

How Worldwide Is Marketing Communication on the World Wide Web?

CLYDE A. WARDEN

Chaoyang University of
Technology
cwarden@libra.seed.net.tw

MENGGUAN LAI

National Cheng Kung
University
mklai@mail.ncku.edu.tw

WANN-YIH WU

National Cheng Kung
University
wany@mail.ncku.edu.tw

This study investigates the impact of different language interfaces on web-based product searches by Chinese consumers in Taiwan and how language familiarity impacts attitudes about the products found. Findings show that understanding the web-page interface language improves product evaluation when the product has high differentiation in the marketplace and is related to decreased evaluations when the level of differentiation is low. English, rather than an international language, is found to be nearly indistinguishable from a totally unknown language for both high- and low-differentiated products.

Don't Panic.

I'm not panicking!

Yes you are.

Alright so I'm panicking, what else is there to do?

You just come along with me and have a good time. The Galaxy's a fun place. You'll need to have this fish in your ear.

(Douglas Adams, *The Hitchhiker's Guide to the Galaxy*, 1980)

DOUGLAS ADAMS' MAIN CHARACTER, Arthur Dent, took his first step into the galaxy by placing a fish (a Babel fish) in his ear that could translate all the languages in the galaxy. A Babel fish is not likely to be available to consumers any time soon, but the World Wide Web is here now, and language comprehension is the first step in making any sense of the information flowing among culturally and linguistically diverse groups. The fastest growing geographic market for web users is Asia with over 100 million present users (Find, 2001) and the greatest potential number of total users. China has already surpassed Taiwan in total number of web users (22 million compared to 10 million) even though Taiwan's usage rate is over 50 percent and China's is under 2 percent (Find, 2001). Web users in China are growing faster than in any other country in Asia (McCarthy, 2000). Over 57 percent of South Korean web users are using broadband connections, compared to over 10 percent in the United States (Find, 2001). Such rapid growth out-

side of the United States forces marketers to re-evaluate issues surrounding globalization as it relates to and is changed by the web.

English in Asia

A key stumbling block to global interaction over the web is that the *international* language of English is a foreign language to the majority of the world's population and nearly all of the residents of Asia. Our own examination of the U.S. Fortune 100 (*Fortune*, 2000) websites found that only 9 percent offered Chinese, Japanese, or Korean languages as options. Firms on the Fortune Global 100 list (*Fortune*, 2000) showed a higher level of attention to Asian access with 19 percent of non-U.S. firms, including an option to view pages in Chinese, 13 percent to view Korean, and 38 percent to view Japanese. Japanese firms by default create websites with a choice to view English and URL addresses located in the United States as well as numerous Asian languages and localized Asian URL addresses.

Funding for this research was provided by the R.O.C. Government's National Science Council.

Goodyear (1996) has pointed out that branding is a dialogue with the consumers in nations with high levels of consumerism, regardless of culture. What message is being sent in this dialogue when the extent of localized content simply states in English, *a wholly owned subsidiary*? Assuming populations living in Asia should master English and learn U.S. URL addresses may lead to missed opportunities to increase international markets, but more importantly, such an oversight sends a message that does not fit with the corporate marketing message. Simultaneously, maintaining multiple-language websites does incur additional costs that may not be justified if English is indeed an *international* language that can effectively act as the communication channel between consumers and the firm.

Language of origin

When an international shopper engages in a web search for a product category, what is the impact of receiving the pages in different languages? Although English is often thought of as an international language (Crystal, 1997), the reality may be quite different. Enthusiastic cable television operators entering Asia after deregulation in the mid 1990s quickly found that U.S. reruns were not popular outside of India due to the language barrier (Louis, 1994). Language scholars have pointed out that after years of required English classes, students in Asia are often unable to produce even basic sentences (*The Economist*, 1996; Liu, 1998; Matsumoto, 1994). Such a phenomenon is not limited to Asia. Gerritsen, Korzilius, Van Meurs, and Gijbers (2000) report that only 36 percent of Dutch subjects viewing Dutch television commercials with English were able to understand the English content. When the English was transcribed on the television screen, however, the rate rose to 50 percent, displaying a similarity with

A completely unknown language will interfere with cognition and cause lower evaluations of products in a web search . . .

Asian consumers' increased ability to cope with written, as compared to spoken, English.

While English is not completely understood by Asian consumers, firms may be expecting a benefit from an assumed *halo* effect (Johansson, Douglas, and Nonaka, 1985). Such an effect can originate from cues such as price (Gerstner, 1985), stereotypes about countries where a product originates (Bannister and Saunders, 1978), and the economic development of the home country of the producer (Nagashima, 1970). Likewise, lacking other cues, English can act as a cue for consumers viewing a web page. It is likely that consumers would assume products presented on web pages in English originate from Western industrialized countries. The use of the English language itself may involve linguistic issues such as framing.

Globalization of English served as an easy substitute for the previously imported colonial languages as parents encouraged their children to study the new *global* English language (Alatas, 1977; Kwan-Terry, 1991; Sibayan, 1990; Sibayan and Gonzalez, 1996). Thus, at its very basic, English in Asia is framed in a socioeconomic context. Since traditional Chinese values are based on Confucian ideals that enforce unequal power relationships, starting with the family, these frames of language discourse are natural and act as a lens through which people understand the world. It is still open to question just how much of a halo effect these frames have, for example, in influencing purchasing behavior.

The use of English—at least a semi-understood language—on a web page differs in degree from a language that has never before been seen, one which a reader would have no chance of understanding at any level of discourse. Differing degrees of language barriers (foreign languages) should show differential impact on product evaluations over the web. A completely unknown language will interfere with cognition and cause lower evaluations of products in a web search, while English, although not well understood by the viewer, may benefit from a discourse frame linked to economic success and social status. This can lead to a positive impression, similar to that of country of origin (COO), that we label language of origin (LOO) and thus leads to the first hypothesis:

- H1: Product web search results presented with low language barriers where the language of origin is known (English) will obtain higher evaluations than when presented with high language barriers.

Role of differentiation

Numerous researchers have found that the country of origin effect is not consistent across all product lines (Cattin, Jolibert, and Lohnes, 1982; Han and Terpstra, 1988). Lampert and Jaffe (1998) have found that more homogeneous products are less affected by COO than highly differentiated products and that the COO effect increases in a log-linear fashion as product differentiation increases. Differentiation can be classified into two types:

horizontal and vertical. Horizontally differentiated products differ on attributes for which consumers exhibit dissimilar preferences, such as color. Vertically differentiated products differ on attributes for which consumers share preferences, such as quality. In both cases, communication of the differentiated features involve many subtle and complex mechanisms elaborated in the communication model's encoding and decoding stages. Thus, differentiated products depend on exploiting features, real or imagined (Carpenter, Glazer, and Nakamoto, 1994), that are examined by the consumer and require comprehensible and relevant input if the product is to succeed in establishing itself as different from substitute goods.

Lack of physical contact can cause buyers to avoid purchases out of fear they will not get what was promised (Spence, Engel, and Blackwell, 1970). Television-based home shopping overcomes such perceived risks by placing a heavy emphasis on long-term relationship building between the program hosts and their viewers, as in the case of QVC Home Shopping Channel (Stephens, Hill, and Bergman, 1996). Such relationship building requires at least some common language interface, which is not always the case in international web-based marketing. Lower language barriers should allow better acceptance of products with higher levels of differentiation, while higher language barriers have a reduced negative impact on products with lower levels of differentiation. Thus the second hypothesis is derived:

H2: The degree to which a product web search result evaluation is influenced by language barriers is moderated by the differentiation level of the product under consideration.

Cognition of marketing communication

The marketing communication effect of viewing a firm's web page can be examined in the context of advertising effects. The hierarchy-of-effects model places increased importance on earlier effects of which cognition is first (Aaker and Day, 1974; Greenwald, 1968; Lavidge and Steiner, 1961; McGuire, 1978; O'Brien, 1971; Wright, 1973). The general pattern of the hierarchy-of-effects model describes consumers' temporal stages, cognition → affect → behavior, when exposed to advertising. Vakratsas and Ambler (1999) found little evidence for this temporal sequence and proposed an alternative model that includes experience, affect, and cognition (EAC) simultaneously in a three-dimensional space. Whereas hierarchy models often rearrange the order of effects for differences in variables, such as involvement (Harris, 1987; Smith and Swinyard, 1978; Swinyard and Coney, 1978), Vakratsas and Ambler's (1999) EAC model proposed that advertisers should emphasize one, or more, of the EAC axes, such as cognition for products requiring increased factual information. In the web context, ability to understand the communication being emphasized requires some commonality in experiences between the firm and the web surfer. High language barriers will make effective communication difficult and thus dilute the firm's effort in either cognitive or affective messages.

Second-language learning theory includes the recognition that some amount of common experience and cognition is required before second-language learning can take place: the comprehensible input hypothesis (Krashen, 1985). With low differentiation products, the cognition requirement should be lowered, as there is no need to understand the complexities of a differentiation argument. Carpenter et al. (1994) point out that it is the argument

presented about differentiation, by the advertiser, even when having no real value, which gets consumers thinking there must be a reason for such information. Substantially higher prices for a specific firm's product should cause customers to switch to lower-priced competitors, unless the demand has become inelastic through differentiation activities, including advertising (Browning and Zupan, 1996). Differentiation exists when consumers perceive some differences among products, giving increased market power to the supplying firms and allowing prices in excess of costs (Mas-Colell, Whinston, and Green, 1995). Language, therefore, plays a fundamental role in increasing marketing communication effectiveness, especially in differentiated product categories. This leads the last two hypotheses:

H2a: Web search results containing non-differentiated products will obtain similar evaluations across levels of language barriers.

H2b: As language barriers are reduced, product web search results will obtain higher evaluations for products with high levels of differentiation.

METHODOLOGY

This experiment was designed to capture the impression resulting from a product search over the web on six product attributes (dependent variables) and the two independent variables of language and product differentiation (see Table 1). A three (language barriers) by four (products) mixed design was employed to test the hypotheses with language barriers between subjects and products within and each plot randomized across language. Of central importance was the duplication of the web-based search engine experience (acting as a mediator for product searches)

TABLE 1
Variables under Study

Independent Variables		Dependent Variables
Language Barriers	Product/Differentiation	Product Evaluation
Unknown	Camera/High	Performance
English	Watch/High	Financial Risk
Chinese	Computer/Low	Quality
	Microwave/Low	Breakdown
		Workmanship
		Technology

as well as obtaining respondents that truly represent Taiwan web users rather than testing the general population. Employing actual computer-based searches, Hoque (1999) found unique attributes for web-based activity compared to traditional paper survey approaches pointing out the importance of matching the manipulation's format with the web medium under study.

Language barriers

Implementation of a native language was completed by creating product descriptions in Chinese. Chinese is the national language of Taiwan and in the written form is nearly universal to all Chinese, even among speakers of different Chinese dialects. English was included to represent the international language of the web while also supplying an opportunity to apply results directly to English-speaking firms deciding how to deal with international web promotions. Taiwan is typical of many developed Asian countries in that English is a required school subject from junior high school through the first two years of university and is also a required subject on all university entrance exams. It is also often required for employment in firms and government positions. As a foreign language, Taiwan citizens often possess the ability to read some basic English,

with writing, listening, and speaking exhibiting diminishing levels of skill.

To represent a truly unknown language, rather than choose a real language that may be recognized by some subjects, a new language was created. A custom-created computer program was used to randomly generate words that resembled a language but actually did not form any known language. For example, part of the camera description was:

Hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat 38-85mm f/4.2-8.7 nulla facilisis at vero eros et accumsan et iusto odio dignissim qui

Clearly the text employs a Roman character set and some Latin roots but is certain to be unknown by anyone. The unknown language closely followed the English/Chinese descriptions in using paragraphs of similar lengths and preserving numerical data.

Price competition and product differentiation

To test the role of differentiation, products with varying degrees of differentiation were required. Additionally, financial risk may play a role in web-based purchases (Tan, 1999), so it was desirable to choose

products for this experiment that offered a range of prices. A short list of products was generated by asking undergraduates to list products they were familiar with within four price ranges (increments of 10,000 dollars in local currency, or approximately US\$350). The interactive shopping bot MySimon (<http://www.mysimon.com>) was used to search the web for all offers of products on the short list (using prices quoted in U.S. dollars). Differentiation was defined as the range of prices for similar products in the marketplace (Lampert and Jaffe, 1998), i.e., the highest price divided by the lowest. Different prices within a product category are the result of added perceived value, of some brands, most often the result of marketing activity such as branding rather than economic factors.

Four products were chosen that showed a range of differentiation: (1) notebook computer, with differentiation rating of 4.28 (min. = 1099.99, max. = 4711.11, mean = 2388.82, SD = 776.77); (2) microwave oven, differentiation rating of 7.2 (min. = 49.97, max. = 359.95, mean = 156.87, SD = 61.42); (3) a digital watch, differentiation rating of 15.01 (min. = 29.99, max. = 450.00, mean = 131.61, SD = 79.94); and (4) a 35mm camera, differentiation rating of 26.2 (min. = 20.99, max. = 549.99, mean = 238.20, SD = 129.49).

The computer and microwave exhibited low differentiation while the camera and watch showed high differentiation. This was confirmed by the second measure of number of models offered for similar products by the same firm: an average of 7 computer models, 5 microwaves, 13 cameras, and 50 watches. In order to avoid confounding effects from price, the products chosen were mixed on price so that both differentiation groups contained one high-priced product and one low-priced product. Relatively low prices are represented by the watch and microwave while

the camera and computer represent relatively high prices. Since the effects of numerous marketers have resulted in the broad range of market prices for the high differentiation products, consumers will likely be looking for details of their differentiation when examining the product descriptions.

Stimulus material

A website was established on a university server dedicated to marketing research. The server's internet address used a URL number address, which is a series of numbers and gives no clues about location or association of the server. A cover story was established that specified the website was an experiment in developing a new worldwide search engine. The website design followed that of a typical search engine with all interface parts employing Chinese characters with no English or other language except in product search result presentation. Users' actions were linked to a database on the server where all responses were recorded. Since the site was touted as being experimental, and not yet finished, subjects could be expected to believe that a pre-existing list of given products and prices to be searched for was plausible. A gift certificate was clearly indicated from the start as a reward for participation.

Online pretesting of the website was conducted using 20 university students. Pretest participants were sent email invitations similar to those used in the actual experiment. Interviews with the pretest subjects were conducted to assure that the interface was understandable and easy to use and that the questions were answered in relation to the products and not to the program interface or web experience. The unknown language was also confirmed as being unknown by anyone in the test group. While clearly the language is of Western origin, i.e., it employed Roman letters (most major Asian languages do

not use a Roman-based alphabet), participants in the test group guessed English, German, French, Spanish, Russian, Italian. The majority simply stated that they had no idea what language it was or what country it might be from. Adjustments were made to the interface where feedback showed deficiencies.

Procedure

Visitors were asked to use the search engine to find predetermined products within a specified price range and then to answer questions about the products found. No questions were related to the search engine, although space was provided for any comments from participants. A randomized list of the four products—camera, microwave oven, notebook computer, and watch—was presented in a dropdown menu from which a participant could freely choose the sequence of the four products to search for—although all four products had to be completed before exiting this section. After choosing one of the four products, a price range was automatically specified in two boxes indicating the highest price and the lowest price (in local currency). These prices were presented as search parameters that the search engine would convert to international currencies during the search query. These prices were drawn from the differentiation price data, with the high and low prices both one standard deviation from the mean for each product, and could not be changed by the subject, thus preventing confounding of price with the dependent variables.

The resulting language/product combination could not be changed and was consistent even if the participant repeated a search. That is, if an English description accompanied the notebook computer product, the participant could not obtain a different language result for the notebook—it would always appear in English

no matter how many times that specific search was performed. No participant could view others' results, and no clue was given that different participants could obtain different language results. Figure 1 shows an example of the experiment's screen displaying a search result for the notebook computer with English description.

After viewing each product result, six questions (dependent measures) were presented on the web page in Chinese. Participants answered the questions by clicking the appropriate buttons and were then given an opportunity to write any comments. This process was repeated for each product so that across all participants all four products were viewed, while the language variable was randomly manipulated for each search result so that approximately one-third of the total results were displayed in English, one-third in Chinese, and one-third in the unknown language.

Subjects

Two methods were applied to draw participants for this experiment. First, a banner inviting participants was located on a commercial web portal in Taiwan and, second, email invitations were sent during the spring of 1999. Resulting visits to the experiment website totaled 625. Out of the total experiment website visitors, 506 went on to complete the experiment, with the remaining visitors completing none or only part of the experiment. The sample compared well with government statistics on internet usage in Taiwan at the time (Find, 2001) as well as private internet service providers' reported usage patterns (YamWeb, 1999), with the experiment's participants exhibiting higher levels of education than the Taiwan internet users' average (see Table 2).

Dependent variables

Below each product description were six questions relating to the products in the

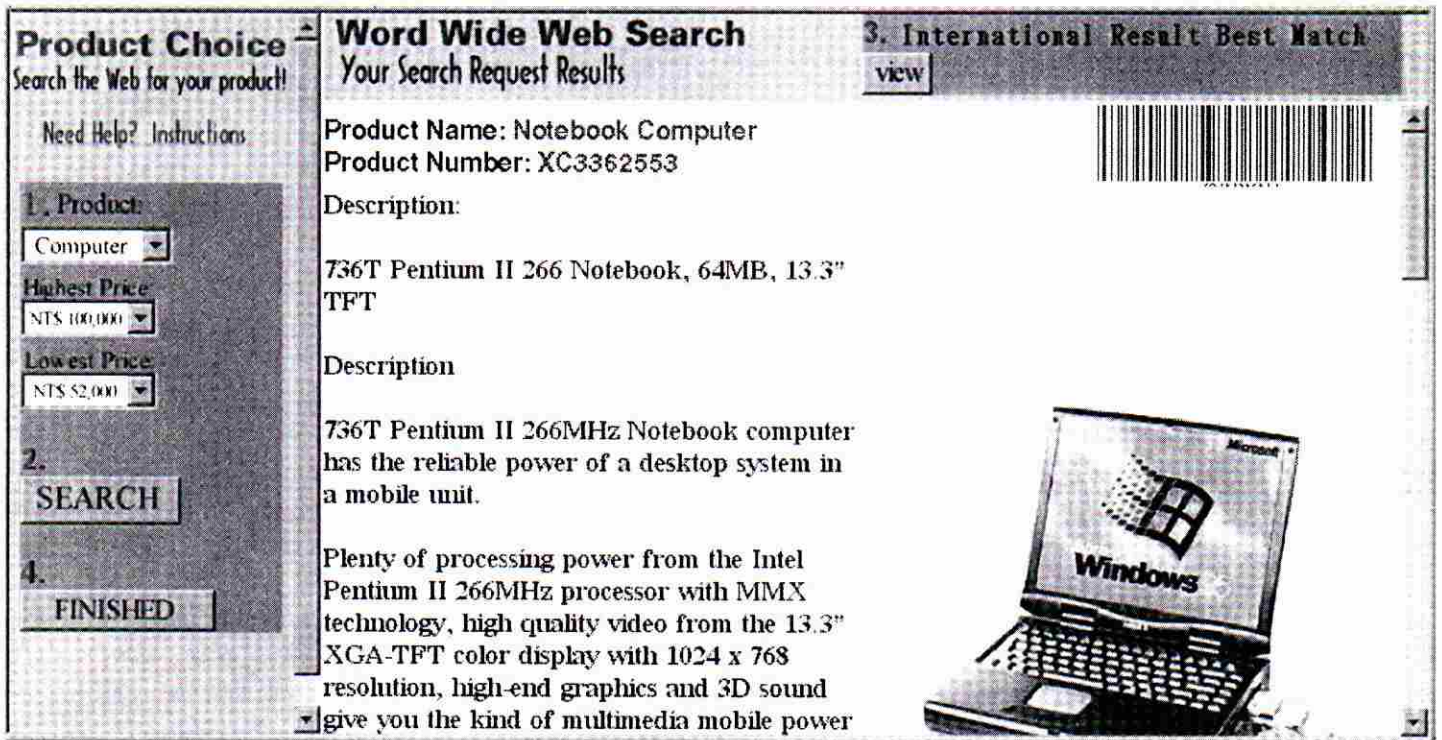


Figure 1 English Language Result for Notebook Computer Product

search results. The measures were adapted from Lim, Darley, and Summers (1994) and Lim and Darley (1997). In both surveys and lab-based experiments, perceptions of quality, risk, and value have often been measured (Baughn and Yaprak, 1993). Perceptions about quality, risk, and value of the product were measured through two questions each using seven-point scales, a negative rating (1) to a positive rating (7). Specific questions included: performance risk (high risk of performance problem to low risk), financial

risk (high risk of financial problem to low risk), overall quality (low quality to high), likelihood to break down (likely to break to unlikely), workmanship (poor workmanship to good), and technology of product (low technology to high). Each subject responded to all six questions for each of the four products, resulting in 24 values.

RESULTS

Reliability of the survey responses was checked using a split-half model resulting

in a Spearman-Brown statistic of .80, and factor analysis showed that the six survey items loaded as expected on their three respective factors. Each product search result included a space for subjects to type comments, which was taken advantage of by approximately one in three subjects. The resulting comments revealed that participants were cognitively evaluating the products and not the software interface or the web experience. Additionally, comments showed that subjects accepted results in any of the three languages and did

TABLE 2
Sample and Taiwan Web Users' Demographic Comparison

	Average Age	Female	Student	Married	College Graduate	Grad. School Graduate	Average Income (NT\$)
Taiwan Web users*	25.3	45.6%	40.9%	29.1%	40.5%	10.1%	20-30K
Experiment Sample	27.1	47%	41.8%	29%	64.6%	9.6%	20-30K

*Taiwan averages from YamWeb, 1999

not comment on the language content, for example, such as requesting the page to be presented in Chinese. Typical comments included:

- The watch design is a little ugly.
- The watch face should be larger.
- The computer's CPU is too slow.

Twenty randomly chosen respondents were contacted after completion of the data collection phase and interviewed via telephone about their experiences using the website. When asked what they thought the experiment was investigating, none expressed the opinion that language was under study. At the completion of the interview, the question was asked directly if the participant ever thought that the experiment was about the interface language. None expressed that they had thought this, and a few insisted on giving the interviewer feedback on how to improve the search engine. Demographic data and online use/purchase history variables, collected at the end of the simulation, did not show any significant relationship with the product evaluations.

Analysis

The first hypothesis (*Product web search results presented with low language barriers where the language of origin is known will obtain higher evaluations than when presented with high language barriers*) was tested by grouping the four products together and comparing the scores of the six dependent variables across the three languages. Resulting MANOVA main-effect scores revealed significant difference (see Table 2) only in performance ($F_{2,2024} = 8.88$, $p < .001$) and breakdown ($F_{2,2024} = 3.14$, $p < .05$). Paired comparisons showed that lower communication barriers were related to higher performance scores, i.e., Chinese outscored English (effect size = .13), English outscored unknown

(effect size = .09), while unknown language was scored significantly lower than Chinese (effect size = .22). In an opposite direction, breakdown ratings revealed a lower likelihood of breakdown attributed to a higher communication barrier than a lower one with the unknown language scoring higher than Chinese did (effect size = .13). In only the performance measure did English score significantly different from the unknown language. While English scores are generally higher than the unknown language, the lack of statistically significant differences leads us to reject a strong language of origin effect here.

The same design was used in order to test the second hypothesis (*The degree to which a product web search result evaluation is influenced by language barriers is moderated by the differentiation level of the product under consideration.*) The MANOVA design of language barrier by differentiation (a 3×2 design) tested interaction between the independent variables. Four out of the six measures showed statistically significant interaction (see Table 3), performance ($F_{6,2024} = 9.98$, $p < .001$), quality ($F_{6,2024} = 6.65$, $p < .05$), workmanship ($F_{6,2024} = 6.13$, $p < .05$), and technology ($F_{6,2024} = 12.84$, $p < .001$). Lack of interaction between the variables for the financial-risk variable is to be expected, as both the low and high differentiation categories contained one low- and one high-priced product. This result confirms that price of the product did not play a role in this study. Likelihood of breakdown showed nearly identical scores across all languages regardless of the level of differentiation. Thus, the second hypothesis is supported.

Hypothesis H2a asserts that products with low levels of differentiation will have similar evaluations across levels of language barriers. This hypothesis was tested by grouping the products based on dif-

ferentiation and comparing the scores of the six dependent variables across the three languages. Resulting MANOVA scores for the low-differentiation group revealed a significant difference (see Table 3) only in the technology evaluation, with the unknown language actually scoring more favorably than Chinese ($F_{2,1012} = 3.98$, $p < .05$). Although the effect size is a small .09 (less than .2 Cohen's d value is considered a small effect, Cohen, 1992), the increase in evaluations as the language barrier increases is interesting. Each of the measures that showed significant interaction effects also repeats this pattern, although not statistically significant. There does appear to be a slight gain for low-differentiated products as the language is actually less understood. Lack of overall significant differences supports H2a.

Hypothesis H2b asserts that high-differentiated products will receive increased scores as language barriers are decreased. This hypothesis was tested in a manner similar to H2a, with only the high-differentiated products included. Results showed significant differences for performance ($F_{2,1012} = 21.22$, $p < .001$), quality ($F_{2,1012} = 6.33$, $p < .05$), workmanship ($F_{2,1012} = 4.52$, $p < .05$), and technology ($F_{2,2024} = 10.0$, $p < .001$) measures, all with large effect sizes. In each case, scores decrease as the language barrier increases, with the exception of the breakdown variable, which moves in the opposite direction, although not statistically significant, similar to the low-differentiation group. Excluding this one exception, hypothesis H2b is supported.

The breakdown measure appears to be unrelated to either differentiation or language barriers. Participants had little opinion about the presented products actually breaking and may have given some credit to the unknown language as a European language. European products are

TABLE 3

Means and Univariate F Values (Sum of Squares III)

	Performance	Financial Risk	Quality	Breakdown	Workmanship	Technology
<i>Known/Unknown LOO (H1)</i>						
Unknown	5.07 _{E,C-.22}	3.82	5.01	3.99 _{C+.13}	4.97	4.93
	(1.10)	(1.21)	(1.08)	(1.25)	(1.12)	(1.13)
English	5.17 _{C,U.09}	3.87	5.05	3.87	4.99	4.97
	(1.12)	(1.24)	(1.08)	(1.28)	(1.11)	(1.14)
Chinese	5.32 _{U,E-.13}	3.93	5.08	3.83 _U	5.02	5.00
	(1.14)	(1.30)	(1.10)	(1.26)	(1.15)	(1.16)
Sum of Squares	21.78	3.89	1.63	9.96	.55	1.61
F (2,2024)	8.88**	1.37	.711	3.14*	.22	.64
Observed Power	.98	.24	.18	.61	.09	.15
<i>Language * Differentiation Interaction (H2)</i>						
Sum of Squares	24.81	5.0	15.52	.82	15.5	33.12
F (4,2024)	9.98**	1.69	6.65*	.26	6.13*	12.84**
Observed Power	.99	.36	.91	.09	.89	1.0
<i>Low-Differentiation Language Effects (H2a)</i>						
Unknown	5.12	3.49	5.05	3.93	5.09	5.02 _{C.09}
Differentiation	(1.13)	(1.20)	(1.11)	(1.29)	(1.12)	(1.13)
English	5.14	3.66	5.03	3.77	4.99	5.02
	(1.17)	(1.25)	(1.10)	(1.24)	(1.11)	(1.15)
Chinese	5.11	3.60	4.92	3.77	4.93	4.80 _U
	(1.21)	(1.32)	(1.14)	(1.27)	(1.18)	(1.25)
Sum of Squares	.13	5.11	3.61	6.47	5.0	11.05
F (2,1012)	.05	1.62	1.45	2.01	1.94	3.98*
Observed Power	.06	.34	.31	.42	.40	.71
<i>High-Differentiation Language Effects (H2b)</i>						
Unknown	5.01 _{C-.47}	4.16	4.97 _{C-.26}	4.05	4.85 _{C-.22}	4.83 _{C-.32}
Differentiation	(1.06)	(1.13)	(1.05)	(1.20)	(1.11)	(1.13)
English	5.20 _{C-.29}	4.09	5.06	3.98	4.99	4.93 _{C-.23}
	(1.08)	(1.19)	(1.05)	(1.32)	(1.11)	(1.12)
Chinese	5.51 _{U,E}	4.23	5.24 _U	3.89	5.09 _U	5.18 _{U,E}
	(1.05)	(1.21)	(1.03)	(1.25)	(1.12)	(1.03)
Sum of Squares	47.73	3.15	13.75	4.44	11.21	23.78
F (2,1012)	21.22**	1.14	6.33*	1.42	4.52*	10.0**
Observed Power	1.0	.25	.90	.31	.77	.99

* $p < .05$ ** $p < .001$ Note: Subscripts indicate significant differences between languages using Tukey-Honestly-Significant-Difference paired comparisons, $p < .05$, where U = unknown, E = English, and C = Chinese, and their effect-sizes (Cohen's d).

Complete understanding of the web page, using the local native language, is advantageous to differentiated products, at both low- and high-price ranges.

often viewed in Taiwan as reliable and not easily broken, compared to domestic and American products. This perspective did not seem to influence the other scores, however, such as workmanship, and may reflect a general language of origin effect for non-Chinese character alphabets when consumer knowledge or opinions are lacking.

CONCLUSION

As we enter an interconnected world based on communication technology, it is important to keep in mind that the world does not communicate in one language. Localization of web content is a laudable undertaking, yet the reality is that content is not made just on one web page, or on one portal, but in the content the consumer is searching for. From this perspective, MNCs are faced with localizing web pages within each region of operation, but since one of the basic tenets of commercial websites is that they continually change, in order to stay fresh and attract loyal viewers' revisits, one may question the practical capability of keeping such fluid information continually available in localized form for even just a few regions of the world. Retaining consistency in branding strategy would be quite difficult if each region were to independently maintain corporate websites, as well as eliminating the advantage of centralized management of a firm's website.

Maintaining a single site in English, Japanese, Chinese, as well as numerous European languages, would require every firm to retain a veritable United Nations of translators on hand. While not addressing these questions directly, this study has

found that simple and direct assumptions about the use of native language in web pages (low language barriers) does not necessarily lead to improved attitudes about the product being presented on the web page. Specifically, it is clear that products with low levels of differentiation do not suffer when presented in an unknown language and in some cases may obtain a benefit from presentation in a language that is not understood at all (see

Figure 2). Complete understanding of the web page, using the local native language, is advantageous to differentiated products, at both low- and high-price ranges.

English in international marketing

Results suggest that English actually is not a completely neutral communication medium, the *international* language. Nevertheless, English can be a compromise when other options are not available. We must keep in mind, however, that this result will only hold as long as English is a known language and understood at some level. The international status of English makes this assumption reasonable, but by no means universal. For web users who do not know any English, an English in-

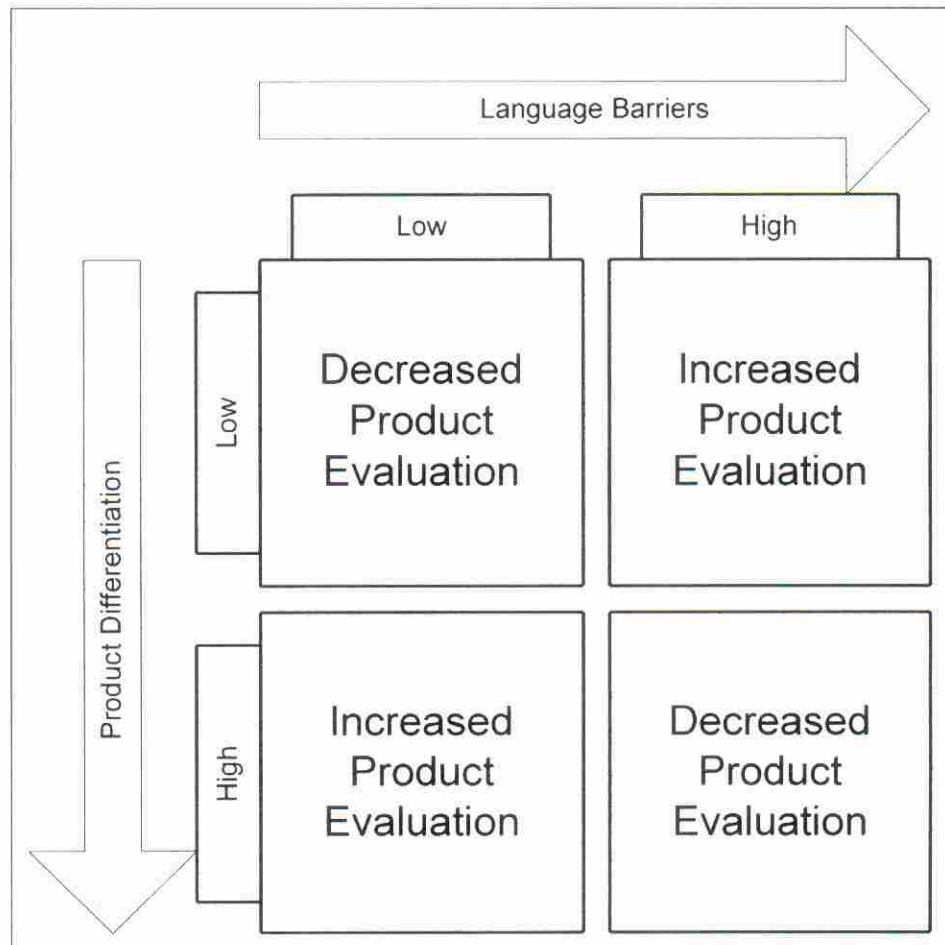


Figure 2 Summary of Findings: Language/Product Differentiation Matrix



Figure 3 Regal Approach Used by Disney in Asian Websites

terface will act as the unknown language in this experiment and maximize low differentiation goods. This advantage may become even more apparent when the products under consideration are homogeneous goods such as commodities. For high-differentiation products, an unknown language is a clear disadvantage. One compromise solution is to create centralized corporate websites that use English and augment them with product descriptions in local languages. American firms may also follow the practice common in Taiwan where nearly every website maintains a Chinese language version and an English version (surfers are presented with a choice of *English* or *Chinese* upon entering these websites).

DISCUSSION

The technical problems of including multiple languages on a single website are numerous and have certainly caused some firms to hesitate localizing their sites. Chu (1999) has detailed some of the problems and solutions specifically presented in the Chinese context with corporate websites that include both English and Chinese. Most importantly, he points out that the focus needs to be on communication, not technology. This includes not only the details of the language but also the cultural

implications of what is said and how it is said, as well as meanings conveyed through graphics that are ripe for cultural misunderstanding. In addressing the standardization-adaptation issue, Disney in Asia is a good example of the regal (regional/local) approach. Disney's websites (see Figure 3) employ a regional outline, supplied by the American Disney, while the local offices are free to make the pages relevant to their own local activities and customers—most importantly, localizing the language. Rather than translation, the local languages actually reflect what is being done locally and include communications more relevant to the local consumer.

Although a global consumer culture is often spoken about, it may not run very deep. In Taiwan, MTV's programming is mostly locally produced and the music videos those of local artists. Thus, what has been internationalized is not American cultural values but the core product of

youth-oriented rock-and-roll videos, now adopted, transformed, and translated through the local culture. Alden, Steenkamp, and Batra (1999) found that local consumer cultural positioning (LCCP) of brand was most prevalent among seven countries throughout Europe, America, and Asia, even as the products themselves appeared to be linked to *global* consumer culture. We must take care not to infer a global consumer exists simply because symbols are observed crossing cultural boundaries.

English can also be placed in this category of adoption by local cultures. While cruising the streets of Taiwan, a tourist will quickly recognize many English words on billboards. Yet a majority of these signs contain misspellings and usually make little grammatical sense. These errors do not come from poor English but a use of the language as visual symbol. A Taiwan consumer reading a newspaper

新竹科學園區第三期旁・劃時代雙語國際生活

The only internationalize community with excellent artistic, culture and most well-educated people in Taiwan will be born soon at GRANDSCIENCE

這是一座高優質的國際觀生活領域 台灣首創雙語別墅特區大科技即將誕生

Figure 4 Taiwan Newspaper Advertisement for Houses

and coming across the advertisement shown in Figure 4 is meant to perceive the inclusion of English as a sign of the similarity between the homes for sale and American homes, i.e., free-standing, two-story, with yard and garage (as compared to normal modern Taiwan homes that are more often small flats in high-rises). Actual understanding of the discourse is not required—just an understanding of the implied meaning within the context of the local culture. Like Chinese food in America, English in Asia is often only a shallow representation of its original source.

LIMITATIONS

These results must be viewed in the context of three important limitations. First, while language was the emphasis of this experiment, the cover story used, to avoid biasing respondents, may have actually trivialized the differences among the languages from the perspective of the participants. Additionally, the product descriptions were themselves limited and included only basic text. These limitations may not reflect actual searches where much more product data can be presented along with multiple results that can be directly compared, thus increasing the importance of cognition. While these simplifications were necessary for the survey conditions, they tend to mute differences among the languages.

Second, although Chinese consumers living in China, Hong Kong, and Singapore share the Chinese language, and a high similarity in culture, there are numerous differences, such as consumption behaviors and educational emphasis on English, that could lead to different results among these Asian countries. Along with this limitation, the respondents in this research were already web users. While this may be useful in judging the effects of language on people likely to be using the medium being tested, the people not yet us-

ing the web may actually show more sensitivity to the variables being studied. For example, web users in this study, and in general, tend to have above-average education levels. This could lead to a higher understanding of English.

Third, the complexity of the relationship among the variables may make accurate measurement difficult for both the language of origin effect and the effects of language cognition. Product categories, involvement, experience, and many other variables may play a role that increases these effects in some combinations while lessening them at others. The complexity of the problem should not discourage further understanding of this fundamental part of marketing communications, now brought center stage by the global growth of the web. **Don't Panic. JAR**

.....
CLYDE A. WARDEN is a professor at Chaoyang University of Technology, Taiwan. His research interests include cross-cultural marketing communication and intercultural service failures as well as the role the internet plays in these topics. Dr. Warden has over 13 years of experience working and teaching in Asia.

.....
MENGKUAN LAI is an associate professor in the Department of Business Administration, College of Management, National Cheng Kung University, Taiwan. Dr. Lai's research interests have been in advertising and brand extension.

.....
WANN-YIH WU is a professor and the dean of the College of Management at National Cheng Kung University, Taiwan. His research interests include consumer behavior, marketing strategy, and channel marketing.

REFERENCES

AAKER, DAVID., and GEORGE DAY. "A Dynamic Model of Relationships among Advertising, Consumer Awareness, Attitudes and Behavior." *Journal of Applied Psychology* 59, 3 (1974): 281-86.

ADAMS, DOUGLAS. *The Hitchhiker's Guide to the Galaxy*. New York, NY: Crown Publishing Group, 1980.

ALATAS, SYED HUSSEIN. *The Myth of the Lazy Native*. London: Frank Cass, 1977.

ALDEN, DANA L., JAN-BENEDICT E. M. STEENKAMP, and RAJEEV BATRA. "Brand Positioning through Advertising in Asia, North America, and Europe: The Role of Global Consumer Culture." *Journal of Marketing* 63, 1 (1999): 75-87.

BANNISTER, J. P., and J. A. SAUNDERS. "UK Consumers' Attitudes towards Imports: The Measurement of National Stereotype Image." *European Journal of Marketing* 12, 8 (1978): 562-70.

BAUGHN, C. C., and A. YAPRAK. "Mapping the Country-of-Origin Literature: Recent Developments and Emerging Research Avenues." In *Product and Country: Impact and Role in International Marketing*, Nicolas Papadopoulos and Louise Heslop, eds. New York, NY: The Haworth Press, Inc., 1993.

BROWNING, EDGAR K., and MARK A. ZUPAN. *Microeconomic Theory and Applications*, New York, NY: Harper Collins College Publishers, 1996.

CARPENTER, GREGORY S., RASHI GLAZER, and KENT NAKAMOTO. "Meaningful Brands from Meaningless Differentiation: The Dependence on Irrelevant Attributes." *Journal of Marketing Research* 31, 3 (1994): 339-50.

CATTIN, PHILIPPE, ALAIN JOLIBERT, and COLLEEN LOHNES. "Cross Cultural Study of 'Made In' Concepts." *Journal of International Business Studies* 13, 3 (1982): 131-41.

CHU, STEVE. "Using Chopsticks and a Fork Together: Challenges and Strategies of Developing a Chinese/English Bilingual Web Site." *Technical Communication* 46, 2 (1999): 206-19.

COHEN, JACOB. "A Power Primer." *Psychological Bulletin* 112, July (1992): 155-59.

CRYSTAL, DAVID. *English as a Global Language*. Cambridge: Cambridge University Press, 1997.

FIND. "Focus on Internet News and Data." *Institute for Information Industry* (2001) Retrieved September 15, 2001, from <http://www.find.org.tw/>

THE ECONOMIST. "Foreign Tongues." 338, 7955 (1996): 36.

FORTUNE. "Fortune 500 List." *Fortune.Com* (2000) Retrieved December 15, 2000, from <http://www.fortune.com/fortune/fortune500/>

GERRITSEN, MARINEL, HUBERT KORZILIUS, FRANK VAN MEURS, and INGE GIJSBERS. "English in Dutch Commercials: Not Understood and Not Appreciated." *Journal of Advertising Research* 40, 4 (2000): 17-31.

GERSTNER, EITAN. "Do Higher Prices Signal Higher Quality?" *Journal of Marketing Research* 12, 2 (1985): 209-15.

GOODYEAR, MARY. "Divided by a Common Language: Diversity and Deception in the World of Global Marketing." *Journal of the Market Research Society* 38, 2 (1996): 105-22.

GREENWALD, ANTHONY G. "Cognitive Learning, Cognitive Response to Attitude Change." In *Psychological Foundations of Attitudes*, Anthony G. Greenwald, Timothy C. Brock, and Thomas M. Ostrom, eds. New York, NY: Academic Press, 1968.

HAN, MIN C., and VERN TERPSTRA. "Country of Origin Effects for Uni-National and Bi-National Products." *Journal of International Business Studies* 19, 2 (1988): 235-55.

HARRIS, GREG. "The Implications of Low-Involvement Theory for Advertising Effective-

ness Research." *International Journal of Advertising* 6, 3 (1987): 209-21.

HOQUE, ABEER Y. "An Information Search Cost Perspective for Designing Interfaces for Electronic Commerce." *Journal of Marketing Research* 36, 3 (1999): 387-95.

JOHANSSON, JOHNY K., SUSAN P. DOUGLAS, and IKUJIRO NONAKA. "Assessing the Impact of Country of Origin on Product Evaluations: A New Methodological Perspective." *Journal of Marketing Research* 22, 4 (1985): 388-96.

KRASHEN, STEPHEN D. *The Input Hypothesis: Issues and Implications*. London: Longman, 1985.

KWAN-TERRY, ANNA. "The Economics of Language in Singapore: Students' Use of Extracurricular Lessons." *Journal of Asian Pacific Communication* 2, 1 (1991): 69-89.

LAMPERT, SHELOMO I., and EUGENE D. JAFFE. "A Dynamic Approach to Country-of-Origin Effect." *European Journal of Marketing* 32, 1/2 (1998): 61-78.

LAVIDGE, R. J., and G. A. STEINER. "A Model for Predictive Measurements of Advertising Effectiveness." *Journal of Marketing* 25, 4 (1961): 59-62.

LIM, J., and W. K. DARLEY. "An Assessment of Demand Artifacts in Country of Origin Studies Using Three Alternative Approaches." *International Marketing Review* 14, 4 (1997): 201-17.

———, ———, and JOHN. O. SUMMERS. "An Assessment of Country of Origin Effects Under Alternative Presentation Formats." *Journal of the Academy of Marketing Science* 22, 3 (1994): 274-82.

LIU, DILIN. "Ethnocentrism in TESOL: Teacher Education and the Neglected Needs of Inter-

national TESOL Students." *ELT Journal* 52, 1 (1998): 3-10.

LOUIS, KRAAR. "TV Is Exploding All over Asia." *Fortune* 129, 2 (1994): 98-100.

MAS-COLELL, ANDREW, MICHAEL D. WHINSTON, and JERRY R. GREEN. *Microeconomic Theory*. New York, NY: Oxford University Press, 1995.

MATSUMOTO, KAZUKO. "English Instruction Problems in Japanese Schools and Higher Education." *Journal of Asian Pacific Communication* 5 (1994): 209-14.

MCCARTHY, TERRY. "China Dot Now." *Time*, February 28, 2000: 16-23.

MCGUIRE, WILLIAM. "An Information Processing Model of Advertising Effectiveness." In *Behavioral and Management Science in Marketing*, Harry L. Davis and Alvin J. Silk, eds. New York, NY: John Wiley & Sons, 1978.

NAGASHIMA, AKIRA. "A Comparison of Japanese and US Attitudes towards Foreign Products." *Journal of Marketing* 34, 1 (1970): 68-74.

O'BRIEN, TERRENCE. "Stages of Consumer Decision Making." *Journal of Marketing Research* 8, 3 (1971): 283-89.

SIBAYAN, B. P. "Insights from Language Planning Based on the Philippine Experience." In *Language Use, Language Teaching and the Curriculum*, V. Bickley, ed. Hong Kong: Institute of Language in Education, 1990.

———, and ANDREW. GONZALEZ. "Post-Imperial English in the Philippines." In *Post-Imperial English: Status Change in Former British and American Colonies, 1940-1990*, Joshua Fishman, Andrew W. Conrad, and Alma Rubal-Lopez, eds. Berlin: Mouton de Gruyter, 1996.

SMITH, ROBERT E., and WILLIAM R. SWINYARD. "Involvement and the Hierarchy of Effects: An Integrated Framework." In *A Look Back, A Look Ahead*, G. Hafer, ed. Chicago, IL: American Marketing Association, 1978.

SPENCE, HOMER E., JAMES F. ENGEL, and ROGER D. BLACKWELL. "Perceived Risk in Mail-Order and Retail Store Buying." *Journal of Marketing Research* 7, 3 (1970): 364-69.

STEPHENS, DEBRA L., RONALD PAUL HILL, and KARYN BERGMAN. "Enhancing the Consumer-

Product Relationship: Lessons from the QVC Home Shopping Channel." *Journal of Business Research* 37, 3 (1996): 193-200.

SWINYARD, WILLIAM R., and KENNETH A. CONEY. "Promotional Effects on a High- Versus Low-Involvement Electorate." *Journal of Consumer Research* 5, 1 (1978): 41-48.

TAN, SOO J. "Strategies for Reducing Consumers' Risk Aversion in Internet Shopping." *Journal of Consumer Marketing* 16, 2 (1999): 163-80.

VAKRATSAS, DEMETRIOS., and TIM AMBLER. "How Advertising Works: What Do We Really Know?" *Journal of Marketing* 63, 1 (1999): 26-43.

WRIGHT, PETER L. "Cognitive Processes Mediating Acceptance of Advertising." *Journal of Marketing Research* 4, 1 (1973): 53-62.

YAMWEB. "Survey Results." YamWeb Frontier Foundation, 1999. Retrieved November 5, 1999, from <http://survey.yam.com.tw/99/99result.htm>

Strategic Insights

Dick Westwood and the Strategy & Tactics team of professionals provide the insights your marketing needs:

- How your market actually works
- What your brand's equities really are
- How to build a path to more growth

Whether it's a segmentation study, a brand image study, a brand extendibility study— or any other area of strategic research— we provide the extra level of marketing insight that makes the work pay off for you.

Call us for an initial consultation. Bring your issues and objectives. We'll design a research program to bring your marketing to the next level.



Strategy & Tactics, Ltd.

109 Forest Street • Stamford, CT 06901

Tel 203-977-8148 • Fax 203-977-8575

E-mail • stratact@walrus.com

