Electronic Word-of-Mouth and Country-of-Origin Effects: A Cross-Cultural Analysis of Discussion Boards

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CERTIFICATION

This thesis is submitted in fulfilment of the requirements of the degree of PhD, in the Graduate School of Management, Macquarie University. This represents the original work and contribution of the author, except as acknowledged by general and specific references.

I hereby certify that this has not been submitted for a higher degree to any other university or institution.

Signed:

John Fong

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Abstract

The growth of electronic discussion boards has enabled consumers from different cultures to communicate with people of similar interests. Through this online channel, marketing concepts such as word-of-mouth (WOM) and country-of-origin (CoO) effects have the potential to become more important because of the potentially large number of participants involved. The US and China, being the largest and second-largest online population in the world respectively, are ideal countries to investigate the frequency and extent of these marketing concepts.

The thesis consists of three separate but inter-related papers which have been published in journals or have been accepted for publication. Each paper builds on the one before and analyses different aspects of online consumer behaviour such as information-giving, information-seeking and the CoO statements made by participants of discussion boards. By examining and comparing the frequency and content of discussion postings on discussion boards within US and China based websites, the thesis makes a comparison of the information-giving and information-seeking behaviour of the discussants and also looks at the extent and the content of CoO statements made. Online observation of discussion postings from six different discussion boards (three each from the US and China) was conducted over two 90-day periods in 2004 and 2005 and a total of 5,993 discussion postings were downloaded for analysis. In addition, an online survey of 214 participants was conducted to compare the stated and actual (or "revealed") behaviour of discussants on the US and China based discussion boards.

Overall, the findings indicate consistent differences over a 12-month period in the behaviour of the US and Chinese discussants. The US discussants were found to provide more information than their Chinese counterparts while the Chinese discussants exhibited more information-seeking behaviour on the discussion boards. The findings also indicate that the Chinese discussants demonstrated more negative CoO statements and these statements were observed to be related to Japan and/or brands that originated from Japan. The findings suggest that such negative CoO statements can increase rapidly online and it appears that the negative sentiments by the Chinese were apparently unrelated to product quality; instead they appear to have been predominantly associated with war related animosity.

These findings have important implications for marketers selling to the Chinese as discussion boards appear to be more important as a source of information for the Chinese than the Americans. Also, given that the Chinese discussants demonstrated a high level of negative CoO statements relating to products from Japan, marketers selling Japanese products to the Chinese must understand the underlying issues related to these negative CoO statements and take steps to prevent non-purchase of Japanese products.

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION

1.1 Introduction

This research investigates the online consumer behaviour of participants from different cultural backgrounds who are involved in virtual communities. Using electronic discussion boards as a basis for observation, quantitative and qualitative analyses were conducted to investigate the behaviour of consumers who interact with each other in these online environments. In particular, the extent of electronic word-of-mouth (eWOM) on discussion boards based in the US and China was investigated to identify the level of information-giving and information receiving within such virtual communities. In addition, cross-cultural issues—including country-of-origin (CoO) effects—that have previously not been examined in an online environment are also explored.

1.2 Research Questions

The growth of computer mediated communications in recent times has enabled consumers to interact with others who they have not met, through the use of internet communication tools such as electronic discussion boards. Electronic discussion boards are online communities organised around specific topics whereby participants read and post messages online that are sorted by date and subject. Participants are also able to communicate with each other on the discussion board by replying to the messages posted, turning the interaction into a discussion thread. Such consumer-to-consumer communication is often referred to as word-of-mouth (WOM). With the proliferation of electronic communication tools (such as electronic discussion boards), this

communication, also known as electronic word-of-mouth or eWOM, can be easily transmitted amongst consumers in various parts of the world (Gruen et al., 2006).

WOM has been previously shown to differ across different cultural groups (Herr et al., 1991; Richins, 1983; Sheth, 1971), but whether this difference extends to different cultural groups in an online environment has not been investigated. Discussion boards have been accepted as a form of "online environment" in which consumers are able to discuss specific topics of interests (Kozinets, 1998). Hence, studying discussion boards that are based in different cultural contexts can be potentially useful to understand differences in online consumer behaviour.

Another area that has been neglected by the literature is the extent of CoO effects online. CoO effects have previously been investigated in offline environments where consumers were asked to compare or to choose products or services which had different origins. As the literature review in Chapter 2 will show, there have been no previous studies that have examined CoO effects online. Hence, eWOM and CoO effects in discussion boards will be investigated and both concepts will be central to the theme of this thesis.

The thesis consists of three separate but coherently integrated publications that have a focus on the eWOM and CoO themes. Each publication builds on the one before and analyses different aspects of eWOM and CoO effects. The first publication analyses the extent of eWOM and CoO effects on an American and a Chinese discussion board. It

examines and compares the frequency and content of the discussion postings on the two discussion boards and addresses the following research questions:

1. **Is eWOM prevalent within discussion boards that are based in different countries?**
2. **Is the extent of information-seeking behaviour similar on the American and Chinese discussion boards?**
3. **Are there differences in the frequency or type of CoO statements on the discussion boards?**

The second publication extends the first study, analysing the stated and revealed behaviour of discussants on three US and China based discussion boards and collecting additional data through a survey of discussion board users. Using a combination of online observation and surveys, the following research questions are addressed:

1. **What is the profile of discussion board users?**
2. **How important is the information obtained from the discussion board perceived to be by these users?**
3. **Are there differences (and similarities) in the use of discussion boards for information-giving and information-seeking by the US and Chinese discussants?**

The final publication extends the second study by adding data obtained in a one-year follow-up study, thus exploring eWOM and CoO effects across time on the six discussion boards and addresses the following research questions:

1. **Do discussants from collectivist cultures engage in more information-seeking than those from individualist cultures?**
2. **Do discussants from individualist cultures engage in more information-giving than those from collectivist cultures?**
3. **Do discussants in a collectivist culture have a higher frequency of negative CoO statements?**
4. **Do discussants in a collectivist culture have a higher frequency of positive CoO statements?**

The next section of this introduction will provide an outline of the thesis. It describes the approach that has been taken in the structuring of the various chapters in the thesis.

1.3 Outline of the Thesis

Chapter 1 provides a summary of the background to the research and highlights the main research questions. It introduces the structure of the thesis, organised around three separate but related publications. Chapter 2 reviews the relevant academic literature. It reviews the development of WOM theory and the more recent eWOM research. Related theory on online information-seeking and information-giving behaviour and CoO effects is also addressed.

The subsequent Chapters 3, 4, and 5 consist of individual but related articles that have been published or have been accepted for publication. The first article (Chapter 3) was published in the *Asia Pacific Journal of Marketing and Logistics (APJML)* (Fong & Burton, 2006b) and explores online WOM by comparing a US based discussion board with a China based discussion board. This article also investigates the correlation between the frequency of brand mentions and market share, and also presents an initial exploration of online CoO effects.

The second article (Chapter 4) was published in the *Journal of Interactive Advertising* (Fong & Burton, 2006a) and investigates the stated and revealed eWOM behaviour of participants in six (three US and three China based) discussion boards. The levels of information-giving and information-seeking of participants from US and China are contrasted using the revealed behaviour. In addition, an online survey of the discussants was conducted to examine the stated behaviour. Both the stated and revealed behaviours were then compared in the area of information-giving and information-seeking.

The third article (Chapter 5) has been accepted for publication in the *Journal of Business Research* and draws a cross-cultural comparison of eWOM and CoO effects using data from six discussion boards that have been observed over two 90-day periods in 2004 and 2005 (Fong & Burton, 2007). It extends the data reported in the second article by collecting data from the same six discussion boards, one year later, allowing comparisons to be made over two years. The conclusion to the thesis is detailed in the last chapter, Chapter 6.

In summary, the thesis contributes to understanding the extent of eWOM and CoO effects on US and China based discussion boards. Understanding how these consumers behave and interact with each other in an online environment will help marketers better tailor their marketing messages to their target audiences. In addition, being aware of the different CoO effects can assist marketers to overcome possible barriers to consumer choice.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

Consumers are increasingly turning to computer-mediated communication for information to be used in their decision-making processes (Kozinets, 2002). Since the late 1980s, virtual communities have been used for online interactions between individuals, and marketers recognise that consumers partake in such discussions not only to inform and influence fellow consumers but also to seek information about products and brands (Kozinets, 1999; Muniz Jr. & O'Guinn, 2001). This thesis draws on the current knowledge of virtual communities and investigates the extent of influence of eWOM through an ethnographic and textual analysis of these virtual communities. Specifically, discussion boards (a form of virtual community) are analysed because they are a good source for observation of the interactions between participants. The thesis also contributes to the literature on cross-cultural analysis in a computer-mediated environment by comparing discussion boards that are based in both the US and China.

The literature review is divided into four main sections which complement the three articles that follow this chapter. The first section reviews the WOM and eWOM literature and the second section reviews the literature on information-seeking and information-giving behaviour of consumers. The third section examines the literature on cross-cultural research. The final section reviews the CoO literature, but identifies a gap in this extensive body of research: there have been no previous studies that have addressed CoO effects in an online environment such as discussion boards.

2.2 Word-of-mouth (WOM) and Electronic Word-of-mouth (eWOM)

Arndt (1967) defined WOM as oral, person-to-person communication between a receiver and a communicator—whom the receiver perceives as non-commercial—regarding a brand, product or service. Recent researchers have characterised WOM as informal communications between individuals concerning the evaluation of goods and services (Anderson, 1998). Typically, these informal communications have been shown to exert a strong influence on consumers' judgments and the adoption of various products or services (Herr et al., 1991; Katz & Lazarsfeld, 1955; Whyte, 1954). For example, consumers have been found to rely on WOM frequently to make decisions such as selecting an automotive diagnostic centre (Engel et al., 1969), choosing a physician (Feldman & Spencer, 1965) or when considering the purchase of a new product or service (Reingen & Kernan, 1986; Richins, 1983).

In an early study, Whyte (1954) investigated the purchase decisions for air conditioners in a Philadelphia suburb and concluded that there was a powerful network amongst neighbours that assisted in the exchange of product information in contexts such as "across backyard fences" and "over the clothesline". In a subsequent study, Katz and Lazarsfeld (1955) showed that WOM was the most important source of information for the purchase of household goods and food products. Their findings indicated that WOM had a strong influence on the type of product that was purchased.

WOM can be either positive or negative (Engel et al., 1969). Examples of positive WOM include relating pleasant or novel experiences and recommendations of brands, products

and services to others. Negative WOM includes behaviour such as product denigration, relating unpleasant experiences, rumours and private complaining (Anderson, 1998). Negative WOM has received more attention in the literature, perhaps due to its substantial effect on sales. For example, Desatnick (1987) found that unhappy customers were more likely to engage in negative WOM than happy customers were to engage in positive WOM. In his research conducted for the White House Office of Consumer Affairs, Desatnick also found that 90% or more of customers who are dissatisfied with the service they receive would not become repeat customers. Apart from not becoming repeat customers, the results suggested that each of those unhappy customers would, on average, tell his or her story to at least nine other people, and 13% of those unhappy former customers would tell their stories to more than 20 people (Desatnick, 1987). Such negative WOM does not only have an influence on potential purchase decisions, but can also indirectly affect how consumers perceive products and services (Richins, 1983). Thus, it is not surprising that the different effects of WOM are considered by marketers and researchers to be an important factor in the purchasing process.

Although there has been substantial research in the area of WOM, few studies have taken this research a step further by comparing WOM on a cross-cultural basis (Takada & Jain, 1991). However, one notable study by Money, Gilly and Graham (1998) examined how national culture affects WOM for industrial services such as advertising, banking and accounting. The researchers used interviews with managers from companies in the US and Japan and found that the Japanese engaged in greater WOM referral than the Americans. Money, Gilly and Graham attributed this to the collectivist culture of the

Japanese. Whether this same WOM behaviour applies to the Chinese (who are also based in a collectivist culture) has yet to be investigated and hence this thesis will draw a comparison of WOM behaviour between the Americans and the Chinese.

Previous WOM research has focused mainly on face-to-face influence and interaction (Bearden & Etzel, 1982; Brown & Reingen, 1987; Engel et al., 1969; Feldman & Spencer, 1965). With the recent growth of the internet, consumers are now able to exchange information about products or services without direct face-to-face interaction and the constraints of time and distance. Such exchanges that happen online often create written records (e.g. discussion postings) and are more lasting and hence have the potential to influence more people than a face-to-face WOM conversation which may just be between two individuals. Thus, the biggest difference between WOM and online WOM is the environment in which the WOM is being transmitted.

Researchers have used terms such as “online WOM” or “electronic WOM” (eWOM) to describe the interaction between individuals in an online environment (Godes & Mayzlin, 2004; Hennig-Thurau et al., 2004). Hennig-Thurau et al. (2004) defined eWOM as any statement that is made by potential, actual or former customers about a product or company, which is made available to a multitude of people and institutions via the internet. Godes and Mayzlin (2004) studied the creation of what they described as ‘online WOM’ on Usenet newsgroups (discussion boards) and showed that the online conversations of individuals that were made available to the public have an influence on ratings of TV programs. Thus, although both the terms eWOM and online WOM have

been used interchangeably by researchers, recent publications have more frequently used the term eWOM (Gruen et al., 2006; Liu, 2006). In our first article (Fong & Burton, 2006b), we used the term online WOM following the usage of Godes and Mayzlin (2004) but the term eWOM was used for the second and third articles as it became apparent that publications had adopted the term widely. For consistency, the term eWOM will be used from here on.

Possibly the first instance of eWOM cited by researchers was a program called RINGO which was developed in 1994 (Negroponte & Maes, 1996). RINGO uses a computer generated matching form of eWOM to help users find interesting music by first developing a list of one's likes and dislikes and thereafter matching them with the preferences of other users in the computer system. By matching users with similar likes, music is recommended automatically between the users, forming a positive source of eWOM between users. Although RINGO worked automatically via a computer system, it showed the possibilities of automated eWOM, and was such a success that thousands of users and music titles were registered on it within a week of its launch—an example of the positive eWOM which was generated by the novelty of the service. Another example of how automated eWOM can be an important information source that influences the adoption and use of products and services is the case of Hotmail, the well-known web based email service provider. With the use of an endorsement message placed at the bottom of each email that was sent using its email service, Hotmail was able to tap into eWOM to garner one million registered subscribers in the first six months after its launch. This became two million subscribers two months later and passed the 11 million

mark within 18 months. By mid-2000, Hotmail had over 66 million users with 270,000 new accounts being opened each day (Goldsmith, 2002). The speed and extent to which Hotmail was adopted is testament to the potential of eWOM.

Both RINGO and Hotmail provide examples of eWOM that is automatically generated (by the RINGO program in the first instance and by the insertion of an endorsement message by the Hotmail server in the second). Other studies of eWOM have focused on the interaction between individual consumers and the WOM written and transmitted by consumers online. For example, Bickart and Schindler (2001) found that product information exchanged between consumers on online forums (such as discussion boards) was judged to have greater credibility and relevance than information obtained from a marketer-designed website. The opinions and accounts of fellow consumers were judged to be trustworthy sources because the consumers were perceived to have no vested interest in the product or service and hence no intentions to manipulate the reader. Some online companies have since taken the initiative to capitalise on this credibility of peer reviews. For example, www.epinions.com provides reviews by consumers of products in a number of categories (e.g. electronics, cars and video games). Consumers are able to express their opinions about products online by first stating the pros and cons and then giving an in-depth overview of the product. Each author is given a rating by other participants reading their review. Furthermore, to add to the personalisation, Epinions provides a personalised webpage for each reviewer which includes pictures and personal information.

There is also evidence that the information provided on discussion boards can become a source of information to influence a purchase decision, as shown by Nelson and Otnes (2005). In their study, soon-to-be brides were shown to exchange marketing related information on discussion boards about local vendors providing bridal services and the trail of eWOM (including the sharing of personal stories) left on the discussion boards became a source of advice, opinion, social comparison and even emotional support for other brides. Thus, although eWOM can occur between two individuals in an online environment, it can also leave a written trail, which becomes a source of eWOM to an unknown and unlimited audience.

In summary, the preceding section has shown how eWOM can have an influence on consumers in an online environment, such as discussion boards. However, there have been limited studies on the effect of eWOM within discussion boards. In particular, the effect of eWOM is likely to be enhanced or reduced depending on the extent of information-giving and information-seeking behaviour of participants on the discussion boards. A search of the relevant literature has revealed no study which has observed such behaviour on discussion boards and certainly not across discussion boards based in different countries. The next section will address the importance of the online information-giving and information-seeking behaviour of consumers and will summarise the relevant literature.

2.3 Online Information-Seeking and Information-Giving Behaviour

The previous section has shown that eWOM can influence consumers online. This influence of eWOM may, however, vary depending on whether consumers ask for information and if information is given at all. The extent of eWOM can thus be measured by the frequency of the information-seeking and information-giving behaviour. Hence, the online information-seeking and information-giving behaviour of consumers is an important area closely related to eWOM which requires further investigation.

Information-seeking behaviour by consumers has been studied extensively in traditional face-to-face purchase decision making such as a car purchase (Kiel & Layton, 1981). As internet purchases become more prevalent, this online, non-traditional decision-making environment has created an opportunity for information-seeking to take place because of the ease of information exchange. Hence, understanding the online information-seeking behaviour of different consumers would enable marketers to better provide these consumers with the required information, assisting in the decision-making process for purchases.

The extent of information-seeking behaviour is important as it is an integral part of the problem-solving process and may expose consumers to WOM on a particular product or service before they purchase it. For example, a study of more than 10,000 participants from 82 countries found that the most important predictor of online purchase was online product information search (Bellman et al., 1999). The authors found that consumers who had a “wired lifestyle” and used the internet for many of their daily activities (such as

reading the news, paying bills, etc.) naturally turned to the internet to search for products they intended to purchase. This finding is consistent with the results of earlier offline research by Rich and Subhash (1968) which demonstrated that measures of past behaviour are the best predictors of a consumption activity. Despite the importance of online information-seeking, there have been limited studies that have investigated and measured the information-seeking behaviour of consumers on the internet.

Hodkinson and Kiel (2003) suggested that information-seeking behaviour on the internet has two components, namely "inter-site" search and "intra-site" search. The former consists of a web-wide search in which the likely source of relevant information is located by the use of a search engine (e.g. Google or Yahoo), while the latter consists of search activity that takes place within a relevant site to obtain specific information. These two forms of search performed by consumers have been classified as the measures of the breadth of the search (the number of individual websites visited, i.e. inter-site search) and the depth of the search (the amount of search within the websites, i.e. intra-site search) (Hodkinson & Kiel, 2003). When consumers need specific information about a certain product category (e.g. digital cameras), it is likely that they perform an intra-site search on websites that contain specific information about digital cameras, such as discussion boards. A search of the literature has not found any research on the extent of information-seeking by consumers within discussion boards, even though the information sought has the potential to influence online purchases. Hence, the first article (Chapter 3) explores the information-seeking behaviour of consumers and compares its extent within a US and a China based discussion board.

Kulviwat et al. (2004) acknowledged the impact of the internet on information search and suggested that the internet facilitates both information-seeking and information-giving. Thus, apart from studying the information-seeking behaviour of consumers, it is important to study the information-giving behaviour of consumers as well since offline studies have suggested that these information givers can influence the purchase decision of other consumers (Maclaran & Catterall, 2002).

Research has suggested that marketers should attempt to utilise those consumers who influence others as they are said to be well informed about products and motivated to share information (Kotler & Zaltman, 1976). The literature has variously termed these individuals as opinion leaders (Lazarsfeld et al., 1948; Rogers, 1976) and market mavens (Feick & Price, 1987). The following section focuses on the characteristics of these individuals who are most influential in information-giving.

The concept of an opinion leader was first discussed by Lazarsfeld, Berelson and Gaudet (1948) who hypothesised that marketer-controlled communication flows first to opinion leaders who in turn communicate to their peers, thereby influencing their attitudes and behaviour. Lazarsfeld et al.'s (1948) study of voting behaviour showed that mass media messages were received and then re-distributed by individuals who were strategically situated at different levels in society. Rogers (1983; 1971) added to the literature by identifying specific characteristics of opinion leaders in the areas of communication, accessibility, social status and innovativeness. His findings suggest that opinion leaders

are more cosmopolitan, have greater social participation, higher social status and are more innovative than their followers.

In the 1980s, extending on the concept of opinion leaders, the concept of the market maven was described. According to Feick and Price (1987), market mavens are individuals with general knowledge about products, stores, and other marketplace information. The literature distinguishes market mavens from opinion leaders based on the high level of information specific to a particular product class that opinion leaders possess. Opinion leaders are thought to be knowledgeable only about a particular product class (for example digital cameras or mobile phones). In contrast, market mavens are differentiated by having broader expertise in marketplace information rather than product specific information (Walsh et al., 2004). For example, a market maven would have information about many kinds of products and the location of the best places to purchase these products. In a comparison of market mavens and opinion leaders, Wiedmann et al. (2001) concluded that market mavens are more general opinion leaders with good overall market related knowledge and a willingness to disseminate information which is typically not product specific. Their information, though broad, might lack the knowledgeable depth of opinion leaders who specialise in a single product category. An extension of the market maven concept was suggested by Walsh et al. (2002) who coined the term eMavens (i.e. market mavens on the internet), thereby extending the concept to the electronic environment. Their study showed that eMavens used the internet and internet music sites more often than non-eMavens. Overall, the eMavens were shown to have different usage behaviour and to be motivated to a greater extent by a sense of obligation

to share information, a desire to help others, and feelings of pleasure associated with informing others about products (Walsh et al., 2004; Walsh et al., 2002).

In summary, although offline literature has shown the importance of studying the information-seeking and information-giving behaviour of consumers, there have been no studies to date that have focused on the extent of online information-seeking and information-giving behaviour of consumers on discussion boards. Understanding this behaviour is critical to understanding eWOM. The literature review so far has discussed research on eWOM conducted mainly in English-speaking countries. There have however, been no studies that have compared eWOM on discussion boards across different cultures and/or languages. The next section will discuss the cross-cultural literature, the dimension of individualism versus collectivism and how this might be expected to influence information-seeking and information-giving online.

2.4 Cross-Cultural Literature

A widely used definition of culture within the cross-cultural marketing literature comes from Hofstede (1991) who defines culture as "the collective programming of the mind which distinguishes the members of one group or category of people from another". He adds that culture is always a "collective phenomenon" because it is at least partly shared with people who live or who have lived in the same social environment, and these patterns of thinking, feeling and potential acting are learnt throughout a person's lifetime (Hofstede, 1991).

There have been numerous cross-cultural studies conducted using consumers from cultures that are significantly different. Researchers have used comparative studies of East versus West to highlight the stated behaviour of consumers (O'Keefe & O'Keefe, 1997), negotiations (Buttery & Leung, 1998), social networks (Ordonez de Pablos, 2005) and even accuracy in memory for product information (Cowley, 2002). Chinese and Westerners are often compared as they have obvious cultural and social differences and hence behavioural differences may be observed.

In her offline study of Chinese and North American consumers, Doran (2002) found that Chinese consumers were generally more involved with their purchases than their North American counterparts. She argued that the Chinese, being less affluent than the Americans, had less overall experience with purchases and thus each purchase takes on more importance and risk. Furthermore, in terms of information search, the North Americans utilised a much greater variety of sources for information search while the Chinese exhibited more uniformity in their search patterns, making higher use of personal sources of information than the North Americans. Whether this same behaviour extends to online information-seeking has yet to be investigated.

Researchers of offline cross-cultural marketing studies have also often cited Hofstede and Bond's (1988) five dimensions of culture: power distance, uncertainty avoidance, masculinity/femininity, long-term time orientation and individualism/collectivism. Although these dimensions have been applied widely in an offline environment, there has been limited research using these dimensions in an online environment. One exception is

that of Burgmann and Kitchen (2006) who utilised uncertainty avoidance and power distance to conduct a comparative content analysis for a sample of websites from the banking and education sectors across Germany, Greece and the UK. Using the number of hypertext links on websites as indicators of structure, they posited that high uncertainty avoidance correlates positively with a low number of hypertext links on a webpage (Burgmann et al., 2006). Their results revealed differences in aspects of the graphical user interface design between the three countries: the Greek websites contained the lowest average number of hypertext links, which is consistent with Hofstede's (1980) ranking of Greece as the highest for uncertainty avoidance. Hence, apart from the power distance and uncertainty avoidance dimensions which have been examined by researchers in an online environment, the rest of Hofstede and Bond's (1988) dimensions in particular, individualism and collectivism, addressed in the third article of this study have yet to be examined by researchers in an online context such as a discussion board.

The dimension of individualism versus collectivism focuses on an individual's relationship with other individuals (Hofstede, 1980, 1991). Triandis (1994) defined collectivism as a social pattern that consists of individuals who see themselves as an integral part of one or more collectives or in-groups, such as family and co-workers. Individualism, on the other hand, is a social pattern that consists of individuals who see themselves as autonomous and independent. People who are collectivist are often motivated by norms and duties imposed by the in-group. They give priority to the goals of the in-group and try to emphasise their connectedness within the group; individualists are motivated by their own preferences, needs and rights. They give priority to their

personal goals and emphasise a rational analysis of their relationships with others (Kacen & Lee, 2002).

Although the dimension of individualism and collectivism has been examined offline, the extent to which individualist or collectivist tendencies result in differences in online behaviour on discussion boards appears to be a neglected area of research. For example, Ngai (2003) reviewed the state of internet marketing research from 1987 to 2000 by looking at 270 journal articles that were published in the areas of marketing, economics, business and management, information systems, and information technology. He found that 96% of the internet marketing research papers were published in the previous five years (1996–2000) and only 11.9% or 32 papers dealt with the issue of consumer behaviour and culture on the internet. However, none of these papers examined individualism and collectivism in an online context (Ngai, 2003).

The extent to which an individual's orientation is either individualist or collectivist is particularly relevant to any study of information-seeking and information-giving because consumers who are highly individualistic might be expected to rely less on the opinions of others, and might therefore engage in less information-seeking. Conversely, consumers who are collectivistic might engage in greater information-seeking behaviour as they have a tendency to rely more on the opinions of others. Thus, this behavioural difference may have an implication for marketers as they may engage in potentially suggesting greater or lesser emphasis on information provision with different cultural groups to suit the target audience.

Though there will be differences within any culture or country, Hofstede (1991) classified countries to individualistic and collectivist societies. Countries such as China, Japan, India and Thailand were classified as collectivist, suggesting that individuals from these countries would be more likely to display great loyalty to their group and be biased toward protecting the interests of their members. Hence, information-seeking behaviour within the group might be expected to be higher as greater reliance is placed on the in-group. On the other hand, countries such as the US, Germany and Australia were classified as having a propensity toward individualism, implying a loosely knit society in which people are expected to care primarily for themselves and their immediate family (Simon, 2001). As a result, information-seeking behaviour might be less in individualist countries.

Based on Hofstede's classification of countries, an online comparison of US and China is interesting from a theoretical point of view because these countries have generally been seen by researchers as representing the two extremes of the dimensions (Hofstede, 2001). This thesis thus draws on the concepts of individualism and collectivism by examining discussion boards that are based in the US and China. By comparing the online behaviour of discussants visiting these discussion boards, the thesis aims to contribute to the knowledge of the behaviour of individualist and collectivist consumers in an online environment.

So in summary, as previously discussed, the first article (Chapter 3) reports on a cross-cultural analysis of the online information-seeking behaviour of discussants on discussion boards based in the US and China, reflecting an individualist and collectivist culture respectively. The information-seeking behaviour of discussants is further examined and expanded upon in the second (Chapter 4) and third (Chapter 5) articles to include the information-giving behaviour of discussants. By examining discussants that are based in individualist and collectivist cultures, these articles can thus draw a comparison between the behaviour of these individuals in an online environment.

2.5 Country-of-Origin (CoO) Effects

Although he did not specifically use the term "Country-of-Origin" effects, Nagashima (1970) analysed the cross-cultural image of "made in…" products as perceived by Japanese and US businessmen. Nagashima identified the "made in" effect as the image, the reputation and the stereotype that consumers attach to products from a specific country. This concept has since been widely accepted in the CoO literature and researchers like Wang and Lamb (1983) have extended the literature to study the effects of negative CoO in the form of consumer bias toward imported products and how negative CoO is an intangible barrier to entering new markets. With the advent of the internet and an increase in the channels of communication online, negative CoO effects in the form of consumer bias can be easily communicated via online channels such as discussion boards. However, there have yet to be any studies that focus on the content of discussion boards and examine the extent of CoO effects online.

A review of the literature has shown that CoO effects have been studied in three main areas: product evaluation behaviour, cultural orientation and brand variations (Gürhan-Canli & Maheswaran, 2000; Hsieh, 2004; Schooler, 1965). Studies in these three areas have always been conducted offline and there has been no research examining the positive and negative CoO statements made by online individuals. This thesis will contribute to the CoO literature by studying the extent of CoO in online discussion boards that are based in countries with different cultural orientations.

One of the areas that the offline CoO literature has examined is the extent to which cultural orientation influences CoO effects on product evaluations. Gurhan-Canli and Maheswaran (2000) studied the effect of CoO on product evaluations in Japan and the US by using 168 undergraduate subjects (86 from the US and 82 from Japan). The study found that respondents from Japan evaluated products that originated from their home country more favourably than foreign products even when the Japanese products were inferior. In contrast, respondents from the US evaluated the product that originated in their home country more favourably only when the product was superior to the competition's (Gürhan-Canli & Maheswaran, 2000). The authors attributed these findings to the psychological principles of individualism and collectivism. Thus, the authors believed that the US subjects, being individualists, were more emotionally detached and hence were considered more "rational", favouring their home country products only when they were superior to the competition's. In contrast, Gurhan-Canli & Maheswaran believed that the Japanese subjects, being collectivists, were more likely to engage in behaviour that benefited the in-group and thus had a positive bias for their home country

products. Whether this same behaviour is consistent across other collectivist countries (such as China) has not been analysed in the literature. In addition, whether these differences exist in an online environment such as discussion boards has also not been investigated. Hence, this thesis will compare CoO effects between the US and China—countries with very different cultural orientations.

As discussed above, a gap in the CoO literature has been identified in the study of CoO effects online for individualist and collectivist countries such as US and China. This gap in online cross-cultural study of CoO effects reflects the limited (offline) cross-cultural study of CoO effects. In an extensive review of the CoO literature, Al-Sulaiti and Baker (1998) noted that most CoO research has been conducted on consumers' perceptions in more developed, Western countries (Bilkey & Nes, 1982; Johansson et al., 1985; Phau & Suntornnond, 2006). In their review of 99 CoO studies investigating perceptions of consumers from 34 different countries, Al-Sulaiti and Baker (1998) reported only one study (Zhang, 1996) which investigated CoO effects in mainland China. Neither the review by Al-Sulaiti and Baker (1998), nor an additional literature search has revealed any studies addressing CoO effects in an online environment.

Therefore, in this thesis, participants from the US and China are studied as they represent the two largest online communities in the world, presenting ideal sample populations to examine and compare CoO effects online. By examining the comments that participants choose to post on websites, the study offers a unique opportunity to observe the prevalence of CoO effects in a natural environment online. There have been no previous

studies that have quantified and/or compared the frequency of positive and negative CoO statements between Americans and Chinese within online environments such as discussion boards. Understanding the extent of such electronic CoO statements on discussion boards would enable marketers to better respond to their target market and also market their products in a better way.

2.6 Summary of Literature Review

In summary, the literature review has shown that despite the known importance of WOM, there has been limited research on eWOM in virtual communities such as discussion boards. There has also been no research comparing the extent of CoO effects for American and Chinese consumers online. Understanding any differences between the American and Chinese online communities (which account for the largest and second-largest online populations in the world) is important in order to allow marketers to understand and possibly influence online buyer behaviour, particularly in the rapidly expanding Chinese market.

From a cross-cultural perspective, the literature review has suggested that individualist and collectivist cultures will demonstrate differences in information-giving and information-seeking behaviour (Doran, 2002). For example, it has been suggested that the Chinese, living in a collectivist culture, engage in more WOM and are more likely to be involved in information search. Whether this same behaviour extends to Chinese discussants on discussion boards has yet to be investigated and whether the reverse is true for Americans (from an individualist culture) has yet to be determined. With an

increasing number of consumers using the internet as a source of information and as a guide to product choice, understanding such differences between American and Chinese consumers will become increasingly important for marketers to overcome barriers to consumer choice.

The next three chapters consist of journal articles that have been published in the *Asia Pacific Journal of Marketing and Logistics* and *Journal of Interactive Advertising,* and a third article that has been accepted for publication in the *Journal of Business Research.* The first article presents the first analysis of the extent of eWOM and CoO effects on an American and a Chinese discussion board. The second article builds on the first by analysing the revealed behaviour of the discussants on three US and three China based discussion boards. In addition, the stated behaviour of discussants was analysed using an online survey of the discussants from the six discussion boards. The final article conducts an analysis of the six discussion boards and compares the eWOM and CoO differences between the American and Chinese discussants across two 90-day periods in 2004 and 2005.

Note: All three journal articles have been reformatted to achieve consistency.

CHAPTER 3 ONLINE WORD-OF-MOUTH: A COMPARISON OF AMERICAN AND CHINESE DISCUSSION BOARDS

This first article was published in the *Asia Pacific Journal of Marketing and Logistics* (Fong & Burton, 2006b) and provides the first published data on the extent and type of eWOM on a typical American and Chinese discussion board. Using discussion boards that are based on eBay (US) and EachNet (China), eWOM was studied and compared across the two countries.

The results show evidence that eWOM is prevalent within the discussion boards and that there are differences in the frequency and type of eWOM on US and China based discussion boards. For example, the findings indicate that Chinese participants requested information more frequently than their American counterparts. In addition, the frequency of brand mentions was compared to the current market share of the brand in an effort to establish if there is a correlation and if the extent of brand mentions online could possibly predict market share. The findings indicate that the brand mentions reflected market share for the China based discussion boards but not for the US discussion boards, suggesting a possibly greater impact of WOM on the behavior of Chinese consumers. The study also found that the content of discussion postings differed in the area of CoO effects, with the EachNet participants demonstrating largely negative CoO references towards brands originating from Japan. eBay participants, in contrast, were not observed to demonstrate such behaviour.

These findings have not been discussed in any previous eWOM studies and the findings suggest a difference in the frequency and type of eWOM on discussion boards that are based across different cultures. The differences in the information-giving and information-seeking behaviour and the extent of CoO references of the discussants are further explored in the subsequent two publications.

Online Word-of-Mouth: A Comparison of American and Chinese Discussion Boards

Abstract

Purpose—The important influence of peer recommendations on consumer purchases has been strongly established. However, the growth of electronic discussion boards has created a channel for online word-of-mouth (OWOM) between people who have never met. This study aims to examine and compare the frequency and content of postings on digital camera electronic discussion boards within US and China based websites.

Methodology—Data was collected from the "Photography" discussion boards on eBay and EachNet (a China based website). A total of 552 discussion postings from 257 participants over a three month period were analysed and coded.

Findings—The analysis showed quantitative and qualitative differences in the content across the two sites. There were differences in the pattern of brand mentions across the two websites, and requests for information-seeking behaviour also varied across the two sites; users of EachNet were more likely to request information, thus possibly increasing the likelihood of, and influence of, OWOM on this website. There were also significant differences in content, with higher country-of-origin (CoO) effects on EachNet. CoO effects were largely strongly negative, in particular showing high levels of negative references to brands originating from Japan.

Research limitations/implications—A limitation is the inability to ascertain the nationality of the participants on the discussion boards. Future research will also benefit from an extension of product categories.

Originality/value—The study is the first to examine word-of-mouth (WOM) in online discussion boards and thus provides valuable insight for marketers into this growing source of WOM.

Keywords: Group discussion, Cross-cultural studies, Country-of-origin, Electronic commerce, Consumer behaviour

Paper type: Research Paper

3.1 Introduction

The important influence of word-of-mouth (WOM) on consumer purchases has been strongly established (Herr et al., 1991; Laere & Heene, 2003; Scott, 2003; Sillence & Baber, 2004). However, the growth of electronic discussion boards has recently created an additional channel for product recommendations and endorsements between people who have never met, and anecdotal reports suggest that such recommendations can be influential in subsequent choice (Goodman, 2001; The Guardian, 2004). However there has been limited investigation of the content of online discussion boards, almost no analysis of the extent of, and type of online word-of-mouth (OWOM) on these sites, and no studies which have specifically analysed and compared OWOM across sites based in different countries.

The marketing literature has identified cultural differences in the online behaviour of consumers (Chau et al., 2002; Knight, 1999). Differences in consumer preferences for foreign and/or domestic products have also been identified (Chau et al., 2002; Knight, 1999), but no previous studies have examined these country-of-origin (CoO) effects online. This study draws on the current knowledge of virtual communities and investigates the extent of, and type of, OWOM through an ethnographic and textual analysis of these virtual communities. Specifically, discussion boards (a form of virtual community) are analysed because they provide a venue where participants come together to seek, share and give information, and thus they provide an important channel for OWOM.

The study presents the first analysis and comparison of the behaviour of consumers from different cultural backgrounds on discussion boards. It contributes to the literature on cross-cultural analysis in a computer mediated environment and extends the literature on online behaviour and different cultural preferences of online consumers. It also contributes to the knowledge of marketers, providing a better understanding of the behaviour of consumers on discussion boards based in different cultures, helping to identify differences in the behaviour of customers which can potentially be used by marketers to better respond to, and target, these customers in order to overcome barriers to consumer choice.

3.2 Literature Review

OWOM and discussion boards

WOM communications have been shown to exert a strong influence on consumers' judgments of products (Herr et al., 1991). This influence is particularly prevalent when considering the purchase of a new product or service (Brown & Reingen, 1987; Scott, 2003). As such, WOM can have a strong bearing on a purchase outcome. Prior research on WOM has focused on interpersonal (or face-to-face) influence (Anderson, 1998; Bearden & Etzel, 1982; Rogers, 1983) and has largely neglected OWOM.

Consumers are increasingly turning to computer-mediated communication for information to use in their decision making process (Kozinets, 2002). Since the late 1980s, virtual communities have emerged, highlighting the importance of connections that are created when people interact with each other online. One such example is that of

"The Well"—a well known, vibrant and engaging online community of leading-edge thinkers that interacted with each other through the postings on its electronic discussion board (Hagel & Armstrong, 1997). Over time, these accumulated postings became a wealth of information with a captive audience which was active in commenting and contributing to the cumulative knowledge. Other examples of such virtual communities have since flourished on the internet and researchers are increasingly recognising that consumers partake in such discussions to inform and influence fellow consumers about products and brands (Kozinets, 1999; Muniz Jr. & O'Guinn, 2001).

Discussion boards and other online communication tools like chatrooms and newsgroups are increasingly being recognised as important sources of information that influence the adoption and use of products and services (Subramani & Rajagopalan, 2003). Furthermore, these tools serve to draw together people with similar interests and present an opportunity for OWOM from like-minded people to take place. OWOM can occur whenever people interact with each other online, but is particularly likely to happen within purchasing websites that have discussion boards. Discussion boards are online communities organised around interest specific topics because products and brands are typically discussed on such sites. Discussion boards cover diverse topics including digital cameras, comic books, automobiles, musical groups, motion pictures, wine, beer, cigars and almost any other interest that could be imagined. There are even discussion boards devoted to discussions about Taco Bell and McDonald's restaurants (Kozinets, 1999). Participants of discussion boards read and post messages that are sorted by date and subject, and also respond to discussion threads.

A recent study by Nelson and Otnes (2005) on the roles the virtual community plays in wedding planning found that discussion boards were being used by brides to "solicit advice, opinions and information, as well as to gain emotional support, social comparison and camaraderie." The brides used the discussion board to exchange marketing-related information, recommend websites and share stories, thus resulting in OWOM for other brides. The study supports Kozinets' (1999) suggestion that discussion boards have wide exposure and influence because they are perused frequently by participants who share similar interest.

The large number of discussion boards on websites has made websites a focus of some recent research (Kozinets, 2002; Nelson & Otnes, 2005). However, few studies have looked at discussion boards and the extent to which they are vehicles for positive and negative WOM. As such, discussion boards are a good source of information to investigate the extent of influence that participants have on each other within virtual communities.

CoO and cross-cultural issues

It has been recognised that the CoO of a product or a service affects consumers' perceptions (Baker & Ballington, 2002; Nagashima, 1970; Saminee, 1994). Consumers often perceive stereotype images about countries and these images are subsequently used as information cues in judging products from different origins (Lotz & Hu, 2001). This is often termed the CoO effect, and Johansson (1989) asserted that the CoO effect could be

seen as a “mental shortcut to decision making” and can be categorised as positive or negative. CoO effects have not previously been explored on electronic discussion boards, where people from different countries have the opportunity to interact freely. Under these circumstances, it is not clear whether CoO effects will be increased or decreased. Thus an analysis of any CoO effects on the various internet sites would extend the literature in this respect.

The behaviour of participants on discussion boards is of particular interest because a recent study of more than 10,000 participants from 82 countries found that demographics alone are not important in terms of online buying (Chau et al., 2002). Instead, what the authors called “a wired lifestyle” (measured by length of internet experience, what is being bought and why) is crucial to internet shopping. In particular, the most important predictor of online buying behaviour was online product information search (Bellman et al., 1999). As such, the information-seeking and giving behaviour of participants on US and China based discussion boards could possibly become a determinant of their own, and potentially others’ buying behaviour. Although the people who use these sites are unlikely to be typical of their wider offline communities, it is possible that the users of technical sites (such as photography) may be seen as experts offline, and hence their opinions, and the OWOM that they create and are exposed to, may provide an early indication of wider trends.

There have been numerous recent studies on online cross-cultural consumer behavioural studies (Chau et al., 2002; Choi & Lee, 2003; Lightner et al., 2002; Nelson & Otnes,

2005; Simon, 2001; Vishwanath, 2003). Most studies have included the United States as one of the main countries, but apart from the study of Chau et al. (2002) which drew comparisons between US and Hong Kong (which arguably is different from China), none have investigated and contrasted the behaviour of participants in American and China based discussion boards. Chinese and US online behaviour is of particular interest, because China's online communities are poised to become the second largest in the world, after the US (CIA, 2005).

In this study, US and China based websites are compared because Chinese and Westerners have been shown to display different behaviours due to social and cultural differences (O'Keefe & O'Keefe, 1997). Lam and Lin (2003) studied the effect of WOM among Chinese and White Caucasians and found that the Chinese group engaged in more WOM behaviour than the White Caucasian group. The authors suggested that this behavioural difference was associated to the Chinese group's cultural focus on "*Guanxi*" which tends to encourage information-seeking and giving behaviour. The word *guanxi* originates from the Chinese culture and can be translated into "personal network", "connections" or "special relationship" (Lam & Lin, 2003). Leung et al.'s (1995) study of *guanxi* found that information exchange was one of the key variables that affected the adaptation of *guanxi*. It is thus likely that people who are highly adapted to *guanxi* may exchange more information and therefore engage in more WOM.

No studies have investigated if there is greater frequency of OWOM in a computer mediated environment and if these behavioural differences extend to different behaviours

in online information-seeking and giving. However understanding any differences between the American and Chinese market segments is important to allow marketers to explain and possibly influence online buyer behaviour, particularly in the rapidly expanding Chinese market. As such, marketers who are selling consumer products, and/or performing online marketing, in these countries will increasingly need to investigate the various channels that consumers use to interact with each other and be aware of the possible implications that come with these channels.

3.3 Methodology

This study is the first to undertake qualitative and quantitative analysis of two different discussion boards, drawing comparisons between the US and China based websites "eBay" and "EachNet". Specifically, it uses the content within the discussion boards to explore the frequency and type of OWOM that takes place. The first website, eBay, has enjoyed much success as the premier online auction website. eBay hosts several discussion boards and, in 2001, had a total of 60 million registered users (Gomes-Casseres, 2001). The site's discussion boards enable strangers to communicate about products that they have purchased or are considering purchasing. It is therefore a good source of information for users or for potential purchasers who wish to find out more about a product before making a purchase, and thus provides a potentially important source of OWOM for purchasers close to the decision process, when OWOM is most likely to occur and is most likely to be influential.

EachNet is the Chinese equivalent of eBay, with a layout similar to eBay, and provides a forum for Chinese language auctions and discussions. EachNet was established in 1995 and was purchased by eBay in 2003. In 2003, it had a total of 4.3 million registered users (Hof, 2003). The discussion boards on both sites are used extensively by each online community, providing a good basis for comparison between the two sites.

As the aim of this study is to generate a deeper understanding of OWOM, the research design is based on both quantitative and qualitative analysis of the contents of the respective discussion boards. Specifically, the research examines the discussion postings on the discussion boards in a bid to better understand the frequency and type of OWOM. Data was collected from the "Photography" discussion board on eBay and EachNet since digital cameras are considered to be a "technological product" with high consumer involvement (Poiescz & deBont, 1995). As such, it is likely to be a product category where consumers are likely to do research on the internet before making a purchase and, as a consequence, OWOM is likely to take place, and where WOM is likely to be influential.

Online observation was carried out on the discussion boards of both eBay and EachNet, and all discussion postings that related to Digital Cameras were downloaded daily over a three month period from March to May 2004. Postings were then coded to determine the frequency of mentions, the extent of direct requests for information and CoO effects. Coding was performed by a bilingual research assistant and checked by the bilingual first author. For eBay, 248 discussion postings from 76 participants were downloaded. For

EachNet, 304 discussion postings from 181 participants were downloaded. In all, a total of 552 discussion postings from 257 participants over the three month period were analysed and coded.

3.4 Results

Market share versus frequency of brand mentions

There was a significant difference in the number of brand mentions per posting on eBay (mean 1.84 std 2.41 brand mentions per posting), compared to EachNet (mean 1.37, std 2.89, $p = 0.039$). Six brands were the most frequently mentioned on both websites, consistent with estimates that these brands account for almost 75% of the global digital camera market share (InfoTrends, 2003). Table I shows the number of brand mentions and for comparison, provides market share of the various brands in US and China respectively.

Table I: Market share versus frequency of brand mentions

Brands	eBay			EachNet		
	Market share in US (%)	Number	Percentage	Market share in China (%)	Number	Percentage
Canon	15	122	26.8	17	62	15.9
Fuji	9	64	14.0	11	51	13.0
Olympus	12	56	12.3	10	40	10.2
Sony	22	51	11.2	20	86	22.0
Nikon	7	42	9.2	8	32	8.2
Kodak	18	37	8.1	9	43	11.0
Others	17	84	18.4	25	77	19.7
TOTAL	100	456	100	100	391	100

Source: IDC and CEInet, 2004

There was no significant association between US and China's market share ($p = 0.208$). The number of brand mentions on each site might be expected to reflect market share in each country, but there was no significant association between the number of brand mentions and US market share for eBay (Spearman's rho, $p = 0.787$). In contrast, for EachNet, there was a significant association between Chinese market share and relative frequency of brand mentions (Spearman's rho, $p = 0.005$).

Direct requests for information

To measure the extent of information-seeking by the participants in the electronic discussion board, the number of postings containing direct requests for recommendations was recorded for each site. The following is a typical example of a request for recommendation which was downloaded from eBay. Six participants responded and discussed and recommended a total of three brands of digital cameras:

> *I'd like a recommendation/opinion on a digital camera for shooting Indoor Basketball games as well as using for eBay items. I need something that would capture fast indoor shots as well as close-ups. Any input as to Brand would be greatly appreciated. Thanks in advance for your input (12 April 2004).*

Table II: Postings with direct requests for information

	eBay (248 Postings)		**EachNet (304 Postings)**	
	Number	**Percentage**	**Number**	**Percentage**
Direct requests for recommendations	19	7.7	54	17.8

Table II shows the results of the comparison of direct requests for information across the two sites. There was a significantly higher percentage of discussion postings containing direct requests for information on EachNet ($Z = 3.65$, $p < 0.001$). The higher percentage of EachNet (17.8% as compared to 7.7% on eBay) suggests that EachNet participants were more likely to request product recommendations and/or information, thus possibly increasing the likelihood of, and influence of, OWOM.

CoO effects

Each discussion posting that contained a reference (either positive, negative or neutral) to a product's CoO was coded, and a comparison of the frequency of CoO effects was conducted. The results are shown in Table III.

Table III: CoO effect (percentage of postings)

References	eBay (248 Postings)		EachNet (304 Postings)	
	Number	Percentage	Number	Percentage
Positive reference	0	0	9	3.0
Negative reference	0	0	19	6.3
Neutral reference	1	0.4	3	1.0
Total	1	0.4	31	10.3

There was a significant difference between the percentage of CoO references between the two websites ($Z = 5.50$, $p < 0.001$). In fact, eBay had only one (neutral) CoO reference while EachNet had 31 (10.3% of postings), of which the majority were negative.

Although EachNet's positive CoO references included references to US, China and Japanese based brands, most of the negative CoO references referred to brands that originated from Japan. Negative CoO references fell into several categories; comments which appeared to relate to the Second World War (in which Japan invaded parts of China); comments that appeared to relate to the way Japan exports its products and general anti-Japanese sentiments which specifically suggest an unwillingness to purchase.

Comments which appeared to relate to the Second World War:

> *今天我们多买一件日货，日本人在下次战争里就多一颗子弹！也许，这颗用你买日货的钱造的子弹将打死你的亲生儿子！为了我们的尊严，为了我们的子孙，停止帮助日本人赚钱吧! (23 March 2004)*
> *When we purchase a Japanese product today, this would translate into an additional bullet for the Japanese in the next war. The bullet manufactured using the profit made might very well be used to kill your son! For the sake of our dignity and future generations, let's stop the Japanese from making money from us! (23 March 2004).*

Comments which appeared to relate to the way Japan exports its products:

> *以前听人说过: 小日本把最好的东西销网欧美,把次一点的东西自用,把最次的东西卖到中国! (3 April 2004)*
> *It has been said: In terms of product quality, Japan always exports its best to America and Europe, keeps the middle quality for itself and exports the worst quality products to China! (3 April 2004).*

> *日本人的好东西是不卖给中国人的! (30 March 2004)*
> *The Japanese never sells its best products to the Chinese! (30 March 2004).*

Comments containing general anti-Japanese sentiments which suggest an unwillingness to purchase Japanese products:

> *我现在影响了我周围的同学，他们现在都不用日货了！用日货，是对自己民族的耻辱! (28 April 2004)*
> *I have already influenced my classmates—they no longer use Japanese products! Using Japanese-made products is a humiliation to our ethnic group! (28 April 2004).*

> *小市民不能左右国家的施政方针,但至少可以从自己做起,不买日货.有了这种民族精神国家才有希望. (30 March 2004)*
> *As citizens, we are unable to control the political direction of our country. We can however start from ourselves by not purchasing Japanese products. It is only after cultivating this behaviour, that our country will have a better future (30 March 2004).*

In contrast, there were only nine discussion postings that contained positive CoO references and only three of these made references to products from Japan. The following are typical examples:

> *抵制日货并不见得是妙计,日本的电子产品质量就是好啊. (22 March 2004)*
> *Boycotting Japanese products is not a good strategy as Japanese-made electronic products have really good quality (22 March 2004).*

> *虽然小日本的确很让人讨厌,但小日本的电器确实好用,我就是用SONY 数码像机拍的照片放在店里,效果真的很好. (19 March 2004)*
> *Although we dislike the Japanese, their electronic products are really good. I used a Sony digital camera to take the photograph that has been displayed in my store and the effect on the photo has been fantastic (19 March 2004).*

This frequency of negative CoO effects towards Japanese products among Chinese speakers has not previously been noted in the marketing literature, and suggests that CoO effects (specifically negative feelings towards Japanese people and Japanese based brands) may present a barrier to the success of these brands for some Chinese speaking consumers. This type of CoO effect, reflecting past national conflict, suggests a need for Japanese based brands to be aware of the situation and perhaps take steps to balance this negative CoO effect so as to influence the future purchase behaviour of Chinese speaking consumers.

3.5 Discussion and Limitations

The study provides some important insights into OWOM on discussion boards. Firstly, the study shows that OWOM partly reflects market share; the study found a significant correlation between the Chinese market share and the number of brand mentions on EachNet. This was not true for eBay; for example Canon, third in market share, was the most discussed brand online. The reasons for this disparity between market share and OWOM are not clear; participants on discussion boards are unlikely to be representative of the general market, but they may be seen as experts by their offline peers, and thus more influential in their offline communities. The divergence between market share and "share of voice" on the US based site may thus suggest a potential problem for the leading brands Sony and Kodak if this difference in WOM and brand mentions represents the attitudes of opinion leaders in the US photographic market. The difference in brand mention frequency across the two discussion boards also suggests quite different awareness level and perceptions of the different brands in the respective markets.

In addition to different brand profiles, there was evidence of different consumer behaviour on the two discussion boards. For example there was a significant difference in the percentage of postings directly seeking information on EachNet ($p < 0.001$); more than twice as many postings on EachNet directly requested information (17.8% as opposed to 7.7% on eBay). There have been no previous cross-country studies on information-seeking, so the reasons behind this greater information-seeking on the Chinese site are unclear. Rogers (1983) discussed personality variables associated with innovativeness, and suggested that "early adopters seek information about innovations more actively than late adopters". Rogers, however, did not discuss the information-seeking behaviour of early adopters across different cultural groups, and if consumers on both sites are considered to be early adopters, our results suggest that there is a difference, with Chinese speaking participants requesting information significantly more frequently. The results do not, however, explain the reasons underlying this behaviour. It is possible that the differences represent different stages in the adoption cycle, with participants on the Chinese site representing a higher percentage of Rogers' early adopters. Alternatively, the results may show previously undiscussed cultural differences in information-seeking. Lam and Lin (2003) have suggested that WOM occurs more frequently within the Chinese community and cultural values such as "Guanxi" may encourage higher frequency of information-seeking. This might then explain the higher levels of information-seeking on the Chinese site.

There were further differences in the types of posting across the two sites; CoO references were almost absent from eBay postings, but occurred in 10.3% of EachNet postings. In particular, EachNet had a much higher proportion of negative CoO references, and most negative references referred to Japan and/or brands that originated from Japan. Although the reasons underlying these negative CoO references were often unclear, it appears from the context that they reflected general anti-Japanese sentiments, possibly related to the Japanese occupation of parts of China during World War II, resulting in an unwillingness among some consumers to purchase Japanese products. There were also positive CoO references on the Chinese site, suggesting that although there appear to be significant and negative CoO attitudes towards Japanese product, some Chinese speaking consumers still recommend Japanese brands because of their good quality. Overall, both the positive and negative CoO references suggest a challenge for Japanese brands in selling to Chinese speaking buyers, and possibly an opportunity for non-Japanese brands in penetrating into these market segments.

While the results show some important differences in the content of the two discussion boards, a limitation of the study is the inability to ascertain the true nationality of the participants on eBay and EachNet. While these websites are based in the US and China respectively, it is unlikely that the participants represented only Americans and Chinese, since there are no barriers to inhabitants of other countries using these sites. Negative sentiment towards the Japanese as a result of their behaviour during World War II is unlikely to be limited to China. It may also be felt by Chinese speakers in countries like Singapore and Hong Kong, (both also invaded by Japan) who might use, and make

comments on EachNet. However whatever the national affiliation of the people who posted on EachNet, the results do show differences in the behaviour of the people who use these different English and Chinese language sites. Another limitation is the focus on only the Digital Camera product category of eBay and EachNet. It is possible that the results discussed cannot be generalised to other product categories, or to other discussion boards. However, given the absence of any studies looking at OWOM, our study suggests clear differences in consumer behaviour across websites from two different cultures. This provides opportunities for research into other product categories to see if the results are replicated with participants of other product categories on other discussion boards.

3.6 Conclusion

This study extends the literature on WOM to include OWOM. The findings show that online discussion boards are certainly providing a venue for OWOM, and suggest that the behaviour of consumers on a US based site, eBay, is very different from that of consumers using EachNet, a comparable Chinese language site, with both quantitative and qualitative differences in the content of the two sites. Increasingly, marketers will need to take into consideration the growth of electronic discussion boards, which have become an additional channel for product recommendations and endorsements between people who have never met. This OWOM is likely to have an influence on consumers' subsequent purchase choice, and understanding differences in the behaviour of customers on different sites can allow marketers to detect, and potentially overcome, barriers to consumer choice.

CHAPTER 4 ELECTRONIC WORD-OF-MOUTH: A COMPARISON OF STATED AND REVEALED BEHAVIOUR ON ELECTRONIC DISCUSSION BOARDS

This second article was published in the *Journal of Interactive Advertising* (Fong & Burton, 2006a) and builds on the first article by extending the number of discussion boards that were analysed and also by conducting an online survey to determine the stated behaviour of discussants. A total of six discussion boards (three each from the US and China) were analysed; the content of discussion postings was analysed to determine the revealed behaviour, while the online survey of participants from the discussion boards investigated the stated behaviour.

For the online survey, a discussion posting with a URL which brought interested participants to the survey website was posted on all six discussion boards. (Note that the term 'Mandarin' was used to describe the language of the online survey, though a thesis reviewer has pointed out that the correct term for the written form of Mandarin should be 'Chinese'.) A total of 214 participants responded to the survey and the findings show that the Chinese respondents were younger than their American counterparts. The perceived importance of information obtained from the discussion board was high for both groups but higher on average for the Chinese. The high importance placed by the Americans and Chinese on the information obtained from the discussion boards reinforces the findings of previous studies that discussion boards are useful to participants and may influence potential purchase decisions (Godes & Mayzlin, 2004).

The findings also indicate differences in the online information-giving behaviours of the discussants, with the US participants being more likely to provide information than their Chinese counterparts. This willingness to provide information results in the US discussion boards containing a richer source of information relative to the number of requests for information.

The online survey measured both the stated information-seeking and information-giving behaviour of both the American and Chinese respondents. In terms of information-seeking, the findings indicate no difference between the two groups—both groups stated they had requested a digital camera recommendation at some time. However, the revealed behaviour indicated that the Chinese were three times more likely to request information which suggests that the Chinese used the discussion boards more as a means to obtain consumer-based information rather than to share information. As for the stated information-giving behaviour, significantly more of the Americans stated they had given a recommendation about a digital camera than the Chinese, thereby suggesting a greater willingness to share information. The revealed behaviour on the other hand suggests that both groups were equally willing to give product recommendations when requested. There are a few possible reasons for the discrepancy between the stated and revealed information-giving behavior. For example, the length of time that each discussant has been involved in the discussion boards and their relative experience with the product category may have influenced the extent of information giving behavior. It is also likely given the more recent economic growth of China, that participants from China based websites have less experience online and possibly less experience with the product

category and thus may have been more likely to ask for recommendations and less likely to give them.

This study is the first to contrast the stated and revealed behaviour of consumers in the area of information-giving and information-seeking on discussion boards. Building on the first article, this second article has extended the analysis of the actual information-seeking and information-giving behaviour of participants by comparing it to the stated behaviour in an online survey.

Electronic Word-of-Mouth: A Comparison of Stated and Revealed Behaviour on Electronic Discussion Boards

Abstract

The important influence of peer recommendations on consumer purchases has been strongly established. However, recent growth in electronic discussion boards has increased the potential for electronic word-of-mouth (eWOM) between people who have never met. This study examines and compares the extent of eWOM on electronic discussion boards within US and China based websites. Using online surveys (N = 214) and observation of discussion postings (N = 3029), data was collected from the "Digital Photography" discussion boards on eBay, Yahoo and Google (US based websites) and EachNet, Sina and Netease (China based websites). The findings indicated both similarities and differences in the information-giving and seeking behaviours, with the US participants more likely to provide information than Chinese participants, resulting in the US based discussion boards containing a richer source of information relative to requests.

Keywords: eWOM, Cross-Cultural Issues, Electronic Discussion Boards, Internet Marketing

4.1 Introduction

A number of studies have shown that Word-of-mouth (WOM) has an important influence on consumer purchases, and that this influence is particularly strong when a consumer is considering the purchase of a new product or service (Engel et al., 1969; Katz & Lazarsfeld, 1955). For example, Katz and Lazarsfeld (1955) demonstrated that WOM was the most important source of information for purchasing new household items, while Engel, Blackwell and Kegerreis (1969) showed that WOM was influential for consumers in selecting services such as an automotive diagnostic center.

Most previous studies of WOM have examined face-to-face WOM, but the recent growth of electronic discussion boards has created an additional channel for product recommendations and endorsements between people who have never met. Anecdotal reports have suggested that these online recommendations can be influential in subsequent choice (Goodman, 2001; The Guardian, 2004). However, there has been limited investigation of the content of electronic discussion boards, and the type of electronic word-of-mouth (eWOM) on these sites, and no studies which have specifically analysed and compared eWOM across sites based in different countries. This study draws on the current knowledge of virtual communities and investigates the extent of, and type of, eWOM through an ethnographic and textual analysis of these virtual communities. Discussion boards (a form of virtual community) are analysed because they provide a venue where participants come together to give and seek information, and thus they provide an important channel for eWOM to take place.

The study presents an analysis and comparison of the information-giving and seeking behaviour of consumers from different cultural backgrounds on discussion boards. It contributes to the literature on cross-cultural analysis in a computer mediated environment, and extends the literature on online behaviour and different cultural practices of participants in a virtual community. The stated and revealed behaviour of participants is compared using online surveys and observational methods, respectively. This study contributes to the knowledge of marketers by providing a better understanding of the differences in the behaviour of consumers on discussion boards based in different cultures. Knowledge of these differences in behaviour can potentially be used by marketers to overcome barriers to consumer choice.

4.2 Literature Review

eWOM and discussion boards

Prior research on WOM has largely focused on interpersonal (or face-to-face) influence (Anderson, 1998; Bearden & Etzel, 1982; Katz & Lazarsfeld, 1955; Rogers, 1983). However, with the advent of the internet, consumers are increasingly turning to computer-mediated communication for information to use in their decision-making process (Dellarocas, 2003; Kozinets, 2002). Dellarocas (2003) found that online channels such as eBay (which acts as a marketplace for buyers and sellers to meet) is an important form of technology for building trust and fostering cooperation amongst consumers in these virtual communities. Hagel and Armstrong (1997) suggested that such virtual communities, which provide consumers with the ability to develop relationships, exchange information and buy and sell products, are a good source of eWOM for both

consumers and marketers. Other examples of virtual communities (e.g. Yahoo and Google) have flourished on the internet and researchers are increasingly recognising that these virtual communities are an unexplored resource of eWOM (Evans et al., 2001; Godes & Mayzlin, 2004; Pitta & Fowler, 2005).

Virtual communities are an important source of eWOM because they host discussion boards and other online communication tools like chatrooms, newsgroups, and listservs which serve to draw together people with similar interests. Discussion boards in particular, present an opportunity for participants to share their experiences, opinions, and knowledge with others on specific topics, and thus allow eWOM between like-minded people to take place. These discussion boards cover diverse topics including digital cameras, comic books, automobiles, musical groups, motion pictures, cigars and almost any other interest that could be imagined. There are even discussion boards devoted to discussions about fast-food restaurants like Taco Bell and McDonald's (Kozinets, 1999). This specificity of discussion topics means that participants have ready eWOM available on almost any potential purchase decision. Participants of discussion boards read and post messages that are sorted by date and subject, and also respond to discussion threads. The discussion postings and threads offer a good form of "written" digital conversation and thus provide a written record of eWOM for researchers to explore. Godes and Mayzlin (2004) used discussion boards to study the volume and dispersion of eWOM while Evans et al. (2001) adopted a qualitative approach to investigate what consumers' attitudes were towards online interaction within virtual communities.

A recent study by Nelson and Otnes (2005) on the roles the virtual community plays in wedding planning found that discussion boards were being used by brides to solicit advice, opinions, and information, as well as to gain emotional support, social comparison, and camaraderie. The brides used the discussion board to exchange marketing-related information, recommend websites, and share stories, thus resulting in eWOM for other brides. They were in essence leaving a trail of product/service recommendations for other consumers with similar interests. The Nelson and Otnes (2005) study supported Kozinets' (1999) suggestion that discussion boards have wide exposure and influence because they are perused frequently by participants who share a similar interest. Bickart and Schindler (2001) suggested that this sort of information source may have greater credibility than marketer-generated information as the personal opinion and account of a participant who has experienced a product is judged to be a trustworthy source because the participant is a fellow consumer, perceived to have no vested interest in the product and no intentions to manipulate the reader.

Prior research on eWOM has therefore shown that discussion boards present an opportunity for people with similar interests to meet and share their opinions. The opinions presented form a potentially credible source of eWOM and this information may be influential to other participants on the discussion boards. However, there has been limited research on the extent of information-giving and seeking across discussion boards based in different cultures.

Information-giving and seeking on US and China based discussion boards

The large number of discussion boards being hosted on websites has made discussion boards a focus of some recent eWOM research (Godes & Mayzlin, 2004; Kozinets, 2002; Nelson & Otnes, 2005). However, there has been limited research on the extent of, and type of eWOM on these discussion boards. For example, some discussion boards may be used to share experiences, and provide limited opportunity for eWOM. In contrast, other discussion boards may have high levels of information-giving and seeking, which provides greater opportunity for eWOM to take place. This information-giving and seeking behaviour can result in both positive and negative eWOM, and may influence the subsequent purchase decisions of participants. Hence, discussion boards are a good source of information to investigate the information-giving and information-seeking behaviour, and the extent of influence that participants have on each other within virtual communities.

The extent of information-seeking online is particularly important because it may be an indicator of intended purchase. A study of more than 10,000 participants from 82 countries found that demographics alone are not important predictors of online buying (Bellman et al., 1999). Instead, Bellman et al. found that the most important predictor of online buying behaviour was online product information search. Consumers who had a "wired lifestyle" and used the internet for most of their activities (such as reading the news, paying bills etc.) naturally turned to the internet to search for product information.

In the current study, US and China based websites were compared because China's online communities are poised to become the second-largest in the world, after the United States (CIA, 2005). Chinese and Americans have been shown to display different information search behaviour due to social and cultural differences, yet there have been only limited studies of any differences in online behaviour. For example, in an offline cross-cultural study of information search, Doran (2002) found that Chinese consumers were likely to search more and rely more heavily on personal sources of information than American consumers, who did less directed search and relied more on their internal knowledge and personal experience with products. Doran suggested that the Chinese, living in a collectivist culture, were less likely to make individual decisions and more likely to let reference groups influence choices, while the Americans were more individualistic and were more likely to make their final decisions alone. This supports Wong, Chan, and Leung's (2005) argument that collectivist societies regard information sharing as a way to share favours while individualistic societies tend to focus on self-reliance. Their findings suggested that the Chinese rely on information obtained within a reference group to a greater degree because it is seen as a "relationship-enhancement behaviour". Individualistic societies, on the other hand, place a value on self-reliance, achievement, and independence which suggests that Americans may be more vocal online, and may offer more information than their Chinese counterparts (Ordonez de Pablos, 2005).

One study has shown that the Chinese engage in more WOM behaviour than White Caucasians (Lam & Lin, 2003). The authors suggested that this difference is associated

with the Chinese group's cultural focus on "*Guanxi*" which tends to encourage information-seeking and giving behaviour. [The word *guanxi* originates from the Chinese culture and can be translated into "personal network", "connections" or "special relationship".] Information exchange has been found to be one of the key variables affecting *guanxi* (Leung et al., 1995). It is thus likely that people who are highly adapted to *guanxi* may exchange more information and therefore engage in more WOM. However, whether this same behaviour extends to the online environment has not been investigated, and this study aims to investigate the extent of this behaviour online and draw a comparison between Chinese and Americans.

In summary, the literature review shows that despite the known importance of (offline) WOM, there has been limited research on eWOM in virtual communities such as discussion boards. Furthermore, whether the information-giving and seeking behaviours of discussants on discussion boards differ across different cultures has not been investigated. Although prior research has established that the Chinese appear to engage in more WOM, are more likely to be involved in information search, and rely more on reference groups for their purchase decisions, there has been no research on any difference in information-giving and information-seeking behaviour across electronic discussion boards based in the United States and China. Understanding any differences between the American and Chinese market segments is important to allow marketers to explain and possibly influence online buyer behaviour, particularly in the rapidly expanding Chinese market. As such, marketers who are selling consumer products, and/or performing online marketing in these countries will increasingly need to

investigate the various channels that consumers use to interact with each other and be aware of the possible implications that come with these channels.

4.3 Method

The study investigated the behaviour of individuals who visited six discussion boards that have a focus on "Digital Photography". These discussion boards were based on six different web portals: eBay, Yahoo, Google, EachNet, Sina and Netease. Of these six discussion boards, three were US based (eBay, Yahoo and Google) and three were China based (EachNet, Sina and Netease). The languages used on the US and China based discussion boards were English and Mandarin, respectively. [Mandarin (also known as "Putonghua") is the official language in China, although there are numerous dialects, such as Cantonese, spoken mainly in Hong Kong. The written language of Mandarin is commonly known as Chinese (simplified) and is used primarily in China while a different written form, sometimes referred to as Chinese (traditional) is used in Hong Kong and Taiwan.] These discussion boards were selected because they are based on popular web portals and thus attract a high number of web traffic (Elgin, 2004; Fannin, 2003; Gomes-Casseres, 2001; Kessler, 2004).

The US based discussion boards on eBay, Yahoo and Google need little introduction as they have all managed to build global brands and create businesses with market capitalisations of over $50 billion since 1995 (Klein, 2005). The China based web portals are less well known outside China, but all have large numbers of visitors. EachNet is the Chinese equivalent of eBay, with a similar layout, and provides a forum for Chinese

language auctions and discussions. It was purchased by eBay in 2003 and currently has a total of 10 million registered users (Hof, 2003; “Open Sesame to the Net Highway”, 2005). Sina and Netease are both popular news portals in China and have approximately 127 million and 298 million registered users, respectively (Qiang, 2004; Turner, 2000; Web Industry Trends, 2005).

Although the registered number of users of a Chinese language web portal is not indicative of the number of China based users (as some registered users may be from other Mandarin-speaking countries like Taiwan, Hong Kong and Singapore), it shows that the portal is frequented by a large number of individuals and as such, provides an opportunity for discussions (and potentially eWOM) to take place on its discussion boards. According to recent estimates, one-fifth of the 90 million Chinese internet users regularly make use of discussion boards to read news, search for information and debate current affairs (Qiang, 2004). Therefore, discussion boards are a good source of information for product users or for potential purchasers who wish to find out more about a product before making a purchase, and thus provide a potentially important source of eWOM for purchasers close to the decision process, when eWOM is most likely to occur and is most likely to be influential (Kozinets, 2002).

As the aim of this study is to generate a deeper understanding of eWOM, the research design is based on an examination of the contents of the respective discussion boards and a quantitative analysis of an online survey. Specifically, the research contrasts actual discussion postings (for the revealed behaviour) and the findings from online surveys (for

the stated actual behaviour) of participants on the discussion boards in a bid to better understand the information-giving and seeking behaviour of discussants. Data was collected from all the "Digital Photography" discussion boards since digital cameras are considered to be a "technological product" with high consumer involvement (Poiescz & deBont, 1995). Digital cameras are a common product category where consumers in both the United States and China are likely to do research on the internet before making a purchase and, as a consequence, online information-giving and seeking behaviour can be observed.

To determine the *revealed* information-giving and seeking behaviour of discussants, online observation was carried out on all the discussion boards, and all discussion postings that related to Digital Cameras were downloaded daily over a three month period from March to May 2004. Postings were then examined and coded for a number of measures: Category of Postings, Information-giving and Seeking, Name and Type of Brand Mentions, Country-of-origin effects and Length of Postings. Coding was performed by a bilingual research assistant and a reliability check conducted by the bilingual first author. For the US based discussion boards, 2060 discussion postings over a 90-day period from 656 participants were downloaded. For the China based discussion boards, 969 discussion postings over the same 90-day period from 540 participants were downloaded. In all, a total of 3029 discussion postings from 1196 participants were downloaded, coded and analysed.

In addition, an online survey was conducted on all the discussion boards to determine the *stated* information-giving and seeking behaviour of respondents. The length of the survey was intentionally kept short and the number of questions limited to 14 to decrease non-response error due to respondent fatigue (Deutskens et al., 2004). The survey was initially developed in English and pre-tested, using a convenience sample of ten respondents to ensure readability, and to detect any logical errors of questions. Changes were made after the pre-test and the survey was retested. Since there were no further problems found at this stage, the survey was translated from English to Mandarin using the back-translation technique (Campbell & Werner, 1970). To ensure translation equivalence, the bilingual first author translated the English version of the survey to Mandarin. It was subsequently back-translated into English by a bilingual research assistant. Both versions of the survey were compared and the minor discrepancies identified were amended. The Mandarin version of the survey was then pre-tested using ten Mandarin-speaking individuals. This stage of testing did not identify any problems.

The English and Mandarin versions of the surveys were uploaded onto a separate website independent of the six discussion boards. A discussion posting encouraging interested participants to click on a URL (which brought the respondent to the separate website) was posted on each of the six discussion boards. To ensure that the posting remained current, the survey request was re-posted every two weeks. This increased the probability that all interested members of, and occasional visitors to, the discussion boards had an opportunity to participate in the online survey. The invitation to participate in the survey remained on the discussion boards of the six websites from October to December 2004.

In the three month period, there were 157 respondents from the US based websites and 57 respondents from the China based websites. In all, a total of 214 participants completed the online survey.

4.4 Results

Profile of respondents

Characteristics of the online survey respondents, their use of, and evaluation of the discussion board information are shown in Table I. A large majority of the respondents from both sites were male (82.2% for US based discussion boards and 77.2% for Chinese participants). There was no significant difference in the gender of the respondents (Chi-sq = 0.668; $p > 0.1$), but an examination of the ages of the American and Chinese respondents showed significant differences (t = 9.78; $p < 0.001$). Chinese respondents were younger on average, with the largest group of respondents from the 25 to 34 group (61.4%) while the US respondents were on average older, between the ages of 45 to 54 years (42.7%). There was also a significant difference in the number of average visits per week to the discussion board (t = 4.59; $p < 0.001$). The US respondents reported more visits to the discussion boards (5.53 mean visits per week) compared to the Chinese respondents (mean = 3.79).

Respondents were asked to rate the importance of information obtained from the discussion boards in their last purchase on a scale of 1 to 7, 1 being “Not important” and 7 being “Very important”. There was a significant difference in the stated importance of information obtained from the discussion boards (t = 2.25; $p = 0.025$). Chinese

respondents rated the importance of information obtained from the discussion board higher, on average (mean = 5.75) compared to their US counterparts (mean = 5.37). However, a large majority of both groups appear to view the information as important, with 91.8% of the Chinese and 86% of the US respondents rating the importance of the information for their last purchase as 5 out of 7 or higher.

Table I: Profile of respondents

Characteristics	**US Online Survey**	**China Online Survey**	**Chi-Square**	***P***
Gender				
% Male	82.2	77.2	0.668	0.414
% Female	17.8	22.8		
Age	**Mean**	**Std dev.**	***t***	***P***
US	42.85	10.36	9.78	<0.001
China	28.60	6.10		
Average number of visits to discussion board in a week				
US	5.53	2.51	4.59	<0.001
China	3.79	2.26		
Importance of information obtained from discussion board Rating scale (1 = Not Important; 7 = Very Important)				
US	5.37	1.12	2.25	0.025
China	5.75	1.06		

Information-seeking behaviour—direct requests for digital camera recommendation

To investigate the stated behaviour of information-seeking, respondents were asked whether they had ever requested a recommendation about a particular brand or product on a discussion board. A total of 128 (81.5%) respondents from the US based discussion boards and 48 (84.2%) respondents from the China based discussion boards reported that

they had requested a recommendation at some time. There was no significant difference ($z = 0.47$; $p > 0.1$) in the proportion of respondents who had requested a recommendation across the two national groups. The online survey thus showed no difference in the stated information-seeking behaviour of US and Chinese respondents.

The actual use of discussion boards was examined to assess the revealed behaviour of information-seeking by discussants on the six discussion boards. All discussion postings were coded to identify direct requests for digital camera recommendations and the percentage of requests for information, as a percentage of all postings on the website, was then calculated. The following is a typical example of a direct request for recommendation which was downloaded from eBay. Six participants responded, discussed and recommended a total of three brands of digital cameras:

> *I'd like a recommendation/opinion on a digital camera for shooting Indoor Basketball games as well as using for eBay items. I need something that would capture fast indoor shots as well as close-ups. Any input as to Brand would be greatly appreciated. Thanks in advance for your input. (12 April 2004).*

Table II shows the results of the comparison of direct requests for recommendation across the US and China based discussion boards. There was a significantly higher percentage of discussion postings containing direct requests for recommendation on the China based discussion boards ($p < 0.001$). The higher percentage on the China based discussion boards (21.9% as compared to 7.2%) suggests that the Chinese participants were more likely to request product recommendations and/or information, thus possibly increasing the likelihood of, and influence of, eWOM.

Table II: Postings with direct requests for recommendation

	US (N = 2060 Postings)		China (N = 969 Postings)	
	Number	**Percentage**	**Number**	**Percentage**
Direct requests for recommendation	148	7.2	212	21.9
	$Z = 10.17$; $p < 0.001$			

Information-giving behaviour—giving a digital camera recommendation

The stated behaviour of the American and Chinese respondents was measured by asking whether they had ever given recommendations about a particular brand or product on a discussion board. Significantly more of the US respondents (72.6%) stated they had given a recommendation about a brand or product, compared to 33.3% of the Chinese respondents ($z = 5.47$; $p < 0.001$).

To measure the revealed information-giving behaviour of the discussants, the percentage of discussion postings containing recommendations for digital cameras was calculated and recorded for all the websites. The following discussion posting is a typical example of a digital camera recommendation which was preceded by a request for recommendation (similar to that in the earlier section) that was downloaded from Google:

> *I strongly recommend Canon Ixus if you can afford it… from my short time with it, it seems to do a great job. Anyway, if you do buy one, I'm convinced you'll love it. (12 May 2004).*

Table III shows the results of the comparison of direct digital camera recommendations across the US and China based discussion boards. There was no significant difference in

the percentage of discussion postings containing digital camera recommendations on the US and China based discussion boards ($p = 0.184$). The similar percentages (17.2% as compared to 19.1%) suggest that the participants on all the discussion boards were equally willing to provide product recommendations when requested.

Table III: Postings which gave a digital camera recommendation

	US (N = 2060 Postings)		China (N = 969 Postings)	
	Number	**Percentage**	**Number**	**Percentage**
Gave a digital camera recommendation	354	17.2	186	19.1
	$Z = 1.33$; $p = 0.184$			

Balance of information-giving and information-seeking behaviour

The balance of information-giving and information-seeking behaviour on the websites was examined to investigate whether discussion boards from either culture contained a higher percentage of information-giving or seeking. Chinese discussion boards contained approximately equal proportions of information-giving (19.1% of postings) and seeking (21.9% of postings) ($z = 1.46$; $p > 0.1$). Individual Chinese participants were, however, significantly more likely to have engaged in information-seeking (84.2%) than information-giving (33.3%) ($z = 6.45$; $p < 0.001$).

US discussion boards, in contrast, had a significantly higher proportion of recommendations than requests ($z = 9.93$; $p < 0.001$) with more than twice the number of discussion postings giving a digital camera recommendation (17.2%) than postings

requesting one (7.2%). Like the Chinese, the US survey respondents reported a higher percentage of past information-seeking (81.5%) than information-giving (72.6%), but the difference was only significant at the trend level ($z = 1.89$; $p = 0.059$). These differences in the balances of information-seeking and giving meant that the US sites were a relatively richer source of recommendation, with more than two recommendations for every posting (17.2% recommendations for 7.2% requests). Chinese requests, in contrast, received less than one recommendation on average per request, with 21.9% of postings containing requests, and only 19.1% containing recommendations.

4.5 Discussion

This is the first study to examine and contrast the stated and revealed behaviour of US and Chinese participants on electronic discussion boards. It provides some important insights into eWOM on discussion boards and highlights the differences in online consumer behaviour in the area of information-giving and information-seeking.

The profile of the respondents who participated in the online survey indicates that a majority were males and this correlates with the profile of internet users in the United States and China (The Economist Intelligence Unit, 2001). Although the Chinese respondents were generally younger, a common trait was the perceived importance of information obtained from the discussion boards. The importance placed on the information obtained was high for both groups of respondents but even higher for the Chinese, even though there were fewer responses, on average for each Chinese request compared to the frequency of US recommendations. Despite this relatively low ratio of

information-giving to seeking, the high average rating of the importance of information obtained from the discussion boards reinforces previous suggestions from the literature that discussion boards are useful to the participants and may influence potential purchase decisions.

The results from the online survey also showed that the US respondents visited the discussion boards more frequently (mean 5.53 visits per week) than the Chinese respondents (mean 3.79 visits per week). Kozinets (2002) has suggested four distinct virtual community "types" that categorise members of a virtual community, based on their strength of social ties and their interest in the consumption activity within the community: Tourists, Minglers, Devotees and Insiders. *Tourists* in general lack strong social ties and deep interest in the community. They only maintain a superficial or passing interest in the consumption activity. *Minglers* maintain strong social ties, but have minimal interest in the consumption activity. *Devotees* are the opposite of Minglers in that they maintain strong interest in the consumption activity but are less involved and thus have minimal social attachments to the community. Finally, *Insiders* are those who have strong social ties to the online group and to the consumption activity. They are often long-standing and frequently provide advice to other members.

In this study, the frequency of visits could be seen as a measurement of "social ties" while an "interest in the consumption activity" measured in this study could be indicated by the extent of information-giving and seeking on the discussion boards. If so, the higher visit frequency and higher levels of information-giving of the US participants suggest that

there are more *Insiders* than *Devotees* in the US virtual communities while the reverse is true for the China based discussion boards. According to Kozinets' typology, *Insiders* are considered very knowledgeable about their topic area and this is partly supported by the study of the revealed behaviour, with US discussants being less likely to seek information. As a result, the expertise of the US discussants may make them opinion leaders for their peers. Identifying such opinion leaders is important for marketers as these consumers may in turn influence other consumers in their purchase decisions.

Although the stated behaviour of respondents from the survey suggests equal information-seeking for both the US and Chinese participants, the observation of the revealed behaviour from the discussion boards suggests that the Chinese discussants appeared to request more product recommendations than the US discussants. For example, there was a significant difference in the percentage of postings directly requesting recommendations for digital cameras on the Chinese discussion boards ($p < 0.001$); almost three times as many postings on EachNet, Sina and Netease directly requested recommendations (21.9% as opposed to 7.2% on the US discussion boards). This behaviour could perhaps be related to the age of the Chinese participants. Sorce, Perotti and Widrick (2005) found in a survey of attitude and age differences in online buying that younger consumers searched for more products online than did older consumers. Although a limitation of their study was the sample of only US consumers and the limited nature of the sample (300 staff and students of a US university), our study suggests that the Chinese respondents, being younger in age, exhibited similar traits to

the younger US consumers studied by Sorce, Perotti and Widrick (2005), and thus were more likely to request product recommendations.

The study also found a significant difference ($z = 9.93$; $p < 0.001$) in the information density of the US sites, with more than twice the number of discussion postings giving a digital camera recommendation (17.2%) than postings requesting one (7.2%). This was consistent with the stated behaviour, with a higher proportion of US respondents stating that they had given information (72.6%) than Chinese respondents (33.3%). Reichheld (1996) found that the element that correlated most with company growth was the willingness of customers to recommend a company or brand. Reichheld argued that consumers who recommend products to their friends incurred certain risks. If their friends act on their recommendation and try a product, the consumer may subsequently lose credibility should their friends be unsatisfied with the product. Although there is no face-to-face interaction on discussion boards, this social risk is still relevant in an online context, because participants engaging in product recommendations still need to maintain credibility so that their opinions will be taken seriously by others on the discussion board. The lower proportion of Chinese respondents giving recommendations may suggest that this social risk is weighed more heavily by Chinese respondents, resulting in higher relative importance for any one recommendation, as shown by the higher average reported importance of website information by the Chinese, even though there was less information available in response to each request.

While US and Chinese respondents were equally likely to have requested information at some time, Chinese websites contained a higher proportion of requests for information

(21.9% compared to 7.2% of US postings). This suggests that the Chinese participants used the discussion boards more as a means to obtain consumer-based information rather than to provide recommendations about their experiences with products. This behaviour is consistent with prior research that suggests that consumers visit discussion boards to interact with other consumers and look for opinions, seek facts, and recommendations from others (Evans et al., 2001; Pitta & Fowler, 2005). However, because the US respondents were on average older, and visited the discussion boards more often, they were perhaps more likely to engage in information-giving behaviour. This behaviour may also reflect greater cumulative information on the US based discussion boards over time, and a greater norm of information-giving.

4.6 Limitations and Future Research

While the results show some important differences between participants on the six discussion boards, a limitation of the study is the inability to ascertain the true nationality of the participants on the US and China based discussion boards. Although the discussion boards are based in the US and China, respectively, it is unlikely that the participants represented only Americans and Chinese, since there are no barriers to inhabitants of other countries using these discussion boards. However, the results provide the first comparison of English- and Mandarin-speaking respondents on different language discussion boards.

The relatively small size of the survey also suggests caution in interpreting its results. Since there is no count of individuals visiting the discussion boards, the researchers

lacked the ability to determine the true response rate, because the invitation to participate in the survey was posted on the discussion boards. Future surveys could be administered via an email list of the participants on the discussion boards as it enables greater control and possibly a higher response rate (Ilieva et al., 2002). However access to email lists of participants is problematic, and excludes unregistered visitors to the discussion board, so it is likely that the potential for non-response error will remain an issue for future studies.

Although, as discussed above, both the observation of discussion postings and online survey have limitations, this study shows that the combined use of both methods can result in a richer understanding of the behaviour of participants on the discussion boards. Given the lack of studies looking at eWOM on discussion boards based in different countries, our study has benefited from the two different methods which have shown both similarities and differences in the information-seeking and giving behaviour of participants from two different cultures. Future research may benefit from replicating this use of two data collection methods to see if the results from this study are replicated with other product categories on other discussion boards.

4.7 Conclusion

This study extends the literature on eWOM to include the information-giving and receiving behaviour of participants on electronic discussion boards based in different cultures. The US and China based discussion boards were dominated by males and the Chinese participants were younger and on average visited the discussion boards less

frequently. A large majority of both groups however, rated the importance of information obtained from the discussion board as 5 out of 7 or higher.

The findings also show that discussion boards are certainly providing a venue for eWOM to take place. Stated information-seeking behaviour was similar for both groups but the revealed behaviour indicated that the Chinese were three times more likely to request information. The Americans appeared to engage in more information-giving than information-seeking behaviour and this could perhaps be attributed to their higher age and visit frequency. In conclusion, this study has contrasted the information-giving and information-seeking behaviour of consumers on US and China based discussion boards. Increasingly, marketers will need to take into consideration the growth of electronic discussion boards, which have become an additional channel for product recommendations and endorsements between people who have never met. This eWOM is likely to have an influence on consumers' subsequent purchase choice, and understanding differences in the behaviour of participants on different discussion boards can allow marketers to detect, and potentially overcome, barriers to consumer choice.

CHAPTER 5 A CROSS-CULTURAL COMPARISON OF ELECTRONIC WORD-OF-MOUTH AND COUNTRY-OF-ORIGIN EFFECTS

This third article has been accepted for publication in the *Journal of Business Research* (Fong & Burton, 2007). Building on the first two journal articles, this third article looks at eWOM and CoO effects from a cross-cultural perspective across US and China based discussion boards. Additional data was collected in 2005 and a comparison was made over two 90-day periods in 2004 and 2005, comparing and contrasting the information-giving and information-seeking behaviour of discussants from individualist (US) and collectivist (China) cultures.

The comparison across the two 90-day periods shows that the differences in behaviour of the discussants in 2004 were replicated in 2005. For example, the Chinese discussants were shown to engage in higher levels of information-seeking and lower levels of information-giving in both periods, suggesting that the observed differences represent real differences between the US and Chinese discussants.

In addition, this article extends the findings from the first article about CoO effects to demonstrate that participants from a collectivist culture (China) were far more likely to engage in both positive and negative CoO discussions; in contrast, CoO effects appeared to be largely irrelevant for the discussants from an individualist (US) culture. A comparison of CoO statements made by the Chinese discussants across the two 90-day periods also showed an increasing trend of negative sentiments against brands originating from Japan. Further analysis suggested that the negative sentiments are largely

independent of product quality, relating instead to nationally based animosity. This effect has not been identified before in an online environment and is an important extension to CoO theory.

A Cross-Cultural Comparison of Electronic Word-of-Mouth and Country-of-Origin Effects

Abstract

Word-of-mouth has been shown to differ across cultures but the extent to which these differences extend to the online environment has not been investigated. This study examines the content of 5,993 discussion postings to US and China based discussion boards during two 90-day periods in 2004 and 2005. The results show significant differences in the behaviour of participants on the different discussion boards; those on the China based discussion boards engaged in higher levels of information-seeking than their US counterparts, and lower levels of information-giving. Participants on the Chinese discussion boards also engaged in significantly higher (and increasing) levels of discussion regarding the Country-of-Origin (CoO) of products. This first study of cross-cultural differences in CoO effects online revealed an important extension to previous offline studies of CoO effects, finding strong negative CoO effects which appeared to be largely independent of product quality, relating instead to nationally based animosity towards the CoO.

Keywords: Electronic Word-of-mouth, eWOM, Cross-Cultural Issues, Electronic Discussion Boards, Country-of-Origin effects, Animosity.

5.1 Introduction

Product recommendations and "word-of-mouth" (WOM) between consumers have long been of interest to marketers and researchers, but previous research has largely focused on interpersonal (or face-to-face) influence (Anderson, 1998; Bearden & Etzel, 1982; Katz & Lazarsfeld, 1955; Rogers, 1983). More recently, however, the internet's global nature has created a medium for electronic word-of-mouth (eWOM) communication between consumers who have never met (Gruen et al., 2006). The internet also allows an individual to provide feedback to many others by means of broadcast emails, weblogs or discussion board postings, resulting in a "written" form of eWOM which has higher credibility than marketer-created sources of information on the internet (Bickart & Schindler, 2001). Although marketers are now beginning to realise the importance of eWOM, attitudinal differences amongst consumers from different cultural backgrounds still appear to be a major obstacle for companies extending their e-business in an online environment where national boundaries are not apparent (Chau et al., 2002; Singh et al., 2005).

The large number of discussion boards where eWOM can be freely exchanged has made such sites a focus of some recent research (Godes & Mayzlin, 2004; Kozinets, 2002; Nelson & Otnes, 2005). For example, Godes and Mayzlin (2004) used discussion boards to study the volume and dispersion of eWOM concerning new television shows while Nelson and Otnes (2005) investigated the effects of eWOM contained in postings to an online wedding planning website. Although the marketing literature has used discussion boards to explore eWOM, there has been limited investigation into any cross-cultural

differences in eWOM on discussion boards and no studies which have specifically analysed and compared eWOM across discussion boards based in different countries over time.

As the two largest online communities, the US and China provide ideal contrast points for a cross-cultural study of online behaviour. The US represents the most researched culture in the world, as well as the sample basis for much consumer research theory. China, in contrast, is culturally very different from the US and has been the subject of relatively little research (Doran, 2002). The purpose of this study was therefore to investigate cross-cultural differences in eWOM, by conducting an ethnographic and textual analysis of discussion boards based in the US and China over a two-year period. By comparing the online behaviour of consumers from different cultural backgrounds over time, the study contributes to the literature on cross-cultural analysis in a computer-mediated environment and extends the literature on online behaviour of consumers. The study also contributes to the knowledge of marketers by providing insights into consumers' attitudes and behaviour, which can potentially be used by marketers to better respond to, and target, these consumers in order to overcome barriers to consumer choice.

5.2 Literature Review

Individualism and collectivism

Among the many different ways that culture has been classified by researchers, Hofstede's (1980; 1991) and Hofstede and Bond's (1988) dimensions of culture are the most widely accepted and cited among researchers. Hofstede and Bond (1988) identified

four dimensions of culture: individualism-collectivism, uncertainty avoidance, power distance and masculinity. In this study, we focus on the individualism-collectivism dimension, which explains the extent to which the society values group norms or individual freedom (Singh et al., 2005). In individualist cultures, there is said to be a strong "I" consciousness, self actualisation is valued, and people are encouraged to express private opinions (Laroche et al., 2005). Therefore, individualist cultures such as the US emphasise self-reliance, independence, and freedom (Hofstede, 1980). In collectivist cultures, the opposite occurs where there is said to be a "We" consciousness and maintaining group consensus and avoiding loss of face are important considerations (De Mooij, 2004). For example, Yao (1988) demonstrated that in collectivist societies such as China, the sacrifice of self for the greater benefit of society is encouraged. Furthermore, the Chinese society also places emphasis on *guanxi* which can be loosely translated as personal network or special relationship. It is closely related to *renqing* (favour) and *li* (etiquette, propriety, and rules of conduct) and is an important consideration in the regulating of relationships (Ghauri & Fang, 2001; Ramasamy et al., 2006).

The literature has shown that culture affects a consumer's decision-making process and in particular, the extent of information search before a purchase decision (Long-Chuan et al., 1999; McGuiness et al., 1991). Collectivist cultures have been shown to display differences from individualist cultures in information-seeking behaviour. For example, in an offline cross-cultural study of information search, Doran (2002) found that Chinese consumers were more likely than American consumers to search for, and rely on,

personal sources of information. In contrast, American consumers did less directed search and relied more on their internal knowledge and personal experience with products. Doran suggested that the Chinese, living in a collectivist culture, were less likely to make individual decisions and more likely to let reference groups influence choices, while the Americans were more individualistic and were more likely to make their final decisions alone. In another study which compared information-seeking for a financial decision by American and Asian cultural groups, Tseng and Stern (1996) found that the Asians desired higher levels of interpersonal communication, which in turn affected the perceived trustworthiness of the information source. This supports Wong and Chan's (1999) argument that collectivist cultures regard information sharing as a way to share favours and build *guanxi* while individualist cultures tend to focus on self-reliance. Their findings suggest that the Chinese rely more on information obtained within a reference group, because use of this information is seen as a relationship-enhancement behaviour. Individualist cultures, in contrast, are said to place higher value on self-reliance and independence and may therefore rely less on others in the information-seeking process (Ordonez de Pablos, 2005).

Further argument for a cultural effect on information-seeking is provided by the work of Hall (1976; 2000), who classified cultures into high and low context, with high context cultures said to be a result of deep involvement between individuals and the mutual obligation that one has towards another in a group. In Hall's studies, China was placed towards the high end of the continuum, and it is possible that one effect of this high context culture would be a greater reliance on the opinions of others to support decision

making, which in our study would be likely to result in a higher level of requests for information online.

However, whether the cultural differences discussed in other studies extend to the online environment has not been investigated, and this study aims to investigate information-seeking and giving online and draw a comparison between users of China and US based discussion boards. Discussion boards are virtual communities organised around interest specific topics, and they thus represent market segments whose interests are very similar and much more specific than the population at large (Pitta & Fowler, 2005). Discussion boards therefore appear to be collectivist by nature, because of the common interest that discussants share, but it is unclear if participants on these discussion boards exhibit the full collectivism behaviour shown in offline communities. A study by Cummings et al. (2002) has suggested that discussion boards do not appear to be intimate social groups because they are relatively large in size and have high churn rates with 22% of original members dropping out annually and double this number joining the group. Thus, Cummings et al. (2002) posit that discussion boards participants are at best "weak-tie collectives". The cross-cultural literature has not examined or compared the extent to which the commonly described dimensions of individualism and collectivism extend to online behaviour; it is possible that individuals' inherent cultural characteristics will also be displayed online, but alternatively, the collectivist nature of discussion boards may mask offline differences by encouraging collectivist behaviour in individualist societies. Extrapolating from offline research, however, and consistent with Wong and Chan's (1999) argument that collectivist cultures place greater value on information gained

within a reference group, we propose and test Hypothesis 1 regarding the effect of individualist and collectivist cultures on information-seeking online:

H1. Discussion board participants from collectivist cultures will engage in more information-seeking online than those from individualist cultures.

The effect of culture on information-*giving* online, however, may be very different. Information-giving often requires people to be prepared to stand out and express an opinion, which in some cases may result in the individual expressing a view which is contrary to others within the group. In a collectivist culture, the key cultural tenets have been said to be the maintenance of harmony, respect for hierarchy and the preservation of face within the group (Chen & Pan, 1993), so it is possible that participants based in collectivist cultures will be less likely to express an opinion which may challenge the opinion of others within the group. In contrast, people from individualist cultures are likely to be more willing to provide information, opinions, and recommendations, consistent with research suggesting that individualist cultures encourage the expression of private opinions (Laroche et al., 2005). Hence, the rate of information-giving is expected to be higher for discussion board participants from individualist cultures. We therefore propose and test Hypothesis 2:

H2. Discussion board participants from individualist cultures will engage in a higher rate of information-giving than those from collectivist cultures.

Country-of-Origin effects on discussion boards

Consumers often perceive stereotype images about countries and these images are subsequently used as information cues in judging products from different origins (Lotz & Hu, 2001). This is often termed the Country-of-Origin or "CoO" effect, and a number of studies have shown that the CoO of a product or service affects consumers' perceptions and influences a purchase decision (Baker & Ballington, 2002; Nagashima, 1970; Saminee, 1994). Johansson (1989) asserted that the CoO could be a "mental shortcut to decision making" and can be categorised as positive or negative.

Although there has been an extensive literature on CoO effects, Maheswaran (1994) argued that a systematic examination based on a theoretical framework for understanding CoO effects across cultures is lacking. Researchers have thus turned to Hofstede's individualism and collectivism framework as a basis for examining cultural variations in CoO effects (Gürhan-Canli & Maheswaran, 2000; Triandis, 1995). For example Gürhan-Canli and Maheswaran (2000) studied the extent to which cultural orientation influences CoO effects and concluded that the individualism and collectivism dimension is a viable framework for exploring CoO variations across cultures.

Maheswaran's criticism of the lack of a theoretical framework for the study of CoO effects is supported by a lack of diversity in existing CoO studies, resulting in an emphasis on research in individualist cultures. For example in an extensive review of 99 CoO studies investigating perceptions of consumers from 34 different countries, Al-

Sulaiti and Baker (1998) noted that most CoO research has been conducted into consumers' perceptions in more developed, Western countries. They found only one study (Zhang, 1996), which investigated CoO effects in mainland China.

Previous CoO research has demonstrated that consumers' attitudes towards foreign products differ significantly from country to country (Beverland & Lindgreen, 2002; Lotz & Hu, 2001; Nagashima, 1970; Saminee, 1994). Al-Sulaiti and Baker (1998) found a general home-country selection bias, with subjects (especially less expert consumers) preferring products and services from their own country, and a bias against products from less-developed countries. In a study comparing Japanese and US consumers, Gürhan-Canli and Maheswaran (2000) found that CoO effects were much more prominent among Japanese consumers, and suggested that home-country bias is particularly important in collectivist cultures in an effect they called "collectivism-based preference" i.e. where consumers from a collectivist culture (in their study, Japan) are said to show a greater preference for same-country products, even if they are of lower quality. In contrast, US consumers in the same study showed a preference for same-country products only when those products were superior to foreign products, suggesting that the CoO may be of less importance in individualist cultures.

Neither the review by Al-Sulaiti and Baker (1998), nor additional literature search revealed any studies addressing CoO effects in an online environment, although based on the work of Gürhan-Canli and Maheswaran (2000), consumers from collectivist cultures may be more likely to react to the CoO of a product than consumers from an individualist

culture. Our study specifically examines the US as an example of an individualist culture, and China as an example of a collectivist culture, and separate studies have found CoO effects among both US consumers (for a review, see Al-Sulaiti and Baker (1998)) and Chinese consumers (Zhang, 1996). Zhang found that both Japanese and US products (shirts and televisions) were preferred by Chinese consumers to Korean products, and for one product (shirts), Japanese products were rated equal to US products. Based on the large CoO effects in that study, Zhang suggested that Chinese consumers might be particularly sensitive to CoO effects, although that study did not directly compare Chinese consumers with any other culture. In a study published two years later, Klein et al. (1998) found evidence of negative CoO effects for Japanese products in one region of China, Nanjing. Nanjing was the site of the "Nanjing Massacre", the horrific slaughter of 300,000 civilians by the Japanese in December 1937 and January 1938, and Klein et al. showed that animosity amongst Chinese consumers in Nanjing towards Japan and Japanese products had a significant impact on buying decisions. Klein et al.'s study did not examine the behaviour of Chinese citizens outside Nanjing, so their study could not establish whether this war-based animosity toward Japan would extend to the wider Chinese community, or to online discussions.

To date, there have been no studies that have quantified and/or compared the frequency of positive and negative CoO statements between US and Chinese consumers within an online context such as discussion boards. However consistent with the limited offline research in this area (Gürhan-Canli & Maheswaran, 2000), we expect that participants from collectivist cultures will be more concerned about the CoO of a product and thus

engage in higher levels of both positive and negative CoO statements within a discussion board. We therefore propose and test:

H3. Participants on discussion boards based in a collectivist culture will have a higher frequency of negative CoO statements.

H4. Participants on discussion boards based in a collectivist culture will have a higher frequency of positive CoO statements.

In summary, the literature does not provide clear guidance on any differences in the online behaviour of consumers from individualist and collectivist cultures. Prior research has suggested that the Chinese, living in a collectivist culture, will engage in more WOM and are more likely to be involved in information search (Doran, 2002), though less involved in information-giving (Laroche et al., 2005). Also, because of their allegiance to and identification with their in-groups, there is some evidence that consumers from collectivist cultures will place higher importance on the CoO of a product (Gürhan-Canli & Maheswaran, 2000). With increasing numbers of consumers using the internet as a source of information and as a guide to product choice, understanding cross-cultural differences in information-seeking, information-giving, and CoO effects online will become increasingly important for marketers selling products in a global marketplace.

5.3 Methodology

The study investigated the behaviour of individuals who visited six discussion boards with a focus on "Digital Photography". These discussion boards are based on six different internet portals; eBay, Yahoo, Google, EachNet, Sina and Netease. The first three of these discussion boards are US based and thus classified as primarily reflecting an individualist culture, while EachNet, Sina and Netease are China based and classified as representing a collectivist culture. The languages used on the US and China based discussion boards were English and Mandarin respectively. These discussion boards were selected based on the recommendations by Kozinets (2002) that study sites should have a high level of interaction and a sufficient amount of web traffic. Furthermore, these discussion boards were based on popular internet portals and thus were considered ideal for this study (Elgin, 2004; Fannin, 2003; Gomes-Casseres, 2001; Kessler, 2004).

The US based discussion boards on eBay, Yahoo, and Google need little introduction as they have all managed to build global brands and create businesses with market capitalisations of over $50 billion since 1995 (Klein, 2005). The China based internet portals are less well known outside China, but all have large numbers of visitors. EachNet is the Chinese equivalent of eBay, with a similar layout, and provides a forum for Chinese language auctions and discussions. It was purchased by eBay in 2003 and has a total of more than 10 million registered users (China Daily, 2005; Hof, 2003). Sina and Netease are both popular news portals in China and have approximately 127 million and 298 million registered users respectively (Qiang, 2004; Turner, 2000; Web Industry Trends, 2005).

While still substantially lower than the US, use of discussion boards in China is high: according to estimates in 2004, one-fifth of the 90 million Chinese internet users regularly use discussion boards to read news, search for information and debate current affairs (Qiang, 2004). Discussion boards are a good source of information for product users or potential purchasers within both cultures, and thus provide a potentially important source of eWOM for purchasers close to the decision-making process, when eWOM is most likely to occur and to be influential (Kozinets, 2002).

Data was collected from the "Digital Photography" discussion boards since digital cameras are considered to be a "technological product" with high consumer involvement (Poiescz & deBont, 1995). Digital cameras are also a commonly purchased product category where many consumers in both the US and China are likely to do research on the internet before making a purchase. The US and China markets are also of critical importance for marketers: it is estimated that by 2008, China will be the second largest market for digital cameras, second only to the US (People's Daily Online, 2004). Digital cameras are therefore an appropriate product category for observation and comparison of cross-cultural behaviour online.

Online observation was carried out on all the discussion boards, and all discussion postings that related to digital cameras were downloaded daily over a three-month period from March to May 2004. This same process was repeated a year later from March to

May 2005. The observation process is consistent with the established practice of "Netnography", which is defined as "a written account resulting from fieldwork studying the cultures and communities that emerge from online, computer mediated, or internet-based communications" (Kozinets, 1998, p. 366). Each posting contains the author's pseudonym, a subject line, the name of the discussion group, the date of the post, and the text of the message. All postings are organised into threads containing the same subject line and can thus be likened to an online conversation.

Information from each posting such as the author's pseudonym, subject line, and date of posting was first recorded onto a database. Each posting was then examined within their respective threads and coded for a number of measures: Information-seeking; Information-giving; CoO effects; Brand Mentions; Number of Questions Asked; Pleasantries and Word Count of each posting. The first fifty postings were coded by a bilingual research assistant and by the bilingual first author. Agreement of coding was checked, and differences resolved by discussion. A further random sample of 50 postings was then coded by both, with 100% agreement on coding. Coding for 2004 was completed by the research assistant, with regular random checks by the bilingual first author to ensure coding reliability. In 2005, because of the exhaustion of research funds, coding was completed by the bilingual first author with random reliability checks performed by the research assistant.

Table I summarises the total number of discussion postings analysed. For the US based discussion boards, a total of 4,308 discussion postings from a 90-day period (March-

May) in 2004 and for an equivalent period in 2005 were downloaded and coded. For the China based discussion boards, 1,685 discussion postings over the same 90-day periods in 2004 and 2005 were downloaded and coded. In all, a total of 5,993 postings were analysed for the fifteen month period.

Table I: Summary of number of discussion postings

	US based discussion boards		**China based discussion boards**	
	2004	**2005**	**2004**	**2005**
Number of discussion postings	2,060	2,248	969	716
Total	4,308		1,685	
Grand total	5,993			

5.4 Results

Information-seeking behaviour

All discussion postings were coded to identify direct requests for digital camera recommendations and the percentage of requests for information, as a percentage of all postings on the discussion boards, was then calculated. The following quote provides a typical example of a direct request for recommendation, showing the specific nature of requests. Ten participants responded, discussed and recommended a total of six brands of digital cameras:

I am interested in purchasing a camera to use primarily for black and white photography. I was curious if there was a specific brand recommended for black and white photography. I eventually want to use the camera for professional shots/family and children. Can anyone recommend a specific camera and tell me more about it. Any advice is appreciated. Thanks! (28 April 2005).

Table II shows the results of the comparison of direct requests for recommendation across the US and China based discussion boards in 2004 and 2005. In both years, there were a significantly higher percentage of discussion postings containing direct requests for recommendation on the China based discussion boards than the US based discussion boards ($p < 0.001$). This higher frequency of requests for recommendations suggests that the Chinese participants, as hypothesised, were more likely to request product recommendations and/or information. Hypothesis 1 was thus supported.

Table II: Postings with direct requests for recommendation

	US (N = 2,060 postings)		**China (N = 969 postings)**	
	Number	**Percentage**	**Number**	**Percentage**
Direct requests for recommendation in 2004	148	7.2	212	21.9
	$Z = 10.17$; $p < 0.001$			
	US (N = 2,248 postings)		**China (N = 716 postings)**	
	Number	**Percentage**	**Number**	**Percentage**
Direct requests for recommendation in 2005	117	5.2	114	15.9
	$Z = 7.41$; $p < 0.001$			

Information-giving behaviour

Since there were a higher percentage of requests for recommendation on the China based discussion boards, it was considered inappropriate to compare the raw percentage of discussion postings containing recommendations (since these would be expected to vary as a function of the number of requests, which was higher on the Chinese sites). The rate of information-giving was therefore assessed by comparing the average number of camera recommendations provided in response to each request. Recommendations were typically very specific; often giving detailed information on brands, models, and features, as shown by the following discussion postings:

> *I strongly recommend Canon Ixus if you can afford it… from my short time with it, it seems to do a great job. Anyway, if you do buy one, I'm convinced you'll love it. (12 May 2004).*

> *I would go for the Fuji A340 because it has a Macro setting. It is very important to use the Macro for close up detail. I am on my 4th Digital camera and I love the Sony ones. They have very accurate color. I started with a 0.5 mega pixel Kodak… it was a horror…went to a 2.1 Sony which I bought on eBay and loved. (7 May 2005).*

Table III summarises the results for the average number of digital camera recommendations in response to requests across the US and China based discussion boards. There was a significant difference between the mean number of recommendations

per request on the US and China based discussion boards in both 2004 and 2005 (F = 23.61; $p < 0.001$). For 2004, the mean number of recommendations per request was 1.89 for the US based discussion boards as opposed to just 0.78 for the China based discussion boards. This pattern was repeated in 2005 with an average of 2.56 recommendations for each request on the US based discussion boards compared to an average of 1.43 recommendations per request on the China based discussion boards. Follow up *t*-tests showed that the US based discussion boards had a significantly higher number of recommendations per request than the China based discussion boards in both 2004 (t = 5.73; $p < 0.001$) and 2005 (t = 3.70; $p < 0.001$). Hypothesis 2 was therefore supported; participants on US based discussion boards were significantly more likely to engage in information provision than participants on Chinese discussion boards. The number of recommendations per request also increased significantly for both countries from 2004 to 2005 (for the US, t = 2.29; p = 0.023 and for China t = 3.04; p = 0.003).

Table III: Average number of digital camera recommendations per request

Discussion boards	N	Mean	Std dev.	*F*	*p*
US 2004	148	1.89	2.18		
US 2005	117	2.56	2.52		
China 2004	212	0.78	1.06	23.61	<0.001
China 2005	214	1.43	2.14		

Country-of-Origin effects

To assess and compare participants' willingness to express CoO opinions, all discussion postings in 2004 and 2005 that contained a reference to a digital camera's CoO were coded as positive, negative, or neutral. The country to which the reference was made was also recorded on the coding sheet.

Table IV shows a summary of the results. There was a significant difference in the percentage of all types of CoO references between the US and China based discussion boards in both years ($Z = 7.00$; $p < 0.001$ for 2004 and $Z = 13.38$; $p < 0.001$ for 2005). The Chinese engaged in more negative CoO references than their US counterparts in both 2004 and 2005 ($p < 0.001$ for both years), and also more positive CoO references ($p < 0.001$ for both years). Hypotheses 3 and 4 were therefore supported; participants on China based discussion boards were significantly more likely to express both negative and positive CoO statements.

Table IV: Country-of-Origin references

CoO references in 2004	US (2,060 postings)		China (969 postings)		Difference (proportions)	
	Number	**Percentage**	**Number**	**Percentage**	***Z***	***p***
Positive reference	0	0%	12	1.24%	3.49	< 0.001
Negative reference	1	0.05%	27	2.79%	5.16	< 0.001
Neutral reference	3	0.15%	12	1.24%	2.99	0.003
Total	4	0.2%	51	5.26%	7.00	< 0.001
CoO references in 2005	**US (2,248 postings)**		**China (716 postings)**		**Difference (proportions)**	
	Number	**Percentage**	**Number**	**Percentage**	***Z***	***p***
Positive reference	0	0%	30	4.19%	5.60	< 0.001
Negative reference	3	0.13%	101	14.11%	10.72	< 0.001
Neutral reference	0	0%	14	1.96%	3.78	< 0.001
Total	3	0.13%	145	20.25%	13.38	< 0.001

Further analysis showed a significant increase in the number of both negative and positive CoO statements on the China based discussion boards from 2004 to 2005 (Z = 9.01; $p < 0.001$). Particularly notable was a sharp increase in the proportion of postings containing negative CoO statements (from 2.79% of all postings in 2004 to 14.11% in 2005). The percentage of positive CoO statements also increased sharply (from 1.24% of

all postings in 2004 to 4.19% in 2005), but for both years positive CoO statements were much less common than negative statements.

Further qualitative analysis of the negative CoO references was carried out, and revealed a specific negative CoO theme: negative comments about Japan. Of the 27 negative CoO references in 2004, 20 (74.1%) consisted of unfavourable references to Japan and/or its products. The negative CoO references fell into several categories; comments which appeared to relate to the Second World War (in which Japan invaded parts of China), comments that appeared to relate to the way Japan exports its products and general anti-Japanese sentiments which specifically suggested an unwillingness to purchase. There was even stronger evidence of this anti-Japanese sentiment in 2005 with 97 (96%) of the 101 negative CoO references referring to Japan. It is notable that this evidence of anti-Japanese sentiments both preceded and was potentially increased by large scale anti-Japanese demonstrations in April 2005, which broke out in various Chinese cities over the reported rewriting of Japanese school history textbooks, which was seen in China as an attempt to downplay Japan's wartime atrocities within China (Zhu, 2005). Given the evidence of anti-Japanese sentiments on the discussion boards in 2004, it appears that anti-Japanese sentiments were already prevalent before the demonstrations took place in April 2005 and were directed at products (including digital cameras) that originated from Japan. This anti-Japanese sentiment was shown by requests for non-Japanese brands, or exhortations not to buy Japanese products, as shown in the following (translated) examples of negative CoO postings downloaded in 2004:

I want to buy a good digital camera but do not want Japanese made products, please give me some recommendations. (28 April 2004).

As citizens, we are unable to control the political direction of our country. We can however begin by not purchasing Japanese products. With this national spirit, there will be hope for our country. (30 March 2004).

The frequency of negative CoO references increased from 2.79% of all postings in 2004 to 14.11% of postings in 2005 with significantly more discussion postings expressing anti-Japanese sentiments ($Z = 8.06$; $p < 0.001$). These existing anti-Japanese sentiments appear to have been heightened by the reports of rewriting of Japanese textbooks, as shown in the following post from 2005:

Recommended brands: America's "Kodak", China's "Legend" and Korea's "Samsung". Boycott brands: Fuji, Konica, Sony, JVC, Panasonic, Toshiba and Olympus. (These companies have financially supported the Japanese right wing government in rewriting the history textbooks which deny the Nanjing Massacre.) (24 March 2005).

It is difficult to be sure of the exact motivations behind the observed anti-Japanese sentiments. Some (like the example above) appear to reflect the anti-Japanese animosity dating back to World War II which was observed by Klein et al. (1998) in the Nanjing area. Other postings, while possibly based on sentiments originating from war related

animosity, referred directly to the potential for future conflict, suggesting that profits from Japanese products would support future military action, as shown in the following two examples:

> *The committee for the rewriting of Japanese history textbook has sworn to completely remove the 'Nanjing Massacre' and the 'Comfort Women' chapters from the new textbook. When you buy Japanese goods today, the money from these goods will be used to manufacture bullets which may penetrate your body someday. (23 March 2005).*

> *If you buy a Japanese car, the future Japanese army tanks that come on to China's streets will be made by you!! If you buy Japanese cabinets, the future bullets that penetrate your son's head will be made by you!! If you buy a Japanese Hi-fi system, in the future, you will hear the cries of the Chinese being killed in the war!!! (22 April 2005).*

One participant from the China based discussion boards went beyond words to demonstrate their anti-Japanese sentiments by posting an image of Japanese brands with a superimposed cross and message "Boycott Japanese products" (see Figure 1).

Figure 1: Picture posted by a Chinese participant in April 2005—text says: "Boycott Japanese Products".

Despite a majority of CoO references being negative, participants from the China based discussion boards also had a higher percentage of positive CoO statements than those on the US based discussion boards in both 2004 ($Z = 3.49$, $p < 0.001$) and 2005 ($Z = 5.60$, $p < 0.001$). Qualitative analysis of these statements showed that the majority of these positive CoO statements related to Chinese products, consistent with the CoO literature which suggests that consumers often exhibit a preference for products produced in their home country even though such products may not necessarily be the best quality or price

(Gürhan-Canli & Maheswaran, 2000; Nagashima, 1970). The following is a typical (translated) example of this type of posting:

> *Domestic digital cameras are slightly poorer in quality but still functional. If you are Chinese, you should buy domestic products!! (16 April 2004).*

5.5 Discussions and Limitations

This study found both quantitative and qualitative differences in eWOM and CoO opinions in the content of discussion boards based in the US and China. Participants from the China based discussion boards engaged in more requests for product recommendations, asking for recommendations more than three times as often as the participants of the US based discussion boards (21.9% as opposed to 7.2% in 2004 and 15.9% as opposed to 5.2% in 2005). This suggests that Chinese participants may be more likely to seek out and respond to eWOM. This behaviour is consistent with the collectivist culture of the Chinese, which encourages information sharing and a higher reliance on personal sources of information. The higher frequency of requests for information on the China based discussion boards is also consistent with suggestions from the literature that Chinese consumers, being from a collectivist culture, will show a higher level of group reliance when making a decision compared to discussion participants from an individualist culture, who might be expected to show a higher degree of self reliance (Laroche et al., 2005). The higher level of information-seeking by Chinese consumers is also consistent with Hall's suggestion (1976; 2000) that individuals from high context cultures (such as China) are characterised by deep involvement

between members of the group, which appears to be manifested here in a greater frequency of requests for information.

In contrast with the higher levels of information-*seeking* by Chinese, the study found higher levels of information-*giving* by US based participants (supporting Hypothesis 2). This finding is consistent with the work of Laroche et al. (2005), who suggested that consumers from individualist cultures are more vocal and more willing for their opinions and recommendations to be heard. This greater apparent willingness of US based participants to provide information and recommendations has important implications for marketers attempting to build and capitalise on favourable WOM. Reichheld (1996) studied the predictors of company growth and found the willingness of customers to recommend a company or brand to be the highest predictor of a company's growth. The results from this study suggest that consumers from individualist cultures will be more willing to provide recommendations, potentially presenting a challenge for companies attempting to build WOM among collectivist cultures.

Although the information-giving and seeking behaviours observed are consistent with the reported characteristics of individualist and collectivist cultures, there could be alternative explanations for these observed differences. For example, the length of time that each discussant has been involved in the discussion board, and their relative experience with the product category may have influenced the extent of information-seeking and giving by the discussants. Given the more recent economic growth of China, it is likely that Chinese participants have less experience online, and possibly less

experience with the product class, and may thus have been more likely to ask for recommendations, and less likely to give them, than their presumably more experienced US counterparts. The Chinese could thus be asking for more, and providing less, information on the discussion boards because they have less experience with digital cameras and hence, less knowledge to share. On a macro level, the overall experience of a country when working with discussion boards may also affect the extent of information-giving and seeking. As China's use of the internet evolves, the behaviour of Chinese participants could move closer to that of US users, and the Chinese may become more information givers rather than information seekers. The observational nature of our data collection did not allow us to model the effect of these factors, which could be explored in future research.

There were further important differences between the two cultural groups, as shown by the support of hypotheses 3 and 4, concerning positive and negative CoO references. Based on our data, Chinese participants were far more likely to engage in both positive and negative CoO discussion; in contrast, CoO effects appeared to be largely irrelevant for US consumers. This is consistent with Zhang's suggestion (1996) that Chinese consumers appear to be particularly sensitive to CoO effects. Our results are also consistent with the findings of Gürhan-Canli and Maheswaran (2000), who found that Japanese consumers showed a greater preference for same-country products than US subjects, and interpreted this as "collectivism-based preference". Our results suggest an alternative explanation for their findings, i.e. that all CoO effects are more important in

collectivist cultures, not just the same-country bias which has been observed in both collectivist and individualistic societies.

Our results also suggest an interesting extension to previous findings on CoO effects in China, with the majority of negative CoO opinions related to Japan, and the percentage of negative comments increasing sharply over the one year follow-up. This animosity effect towards Japan was not revealed in Zhang's 1996 study of Chinese attitudes to Japanese products, and shows that the anti-Japanese animosity discussed by Klein et al. (1998) both extends beyond their study site of Nanjing, and appears to have increased considerably since Zhang's study in 1996.

While the higher frequency of CoO sentiments on the China based discussion boards does suggest that the Chinese are more susceptible to CoO effects, an alternative explanation for the small number of CoO references on the US based discussion boards is that the US discussants were more familiar with the brands of digital cameras discussed and as such, may have relied less on the CoO when evaluating that particular brand. It is possible, therefore, that as Chinese consumers acquire the higher levels of experience of US consumers, that the importance of CoO effects may diminish in China. While our study cannot eliminate that the differences in CoO effects were due to the lower levels of consumer experience in China with the product category, there is some evidence that the importance of CoO in China is not likely to be a transient phenomenon. While CoO references were almost completely absent from the US based discussion boards in both 2004 and 2005, negative CoO references increased significantly on the China based

discussion boards, with most referring to Japan and/or to brands that originated from Japan. In contrast with previous CoO effects discussed in the literature, these negative CoO sentiments appeared to be independent of (or even despite) perceived product quality, instead reflecting ethnocentric sentiments apparently largely linked to the Japanese occupation of parts of China during World War II, with frequent mention of "bullets", "army tanks", and other images of war. Such negative Chinese sentiments stemming from past national conflicts have been previously noted by Klein et al. (1998) and by Tung (2005), but national based antagonism has been neglected in the CoO literature. The nationally driven CoO effect we observed was apparently enhanced by the widespread protests in China over the perceived whitewashing of Japanese textbooks, with a sharp year on year increase in the percentage of postings containing negative CoO references (from 2.79% in 2004 to 14.11% a year later).

While previous CoO literature has discussed ethnocentric effects on CoO judgments, that discussion has largely been restricted to a preference for same country products. Apart from one notable study by Klein et al. (1998), no studies have identified or discussed negative attitudes towards the products of a country based on past military conflict. The results from our study suggest a clear threat to the success of Japanese products in China. However they also present a warning for other countries, suggesting that anti-national sentiments can be expressed and magnified online, potentially contributing to greater salience and greater influence of non-product related CoO features. Future CoO research would benefit from measuring and modeling attitude towards the country, separate from

any product specific evaluations, to see if these national effects are detected in other product environments.

In addition to a higher percentage of negative CoO references, the China based discussion boards also had a higher percentage of positive CoO references. In contrast, there were no positive CoO references on the US based discussion boards at all. However, our results must be interpreted with caution, since no previous studies have examined CoO effects online, and there may be important differences in CoO effects on- and offline. Previous research has examined CoO effects on individual choice and/or evaluation, under circumstances where peer opinions about any CoO effects were not highly salient. In contrast, the online discussion board provides a direct record of other discussants' opinions, with the potential to directly influence and magnify other participants' evaluations and choice. Thus if some participants of discussion boards are expressing strong and negative CoO judgments, it would be expected that CoO effects will become more salient, and perhaps more deterministic in judgments. Thus our results showed an increase in CoO sentiment in 2005, following both earlier discussion of negative CoO effects, and also wide online and offline publicity about anti-Japanese protests in China. It may be that the increasing number of CoO references online reflected their increasing salience, and that negative CoO effects might arise just as quickly in other countries if antagonism increases towards another country, and if that antagonism begins to be widely discussed. There has been some recent evidence of this in other markets: following the US led invasion of Iraq in 2003, consumers from different geographic markets were

reported to be boycotting American brands such as McDonald's and Kentucky Fried Chicken in protest at the US actions (Rockwell, 2003).

Finally, our study identifies an important extension to CoO theory: a reluctance to buy a country's products due to antagonism towards the country, despite a positive evaluation of the country's products. This effect has not been identified before in an online environment, but the rapid escalation in anti-Japanese sentiments on the China based discussion boards and in offline demonstrations and press reports suggests that negative CoO effects can rapidly become more salient for many consumers.

One limitation of the study is that it investigated six discussion boards for one product category only, and the people who visit discussion boards may not be typical of their respective wider communities, so the findings from these people cannot be generalised to the wider community. In particular, discussion boards tend to be somewhat collectivist in their nature, so behaviour on those sites may not reflect the characteristics of participants' offline communities. However, people who visit discussion boards are likely to be seen as relative experts among their offline peer groups, because their behaviour will mean that they are exposed to more information about the product category. As a result, the behaviour of these people is of interest to marketers, because they may be influential in the choices of their peers, and their behaviour may be an early predictor of trends. Our study showed some evidence of this, with the 2004 data indicating significant anti-Japanese content on the discussion boards, some twelve months before the outbreak of widespread anti-Japanese protests.

A further limitation of the study is our inability to ascertain the true nationality of the participants on the discussion boards. The discussion boards are based in the US and China respectively, and are likely to reflect a majority of discussants from those countries, but will almost certainly include non-US and Chinese nationals, since there are no barriers to inhabitants of other countries using these discussion boards. However, the results do provide the first cross-cultural comparison of English- and Mandarin-speaking respondents on different language discussion boards over time. Future research may benefit from replicating this research with other product categories on other discussion boards.

5.6 Conclusion

In the first cross-cultural study of eWOM, the study finds consistent and important differences between participants on US and China based discussion boards across two separate years. Participants on the China based discussion boards engaged in higher levels of information-seeking, consistent with a collectivist culture. In contrast, participants on the US based discussion boards engaged in higher levels of information-giving (and thus higher levels of eWOM) consistent with an individualist culture. There were also strong differences in expressed CoO sentiments between the discussion boards, with participants on the China based discussion boards engaging in significantly higher discussion of the CoO of the product. In contrast with previous CoO research, these (largely negative and anti-Japanese) sentiments appeared to be unrelated to perceived product quality. This may be due to differences in the China and US based discussants, or

it may be a result of increasing salience over time as the presence of CoO discussion makes the issue more salient for others. The results do present a warning for international marketers that negative CoO effects can rapidly increase as a result of national actions that are unrelated to product quality. Anticipating these effects and crisis planning may become increasingly important as discussion boards provide a venue for unfavourable eWOM and CoO discussion to take place.

CHAPTER 6 CONCLUSION

6.1 Introduction

This chapter summarises the conclusions from the three articles and discusses limitations of the research. Suggestions for further research are then provided. The final section summarises the chapter and the thesis.

6.2 Conclusions Drawn from the Three Articles

Each of the three articles has made a distinct contribution to the knowledge and literature of eWOM and CoO effects relating to discussants on US and China based discussion boards. Identifying the information-giving and information-seeking behaviour of participants and the extent to which CoO effects are discussed in an online environment is useful for marketers who observe and use discussion boards as part of their marketing strategies.

The first article compared eWOM on two US and China based discussion boards (eBay and EachNet) and provided the first published data on the extent and type of eWOM in the areas of the frequency of brand mentions and information-seeking behaviour of discussants on discussion boards. The findings suggest that the frequency of brand mentions partly reflects the brand's market share in the Chinese market as there was a correlation between the number of brand mentions and market share on the China based discussion board. This same result was not observed for the US based discussion board. Although the reasons for these differences are not clear, the difference in brand mention

frequency across the two discussion boards suggest quite different awareness levels and perceptions of the different brands in the respective markets.

The findings also indicate that the Chinese had a higher frequency of information-seeking in comparison to their US counterparts. Since there have been no previous studies on online Chinese information-seeking behaviour, the reasons behind this finding remain unclear. Perhaps their limited access to some international websites (due to language limitations and government policy) resulted in the Chinese seeking more information on the websites investigated in this study, compared to their US counterparts who have wider website accessibility. It may be possible too that the China based discussion boards represent a higher number of discussants who are "early adopters" and thus seek information more actively. It may also be possible that the information-seeking behaviour occurs more frequently within the Chinese community as cultural values such as "Guanxi" may encourage a higher frequency of information-seeking within the in-group.

The content of the discussion postings also identified a difference in the CoO sentiments expressed online: the Chinese discussants demonstrated largely negative CoO references towards brands originating in Japan while the US discussants were not observed to demonstrate this same negative CoO sentiment towards products that come from any other country, including Japan. An analysis of the discussion postings found that the negative CoO references by the Chinese discussants fell into several categories: comments that related to the Second World War, comments that related to the way Japan exports its products and general anti-Japanese sentiments which suggest an unwillingness

to purchase Japanese products. A follow-up analysis was conducted in the subsequent articles to further investigate the CoO effects observed.

The second article built on the analysis from the first article and collected data from four other discussion boards (two are US based and two are China based). In total, six discussion boards (three US and three China based) were analysed across a 90-day period in 2004. Using data from these six discussion boards, the article analysed the stated and revealed behaviour of the US and Chinese discussants. An online survey was conducted to observe the stated behaviour and online observation of discussion postings was conducted to record the revealed behaviour. Using a combination of both methods, the study showed the behavioural differences between participants from the various discussion boards. The online survey was useful in profiling the respondents and the findings show that 82% were males, with the Chinese respondents being younger on average. The online survey also found that the Chinese rated the importance of information obtained from the discussion board higher when compared with their US counterparts. In addition, the online survey showed no significant difference in the stated information-seeking behaviour—both the Americans and Chinese respondents indicated that they had requested a digital camera recommendation at some time. However, the stated information-giving behaviour found significantly more of the US respondents stating they had given a recommendation about a brand or product when compared with their Chinese counterparts.

The online observation on the other hand extended the findings from the first article to include the information-giving behaviour of participants—an area which has not been observed in previous studies. This analysis was also extended by more data as findings from four other discussion boards were added to this study. Hence, the study makes a contribution by adding to the eWOM literature in the area of online information-giving and information-seeking behaviour of participants on discussion boards based in different cultures. Online observation of the information-giving behaviour showed that the American discussants were more likely to provide information—with more than twice the number of discussion postings giving a digital camera recommendation than postings requesting one. This resulted in the US discussion boards containing a richer source of information relative to requests. This finding is important as it indicates that the US discussion boards might be a good source of reference for consumers prior to making a purchase decision and hence marketers may consider using discussion boards as an information source for marketing their products. In terms of the information-seeking behaviour, although there was no significant difference observed from the online survey between the US and participants from Chinese websites, a consistent finding from the online observation in both the first and second study was that Chinese discussants were more likely to seek information than their American counterparts.

The third article focused on the same six discussion boards and investigated the behaviour of participants across two 90-day periods in 2004 and 2005. This longitudinal study builds on the previous findings of the first two articles to analyse eWOM and CoO effects on the six discussion boards that are based in an individualist (US) and collectivist

(China) culture. The findings of this third article show that the US discussants demonstrated a higher level of information-giving while the Chinese discussants showed a higher level of information-seeking. These findings have been found to be consistent with previous studies of the characteristics of individualist and collectivist cultures. However, alternative explanations such as the length of time that each discussant has been involved in the discussion boards and their relative experience with the product category could be used to explain the differences in the information-giving and information-seeking behaviours observed.

In the area of CoO references, it was found that the participants from Chinese websites were more likely to engage in both positive and negative CoO discussions, and an increase in frequency was observed over the period from 2004 to 2005. A majority of the negative Chinese CoO discussions related to brands originating in Japan. This finding extends the online CoO theory by showing that consumers can be reluctant to buy a country's products due to nationalistic antagonism. This effect has also been previously noted in the first article based on comparisons of two discussion boards in 2004. In conclusion, these findings caution marketers about negative CoO effects which can be unrelated to product quality and instead can be due to nationalistic antagonism.

In sum, the objective of the thesis was to conduct a cross-cultural comparison of online consumer behaviour on US and China based discussion boards. The themes of eWOM and CoO effects were central to the area of research within the three articles and the

findings have suggested three important conclusions to the research questions identified in Chapter 1:

a) The information-seeking behaviour of participants on the US and China based discussion boards was examined in all three articles. The findings from the three articles showed that Chinese discussants requested information more often than their US counterparts, consistent with the collectivist culture of the Chinese, which is said to encourage information sharing and to have high reliance on personal sources of information.

b) The information-giving behaviour of participants from the US and China based discussion boards was compared in the second and third articles. Using data from both 2004 and 2005, US participants were found to give recommendations about a brand or product more frequently than their Chinese counterparts. The higher proportion of information-giving by the American participants has resulted in the US discussion boards becoming a relatively richer source of recommendations. In contrast, although the participants from Chinese websites engaged in much more information-seeking than the American participants, they received less than one recommendation for every request for information.

c) The extent of CoO statements expressed by the participants within the discussion boards was analysed and it was noted from the findings in the first article that an

overwhelmingly negative perception towards brands that originate from Japan was expressed by the Chinese. The third article observed the same result using data from an additional two discussion boards and on replicating the data collection one year later, showed a theme of war based animosity on the China based discussion boards. The Chinese engaged in more negative CoO references than their US counterparts in both 2004 and 2005 and these references largely related to Japanese brands, with numerous calls from participants to boycott these brands. The participants from Chinese websites also expressed more positive CoO statements about their home country products than their US counterparts. This behaviour is consistent with the offline CoO literature which suggests that consumers often exhibit a preference for products produced in their home country even though such products may not necessarily be the best quality or price (Gürhan-Canli & Maheswaran, 2000). However the failure to observe this home country preference in the US data suggests that home country preference is not consistent across different countries. Hence, this first study of online CoO effects shows evidence that CoO effects do exist in an online environment and may be more salient for a particular cultural group. Many of the CoO statements made by participants online have also been shown to be unrelated to product quality, relating instead to an unwillingness to purchase a country's products due to pre-existing nationalistic antagonism.

In conclusion, this thesis has made a distinct contribution on two fronts. Firstly, it has contributed to the literature on eWOM by analysing the information-seeking and information-giving behaviour of discussants on discussion boards based in an

individualist and a collectivist culture. Secondly, this research has identified an extension to online CoO theory which is a reluctance to purchase a country's products irrespective of product quality. From the study, this behaviour has been shown to be due to pre-existing nationalistic antagonism. The effect has not been identified before in an online environment, and the rapid escalation in anti-Japanese sentiments on the China based discussion boards suggests that negative CoO effects can rapidly become more salient for consumers, representing a threat to branded products due to factors which may be largely or completely outside the control of the marketer.

6.3 Limitations of the Research

As discussed previously in the articles, the findings of this research should be considered in light of the following limitations. Firstly, an important limitation is the inability to ascertain the true nationality of the participants on the discussion boards. Although the discussion boards are based in the US and China, it is unlikely that the participants represented only Americans and Chinese since the internet offers no barriers to participants from other countries from using these discussion boards. It is possible that the US and China based discussion boards also include participants from countries that respectively use English (e.g. United Kingdom and Australia) and Mandarin (e.g. Taiwan and Singapore) as their main language. However, whatever the nationality of participants on the discussion boards, the results do show significant differences in the behaviour of participants who use these boards with different languages.

The second limitation pertains to the generalisability of this study. This study only examined discussion boards relevant to one product category (i.e. digital cameras). Without replication with other product categories, it is impossible to tell whether these results would be replicated in studies of other products. It is also possible that the participants who visit the digital camera discussion boards may not be typical of their respective wider communities, hence, it may be difficult to generalise the findings from these participants to the general consumer. However, since participants who visit discussion boards are likely to be seen as relative experts among their peer group, the behaviour of these participants is of interest to marketers as they may be influential in the choices of their peers and their behaviour may be an early predictor of market trends.

Thirdly, the small sample size of the online survey in the second article suggests caution in interpreting its results. Since there was no count of individuals visiting the respective discussion boards, it was impossible to determine the true response rate. However, given the lack of studies looking at eWOM on discussion boards based in countries with individualist and collectivist cultures, the study has benefited from the two different methods (i.e. online survey and online observation) which have shown both similarities and differences in the information-seeking and information-giving behaviour of participants from individualist and collectivist cultures.

Fourthly, the extent of information search could be affected by a variety of factors. For example, given the lower per capita income of the Chinese in comparison to the Americans, the purchase of digital cameras could be higher involvement, thus resulting in

increased information search. Furthermore, the availability of information online affects the search for product information. Many international websites have been off-limits to the participants from Chinese websites whereas US participants have wide accessibility to all information by manufacturers and retailers locally as well as internationally. This may in turn affect the extent of information search by the participants from Chinese websites.

6.4 Suggested Areas for Further Research

Further research is recommended to improve upon and extend the three respective studies. Digital cameras fall into the larger category of electronic devices, of which there are several others, for example, iPods, laptops, mobile phones. These electronic devices already have discussion boards dedicated to them which are available on different web portals. Hence, future research may benefit from replicating this study with other electronic and on-electronic devices product categories on other discussion boards.

The second article found that the Chinese respondents were generally younger than the US respondents. This difference in the age group may suggest that the younger Chinese participants were purchasing their first camera while the older US participants may have been making a repurchase. Hence, further research may benefit from analysing information search by different age groups. Separate in-depth analysis could also be performed on each of the discussion boards (i.e. on eBay, Yahoo and Google respectively). This approach could investigate any differences in the behavior of participants on different discussion boards.

Another area of further research could be developed by studying discussion boards from other individualist and collectivist cultures. Although this study examined and found differences in information-giving and information-seeking behaviour between an individualist and collectivist culture, there may be other differences between the US and China which may be the source of these differences. For example, a country's stage of development could account for differences in the online behaviour of consumers. To address this issue, a comparison could be made between the US and Japan since they represent the most economically developed individualist and collectivist cultures respectively.

6.5 Summary

As the use of the internet becomes more prevalent, marketers need to be aware that consumers are using channels such as discussion boards to communicate with other consumers and it would be beneficial to companies to tap into this publicly available information in order to obtain valuable information on issues such as eWOM and CoO effects related to their products. This thesis makes a distinct contribution to the literature on eWOM by demonstrating the extent and frequency of the online information-giving and information-seeking behaviour by discussants based in individualist and collectivist cultures. As discussed in the three articles, knowledge about the information-seeking and information-giving behaviour of consumers would be useful for marketers who want to use eWOM in their online promotion efforts. In particular, based on the results of the study, when promoting products within a collectivist culture, it may be a useful strategy

to use discussion boards as they appear to be a more important source of information than they are in individualist cultures.

This thesis has also contributed to the CoO literature by showing that CoO effects do exist on discussion boards and that the extent of these effects may be related to the cultural characteristics of a country. The findings from the three studies have suggested that US participants, coming from an individualist culture, are significantly less affected by CoO effects than their Chinese counterparts. An important extension to the online CoO theory demonstrated by this thesis is the negative CoO effect that the Chinese appear to have towards Japanese products. This is the first study that has observed this effect in an online environment, or outside the confines of a small geographic area.

Overall, this thesis has expanded on previous work in the areas of eWOM and CoO effects by comparing the extent of these factors on discussion boards that are based across different cultural groups. Understanding the differences between the online behaviour of participants from these cultural groups will be useful for marketers as discussion boards become another information channel for consumers to use in their decision-making processes.

Appendices

The following appendices contain the three journal articles in their original formats.

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