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CHAPTER 7. DISCUSSION AND CONCLUSIONS

7.1 Introduction

The Web is a new phenomenon in marketing communication. Although most marketing and advertising scholars acknowledge the importance of a corporate Web site as a marketing communication medium, to date little systematic research within the discipline of marketing has been carried out the nature of WMC and assessment of WMC effectiveness. Accordingly the overall aim of the study was to investigate the features of effective corporate Web sites. There were five research questions addressed by this study: (1) What content and structural elements are presented on corporate Web sites?, (2) How can corporate Web sites be classified according to their content and structure?, (3) How do consumers respond to different types of corporate Web site?, (4) Do user attitudes towards corporate Web sites vary according to Web literacy levels?, and (5) What features of corporate Web sites determine revisit intention among Web users?

Through a critical review of the existing marketing literature, this study identified knowledge gaps and problems with the current body of marketing knowledge. The lack of an appropriate framework, which can be applied to this new communication medium, calls for a new approach to studying WMC (e.g., Hoffman and Novak, 1996; McDowell and Sutherland, 2000: Stewart *et al*., 2002). Given the distinctive characteristics of the Web and the limitations of conventional approaches to the evaluation of marketing communication media, this study developed the WMC model based on Activity Theory.

Furthermore, despite continued research on the Web, to date systematic empirical research on a Web site typology has been deficient. To address this issue, a preliminary study of 386 Web site home pages of Australian and Korean companies was conducted and the findings discussed in Chapter 3. The content analysis identified two meaningful homogeneous groups of Web site content (i.e., the "integrated communication" and "basic information" type) and Web site structure (i.e., the "hypermedia" and static image" type).

Based on a critical review of literature and the preliminary research on Web site typology, a new conceptual model, the Web Acceptance Model (WAM)", was developed for understanding and measuring consumer acceptance and use of corporate Web sites. Fourteen hypotheses were derived from the model. The WAM proposed that Web site structure and content, together determined users' affective responses to a Web site and their ability to perform tasks using it (e.g., access required information). While affective responses to a Web site were captured in the model through the construct of "social presence", task-related interaction in the model was assessed according to inter-related constructs: perceived usefulness and perceived ease of use. It was also hypothesised that Web literacy would moderate the relationship between Web site typology and users' responses to a Web site. These hypotheses were tested through an experimental study.

This chapter discusses the results of both the preliminary research on the typology of corporate Web sites and the experimental study which researched the WAM. These findings provide answers to the research questions rosed in this study.

This chapter commences with a summary of the main findings of the experimental study and the resulting modification of the proposed WAM. This chapter also discusses the overall study results along with five research questions addressed in Chapter 1. Then, both the theoretical and practical implications of the thesis are discussed. Based on the limitations of the study, further areas for future research are suggested. Finally, this chapter concludes by emphasising the importance of including the consumers' affective and cognitive responses in studies of WMC.

7.2 Summary of the Main Findings

Fourteen hypotheses were tested and the results are summarised in Table 7.1. Nine hypotheses (H1, H2, H3, H5, H6, H8, H10, H11a, H12b) were supported by the experimental data, one hypothesis (H4) was partially supported and other four hypotheses (H7, H9, H11b, and H12a) were not supported.

Table 7.1 Results of Hypothesis Tests

Research Hypothesis	Result
H1: The "hypermedia" type of Web sit will have higher social presence than the "static image" type.	Supported
H2: The "static image" type of Web site will have higher perceived ease of use than the "hypermedia" type.	Supported
H3: The "integrated communication" type of Web site will have higher social presence than the "basic information" type.	Supported
H4: The "basic information" type of Web site will have Higher perceived ease of use than the "integrated communication" type.	Partially Supported
H5: The "integrated communication" type of Web site will have higher perceived usefulness than the "basic information" type.	Supported
H6: The more positive the social presence of a Web site is, the more positive the attitude toward the Web site will be.	Supported
H7: The more positive the perceived ease of use of a Web site is, the more positive the attitude toward the Web site will be.	Not Supported
H8: The more positive the perceived usefulness of a Web site is, the more positive the attitude toward the Web site will be.	Supported
H9: The more positive the perceived ease of use of a Web site is, the greater the perceived usefulness will be.	Not supported
H10: The more positive the attitude toward the Web site is, the higher the revisit intention will be.	Supported
H11a: People with high Web literacy will feel the "hypermedia" type of Web site to be higher in social presence than the "static image" type.	Supported
H11b: People with low Web literacy will feel the "static image" type of Web site to be higher in social presence than the "hypermedia" type.	Not supported
H12a: People with high Web literacy will perceive no difference in ease of use between the "hypermedia" type and the "static image" type of Web site.	Not supported
H12b: People with low Web literacy will perceive the "static image" type of Web site to be higher than the "hypermedia" type.	Supported

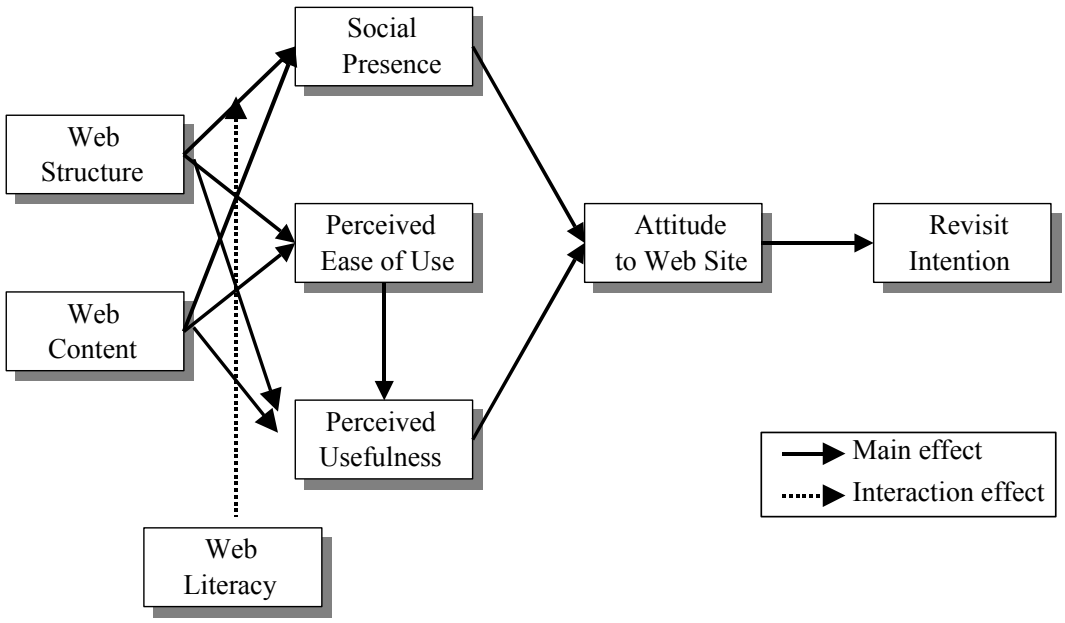
The results of the hypothesis test indicate a modification of the proposed WAM is necessary with three key changes. First of all, the moderator effect of Web literacy was

only found on the relationship between structure and social presence (see Table 6.26 in Section 6.3.4). Therefore, the moderator effect of Web literacy on the relationship between Web site structure and perceived ease of use was eliminated (H12a was rejected). Next, there was a significant main effect between structure and perceived usefulness (as shown in Table 6.19 in Section 6.3.4), which is reflected in the revised model. Finally, there was no relationship between perceived ease of use and attitude toward the Web site (see Table 6.30, in Section 6.3.4). It should be mentioned that although H4 was partially supported, the content type still had an effect on perceived ease of use. These changes are all reflected in the revised research model (see Figure 7.1).

Overall, as can be seen from Figure 7.1, the revised WAM proposes that both Web site structure and content determine users' responses to a Web site. An affective (or emotional) response is measured through "social presence". On the other hand, cognitive (or task-related) responses are captured through "perceived usefulness" and "perceived ease of use". However, as perceived ease of use was not related to attitude toward the Web site, only perceived usefulness can be considered as a cognitive predictor of attitude toward the Web site. The revised model posits that integrated communication type and hypermedia type Web sites will have a higher social presence and perceived usefulness, which will result in a more positive attitude toward the Web site and a higher revisit intention. As a result, social presence and perceived usefulness are critical factors that explain "why" a specific type of Web site is more effective in terms of affective and cognitive attitude respectively. One thing to note is the moderator effect of Web literacy on the relationship between Web site structure and social presence. Interestingly, while subjects felt the hypermedia was higher in social presence

than the static image type regardless of their Web literacy levels (see Figure 6.7 in Section 6.3.4), the strength of their feelings toward the Web site were different. For instance, subjects with low Web literacy saw bigger differences in social presence between static image type and hypermedia type than those with high Web literacy.

Figure 7.1 Revised Web Accepted Model (WAM)



7.3 Discussion of the Study Results

There were five research questions addressed by this study, including two questions relating to the preliminary research and three questions relating to the experiment. These questions were:

- Preliminary Research Questions

1. What content and structural elements are presented on corporate Web sites?
2. How can corporate Web sites be classified according to their content and structure?

- Experimental Research Questions

3. How do consumers respond to different types of Web sites?
4. Do user attitudes toward corporate Web sites vary according to Web literacy levels?
5. What features of corporate Web sites determine revisit intention among Web users?

7.3.1 The Elements of Corporate Web Sites

The first research question addressed the elements of corporate Web sites in terms of their content and structure. In this study, content is defined as the information or message presented on a Web site, whereas structure referred to the combination or organisation of the executable elements of a Web site. Accordingly, the research question focused on the types of messages and hypermedia elements that were presented on corporate Web sites. This question was answered through an exploration of corporate Web sites, as discussed in Chapter 3.

(1) Web Content

First of all, this study investigated the message content of corporate Web sites. Rust and Oliver (1994) emphasised the importance of information content in the Internet era, and foresaw a new form of communication different from traditional communication media. Further, while some scholars (e.g., Novak and Hoffman, 1997; Raman and Leckenby, 1998; Salam *et al*., 1998; Singh and Dalal, 1999) have regarded Web sites as a form of advertising, others (e.g., Ainscough and Luckett, 1996; Angehrn, 1997; Cappel and Myerscough, 1997; Cockburn and Wilson, 1996; Deans and McKinney, 1997; Ellsworth and Ellsworth, 1997; Esrock and Leichty, 2000; Hoger *et al*., 1998; Leong *et al*., 1998; McNaughton, 2001; Palmer and Griffith, 1998; Perry and Bodkin, 2000; Pitt *et al*., 1996; Simeon, 1999; Zeff and Aronson, 1999) have treated it as more than advertising in its function. Therefore, in reply to the need for more research on Web function, this study investigated the unique characteristics of the content of corporate Web sites.

Content was related to five functions of marketing communication (i.e., advertising, public relations, sales promotion, online selling, and customer service). This study found that corporate home pages delivered all of the marketing communication functions. This is consonant with other empirical studies, which have reported that Web sites are more than advertising in their functions (e.g., Ainscough and Luckett, 1996; Cappel and Myerscough, 1997; Cockburn and Wilson, 1996; Deans and McKinney, 1997; Esrock and Leichty, 2000; Hoger *et al*., 1998; Griffith and Krampf, 1998; Leong *et al*., 1998; McNaughton, 2001; Perry and Bodkin, 2000; Simeon, 1999).

The study also revealed that advertising, public relations, and customer service were the most frequently utilised functions of corporate Web site, whereas online selling and sales promotions were used much less often. This result is consistent with the findings from previous studies on Web pages. For example, through a content analysis of 300 corporate Web sites Cockburn and Wilson (1996) found that a mixed form of public relations and advertising was most common (71.3 %), followed by online selling (22.4%). On the other hand, the use of sales promotion was of a low incidence (3.0%). Deans and McKinney's (1997) study in New Zealand showed similar results. They found that advertising (70%) and promotion (75%) were the two main functions, and online selling (35%) and customer support (20%) were also considerably common. Through a content analysis of the *Fortune 500* Web sites, Liu *et al*., (1997), demonstrated that product/service information (93.2%), company information (86.1%), customer service (44.9%), online selling (26.2 %) were common features of these Web sites.

It is of particular interest to note that customer service is one of the most important functions of a corporate Web site. Some studies (e.g., Deans and McKinney, 1997, Griffith and Krampf, 1998, Liu *et al*., 1997) have identified the important role of the customer service function in a corporate Web site. This implies that a corporate Web site can substitute for the more traditional way of dealing with customer inquiries and problems, which was mostly carried out done by telephone (e.g., using a 1-800 number).

In general, it can be argued that corporate Web sites are capable of delivering more diverse types of marketing information to broader target audiences than traditional

marketing communication media. Although online selling and customer service is still not widely used, there is no doubt that the corporate Web site enables a hybrid form of marketing communication which includes advertising, public relations, sales promotion, online selling and customer service. Accordingly, a Web site should not simply be treated as just another advertising medium.

(2) Web Site Structure

In terms of Web site structure, the current study proves that corporate Web sites utilise all forms of hypermedia such as text, static images, video, audio and hyperlinks. While a static image (e.g., company logo or a photograph) is the most common element of Web site design, the use of audio is still low. On the other hand, text, and video are moderately used. Among video options, simple animation techniques such as moving text and images (e.g., continuous moving or blinking of visual images) are most common rather than complex and advanced techniques such as video clips. This finding supports previous studies. For example, Cockburn and Wilson (1996) found that Web sites are mainly composed of text and images (89.3%), while the use of sound and video was very rare (5.3.%). A likely explanation for this finding is that audio and video clip files are relatively large and so take more time to download. Hence, companies prefer simple animation types which tend to be more user-friendly.

The use of links on corporate Web sites is also an interesting finding. The study revealed that around 60% of Web sites utilised internal links such as a “site map” or a “search” function. This result indicates that many companies try to give their consumers more control over accessing the company information on the Web site. This differs

markedly from traditional marketing communication tools such as television, radio, newspapers and magazines, where consumers have much less control over how they obtain information. In other words, a Web site provides consumers more "power to decide which Web pages to surf, for how long, and how much information to obtain" (Dholakia and Rego, 1998, p. 725). Furthermore, this study found that 47% of the sites sampled had external links to other Web sites. According to Dholakia and Rego (1998), the number of external links is one factor that influences the popularity of a Web site. Therefore, it can be argued that by providing more information through links to affiliated companies or other organisations, companies can enhance customer satisfaction.

7.3.2 The Classification of Corporate Web Sites

The second research question aimed at identifying a possible typology of corporate Web sites in terms of content and structure. Previous research has generally neglected the systematic study of different Web site types. In other words, there has been no previous empirical study on Web site typology in terms of content and structure. This question was addressed through the development of a classification scheme in the preliminary research described in Chapter 3.

(1) Web Site Content

On the basis of the preliminary research, Web site content was classified into two types: "integrated marketing communication" and "basic information". The integrated marketing communication type contains all of the functions of marketing

communication, including advertising, public relations, sales promotion, and customer service. On the other hand, the basic information type is composed of minimal information and is limited to the functions of advertising, public relations customer service. The study found that the majority of Web sites (61.5%) fall into the basic information type, whereas only 38.5% were of the integrated communication type. Although previous studies differ in their classification schemes and cannot be directly compared, Cockburn and Wilson's (1996) study yielded similar results i.e., the basic information category was 74.3% and the more integrated communication type including online selling function and sales promotion was 25.7%. This finding could be due to a tendency for companies to treat their Web sites mainly as a medium for advertising and public relations. Also, issues of security and the management of payment systems remain obstacles to the widespread adoption of online selling (Cockburn and Wilson, 1996). Hence, at present the integrated communication type seems to be generally less preferred.

(2) Web Site Structure

On the basis of the previous research, Web site structure was divided into two mutually exclusive groups: "hypermedia" and "static image" types. While the hypermedia type utilises full hypermedia capabilities of the Web such as text, images, video, audio, and hyperlinks, the static image type mainly relies on descriptive text and static image. The result showed a similar incidence of use between the two types. The hypermedia type (55.1%) was used slightly more often than the static image type (44.9%). This is in contrast to a previous study conducted by Cockburn and Wilson (1996). They found that the vast majority (94.3%) of Web sites were of the static image type, whereas only

5.3% belonged to the hypermedia type. The finding of the current study implies that unlike in an earlier stage of the Web's development, nowadays more companies have a tendency to adopt the hypermedia type than the static image type.

7.3.3 Consumer Responses to Corporate Web Sites

The third research question addressed the issues of "what" type of Web site is more effective and "why" a particular type of a Web site is more effective than other types. This question was addressed in the experiment by an exploration of the relationships between Web typologies and two dimensions of social interaction, affective and cognitive. The measure of the affective dimension was social presence, which is defined as a user's feeling that he or she is communicating via a Web site with other human beings. The measures of the cognitive dimension were perceived usefulness, which is defined as the degree to which a user believes that using a particular Web site would increase job performance, and perceived ease of use, which is defined as the degree to which a user believes that using a particular Web site would be free of physical and mental effort.

(1) Web Site Structure and Social Interaction

This study found strong empirical support for first two hypotheses that different types of Web site structure would generate different levels of social interaction in terms of affective (H1) and cognitive (H2) dimensions. First, the hypermedia type resulted in higher social presence than the static image type (H1). This finding confirms previous studies in the communication literature showing that the use of more complex

multimedia increased the believability (Choi, 2000; Choi *et al*., 2001; Gale, 1990; De Greef and Ijsselsteijn, 2000). The result of the present study implies that the use of full hypermedia elements provides a rich sense of emotional experience (e.g., Bocker and Muhlbach, 1993; Lombard, 1995; Lombard and Ditton, 1997; Lester, Voerman, Towns, and Callaway, 1999; Reeves *et al*., 1993), which ultimately creates a sense of online community (Suh, Hasan, and Couchman, 2003).

Second, the static image type had a higher perceived ease of use than the hypermedia type (H2). Although there was an interaction effect between structure and content, it did not affect the direction of the relationship between Web site structure and perceived ease of use. Therefore, it may be concluded that as the static image type is much simpler than the hypermedia type, Web users see the static image type as easier to use than the hypermedia type. Additionally, this study found that there was a relationship between Web site structure and perceived usefulness, i.e., the hypermedia type resulted in higher perceived usefulness than the static image type. Although this relationship was not expected, the result supported a previous study which found that multimedia use yielded a higher perception of utility (Lester *et al*., 1999). One possible explanation of this result is that the realistic representation of information in combination with interactivity (e.g., the use of hypermedia elements) might increase the perceived quality of information provided on a Web site. This implies that Web site structure has an effect on perceived usefulness.

(2) Web Site Content and Social Interaction

As mentioned before, no attempts have yet been made to examine the relationships between Web site content and the two dimensions of social interaction. In response to the need for more research on these relationships, it was hypothesised that the different types of Web site content would yield different levels of social interaction in terms of affective (H3) and cognitive (H4 and H5) dimensions. The current study provided strong support for H3 and H5, and partial support for H4. More precisely, the integrated communication type had higher social presence (H3) and perceived usefulness (H5) than the basic information type. These results confirm earlier findings that providing more diverse information can enhance the effectiveness of marketing communication in terms of usefulness, imagery vividness, overall attitude and behavioural intention (Bone and Ellen, 1992; Davis, 1999; Hallahan, 2001; Singh *et al*., 2000). Davis (1999) suggests the inclusion of content in which consumers can actively participate (e.g., entering a contest, making a recipe, ordering a brochure, joining a club, etc.) will make a Web site more effective. This implies that integrated marketing communication via a Web site, providing relevant and interactive content, can make consumers feel that they are interacting with firms and so perceive that the information provided is useful to them.

Furthermore, it was found that the relationship between Web site content and perceived ease of use (H4) was influenced by Web site structure. That is, in the case of the static image type, the basic information type was perceived to be easier to use than the integrated communication type. By contrast, when structure was the hypermedia type, the integrated communication type was perceived to be easier to use than the basic

information type. The results imply that when structure is simple (i.e., there is less use of hypermedia elements) users consider that the simple content type is easier to use than the more complex content type. However, in a more complex structure (with more use of hypermedia elements) users perceive little difference between content types. To our knowledge, this is the first study that has considered Web site structure and content simultaneously in the study of consumer responses to Web sites.

7.3.4. User Attitudes and Web Literacy

The fourth research question sought to determine "when" a web site is more likely to be effective. This question was addressed by an exploration of the moderator effect of Web literacy on the relationships between Web site structure and the two dimensions of social interaction, as expressed by four research hypotheses (H11a, H11b, H12a, and H12b). Web literacy is defined as the user ability to manage the distinctive characteristics of a Web site such as hypermedia and interactivity. This study provided partial support for the hypotheses, supporting H11a and H12a but rejecting H11b and H12b. First, there was a moderator effect of Web literacy on social presence, which changed its value but did not change its direction. Subjects felt the hypermedia type to be higher in social presence than the static image type regardless of their Web literacy. However, as shown in Table 6.28 and Figure 6.12, there was a difference in subjects' feelings of social presence for the different structure types. Subjects with low Web literacy found more differences between the two structure types than those with high Web literacy. One possible explanation is that previous experience and familiarity with a Web site decreases the sense of social presence. On the other hand, a lack of experience increases user sensitivity to the feeling of social presence, so novices or

inexperienced users notice the difference between the static image type and the hypermedia type more than experts or experienced users. To our knowledge, this is also the first study to explore the different user attitude toward the Web site according to their Web literacy.

In contrast, it was found that there was no moderator effect on perceived usefulness and perceived ease of use (see Table 6.22). This means that Web literacy does not change the direction or value of the relationship between structure and the cognitive dimension of social interaction (e.g., perceived usefulness and perceived ease of use).

7.3.5. Corporate Web Sites and Revisit Intention

The fifth research question was addressed by exploring the relationships between the mediator variables (i.e., social presence, perceived usefulness, and perceived ease of use) and the criterion variables (i.e., attitude toward the Web site and revisit intention). This was specifically addressed by five hypotheses. The criterion measures were attitude toward the Web site (Aws) and revisit intention (RI). Attitude toward the Web site (Aws) is defined as a learned predisposition to respond to the attitude object in a consistently favourable or unfavourable way, which represents a Web user's overall feelings toward the Web site. Revisit intention (RI) is defined as a consumer's willingness to revisit a particular Web site.

(1) Social Interaction and Attitude Toward the Web Site

In Chapter 4, this study hypothesised that there would be a positive relationship between attitude toward the Web site and social presence (H6), and perceived usefulness (H7), and perceived usefulness (H8). While this study found strong empirical support for hypotheses H6 and H8, there was no evidence to support hypothesis H7. First of all, higher levels of social presence led to a more positive attitude toward the Web site (Aws). This is consistent with the findings from previous studies on Web site effectiveness (Choi, 2000; Choi *et al*., 2001). In addition, higher levels of perceived usefulness also resulted in a more positive attitude toward the Web site (Aws). This finding is in accordance with previous empirical findings concerning the acceptance of new technologies (Agawal and Prasad, 1999; Davis, 1993; Hu *et al*., 1999; Moon and Kim, 2001). Hence, these results indicate that both the affective (i.e., social presence) and cognitive (i.e., perceived usefulness) dimensions of social interaction are important factors influencing users' attitudes towards the Web site. Consumers tend to have a more positive attitude toward the Web site when a Web site is seen as having more social presence and perceived to be more useful.

Contrary to the expectation that there would be a positive relationship between perceived ease of use and attitude toward the Web site, no significant relationship was identified. This result contrasts with much previous research that has focused on the acceptance or use of new technology (e.g., Agawal and Prasad, 1999; Davis, 1993; Moon and Kim, 2001). Previous studies in the field have reported contradictory results about the relationship between ease of use and attitude (e.g., attitude toward the technology or attitude toward the use of the technology) or behavioural intention (e.g.,

intention to use), including findings of no relationship (Chau, 1996; Goldschmidt and Tan, 1999; Hu *et al*., 1999), negative relationships (Griffith, Tansik, and Benson, 2002), and mixed results (Adams, Nelson, and Todd, 1992; Davis *et al*., 1989; Gefen and Straub, 2000). Moreover, the current study also revealed that there was a negative relationship between perceived usefulness and perceived ease of use. Previous studies have reported different results, including a positive relationship (Agawal and Prasad, 1999; Chau, 1996; Venkatesh and Davis, 2000), a negative relationship (Griffith *et al*., 2002), and no relationship (Hu *et al*., 1999).

Chau (1996) explains that the relationship between perceived ease of use and attitude toward the technology is dependent upon the stage of technology diffusion or technology life cycle. In other words, in the early stage of diffusion, users need some skills to handle the technology, hence perceived ease of use will show a positive relationship with attitude toward the technology or behavioural intention to use. However, in the late stage users will have much less difficulty in using the technology. Accordingly, there will be no relationship, which seems to be a plausible explanation for the inconsistent results.

As many researchers have argued (e.g., Adams *et al*., 1992; Chau, 1996; Davis, 1989; Keil, Beranek, and Konsynski, 1995), perceived ease of use may not be an important variable for explaining user acceptance of technology but there are some factors that have an influence on the relationship between perceived ease of use and attitude or behavioural intention. Those factors encompass technology characteristics (e.g., functions, technology life cycle, and technology category) and user characteristics (e.g., technology literacy, motivation, and culture). Therefore, this study indicates that the

study of technology acceptance should be guided by a more sophisticate theoretical framework that reflects broad influential factors including technology characteristics and user characteristics.

(2) Relative Importance of the Affect (Social Presence)

This study investigated the two dimensions of social interaction, namely affective socio-emotional and cognitive task-related. The results showed that social presence was the better indicator of consumer attitudes towards the Web site than perceived usefulness. This result strongly supports Morris *et al.*'s (2002) advertising effectiveness study, which found that an emotional response to marketing communication stimuli was more a powerful predictor of purchase intention) than a cognitive response. Moreover, Morris *et al*., (2002) insisted that unlike overall evaluation of consumer attitude (e.g., attitude toward the ad), more specific affective responses (e.g., pleasure) offer a direct method of analysing the complex feelings that comprise human reactions to marketing communication stimuli. While attitude toward the Web site measures overall affective responses to Web site, social presence can explore more complex and specific feelings towards Web sites. The current study implies that, although the usefulness of the information presented in a Web site (measured by perceived usefulness) is still important, a user's specific feeling towards Web sites (measured by social presence) is more important.

(3) Attitude Toward the Web Site and Revisit Intention

Finally, this study hypothesised that "the more positive the attitude toward the Web site is, the higher the revisit intention will be" (H10). The study revealed a significant, positive relationship between the attitude toward the Web site and revisit intention. This finding is in accordance with previous empirical findings concerning advertising, Web site effectiveness, and user acceptance of technology (Agawal and Prasad, 1999; Bruner and Kumar, 2000; Choi, 2000; Choi *et al*., 2001; Davis, 1993; Gefen and Straub, 2000; Hu *et al*., 1999; Moon and Kim, 2001; Stevenson *et al*., 2000). Choi and his colleagues (Choi, 2000; Choi *et al*., 2001) found that when a user's attitude toward a Web site was high, users' intention to revisit the Web site was high. This study indicates that consumers intend to revisit a Web site when they have more favourable attitude toward it.

7.4 Implications of the Study

7.4.1 Theoretical Implications

The Web is a new phenomenon in marketing communication. For instance, Web users are more active than traditional television viewers. The Web uses hypermedia and delivers various content such as advertising, public relations, sales promotion, online selling, and customer service simultaneously. Two central concepts of Web-mediated marketing communication are mediation and social interaction. Given the distinctive characteristics of this new medium, conventional approaches to the evaluation of a Web

site have been questioned. Activity Theory best explains this new phenomenon. This study proposes a conceptual framework for understanding WMC based on Activity Theory. This conceptual model has many important implications for the study of the Web. To begin with, the WMC model provides different perspectives compared to traditional communication models. The most popular communication model is the information processing model, which defines communication as the cognitive process of message transmission. Many scholars (e.g., Allen, Machleit, and Kleine, 1992; Krech and Crutchfield, 1948; Vygotsky, 1962 and 1994) warn that without an understanding of the affective attitude of subjects, we cannot fully understand behaviour. Hence, this model has been criticised for ignoring this important aspect of behaviour (e.g., Aboulafia *et al*., 1995; Craig, 1999; Peter and Olson, 1990). In addition, the direction of transmission in the model is always from the sender (firms) to the receiver (consumers, or as they are often called "recipients"). Furthermore, although there is a feedback loop in the information processing model, it is asynchronous and performed through other media like the telephone and customer surveys.

By contrast, the WMC model suggests that communication is a process of mutual exchange and social interaction between firms and customers. There is no distinction between the sender and the receiver, and consumers are "participants" in the communication process. In other words, a corporate Web site is not a simple information distribution channel, rather it is a virtual community where firms and customers actively exchange information and build relationships. Therefore, WMC is not simply human-computer interaction but is more like human-human interaction. Papacharissi and Rubin (2000) argue that a Web site is a socio-cultural network for informational and social interaction. This notion implies that Web studies should be

conducted in relation to both information needs and social relationships. Thus, effective Web design should be aimed at persuading and building relationships with customers through a virtual community. It is claimed here that the WMC model, with its fundamental premise of Web-mediated marketing communication as an interactive process, overcomes the shortcomings of the information processing approach. In this respect, the WMC model is a more useful and powerful alternative to the traditional communication model.

The identification of two dimensions of social interaction provides a new insight into theories of human communication. Traditionally, communication is defined as the transfer of information from a sender to a receiver (e.g., Shannon and Weaver, 1949). Accordingly, the concern of a sender is to deliver a message accurately. Effectiveness, efficiency, and functionality are frequently used concepts for assessing the performance of communication. Accordingly, researchers have focused on identifying the cognitive or rational aspect of human communication and information processing. Alternatively, the WAM emphasises the exchange of both information and emotional responses. Especially, emotional responses express anticipated action, which ultimately underlies forthcoming behaviour (Arnold, 1960; Frijda, 1970 and 1986). Therefore, understanding consumers' emotional responses (e.g., social presence) helps to understand consumers' action tendencies toward the firms' communication activities. The dual functions of the WAM are reflected in the two dimensions of social interaction (affective and cognitive), which help explain the conative or behavioural component of consumer attitude. This also implies that the WAM mainly focuses on identifying user's responses to messages (or media) rather than messages (or media) themselves. Therefore, it can be concluded that this trend should be reflected in future studies of the Web. It is expected that this

study will provide a sound foundation for building theoretical models and assessing the communication performance of Web sites.

Recently, there have been many attempts at assessing corporate Web sites as tools for marketing communication. Much of the research on Web site marketing effectiveness to date has focused on a Web site as an advertising medium and so has adopted conventional advertising evaluation models (e.g., Bruner and Kumar, 2000; Choi *et al*., 2001; Luo, 2002; Goldsmith and Lafferty, 2002). A fundamental shortcoming of this approach is that it does not adequately address the reciprocal social interaction provided by Web-mediated marketing communication (Suh, Couchman and Park, 2002a). Neither does it adequately address the active role that users play in interacting with this medium. It is argued that, as Web sites are new interactive media very different from traditional marketing communication media, new approaches to their assessment should be employed.

The current study suggests that in addition to traditional communication effect measures, social interaction measures should be added as mediator variables in any model that aims to explain Web site effectiveness. This claim reflects the argument that a more sophisticated multi-dimensional view of attitudes is required when studying responses to Web sites. Only assessing the cognitive and affective dimensions of an attitude can help understand the underlying meanings of the behavioural intention associated with an attitude object such as a Web site. Thus, social interaction variables can help explain the key dimensions of an attitude. Because of this, social interaction measures can play a critical role in the development of Web-based marketing communication. They do so by helping marketers to better understand not only those

factors that influence Web site acceptance, but also the processes by which consumer attitudes are shaped and changed. Moreover, social interaction is influenced by Web characteristics (i.e., structure and content) and user characteristics (e.g., experience, culture, motivation, and so on). Accordingly, researchers should not ignore their role in studies of Web site effectiveness (Stewart and Pavlou, 2002).

Furthermore, this study provides a more sophisticated concept of communication than is generally provided in studies of consumer behaviour. Even though many communication theorists have asserted that social interaction is at the core of human communication (e.g., Cherry, 1966; Gerbner, 1977), to date most marketing communication models have failed to adequately reflect this. Adopting social interaction as a central concept, the WAM indicates that the communication act is not simply a linear transfer of information between a transmitter and a receiver, but a mutual exchange of information carried out within specific socially and culturally-determined frameworks of meaning and often involving an emotional component. In other words, human communication is rarely just an instrumental act and therefore requires a multi-dimensional approach to adequately describe and explain its socio-cultural nuances. Thus, in the model, task-related interaction explains the process of information exchange, while the construct of socio-emotional interaction accounts for the emotional exchange that occurs.

The development of the model has made clear that in studies of user responses to corporate Web sites there needs be a close collaboration among different disciplines and their associated fields of research, including Marketing, Communication Studies, Information Systems (and especially the field of Human Computer Interaction),

Education and Psychology. Each of these adds to an understanding of this new phenomenon, and all have an interest in it. A Web site is not just a marketing medium, it is also a very useful tool for other practical areas such as education, computer networking, and collaborative activities in a wide range of domains. As such, it is a legitimate object of study and theoretical development in the disciplines associated with these practices. Furthermore, the study of user interactions with a Web site involves developing an understanding of user psychology. Each of these disparate areas of study adds to our understanding of web-mediated marketing communication, but none on its own is sufficient. When the results of the research in each of these areas are integrated, synergies and richer understandings are the result, which is why so many interdisciplinary studies are currently being conducted in this area. One of the main contributions of the model presented here to the development of theory on WMC is that it integrates knowledge from a number of different disciplines, most notably from Marketing and Information Systems.

It is worth noting that the definition of Web functions and the classification of Web sites are important issues in the study of the Web. Immediately after the advent of a Web site as a marketing communication medium, existing definitions did not capture the distinctive role of Web marketing communication. Moreover, an integrated use of the communication functions of a Web site can blur boundaries between functions. Furthermore, as a Web design involves a wider range of structural elements than traditional marketing communication media (e.g., television, radio, newspaper, and magazine), a typical advertising typology cannot be applied to a Web site design. This study identified the empirical typology of a corporate Web site based on a new classification scheme (i.e., structural and functional). Therefore, the Web site typology

proposed in this study provides a conceptual base for establishing and developing theories related to marketing communication and information systems.

The clear definition of Web functions and hypermedia structure can also play a critical role in establishing a measurement system for Web site effectiveness. At present one of most urgent problems to be solved is an assessment of the effectiveness of a Web site. The empirical typologies can serve as independent variables in a measurement system. In addition, although there have been many empirical studies on the Web, the results of these cannot be compared due to the different terms and definitions used. Inconsistent definition is also a big hindrance to the development of theory. In this respect, the classification schemes and definitions in this study can be a cornerstone for building sound marketing communication theories.

A major methodological theme throughout the behavioural and social sciences since at least the late-20th century has been the need for researchers to pay more attention to instrumentation. But in marketing research (and notably in the genre of applied marketing research) questionnaire design is often driven by pragmatism and expediency, and so issues of instrument validation tend to receive scant attention. This also applies to the pilot testing of questionnaires, which as Hunt *et al*., (1982) point out "… is often done in a hurried, non-systematic fashion" (p. 269). While researchers can deploy previously-used scales in the confidence that these may have been assessed (often over many independent studies) as reliable and valid, this may not be sufficient because of variations in language and sense-making across populations and even across cohorts or cultures within populations. This study has centred the discussion on the

procedures through which the draft questionnaire was pilot tested, which had been constructed by appropriating and modifying previously-used scales.

Four main benefits were derived from a more rigorous pilot test of the instrument. Firstly, the two-stage process ensured that appropriate language was used for scale items and that the questionnaire was both meaningful and comprehensible to members of the population of interest in the study. In doing so, the possibility of obtaining "noise" in the data collected was minimised and the researcher could be more confident that the responses to the questions were authentic. Secondly, the pilot testing enabled the researcher to "de-bug" the experimental procedure used in the study. For instance, it was able to determine that the test Web sites appeared and performed as planned in the experiment, that there were no problems in managing the experimental situation, and that the information task set for subjects was appropriate for the experiment. Thirdly, the pilot test ensured that the measuring instruments used were, after some necessary modifications (a process often referred to as measure "purification"), internally consistent and reliable. Finally, the pilot testing enabled the researcher to conclude that the multi-item scales were indeed unidimensional and likely to be valid measures of the constructs in the theoretical model. These latter findings were consistent with the results of the various studies from which the different scales had been derived.

7.4.2 Practical Implications

To begin with, the study provides managers with insights into Web site design. The study implies that the Web design process is not a simple allocation of hypermedia elements, but a purposeful activity. The comparison of these two approaches can be

described by informative and communicative concepts (Gahagan, 1975). The former refers to a simple allocation of information without intention. On the contrary, communicative design is the intended and planned behaviour of firms aimed at influencing customers. Web design requires well-prepared plans to influence customers. Hence, it involves selecting and combining various content and structural elements of representation. As content and structure are interdependent, a holistic view is essential in designing Web sites (Barton and Barton, 1985; Kostelnick, 1988). This study provides managers with a holistic view for designing Web sites through the classification schemes of Web typologies developed in Chapter 2.

Second, the study found that a corporate Web site is an efficient tool for integrated marketing communication. In other words, a Web site is more than an advertising medium in its function. Although advertising, public relations, and customer service are dominant functions, online selling and customer service are also important functions of corporate Web site. Many scholars insist that integrating marketing communication functions into one medium is a critical activity for business success (e.g., Blattberg and Deighton, 1991; Clark, 1997; Rao, Salam, and DosSantos, 1998; Strauss and Frost, 1999). Therefore, one of the important jobs of marketers is to select and integrate relevant information on a Web site.

Third, this empirical study warns practitioners not to accept conventional wisdom without systematic investigation. Some popular examples of the conventional wisdom in relation to Web design are “Simple is better” and “Content is king”. Although the meaning of “simple” is not clearly defined, generally simple can be understood as simple design (less complicated) or simple content (less information). Contrary to

industry wisdom, the results of this study showed that the hypermedia type, and the integrated communication type of Web site were more effective than the static image type and the basic information type, respectively. This implies that consumers prefer more information and interactive Web sites, which ultimately helps consumers feel that they are interacting with firms, and perceive that the information provided is useful. Perceived ease of use was not a critical factor in understanding consumer attitude on a Web site. For Web designers, it appears that the use of dynamic hypermedia (e.g., animation, audio, video, and links) will enhance the effectiveness of a corporate Web site (Blumberg and Galyean, 1995; Cockburn and Wilson, 1996; Hamilton and Luo, 1999). The study also showed that the belief "content is king" is not in fact the case. As discussed before, it was found that both content and structure are critical factors of consumer attitude and both seem to contribute equally to enhance positive attitude. Accordingly, the study result indicates that 'both content and structure are king'. This strongly emphasises the need for close collaboration between marketers and Web designers.

Fourth, to overcome the limitations of traditional methods of assessing Web site effectiveness, the WAM was developed. In the model, a critical predictor of consumer behaviour is social interaction between a Web site (or a firm) and a user. Unlike attitude toward the Web site, social interaction measures can examine more precise emotional and cognitive responses to the marketing environment. The use of socio-emotional and task-related interaction gives practitioners the opportunity to closely investigate consumer attitudes. Understanding how consumers feel toward a specific type of Web site enables marketers or Web designers to forecast consumer behaviour, which in turn can help maximise the effectiveness of the Web site (Shimp, 1997).

Fifth, it has been often argued that a Web site is a rational medium and so the communication process with a Web site has been mainly studied from the cognitive point of view. However, this study found that a Web site is an emotional and cognitive medium. The results demonstrated the superiority of the emotional component (i.e., social presence) over the cognitive component (i.e., perceived usefulness) for forecasting overall attitude. Therefore, marketers should keep in mind that a good Web site should foster not only the perception of usefulness but also the feeling that the user is fully interacting with a Web site. To some extent, these factors are controllable by marketers and Web designers.

Finally, the study indicates the important role of individual user differences. As already discussed, Web literacy had an impact on a consumer's feeling of social presence. This result indicates that a so-called one-size-fits-all design does not seem to work well (Egan, 1988; Nielsen, 1993; Palmquist and Kim, 2000). Besides, although they were controlled in this study, consumers' motives and culture seem to influence consumer attitudes. As a result, those factors should be considered in the design of corporate Web sites.

7.5 Limitations of the Study

There were several limitations of the research methods use in this study. Firstly, the current study adopted a cross-sectional design, which was conducted at one point in time. While it provided a useful "snapshot" of consumer data help to understand the phenomenon under study, it could not explain possible changes in consumer attitudes over time. It is generally recognised that longitudinal studies (or at least a series of

cross-sectional studies) can detect attitude changes over time and allow stronger inferences to be drawn about the dynamic elements of behaviour (De Wulf, 1999).

Secondly, there were limitations arising from the sample used in this study. First, the sample size was relatively small (n = 160). Given the relatively small sample size, more versatile and powerful statistical techniques such as Structural Equation Model (SEM), which is optimised for large samples of 200 to 400 subjects (Muehling and Laczniak, 1992), could not be run. Instead this study utilised the conventional ordinary least square (OLS) regression to analyse data gathered from the experiment.

Moreover, the subjects were not taken from a probability sample. Although there appeared not to be any sample biases, compared to the population from which it was drawn, this possibility cannot be categorically ruled out. A related problem was that of the population of interest for the overall study, university students. As in many marketing and psychology studies, students were treated as representative of a broader national population (young adults, aged 18 – 30 years), but it could be questioned whether this was a valid assumption (e.g., it is likely that university students are not representative of the broader population on a number of variables which are relevant to the study, such as Web literacy).

Thirdly, another limitation was the procedure used to validate the summated scales in the questionnaire. Although the researcher was reasonably confident that the scales were reliable, unidimensional, had good item analysis coefficients and expert-determined face validity, there was no rigorous assessment of the construct validity of the scales (i.e., in terms of convergent, discriminant or nomological validity). In other words, it

cannot be conclusively stated that the scales did indeed accurately measure the constructs in the research model. Further validation studies are required to confirm that the measures accurately measured the constructs, for example by using such techniques as multi-trait, multi-method (MTMM) matrices and structural equation modelling (e.g., Campbell and Fiske, 1959; Peter, 1981).

Finally, this study controlled some important variables such as motives for Web use and culture. For example, even though there were many motives for Web use (e.g., information, entertainment, communication, and so forth), the experiment was conducted in the context of "search for information". In addition, it was carried out only in Australia. Therefore, the results of this study may not be generalisable to other situations and contexts.

Despite these limitations, the present study provides valuable insights into the study of Web-based or Internet marketing. The acknowledged limitations of this study have led to suggestions for further research.

7.6 Areas for Further Research

In the preceding section, the limitation of using a cross-sectional research design was raised. As the Web is growing and evolving very quickly, the nature of Web sites is not fixed (Feldman, 1997; Koehler, 1999). Furthermore, over time consumers' levels of Web literacy are also changing. Accordingly, a "snapshot" experiment cannot fully explain the new phenomena in WMC. Alternatively, further research employing longitudinal methods, which assess the same subjects over time, would allow more

precise investigation of cause and effect relationships between Web site typology and consumer attitudes. In addition, more sophisticated experimental methods such as a within-subject design may improve our understanding of the phenomenon studied. In a within-subject design each subject experiences every experimental condition (i.e., all the test Web sites), therefore differences in response to a Web site by the same subject under different conditions can be detected (Shaughnessy and Zechmeister, 1994).

In terms of the sample, future studies should involve larger samples with greater diversity in age groups, levels of Web literacy, and educational background, and so on. Even though university students may be a typical consumer group, it can be assumed that their levels of Web literacy would be comparatively higher than those of the general public. This study showed that Web literacy has an impact on the relationship between Web site structure and social presence. Accordingly, in order to generate more generalisable results, larger and more diverse samples are recommended.

As discussed in Chapter 4, culture is widely believed to influence consumer behaviour. There are several reasons why culture should be considered in studies of WMC. First of all, a Web site is inherently an international communication medium. Secondly, previous research on the Internet and the Web has found significant differences across industries and countries (e.g., Huizingh, 2000; Ju-Pak, 1999; McBride, 1997; Perry and Bodkin, 2000; Suh, Couchman, and Lee, 2002a and b). As a result, it is expected that consumers living in different countries would respond to a Web site differently. More importantly, the theoretical framework of this study was developed using evidence from Western cultures and conducted only in Australia. Hence, this model should be tested in the context of different cultures (Aaker and Maheswaran, 1997). Given that different

countries have not only large cultural differences but also different industry structures, it seems that a cross-national study would be appropriate and highly desirable (Suh, Couchman, and Lee, 2002a). Further studies in different countries, with different cultures, would strengthen the model's explanatory and predictive power.

Human communication is not a simple process of information transmission, but a more complex process involving interaction among subjects, tools, and objects. In terms of objects, or purposes, this study has investigated only one aspect, namely that of "information search". How are other purposes (e.g., entertainment, communication, education, and so on) used in the WAM? The inclusion of a variety of tasks would provide greater insights in studies of WMC.

7.7 Conclusions

The use of Web-based or Internet marketing is growing rapidly in today's increasingly globalise "networked economy", and associated with this has been an increase in the importance of corporate Web sites (Mohammed, Fisher, Jaworski and Cahill, 2002). But while more and more companies are establishing a presence on the World-Wide-Web through their Web sites, our understanding of the effectiveness of such corporate Web sites is still at a rudimentary stage. This is despite a recent proliferation of studies in the discipline of Marketing on the responses of customers to Web-based advertising, in the discipline of Communication on Computer-Mediated Communication, and in the discipline of Information Systems on the determinants of Web page usability. To help advance our understanding of Web site effectiveness, this study has constructed a new

theoretical model which seeks to explain Web site acceptance by different types of users.

This study proposes the WAM as a conceptual framework, which includes predictor, criterion, mediator, and moderator variables, for understanding consumer acceptance and use of a corporate Web site. Like a traditional advertising study, Web site typologies serve as predictors and communication effects are criterion variables. Meanwhile, individual differences, as moderators, explain "when" the effectiveness of a Web site is different. Finally, both affective and cognitive dimensions of social interaction, as mediators, describe "why" certain behaviour occurs. The current study has constructed this model by drawing on recent research developments in the areas of Marketing, Communication, and Information Systems. The model moves beyond previous frameworks used to assess conventional marketing media, to address the central feature of this new medium: users can actively interact with corporate Web sites.

On the basis of this framework, an experiment was conducted. Few Web site effectiveness studies have examined social interaction as a consumer-defined variable, and none of these have identified the consumers' socio-emotional and task-related responses toward the communication medium as important factors influencing overall consumer attitude and revisit intention. The current study clearly demonstrates the importance of these constructs when evaluating effectiveness of a Web site. Accordingly, it is hoped that this study makes a significant contribution to a burgeoning area of research that is of great and increasing importance to both the discipline and the practice of marketing.