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An Empirial Investigation of Product Symbolism from an Ethnic Subcultural Perspective

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ABSTRACT

This study identifies and empirically assesses some determinants of product symbolism within and across two ethnic subcultures. A conceptual model with five causal antecedents of product symbolism was developed based on the theoretical perspectives on semiotics, symbolic interactionism, and information processing. The study posits the applicability of the conceptual model across ethnic subcultures. The extent of applicability of the conceptual model was then examined using a multi-sample covariance structure model (LISREL VI) on data obtained from a sample of Malays and Chinese in Malaysia. Study results indicate that the conceptual model fits the data differently among the two ethnic groups. Several differences in parameter estimates between Malays and Chinese were also discussed.

ABSTRAK

Kajian ini mengenalpasti dan menilai secara empirikal beberapa penentu simbolisme keluaran di dalam dan di kalangan dua sub-budaya etnik. Sebuah model konseptual telah diperkembangkan dengan meliputi lima faktor penyebab kepada simbolisme keluaran yang dikenalpasti daripada teori semiotik, interaktionisme simbolik dan pemprosesan maklumat. Darjah kesesuaian model konseptual ini di kalangan sub-budaya etnik diuji dengan menggunakan model struktur kovarians berbilang sampel (LISREL VI) bagi satu sampel sub-budaya etnik Melayu dan Cina di Malaysia. Hasil kajian menunjukkan darjah kesesuaian yang berbeza bagi kedua-dua golongan etnik tersebut. Beberapa perbezaan anggaran parameter bagi kaum Melayu dan Cina juga dibincangkan.

INTRODUCTION

In examining the symbolic use of products among consumers, marketers need to understand the influence of the social arena in which conventional symbols develop. Two relevant theoretical perspectives on symbolism, semiotic and symbolic interactionism, suggest the importance of people, social institutions, and culture in fostering the development of symbols (Blumer 1967; Meltzer

1967; Mertz 1985; Mick 1986; Solomon 1983). According to these perspectives, symbols acquire meanings when agreement exists between at least two individuals on what the objects connote. The correspondence between object and meaning may be vague, initially, but through human interaction over time the correspondence will become more pronounced (Stryker 1967). Mick (1986) acknowledges the importance of consumer socialization and enculturation by stating,

> a point-of purchase display for wine depicting a young couple lounging by a fire place may represent "the good life" or decadence, love or licentiousness, depending upon the codes of the interpreter's background.

Social organization (such as culture, subculture, social systems, or families) serves as a framework inside which individuals develop and execute their actions (Blumer 1967). Social organization is important to consumers to the extent that it shapes situations in which they act and the extent that it supplies sets of symbols that consumers use in interpreting their situations (Solomon 1983). In the act of consumption, social organization serves to influence the types of products viewed as symbolic and also to impact the ascription of meanings to products in these categories. To an American Black, for example, the "Afro" hairstyle may symbolize "black pride" (Duker 1972).

This study focuses on ethnic subculture as the social setting for examining product symbolism. An ethnic subculture is defined as a group of people living alongside at least one other cultural group in a particular geographic area. These groups coexist in a single nation state and have common political, economic, and legal systems (Berry 1979). Full assimilation between groups has not taken place, thus the behavior of a subculture reflects a combination of norms of the culture of origin and norms of the culture of residence (Wallendorf & Reilly 1983).

The purpose of this study is to develop a conceptual model of influences on product symbolism and to examine whether the same system of explanation exists in two ethnic subcultures. The conceptual model includes five antecedent variables to product symbolism: subcultural affinity, public self-consciousness, materialism, product category relevance, and brand name familiarity This study utilizes a multi-sample structural equation analysis for testing the viability of the model in two ethnic subcultures.

PRODUCT SYMBOLISM

Several marketing authors and researchers have suggested the importance of product symbolism to consumers (Belk 1978; Belk 1980; Belk 1981, Gardner & Levy 1959; Grubb & Grathwohl 1967; Hirschman 1980; Holbrook & Hirschman 1982; Holman 1981, Mick 1986; Solomon 1983). The symbolic

or communicative properties of products have been of interest among marketers because of the increasing need to understand the sociology of consumption and because of the failure of other paradigms to explain for some consumption patterns. New insights have also resulted from looking at product symbolism. Holbrook and Hirschman (1982) have suggested the inclusion of the experiential view to consumer behavior. Park, Jaworski and MacInnis (1986) espouse a differentiated brand concept management for functional, symbolic, and experiential products.

Symbols constitute a specific class of signs. A sign is an expressive form which can be a word, a physical object, or an internal mental representation that functions as a means of communication and conveys meaning from one cognitive act to another. Based on Peirce's semiotic triad, there are three classes of signs: an icon, an index, and a symbol (Parmentier 1985; Mertz 1985; Mick 1986). An icon is a sign that refers to an object by reason of physical resemblance, while an index requires a contextual reference between sign and object. A symbol is a sign that refers to its object by reason of conventional understanding that allows sign and object to be interpreted as related.

A sign that functions as an icon can be understood by an interpreter apart from its object. An index, on the other hand, cannot be comprehended apart from the object or the context in which it occurs. For example, if one were to point a finger at a specific car in a parking lot, an interpreter will not understand the designated meaning to the pointed finger (the specific reference to a car) unless he or she looks at the parking lot in the specific direction. A symbol differs from either an icon or an index because it relates to its object in an entirely conventional manner (Mick 1986). When a product functions as a symbol, it conjures up a specific meaning other than the physical attributes of the product. For example, Belk, Bahn, and Mayer (1982) found that sixth graders tended to associate a grandfather with the ownership of a Chevrolet Caprice two-door coupe. Thus, a *symbol* can be defined as a sign that relates to its object not on the basis of context nor on physical resemblance but rather on the basis of conventional understanding.

Summarizing the semiotics perspective, the degree of symbolism in a product is determined by the meaning and reaction of an interpreter. Product symbolism, then, captures the conventional meaning of a product in the form of consumers' ascriptions of characteristics of a hypothetical user or owner of the product. This definition is not unique to this study but is consistent with previous investigations on product symbolism (Belk, Bahn, & Mayer 1982; Belk, Mayer, & Bahn 1982; Belk, Mayer, & Driscoll 1984; Holman 1980).

In this study, it is assumed that a core subcultural consensus exists for ascribed meanings within an ethnic group. The core subcultural consensus represents an average or typical response given by individuals belonging to

an ethnic group. The above assumption is justifiable from several perspectives. From the view of symbolic interactionism, Solomon (1983) describes that a product tends to have a consensus of meaning within a social milieu. Similarly, Firat (1987) describes similarities in consumption experiences as a result of societal generalizations of product meanings. Sherry (1986) states that one of the properties of a culture lies in the existence of a consensus of meaning that produces redundancy across individuals. Hirshman (1980), in her model on layers of meaning for products, suggests the existence of a common subcultural layer of meaning besides the tangible product attributes, common cultural intangible attributes, and idiosyncratic intangible attributes. Because products possess both commonlyheld and idiosyncratic or personalized meanings (Belk 1988; Hirschman 1980; Wallendorf & Arnould 1988), an important step in understanding product symbolism will be to explain why an individual attributes symbolic meanings that deviate from the core subcultural consensus of his or her group. This study posits several influences on these deviations.

INFLUENCES ON PRODUCT SYMBOLISM

The conceptual model of influences on product symbolism that guides this study appears in Figure 1. Five influences in the model include: subcultural affinity, public self-consciousness, materialism, product category relevance, and brand name familiarity Each of these constructs will be described in turn alongwith an explanation of construct relationships as shown in the model. The theoretical frameworks on semiotics, symbolic interactionism, and information processing serve as foundations for the model.

The model in Figure 1 does not exhaustively include all possible determinants of product symbolism. Some other influences exist, for example, the impact of reference groups in which membership or identification constitutes other bases than ethnicity (Shibutani 1967). Similar to the situation with ethnic subcultures, the desire to be associated with a reference group or to be different from members of the group may influence an individual's perception of a product. Further, previous studies have found individual characteristics such as age, gender, and social class to influence product symbolism (Belk, Bahn, & Mayer 1982; Belk, Mayer, & Bahn 1982; Belk, Mayer, & Driscoll 1984). Several researchers have also found some types of products to be better cues to their symbolic meanings than others (Belk 1978; Belk 1980; Belk 1981, Dolich 1969; Holman 1981).

SUBCULTURAL AFFINITY

Subcultural affinity is defined as the extent to which an individual identifies with the values of his or her ethnic subculture. Zikmund, Sciglimpaglia,

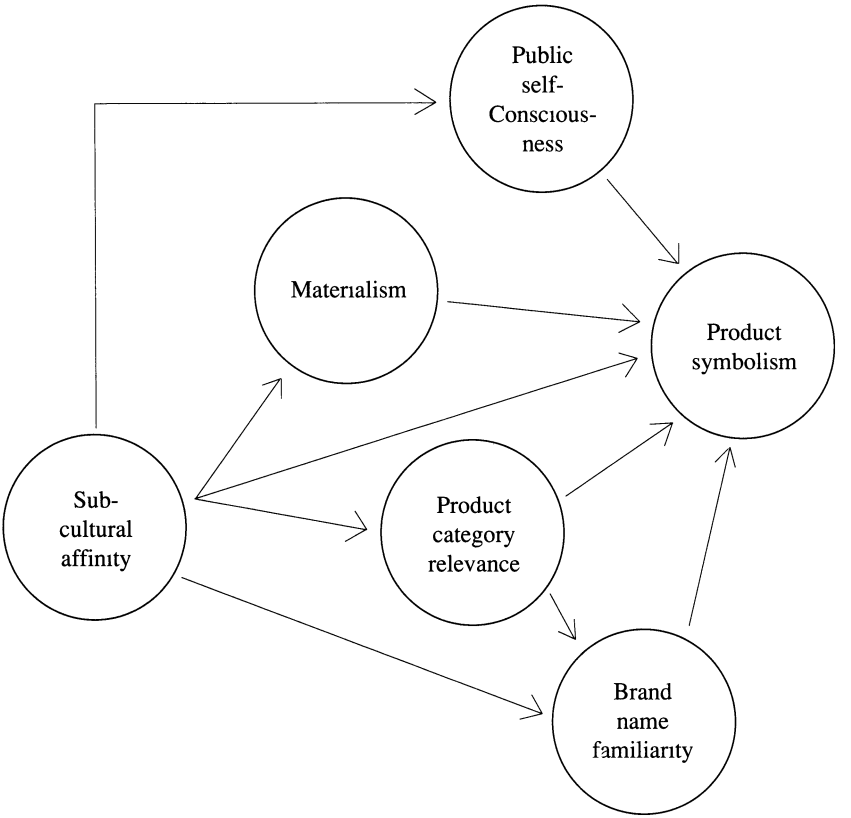


FIGURE 1. Conceptual model of ethnic subcultural influences on product symbolism

Lundstrom, and Cowell (1984) assert that a group's influence on consumers depends on whether they hold positive attitudes toward the group members or their activities. Subcultural affinity does not distinguish one's ethnic background but simply describes the extent of affiliation with one's ethnic subculture. This construct describes an individual as having more or less of the ethnic values.

As Figure 1 shows, subcultural affinity is expected to directly influence product symbolism. The extent that an individual identifies with his or her ethnic subcultural values will consistently determine the extent of his or her deviations from the core subcultural consensus in ascribed product meaning. When an individual identifies with a specific ethnic group, the nuances of the group will tend to influence his values, attitudes, and behaviors. As stated by Hirschman (1981, p. 103),

...the degree of identification the individual feels with a given ethnic group may largely determine the level of commitment he or she experiences regarding the norms of the group and, thus, the degree of influence the group has on his or her actions and attitudes.

PUBLIC SELF-CONSCIOUSNESS

Public self-consciousness describes the consistent tendency of persons to direct their attention outward (Feningstein, Scheier, & Buss 1975). An outward-directed person tends to be one who is aware of others' perspectives and who is conscious of his or her appearance and overt behavior (Solomon & Schopler 1982). The concept revolves around the recognition of one's self as a social object. This view supports the idea that an individual can define and assign meaning to himself in the same way that he assigns meanings to other objects or people (Solomon 1983).

According to symbolic interactionism perspective, a person builds up his or her social self by incorporating the role of "generalized others" (Meltzer 1967; Solomon 1983). The generalized others role provides a set of standpoints that are common to the group and serves to regulate an individual's conduct in a manner consistent with the group. The achievement of consistency is a direct result of the individual learning and internalizing the symbols of his or her group. Consequently, a person's attention to the perception of others can greatly influence his or her ascription of meaning to an object. The extent of outward-directedness will consistently determine the extent of deviation from the core subcultural consensus in ascribed product meaning.

Although public self-consciousness captures individual differences in the extent of outward- or other-directedness, this construct is also believed to manifest subcultural affinity. It does so because the importance of other-directedness is to some extent culturally or subculturally bound. Belk (1984b) asserts this point by stating that concepts of self differ between cultures to the extent to which they are group-based versus individually-based. Tu (1985) describes the Confucian selfhood as entailing the participation of others. The importance of others is especially prominent in the concept of "filial piety" which calls for a total submissiveness of the son to the authority of the father. By contrast, Chu (1985) describes the American culture as primarily oriented toward individual self rather than toward others. Therefore, an individual's strong affiliation with an ethnic subculture that places great importance on otherness will create a tendency for the individual to reflect high public self-consciousness. Conversely, if a subculture values individualism, a strong subcultural affiliation will tend to result in low public self-consciousness.

MATERIALISM

Belk (1984b) and Belk and Pollay (1985) define materialism as "a tendency to view worldly possessions as important sources of satisfaction in life." Based on the self-concept theory, Chu (1985) describes the self as emerging from the interactions of three broad entities: significant others, material objects, and ideas. The nature of self is shaped by differences in emphases on the three entities. For example, Belk (1984a) recognizes that the use of material objects for self definition differs by type of society In small, primitive societies where acts and performances are directly observable by all significant others, identity tends to be group based and acheived by doing. In larger scale societies, identities are more individually based and indirectly achieved because anonymity and segmented roles characterized the societies. Thus, possession becomes a very important part of identity (Belk 1984a, Belk 1988).

Similarly, Chu (1985) recognizes that different cultures have varying use of material objects for defining self. He states that the American self seems to be characterized by individualism where self-reliance and independence are emphasized. As such, materials play an important role in self-other relations. By contrast, the traditional Chinese self appears to be more oriented toward significant others rather than toward individual self. Consequently, materials play a lesser importance than significant others in traditional Chinese society Although the available evidence indicates varying cultural orientation toward materialism, it can be expected that such a variation exists between and within ethnic subcultures. A strong subcultural affiliation will tend to be associated with either high or low materialistic orientation depending on whether the subculture evaluates materialism positively or negatively

The relationship between materialism and product symbolism can be explained on the basis of consumption encoding and decoding (Belk, Bahn, & Mayer 1982; Holman 1981). The literature in marketing is replete with evidences that many consumers place a great deal of importance on material objects. Belk (1988) describes that most consumers view their possessions as part of themselves. Loss of valued possessions is sometimes accompanied by feelings of anger and rage and a sense of lessening of self. Wallendorf and Arnould (1988) found Americans to have strong personal attachments to possessions based upon personal memories while Nigerians developed personal attachments to objects based upon their instrumental value. When strong materialistic orientation prevails in a community, it often leads to a high usage of products for self expression or definition. As described earlier, Belk (1984b, 1988) asserted that small, primitive societies tended to differ from large societies in their materialistic orientations and in the ways members secure their identities. In large, modern societies material objects become crucial for self-definition. In this type of society consumers will tend to

encode their identities through product usage or ownership to either integrate themselves into a group or to differentiate from a group. When a product is used over an extended period of time by a group and not others, the meaning of a product would become more distinct and well-defined to enable its decoding. Usage or possession of a product, therefore, functions among others as a symbol to classify individuals. Hence, it can be expected that high materialistic orientation will tend to be associated with high usage of products as symbols. Therefore materialism is expected to explain the pattern of deviation in ascribed product meanings.

PRODUCT CATEGORY RELEVANCE AND BRAND NAME FAMILIARITY

Product category relevance and brand name familiarity will be discussed together because they arise from the same theoretical foundation. From an information processing premise, interpretations of a stimulus are posited to be dependent on the degree of experience and familiarity with the stimulus (Bettman 1979). Memory plays a very important role in synthesizing meaning because a large part of what is perceived depends upon what is available in memory in terms of prior knowledge. Peter and Olson (1987) have suggested that consumer knowledge about products is manifested in several levels of abstraction, among which are brand knowledge and product category knowledge. These two levels of knowledge do not always go hand in hand in that consumers high in product category knowledge do not always display high brand knowledge. As such the importance of prior knowledge about products and its influence on product symbolism is examined in this study by looking at product category relevance and brand name familiarity

Product category relevance refers to the degree of suitability of a product category to the individual. High relevance would indicate an individual's positive affect toward the product as a result of previous experiences with it. These experiences could be obtained from product ownership, knowing someone who owns the product, or having the aspiration to some day own or use the product. Brand name familiarity refers to how much an individual thinks he or she knows about the brand. Several studies have uncovered positive relationships between product ownership and familiarity with consumption stereotyping (Belk 1978; Belk 1980; Belk, Mayer, & Driscoll 1984; Grubb & Hupp 1968). Some existing knowledge about the brand name is also important for understanding product symbolism because a brand name can be seen as a memory chunk consisting of expected patterns or attribute configurations (Bettman 1979; Peter & Olson 1987).

From the perspective of cognitive anthropology, knowledge is said to be acquired through social experience (Dougherty 1985; Henry 1976). Thus culture or subculture plays a large part in influencing cognition. As stated by Peter and Olson (1987: 402), "society develops a variety of rules, customs, and objects to influence the cognitions and behaviors of its members."

Hirschman (1983) has found some dissimilarities in cognitive structures across ethnic subcultures in the US. Differences in cognitive structures reflect differences in consumers' organization of reality and, consequently, result in distinguishable patterns of consumption. Subcultural affinity is therefore shown in Figure 1 to impact product category relevance and brand name familiarity Brand name familiarity is also influenced by product category relevance. When product category relevance is low, it is not expected for an individual to be highly familiar with a specific brand name within the product category especially if the brand is a one-product-class name such as Coors.

APPLICATION OF THE CONCEPTUAL MODEL TO MALAY AND CHINESE SUBCULTURES

The Malay and Chinese ethnic groups constitute two main communities in the diverse and plural society of Malaysia. According to the 1980 census of population, Malays and Chinese made up 53% and 35% of the populace, respectively The remaining 12% consist of people from Indian descent and the various indigeneous groups of East and West Malaysia, for example the Iban of Sarawak and the Kadazan of Sabah.

The study focuses on Malay and Chinese subcultures for several reasons. Firstly, Malays and Chinese constitute the two largest segment of the population. Secondly, they differ greatly from one another. They use different languages and scripts and they belong to different religions and customary traditions. Each subculture has developed its own distinctive characteristics: Malays as a result of prehistoric animistic beliefs, Hinduism, and Islam; Chinese as an extension and variation of the culture of China. Because of little overlap in economic involvement and beliefs, interaction between Malays and Chinese has remained limited. The two subcultures have not been fully or partly assimilated (Ryan 1971).

A full exposition of the directional influences between constructs could not be made for each of the ethnic subcultures because of space limitation. However, a brief discussion is forwarded to indicate the expected direction of influence between some of the constructs. It should be noted that the influences of the five antecedent variables on product symbolism are non-directional because product symbolism is conceptualized in this study as deviation of ascribed product meanings from the core subcultural consensus. As such both a positive and negative deviation would be meaningful.

Among Malays and Chinese, subcultural affinity is expected to exert a positive influence on public self-consciousness because of a strong "other-orientation" in both subcultures. The influence of subcultural affinity on product category relevance and brand name familiarity in the Malay and Chinese subcultures would be highly dependent on the product being investigated. Since the product under study is jeans, it could be expected that

negative influences would result in both subcultures. As stated earlier, irrespective of ethnic subculture, a positive influence is expected between product category relevance and brand name familiarity

The only difference in the model between Malays and Chinese would be in the direction of influence between subcultural affinity and materialism. Among Chinese, a positive relationship is expected. A materialistic orientation prevails among them because of past events that shaped their subculture. Tan (1982) attributes the materialistic orientation among Malaysian Chinese to their immigrant mentality that motivate them to make a better life for themselves and for their descendents. Among Malays, a negative influence between subcultural affinity and materialism is expected. Ostentatious display of wealth and the use of material possessions for social class definition or for prestige tend to go against the traditional Malay values and Islamic values (The Business International Research Report 1983).

The preceding discussion essentially implies the following proposition and hypotheses:

Proposition: For any ethnic subculture, the conceptual model in Figure 1 will hold.

H1. Product symbolism is a function of subcultural affinity
H2: Product symbolism is a function of public self-consciousness.
H3: Product symbolism is a function of materialism.
H4: Product symbolism is a function of brand name familiarity
H5: Product symbolism is a function of product category relevance.
H6: Brand name familiarity is a positive function of product category relevance.
H7· For Malay subculture, a high score on subcultural affinity will result in
  a) high public self-consciousness,
  b) low materialism,
  c) low product category relevance, and
  d) low brand name familiarity
H8: For Chinese subculture, a high score on subcultural affinity will tend to result in
  a) high public self-consciousness,
  b) high materialism,
  c) low product category relevance, and
  d) low brand name familiarity

METHOD

To test the proposition and hypotheses, a survey was conducted among the two ethnic subcultures in Malaysia, Malays and Chinese. The survey was conducted through personal interviews among adult members of the two communities residing in several middle class residential areas in the Federal

Territory of Kuala Lumpur and the state of Selangor. The survey was conducted by twelve student interviewers from a local university They were proficient in at least two of the three languages of Malay, English, and Chinese. By sampling subjects from middle class residential areas, some control on social class is exercised. This is necessary because several studies have found social class to impact inferences made about a product user (Belk, Bahn, & Mayer 1982; Belk, Mayer, & Bahn 1982). Further, Calder, Phillips, and Tybout (1981) have also recommended a sample selection that is homogeneous on nontheoretical variables for theory application research.

The product category selected for this study is jeans. Previous studies have found clothing, in general, and jeans, in particular, to convey symbolic meanings about user characteristics (Belk 1980; Belk, Mayer, & Driscoll 1984; Holman 1980). Further, jeans appear to meet the requisites for a symbolic product. They are conspicuous, available in wide variety, and relatively high in cost in Malaysia. From the pretest, the brand identified for this study is Levi Strauss. The brand resulted in variations in product symbolism, product category relevance, and brand name familiarity.

A set of questionnaire in both Malay and English languages was drafted and then pretested among a small group of Malays and Chinese with similar characteristics to the final sample. After the questionnaire had been refined and the final draft prepared, the instrument was administered to the sample of subjects. The survey resulted in a total of 203 interviews comprising 81 Malays and 122 Chinese. Usable responses are 72 and 117 for Malays and Chinese, respectively

MEASURES

Multiple measures were used for each latent construct in the conceptual model in Figure 1. Four of the six latent constructs have three items serving as indicators while two other constructs utilized four indicators each. Table 1 provides the list of items utilized in this study These items were selected from a larger pool of items based on the following criteria. First, items for each construct jointly must produce a sufficient level of reliability Second, some evidence of convergence and differentiation between constructs must exist for measures to have validity. Third, items should not give rise to multicollinearity because this would result in a covariance matrix that is not positive definite. Finally, to enable multi-sample analysis to be performed and measurement properties between groups to be assessed, common items must be used.

Each item for the latent constructs was measured on a nine-point scale ranging from "very strongly disagree" (1) to "very strongly agree" (9). Negative items were reverse coded. With the exception of public self-consciousness and materialism, all items were especially developed for the purpose of this study Measures for public self-consciousness were adapted

TABLE 1. Measurement items for x and y variables

Construct	Item code	Item
Subcultural affinity	SA1	The traditional values of my people are important to me.
	SA2	I like to conform to the traditional values of my people.
	SA3	I should hold on to the traditional values of my people.
Public self-consciousness	PSC1	I'm self-conscious about the way I look.
	PSC2	I usually worry about making a good impression.
	PSC3	I'm concerned about what other people think of me.
Materialism	M1	It is important to me to have really nice things.
	M2	I'd be happier if I could afford to buy more things.
	M3	It sometimes bothers me that I can't afford to buy all the things I would like.
	M4	I worry about people taking my possesions.
Product category relevance	PCR1	Jeans are not very appropriate for me.
	PCR2	I would not consider jeans to be part of my wardrobe.
	PCR3	I would not waste my money on a pair of jeans.
Brand name familiarity	BNF1	I am very familiar with Levi products.
	BNF2	I know a lot about Levi jeans.
	BNF3	I can easily distinguish a pair of Levi jeans from other jeans.
Product symbolism	PS1	fashionable
	PS2	adventurous
	PS3	exciting
	PS4	active

from the study by Fenigstein, Scheier, and Buss (1975) while measures for materialism were borrowed from Richins (1987) and Belk (1984b). However, unlike the original studies, this research only examines a unidimensional aspect of public self-consciousness and materialism.

Product symbolism was measured by asking respondents the question, "What general impressions do you have of someone wearing Levi jeans? Would you say he or she is _____ ?" The descriptors listed in Table 1 served as fillers to the above question. A similar form of measurement has been used by Belk, Bahn, and Mayer (1982) and Belk, Mayer, and Bahn (1982). Based on the responses, an average response on each descriptor for each ethnic group was calculated. The average responses by each ethnic group represent the core subcultural consensus for ascribed meanings of a particular brand of product. An individual's score on each item for product symbolism represents a deviation from the core subcultural consensus on that descriptor.

ANALYSES

Validity of measures were assessed by several methods. Cronbach's alpha formed the basis for reliability assessment but confirmatory factor analyses were utilized to determine undimensionality of measures. The latter analysis also provides evidences of measurement properties between groups. Further, evidence of differentiation and convergence between constructs were obtained by inspecting the correlation matrix for all observed x and y variables (Bagozzi 1981). However, because of space limitation the detailed results of these analyses are not reported in this paper.

For test of the proposition and hypotheses, a multi-sample covariance structure analysis using the LISREL VI package was performed on the variance-covariance matrix. A multi-sample analysis is advantageous because it enables simultaneous estimation of parameter coefficients for two or more groups. Two consecutive runs were made in which the first run imposes no equality constraints between groups (Model I). In this run, all betas, gammas, and psis are allowed to take on any values as estimated by data for each group. The second run has all structural parameters (betas, gammas, and psis) to be equal between groups (Model II). Since the models in the consecutive runs are nested, difference in Chi-square tests are useful for assessing equality of structural parameters between groups and for evaluating goodness of fit from one model to another (Bagozzi 1981).

RESULTS

To facilitate the discussion of results, this section has been divided into three areas. The first area assesses the validity of measures utilized in the study while the second area examines several quantitative indicators for the test of the proposition. The final discussion focuses on the test of hypotheses.

VALIDITY OF MEASURES

Reliability coefficients of the various scales for each group are shown in Table 2. Most of the scales perform well by the standard set by Nunnally (1978). The scales for subcultural affinity, brand name familiarity, and product symbolism for both groups indicate reliability coefficients of well above the 0.70 mark. However, the scale for product category relevance and public self-consciousness perform well in one group and not the other. The biggest problem in terms of reliability lies in the borrowed scale of materialism. The scale yields reliability coefficient of less than 0.70 in both groups. However, the coefficients are above 0.50, the minimum level necessary for credible findings (Nunnally 1967).

Measurement validity assessment through a series of confirmatory factor analysis indicates no serious violations of the psychometric properties of the x- and y-measurement models. An examination of the correlation matrices for the two groups shown in the Appendix also revealed very few violations (for example in the Malay sample, violations for discrimination occur only in three out of sixty-four cross-construct correlations) of the rule of convergence and differentiation of the various measurement items as discussed by Bagozzi (1981).

TABLE 2. Scale statistics and reliabilities

Construct	Scale items	Scale mean	Std. dev	Cronbach's alpha
Malays				
Subcultural affinity	SA1,2,3	33.71	5.81	0.75
Public self-consciousness	PSc1,2,3	20.53	5.10	0.70
Materialism	M1,2,3,4	25.29	6.31	0.61
Product category relevance	PCR1,2,3	17.83	6.78	0.68
Brand name familiarity	BNF1,2,3	15.13	7.79	0.90
Product symbolism	PS1,2,3,4	0.02	7.69	0.80
Chinese				
Subcultural affinity	SA1,2,3	17.87	5.48	0.86
Public self-consciousness	PSC1,2,3	19.18	4.50	0.57
Materialism	M1,2,3,4	25.65	5.83	0.63
Product category relevance	PCR1,2,3	18.31	6.68	0.81
Brand name familiarity	BNF1,2,3	11.47	6.05	0.86
Product symbolism	PS1,2,3,4	-0.03	6.74	0.78

TEST OF PROPOSITION

The proposition in this study posits the applicability of the conceptual model across ethnic subcultures. To investigate the proposition, a covariance structure analysis was performed. The analysis for Malays and Chinese was performed simultaneously in one run using the multi-sample format. In this run, all structural parameters are free to assume any value as estimated by data for the group.

Several criteria were used as bases for inferring the veridicality of Proposition 1. Hunt (1983) states that the usefulness of a model lies in its ability to systematically explain a phenomenon. An explanatory model helps answer why certain phenomena occur. Statistically, the above requirement is translated into the necessity for the model to account for variation in the criterion variable(s). LISREL provides several indicators of effect size in the form of squared multiple correlations for each structural equation and the total coefficient of determination for all structural equations jointly. The latter indicator provides more complete evidence of the applicability of the conceptual model because it takes into consideration the contribution of all constructs in the model.

Table 3 presents the total coefficient of determination for the whole structural model for the two groups. The results indicate an effect size of 0.20 for Malays and 0.16 for Chinese suggesting that the conceptual model in Figure 1 is able to explain 20% and 16% of the variations in data for Malays and Chinese, respectively Although there are no standards to compare with these values, the results are encouraging. Table 3 also presents further evidence of the applicability of the conceptual model across ethnic subcultures. Squared multiple correlations for product symbolism is 0.55 and 0.16 for Malays and Chinese, respectively, indicating that the structural equations are better able to explain variations in product symbolism in the Malay sample than in the Chinese sample. Structural equations for public self-consciousness

TABLE 3. Total coefficient of determination for the structural model and each structural equation

	Malays	Chinese
Coefficient of determination for model	0.20	0.16
Squared multiple correlation for:		
Public self-consciousness	0.13	0.05
Materialism	0.01	0.06
Product category relevance	0.03	0.01
Brand name familiarity	0.08	0.18
Product symbolism	0.55	0.16

(eta 1), materialism (eta2), product category relevance (eta3) and brand name familiarity (eta 4) seem to achieve a low level of explanation. Since the only factor besides the error term influencing public self-consciousness, materialism, product category relevance and brand name familiarity is subcultural affinity, it can be concluded that subcultural affinity has little direct effect on these constructs.

Joreskog and Sorbom (1988) suggest looking at several goodness-of-fit indicators to assess how well the model fits the data. If the indicators vary a great deal among ethnic groups, this may suggest that the model does not hold equally between groups. Several of these indicators and their values are shown in Table 4. As can be seen from the Table, the Chi-square value for the multi-sample analysis is significant at $p < 0.001$ indicating that the model does not adequately reproduced the covariance matrix for Malays and Chinese. Further, goodness-of-fit indices for the two groups vary somewhat with GFI of 0.75 for Malays and 0.84 for Chinese. Similarly, the root mean square residual for Malays is almost twice as high as that of Chinese. The ratio of root mean square residual to average variance amounts to 0.11 for Malays and 0.08 for Chinese. Further, the normalized residual Q-plots indicate moderate fit for both groups with the residuals scattering around the 45-degree line.

TABLE 4. Goodness-of-fit of the covariance structure model

Indicator	Malays	Chinese
Chi-Sq	503.92	
df	320	
Chi-Sq/df	1.57	
GFI	0.75	0.84
RMR	0.69	0.39
RMR*	0.11	0.08

Note RMR* refers to the ratio of the root mean square residual to average variance.

The change in Chi-square test between Model I (with no equality constraints between groups) and Model II (with the structural parameters being constrained to be equal) will further attest to the differences between the ethnic groups. Table 5 presents results of the change in Chi-square test. As evident from Table 5, the change in Chi-square values from Model I to Model II is significant. The significant finding indicates that the parameter estimates for betas, gammas, psis, or any combination of the parameters are different

TABLE 5. Change in chi-square test for the covariance structure model

	Chi-Sq	df	Chi-Sq	df	Prob.
Model I	503.92	320			
Model II	530.89	335			
Model I vs. II			26.97	15	<0.05
	Goodness-of-fit indicators				
	Malays		Chinese		
Model II					
GFI	0.74		0.84		
RMR	0.82		0.46		

between ethnic groups. In other words, when all structural parameters are constrained as equal between ethnic groups, the model results in a significantly poorer fit. Differences in structural parameters between ethnic groups could emanate from differences in the direction and magnitude of the causal coefficients and/or from the error specification in the structural equation. Either one of these sources or both would suggest that the conceptual model applies differently for the two ethnic subcultures.

In summary, it can be concluded that the conceptual model tends to exhibit differences in its ability to explain variations in product symbolism across the two ethnic subcultures. This conclusion is based on the achievement of different levels of coefficient of determination for the whole structural model, different levels of squared multiple correlations for the structural equations, and different levels of goodness-of-fit between Malays and Chinese. Results from the change in Chi-square test further support the above conclusion.

TEST OF HYPOTHESES

Several different statistical indicators were utilized to test the hypotheses. Figure 2 shows the symbols utilised to represent the major causal coefficients in the structural equation model. As presented in Tables 6, 7, and 8, the relevant indicators include t-tests of the unstandardized causal coefficients, standardized regression coefficients of eta on xi and correlation between etas, and total, direct and indirect effects between constructs. T-tests of the unstandardized causal coefficients provide a test of significance on the direct effect of one construct on another construct with all other constructs included in the model. The standardized regression coefficients for eta on xi and correlations between etas describe the degree of association between two constructs without the influence of other constructs. To complement the

above set of indicators, total, direct, and indirect effects were also examined to obtain a better understanding of the relationship between constructs.

Hypothesis 1 posits that product symbolism is a function of subcultural affinity Three different criteria were utilized for this investigation: the estimate for gamma$_{51}$ (γ_{51}), standardized regression coefficient for eta5 on x1, and total effects of subcultural affinity on product symbolism. As evident in Table 6, gamma$_{51}$ (γ_{51}) is found to be insignificant for Malays and significant for Chinese. This finding suggests that given the constructs in the model, the direct effect of subcultural affinity on product symbolism is small for the Malays and significantly large for the Chinese. The standardized regression coefficients for eta5 on x1 shown in Table 7 indicate sizeable values for Malays and Chinese. However, the inclusion of other constructs in the model negates the importance of subcultural affinity especially for the Malays. Among Malays, a large portion of the effects of subcultural affinity on

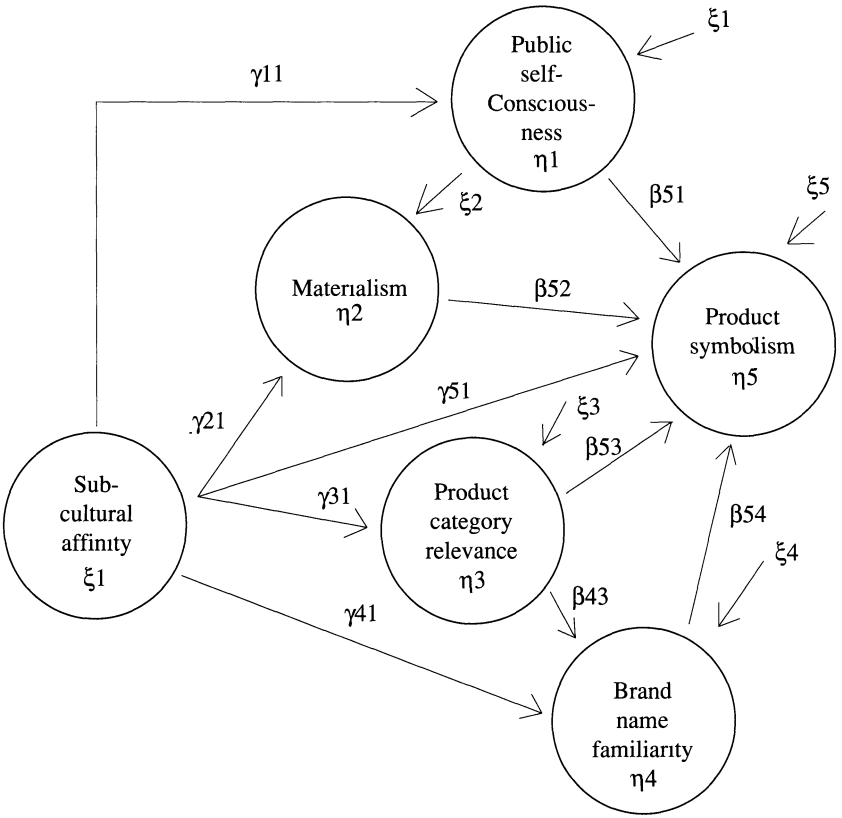


FIGURE 2. Structural equation model

product symbolism occur indirectly through other constructs as shown in Table 8. This finding accounts for the insignificant gamma$_{51}$ (γ_{51}) among the Malays. Hypothesis 1 is therefore supported among both Malays and Chinese.

Hypothesis 2 states that product symbolism is a function of public self-consciousness. Only direct effects are possible to substantiate this hypothesis. The t values for beta$_{51}$ (β_{51}) is positive and significant for Malays and insignificant for Chinese. Thus, Hypothesis 2 is only supported among the Malays but not for the Chinese.

The third hypothesis postulates a relationship between materialism and product symbolism. Only direct effects are possible to substantiate this hypothesis. As evident from Table 6, a significant negative relationship is found for Malays and and an insignificant relationship for Chinese. As such, Hypothesis 3 is only supported for Malays.

Hypothesis 4 states that product symbolism is a function of product category relevance. As shown in Table 6, insignificant relationships were observed for both ethnic groups. Correlation between eta3 and eta5 appears sizeable for Malays but small for Chinese. Total and indirect effects between the two constructs are also small for the Chinese. Hypothesis 4 is only weakly supported for Malays and not for Chinese.

TABLE 6. Selected structural parameters and significance (unstandardized solution)

	Group			
	1 Malays		2 Chinese	
Parameter	Value (Std. error)	t	Value (Std. error)	t
β_{43}	0.12(0.25)	0.48	0.56(0.15)	3.71**
β_{51}	0.40(0.23)	1.78*	-0.03(0.20)	-0.16
β_{52}	-0.59(0.24)	-2.44**	0.08(0.16)	0.50
β_{53}	0.20(0.14)	1.44	-0.00(0.08)	-0.03
β_{54}	0.30(0.08)	3.73**	0.18(0.07)	2.63**
γ_{11}	0.23(0.11)	2.04**	0.08(0.05)	1.59*
γ_{21}	0.05(0.13)	0.41	0.12(0.06)	1.86**
γ_{31}	0.15(0.14)	1.02	-0.10(0.10)	-1.04
γ_{41}	0.45(0.25)	1.80**	0.07(0.11)	0.60
γ_{51}	-0.01(0.15)	-0.07	-0.13(0.07)	-1.81**

* Significant at $p < 0.10$
** Significant at $p < 0.05$
Test for betas are two-tailed while tests for gammas are one-tailed.

Table 6 shows a strong support for Hypothesis 5 that there is a relationship between brand name familiarity and product symbolism. Again, only direct effects between constructs are possible to support the hypothesis. Significant t values for $beta_{54}$ ($ß_{54}$) in both groups indicate a substantial influence between brand name familiarity and product symbolism. As such, an individual's knowledge about the brand bears a direct influence on how he or she ascribes meanings to a product. This relationship holds for both ethnic groups.

Hypothesis 6 posits a positive relationship between product category relevance and brand name familiarity Support for this hypothesis is found for Chinese as a result of a significant t value for $beta_{43}$ ($ß_{43}$). However, the relationship for Malays is found to be positive but insignificant. Therefore, Hypothesis 6 is supported only for the Chinese.

Hypothesis 7 pertains to the relationships for the Malay subculture between subcultural affinity and the four intervening endogeneous variables of public self-consciousness, materialism, product category relevance, and brand name familiarity Hypothesis 7a postulates a positive relationship between subcultural affinity and public self-consciousness. This hypothesis is strongly supported as a result of a significant t value for $gamma_{11}$ (γ_{11}). Hypothesis 7b suggests that there is a negative relationship between subcultural affinity and materialism. As table 6 shows, the maximum likelihood estimate of $gamma_{21}$ (γ_{21}) is not significantly different from zero. Hypothesis 7b is rejected. Similarly, Hypothesis 7c is also rejected because of the insignificant result obtained for $gamma_{31}$ (γ_{31}). The relationship between subcultural

TABLE 7 Standardized regression coefficients of Eta on Xi and Correlations between Etas

Malays

	Xi	Eta_1	Eta_2	Eta_3	Eta_4	Eta_5
Eta_1	0.48					
Eta_2	0.09	0.04				
Eta_3	0.16	0.07	0.01			
Eta_4	0.34	0.15	0.03	0.12		
Eta_5	0.28	0.49	-0.65	0.28	0.78	

Chinese

	Xi	Eta_1	Eta_2	Eta_3	Eta_4	Eta_5
Eta_1	0.16					
Eta_2	0.20	0.03				
Eta_3	-0.11	-0.02	-0.02			
Eta_4	0.01	0.00	0.00	0.38		
Eta_5	-0.16	0.04	0.01	0.13	0.24	

affinity and product category relevance is too small for the path to be significant. In Hypothesis 7d, a negative relationship is posited between subcultural affinity and brand name familiarity. Instead a positive significant relationship is found indicating that an individual who is high on subcultural affinity would tend to express a high level of brand name familiarity

The positive relationship between subcultural affinity and public self-consciousness (Hypothesis 8a) is strongly supported for the Chinese as a result of a significant positive value of $gamma_{11}$ (γ_{11}). This finding implies that a Chinese who identifies strongly with his ethnic subcultural values would also tend to be high on public self-consciousness. Hypothesis 8b predicts a positive relationship relationship between subcultural affinity and materialism. As Table 6 shows, the value of $gamma_{21}$ (γ_{21}) is positive and significant as predicted. In Hypothesis 8c, a negative relationship is expected between subcultural affinity and product category relevance. Value for $gamma_{31}$ (γ_{31}) is negative but insignificant suggesting that Hypothesis 8c should be rejected. Finally, Hypothesis 8d predicts a negative relationship between subcultural affinity and brand name familiarity The insignificant estimate for $gamma_{41}$ (γ_{41}) provides support for the rejection of Hypothesis 8d.

TABLE 8. Decomposition of total effects into direct and indirect effects

	Total Effects	Direct Effect	Indirect Effect
Malays			
Xi on Eta_4	0.47	0.45	0.02
Xi on Eta_5	0.22	-0.01	0.23
$Eta_3 Eta_5$	0.23	0.20	0.03
Chinese			
Xi on Eta_4	0.01	0.07	-0.06
Xi on Eta_5	-0.12	-0.13	0.01
$Eta_3 Eta_5$	0.10	-0.00	0.10

DISCUSSION

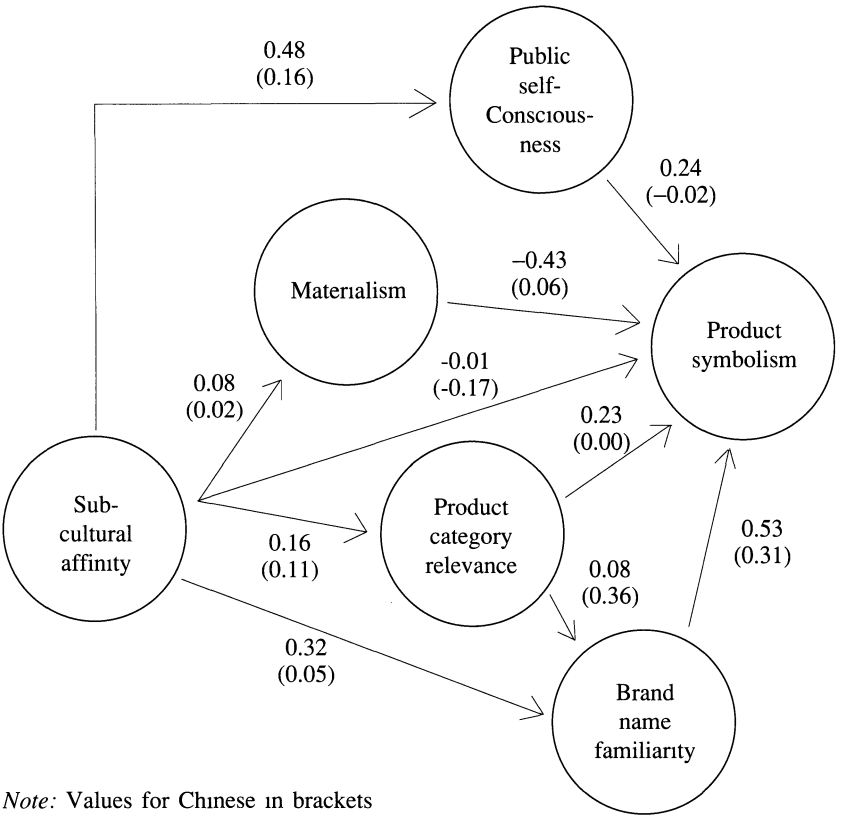
Results of the multi-sample covariance structure analysis indicate that the proposition of equal applicability of the conceptual model across Malay and Chinese ethnic subcultures should be rejected. From the coefficient of determination and squared multiple correlation for product symbolism, the

conceptual model appears to be more applicable to the Malay subculture than that of the Chinese. However, other goodness-of fit indicators such as GFI and root mean square residual suggest that the conceptual model holds better for the Chinese than the Malays. The finding that the conceptual model is not generalizable is interesting because it suggests that a parsimonious explanation of product symbolism across ethnic subcultures is not quite possible. Since the Malays and the Chinese are *vastly different* in their values, traditions, and norms, the same system of explanation does not appear to explain for variations in the data equally well. Similarities and differences exist in the parameter estimates for the two subcultures.

Relationships that are similar in direction and magnitude across ethnic subcultures exist between brand name familiarity and product symbolism, and between subcultural affinity and public self-consciousness. In both groups, the influence of brand name familiarity on product symbolism and the influence of subcultural affinity on public self-consciousness are strong and positive. Further, findings of both ethnic groups indicate an insignificant influence of subcultural affinity on product category relevance and an insignificant influence of subcultural affinity on brand name familiarity In other words, an individual's identification with his or her ethnic subcultural values would not impact his or her perception of product suitability or expressed knowledge about the brand. Another insignificant relationship was also found between product category relevance and product symbolism for both ethnic groups. As a result of a consistent insignificant paths between the antecedent and consequence of product category relevance across the two ethnic groups, this construct should perhaps be deleted from the model.

Differences in construct relationships exist for all other causal paths in the model in Figure 3. For example, the relationship between product category relevance and brand name familiarity is positive for Chinese but insignificant for Malays. For the causal path between public self-consciousness and product symbolism, a significant positive estimate was obtained for Malays but an insignificant estimate was obtained for Chinese. All the differences that were observed in the causal path coefficients further supported the conclusion that the conceptual model would not be generalizable across the two ethnic subcultures. As a result, for future research, the model for Malays and Chinese could be modified from the base model to represent relationships that are only important within each ethnic subculture. The goodness-of-fit of the model will most likely improve when the researcher does not assume that the same system of explanation to hold across ethnic subcultures.

Several implications for future research are suggested by the findings, some of which are in response to the limitations in this study The present study provides a static look at a complex process of meaning creation in a social milieu over time as a result of product ownership or usage. The study



Note: Values for Chinese in brackets

FIGURE 3. Standardized solution for Malays and Chinese

deals with the end process when meanings have already been created. Future research should attempt to tap the dynamics of meaning creation or the process of meaning alteration over time.

Since this study investigates product symbolism within and across ethnic subcultures in Malaysia, replication with a different sample in other nations would be beneficial in understanding the extent of the model's usefulness. Further, because of the decision to focus on middle class Malays and Chinese, this study suffers an additional restriction in range in the data. That is, correlations observed between variables tend to be understated because of smaller variability in the variables. Although this design forms a more demanding and rigorous test of the model, it has limited external validity For generalizability of the findings among Malays and Chinese, future research chould attempt to corroborate the study with a representative sample

of subjects. Further, these researchers might investigate the influence of different product categories and brands on the model.

Future work is also necessary on the proper measurement and definition of various dimensions of materialism and public self-consciousness. Instead of using unidimensional measures of these constructs, materialism and public self-consciousness should probably be treated as second order constructs descriptive of several dimensions pertinent to their domain of content. Researcher should take care to verify conceptual equivalence of these measures between ethnic subcultures. Preexisting measures may not be suitable in different cultural or subcultural context.

Appendix

Correlation Matrices for Malays and Chinese

Malays

	SA1	SA2	SA3	PSC1	PSC2	PSC3	M1	M2
SA1	1.00							
SA2	0.50	1.00						
SA3	0.48	0.51	1.00					
PSC1	0.13	0.16	0.18	1.00				
PSC2	0.01	0.14	0.24	0.35	1.00			
PSC3	0.07	0.17	0.34	0.49	0.54	1.00		
M1	0.06	0.26	0.11	0.29	0.14	0.14	1.00	
M2	0.12	0.25	0.09	0.32	0.42	0.26	0.29	1.00
M3	-0.03	-0.01	0.07	0.31	0.17	0.20	0.16	0.48
M4	-0.18	-0.19	-0.13	0.24	0.15	0.12	0.34	0.22
PCR1	-0.10	-0.03	0.06	0.03	0.03	-0.08	-0.22	0.04
PCR2	0.15	0.06	0.14	-0.08	-0.07	-0.03	-0.24	-0.10
PCR3	0.05	0.11	0.05	0.03	0.13	-0.08	-0.10	0.13
BNF1	0.05	0.16	0.12	0.13	0.10	0.15	0.05	0.01
BNF2	0.15	0.14	0.19	0.17	0.08	0.11	0.05	0.02
BNF3	0.09	0.18	-0.02	0.23	-0.03	-0.06	0.11	0.09
PS1	-0.01	0.23	0.01	0.01	0.16	-0.03	-0.19	0.18
PS2	0.10	0.20	0.03	0.06	0.17	0.03	-0.03	0.03
PS3	0.05	0.14	0.18	0.06	0.08	0.21	-0.16	-0.08
PS4	-0.16	0.14	0.07	0.10	0.16	0.11	-0.01	0.08
St.dev	2.45	2.40	2.28	1.66	2.69	1.98	2.26	2.37

	M3	M4	PCR1	PCR2	PCR3	BNF1	BNF2	BNF3
M3	1.00							
M4	0.22	1.00						
PCR1	-0.06	-0.11	1.00					
PCR2	-0.17	-0.09	0.30	1.00				
PCR3	-0.14	-0.02	0.49	0.48	1.00			
BNF1	0.01	0.03	0.07	0.30	0.12	1.00		
BNF2	-0.01	-0.01	0.20	0.34	0.09	0.89	1.00	

BNF3	-0.04	0.10	0.18	0.20	0.04	0.66	0.71	1.00
PS1	-0.23	-0.07	0.16	0.16	0.25	0.44	0.36	0.38
PS2	-0.08	-0.07	-0.08	0.14	0.04	0.41	0.36	0.29
PS3	-0.19	-0.32	0.02	0.19	0.15	0.35	0.32	0.24
PS4	0.05	-0.19	0.10	-0.09	0.10	0.42	0.37	0.33
St.dev	2.56	2.09	2.79	3.02	2.85	2.91	2.88	2.75

	PS1	PS2	PS3	PS4
PS1	1.00			
PS2	0.47	1.00		
PS3	0.54	0.47	1.00	
PS4	0.46	0.39	0.60	1.00
St. dev	2.43	2.46	2.36	2.44

Chinese

	SA1	SA2	SA3	PSC1	PSC2	PSC3	M1	M2
SA1	1.00							
SA2	0.77	1.00						
SA3	0.60	0.65	1.00					
PSC1	0.02	0.25	0.15	1.00				
PSC2	0.12	0.09	0.05	0.13	1.00			
PSC3	0.06	0.18	0.15	0.28	0.47	1.00		
M1	0.19	0.20	0.10	0.12	0.02	0.01	1.00	
M2	0.09	0.11	0.18	0.23	0.29	0.08	0.25	1.00
M3	0.04	0.11	0.08	0.15	0.30	0.11	0.18	0.41
M4	0.13	0.17	0.14	0.20	0.17	0.15	0.24	0.47
PCR1	-0.12	-0.10	-0.18	0.07	-0.10	-0.03	-0.06	-0.23
PCR2	-0.07	-0.03	-0.06	0.11	-0.05	0.09	-0.02	-0.16
PCR3	-0.11	-0.09	-0.12	0.13	-0.14	0.04	0.03	-0.22
BNF1	0.05	-0.03	-0.08	-0.04	0.04	0.06	0.16	-0.05
BNF2	0.03	0.01	-0.05	0.05	0.08	0.08	0.21	0.03
BNF3	-0.01	0.09	-0.02	0.13	0.00	0.17	0.11	-0.14
PS1	-0.12	-0.03	-0.02	0.13	-0.01	0.03	0.16	0.00
PS2	-0.08	-0.10	-0.09	-0.12	-0.09	0.05	0.16	-0.12
PS3	-0.18	-0.11	-0.16	0.15	-0.10	0.00	0.08	-0.02
PS4	-0.14	-0.11	-0.06	0.09	-0.18	-0.06	0.09	-0.01
St.dev	1.97	2.11	2.10	1.69	2.19	2.21	2.09	2.02

	M3	M4	PCR1	PCR2	PCR3	BNF1	BNF2	BNF3
M3	1.00							
M4	0.28	1.00						
PCR1	-0.03	-0.15	1.00					
PCR2	0.03	-0.12	0.51	1.00				
PCR3	0.02	-0.10	0.53	0.74	1.00			
BNF1	0.13	-0.05	0.26	0.33	0.32	1.00		
BNF2	0.13	0.03	0.27	0.33	0.35	0.79	1.00	
BNF3	0.11	-0.09	0.28	0.34	0.36	0.55	0.69	1.00
PS1	0.09	0.13	0.07	0.12	0.12	0.11	0.21	0.18
PS2	-0.02	-0.04	0.10	0.05	0.05	0.23	0.28	0.20

PS3	0.05	0.11	0.07	0.06	0.03	0.15	0.25	0.22
PS4	0.07	-0.02	0.25	0.15	0.21	0.23	0.28	0.31
St.dev	2.17	2.20	2.55	2.63	2.69	2.50	2.09	2.26

	PS1	PS2	PS3	PS4
PS1	1.00			
PS2	0.30	1.00		
PS3	0.36	0.56	1.00	
PS4	0.41	0.51	0.63	1.00
St.dev	2.18	2.30	2.18	2.05

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