics, etc.) did you like / dislike and why?

Please write your answer in the space of the quadrant provided below:

.....

.....

.....

.....

.....

.....

.....



WWW.TRINITYZONE.COM

	Strongly Disagree			Strongly Agree
1. In general I like this site very much.	1	2	3	4 5
2. I enjoyed browsing this site.	1	2	3	4 5
3. This site seems to me very beneficial.	1	2	3	4 5
4. Overall this site is dull.	1	2	3	4 5
5. I liked the content of this Web site.	1	2	3	4 5
6. After I had finished browsing this Web site, I felt happy that there is such a Web site available on the World Wide Web.	1	2	3	4 5
7. This site offers an excellent array of attractive products that I would add to 'my favourites' list.	1	2	3	4 5
8. I will definitely revisit this site.	1	2	3	4 5
9. I prefer another site from the selection of sites that I had browsed.	1	2	3	4 5
	Particularly, the (name of site):			
site			
	Strongly Disagree			Strongly Agree
10. This site made me feel at home.	1	2	3	4 5

11. How likely would you buy from this site in the nearest future? Would you say you:

	Definitely will not	Probably will not	I am not sure	Probably will	Definitely will
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Strongly Disagree	Strongly Agree
--------------------------	-----------------------

1 2 3 4 5

12. I'd prefer buying from another site that I had browsed in this experiment.

Particularly, the (name of site):
site

13. Overall I expect this site to be trustworthy when dealing with my online purchases in terms of credit / debit card transactions.

1 2 3 4 5

14. Overall I expect this site to be reliable in meeting the enlisted time for delivery.

1 2 3 4 5

15. I doubt that the owners of this site will deliver purchased products within the time that is advertised on the site.

1 2 3 4 5

16. Have you ever purchased something online from this site?

Never	A few Times	Sometimes	Often	Very often
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. If you were to buy a product online from this site, how confident are you going to be in terms of:

Extremely confident	Somewhat confident	I'm not sure	Somewhat doubtful	Not at all
----------------------------	---------------------------	---------------------	--------------------------	-------------------

i) safety;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) security;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) privacy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. What particular aspect of the site (colour, images, graphics, etc.) did you like / dislike and why?

Please write your answer in the space of the quadrant provided below:

.....

.....

.....

.....

.....

.....

.....

.....



WWW.BOL.COM

	Strongly Disagree				Strongly Agree
1. In general I like this site very much.	1	2	3	4	5
2. I enjoyed browsing this site.	1	2	3	4	5
3. This site seems to me very beneficial.	1	2	3	4	5
4. Overall this site is dull.	1	2	3	4	5
5. I liked the content of this Web site.	1	2	3	4	5
6. After I had finished browsing this Web site, I felt happy that there is such a Web site available on the World Wide Web.	1	2	3	4	5
7. This site offers an excellent array of attractive products that I would add to 'my favourites' list.	1	2	3	4	5
8. I will definitely revisit this site.	1	2	3	4	5
9. I prefer another site from the selection of sites that I had browsed.	1	2	3	4	5

Particularly, the (name of site):

.....site

	Strongly Disagree				Strongly Agree
10. This site made me feel at home.	1	2	3	4	5

11. How likely would you buy from this site in the nearest future? Would you say you:	Definitely will not <input type="checkbox"/>	Probably will not <input type="checkbox"/>	I am not sure <input type="checkbox"/>	Probably will <input type="checkbox"/>	Definitely will <input type="checkbox"/>	
		Strongly Disagree		Strongly Agree		
		1	2	3	4	5
		Particularly, the (name of site):				
	site				
13. Overall I expect this site to be trustworthy when dealing with my online purchases in terms of credit / debit card transactions.		1	2	3	4	5
14. Overall I expect this site to be reliable in meeting the enlisted time for delivery.		1	2	3	4	5
15. I doubt that the owners of this site will deliver purchased products within the time that is advertised on the site.		1	2	3	4	5
16. Have you ever purchased something online from this site?	Never <input type="checkbox"/>	A few Times <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Often <input type="checkbox"/>	Very often <input type="checkbox"/>	
17. If you were to buy a product online from this site, how confident are you going to be in terms of:	Extremely confident	Somewhat confident	I'm not sure	Somewhat doubtful	Not at all	
i) safety;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ii) security;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
iii) privacy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

18. What particular aspect of the site (colour, images, graphics, etc.) did you like / dislike and why?

Please write your answer in the space of the quadrant provided below:

.....

.....

.....

.....

.....

.....

.....

Please rank the 3 Web sites according to your preference. Placing a 1 beside a Web site indicates your highest preference, a 2 indicates your next-in-order preferred Web site, and a 3 indicates the least preferred Web site from this selection.

- Dar-us-salam.com**
- Trinityzone.com**
- Bol.com**

A-2 Respondents Verbatim Answers to Questions of the Interview

Below is the transcription of all of the interviewees' responses to the interview questions. These are the original verbatim quotes of the respondents. The underlined portions of the quotes represent the extract of quotes identified to be consistent with the construct's specification or definition and the word in square brackets after the underlined text shows the construct that is represented purportedly by the underlined text.

Questions used in the Interview:

1. What is your religion if I may ask?
2. Did any of these sites appeal to you? If yes, which one and why?
3. Do you trust purchasing from any of these sites? If yes, which one and why?
4. Do you think that there is a relationship between trust and religion?
5. Do you trust religious sites more than non-religious sites? If yes, which one and why?
6. What are your criteria for trusting a Web site?
7. If you had the option of buying the same product from an online store or a conventional/physical store, which option would you go for and why?
8. Did you find any of the questions in the questionnaire inquisitive or personal? If yes, which ones?
9. Did you enjoy the experiment?

Note that Question 1 is not included in the Table displaying the respondents' answers, the reason being that the question asks the respondents about which religion they follow.

Question 2: Did any of these sites appeal to you? If yes, which one and why?

Muslim	Christian	Others
<p>Ehm, BOL.com because eeh there is a lot of Islamic text free on the Internet so I wont be buying from Dar-us-salam because I will be finding free information</p>	<p>I think that the Christianbok.com was more user-friendly to me in the sense that eech I can find eeech books or gifts or general items that are more related to my taste and preferences. This is the basic criteria.</p>	<p>Well I think that they are all sort of interesting in a way sort of different. I think the Christian one, I thought was the best in a design way. Ehm I am not necessarily interested in the subject but probably that one more than the other two. The layout was quite good and the legend to links and stuff so you can look up sort of areas more easily whereas the other two weren't a bit more so clearly laid out so I am not sure</p>
<p>Yes eehm the Islamic site. Because I am Muslim and I love Islam too much eehm so as you know Muslim people are very very interested in their religion Islam is one of the biggest religions and very strong one you know.</p>	<p>Eehm not particularly none of them.</p>	<p>The BOL because it had some general stuff which I am interested in. so I found especially that site interesting.</p>
<p>I liked the Dar-us-salam that was quite relevant to my beliefs and the BOL one the books online cos there was a music section ion that so I like music... that was very interesting. I thought that section was better than anything than the other Web sites really.</p>		<p>The Muslim one (PAUSES) it's nice it's full of information... a variety yeah... it doesn't look like an online bookshop not at all. They give you an idea they're selling books and give you ideas as well.</p>

Question 2: Did any of these sites appeal to you? If yes, which one and why?		
Muslim	Christian	Others
<p>Yeah of course that one selling Islamic books because I need some books from them and the other one eehh BOL.com because it is a general eeeehm bookstore so I probably will be using it in the future.</p>		<p>Eehh Bol one only because it has books that are of interest to me the others I (PAUSES) wouldn't generally go to otherwise.</p>
<p>Islamic (PAUSES) Dar-us-salam is...some of the content obviously interested me related to the religion and everything the other sites they were well laid out but their contents obviously did not interest me apart from the BOL one where the books some of the books were quite interesting.</p>		<p>None of them really (PAUSES) I liked the ehm Islamic site it looked the best but I am not Islamic.</p>
<p>Dar-us-salam appealed to me because it had a range of Islamic goods and items also Bol.com also accommodated for that for a selection of Quranic books and Islamic items.</p>		<p>BOL. It had many books.</p>
<p>Dar-us-salam.com eeh because they have a selection of books that you usually can't find in some bookstores.</p>		<p>The BOL one. I am not interested in the other religions I am more generally in books that is more my kind of Web interests. .</p>

Question 2: Did any of these sites appeal to you? If yes, which one and why?		
Muslim	Christian	Others
<p>Okay the thing is as I mentioned in my questionnaire and at the end as well these are sites that are directly related to religion anyone's religion especially the Christian or Muslim site. Obviously I am Muslim so if I buy anything which is related to Islam I will buy from the Muslim site and not from the Christian site because they do not have that product anyway so same thing case will be with the Christian as well I think but if I go and I have only the option as option these three sites and if I wanted to buy any general thing I will have to buy from BOL I don't have any other option but if I have some more options for buying general purpose stuff I wont go to BOL site because it doesn't appeal to me very much. First of all, I don't think that they have a wide range of products plus the prices compared to Amazon the cost of the books are not lower than Amazon's offering so I would go for Amazon or some other site that is more trustworthy in other words.</p>		

Question 2: Did any of these sites appeal to you? If yes, which one and why?		
Muslim	Christian	Others
<p>Ehm Bol.com yeah the other one Christianbooks appealed to me because I have some interest in some of their books. Dar-us-salam wasn't comprehensive enough and I know some other book sites which are better because that was just about the title and the price and nothing else and I need to know much more about a book before I buy it.</p>		
<p>Actually I am not you know an online buyer so I never been in an online shops. So basically these three sites are the same to me but (PAUSES) dar-us-salam site attracts me in a sense because they've got a other things in it like Spanish books and other books on the other hand BOL got all variety of books in it except religious the Christianbook site has only Christian things so I think I probably recommend dar-us-salam site.</p>		
<p>Yes, two of them actually the dar-us-salam and the BOL one. I tried to find some things that I didn't know that I could get through them.</p>		

Question 2: Did any of these sites appeal to you? If yes, which one and why?

Muslim	Christian	Others
<p>The dar-us-salam site appealed to me eh I liked it a lot it caught my attention cause they have a lot of moving things in it, colours not bright colours and not so obscene or anything it kept my attention I have a very short attention span which was good the other sites they didn't get my attention they looked a bit blank like the textbook or text but the Christianbook site it was a bit nicer than the Bol site but it wasn't... it still looked blank. I like to see pictures, I like to see colours to read. The small print on them the other two sites I couldn't do that whereas the Dar-us-salam site the pictures of the books were very big and I could see what I wanted to see letter prints, publishers and when it was published although it was written in the text next to it but that made it better. And when you want to buy it they give a brief description of the book unlike the other two sites who just have little clicks little URLs to other sites, which weren't working which as far I know it is a waste of time. If I am a potential buyer I want to see everything in front of me without with as little trouble as possible.</p>		

Dar-us-salam definitely because it is Islamic and that's what I follow so I understood it more than any other Web site. No they didn't.		
--	--	--

Question 3: Do you trust purchasing from any of these sites? If yes, which one and why?

Muslim	Christian	Others
Probably BOL because they're very famous [Reputation]	Yeah the Christianbook.com as I said before eeeh I found it interesting and worth trusting because it sells items that agree with eeeeh my taste and preferences.	I think I would trust from...I have bought from the Internet before, so generally I would trust especially the BOL one...seems like a sort of big site [Reputation] so I generally would trust theehh... I think I would buy from all of them If I had to yeah.
Yes I trust buying from the Islamic site and the other book site BOL.	Well all I can say is that I don't have a reason not to trust to them.	Yes, umh, I will trust the BOL firstly aaaaand second one was it the Christian thing because it gives the address and the phone numbers [Contact Info.] whereas the other site Islamic it didn't give any address or phone number so I don't think I would (PAUSES) try to purchase from them online.
Eehm if everything I trust the BOL one because that's like that is established and very well known [Reputation] but even that I wouldn't purchase anything over the Internet. I don't trust the Internet generally I wouldn't feel comfortable giving my address and my credit card details over the Internet. I feel that the Islamic Web site is being monitored definitely. [Security/ Privacy].		No (LAUGHS QUIETLY)

Question 3: Do you trust purchasing from any of these sites? If yes, which one and why?		
Muslim	Christian	Others
<p>Eehm probably BOL.com is trustworthy because it is a big company [Reputation] and probably this is the only reason and it is a British company.</p> <p>I would purchase from the (PAUSES) Islamic site and the BOL one because of their interest and second trust is a bit difficult because of the security concerns over the Internet [Security] in general.</p> <p>I would really trust Dar-us-salam and (PAUSES) BOL.com because they had information about security [Security] and privacy [Privacy] actually on the main page the last eeh last Web site Christianbook is hard to navigate and find information about privacy [Privacy] but the other two were quite good in giving information about secure credit card details secure server details [Security].</p> <p>Dar-us-salam.com because I have trust in this site eeh as it is my religion I mean it has a relationship to my religion .</p>		<p>I never tried any of them so I couldn't tell you but they all look like they'll be okay they all look like that had secure services [Security] or whatever but until I tried them I wouldn't know.</p> <p>Not a 100 percent, maybe I should (LAUGHS) but no.</p> <p>Not really.</p>
		<p>Eehm, no I don't because I haven't actually bought anything on the Web I don't trust the security of it [Security] I don't know who it's going to or when I am going to get the books [Reliability].</p>

Question 3: Do you trust purchasing from any of these sites? If yes, which one and why?		
Muslim	Christian	Others
<p>Eeeh depends what I would say if you say trust okay except BOL if I wanted to buy any Christian product or anything like that yeah I might buy from the Christian site and somehow I trust same case is with the Muslim site as well because the religion factor is involved in these sites so what I believe eeeh doesn't matter what religion it is but every site eeh in my opinion they wont break trust within their religious community so yeah I will if say I wanted to buy an Islamic thing buy an Islamic book I prefer to buy from dar-us-salam. Yeah. I would say I would always trust religious sites more than non-religious sites just due to the factor of religion .</p> <p>No I wouldn't give my credit card details to any site I haven't got enough confidence in Internet communications [Security] yet. Eeehm but in the shops I don't have any reason not to trust any shop but I wouldn't give my credit card number.</p> <p>No never. I bought a book I wrote this down in the questionnaire I bought a book from Amazon.co.uk but still I am not sure what they are going to do with my credit card details</p>		

Question 3: Do you trust purchasing from any of these sites? If yes, which one and why?		
Muslim	Christian	Others
<p>I actually ehm not fully trust any site to purchase any product because it is not very secure [Security] but I think I have not enough confidence but I will trust dar-us-salam even though I think it is not in relation to but I would do it.</p> <p>Ehm I don't actually trust buying from... I might probably trust buying from BOL because of I heard a lot about them before and it is in the media and everything [Reputation/ Familiarity]... the Christianbook site I wouldn't buy from them I don't know they just strike me as cos it looks text and everything so very religious people they do not know much about security [Security] but then again I might be wrong... the dar-us-salam site I wouldn't buy from them because eeh like eeh I think that they are so much into religion they don't really... wouldn't spend much money on securing their site [Security] and then to make a bit of an estimate something I just thought of when I looked at who the actual owners were, the Saudi Arabians, now one has to be realistic with lots of hype about Islam and Saudi Arabians and all that and the site is</p>		

<p><u>an American-based site not English-based site</u> [Country of host effect] people like that have a lot of people watching them. <u>Anything you dropped on that Web site I wouldn't be surprised if someone is watching it</u> [Privacy]. I may be pessimistic but that's the way I am <u>somebody in America is monitoring us</u> and that <u>site and whatever details you drop they're gonna like just print out your whole details in front of them</u> [Privacy] and that's what scares me about purchasing on the net people having information about you I want to be an individual maybe I am on the mast so I just want to be in the background</p>		
<p>I haven't actually purchased anything yet but if I try I have to and see what happens.</p>		
<p>Eehm I don't I don't have any real problem purchasing from these sites anymore than I would from any other sites.</p>		

Question 4: Do you think that there is a relationship between trust and religion?		
Muslim	Christian	Others
<p>Not necessarily unless I knew the organization personally if I knew eeh if I was let's say if I knew their sect so eeh not only do they need to be Muslim.</p>	<p>No no I don't think generally based on my profile there is no relation between trust eeh and religion and neither there is a relationship between religion and preferences.</p>	<p>Well you might think that religious people would be trustworthy (GRINS)... I don't think not in terms of Internet especially ehm if it is a proper site on the Internet you should trust them [Reputation] as much as you trust anyone handing over your credit card to in a shop or (PAUSES) in a restaurant or anything like that I think.</p>
<p>Eehm yes there is a relationship</p>	<p>No not really.</p>	<p>No it is with respect of your information that you provide.</p>
<p>Eehm well (PAUSES) I can't say I trust all the Muslims on earth but when you think about trust you should be .</p>		<p>Not particularly. No. There can be a case but not in general.</p>
<p>No it is not I don't think so. If you want to test somebody from a different religion you need to know him it is not enough to say I am Muslim to be trusted by somebody or I am Christian to be trusted by somebody.</p>		<p>Not necessarily, no.</p>
<p>Not really no. Basically the sites are not religious there are commercial concerns as well so the religious factor is incidental really.</p>		

Question 4: Do you think that there is a relationship between trust and religion?		
Muslim	Christian	Others
<p>Behm it depends it depends on the situation on the information you have about a site [Familiarity] but if you know a company for example like BOL.com is a company that a lot of people use and it's a certain quality of service [Reputation] you should take that into account.</p> <p>Yes I think so definitely.</p> <p>Yes it is. Religion is associated with trust like as I mentioned earlier on eeh as well say if I buy anything religious for any religion not just Islam any religion eeh and if I have convenience to buy via online I will buy from the religious site because eeh religion is something to do with belief and trust anyway so I will prefer obviously no one not well you will find every type of person everywhere but the majority no one is gonna break anyone's trust like in the name of the religion they misuse the I don't think well not in most cases but you cannot say anything anyway this is the world.</p> <p>It's not it's not I hold the same level of trust in all three sites.</p>		<p>No. It has nothing to do with religion it is how the process will carry on on the other end</p> <p>No</p> <p>No.</p>

Question 4: Do you think that there is a relationship between trust and religion?

Muslim	Christian	Others
<p>Yeah obviously but the <u>people using the name of the religion it depends on them as well</u> . So trust builds on the people so you don't know who is making this site Muslims or others so they can deceive you in a way.</p>		
<p>Well, I am not sure it really depends. You have to know how others behave before you can judge.</p>		
<p>In the case of buying from a site no I am Muslim and I like what they sell there but when it comes to money it is not a religious thing and it's a I sweated for my money thing' so (LAUGHS) I wouldn't... wouldn't just blindly put my money there because I think they will do the right thing with it or not.</p>		
<p>Yeah, definitely .</p>		
<p>No.</p>		

Question 5: Do you trust religious sites more than non-religious sites? If yes, which one and why?		
Muslim	Christian	Others
I probably would but mainly Islamic sites and Christian sites but not so much if it was eeh a Jewish site because that's the way I was brought up.	Eehh as I told you before it is not a matter of trust but a matter of preferences and wishes so all in all I do not have a problem with trusting a Web site if it matches my preferences and tastes.	Eehh, no I don't think so not something I thought about really no generally they are about the same.
Eehhm I think I trust eehhm the Islamic site and a site that is popular [Reputation].	Not really.	No, certainly not.
No not at all.		No no not at all.
Never there is no difference (LAUGHS).		No not really no.
Eehh, (PAUSES) probably they are more likely to be trustworthy because of their religious aspect .		Not particularly.
I will trust (PAUSES), Dar-us-salam.com because they are a Muslim site and from my religion so you should trust the Muslim anyway . So naturally I would trust Dar-us-salam.com and the other two I would trust them as companies that said that they will provide a certain quality of service [Reliability] on that basis. So yeah dar-us-salam, I would trust because it is a Muslim site and the other two I would trust on the issue that they have said that they will provide this service [Reliability].		I have never looked about my religion in a Web site.

Question 5: Do you trust religious sites more than non-religious sites? If yes, which one and why?

Muslim	Christian	Others
<p>My religion I trust sites which have to do with my religion most of them because I believe in my religion and people following my religion if they are following it 'as is' should be trusted .</p>	<p>No.</p>	
<p>I did discuss this in previous questions that I answered earlier on eeh yes religious sites are more trustworthy due to the aim of keeping the trust or otherwise the reputation of the religion will be affected as a result of breaking the trust or doing anything inappropriate.</p>		
<p>No. Yeah no necessarily I wouldn't say that religious sites are more trustworthy. Past experiences with religious people made me more cautious.</p>		
<p>Eeh, I prefer both.</p>		
<p>Not 100 percent but it really helps I believe since the religion is what you believe so you think that they would do the same .</p>		

<p>Question 5: Do you trust religious sites more than non-religious sites? If yes, which one and why?</p>		
Muslim	Christian	Others
<p>In the context of what they saying you can't trust everything you see you have to double-check it yourself there so may sites out there people can put anything their own views or not their own views because it is easily accessible you will read it no... because they know that your tendencies to believe it but I don't believe everything I read on the net... you have to be careful you have to filter out the rubbish from the good stuff you know.</p> <p>Yes and no depends on who is running the Web site [Country of host effect]. Undercover agents against the religion make phoney Web sites [Country of host effect]... could happen (LAUGHS SLIGHTLY).</p> <p>No.</p>		

Question 6: What are your criteria for trusting a Web site?

Muslim	Christian	Others
<p>Eeh... if it is a very famous site [Reputation] and possibly (PAUSES) if the people who run it are religious.</p>	<p>First of all, the brand name of the site [Reputation] for example Amazon.com or Tesco I think that this is the basic criteria for trusting a Web site and in addition whether the site provides information about itself regarding security and this kind of issues [Security]. So I want to be able to read some information to see for example if this site is properly secured [Security] and abides by the set of standard protocol.</p>	<p>Well if I've had heard about it from other people [Familiarity] and they've successfully ehm done something on it already...(PAUSES) even that would help ehm and if it looks professionally done ehm with links to other sites in it ehm which also ehm proper sites ehm I'd probably buy from it. In the end sometimes you gotta try and see what happens I think... I am not sure (LOW TONE)... Other wise if it doesn't look right then I wouldn't buy from it.</p>
<p>Eeh it depends on what is in the site eehm depends on what is available on the site and if it is Islamic ...so many things.</p>	<p>Probably experience my past experiences [Previous Personal Experience] because I purchased something from the Web and everything was fine so I think it's that.</p>	<p>First is I need the address and the phone number and the people to contact [Contact Info.] and also then if I heard about the Web sites before to use familiarity [Familiarity] or whatever.</p>
<p>Eehm like the BOL one it's consistent it's known about so everyone knows it is a decent Web site [Reputation] it is not as if it was one I didn't know about.</p>		<p>Right eeh for example they have some security system [Security] when you need to buy something that's important. Eeetum (PAUSES) yeah I think it's basically that.</p>

Question 6: What are your criteria for trusting a Web site?		
Muslim	Christian	Others
<p>Usually <u>big sites related to big companies</u> are trustworthy because <u>you know trustworthy means you can you can put your details there without any fear [Reputation/ Security].</u> Eehm and also there is safety because they are a big investment and they are strictly committed to their customers. All these features can be provided by a <u>big company [Reputation].</u></p> <p><u>Previous experience [Previous Personal Experience], the content on their page, the reputation of the sort of the company [Reputation] and really personal experience, previous personal experience [Previous Personal Experience].</u></p>		<p>Usually <u>if someone has recommended it [Familiarity] eehm you tend to know if they've tried ordering from it it usually okay eehm but unless you either <u>found out from word-of-mouth or through media [Familiarity /Reputation]]</u> or something like that.</u></p> <p>To see that they are going to <u>deal with my details very securely [Security] when I am purchasing something eehm to encrypt the information and either to take me to a private window [Security/ Privacy] so that I can maybe interact with somebody else or <u>submit the information very privately [Privacy] and to have somebody get back to me very straight away so I'd know that they have received my details [Reliability]. I don't like giving my details over the Internet and not hearing from someone for days and days [Reliability].</u></u></p>

Question 6: What are your criteria for trusting a Web site?		
Muslim	Christian	Others
<p>I think they should be three first they should have eech information about the technology used: encryption technology used, secure server and other technologies that they use to secure access to personal information [Security] so basically that's three criteria for any sites for most sites they should should have a secure server [Security] or some kind of technology that encrypts your credit card details [Security] when you send them over the Internet.</p> <p>Else than what I've already said eeech that it's a well known site [Reputation], lots of people did purchase from this site [Familiarity] and eeehm that there were no problems eehm with these sites before [Previous Personal Experience].</p> <p>Trust is if it's a well known site [Reputation] like say Amazon it's very established very well known [Reputation] obviously they're not gonna disclose any private information [Privacy] or use for that information for fraud [Security] because their business is based on trust and they have a quite big business so I will buy from them but if I buy same</p>		<p>Nothing.</p> <p>I don't really think I should buy something from a Web site I don't feel confident when buying from a Web site [Security]. Amazon.</p>

		<p>thing or some other thing from eeh not very renowned site or not a very big company so I would prefer buying... I want experiment anyway. Put it this way, I wont experiment unless few people recommend that that site is very secure and that they have been frequently buying from it [Familiarity].</p> <p>Well at present I wouldn't trust any Web site eeh simply because I don't want to give my credit card details to anyone but eehm once I am sure that these transactions are secure [Security] then I may start buying online but at the moment I'm eehm I don't buy anything. I read a lot of journals and magazines so once I know that there is a system, which is 99 percent secure and it is being adopted by a Web site then I would trust on that [Security]. I would go to security reviews so if I hear about a Web site using a system which is safe enough there is no system which is 100 percent safe but safe enough then I would start buying online [Safety].</p> <p>I never trust Web sites.</p>

Question 6: What are your criteria for trusting a Web site?		
Muslim	Christian	Others
<p>Not at all, I can't trust a site unless I know that they have a <u>good reputation and background</u> [Reputation] or if I heard about a site a bad reference I wouldn't trust [Familiarity] I usually do internet shopping with <u>amazon.com</u> because I know that they don't they are <u>very good</u> [Reputation] and that I can trust them but I haven't trusted any other site.</p> <p>That's very difficult eehm some set of laws or standards or something which cannot be imposed really you cannot say anything you say about less or about religious site if you talk about Christianity has to be truly Christianity there is no way of monitoring there is no monitoring body maybe yes I will when there is a monitoring body like where you have the W3C people they don't monitor sites but they monitor contexts as in download times and the things for the sites and how efficient they are. If I was looking at a site in respect of that if they had their <u>logo on it, certification logo then I would trust a site to do that particular thing</u> [Certification Logo/ Certified Security Seal from an Authorized</p>		

<p>Intermediary] when general contexts of life there is no standard for there is no standard for a way of telling somebody I want to sell tapes or books or anything no monitoring body so you just have to guess it is either that or what is in the media.</p>		
<p>What they talk about and the interface and what they got to offer. The content of the product.</p>		
<p>Eehm (PAUSES) I put some weight on people having had experience of having bought things from a site if there were certain reviews of people who've bought things from this site [Familiarity] and recommendations from people [Familiarity] eechm not just friends but certain other authorities as well who recommend the site [Familiarity].</p>		

Question 7: If you had the option of buying the same product from an online store or a conventional/ physical store, which option would you go for and why?

Muslim	Christian	Others
<p>A conventional store so I can see everything I can pick it up for myself.</p>	<p>Eech it depends on the type of product I will prefer to buy some standardized products for example like Heineken, Coke, or Pringles or any of this kind of products that are standardized I would not prefer to buy such products from the physical store but regarding products like clothes or meat or this kind of products that are not standardized I would prefer to conduct shopping by visiting the physical store so this is the basic criteria of conducting or not some different shopping activities. I would like to have a physical contact with non-standardized products that is not applicable in the Web-based consumer interface.</p>	<p>Ehm I actually more buy from online stores now cos (JOYFUL MODE) they seem to save time more if you can just do it from home or from university so I probably would do it online if I could if there wasn't a local shop to have a look at that or if I needed to buy a few books and it could be delivered so I probably would buy it online.</p>
<p>I'll go with the online one of course because it is so easier and simpler. It really depends on what I am going to buy. I would buy from a physical store if it was food products because Muslim people are not going to eat every kind of food there us Halal there is Haram so in this case it is better to go physically to find and check the food ingredients.</p>	<p>Normally for 'food' shopping I prefer to go to physical store probably well no if I know the book it's okay but if I go random sometimes just go random to buy books and I like to go through the pages and I like to see them but the if my search is focused or I have a special specific target then I can buy on the Internet.</p>	<p>I think I prefer the Internet because it is more easy because you don't have to spend your time going around cos it costs you money yeah (PAUSES)... Internet is more handy.</p>

<p>Question 7: If you had the option of buying the same product from an online store or a conventional/ physical store, which option would you go for and why?</p>		
<p>Muslim</p>	<p>Christian</p>	<p>Others</p>
<p>I would go to the street I'll go buy from the shop definitely it may be less convenient but even still I'd like to it's just that I feel better buying from the shop you can try clothes and see if your uncomfortable and also you would like eehh you can try before you buy it cos on the Internet you just see it and you just order it.</p>		<p>Right, eehh I usually buy books from the normal bookshops not online shops aahm (PAUSES) when someone eehh a close friend or peer, recommends one perhaps then I wouldn't mind to buy something from them.</p>
<p>Eehh if the physical store is close I would prefer to go there and see the book by myself and check if there any other books that are similar but in some cases it should be online especially when we can't find some books immediately or things that we need immediately and usually online stores offer better deals than the physical stores...</p>		<p>Eehh, that would depend a) whether, you know, it was the cost of it in the online store compared to the normal store and b) which is easier so if I needed something if I needed books say take the Amazon.com example if I needed a book and I knew the book is available in Waterstone's in London but I could get it from Amazon and have it deliver to my door in 24 hours then I'll buy it from Amazon.</p>

<p>Question 7: If you had the option of buying the same product from an online store or a conventional/ physical store, which option would you go for and why?</p>		
<p>Muslim</p>	<p>Christian</p>	<p>Others</p>
<p>Probably the physical store because there is more sort of certainty there as you pay the money you sort of get your goods whereas the Internet there is the time delay I don't know between ordering and receiving and obviously with the physical one that doesn't arise.</p>		<p>If I wanted to buy a conventional product, like a cook book or a gift, I'd go to a regular store and if it is something a bit more specific I will try to see if I can find it online first because I know some of the sites have specific things and some of the conventional stores are out of stock but online stores are generally not. It depends on where I am. I have been for example to some car sites and I don't think it compensates personally for the excitement of seeing the car in a showroom- I like to touch the car, get into it, hold it knowing that it is there. I'd rather do these things in person.</p>
<p>Again it depends on the situation if I am in front of a computer and also depends on the item if it is a book and there was a Web site that was giving a discount and I know it has a good quality of service and reputation I will try (PAUSES) I will try to purchase from that site otherwise if I am in the town centre I'll go to the local bookshop. It depends on the reality where you are and eeh if you have access to the Internet. Price is an incentive because you can</p>		<p>A physical store because I am not sure about the payment process on the Internet.</p>

<p>get discount apparently from Web sites whereas in physical stores the prices are really the same they hardly change.</p> <p>I think eeh the physical store because it's as with respect to credit card details it is less dangerous to do so and eeh sometimes I eeh I would like to see the book before I buy it and eeh see really whether it is within my interest or not because sometimes you can't tell about a book from just having the table of contents and the title.</p> <p>Okay the thing is if I have eeh (PAUSES) say (PAUSES) eeh an option but that depends on the product what product I am going I am buying for I am going to buy and eeh first of all is product and second thing is price if I find something in eeh which is eeh for daily usage thing or anything like that, something that I would like to touch before I decide like clothes or anything I go for conventional store but if I in the same category like clothes if I have again an option I am going to buy any Jeans like branded stuff like Levis 501 and it is bit cheaper online I would definitely go for online because I do not need to touch that because that is a brand that is well known whichever it is it is there you know the size you know already the stuff because if you are not a first-time buyer of that specific product. Again another thing is that if I buy</p>		<p>I think conventional because the book is there there is no risk of not getting the book or your payment not being processed properly.</p>
---	--	--

<p>a computer if the online store gives me an option to input my specification, my own specification and afterwards it comes cheaper than conventional store definitely I will buy from the online store because obviously I don't need to touch and feel that stuff before I buy it. So, it entirely depends on the product what you are going to buy and another thing is security hoe secure is the site because you are disclosing your credit card details and other stuff.</p>		
<p>I would go for a physical store because eehm I can get the book straight away that's one reason I can browse the book for the quality of its paper and printing and quality of writing may be I can read a page or two to see how fluent the author is and maybe I would go for the table of content and see what is contains so there is some sites the Islamic site that didn't have those things so well even if the site have table of contents and all that I do want to feel the book how it feels, the style of author , the quality of the paper and the quality of the cover page sometimes (LAUGHS SLIGHTLY) affects the scene.</p>		
<p>Physical store because I am giving them the money in front of me and taking the things in front of me so I never believe to give my details on the net.</p>		

<p>Question 7: If you had the option of buying the same product from an online store or a conventional/ physical store, which option would you go for and why?</p>		
<p>Muslim</p>	<p>Christian</p>	<p>Others</p>
<p>Depending on the actually what the product I want to buy is... if it something I already know what I want then that makes my life much easier because it is easy for me to do it through the Internet and it will work out cheaper to but if I don't know what to buy then it's good to go to the physical store to have a look at what you want and if you like it or not.</p> <p>Eehm One kind of the things at times I feel you can't replace touch, feel the normal senses of life you know you touch, you feel it you smell it or something like or you have a 'think about it over a night' thing on the net you face you arte buying it or not buying it click in your details you know on the other hand you might be able to go to a showroom and see something you feel it you test it come back the next day test it again and again whereas on the Web site it is the same picture every time you know you it's (PAUSES) you don't get that feeling. At times I would rather buy physically although the Web sites are cheaper that's the only lure right now</p> <p>the cheapness and may be the convenience of delivering to your house but if it's down the road I'd</p>		

<p>rather go down the road I've heard it's cheaper buying online than going to normal shops so I would buy online if I knew it was trustworthy.</p> <p>Eeh well I'd much rather buy from a physical store than an online store because I have the chance to see the things that I am buying directly. That doesn't stop me necessarily from buying things online anyway which I have done but I'd much prefer to see what I eehm buy and also human contact is rather important as well and the interaction when purchasing things.</p>		
---	--	--

Question 8: Did you find any of the questions in the questionnaire inquisitive or personal? If yes, which ones?

Muslim	Christian	Others
No, not really.	Eeh, no I don't think so all questions are very let's say (LAUGHS SLIGHTLY) they're not against privacy or these issues. So it is okay.	No I don't think so...it's just general opinions about what you thought of it eeh so no I didn't have a problem with any of the questions.
No.	No, not really.	Yes the first part of it can you remember the one (PAUSES) about religion... overemphasized in all of the facts I guess I don't know (LAUGHS) may be not some questions were general but the other ones were more specific (LAUGHS) so... (PAUSES) the problem at the end of the day is when you start questioning the motive of the experiment (LAUGHS) whether it is an experiment or is it like something else... like a religious thing or whatever.
Eeh just eeh the religious ones when you asked me about my religion. I thought what did this have to do with the experiment (AGITATED TONE).		Eehm, no not particularly no.
No it's all right everything was all right.		Eeh, (PAUSES) not really no they were fine.
Not really. No.		Not particularly.
No none at all (LAUGHS) I don't mind (LAUGHS).		No it was okay
No I don't think so.		No.
Eeh not really depends on how you categorize personal but in my case I didn't find anything personal.		

Question 8: Did you find any of the questions in the questionnaire inquisitive or personal? If yes, which ones?

Muslim	Christian	Others
Well first of al asking about my religion eeehm that is a personal question and asking about belief what do you belief and why these are not very personal questions but they are... they are in that eeh category.		
No it was or it wasn't it was in between some of the questions asking you if you like the site and if you prefer going to other sites is a bit personal but at the same time it's not.		
No at all.		
Eehm not really because it depends on the end user I like to tell my views I tell them what it is.		
Not really no.		
Eeehm no not difficult or personal just odd some of them were quite odd.		

Question 9: Did you enjoy the experiment?		
Muslim	Christian	Others
<p>Beeh yes (LAUGHS QUIETLY)</p> <p>Sure I very enjoyed the experiment (LAUGHS SLIGHTLY) it is very enjoyable.</p>	<p>Yes I enjoyed it very much because the basic reason eeh is that these three sites were different and they were completely different so it was interesting for a subject to participate in this kind of sites.</p> <p>Yeah it was okay yeah it was fine as I was browsing it was interesting to see how religious matters are treated by e-commerce yeah it was interesting.</p>	<p>Yeah it was interesting yeah it is not the sort of sites I would normally look at the two religious sites...yeah it was.</p> <p>Yeah it was good (PAUSES) but eeh actually I don't think you'll be able to achieve your aims very much because like most of them were more general not specific so (PAUSES AND GRINS) but maybe it is difficult to engender it more like this you have various people so hah (LAUGHS).</p> <p>It was okay (LAUGHS) it was fine.</p>
<p>Yes and no, I thought it was boring sometimes cos there was really I thought there was so much you can look at a Web site before going crazy cos there was like the Islamic Web site it was very big I didn't finish it cos I could spend hours on that Web site whereas the Christian one was very small and like much of the information was repeated so I found myself getting bored but the BOL one was very very good and I like that. Generally the experiment was eeh a bit boring but some of the Web sites were very good.</p>		

Question 9: Did you enjoy the experiment?

Muslim	Christian	Others
Of course, yes.		Yeah it was fine it was great good to browse some sites I didn't even know some of them existed so like Christianbooks and stuff so it was good to see that they were there.
Great laugh, it was good, good and interesting.		Yes yes it was good it was interesting bit eye-opening.
Yeah I think it's a good experiment eeh being good if we had a couple more Web sites but obviously (LAUGHS SLIGHTLY) there is a time limit.		Yeah.
Yes.		
Yes I did.		
Yeah I did.		
Yeah I enjoyed it		
Yes, I did.		
Oh yeah yeah very much so very much so.		
Yeah it was good.		
Yes, I thought it was rather good.		

A-3 Post Hoc Tests for Analysis of Variance (ANOVA)

Post hoc multiple comparison procedures are used to assess which group means differ from which others, after the overall ANOVA test has demonstrated that there is a significant effect on the dependent variable. Using the results of the post hoc tests, the researcher then proceeds to determine just which group means differ significantly from the others.

Dunn Test: This test is recommended for multiple planned comparisons, if the number of comparisons is not large. Dunn's test addresses the problem that when a series of t-tests is made to compare the means of two groups, the nominal alpha significance level (for example, 0.05) is inaccurate. A 0.05 significance for the first comparison means there is a 5% chance of a Type I error or fluke (thinking that you found something when you didn't) occurring in the results. However, as one computes additional significance coefficients for additional comparisons, one is increasing the likelihood of a Type I error. The more comparisons there are to test, the more stringent the alpha level must become to obtain a total overall experiment-wise Type I error rate of 5%. Dunn's test accomplishes this by setting the alpha rate at $0.05/p$, where p is the number of comparisons. For example, for 10 comparisons, in order to obtain an overall Type I error rate of 0.05, one should test each comparison against an alpha of $0.05/10 = 0.005$. Note Dunn's test can be applied to ANOVA tests as well as T-tests: it can handle both independent and pair-wise comparisons. Dunn's test imposes an extremely small alpha significance level as the number of comparisons becomes large. Thus, this method is not recommended when the number of comparisons is large because the power of the test is reduced. Nonetheless, researchers still try to limit the number of comparisons, trying to reduce the probability of Type II errors (accepting a false null hypothesis or thinking that there is no significant result when there actually is). Dunn's test is not recommended when the researcher wishes to perform all possible pair-wise comparisons.

Bonferroni test: Dunn's test generalizes the Bonferroni test, which uses the same criterion of setting the alpha error rate to control for the experiment-wise error rate (usually 0.05) divided by the total number of comparisons to control for Type I error when multiple comparisons are being made. If the Bonferroni test is requested, SPSS will print out a table of "Multiple Comparisons" giving the mean difference in the dependent variable between any two groups (for example, differences in group means between two different religious groups). The significance of this difference is also printed, and an asterisk is printed next to differences significant at the 0.05 level or better. SPSS supports the Bonferroni test in its GLM and UNIANOVA procedure.

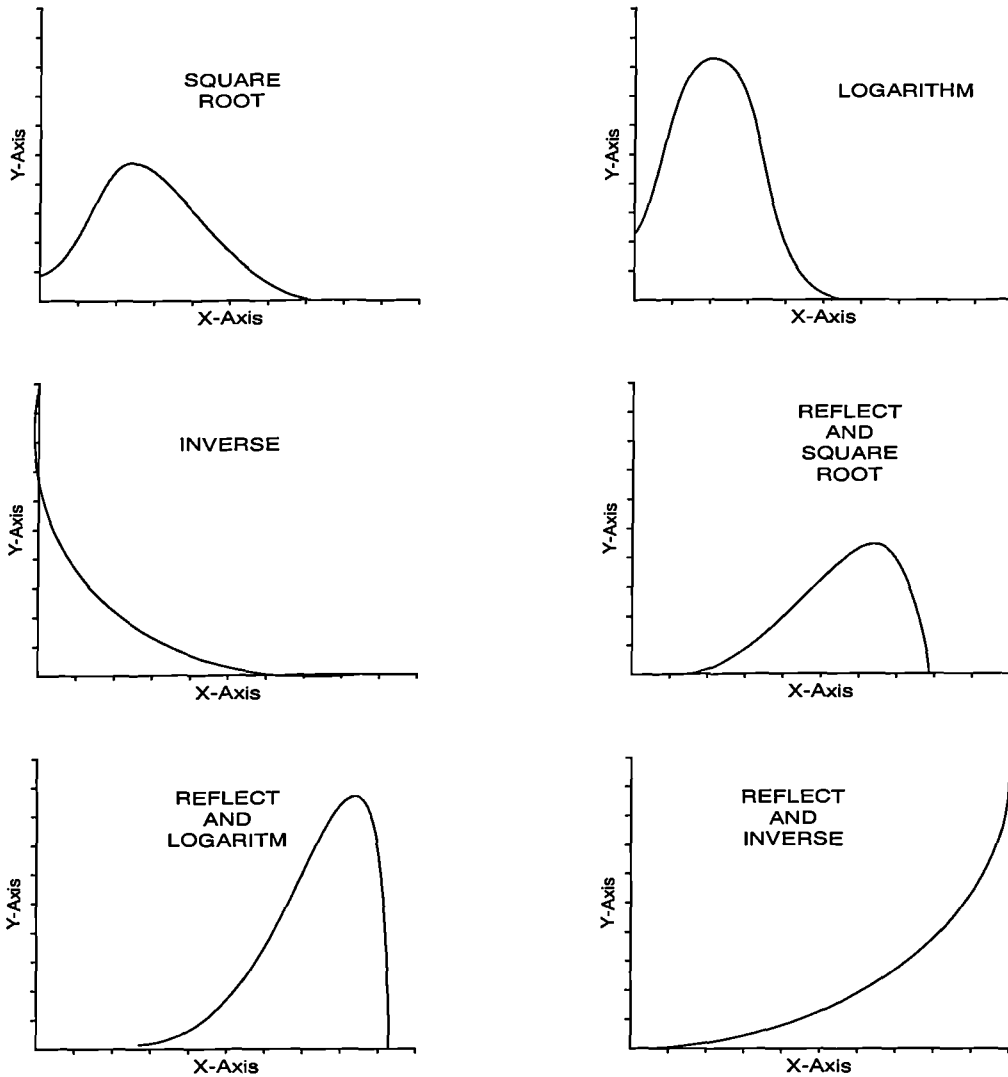
Scheffe test: This test performs simultaneous joint pair-wise comparisons for all possible pair-wise combinations of means using the *F* sampling distribution. The Scheffe test can be used to examine all possible linear combinations of group means and is not restricted to pair-wise comparisons only. It is used mainly for controlling Type I errors in post hoc testing of differences in group means. It works by first assuming that the overall *F* test of the null hypothesis to be rejected. If the null hypothesis is not rejected overall, then it is not rejected for any comparison null hypothesis. If the overall null hypothesis is rejected, however, then *F* values are computed simultaneously for all possible comparison pairs and must be higher than an even larger critical value of *F* than for the overall *F* test described above. The Scheffé test can be used to analyse any linear combination of group means. While the Scheffé test maintains an experiment-wise 0.05 significance level in the face of multiple comparisons, it does so at the cost of a loss in statistical power (more Type II errors may be made: thinking you do not have a significant effect when you do have one). The Scheffé test is a conservative test (more conservative than Dunn or Tukey) that is inappropriate for planned comparisons. Its use should rather be restricted to post hoc comparisons (Toothaker, 1993).

Sidak test: The Sidak test is a variant of the Dunn or Bonferroni test, using a *t*-test for pair-wise multiple comparisons. The alpha significance level for multiple comparisons is adjusted to tighter bounds than for the Bonferroni test. SPSS supports the Sidak test in its GLM and UNIANOVA procedures.

Dunnett's test: Dunnett's test is a *t*-statistic, which is used when the researcher wishes to compare each treatment group's mean with the mean of the control group, and for this purpose it is more powerful than the other post hoc tests.

A-4 Original Distributions and Common Transformations To Produce Normality

Tabachnick and Fidell (1996) suggested for each shape of a non-normal distribution the following transformation techniques:



Note that the “reflect” technique is not a built-in function in SPSS. The procedure of “reflecting” a variable involves retrieving the maximum value in the distribution and incrementing it by 1 to create a constant ‘larger than any score in the distribution’. The next step is then to create a new variable whose values are derived from subtracting each score in the distribution from this newly derived constant (Tabachnick and Fidell 1996: p. 82-82).

A-5 Construct Validity

Measuring elusive psychological constructs like emotional intelligence or attitude is as much an art as it is a science. A psychological construct is an abstract theoretical variable that is usually contrived to explain some phenomenon, which is of interest to scientists. Because such psychological constructs are latent and not directly observable, issues of construct validity are paramount, but are, unfortunately, often deferred to or omitted from the methodology sections of published research papers. In an effort to increase the validity of conclusions reached using measures of psychological constructs (for example, emotional intelligence), this Appendix has been included as part of this thesis. The sections will mainly cover the major validity issues involved in measuring psychological constructs. The information gathered here will provide insight regarding the validity of psychological constructs and how one would attempt to clarify the meaning of such elusive constructs and measure them. To recap briefly on the meaning of construct validity, construct validity reflects the extent to which a measurement measures what it is supposed to measure. In other words, construct validity is mainly concerned with studying the relationship between a concept and the items that are used as indicators to measure the concept of interest (Coolican 1994; DeVellis 1991).

Types of Construct Validity

Construct Validity reflects the extent to which a measure relates to other measures consistent with theoretically derived hypotheses concerning the concepts that are being measured and it is intrinsically linked to theory. The term construct validity is an overarching type of validity that encompasses face, content, criterion-related, predictive, concurrent, convergent and discriminant validity.

Convergent and Discriminant Validity

Convergent validity is demonstrated by the extent to which the measure correlates with other measures designed to assess similar constructs. Discriminant validity refers to the degree to which the scale does not correlate with other measures designed to assess dissimilar constructs. Basically, by providing evidence of all these variations of construct validity (content, criterion-related, convergent and discriminant), the analyst is trying to confirm or disconfirm if the scale measures what it was intended to measure.

Face and Content Validity

Both of these terms, face validity and content validity, have been used interchangeably in some textbooks but it is wrong to assume that they are the same. Face validity refers to whether a measure appears "valid on the face." The task of face or content validity is to look at a measure of a certain psychological construct such as emotional intelligence and then say, "Yes, it looks to me like it measures emotional intelligence." In summary, face validity reflects the extent to which the items appear on the surface to be consistent with the theoretical domain of the concept that is being investigated. Since it is based on the personal subjective assessment of a construct, it should come to no surprise that many books described it as the weakest form of construct validity.

Content validity determines if the test items representing a certain concept are representative of the domain of the concept that is being measured. This type of validity is in fact more of a "sophisticated" version of face validity. The main difference in this case is that content validity involves consulting a panel of experts in the domain of interest in order to obtain suggestions and feedback about the extent to which the test items represent the underlying construct while face validity can be based on the personal opinions of colleagues or the researcher himself/ herself and thus the outcome of the review process can turn out to be too lenient when compared to that from the "experts" in the domain.

Criterion-related Validity

This refers to the extent to which a measurement scale of a construct is able to predict a variable that is designated as a criterion. Criterion-related validity relies more on statistical analyses rather than subjective judgments as in face/ content validity. This type of validation involves calculating a 'validity coefficient' by correlating the items that represent a certain concept with another "validated" measure (criteria) already known to represent the concept of interest. Said alternatively, it refers to the relationship between a new psychological measure and other established and independent measures representing a similar concept (Coolican 1994; DeVellis 1991).

As has been mentioned previously, criterion-related validity is an indicator that reflects to what extent scores on a measure of for example, emotional intelligence can be related to a criterion. A criterion can be some behaviour or cognitive skill of interest that a scientist wants to predict using the test scores of for example, emotional intelligence. For instance, one could predict that participants who score higher in the

emotional intelligence test would be more sympathetic towards other people's problems. As mentioned previously, evidence of criterion-related validity is usually demonstrated by significant correlations between the scores of the new measure and the scores of an established criterion. Criterion-related validity has two sub-components: predictive validity and concurrent validity. Predictive validity refers to the correlation between the scores of the new measure and the scores of a criterion given at a later date. Concurrent validity refers to the correlation between the scores of the new measure and the scores of a criterion when both tests are performed at the same time. The following example will help clarify the two types of validity.

If one wants to predict the performance of front desk clerks at a hotel, this will represent the criterion that one wants to predict using some test. The test that will be used in this example is a measure of emotional intelligence. The predictive validity of the emotional intelligence test can be estimated by correlating an employee's score on a test of emotional intelligence with his/her performance evaluation, a year after taking the test. If there is a high positive correlation, then one can predict performance using the emotional intelligence measure and thus demonstrate the predictive validity of the emotional intelligence measure. To demonstrate concurrent validity, one would have to correlate emotional intelligence test scores and criterion scores (current performance evaluations). If the correlation is significantly large and positive, this would provide evidence of concurrent validity.

A-6 Respondents Transcribed Answers to the Open-ended Questions Of the Questionnaire

Before beginning to browse the sites, participants were given a briefing about what to do with the questionnaire. Some of the questions in the questionnaire were open-ended to give participants the freedom to write their personal opinion about the sites they have browsed and how they found the experiment in general. The literals “M”, “C”, and “N” represent the respondents’ answers for the Muslim site, Christian site and Neutral site respectively. This answers were not used in the content analysis due to the fact that they reflect opinions about common aspects of Web sites such as colour, layout, interface features, etc.

GRADUATES

Female (Muslim, Turk, White)

M: I don't like the fact that the green is used too frequently in the page. I would like to see green in the nature not on the screen and because of this I believe that green is the holly colour in our religion. Another thing the choice of the books there isn't any book that talks "how can we combine Islam to secularism, and this is the issue we have to discuss today.

C: Actually, I don't know too much things about Christianity but I like the colour & images. There are more choice available at this site than dar-us-salam site.

N: I like the site very much the selection of books and CDs are very elegant. It directs the customer to the item of interest in a very smooth way. Colour, image and graphic combination is perfect.

Overall: I like to visit three different sites and I like Bol.com the most because I like to read books from different literatures. For religion, I like to read only Quran, the other books written by other people don't mean anything for me, and I have no intention to read them before I have certainly developed my sight of view in Quran.

Male (Christian, Greek, White)

M: I disliked the green colour. It made the site a little bit "cheap". The combination of flashing objects made the site look like a children garden.

C: The design of the site is very nice. It gives a confidence to the user. I do not like the nature of the information displayed here.

N: I liked the way the entire site has been designed. White and blue colours are combined in such a way that they give an elegance and extra quality.

Overall: No comment.

Male (Hindu, British, Asian)

M: The colour co-ordination is good, and the layout is good. However font sizes are too large, and use of animated gifs is not appropriate. It's a case of using technology without reason. Having NO privacy policy is EXTREMELY worrying. I would not provide ANY details for ordering without one.

C: Use of Book Bay not extremely clear/ Low feed back. Layout is good, very similar to Amazon, but no 'personalization'. However, some picture icons are a little small. The privacy code breaks UK DATA Protection Act. No details on delivery BEFORE making an order so I am unsure. However at least the privacy details are clearly stated. By default it will distribute your details. You have to cancel. SSL implemented.

N: Very well laid out, uncluttered, and sleek very unobtrusive. Ordering is well thought out, and privacy and delivery policy is well stated. Privacy policy conforms to UK Data Protection Act. Server is a bit slow however. I doubt older Web browsers and "lightweight" browsers can view these very complex sites unless provisions have been made. Colour coding is very pleasant. "Order Status" feature is very good & helpful.

Overall: All three sites have merits and problems. I am of the Hindu religion and therefore neither the "Dar-us-salam" nor "Christian books" are useful to me. If I wanted to read book of those

religions I would borrow from a library or a friend. My greatest worry about the two sites is the privacy policies. Christian books break UK laws and the Islamic one doesn't HAVE a policy. I would not buy book from either because of this. All sites made a good attempt at cross-browser display.

Male (Muslim, Pakistani, Pakistani)

M: Overall design of site is good and mostly according with W3C. Links are pretty good. Site describes about itself. Products and links to other valuable site. Colour combination & distribution is good. It is not very good & impressive on 'URDU' site, books can't be linked/ explored as in other site of same Web site.

C: Overall site meets the standards of W3C. It is a defined site for Christian books. Obviously a Christian or student of comparative religion study would like to visit & buy from this. Contents of site does not preach on Christianity. It is pure commercial Web site. Display is quite good. Links and searching is quite good as well.

N: Pure commercial site. Following standards of W3C. Presentation is good. Unfortunately download time is high. Colour/ images/ graphs are good and fairly presented.

Overall: Really well designed. I hope the result of these experiments will impact e-commerce industry. I think religious affiliation and nationalism affect the business as well. In open market people follow this trend as well. In British multi-cultural society it is followed by people of different religion and ethnic backgrounds.

Male (Christian, Greek, White)

M: I did not like the background colour (green). What I liked most is that it provides many useful information.

C: I liked the site's layout

N: Excellent layout. I particularly liked that there where links for different countries.

Overall: Bol.com is the most known site between the three. The site is well organized and with a variety of selections. I would definitely prefer it for any online purchases.

UNDERGRADUATES

Male (Muslim, Iraqi, Arab)

M: I did not like the colour scheme of the site and felt there is too many navigation styles like there was links on top of the page and drop menu and link menu on the left side that all had the same links. In the other hand I found it very easy to move around this site also contained very useful and explicit data.

C: There was too much text that made the site quite unclear and too many links, which confused me. Having said that it allowed to search for information through common issue e.g. ISDN and also had good structure for main heading

N: This site gave me the impression that it's professional and easy to navigate through it and obtained all the necessary information and the right use of colour. The only thing I can suggest if the font size at the links can be bigger and less text more graphics.

Overall: This experiment made me think what to expect from Web sit and to understand that the Web site have to be easy to use rather then the users has to adapt to it. I think I also developed my analytical and observation skills towards Web surfing.

Male (Christian, Greek, White)

M: I liked the framed construction and the colour choices were easy on the eye without being tiring. Yet too much info on first page rather congested.

C: No comments.

N: The colour choices were very good. The navigation from page to page was also easy and did not require much thought to find out where to go next. I would certainly revisit the site especially since I found some books I was looking for.

Overall: Overall the bol.com site was an easy to browse site without extravagant colours, banners & info. Enough amount of info per page and rather "clear content" link titles.

Female (Hindu, British, Indian)

M: The design of the site was confusing. The colours were too varied, with different size text, which made the site seem cluttered. The graphics were very basic and quite dull. I liked that new books were so well highlighted, which draws your attention to it, so you don't have to browse through everything repeatedly to see what's new.

C: It is a well layout site. The colours used and text size etc. are quite constant: it is a neat and tidy site. Everything is clear. The different sections such as 'our pick' is a very good idea- you can go to preferred sections without having to browse through everything. Also, because the graphics are smaller they seem neater. The customer review idea is a very good one.

N: Again, the colour and text size used was constant, which made it neater/ clearer therefore easier to use. The graphics were smaller which made it neater. The bookmarks used to section books, music & gifts were a good idea. But it was not very well sectioned out which meant that more browsing was required than was necessary. The Banners also made the site a little more cluttered.

Overall: I think that because the contents of the Web sites/ types of books sold were so specific to a particular area or religion, it affected my preference chosen. For example, I preferred the contents of Bol.com because I am neither a Muslim nor a Christian. As a consumer, I am not interested in 'general' books such as those contained in Bol.com. However, I prefer the layout of the Chritianbooks.com, as it is neater, less cluttered and easier to use.

Female (None, Spanish, White)

M: I do like the comprehensive list of items offered by the site. The variety of choices for payment fit but it might be too much sometimes. An item is in one list but you cannot buy it because it is not in the shopping list and so on. The overall design is O.K. but it does not look like an on-line bookshop. It is not direct in its approach. A good point is its global market orientation (Languages).

C: Easy to navigate, it goes straight to the point. Short sentences. Clear layout very commercial and American consumer-oriented. It doesn't seem a religious site at all.

N: Typical site on the Web: relies on colours, offers, attractive layouts, etc.

Overall: Dar-us-salam.com is definitely a Muslim site full of explanations. Mentions about God, Islam etc. but in a nice way (Quite). I don't see differences between Christianbooks.com and Bol.com. Their approaches are the same.

Male (None, Chinese, Chinese)

M: Colour is somewhat good. But I don't like the contents on this Web site.

C: No comment.

N: I like the blue colour as the background in blue colour makes people calm down and feel quiet. So that I can browse the Web site thoroughly and carefully. Somewhat I hope Chinese version could be provided in near future cos nearly 10 million Chinese on Website everyday.

Overall: In general, this experiment is very useful and interesting. The Website company can build a bridge across the seller and consumer, that is very beneficial for the on-line store or company to improve their service in order to meet most consumers' need. Generally I prefer the common or normal on-line company than some special shop like Christian or Islam shopping particularly because that doesn't meet my need.

Male (Muslim, Turkish, White)

M: I liked colour and graphics, but in some of the pictures of books, I could not read what is written on them clearly (Maybe because of the scanning process). The background is well designed. I especially liked the images and icons. I wish I could find some books in my language.

C: I didn't like the colours. I liked the site only since it provides RealAudio Player to listen to some of the products, I guess.

N: The site was not bad in terms of colours and graphics but too slow to navigate. It looks good overall.

Overall: I don't think that anybody who attends the experiment can evaluate the sites themselves unbiased. It is obvious that the products will directly affect the ranking of the sites.

Male (Christian, Greek, White)

M: I liked the given information about this religion, e.g. books, authors, what's the religion belief, etc., so I can, spread further my knowledge about the world's religions. I actually believe that is good to have a wide knowledge of every religion. So that you will be more able to make your own judgement, depending upon objective standards.

C: I found this Web site very interesting since you can find all the information you need. Again, it is good having some knowledge so you can be more wide in mind and consequently in thinking.

N: It is a very interesting site since you can find books of your concern and also other information about entertainment, e.g. travel, books, food and drinking, literature, etc.

Overall: I think the experiment is clever and can produce some comprehensive information about people's and specially customers' taste preferences concerning mostly these three Web sites but in general other Web sites as well if this experiment is applied in other sites as well; which it can further help companies, to change their strategies, depending on consumers' preferences.

Female (Christian, British, White)

M: The colour was very restful. Book lists were just that- a bit boring. Info re Islam was very interesting.

C: Quite browsable- but not a site I would normally look at.

N: Very easy to browse. Kept my attention. Had books/ gifts that I am interested in.

Overall: Very interesting. I normally don't have time to browse as I do not have a PC at home. Made me a little more confident. Interesting subjects comparing the two religious sites in particular since I am not a very religious person myself- though baptised as a Christian.

Female (Christian, Italian, White)

M: I do not like the colour and the organisation of the menus.

C: There isn't any introduction to Christian religion- Books are shown and sold as if they were "commercial books". I didn't like menus' structure. No help function provided.

N: Web site design seems to me much more well organized. Graphics is more consistent.

Overall: It's interesting to see how religious matter is treated for e-commerce. It's a bit difficult to separate judgements about contents of the sites from judgements about how the sites are structured and designed. The timing is perfect for browsing activity. The task & the instruction were clear and simple to follow.

Female (Christian, British, White)

M: I found I was interested in the books but I wanted to see/ read an excerpt. I was disappointed not to have an excerpt. I enjoyed the links- especially the explanations and sayings of Allah (God Be Praised). I was curious to find out what the religion had to offer a simple person living a simple life.

C: Disliked American focus- wanted English-British. Some e.g. Sister Wendy Beckett. I liked the Daily Devotion- bookmarked it. Again disappointed no excerpts available on literature offered for sale.

N: I liked this it gave excerpts about books e.g. Terry Patchett's The Fifth Elephant, which I read the other day.

Overall: I enjoyed the luxury of browsing and especially exploring these sites. I did not know they existed. I found the two religious site of great interest. Yes I found them comforting. I felt "neutral"

about the 3 sites but I also felt a degree of reverence for the religious sites, which was tempered by the advertisements for the sale of "goods". Many thanks

Female (Hindu, Indian, Indian)

M: I did not have any particular likes or dislikes, so far as the images, etc. are concerned. The colour scheme was perhaps appropriate given that this is a predominantly Islamic site. I am more or less indifferent as I do not have any interest in Islamic books- although I am open to knowing more about Quran/ Islam. The fact that there was no SITE MAP was something I was not too happy about.

C: There was no site map- but the layout of the main page made it easier for me to find out what the site was about. The colour scheme, images were soothing and nice- made me more comfortable browsing.

N: The colour scheme of the pages was soothing. I did not particularly dislike anything.

Overall: I did not know that a couple of the above sites existed, so it was interesting to browse through these. I would be interested in finding out the results of this experiment.

Male (Muslim, Iranian, Persian)

M: I like the colour images of this site.

C: I like images of this site.

N: I like graphics on this Web site, because of decoration and design.

Overall: None.

Male (Christian, Polish, White)

M: Every window shows a little bit too much information. Many headers, footers, lots of links and so on. I liked the info about Islam religion since I'm Christian and I don't know a lot about it.

C: In general, colours, graphics look fine. The thing is that I prefer to read things about religion in my mother tongue.

N: I liked colours very much. Pictures of books are also quite nice.

Overall: In my opinion all Web pages look nice. The problem for me is when it comes to buying things through the Internet. Although I use the computer in my work all the time, I'm not quite sure about the security of Internet transactions. Another aspect of safety is that you never know if the Web page you browse is not a fake Web page made just to get your VISA card number. It might sound stupid or superstitious but I think there are still many people who are afraid of Internet criminals.

Male (None,Chinese,Chinese)

M: I don't like this site because I'm not familiar with the name of books. The site is unattractive because there aren't enough images and photos.

C: I like the design of this site. More discourse on books. Bargain centre is very good.

N: Contents. I love books. I like the affiliate programmes as well because I have my own Web site. I can buy books from it to get more discounts.

Overall: I like BOL because there are quite a lot of books and music I can choose. The Christianbook provides more bargain books and examples of a book. Dar-us-salam is not a very good site. The site is not attractive.

Male (Muslim, Iranian, Persian)

M: Images & colours make sense.

C: None.

N: None.

Overall: It was a good experiment and I think it is better to compare more Web sites to get a better idea of the purpose of selecting & purchasing not just books.

Male (Hindu, Indian, Indian)

M: Not many images, not many colours apart from white and light green. So it is not attractive. Some images on the site were O.K. Content wise I think this site may appeal more to people with knowledge of Arabic or Urdu. And it may be a good source of information for Islamic people. I did not quite like the site because I don't think it had anything that I wanted to know more about.

C: The sites looks OK. The colours I could see were blue and white and some others. Images wise this site had some nice images in gifts and kids section and overall the site does not look dull. It seems to have something for everyone. But it is more related to Christians.

N: This site seemed dull. The only colour I could see were blue and light green, which is not very attractive. There weren't many images apart from a few small images. I would prefer more eye-catching images than lots of writing. But less images meant browsing was faster which is good. Overall a good site to buy a book and to look for a book.

Overall: It was a good experiment. I got the chance to visit some of the Web sites I had never visited before. Would love to do the experiment again with different sites. Overall sites did not have a lot of images or graphics and they were not very colourful. Overall it's a good test to find people's opinion.

Male (Muslim, Afghani-British, Afghani)

M: The images and range of colours used were appropriate to the subject that it aimed to promote. There weren't any graphics, if they were, I did not see during the time that I was browsing. There was the choice of audio options but the lab computers did not have the facility to enable us to listen.

C: There was no use of graphics. The colours were very sparingly used. The images were of very small size that did not have nay effect on the reader. The content is very rich with information but the presentation is in a boring way.

N: The colour combination used is rather good and appropriate to the subject. The images of books were very small again on this site, so it might not be as effective. The use of graphics was limited but generally well done.

Overall: I think the choice of sites is not a good reflection of identifying cultural influence on consumer decision-making process. Because, these sites represent mostly a religion and they offer products for those who are interested in the subject. BOL.com is more a competition to book-selling companies such as Amazon.com than religious sites. However, the other two sites are religion oriented and form a very useful site for research for those who are interested and are seekers of knowledge.

Female (Muslim, Egyptian, Arabic)

M: The site could use some more graphics & brighter colours to be of some more attraction to view. Some images, I saw in other Islamic sites were very attractive for people to click on them and find more about the site & links.

C: Although the fact that it is a religious site, one cannot feel the deity when surfing it. It is more or less like a site for strictly marketing a product nothing special.

N: What I like most about this site is the form and how icons & info are ordered and seem user friendly and nice.

Overall: No comment.

Female (Christian, Italian, White)

M: I liked the site overall: The green colour is nice and doesn't make your eyes tired. It's well organized. I think it is on average a good Web site.

C: I didn't like the site. It's too plain and they sell too many things related to the same topic.

N: I really like this Web site. I think it is well organized and there is a wide range of products. It seems to browse a real catalogue.

Overall: I think the experiment is based on a really interesting idea. I really would like to know the results that is how much people are influenced by their religious beliefs.

Female (Hindu, Srilankan, Asian)

M: Pleasing colours have been used in all or most of the pages. No difficulties in term of navigation but less descriptive for people who are not Muslims. I prefer that it could be worthwhile if the content of each book is online. Opening new window is an advantageous feature as customer (user) may not lose interest in browsing through.

C: Lot of information on the sitemap but much easier to browse through as menu feature is useful for easier browsing. Very informative site for the user. Provides statistical information for the user (which helps to decide whether to buy a book or not). Not a straightforward process to buy books from this site (e.g. time consuming). Sitemap and all other pages are informative, pleasing colours and graphics.

N: Pleasing colours have been used. Attractive informative menu (i.e. index). Mentioned about safety issues on their homepage. Descriptive pages but user may get bored as much to read through! And might get easily lost while browsing. Navigation is not impressive but easier to buy a book! No contact info about them is not found.

Overall: Easy and simple experiment that helps a Web designer to be more careful about how to design a Web site.

Female (Christian, British, Black African)

M: I thought the colour and images were better than the other two sites. There was a lot of information but the graphics made the content seem a bit more interesting. For example, the flashing graphic for new items. The green colour of the banner was a lot more refreshing than the blue and white.

C: I thought the site was very boring. Not enough graphics to make it look interesting. Just lots of text to wade through.

N: I thought the site was comprehensive in its set up. Everything was set out clearly on a white background. It could have been a bit more exciting. I thought the site was boring at least there were images of the book and ID savers available.

Overall: The experiment was interesting in terms of getting me to browse sites. I wouldn't normally consider going to. I found the Christianbooks site very amusing and I didn't find anything in the site that would make a newcomer feel that the site had no other motive than to sell things that were in a Christian genre. Rather than a site to find useful Christian literature. I was quite disappointed with the site to be honest.

Male (Buddhist, Thai, Asian)

M: That is all right. I like it. I don't need a colourful style.

C: That's all right. I like it. I don't need a colourful style.

N: That's O.K. Details of products are more important. I like it.

Overall: No Comments.

Male (Muslim, Pakistani, Pakistani)

M: The construction of the site (the display of homepage) is very nice. Very lightly build up. The way they display the books' front page is just like real ones. The colour combination is very good and the font used is very legible for any kind of reader.

C: The graphics and images of the homepage are very good. They build up site quite nicely and one more thing that colour combination is not nice because they tried to use full blue colour.

N: They used nearly the same colour combination as the people used in dar-us-salam site. I liked the colour combination, but they haven't got most of books (images) on the homepage, which is not good sign. Because images are attractive all the time for buyers, as people used in dar-us-salam site.

Overall: These sites, two sites were religious & one was free of any thing. I never believed that online shopping is good but few days ago. I bought book from Amazon.co.uk and I put in my credit card details on their sites. I've got my book, but still I am reluctant to buy online. Only Bol.com site has freely books (means free from religious matter). I personally think if BOL includes these two sites together it will be better one.

Male (Muslim, Sudanese, Arab)

M: I dislike the green colour. I like the Islamic content very very much.

C: None.

N: None.

Overall: Very good experiment. What I know what is in Islam is not conflict with what in Christian as original. So I hope Christian people go & read Islamic books.

Male (Muslim, Pakistani, Pakistani)

M: I like the price of books offered by site. I dislike 1) The books are only restricted to one topic; 2) The books are only of one specific school of thought; 3) The books are only available in certain languages and not in other major languages like French, German, Persian, etc.

C: I like 1) the bargain & price books. I dislike 1) The books are too specific/ subjective. 2) Books are restricted to a particular ideology/ school of thought.

N: I like 1) the availability & selection of books 2) The selection was good and informative. I dislike 1) The site was very slow; 2) The variety of books was not available 3) A few books were available certain interested topics.

Overall: The experiment is quite O.K. and interesting. I am not happy with the selection of sites, because two of the sites were very specific, so not every person has got any special interest in that type of sites. I rather advise that in future, some interesting sites may be selected so the users will take more initiative and interest in that type of Web browsing.

Male (None,Chinese,Chinese)

M: This site is well designed. Simple not very colourful. You feel quite easy when browsing it.

C: The images in the Web site are beautiful.

N: I like this site very much because it got everything you want. It will be very handy when you want to find or buy a book.

Overall: Generally speaking, the experiment is quite good. I think the result of this survey might be very helpful to the Web-based company. However, among these three sites, one is special for Islam. One is special for Christian, so if somebody does not believe in either of them. Maybe he/ she would not pay much attention to the design of the Web site. In other words, the result of this experiment could be affected by if people believe in religion or not.

Female (None,Chinese,Chinese)

M: The Web site is well designed. The colour is fresh and attractive. The only defect is lack of a brief introduction about the content of a book.

C: I like the colour and images of the site. They are very vivid and delicate. The whole Web site is well designed, it gives you a feeling of beauty besides that, a guarantee that the company is very reliable.

N: I like the content of this site very much. They are quite attractive and concise. Makes sure you can get more information about new books in the shortest time. This is a very promising Web site.

Overall: I think this is a very interesting experiment. In terms of electronic business, as far as concerned. Bookshop online is a quite promising business. Anyway, you needn't try it on or taste it

like clothes or food then decide to buy it or not. A brief introduction of the book is enough to suggest to you to determine. And I also think a book bookshop online Website not only focuses on selling their books but also try to provide you more information of present literature and science, attract you to visit it from time to time. This is a very important point, and also a very easy to be neglected point.

Female (Hindu, British, Indian)

M: In terms of design the site is like any other. I wasn't interested in the content and it had no meaning for me. I'm sure that if the site was related to my own religion then I would have shown more interest. I didn't like or dislike the site- I'm not really interested in the content.

C: Again the design of the site was like any other. I found this site a little more interesting than the previous because I was interested in some of the content. The content I was not interested in was the religious material. I do not like or dislike this site- I wasn't particularly interested in what it had to offer.

N: As with the previous 2 examples the site was like any other in terms of design. I liked this site because it was general and there was no religious aspect. I was also quite interested in most of the content of this site.

Overall: I would imagine the results from this experiment show that I am anti-religion. However, if one of the sites represented my religion than I imagine my response to the questions would have been different.

Female (Hindu, British, Asian)

M: The site was pretty nice to look at in terms of colour but was a little overcrowded in terms of content especially on the opening page. However, I liked the box in the middle of the page that showed new arrivals because it was clear to see what was on offer. The links on the left hand side were useful. The content is wide and informative but the overall look of the site is cluttered.

C: This looks very much like the amazon.com site in its colour and layout. The layout is 'clean' and nice to look at. Good links which made it easy to navigate around the site and find what you were

looking for. The colours were nice because they were not overpowering. The one thing that was confusing is that when you clicked on an author's name after searching for a book and it came up with list of books by the same author. This was good except for the fact that the list resembled what in other online shops looks like your shopping bag so this was confusing.

N: The site is nicely laid out and the colours are not too strong. I liked the Gifts section because it split things up into manageable sections and it was easy to navigate around the options that were given. In some cases, the screen was a little crowded with information but this wasn't too bad.

Overall: It was interesting to browse the sites but some of the questions were difficult to answer. For example, when it asked if I preferred one site over another- I did, but only because the others didn't have books I would buy. Also, the questions about security etc. are difficult to answer because unless I tried I wouldn't know.

Male (Muslim, Pakistani, Pakistani)

M: Wide range of products. Attractive and seems designed their own graphics and style (not seems to impressed by any other famous sites).

C: Range of products towards Christianity (e.g. books, audio and especially S/W).

N: It is a copy of some other sites, which are more better in terms of product range.

Overall: Overall, I think it is useful but the Web sites are included in this experiment (specially Islamic & Christian) are directly related to a buyer's religion. Obviously, if someone was a Muslim he/ she will buy anything, which is related to Islam from an Islamic site and same case with Christians as well. In other words it doesn't give much options except BOL for general purpose shopping.

Male (None, British, Indian)

M: A slightly garish colour scheme, but overall effective. I did find the Islamic art on the covers interesting. Also there is more info per book than BOL.

C: Dull colour scheme, plenty of information per book but the language was a little terse making the site disinteresting. A very structured layout, which does not draw attention to anything in particular.

N: Bland colour scheme. Too little information on certain books. Plus you can't browse, so a bit of a guess as to what you are getting. Not all books gave a picture of a cover or a review.

Overall: The experiment seems to be based on subjective opinions, which may not be the most accurate thing to measure. Also one may feel apprehensive about criticising theological Web sites as it may be offensive. Also people in general from opinions about Web sites, usually in the first 30 seconds, due to the amount of pages that need surfing and it is that opinion which usually stays, in my opinion.

Female (Muslim, British, Arab)

M: The overall presentation of the site was good, the producer seemed to be intelligently incorporated into the overall theme. The layout of the information was accessible.

C: The layout of the pages seemed serious and quite unimaginative. The overall graphics were limited and although the information was accessible the way it was presented was literal and less stylistic.

N: I thought the layout of the page was overall good. Easily accessible information and convenient it seemed like a friendly site and the colour and graphic were set out well.

Overall: I am unsure at some of the questions included in the booklet- 'the site made me feel at home'. I wondered whether I could make a fair assessment about the sites especially the religious ones when they are specifically geared (or so it seems) to sell products for a particular market, they serve a function- and if people were to want to buy a product I wonder how much attention they would pay to graphics, layout etc. when they want to buy a book, so I am fairly neutral but IO wondered if the order of presentation of the sites should be changed. Neutral first then enter Christian or Islamic after or random ordering. So as to influence people's assessment given that the initial impressions can be highly influential in subsequent judgements.

Female (Muslim, Turkish, White)

M: I liked the following: The colours, speed, big letters, easy to find what you are searching for. The colour and the design of the books. The icons, images, pictures, shapes. The design and the animated icons and images. I disliked when I had an ERROR message.

C: I didn't like the colours. It is very plain. There aren't any attractive, animated icons, which can gain my attention. It takes more time to shift from one site to another. The colour, mostly black, which is scary, and the design of the books are not attractive.

N: I did not like the speed of the site. The colours and the books were not attractive. It was plain and ordinary. I didn't like anything at all on this site.

Overall: The Muslim site was very very nice. I was very much happy to visit that site. I am glad that I participated in this experiment because as a Muslim, I didn't know that there were sites like these, which attract people. It really attracted me. The other 2 sites were not attractive at all. But, I have the feeling that the sites were chosen on purpose. I mean that there can be other attractive sites that sell Christian books. If I had to give points to the sites out of 10: Muslim site 10 Christian site 4 The other site 3

Male (Christian, Greek, White)

M: I didn't like the colours (especially the green colour). The design is not very good.

C: User-friendly colour. Good quality of images. Good design.

N: Nice design. Very slow data transmission.

Overall: No comments.

Male (Muslim, Pakistani, Pakistani)

M: Well the colours are not well defined, not organized in terms of icon, not much options, and the selection is less, not much book titles. Not a good site.

C: The organization of site is well defined. The colours are use very intelligently, and there is a variety of search options. It covers all aspect of books on-line. Over all a good site.

N: Well organized, colours well defined, handy search and quite a variety of books available. A very good site.

Overall: Some of the questions were quite vague, which needed assistance and clarification and the measurement scale was not appropriate to measure such type of experiment.

Female (Hindu, British, Indian)

M: None.

C: None.

N: Options were clearly presented.

Overall: I placed a '1' on BOL because it was the most applicable to me. I placed a '2' on Dar-us-salam because as I am an Asian, seeing 'ethnic' material on the Web encourages me. BOL was the most interesting for me because the other two consisted of information, which wasn't applicable to me. This does not imply that I am against these religions in any way. I'm sure that I would find a 'Hindu'-related Web site very useful (perhaps just as much as BOL). I would visit the two religious Web sites to learn more about the religion or if I wished to buy a religious gift for one of my friends. The experiment was thought provoking. I'm not sure how my results would be useful as I am not a Christian or Muslim?

Male (Muslim, Pakistani, Pakistani)

M: 1. Particularly, I like the images on this site. 2. I like the price mentioned for each product. 3. I don't like this site because it gives only the information on Islamic books and no other religion.

C: 1. Particularly, I like the images of the products mentioned on this site as they are clearly specified. 2. I like the price deal of the products. 3. I have doubt about the deliveries of the products, as their prices are very low as less than 40% of the original price. I think there is something wrong with this site.

N: 1. I particularly like the images & graphics of the site as they are clearly provided. 2. There is reasonable price of each product mentioned on the site.

Overall: I enjoyed browsing these sites during today's experiment. I like the BOL site as its contents are very general as compared to other sites.

Male (Christian, Polish, White)

M: This site looks nice, however I'm not interested in buying any of the books offered by them. I don't have any objection to graphics and design, which are basically the same as all other similar Web sites.

C: The design and graphics seems to be O. K.

N: Please check final comments.

Overall: www.dar-us-salam - I don't find interesting because I'm not interested in buying any Islamic books. BOL.com seems to be the site, which is very similar to Amazon.com, however it seems to offer less variety of titles and is not easy to find all the books on a particular topic of interest. All the Web sites use very similar template for design and graphics.

Male (Muslim, British, Pakistani)

M: I don't like its colour scheme (green) but I suppose it is suitable for this kind of site.

C: I like its design and the way cover page has been given.

N: I like the details it provides about books.

Overall: None

Male (None, British, White)

M: None.

C: None.

N: Slow loading. Limited range of products.

Overall: No Comment.

Female (Muslim, Singaporean, Asian)

M: Wide choice of books specific to Islam. Good links to other Islamic sites. Reviews of books were quite good.

C: The book reviews were excellent- quite a hard sell- the language was evocative and highly readable. Easy to 'get into' even if one is not a Christian.

N: Informative site- contributions from customers & reviewers made it seem impartial & fair.

Overall: Actually I'd prefer not to rank my preferences, because each site had its own plus and minus points. Some of which are related to my preferences (religious, entertainment or otherwise) some had to do with the actual site itself, i.e. the content.

Male (Muslim, Iranian, Persian)

M: It offers good information about Islam in a way that does not seem to preach people. Offers people the chance to purchase books that might not be readily available. It also downloads much faster.

C: This site takes too long to download. It has good informative contents but its size of fonts is too small and makes reading difficult. Hence one will not spend too long trying to read something that is so small.

N: The choice of colours & images seems to be good but the site is slow to download. This will put me off any site regardless of how good it is. The size of fonts is too small and makes reading very difficult.

Overall: A worthwhile experiment which demonstrates what aspects of the Web appeal to people, apart from good information & comment, it must also be presented in a manner that people find easy to use & understand. The two go hand in hand.

Male (None, Czech, White) – identified as a potential outlier

M: I agree with graphics of this site.

C: I don't like this site.

N: The site Food & Drinks was very interesting for one, because I like to eat. The site was sorted and lucid (arranged).

Overall: I think that it was about religion and only little about WWW.

Female (Muslim, Egyptian, Arab)

M: I didn't like the neon colour. I like the design of the Web site. There are lot of navigation facilities such as menus, search, etc. However, the books are listed in different languages (e.g.

Arabic, Spanish, Urdu, English). The Web site is easy to use and provides links to other Islamic sites, provides answers to frequently asked questions, and allows the user to send his feedback. The book collection is unique and can't be easily found in bookshops (most of them). Children books are also provided.

C: The colour, images are O.K. but the design is not good as it's very crowded.

N: I didn't like the design of the Web site nor the colours. It's also not very easy to use. When I tried to retrieve a book using keywords I received a book from a totally different subject. The books provided by this site can be bought from any bookstore. The subjects provided for search do not fulfil my needs, for example there is no subject called information systems.

Overall: None.

Female (Christian, Greek, White)

M: The overall layout of the site is not appealing. The use of the colours is not the best. The functionality is quite good and it is very easy to navigate.

C: The site layout is good and the functionality is easy. It's the content and the products that it offers that seem very dull. There is an effort to imitate Amazon.com.

N: The layout is good, but the functionality is basic. It gives the impression of being very 'plain'. There wasn't much effort put in its development.

Overall: The experiment was very easy and fun to do. All the 3 sites had similar functionality. The preference of the audience in the content would make the difference in buying from one site or another.

Female (Christian, Greek, White)

M: I liked the colours and the variety of the topics (even though Islamic) that it offers.

C: A lot of bla-bla (theory).

N: Very good collection of jazz music.

Overall: I don't know which site is my favourite one, but I think that the sample is very narrow in quantity and area of interest (I'm sure that there must be some better Christian sites than the one in this selection)

Male (Muslim, Pakistani, Pakistani)

M: I like graphics & colour.

C: I like Colour & Background.

N: I like Colours & Contents.

Overall: Experiment was interesting but difficult. Preferences and needs are dynamic.

Female (Christian, British, Caucasian)

M: I liked the (green) menu on the left hand side of the page- the way the submenu appears when you pass the cursor over it. There didn't seem a huge amount of English books per sub-section.

C: Overall, it was easy to navigate, the graphics were good, but the descriptions about books were limited.

N: Not a large choice of current titles available & the descriptions of the books available are very limited. However, their selection of books is more like what I personally would read & would therefore be more likely to buy from this site than the other two.

Overall: I would be more likely to use BOL because I am more familiar with the content that it offers. It is difficult for me to make an objective judgement on the Dar-us-salam Web page, as my knowledge of Islam is limited, whereas the Christian Web page was within my knowledge.

Female (Pagan, British, White)

M: No actual information on books provided beyond title and author. Method of dealing with non-US shipping extremely dodgy.

C: Excerpts from the books- good idea. Notice there weren't any from the occult books though- not surprising. Splash page is useful & not too slow to load.

N: Forms expire too quickly- expect to be able to use the back button for at least a minute. Slow to load on every page. Browse feature gives to limited selection per page- better with option of how much detail one wants on a book although box on right is a good idea. Blue text and blue background- not a good idea if my eyesight was worse. Split of titles into in- and out-of-print categories good idea.

Overall: No comments.

Female (Muslim, Iraqi, Kurd)

M: I found this site very useful, as it is usually hard to find all the books & items listed in a particular bookshop, which are not usually found locally.

C: None.

N: The books and items in this site can be found in bookshops. However the prices seem to be competitive.

Overall: This was a very interesting experiment. Thank you.

Female (Buddhist, Chinese, Chinese)

M: Too much graphics. Took long time to download images, too colourful so made me extremely confused. It's graphics everywhere so it's hard for user to focus- where to look.

C: None.

N: None.

Overall: Are the number of hits for each link recorded? They may provide clues to design of Web pages, consumer preferences & interests, etc. Experiment should be controlled. All participants do it at more or less the same time of the day otherwise network traffic factor may affect responses from participants. Perhaps you would also find some differences in participants' responses at different traffic conditions. The design of the questionnaire papers is very beautiful. There are a couple of computer jargons which normal human being (non-computer scientists) may not be comfortable with.

Male (Muslim, Pakistani, Pakistani)

M: I liked the site. This site is well organized in *every things especially colours are very beautiful* full of attraction. And the introduction of this site is really very very good. I liked it.

C: This site is really full of information about Christianity. People and I can say that, the Christian people must visit this site as this site is very comprehensive. Excellent graphics.

N: The site really is good and full of entertaining material that can make any person enjoy the site. Wonderful graphics, excellent setting and easy to navigate. Good images, attractive colours. But I think this site left too much space between paragraphs. Well the whole site is really good.

Overall: This experiment is good for advertisements of Web sites on the Internet. And you can know about the interest in Web sites easily. If you prolong the experiment, I believe that the information will become richer.

Male (Muslim, British, Arab)

M: Things that I like about this site are the graphics so simple eye-catching also the style of text and the way that the page was organized makes you easy see everything from the first sight. The colours used are very comforting. While I was browsing the links it appears that there are some faults. Also the site was ignoring other groups of Muslims such as the Shi'ites for example.

C: Beautiful graphics that are the best of the three sites I have seen. Simple and easy to follow. The thing I dislike about this site is the poor content. Also the search engine is not efficient.

N: Things that I dislike about this site is the text. It is too much and not properly organized. The colours were dull and not eye-catching.

Overall: It was an excellent experiment.

Male (Muslim, Libyan, Arab)

M: I like the images and colour of the site because it is simple and bright.

C: I like the easy to use aspect but I think the images and replacing the products is not very organized.

N: I like the way it delivers the messages and also the design of the graphics. But, it's too simple.

Overall: I think this is a good effective way to investigate and the questions are quite easy and friendly so I think people who participated in the experiment would find it an interesting experience to explore and discover new sites.

Male (Muslim, Algerian, Arab)

M: Interactivity is good. Multi-language option.

C: It contains a large selection of Biblical material. Illustrations and interactivity are superb. It is a little bit slow.

N: Browsing is too slow. Searching any title is slow too. Search function is not advanced at all. Too much redundancy.

Overall: I would rather have been told to compare "Amazon.com" to "BOL.com" or "Dar-us-salam.com" with some other online Islamic bookshop.

Male (Christian, Mexican, Hispanic)

M: The contents of the site are good, but the colour arrangements especially that pistachio green are not very attractive to the sight. Many books offered in the site have reviews missing making it difficult for first-time shoppers to decide which product (book) to buy.

C: The overall presentation of the site is very good. The organization and colours utilized make it attractive for first-time shoppers. Very easy to browse.

N: Good presentation using colours and images but doesn't have anything special that would make site better than amazon.com or Barnes & Noble.

Overall: There is a risk of giving biased answers based on the faith of each respondent. I guess Muslims will rate the Muslim site as number one, no matter if the presentation of the site is not better than those of the other two sites.

Male (Christian, Greek, White)

M: I like the colour, images, graphics and text format. I dislike the lack of alternatives regarding content that are provided. For example, this site is targeting only Muslim people. So the target segment is very narrow.

C: I like the layout structure of the site. Low speed was a problem.

N: I like the warm colours used as they contribute to the creation of a pleasant shopping atmosphere. I dislike the fact that there is not an introductory page explaining/ informing visitors about the content and general information about this site.

Overall: I think that Christianbooks.com & Dar-us-salam.com are more related to religion than BOL.com. More specifically, visitors of BOL.com cannot easily verify information related to religion. Nevertheless, I think that there are discrete differences among these sites and their selection for such kind of experiment was very successful. Thanks for the experience.

Male (Christian, Greek, White)

M: I did not like the combination of green and blue colour. Not attractive site at all whatever your religion is you must try more.

C: Nice colours, easy to browse through.

N: Very nice Web site, well presented, easy to glide through. I am interested. Big variety, nice colours and ideas.

Overall: Nice experiment, it gave me the opportunity to visit two sites that I didn't know anything about, although there are a lot more interesting sites to visit.

Male (Christian, Greek, White)

M: I did not like the colour of the page. I can't read Arabic. It's an amateur's work.

C: I did like the colours, seems much more nice site than the other, more time of work is spend than the other.

N: Nice site, nice work, easy to find what you want.

Overall: The only comments I would like to make are that never would I buy something via Internet; I think it is not safe there is not security and no privacy. Any system in the PC however secure or safe it appears to be can break down.

Male (Christian, Greek, White)

M: I did not like the things available as well as the overall appearance in terms of colours and graphics.

C: This site seems unreliable, not Christian authentic. The colours, graphics and images are not bad, but on the other hand nothing special.

N: This site got a nice combination of colours, images and graphics. Its general topic of concern seems interesting

Overall: This experiment seemed interesting but its sites were not in general interesting due to their topic of concern.

Male (Christian, Czech, White)

M: I don't like this page because it is about Islam. I think that Islam is not tolerant to rest of the world.

C: Very hard Christian page but good for members of this religion.

N: Good page for everybody.

Overall: I would like to know the statistical results of this experiment. Pages Dar-us-slam and Christianbooks are suitable for members of these religions.

Male (Muslim, Egyptian, Arab)

M: The background colours do match the spirit of its contents; it reflects the contents. But it needs to be more alive. From a buyer's point of view it needs to be more attractive but in a calm way.

C: I think that this site is purely a commercial site. It doesn't differ from any other commercial site; it lacks the deity touch. It seems that it was made by a professional Web developer but he missed the idea of this Web page; it is not directed to a specific section of people. From the first look I couldn't tell what this site was about. There is no difference between a food hall's Web page and this one.

N: It is a normal site considering its nature. But it lack's the competitive advantage. It needs some own banners, colours, increase the size of the images to be more attractive to the users. A big headline would help also.

Overall: Generally, getting specialized people to get involved with the process of Web designing. A religious man should comment on the design of the pages because we'll feel his touch, and if we do

then we'll be attracted to it. So, if people can feel & interact with the subject of the pages they'll be willing to even consider trying them or even buying from them. The main issue is to try to get the users involved with the idea represented in the pages, if he believes you he'll trust you & this could be leading to the hidden aim of those pages, which is commerce & business.

Female (Hindu, British, Indian)

M: I thought the green colour was very nice to look at, very peaceful and serene. The way the information is set out is convenient to look at and easy to find. I liked the way 'you' can actually see the books available. The graphics are good, simple, so not intimidating to use.

C: I do not think the layout is appealing. There is no order of products and there is too much information to look at. The colours seem very dull and inviting. I liked the way the books are shown but I found it so hard to find information, which I was looking for. There is too much detail.

N: I liked the format where the options are easy to see and the books/ music sections are easy to search. There is just enough information on the first page without getting the user confused. The layout and colour are user friendly and simple information required is available without difficulty.

Overall: I think the usefulness of the above Web sites depends on your religious beliefs or religious interests. If users were after information about these religions then may be the layout or graphics of the Web site would not matter and they would continue searching until the appropriate information was found. The BOL.com Web site, however does depend on the layout since it does not offer products of a specific sector and there are also other Web sites to compete with it, i.e. Amazon.com.

Male (Jewish, British, White)

M: The site was bright and fairly basic and easy to use. It was fairly well designed although it does not look particularly professional. It might also be hard to track down a book that you want because the listings do not seem to be in any order.

C: Looks well designed generally although it is a bit cluttered in places. The colours are quite good to look at.

N: Site sign is OK. A bit messy but seems to have some good links. The graphics make it fairly clear how to do a search.

Overall: It seems like an interesting experiment because there are so many poorly designed Web sites generally and also to look at the religious Web sites, which I would not normally do. I am not sure of the relevance of looking at 2 religious sites and one general book ordering site but it is interesting to see what my perceptions were about them on a first impression. In the end I am not so bothered about site content but how well it is designed and is easy to use regardless of it being of a certain religion which I am not sure had that much impact on my decisions.

Male (Hindu, Srilankan, Srilankan)

M: The layout of the site was easy and user friendly to browse through. But the names and the Arabic letter made me a bit uncomfortable, as I am not familiar with them. The colour and design on its own was good and vibrant.

C: The layout was good and easy to browse through. A definitely user-friendly site with interesting graphics & details.

N: The listing of the subjects was concise and clear. The graphics were simple and presented in a good form.

Overall: The interaction of users with respective cultural Web sites depends on many facts, I don't feel that factors of individual customer preferences has not been addressed in this experiment, i.e. it was more in a generalized way. This would help the experiment achieve its aim. More emphasis can be placed on what the customer or user liked and disliked in this experiment or the sites and the reason for it. This would have enhanced the validity of the experiment rather than giving a general questionnaire. The experiment on the whole was set-up in a user-friendly manner.

Female (None, Chinese, Chinese)

M: It is a good religious Web site for Islam. Colour is fine but so simple (blue, green, etc.) so it looks more serious.

C: This is a good Web site for Christians to browse books, music, etc. Among these three Web sites that I've visited this is the best one: many options, nice images, etc.

N: Overall this site is fine but sounds so normal that I cannot be attracted to it. Colour is nice.

Overall: Christianbooks.com: I have a good feeling to buy something from it. It is simple to browse and very relaxing. I am not a Christian but this Web site does not bore me on the other hand I feel that I like this Web site very much. BOL.com is ok but if I want to buy a book I still will browse amazon.com first. Actually the prices on this site are not cheaper than the other shopping Websites, e.g. some CD prices are £9.99 or even £10.99, £11.99, etc. Dar-us-salam is the Website that probably I will introduce to my Muslim friends but I am not sure if I will revisit it since I might not find information that I need.

Female (Muslim, British, Bangladeshi)

M: Lots of help available as to how to navigate and use the Web site. The Back option is working. Contact details are given and the colour scheme is good. Information provided as to how long an order will take is realistic bearing in mind that a potential buyer may not be a US resident. Also details of returns policy are provided. Lots of HELP options are given and it is easy to navigate.

C: Menus on both left & right hand side- confusing & messy. I didn't like this homepage- no description/ welcome message, etc. There are contact details available which is very useful.

N: I didn't like the fact that there is no back option within the Web page. Colour scheme- generally ok but highlighted links are difficult to see. Could not find any mention of a refund policy or an address for correspondence. Although you are able to email, I am not convinced that it would be read or that a reply would be given. No direct contact. Good search facility allowing several options.

Overall: Dar-us-salam.com & Christianbooks.com are useful for readers who want specialized books in those areas but would therefore be not appealing to the general public. Also Dar-us-salam.com has a link at the bottom to non-Islamic books that seems to be out-of-place. I would have expected BOL.com to provide a contact address but I could not find one- I am not impressed by this. As far as security issues is concerned, in general I do not like giving details over the Web. Also I would prefer to see what I am buying & flip through it. I would only really use these sites if I knew exactly what I wanted since they are cheaper- the fact that the same product costs less is an incentive to buy over the Web.

Female (Christian, British, White)

M: The homepage is nicely laid out and it is easy to spot straight away how to get round the site and what I may be interested in. In comparison to Christianbooks.com, this site doesn't make me feel that there are too many products. But may be because information is organized and presented better.

C: It's good that there is a lot of information on a wide range of products, but I feel that the site seems too big + slightly unmanageable because of the amount of information but having said that navigating around the site is fairly straightforward.

N: The site is nicely laid out and is easy to navigate with 'at-a-glance' categories of books. The front pages of the different categories of books are nicely laid out with the books of a month and latest deals, plus the description of the books is extremely useful.

Overall: I think the experiment could have been improved slightly if we'd been given an actual task or tasks to perform so as to help our navigation around the site in a more systematic way rather than idly browsing because after all you do come to a site with some sort of purpose e.g. checking availability of a book + buying it. Didn't like Q.10 : "This site made me feel at home." Because I wasn't sure how to respond. I didn't feel "at home" with any of the sites because the Internet is supposed to break down cross-cultural/ geographical boundaries and so I expect to and I am not particularly affected by seeing Web sites that perhaps may be considered culturally different from my own.

Female (Christian, Thai, Asian)

M: Colour is dull and appalling Images and graphics are also poor and uninteresting. The layout is confusing and unattractive.

C: Colour is pleasant. Images and graphics are suitable. The layout is well organized though not interesting.

N: Colour is ok. Images & graphics are not attractive and uninteresting.

Overall: None.

Male (Christian, Greek, White)

M: The colours and images of this site were nice. Also the structure was good. I disliked the fact that it refers to a particular group of people by offering only Islamic books (the same opinion holds for the Christianbooks.com)

C: I liked the contents of the site and also the volume of information. This site is easy to navigate and has nice colours and images and it is well structured.

N: I liked this site mostly because of the variety of books it offers. I also liked the structure, the colours and the images of the site. Further more, I liked that it keeps a profile for each member.

Overall: Although I liked the experiment I believe that the majority of people will like BOL.com. It is a site that offers books in many areas. As far as the other two sites are concerned, I believe that if someone believes in a specific religion (e.g. Islam), he won't appreciate the contents of a site like Christianbooks.com. What I mean is that in terms of contents he/ she won't be interested in books concerning a different religion. Anyway, generally I believe that all the sites are well structured, easy to navigate, had nice colours and images and a great amount of information for the user to look into.

Male (Muslim, Nigerian, Black African)

M: Colours used- good- light green/ blues. Graphics- Fast quick download time so must have been done efficiently- Good. Some animated icons were good. Images- book, pictures were big- Good you can look at covers in detail and read what is on it. Delivery of books, they are not accurate and prices are in US dollars. I don't think that it is a secure site in terms of privacy cos it is based in America and Muslims and Saudi things are monitored by the US government.

C: Not an attractive combination of colours. Images are a bit small. No good as I would like to see the covers. Hyped-up text looks about the page. No animated images or icons. My attention wasn't attracted- I need something to catch my eye. Do not have a US based accounts- can't pay for any order I place on this site. I do not possess any credit cards: Visa, Master or Discovery.

N: They used a lot of shades of blue, black & yellow. This is good, cos I know they have done their homework. Blue is very pleasing to the eye. Graphic- very blank and text/ official looking. This would not attract someone with a short attention span like myself, this is not to say I want things jumping around on screen. Images shown are so small, it is irritating trying to look at a picture of a product. They should make it bigger.

Overall: Sites have to have a good content in the Dar-us-salam site if you want to buy a book there is a brief description of the content of the books by the Web site providers not editors etc. This gives an objective information about the book although you must keep in mind that all their products/ books here are liked by the Web providers. The sizes of the pictures are important, you should be able to see a cover and read the small print on the cover. On-line payments are based towards US customers not Europeans. I have a Switch card from Natwest bank and no Visa/ Master card or anything else. Sites must have some type of excitement about it not just blank. BOL like with information in your face.

Male (Christian, French, White)

M: Apart from the menu on the left, which is well designed, navigation on this site is not easy. Furthermore, the information is a bit overwhelming. I would say not structured enough. At last, I really don't like the colours used (strange and unattractive green).

C: Soft colours were good. Navigation is not so easy but still ok. Being able to see many books at the same time with their photos and price + description is a good thing for deciding what to buy. Good menu. Especially reassuring in terms of privacy.

N: I really liked the menu presentation. It is really easy to, get from one part to another (books, music, gifts, etc.) and the basket for shopping is well done. I was surprised to see that we could see what the other customers have purchased. Excerpts from the given product. It is good to see comments of customers on products.

Overall: The experiment is good and judging from what we were asked in the first questionnaire, I think it will be very meaningful. The time allocated is sufficient to have an objective impression about each site.

REFERENCES

- Aaker, J. L. and M. Durairaj (1997), "The Effect of Cultural Orientation on Persuasion," *Journal of Consumer Research*, 24, 315-28.
- Abrahamson, M. (1983), *Social Research Methods*. London: Prentice Hall.
- Alba, J. W., J. W. Hutchinson, and J. G. Lynch (1991), "Memory and Decision Making," in *Handbook of Consumer Behavior*, T. S. Robertson and H. H. Kassarian, Eds. NJ: Prentice Hall.
- Alvarez, M. G., L. R. Kaschay, and S. Todd (1998s), "How We Made the Web Site International and Accessible: A Case Study", <http://www.research.att.com/conf/hfweb/proceedings/alvarez/index.htm>, [11/ 04/ 1999].
- Ambler, T. (1997), "How Much Brand Equity is Explained by Trust?" *Management Decision*, 35 (3-4), 283 - 93.
- Anderson, E. and E. Weitz (1989), "Determinants of Continuity in Conventional Industrial Channel Dyads," *Marketing Science*, 8, 310-23.
- Anderson, J. C. and J. A. Naurus (1990), "A Model of Distributor Firm and Manufacturer Firm Working Partnerships," *Journal of Marketing*, 54, 42 - 58.
- Andrews, G. (1994), "Mistrust, the Hidden Obstacle to Empowerment," *Human Resources Magazine*, 39 (9), 66 - 70.
- Appelbaum, K. and I. Jordt (1996), "Notes toward an Application of McCracken's 'Cultural Categories' for Cross-Cultural Consumer Research," *Journal of Consumer Research*, 23, 204-16.
- Athos, A. G. and J. J. Gabarro (1978), *Interpersonal Behaviours: Communication and Understanding in Relationship*. NJ: Prentice Hall.
- Babbie, E. (1992), *The Practice of Social Research*. Belmont, CA: Wadsworth.
- Babbie, E., F. Halley, and J. Zaino (2000), *Adventures in Social Research*. Thousand Oaks, California: Pine Forge Press, Sage Publications Ltd.
- Baillie, J. (1995), "Trust: a New Concept in the Management of People?" *People Management*, 1 (11), 53.
- Barber, B. (1983), *The Logic and Limits of Trust*. NJ: Rutgers University Press.
- Barber, W. and A. Badre (1998), "Culturability: The Merging of Culture and Usability," *Human Factors & the Web conferences (4th Conference)*, Available <http://www.research.att.com/conf/hfweb/proceedings/barber/index.htm>, [11/ 04/ 1999].
- Bartolome, F. (1989), "Nobody Trusts the Bosses Completely- Now What?" *Harvard Business Review*, 62 (2), 135-42.

- Basu, L., C. Carrico, and J. Lin (1997s), "Study Reveals Repeat WWW Shoppers are Worth Their Bandwidth in Gold! ", <http://www.binarycompass.com>, [21/ 04/ 1998].
- Beamish, P. W. and J. C. Banks (1987), "Equity Joint Ventures and the Theory of the Multinational Enterprise," *Journal of International Business Studies*, 18 (2), 1-16.
- Bearden, W. O, R. G. Netemeyer, and M. F. Mobley (1993), *Handbook of Marketing Scales: Multi-Item Measures for Marketing and Consumer Behavior Research* (Fourth ed.). Newbury Park, California: Sage Publications, Inc.
- Bearden, W. O and R. G. Netemeyer (1999), *Handbook of Marketing Scales* (Second ed.). Thousand Oaks: Sage Publications.
- Bearden, W. O. and M. J. Etzel (1982), "Reference Groups Influence on Product and Brand Purchase Decisions," *Journal of Consumer Research*, 9, 183-94.
- Bederson, B. B., J. D. Hollan, K. Perlin, J. Meyer, D. Bacon, and G. Furnos (1996), "Pad++: a Zoomable Graphical Sketchpad for Exploring Alternate Interface Physic," *Journal of Visual Languages and Computing*, 7 (1), 3-31.
- Bellman, S., G. L. Lohse, and E. J. Johnson (1999), "Predictors of Online Buying Behaviour," *Communications of the ACM*, 42 (12), 32-38.
- Benassi, P. (1999), "TRUSTe: An Online Privacy Seal Program," *Communications of the ACM*, 42 (2), 56-59.
- Bennis, W. (1989), " Why Leaders Can't Lead," *Training and Development Journal*, 43 (4), 35-39.
- Berelson, B. (1952), *Content Analysis in Communication Research*. New York: Free Press.
- Berst, J. (1998s), "Seven Deadly Web Site Sins (And Why You Must Avoid Them At All Costs), ", <http://www.zdnet.com/anchordesk/story/story-1716.html>, [25/ 10/ 1998].
- Bertelsen, O. (1994), "Fitt's Law As a Design Artifact: A Paradigm Case of Theory in Software Design," *East-West Human Computer Interaction Conference, St. Petersburg, Russia*, 1, 37-43.
- Blackston, M. (1992), "Observations: Building Brand Equity by Managing the Brand's Relationships," *Journal of Advertising Research*, 32 (3), 79-83.
- Bok, S. (1978), *Lying: Moral Choice in Public and Private Life*. New York: Pantheon Books.
- Bolin, S. (1998), "E-Commerce: A Market Analysis and Prognostication," *StandardView*, 6 (3), 97-105.
- Boor, S. and P. Russo (1993), "How Fluent Is Your Interface?" *Designing for international users INTERCHI' Conference* 93, 346.
- Bourges-Waldegg, P. and S. A. R. Scrivener (1998), "Meaning, the Central Issue in Cross-cultural HCI Design," *Interacting with Computers*, 9 (3), 287-309.
- Bradach, J. L. and R. G. Eccles (1989), "Price, Authority and Trust: from Ideal Types to Plural Forms," *Annual Reviews of Sociology*, 15, 97-118.

- Brandt, J. R. (1997), " In People We Trust: Technology and Strategy Are Important, But Character is Still the Key to Success," *Industry Week*, 246 (6), 6.
- Brewer, M. B. (1979), "In-group Bias in the Minimal Intergroup Situation: A Cognitive-Motivational Analysis," *Psychology Bulletin*, 86, 307-24.
- Bromily, P. and L. L. Cummings (1992), "Transaction Costs in Organizations with Trust," Minneapolis: Strategic Management Research Center, University of Minnesota.
- Browning, L. D., J. M. Beyer, and J. C. Shelter (1995), "Building Cooperation in a Competitive Industry: SEMATECH and the Semiconductor Industry," *Academy of Management Journal*, 38, 113-51.
- Bruce, G. (1992), "Comments," *Directions in Corpus Linguistics: Proceedings of Nobel Symposium 82, Stockholm*.
- Bryman, A. (1988), *Quantity and Quality in Social Research*. London: Unwin Hyman.
- Butler, J. K. (1991), "Toward Understanding and Measuring Conditions of Trust: Evolution of a Conditions of Trust Inventory," *Journal of Management*, 17, 643-63.
- Butler, J. K. and R. S. Cantrell (1984), "A Behavioural Decision Theory Approach to Modeling Dyadic Trust in Superiors and Subordinates," *Psychological Reports*, 55, 19-28.
- Card, S., G. Robertson, and J. Mackinlay (1991), "The Information Visualizer," *Proceedings of ACM CHI'91 Conference on Human Factors in Computing Systems*, 181-88.
- Carnevale, P. J. D., D. G. Pruitt, and P. I. Carrington (1982), "Effects of Future Dependence, Liking, and Repeated Requests for Help on Helping Behavior," *Social Psychology Quarterly*, 45 (1), 9-14.
- Carroll, J. M. (1997), "Human-Computer Interaction: Psychology As a Science of Design," *International Journal of Human-Computer Studies*, 46 (4), 501-22.
- Cassell, J. and T. Bickmore (2000), "External Manifestations of Trustworthiness in The Interface," *Communications of the ACM*, 43 (12), 50-56.
- Charmaz, K. (1995), " Grounded Theory," in *Rethinking Methods in Psychology*, J. A. Smith and R. Harre and L. V. Langenhove, Eds. London: Sage Publications.
- Chatman, J. A. (1991), "Matching People and Organizations: Selection and Socialization in Public Accounting Firms," *Administrative Science Quarterly*, 36, 459-84.
- Childers, T. L. (1986), "Assessment of the Psychometric Properties of an Opinion Leadership Scale," *Journal of Marketing Research*, 23, 184-88.
- Chiles, T. H. and J. F. McMackin (1996), "Integrating Variable Risk Preferences, Trust, and Transaction Cost Economics," *Academy of Management Review*, 21 (1), 73-100.
- Churchill, G. A. (1979), " A Paradigm for Developing Better Measures of Marketing Constructs," *Journal of Marketing Research*, 16, 64-73.
- Clark, M. S. and J. Mills (1979), "Interpersonal Attraction in Exchange and Communal Relationships," *Journal of Personality and Social Psychology*, 37 (1), 12-24.

- Clark, M. S., J. Mills, and M. C. Powell (1986), "Keeping Track of Needs in Communal and Exchange Relationships," *Journal of Personality and Social Psychology*, 51, 333-36.
- Clarke, R. (1999), "Internet Privacy Concerns Confirm the Case for Intervention," *Communications of the ACM*, 42 (2), 60-67.
- Clawson, J. (1989), "You Can't Manage Them If They Don't Trust You," *Executive Excellence*, 6 (4), 10-11.
- Cockburn, A. (1996), "The Interaction of Social Issues and Software Architecture," *Communications of the ACM*, 39 (10), 40-46.
- Cohen, J. B. (1972), *Behavioural Science Foundation of Consumer Behaviour*. New York: Macmillan Press Ltd.
- Coleman, J. S. (1984), "Introducing Social Structure into Economic Analysis," *American Economic Review*, 74, 84-88.
- Cook, J. and T. D. Wall (1980), "New Work Attitude Measures of Trust, Organizational Commitment and Personal Need Non-fulfilment," *Journal of Occupational Psychology*, 53, 39-52.
- Coolican, H. (1994), *Research Methods and Statistics in Psychology (Second ed.)*. London: Hodder & Stoughton Educational.
- Comrey, A. L. and H. B. Lee (1992), *A First Course in Factor Analysis (Second ed.)*. Hillsdale, NJ: Erlbaum.
- Cornford, T. and S. Smithson (1996), *Project Research in Information Systems: A Student's Guide*. London: MacMillan Press Ltd.
- Couch, L. L. and W. H. Jones (1997), "Measuring Levels of Trust," *Journal of Research in Personality*, 31, 319-36.
- Coutu, D. L. (1998), "Trust in Virtual Teams," *Harvard Business Review*, 76 (3), 20-22.
- Covey, S. (1989), "Seven Chronic Problems," *Executive Excellence*, 6 (2), 3-6.
- Cowles, D. L. (1997), "The Role of Trust in Customer Relationships: Asking the Right Questions," *Management Decision*, 35 (3-4), 273-83.
- Crano, W. D. and M. B. Brewer (1973), *Principles of Research in Social Psychology*. New York: McGraw-Hill.
- Cronbach, L. J. (1951), "Coefficient Alpha and the Internal Structure of Tests," *Psychometrika*, 31, 93-96.
- Crosby, L. A., K. R. Evans, and D. Cowles (1990), "Relationship Quality in Services Selling: An Interpersonal Influence Perspective," *Journal of Marketing*, 54, 42-58.
- Czerwinski, M. and K. Larson (1998), "Trends in Future Web Designs: What's Next for the HCI Professional?" *Interactions*, 5 (6), 9-15.

- Czerwinski, M. P. and K. Larson (1997), "The New Web Browsers: They're Cool But Are They Useful?" *People and Computers XII: Proceedings of HCI 97, Berlin.*,
- Dannehl, K. (1998), "Experimental Study versus Non-Experimental Study: The Non-Experimental (Non-Randomized) Study as a Methodological Compromise," in *Proceedings of the International Conference on Nonrandomised Comparative Clinical Studies*, U. Abel and A. Koch (Eds.). Heidelberg, Germany: Symposion Publishing, Available <http://www.symposion.com/nrccs/dannehl.htm> [20/06/2001].
- Darling, J. R. and D. R. Arnold (1988), "The Competitive Position Abroad of Products and Marketing Practices of the United States, Japan, and Selected European Countries," *Journal of Consumer Marketing*, 5, 61-68.
- Darling, J. R. and V. R. Wood (1990), "A Longitudinal Study Comparing Perceptions of U.S. and Japanese Consumer Products in a Third Neutral Country: Finland 1975 - 1985," *Journal of International Business Studies*, 21 (3), 427-50.
- Davis, F. B. (1964), *Educational Measurements and Their Interpretations*. Belmont: Wadsworth.
- De Groot, B., P. Eikelboom, and F. N. Egger (2001), "User or Consumer? Bringing Together HCI and Marketing at CHI," *CHI2001: Conference on Human Factors in Computing Systems, Seattle*.
- Denzin, N. K. (1978), "The Logic of Naturalistic Inquiry," in *Sociological Methods: A Sourcebook*, N. K. Denzin, Ed. New York: McGraw-Hill.
- Denzin, N. K. and Y. S. Lincoln (1998), "Introduction: Entering the Field of Qualitative Research," in *Strategies of Qualitative Inquiry*, N. K. Denzin and Y. S. Lincoln, Eds. London: Sage Publications.
- Deshpande, R. and D. M. Stayman (1994), "A Tale of Two Cities: Distinctiveness Theory and Advertising Effectiveness," *Journal of Marketing Research*, 31, 57-64.
- Deutsch, M. (1958), "Trust and Suspicion," *Journal of Conflict Resolution*, 2 (4), 265-79.
- DeVellis, R. F. (1991), *Scale Development: Theory and Applications*. London: Sage Publications.
- Dholokia, U. M. and L. L. Rego (1998), "What Makes Commercial Web Pages Popular? An Empirical Investigation of Web Page Effectiveness," *European Journal of Marketing*, 32 (7/8), 724-36.
- Doney, P. M. and J. P. Cannon (1997), "An Examination of the Nature of Trust in Buyer-seller Relationships," *Journal of Marketing*, 61, 35-51.
- Doney, P. M., J. P. Cannon, and M. R. Mullen (1998), "Understanding the Influence of National Culture on the Development of Trust," *Academy of Management Review*, 23 (3), 601-20.
- Dore, R. (1983), "Goodwill and the Spirit of Market Capitalism," *British Journal of Sociology*, 34, 459-82.
- Drolet, A. and M. Morris (2000), "Rapport in Conflict Resolution: Accounting for how Nonverbal Exchange Fosters Coordination on Mutually Beneficial Settlements to Mixed Motive Conflicts," *Journal of Experimental Social Psychology*, 36 (1), 26-50.

- Du Bois, J. W. (1991), "Transcription Design Principles for Spoken Discourse Research," *Pragmatics*, 1, 71-106.
- Dyer, W. G. (1995), *Team building: Current Issues and New Alternatives*. New York: Addison-Wesley.
- Easterby-Smith, M., R. Thorpe, and A. Lowe (1995), *Management Research: An Introduction*. London: Sage Publications.
- Edwards, D. and J. Potter (1992), *Discursive Psychology*. London: Sage Publications.
- Egger, F. N. (1999), "Human Factors in Electronic Commerce: Making Systems Appealing, Usable & Trustworthy," Graduate Students Consortium & Educational Symposium, 12th Bled International E-Commerce Conference, *Bled*.
- Egger, F. N. and M. McElhaw (2001), "UX Strategy: Design & Evaluation of Trust in E-business," CHI2001: Conference on Human Factors in Computing Systems, *Seattle*.
- Eick, S. G. and Joseph L. S. (1993), "Seesoft: a Tool for Visualizing Line-oriented Software Statistics," *IEEE Transactions on Software Engineering*, 18 (11), 957-68.
- Elofson, G. and W. N. Robinson (1998), "Creating a Custom Mass Production Channel on the Internet," *Communications of the ACM*, 41 (3), 56-62.
- Fishbein, M. and T. Azjen (1975), *Belief, Attitude, Intention and Behavior*. Reading: Addison-Wesley.
- Flynn, L. R., R. E. Goldsmith, and J. K. Eastman (1994), "The King and Summers Opinion Leadership Scale: Revision and Refinement," *Journal of Business Research*, 31, 55-64.
- Foxall, G. (1996), *Consumers in Context (First ed.)*: International Thomson Business Press.
- Foxall, G. R. (1997), *Marketing psychology: the paradigm in the wings*. London.: Macmillan Press Ltd.
- Friedman, B., P. H. Kahn, J.R., and D. C. Howe (2000), "Trust Online," *Communications of the ACM*, 43 (12), 34-40.
- Fukuyama, F. (1995), "Now Listen, Net Freaks, It's Not Who You Know, But Who You Trust," *Forbes*, 156 (13), 80.
- Fukuyama (1996), "Trust Still Counts in a Virtual World," *Forbes*, 158 (13), 33-35.
- Galliers, R. D. (1994), "Choosing Information Systems Research Approaches," in *Information Systems Research*, R. Galliers, Ed. Oxfordshire: Alfred Waller Ltd.
- Galliers, R. D. (1992), *Information Systems Research: Issues, Methods, and Practical Guidelines*. London: Blackwell Scientific Publications.
- Gambetta, D. (1988), *Trust: Making and Breaking Cooperative Relations*. New York: Basil Blackwell.

- Ganesan, S. (1994), "Determinants of Long-term Orientation in Buyer-seller Relationships," *Journal of Marketing*, 58 (2), 1-19.
- Geyskens, I., J-B. Steenkamp, and N. Kumar (1998), "Generalisations About Trust in Marketing Channel Relationships Using Meta-analysis," *International Journal of Research in Marketing*, 15, 223-48.
- Giffin, K. (1967), "The Contribution of Studies of Source Credibility to a Theory of Interpersonal Trust in the Communication Process," *Psychological Bulletin*, 68, 104-20.
- Glock, C. Y. and R. Stark (1965), *Religion and Society in Tension*. Chicago: Rand McNally & Company.
- Golembiewski, R. T. and M. McConkie (1975), "The Centrality of Interpersonal Trust In group Processes," in *Theories of Group Processes*, C. L. Cooper, Ed. New York: Wiley.
- Granovetter, M. (1985), "Economic Action and Social Structure: the Problem of Embeddedness," *American Journal of Sociology*, 91, 481-510.
- Guba, E. G. and Y. S. Lincoln (1998), "Major Paradigms and Perspectives," in *The Landscape of Qualitative Research*, N. K. Denzin and Y. S. Lincoln, Eds. London: Sage Publications.
- Gudykunst, W. B. (1997), "Cultural Variability in Communication," *Communication Research*, 24 (4), 327-48.
- Gulati, R. (1995), "Does Familiarity Breed Trust? The Implications of Repeated Ties for Contractual Choice in Alliances," *Academy of Management Journal*, 38, 85-112.
- Hammersley, M. (1996), "The Relationship Between Qualitative and Quantitative Research: Paradigm Loyalty Versus Methodological Eclecticism," in *Handbook of Qualitative Research Methods*, J. T. E. Richardson, Ed. Leicester: BPS (The British Psychological Society).
- Hasan, R. (1992), "Rationality in Everyday Talk: from Process to System," *Directions in Corpus Linguistics: Proceedings of Nobel Symposium 82, Stockholm*.
- Henwood, K. L. (1996), "Qualitative Enquiry: Perspectives, Methods and Psychology," in *Handbook of Qualitative Research Methods*, J. T. E. Richardson, Ed. Leicester: BPS (The British Psychological Society).
- Hesse, M. B. (1980), *Revolutions and Reconstructions in the Philosophy of Science*. Brighton: Harvester Press.
- Hewett, T. T., R. Baecker, S. Card, T. Carey, J. Gasen, M. Mantei, G. Perlman, G. Strong, and W. Verplank (1996s), "Curricula for Human-Computer Interaction ", <http://www.acm.org/sigchi/cdg/index.html>, [08/ 04/ 2001].
- Hill, C. W. L. (1990), "Cooperation, Opportunism, and the Invisible Hand: Implications for Transaction Cost Theory," *Academy of Management Review*, 15, 500-13.
- Hirsch, F. (1978), *Social Limits to Growth*. Cambridge, MA: Harvard Business Press.
- Hirschheim, R. A. (1994), "Information Systems Epistemology: A Historical Perspective," in *Information Systems Research*, R. Galliers, Ed. Oxfordshire: Alfred Waller Ltd.

- Hoffman, D. L., T. P. Novak, and P. Chatterjee (1995), "Commercial Scenarios for the Web: Opportunities and Challenge," *Journal of Computer Mediated Communication*, 1 (3), Available <http://www.ascusc.org/jcmc/vol1/issue3/hoffman.htm>, [25/ 06/ 1998].
- Hoffman, D. L., T. P. Novak, and M. Peralta (1999), "Building Consumer Trust Online," *Communications of the ACM*, 42 (4), 80-85.
- Hofstede, G. (1998), *Cultures and Organizations*. London: HarperCollinsBusiness.
- Hofstede, G. (1984), *Culture's Consequences: International Differences in Work Related Values*. Beverly Hills, CA: Sage Publications.
- Hollan, J. D. (1997s), "Human-Computer Interaction ", <http://mitpress.mit.edu/MITECS/work/hollan-r.html>, [25/ 06/ 1998].
- Hollan, J. D., B. B. Bederson, and J. Helfman (1997), "Information Visualization," in *The Handbook of Human Computer Interaction*, M. G. Helander and T. K. Landauer and P. Prabhu, Eds. 33-48: Elsevier Science.
- Holland, C. P. and A. G. Lockett (1998), "Business Trust and the Formation of Virtual Organizations," *Proceedings of the 31st Hawaii International Conference on System Sciences (HICSS'98)*, *Hawaii*, 6, 602-11.
- Holmes, J. G. and J. K. Rempel (1989), "Trust in Close Relationships," in *Close Relationships*, C. Hendrick, Ed. Newsbury Park, NJ: Sage Publications.
- Howard, J. A. (1994), *Buyer Behaviour in Marketing Strategy (Second ed.)*. London: Prentice-Hall.
- Howe, K. R. (1988), "Against the Quantitative-Qualitative Incompatibility Thesis or Dogmas Die Hard," *Educational Researcher*, 17, 10-16.
- Husted, B. W. (1989), "Trust in Business Relations: Directions for Empirical Research," *Business and Professional Ethics Journal*, 8 (2), 23-40.
- Hwang, P. and W. P. Burgers (1997), "Properties of Trust: An Analytical View," *Organizational Behavior and Human Decision Processes*, 69 (1), 67-73.
- Hyslop, M. (1997), "Obstructive Marketing," *Journal of Business & Industrial Marketing*, 12 (5-6), 339-44.
- Iannaccone, L. R. (1995), "Risk, Rationality and Religious Portfolios," *Economic Inquiry*, 13, 285-95.
- Jaccard, J. (1998), *Interaction Effects in Factorial Analysis of Variance*. Thousand Oaks, CA: Sage Publications.
- Janesick, V. J. (1998), "The Dance of Qualitative Research Design: Metaphor, Methodolatry, and Meaning," in *Strategies of Qualitative Inquiry*, N. K. Denzin and Y. S. Lincoln, Eds. London: Sage Publications.
- Janis, I. L. (1965), "The Problem of Validating Content Analysis," in *Language of Politics*, H. D. et al Laswell, Ed. Cambridge: MIT Press.

- Jarvenpaa, S. L. and P. A. Todd (1997), "Consumer Reactions to Electronic Shopping on the World Wide Web," *Journal of Electronic Commerce*, 2 (1), 59-88.
- Jarvenpaa, S. L., N. Tractinsky, and L. Saarinen (1999), "Consumer Trust in an Internet Store: A Cross-Cultural Validation," *Journal of Computer Mediated Communication*, 5 (2), Available <http://www.ascusc.org/jcmc/vol5/issue2/jarvenpaa.html>, [13/ 08/ 2000].
- Jennings, E. E. (1971), *Routes to the Executive Suite*. New York: McGraw Hill.
- Jensen, C., S. Farnham, S. Drucker, and P. Kollock (2000), "The Effect of Communication Modality on Cooperation in Online Environments," *Proceedings of CHI'00, The Hague, The Netherlands*, 470-77.
- Johansson, G. and G. Aronsson (1984), "Stress Reactions in Computerized Administrative Work," *Journal of Occupational Behaviour*, 5 (1), 159-81.
- Johnson, S. (1997), *Interface Culture: How New Technology Transforms the Way We Create and Communicate*: HarperCollins Publishers.
- Johnson-George, C. and W. Swap (1982), "Measurement of Specific Interpersonal Trust: Construction and Validation of a Scale to Assess Trust in a Specific Other," *Journal of Personality and Social Psychology*, 43, 1036-317.
- Jones, G. R. and J. M. George (1998), "The Experience and Evolution of Trust: Implications for Cooperation and Teamwork," *Academy of Management Review*, 23 (3), 531-47.
- Jones, S (1985), "Depth Interviews," in *Applied Qualitative Research*, R. Walker, Ed. London: Gower.
- Jones, T. M. (1995), "Instrumental Stakeholder Theory: A Synthesis of Ethics and Economics," *Academy of Management Review*, 20, 404-37.
- Kachigan, S. K. (1991), *Multivariate Statistical Analysis: A Conceptual Introduction (Second ed.)*. New York: Radius Press.
- Kalakota, R. and A. Whinston (1996), *Frontiers of Electronic Commerce*. New York: Addison-Wesley.
- Kannan, P. K. , A. Chung, and A. B. Whinston (1998), "Marketing Information on the I-Way," *Communications of the ACM*, 41 (3), 36-43.
- Kaplan, R. W. and D. P. Saccuzzo (1982), *Psychological Testing: Principles, Applications and Issues*. Monterey: Brooks/ Cole.
- Keller, E. (1985), *Reflections on Gender and Science*. New Haven, CJ: Yale University.
- Kerne, A. (1998), "Cultural Representation in Interface Ecosystems: Amendments to the ACM/ Interactions Design Awards Criteria," *Interactions*, 5 (1), 37-43.
- Kim, J. and J. Y. Moon (1998), "Designing Towards Emotional Usability in Customer Interfaces- Trustworthiness of Cyberbanking System Interfaces," *Interacting with Computers*, 10 (1), 1-29.

- Kim, J. and J. Moon (1997), "Emotional Usability of Customer Interface," Proceedings of Human Factors in Computing Systems, *Atlanta, Georgia*.
- Kini, A. and J. Choobineh (1998), "Trust in Electronic Commerce: Definition and Theoretical Considerations," Texas: A & M University.
- Kinnear, P. R. and C. D. Gray (1999), *SPSS for Windows Made Simple*. London: Hove Psychology Press.
- Kirakowski, J., N. Claridge, and R. Whitehand (1998), "Human Centered Measures of Success in Web Site Design," Human Factors & the Web conferences (4th Conference), Available <http://www.research.att.com/conf/hfweb/proceedings/scholtz/index.htm>, [09/ 05/ 1999].
- Klein, J. G., R. Ettenson, and M. D. Morris (1998), "The Animosity Model of Foreign Product Purchase: An Empirical Test in the People's Republic of China," *Journal of Marketing*, 62, 89-100.
- Kline, P. (1994), *An Easy Guide to Factor Analysis*. London: Routledge.
- Koman, R. (1998s), "Helping Users Find Their Way by Making Your Site Smelly ", http://www.webreview.com/1998/05_15/strategists/05_15_98_1.shtml, [20/ 05/ 2000].
- Kraut, R., V. Lundmark, M. Patterson, S. Kiesler, T. Mukopadhyay, and W. Scherlis (2000), "Internet Paradox: A Social Technology That Reduces Social Involvement and Psychological Well-Being?" *American Psychologist*, 55 (4), Available <http://www.apa.org/journals/amp/amp5391017.html>, [09/ 01/ 2001].
- Krippendorff, K. Ed. (1980), *Content Analysis: An Introduction to Its Methodology*. London: Sage Publications.
- Kuhman, W. (1989), "Experimental Investigation of Stress- inducing Properties of System Response Times," *Ergonomics*, 32 (3), 271-80.
- Kuhn, T. S. (1970), *The Structure of Scientific Revolutions (Second ed.)*. Chicago: University of Chicago Press.
- Laudon, K. C. and J. P. Laudon (1996), *Management Information Systems (Fourth ed.)*. New Jersey: Prentice Hall International.
- Leavitt, C. and J. Walton (1975), "Development of a Scale for Innovativeness," in *Advances in Consumer Research*, M. J. Schlinger, Ed. Vol. 2. Ann Arbor, MI: Association for Consumer Research.
- Lewicki, R. J. , D. J. McAllister, and R. J. Bies (1998), "Trust and Distrust: New Relationships and Reliabilities," *Academy of Management Review*, 23 (3), 438-59.
- Lewis, J. D. and A. Weigert (1985), "Trust As Social Reality," *Social Forces*, 63 (4), 967-85.
- Lewis, P. (1994), *Islamic Britain: Religion, Politics and Identity among British Muslims*. London: I.B. Tauris Publishers,.
- Li, H., C. Kuo, and M. G. Russell (1999), "The Impact of Perceived Channel Utilities, Shopping Orientations, and Demographics on the Consumer's Online Buying Behaviour," *Journal of Computer Mediated Communication*, 5 (2), Available <http://www.ascusc.org/jcmc/vol5/issue2/hairong.html>, [27/ 04/ 2000].

- Liang, T. and J. Huang (1998), "An Empirical Study on Consumer Acceptance of Products in Electronic Markets: a Transaction Cost Model," *Decision Support Systems*, 24, 29-43.
- Light, I. (1984), "Immigrant and Ethnic Enterprise in North America," *Ethnic and Racial Studies*, 7, 195-216.
- Lindskold, S. (1978), "Trust development, the GRIT Proposal and the Effects of Conciliatory Acts on Conflict and Cooperation," *Psychology Bulletin*, 85, 772-93.
- Loehlin, J. C. (1998), *Latent Variable Models: An Introduction to Factor, Path, and Structural Analysis* (Third ed.). London: Lawrence Erlbaum Associates, Inc.
- Lohse, G. L. and P. Spiller (1998), "Electronic Shopping," *Communications of the ACM*, 41 (7), 81.
- Lohse, G. L. and P. Spiller (1999), "Internet Retail Store Design: How the User Interface Influences Traffic and Sales," *Journal of Computer Mediated Communication*, 5 (2), Available <http://www.ascusc.org/jcmc/vol5/issue2/lohse.htm>, [25/ 04/ 2000].
- Lutz, R. J. (1991), "The Role of Attitude theory in Marketing," in *Perspectives in Consumer Behaviour*, H. H. Kassarian and T. S. Robertson, Eds. NJ: Prentice Hall.
- Malhorta, Y. (1997s), "Virtual Corporations, Human Issues & Information Technology ", <http://www.brint.com/interview/astdint.html>, [06/ 01/ 1998].
- Mangham, I. L. (1986), " In Search of Competence," *Journal of General Management*, 12 (2), 5-12.
- Mariampolski, H. (1999), "The Power of Ethnography (Qualitative Research for the 21st Century)," *Journal of the Market Research Society*, 41 (1), 75-82.
- Marshall, C. and G. B. Rossman (1999), *Designing Qualitative Research* (Third ed.). London: Sage Publications.
- Mayer, R. C., J. H. Davis, and F. D. Schoorman (1995), "An Integrative Model of Organizational Trust," *Academy of Management Review*, 20 (3), 709-34.
- Maykut, P. and R. Morehouse (1998a), "Before Beginning Research: A Philosophic Perspective," in *Beginning Qualitative Research: A Philosophic and Practical Guide*, P. Maykut and R. Morehouse, Eds. London: The Falmer Press.
- Maykut, P. and R. Morehouse (1998b), " Designing Qualitative Research: An Overview," in *Beginning Qualitative Research: A Philosophic and Practical Guide*, P. Maykut and R. Morehouse, Eds. London: The Falmer Press.
- McAllister, D. J. (1995), "Affect- and Cognition-based Trust As Foundations for Interpersonal Cooperation in Organizations," *Academy of Management Journal*, 38 (1), 24 - 60.
- Mecker, B. F. (1983), "Cooperative Orientation, Trust, and Reciprocity," *Human Relations*, 37, 225 - 43.
- Metwally, M. M. (1997), "Economic Consequences of Applying Islamic Principles in Muslim Societies," *International Journal of Social Economics*, 24 (7-9), 941-58.

- Michalos, A. (1990), "The Impact of Trust on Business, International Security, and the Quality of Life," *Journal of Business Ethics*, 9, 619 - 38.
- Modic, S. J. (1988), "Cultivating Trust: You'll Only Get As Good As You Give," *Industry Week*, 237 (3), 17 - 18.
- Moore, K. R. (1998), "Trust and Relationship Commitment in Logistics Alliances: a Buyer's Perspective," *International Journal of Purchasing and Marketing*, 34 (1), 24-38.
- Murphy, K. R. and C. O. Davidshofer (1988), *Psychological Testing: Principles and Applications*. New Jersey: Prentice-Hall.
- Myers, B. A. (1998), "A Brief History of Human-Computer Interaction Technology," *Interactions*, 5 (2), 44-54.
- Nardi, B. A. (1998s), "Context and Consciousness: Activity Theory and Human-Computer Interactions ", <http://www.acm.org/interactions/vol2no4/depts/book.html>, [09/ 05/ 1999].
- Nass, C. and B. J. Fogg (1997), "Silicon Sycophants: The Effect of Computers That Flatter," *International Journal of Human-Computer Studies*, 46 (5), 551-61.
- Nass, C., B. J. Fogg, and Y. Moon (1996), "Can Computers be Teammates?" *International Journal of Human-Computer Studies*, 45 (6), 669-78.
- Naumann, E. (1992), "Ten Easy Ways to Lose Your Customer's Trust," *Business Horizons*, 35 (5), 30-35.
- Netemeyer, R. G., S. Durvasula, and D. R. Lichtenstein (1991), "A Cross-National Assessment of the Reliability and Validity of the CETSCALE," *Journal of Marketing Research*, 28, 320-27.
- Newbold, P. (1995), *Statistics For Business and Economics (Fourth ed.)*. New Jersey: Prentice-Hall International.
- Nielsen, J. (1997s), "Why Advertising Doesn't Work on the Web ", <http://www.useit.com/alertbox/9709a.html>, [23/ 04/ 1998].
- Nielsen, J., D. Norman, and B. T. Tognazzini (1995s), "The Alertbox: Current Issues in Web Usability ", <http://www.useit.com/alertbox/>, [23/ 04/ 1998].
- Noordewier, T. G., G. John, and J. R. Nevin (1990), "Performance Outcomes of Purchasing Arrangements in Industrial Buyer-vendor Relationships," *Journal of Marketing*, 54 (4), 80-93.
- Norusis, M. J. (1998), *SPSS 8.0 Guide to Data Analysis*. New Jersey: Prentice-Hall, Inc.
- Nunnally, J. C. (1978), *Psychometric Theory (2 ed.)*. New York: McGraw-Hill.
- O'Connell, C. O. and S. Kowal (1995), "Basic Principles of Transcription," in *Rethinking Methods in Psychology*, J. A. Smith and R. Harre and L. V. Langenhove, Eds. First ed. London: Sage Publications.
- O'Hara-Devereaux, M. and R. Johansen (1994), *Global work: Bridging Distance, Culture, and Time*. San Francisco, CA,: Jossey-Bass Publishers.

- O'Keefe, R. M. (1998), "NCR Project: Interim Report," . London: Brunel University.
- O'Keefe, R. M. and T. McEachern (1998), "Web-based Customer Decision Support Systems," *Communications of the ACM*, 41 (3), 71-78.
- O'Keefe, R. M., M. Cole, P. Y. K. Chau, A. Massey, M. Montoya-Weiss, and M. Perry (2000), "From the User Interface To The Consumer Interface: Results From A Global Experiment," *International Journal of Human-Computer Studies*, 53, 611-28.
- Olson, J. S. and G. M. Olson (2000), "i2i Trust in E-commerce," *Communications of the ACM*, 43 (2), 41-44.
- Owen, H. (1996), "Building Teams on a Display of Trust," *People Management*, 2 (6), 34 - 37.
- Palmer, J. W. and D. A. Griffith (1998), "An Emerging Model of Web Site Design for Marketing," *Communications of the ACM*, 41 (3), 44-51.
- Parkhe, A. (1993), "Messy Research Methodological Predispositions, and Theory Development in International Joint Ventures," *Academy of Management Review*, 18, 227 - 68.
- Patton, M. Q. (1990), *Qualitative Research and Evaluation Methods* (Second ed.). CA, Newbury Park: Sage Publications.
- Pearce, J. L. , S. M. Sommer, A. Morris, and M. Friderger (1992), "A Configurational Approach to Interpersonal Relations: Profiles of Workplace Social Relations and Task Interdependence," . Irvine.: Graduate School of Management, University of California.
- Pearce, W. B. (1974), "Trust in Interpersonal Relationships," *Speech Monographs*, 41 (3), 236-44.
- Pessemier, E. A., A. C. Bemmoar, and D. M. Hanssens (1977), "Willingness to Supply Human Body Parts: Some Empirical Results,," *Journal of Consumer Research*, 4 (3), 131-40.
- Phipps, R. and C. Simmons (1998-99), *Understanding Customers*. Oxford: Butterworth-Heinemann.
- Pinson, C. and E. L. Robert (1973), "Do Attitude Changes Precede Behaviour Change?" *Journal of Advertising Research*, 13, 33-38.
- Preece, J. (1998), "Emphatic Communities: Reaching out Across the Web," *Interactions*, 5 (2), 32-43.
- Preece, J. and H. D. Rombach (1994), "A Taxonomy for Combining Software Engineering and Human-Computer Interaction Measurement Approaches: Towards a Common Framework," *International Journal of Human-Computer Studies*, 41 (1), 553-83.
- Proctor, T. (1997), *Essentials of Marketing Research*. London.: Pitman Publishing, Pearson Professional Ltd.
- Raman, N. V. and J. D. Leckenby (1998), "Factors Affecting Consumers 'Webad' Visits", " *European Journal of Marketing*, 32 (7/8), 737-48.
- Ramsay, J., A. Barbes, and J. Preece (1998), "A Psychological Investigation of Long Retrieval Times on the World Wide Web," *Interacting with Computers*, 10 (1), 77-86.

- Ray, M. L. and R. Batra (1983), "Emotional and Persuasion in Advertising: What We Do and Don't Know About Affect", *Advances in Consumer Research*, 10, 543-48.
- Reichardt, C. S. and S. F. Rallis (1994), "Qualitative and Quantitative Inquiries Are Not Incompatible: A Call For a New Partnership.", in *The Qualitative-Quantitative Debate: New Perspectives*, C. S. Reichardt and S. F. Rallis, Eds. San Fransisco: Jossey-Bass.
- Reichmann, N. (1989), "Breaking Confidences: Organizational Influences on Insider Training," *Sociology Quarterly*, 30, 185 - 204.
- Rempel, J. and T. Holmes (1986), "How Do I Trust Thee?" *Psychology Today*, 20, 28-34.
- Rempel, J. K. , J. G. Holmes, and M. D. Zanna (1985), "Trust Is Close Relationships," *Journal of Personality and Social Psychology*, 49, 95 - 112.
- Resnick, P., R. Zeckhauser, E. Friedman, and K. Kuwabara (2000), "Reputation Systems," *Communications of the ACM*, 43 (12), 45-48.
- Reynolds, F. D. and W. R. Darden (1971), "Mutually Adaptive Effects of Interpersonal Communication," *Journal of Marketing*, 8, 449-54.
- Reynolds, J. and A. Santos (1999), "Cronbach's Alpha: A Tool for Assessing the Reliability of Scales," *Journal of Extension*, 37 (2), Available <http://joe.org/joe/1999april/tt3.html>, [16/6/2001].
- Ring, P. S. and A. H. Van de Ven (1994), "Development Processes of Cooperative Interorganizational Relationships," *Academy of Management Review*, 19 (1), 90-118.
- Ring, P. S. and A. H. Van de Ven (1992), "Structuring Cooperative Relationships Between Organizations," *Strategic Management Journal*, 13, 483 - 98.
- Robertson, T. S. (1971), *Innovative Behaviour and Communication*. New York: Holt.
- Robinson, S. L. (1996), "Trust and Breach of the Psychological Contract," *Administrative Science Quarterly*, 41, 574 - 99.
- Rocco, E. (1998), "Trust Breaks Down in Electronic Contexts But Can Be Repaired By Some Initial Face-to-Face Contact," *Proceedings of CHI'98, Los Angeles*, 496-502.
- Rogers, E. and D. G. Cartano (1962), "Methods of Measuring Opinion Leadership," *Public Opinion Quarterly*, 26, 435-41.
- Rokeach, M. (1973), *The Nature of Human Values*. New York: Free Press.
- Roper, B. (1966), "The Importance of Attitudes, the Difficulty of Measurement," in *New Ideas For Successful Marketing*, J. S. Wright and J. Goldstrucker, Eds. Chicago: American Marketing Association.
- Rosengren, K. E. Ed. (1981), *Advances in Content Analysis (First ed.)*. Beverly Hills: Sage Publications, Inc.
- Rotter, J. B. (1971), "Generalized Expectancies for Interpersonal Trust," *American Psychologists*, 443-52.

- Rotter, J. B. (1967), "A New Scale for the Measurement of Trust," *Journal of Personality*, 35, 651 - 65.
- Rubin, H. J. and I. S. Rubin (1995), *Qualitative Interviewing: The Art Of Hearing Data*. Thousand Oaks: Sage Publications, Inc.
- Ruch, L. O., J. W. Gartrell, A. Ramelli, and B. J. Coyne (1991), "The Clinical Trauma Assessment: Evaluating Sexual Assault Victims in the Emergency Room," *Psychological Assessment*, 3, 405-11.
- Sabel, C. F. (1993), "Studied Trust: Building New Forms of Cooperation in a Volatile Economy," *Human Relations*, 46 (9), 1133 - 71.
- Sacher, H. (1998), "Interactions in Chinese: Designing Interfaces for Asian Languages," *Interactions*, 5 (5), 28-38.
- Salkind, N. J. (1997), *Exploring research*. Upper Saddle River, NJ: Prentice Hall.
- Saslow, C. A. (1982), *Basic research methods* (First ed.). New York: McGraw-Hill, Inc.
- Schein, E., H. (1985), *Organizational Culture and Leadership*. San Francisco: Jossey-Bass.
- Schiffman, L. G. and L. L. Kanuk (2000), *Consumer Behaviour* (Seventh ed.). Upper Saddle River, New Jersey: Prentice-Hall, Inc.
- Schneider, F. B. (1999), *Trust in Cyberspace*. Washington, D.C.: National Academy Press.
- Schneiderman, B. (1992), *Designing the User Interface- Strategies for Effective Human-Computer Interaction* (Second ed.). Reading, MA.: Addison Wesley.
- Scholtz, J., S. Laskowski, and L. Downey (1998), "Developing Usability Tools and Techniques for Designing and Testing Web Sites," *Human Factors & the Web conferences* (4th Conference), Available <http://www.research.att.com/conf/hfweb/proceedings/scholtz/index.htm>, [03/ 02/ 1999].
- Shapiro, D. , B. H. Sheppard, and L. Cheraskin (1992), "Business on a Handshake," *Negotiation Journal*, 8 (4), 365-77.
- Shapiro, S. (1987), "The Social Control of Impersonal Trust," *American Journal of Sociology*, 93, 623-58.
- Sharma, S., T. A. Shimp, and J. Shin (1995), "Consumer Ethnocentrism: A Test of Antecedents and Moderators," *Journal of the Academy of Marketing Science*, 23 (1), 26-37.
- Sharp, J. A. and K. Howard (1996), *The Management of a Student Research Project* (Second ed.). Aldershot, Hants: Gower Publications.
- Sheppard, B. H. and D. M. Sherman (1998), "The Grammars of Trust: a Model and General Implications," *Academy of Management Review*, 23 (3), 422-38.
- Shih, Chuan-Fong (1998), "Conceptualising Consumer Experiences in Cyberspace," *European Journal of Marketing*, 32 (7/8), 655-63.

- Shimp, T. A. and S. Sharma (1987), "Consumer Ethnocentrism: Construction and Validation of the CETSCALE," *Journal of Marketing Research*, 24, 280-89.
- Singleton, R., B. C. Straits, and M. M. Straits (1993), *Approaches To Social Research*: Oxford University Press.
- Smith, H. W. (1975), *Strategies of Social; Research: The Methodological Imagination*. London: Prentice Hall.
- Smith, J. A. (1995), " Semi-Structured Interviewing and Qualitative Analysis," in *Rethinking Methods in Psychology*, J. A. Smith and R. Harre and L. V. Langenhove, Eds. London: Sage Publications.
- Solomon, M. R. (1999), *Consumer Behaviour: Buying, Having, and Being (Fourth ed.)*. Upper Saddle River, New Jersey: Prentice Hall, Inc.
- SPSS Inc. (1998), *SPSS Base 8.0 for Windows User Guide*. Chicago: SPSS Inc.
- Stark, R. and C. Y. Glock (1968), "American Piety: The Nature of Religious Commitment," California: University of California Press.
- Staw, B. M. and L. L. Cummings (1980a), *Research in Organizational Behaviour: an Annual Series of Analytical Essays and Critical Reviews*. Greenwich, CT: JAI Press.
- Staw, B. M. and L. L. Cummings Eds. (1980b), *Research in Organizational Behaviour*.
- Stevens, J. (1996), *Applied Multivariate Statistics for the Social Sciences (Third ed.)*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Strauss, A. L. and J. Corbin (1990), *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. California: Sage Publications.
- Strong, K. and J. Weber (1998), "The Myth of the Trusting Culture: a Global Empirical Assessment," *Business and Society*, 37 (2), 157-84.
- Sutherland, I. E. (1963), "Sketchpad: a Man-Machine Graphical Communication System," *Proceedings AFIPS Spring Joint Computer Conference*, 1, 329-46.
- Swaminathan, V., E. Lepkowska-white, and B. P. Rao (1999), "Browsers or Buyers in Cyberspace? An Investigation of Factors Influencing Electronic Exchange," *Journal of Computer Mediated Communication*, 5 (2), Available <http://www.ascusc.org/jcmc/vol5/issue2/swaminathan.htm>, [29/ 01/ 1999].
- Tabachnick, B. G. and L. S. Fidell (1996), *Using Multivariate Statistics (Third ed.)*. NY: HarperCollins College Publishers.
- Tannen, R. S. (1998), "Breaking the Sound Barrier: Designing Auditory Displays for Global Usability," *Human Factors & the Web conferences (4th Conference)*, Available <http://www.research.att.com/conf/hfweb/proceedings/tannen/index.htm>, [29/ 01/ 1999].
- Tashakkori, A. and C. Teddlie (1998), *Mixed Methodology: Combining Qualitative and Quantitative Approaches*. London: Sage Publications, Inc.

- Tenenbaum, J. M. (1998), "WISs and Electronic Commerce," *Communications of the ACM*, 41 (7), 89-90.
- Thompson, G. and P. F. Pearce (1992), "The Team-Trust Game," *Training & Development*, 46 (5), 42-44.
- Tilson, R. , J. Dons, S. Martin, and E. Kieke (1998), "Factors and Principles Affecting the Usability of Four E-commerce Sites," *Human Factors & the Web conferences (4th Conference)*, Available <http://www.research.att.com/conf/hfweb/proceedings/tilson/index.htm>, [11/ 02/ 1999].
- Toothacker, L. E. (1993), *Multiple Comparisons Procedures*. Thousand Oaks, CA: Sage Publications.
- Triandis, H. C. (1995), *Individualism and Collectivism*. Boulder, Colorado: Westview Press.
- Tull, D. S. and G. S. Albaum (1973), *Survey Research: A Decisional Approach*. New York: Intex Educational Publishers.
- Turner, J. C. (1987), *Rediscovering the Social Group: A Self-Categorization Theory*. Oxford: Blackwell.
- Unknown (1997s), "The HomeNet Project ", <http://homenet.andrew.cmu.edu/progress/>, [8/ 12/ 1999].
- Van Maanen, J. and E. H. Schein (1979), "Towards a Theory of Organizational Socialization," in *Research in Organizational Behaviour*, B. M. Staw, Ed. Greenwich, CT: JAI Press.
- Varner, I. I. and L. Beamer (1995), *Intercultural Communication in the Global Workplace*: McGraw-Hill Higher Education.
- Venkatesh, A. (1998), "Cybermarketscapes and Consumer Freedoms and Identities," *European Journal of Marketing*, 32 ((7/8)), 664-76.
- Walker, R. (1995), "Applied Qualitative Research," in *Management Research: An Introduction*, M. Easterby-Smith and R. Thorpe and A. Lowe, Eds. London: Sage Publications.
- Wang, H., M. K. O. Lee, and C. Wang (1998), "Consumer Privacy Concerns about Internet Marketing," *Communications of the ACM*, 41 (3), 63-70.
- Wang, P. and L. A. Petrison (1993), "Direct Marketing Activities and Personal Privacy: A Consumer Survey," *Journal of Direct Marketing*, 7 (1), 7-19.
- Weber, R. P. Ed. (1990), *Basic Content Analysis (Second ed.)*. London: Sage Publications, Inc.
- Weick, K. E. (1984), "Theoretical Assumptions and Research Methodologies Selection," in *Information Systems Research Challenge*, F. W. McFarlan, Ed. Boston: Harvard Business School Press.
- Wells, W. D. and D. Prentsky (1996), *Consumer Behaviour (First ed.)*. John & Wiley & Sons, Inc.
- Wernimont, P. F. and S. Fitzpatrick (1972), "The Meaning of Money," *Journal of Applied Psychology*, 56 (3), 218-26.

- Wiedenbeck, S. and S. Davis (1997), "The Influence of Interaction Style and Experience on User Perception of Software Packages," *International Journal of Human-Computer Studies*, 46 (5), 563-88.
- Wigand, R. T. and R. I. Benjamin (1998), "Electronic Commerce: Effects on electronic Markets," *Journal of Computer Mediated Communications*, 1 (3), Available <http://www.ascusc.org/jcmc/vol1/issue3/wigand.html>, [11/ 04/ 1999].
- Williamson, O. E. (1975), *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: Free Press.
- Winfield, I. Ed. (1991), *Organisations and Information Technology: Systems, Power and Job Design* (First ed.). London: Blackwell Scientific Publications.
- Wood, V. R. and J. R. Darling (1993), "The Marketing Challenges of the Newly Independent Republics: Product Competitiveness in Global Markets," *Journal of International Marketing*, 1 (1), 77-102.
- Wright, G. H. (1971), *Explanation and Understanding*. London: Routledge and K. Paul.
- Wright, M. A. and J. S. Kakalik (1997), "The Erosion of Privacy," *Computers and Society*, 27 (4), 22-26.
- Yamagishi, T. and M. Yamagishi (1994), "Trust and Commitment in the United States and Japan," *Motivation and Emotion*, 18, 129-65.
- Yin, R. K. (1994), *Case Study Research: Design and Methods* (Second ed.). London: Sage Publications.
- Zand, D. E. (1972), "Trust and Managerial Problem Solving," *Administrative Science Quarterly*, 17, 229-39.
- Zeynep, G. and D. Maheswaran (2000), "Cultural Variations in Country of Origin Effects," *Journal of Marketing Research*, 37 (3), 309-27.
- Zikmund, W. G. (1997), *Business Research Methods* (Fifth ed.). Orlando: The Dryden Press, Harcourt Brace College Publishers.