The Acquisition of Consumer Skills and Materialism in Adolescents: A Cross-cultural Comparison

By

Dr. Cheng Kuo

ABSTRACT

Two theoretical approaches--the social learning approach and the family communication pattern approach--were used and integrated in examining the acquisition of consumer skills and materialism in both the American youths and the Chinese youths. Two cross sectional surveys were conducted in which 443 American adolescents in a midwest state of the United States and 712 Chinese adolescents from the largest metropolitan city in Taiwan were studied. The LISREL covariance analysis was used to achieve the two objectives: (1) to examine the cross-cultural measurement comparability, and (2) to compare the cross-cultural differences and similarities in the structural relationships between latent variables in the proposed models. Results from the study suggested that there were more differences than similarities in the process of consumer socialization. In addition, the two communication-related theoretical models did work jointly in accounting for the socialization outcomes.

作者簡歷:
Cheng Kuo(郭貞), Ph.D, University of Michigan Ann Arbor; Associate Professor, Refartment of advertising, National Chengchi University.
INTRODUCTION

Adolescence is a crucial period for socialization. During this time, the youngster needs to acquire various skills and attitudes that will prepare him or her to become an appropriately adjusted adult who can contribute to society in meaningful ways.

Social learning is impossible without some forms of communication. In this paper two communication-related theoretical frameworks-- the social learning theory and the family communication pattern approach-- were utilized and integrated in examining the processes of acquisition of consumer skills and materialistic orientations among both the American youths and the Chinese youths in Taiwan.

In doing cross-cultural studies, a common methodological problem has been that one concept may have different meanings in different culture (Triandis & Berry, 1980). However, it is reasonable to assume that there may be some identical aspects to a concept, but there will also be a culture-specific meaning (Starr & Wilson, 1980). In addition, the problem of different meanings for what seems to be the same concept also arises when attempts are made to translate from one language to another (Werner & Campbell, 1970). Rather than giving up in frustration, this study will propose a way to do cross-cultural comparison in which both the identical part of the meaning and the culture-specific part of the meaning to a concept are taken into consideration.

A simultaneous multi-group comparison strategy was utilized to compare the cross-cultural differences and similarities in the structural relationships in a the proposed causal model while imposing a relatively invariant measurement structure across two samples. In the past, when a multiple-item scale was used in a cross-cultural study, the readers often assumed that the measurement structure was invariant across samples. However, in many occasions, such an invariant-measurement assumption was very questionable. When cross-cultural differences were reported, it is quite possible that the observed differences were a function of both the true differences in characteristics and of the measurement incomparability.

Few communication scholars have paid reasonable attentions to this issue. Gudykunst, Yang, and Nishida (1985) made their first attempt to address this issue in a cross-cultural test of uncertainty reduction theory through the use of LISREL covariance analysis. However, they ran separate tests on each sample rather than conducting a simultaneous multi-group comparison on multiple samples at one time. As a result, their results were not cleared from possible contaminemination of measurement
incomparability due to the fact that the researcher failed to verify a cross-cultural comparability in the measurement structure.

In this study, the author proposes to utilize a simultaneous multi-group comparison strategy in examining differences and similarities of the structural relationships in both samples. With this simultaneous multi-group comparison approach, this author intends to accomplish three objectives: (1) to examine and ascertain that the measurement structures are comparable across cultures so as to rule out the measurement-related contamination, and (2) to compare the similarities and differences in the structural relationships in the proposed causal model across samples, and (3) to set an example for future cross-cultural comparisons involving multiple-indicator scales.

THEORETICAL BACKGROUND

The social learning theories have been widely adopted in the study of children's consumer socialization in earlier studies (Moschis and Churchill, 1978; Moschis and Moore, 1978; Moschis and Moore, 1982; Ward and Wackman, 1971). The family communication pattern approach (Chaffee, McLeod and Wackman, 1973; Meadowcroft & Chaffee, 1985; Sheinkopf, 1973), which proposes the distinction of qualitatively different family communication environments, was used primarily in investigating teenagers' acquisition of knowledge about political and public affairs. Only a few studies have applied it to empirically investigate the learning of a consumer role and role-appropriate behaviors in adolescents (Kuo, 1987, Kuo, 1989; Moore & Moschis, 1981; Moschis, 1985).

The two theoretical approaches mentioned above involve, to a varying extent, either interpersonal communication or mediated communication (e.g., mass media communication). It is reasonable to expect that the two theoretical frameworks cross one another and may be integrated into one generic causal structural model.

The Social Learning Model

The social learning theory emphasizes sources of influence—commonly known as "socialization agents"—which transmit values, norms, knowledge, skills, and behaviors to the learner. These socialization agents may be any person or organization in direct or frequent contact with the learner, or in positions of primacy over, or saliency to the learner, or in control of social reinforcements for the learner.

Both parents and peers are important socialization agents. Parents are usually the
models of "smart shoppers" for their children. Discussions of advertising messages and consumption matters often provide the youngsters good opportunities to learn to be smart shoppers. Accompanying parents during shopping trips also provides opportunities of observational learning for children. Peer influence increases considerably as children enter mid-adolescence (Allen & Newton, 1972; James, 1971; Kanter, 1970; Teter, 1966), nevertheless, parental influence predominates in areas of more long-term concern, such as moral values, code of behavior, and religious beliefs. Peer influence tends to dominate in the realms of fads, music, dress, language and some aspects of social behavior such as dating (Fauman, 1966; Ford and Ellis, 1980; Huba and Bentler, 1980; Jennings and Neimi, 1968; Munns, 1972-1973; Stoneman and Brody, 1981; Vener and Hoffer, 1965). Only those adolescents poorly adjusted to their families tended to rely heavily on peers for emotional and social support.

In earlier studies (Marshall and Magnider, 1960; Strauss, 1952) significant correlations have been found to exist between children's experiences with money and the extent to which parents "spent money wisely." Other studies (Arndt, 1971; Olshavsky and Granbo, 1979) yielded some evidence in support of the hypothesis that family is generally instrumental in teaching young people basic rational aspects of consumption such as money saving, budgeting, etc. On the other hand, some scholars (Moschis & Churchill, 1978; Moschis & Moore, 1982) found that peers contributed to the learning of materialistic values and expressive consumption.

Children may acquire consumer skills through observation and imitation after mass media figures. Bandura (1971) argues that material objects may acquire social meanings that product endorsers transmit to children by means of granting "make-believe social reinforcement and promises. When the depicted outcome of using or not using a certain product is viewed as real by naive children, they may imitate the product endorser's behavior and make purchase influence attempts.

Churchill and Moschis (1979) reported that television provides a rich source for new product information that is utilized in intra-family communication and mediation for actual consumption practices. They also found newspaper reading to be a strong predictor of knowledge about consumer affairs, consumer skills, activism, and motivations for consumption. Ward and Wackman (1971) found that younger adolescents talked more with parents about specific consumption practices and acts, and that such intra-family communication seemed to mediate between exposure to advertising and purchasing for all adolescents. In a path analysis, Moore and Moschis (1981) suggested that different communication process that take place within the home
The Acquisition of Consumer Skills and Materialism in Adolescents

may lead to differential exposure to and use of the mass media (e.g., TV and newspapers) which, in turn, could lead to the development of various consumer orientations.

The Family Communication Pattern Approach

In studying political communication, McLeod and Chaffee (1973) developed a typology of parent-child communication based on the two dimensions of socio-oriented and concept-oriented communication patterns. They contend that the two-dimensional typology identifies qualitatively distinct and meaningful environments for youngsters which will lead to different media use behaviors and different socialization outcomes (McLeod, Chaffee, and Atkin, 1971).

The Socio-oriented communication tends to produce deference and to foster harmonious and pleasant social relationships at home. Children in homes characterized by such a communication environment may be taught to avoid controversy, to repress their feelings on extra-personal topics, and to give in on arguments with adults rather than risk offending others.

The concept-oriented communication focuses on positive constraints that help children to develop their own views about the world. Parents may, for instance, encourage a child to weigh all alternatives before making a decision, or they may expose him/her to controversy, either by openly discussing an issue or by discussing it with other adults in the child's presence. The two dimensions of communication patterns produce a four-fold typology of the following family communication patterns: (a) laissez-faire, (b) protective, (c) pluralistic, and (d) consensual.

Only few studies focused on communication patterns within the family as a variable in the development of consumer skills (Kuo, 1987; Kuo, 1989; Moore & Moschis, 1981; Moschis, 1985). The data suggest that children from "pluralistic" families, where parents encourage open communication and discussion of ideas without insisting on obedience to authority, were more likely to have greater knowledge about consumer matters; they were better able to filter puffery in advertising; and they were better able to cognitively differentiate product-related information they were exposed to in the advertisements (Moore & Moschis, 1981; Moschis, 1985). Kuo (1986, 1987, 1989) found that concept oriented family communication pattern showed some indirect effects on consumer learning such that it tended to enhanced communication with family and with peers and the latter ones contributed positively to the learning of consumer skills.
Social Structural Factors--SES and Age

Socio-economic background, in effect, plays an essential part in locating individuals in their social environment. These locations, in turn, affect the learning process and the final outcomes of consumer socialization. Many studies of consumer behavior have paid some attention to socioeconomic status and have treated it either as an antecedent or as a major explanatory variable. The further apart two people are in social class, the greater the difference has been found in their usage, purchase, and understanding of a product, especially among value-expressive products (Reisman & Rosebrough, 1955). These results tend to refute the contention that of Bieda and Kassarjian (1969) that differences in social class with regard to product preference have disappeared because of common exposure to mass media.

Positive relationships were found to exist between, on one hand, children's experience with and knowledge of money, and on the other hand, age, IQ scores, and socioeconomic status (Marshall and Magnider, 1960; Strauss, 1952). Warner (1960) and Martineau (1957) also noted that social class helps to predict the hierarchy of things for which people wish to spend money. Kuo (1986) reported that adolescents from a high socioeconomic background showed less materialistic orientations when compared with their counterparts from a lower SES origin.

Age may serve as an indicator of many things including cognitive developmental stage, location of life cycle, cumulation of life experience, length of schooling, saliency of different developmental tasks and so forth. In other words, age is a developmental variable but in a multi-dimensional senses. In addition, age also seems to influence, to a certain extent, the youngsters' mass media use behavior and the frequency and intensity of their communication with parents as well as with peers (Faber, Brown, & McLeod, 1979; James, 1971). Previous studies have shown that parent-child communication decreases as the youngsters mature; meanwhile, peer communication increases as a function of the adolescent's age (Allen and Newton, 1972; Dusek, 1977). Age was found to influence youngster's uses of mass media (Faber, Brown, and McLeod, 1979; James, 1971) as well. Older adolescents tended to watch less television but read more newspapers.

RESEARCH HYPOTHESES

Nine hypotheses regarding the social learning processes, family communication
The Acquisition of Consumer Skills and Materialism in Adolescents

patterns and social structural variables in relation to the learning of consumer skills and materialism are proposed.

H1: Assuming that parents as a group are more skillful and experienced consumers than are adolescents as a group, frequent discussion with parents on consumption matters and frequent observation of parents' consumption behavior are likely to enhance the child’s learning of smart consumer behaviors such as shopping for a bargain price.

H2: Assuming that parents tend to teach basic rational consumer behaviors, frequent interacting with parents with regard to consumption matters will reduce the materialistic orientations in adolescents.

H3: Adolescents who often look upon one another as social referents on buying things and frequently consult one another on consumption matters will exhibit greater materialism and consumer skills as well.

H4: Adolescents who watch television frequently will exhibit greater materialistic orientations; whereas, adolescents who read more newspapers will exhibit greater consumer skills.

H5: Adolescents from a high SES background would (a) watch less television, (b) read more newspapers, and (c) demonstrate less materialism as compared to those who are from a lower SES origin.

H6: Older adolescents are likely to (a) read newspapers more frequently; (b) watch less television; (c) communicate with parents on consumption less frequently; (d) communicate with peers on consumption-related matters more frequently; (e) exhibit greater consumer skills; and (f) exhibit less materialism.

H7: The four social learning processes are inter-correlated such that (a) newspaper reading and television viewing will enhance child-parent and child-peer communications on consumption related topics, (b) television viewing is positively related to newspaper reading, and (c) child-parent communicating is positively with child-peer communication on consumptions related matters.

H8: The concept-oriented family communication pattern fosters consumer needs and behaviors geared to evaluating alternatives according to their objective and functional (non-social) attributes. Adolescents from homes in which a concept-oriented communication style is emphasized are more likely to show greater consumer skills but less materialism.

H9: The concept-oriented family communication pattern encourages open discussion and expression of different views, adolescents from such families are
more likely to (a) communicate with parents on consumption related matters, and (b) communicate with peers on consumption related matters.

**RESEARCH METHODS**

**Data Collection**

Two cross-sectional surveys were conducted in the United States and in Taiwan. Respondents were all selected from secondary schools.

**The U.S.A. Youth Sample**

The American youth sample consisted of 443 respondents, who were selected from six secondary schools located in three counties surrounding a metropolitan city in a mid-west state. Efforts were made to maximize the variations in the respondents’ family socioeconomic status by selecting schools from rich as well as less affluent school districts. Based on the per capita income of each school district reported by the state’s educational board, the author selected three school district.

The six schools, two schools from each district, selected for the study were about relatively the same size. Then, two classes from each class of the 7th, 10th and 12th grades were selected. A self-administered questionnaire was distributed during a regular class session while the author was present in the classroom to answer questions or to clarify confusions.

**The Taiwan Youth Sample**

The Taiwan youth sample consisted of 712 respondents who were selected from nine junior middle (equivalent to 7th, 8th, and 9th grades) and high schools (equivalent to 10th, 11th and 12th grades) located in the metropolitan area of Taipei, the largest city of Taiwan. Two classes from each grade were randomly selected. Since there are only required courses in Taiwan’s secondary schools, the students selected should represent the average student population of each school. The participation rate of the students in each class was over 90 per cent. A self-administered questionnaire was the survey instrument. Both the author and a student advisor were present to answer questions and clarify confusions regarding the questionnaire.

In Taiwan, it is more difficult to distinguish the socioeconomic status of the student’s family by merely looking at the school districts. The student population of each school often represents a mixture of children from wealthy as well as from less affluent families. This is especially true in the high school student bodies. The students
The Acquisition of Consumer Skills and Materialism in Adolescents

in Taiwan have to take a competitive entrance examination to be admitted to high schools after they graduate from junior middle schools. Those who are admitted to the best high schools are those who do well in the entrance tests but are not necessarily all from wealthy families.

In addition to age, the author used another stratification variable, the school's prestige (e.g., good, average, lousy), in selecting the schools. Students in the good schools usually have much heavier school works than those who are in the lousy schools. The time that is devoted to school works may also have some impacts on their mass media uses, participation in recreational activities and even some types of consumption behaviors. To avoid such possible confounding biases, the author selected schools with different prestige statuses.

Measurement of Theoretical variables

Multiple items were used in the questionnaire to measure some of the major variables. The reliability of each multiple-item measurement scale was examined before that construct was chosen into the analysis. Following the suggestion of a two-step approach in analyzing a causal model (Anderson & Gerbin, 1988), confirmatory factor analysis was run to examine the measurement structure for each latent construct so as to test the construct validity. In addition, a multi-group confirmatory factor analysis was run to search for cross-sample comparable measurement items (Bollen, 1989). The selection of observed indicators for the latents to be included in the final analysis was based on two criteria: (a) the item has adequate face validity, and (b) the resulting lambda coefficient (or factor loading) from the confirmatory factor analysis of the item was acceptable. In general, items having a standardized factor loading (or lambda) less than .40 across samples were eliminated (See Liang, Tran, Krause, & Markides, 1989; Porst, Schmidt, Zeifang, 1987).

Consumer Skills

Consumer skills is defined as the frequency of exercising rational and intelligent market transactional activities such as money saving and price bargaining, etc. Based on the two criteria mentioned above, only one indicator was selected from the original five measures to be used in the final analysis. The respondents were asked to indicate on a five-point scale, "how often they shop around before buying something that costs a lot of money."

Materialism

Materialism is defined as the orientation emphasizing possessions and money for
personal happiness and social progress (Moschis & Churchill, 1978; Ward & Wackman, 1971). Two indicators were selected from the original five to be used in the final analysis. The respondents were asked to indicate on a five point scale, whether they agree or disagree with the two statements: (1) money can buy happiness, and (2) my dream of life is to be able to own expensive things.

The Social Learning Variables

Both mass media communication and interpersonal communication are important social learning processes for the adolescents in acquiring various consumer orientations. The mass media exposure variables consist of two single-indicator constructs: total time of television viewing (Eta 1), and total time of newspaper reading (Eta 2) (Note 1).

Multiple indicators were used to measure the other two social learning agents--child-parent communication (Eta 3) and child-peer communication on consumption matters (Eta 4). Three indicators out of the original five were selected into the final analysis to reflect child-parent communication. The respondents were asked to indicate on a five-point scale how often (1) they went shopping with parents, (2) they discussed advertisements and advertised products seen on television with parents, and (3) their parents asked about their opinions on buying costly things such as a car, television, and so forth. Whereas, two indicators were used to reflect construct of child-peer communication. The respondents were asked to indicate on a five-point scale how often (1) they went shopping with friends of their own age; and (2) friends asked their opinions/advises on buying things.

The Family Communication Patterns

The author chose to concentrate on the concept-oriented communication pattern because, conceptually, it relates more closely with the learning of consumer skills. Three measures were used in the study which asked respondents to indicate on a five point scale how often their parents (1) encouraged the child to express and discuss his/her own ideas and views even the child was disagreeable with parents.

Socioeconomic Status

Following Bachman's (1970) example, seven questions were asked in order to measure adolescent's socioeconomic level (Note 2). However, due to differences in the economic structure and culture between the two nations, income, occupation prestige, and possessions may not be comparable indicators for socioeconomic status. Thus only two indicators--father's education and mother's education--were used in the actual analyses because they were more comparable cross-cultural measures. Another advantage of
using these two indicators is that the youngsters were able to more accurately report their parents' educational attainment than knowing about their parents' occupation and income. We will have more reliable data by using the parents' educational level alone. The other measures (i.e., number of rooms, number books) have poor factor loadings and were thus excluded from the final analysis.

**ANALYSIS AND RESULTS**

The analyses consisted of three steps: (1) a multi-sample confirmatory factor analysis was conducted to examine the cross-sample measurement comparability, and (2) a causal model was tested on both samples holding that the multi-item measurement structure to be invariant across samples, and (3) a chi square difference test (Bagozzi & Yi, 1988) was conducted on each parameter linking latent variables (i.e., beta, gamma and psi) to examine whether the cross-sample difference was significant.

The Linear Structural Relationship (LISREL) covariance analysis was conducted in testing the hypotheses. The maximum likelihood method was chosen and the input matrices were variance-covariance matrices. (Note 3).

**Examination of Cross-Sample Measurement Comparability**

Comparability or invariance of measurement models represent a continuum (Bollen, 1989 p.356). Models with different forms mostly represent the lower range of the invariance continuum. Two models which have the same form but have different parameter values represent the middle range of invariance continuum. Whereas, two models which have the same form, same parameter values represent the high range of the invariance continuum. (For more details, please see Bollen, 1989, ch.8). The goal of the testing is to determine if the same relation of indicators to latent variable holds in both samples. The equality of scaling is generally of a higher priority than the equality of measurement error variances or the equality of the covariance matrices in different groups.

Following the testing hierarchy recommended by Bollen (1989), the author ran a series of confirmatory factor analysis on five multi-item latent constructs (Note 4) to test the following three hypotheses:

1) H(form): same form but different parameters.
2) H(Lambda): same form, Lambda's(group 1)=Lambda's(group 2).
3) H(Lambda & Theta): same form, Lambda's & Theta's(group 1)=...
Lambda's & Theta's (group 2).

The least demanding test of invariance is \( H(\text{form}) \), whether the two groups have the same form, without restricting the non-fixed parameters to have same values across samples. Since this is the least restrictive test in the hierarchy, a poor fit means that it makes little sense to move to the more restrictive hypotheses. If, however, the fit is satisfactory, a more restrictive model is appropriate. The results of the testing are presented in Table 1.

Table 1 inserted about here

A chi square difference test was conducted to compare the goodness of fit between the three models (Note 5). The chi square difference between model 1 and model 2 is not significant at .05 level (chi square=8.14 with 6 df., p>.05). This would lead us to accept the hypothesis that the lambda values (or standardized factor loadings) are invariant across samples. However, the chi square differences between model 2 and model 3 is significant (chi square=67.95 with 11 df. p<.05). This indicates that the variances of the observed variable are different across samples.

Based on the results from the tests mentioned above, the author would conclude that the scaling of the five latent constructs is quite similar in both samples although the error variances in the observed variables are different. Then, the author proceeded to assess the invariance in the cross-group structural relationships among the latents.

Assessing Two Nested Structural Equation Models

The structural equation model is presented in Figure 1. The six latent endogenous constructs involved in the causal model are: total time of television viewing (Eta 1), total time of newspaper reading (Eta 2), communicating with parents on consumption matters (Eta 3), communicating with peers on consumption matters (Eta 4), consumer skills (Eta 5), and materialism (Eta 6). The last two are the outcome variables of interest, whereas, the other four are the latent constructs representing the social learning processes.

The three exogenous latent variables are age (Ksi 1), family’s SES (Ksi 2), and concept-orientated family communication pattern (Ksi 3). The construct of concept-oriented family communication pattern is treated as an exogenous variable in the model.
because it represents a communication environment for the social learning processes to take place. It is likely that this communication environment preceeds the activities of mass media uses and interpersonal discussions. Conceptually, the direction of the paths should go from the family communication pattern to interpersonal communication on consumption matters because the former refers to the communication style in general, the latter deals with specific topics.

Three correlated disturbances (psi’s) instead of causal paths (beta’s) are specified among the four social learning constructs (psi 1 2, psi 3 4) and between the two consumer learning outcome variables (psi 5 6). No directions are assumed on these three structural relationships. Conceptually and theoretically, reciprocal causal paths are possible to exist among the four social learning processes because exposure to information on mass media may enhance interpersonal discussions, meanwhile, such discussions may encourage information seeking on media as well. Empirically, researchers have reported that interpersonal communication tended to mediate the effect of mass media in the process of social learning (Moschis & Churchill, 1987). To avoid the technical problem of identification in estimating multiple pairs of reciprocal paths, specifying correlated disturbances was specified as an alternative (Hargens, 1988).

Since that the cross-sample measurement invariance has been established and that the major interest of this study is in the equality of the parameters linking the latent variables (beta’s and gamma’s), the testing hierarchy thus consists of the following two nested models:

1) H(Lambda): same form, Lambda’s(group1)=Lambda’s(group2).
2) H(Lambda, Beta, & Gamma)=Lambda’s, Beta’s, and Gamma’s are invariant across samples.

Results from the model testing are presented in Table 2. Apparently, the second model, H(Lambda, Beta, & Gamma) has a less satisfactory fit when compared with the first model. This leads the author to reject H(Lambda, Beta, & Gamma) and to conclude that the scaling of the latent variables is similar in both samples but the structural relationships linking the various latent variables are significantly different across samples.

Table 2 inserted about here
Based on the results presented in Table 2, model 1 is chosen to be reported and discussed. Estimates from the within-group standardized solution are presented in Figure 2 and Figure 3 because they have a value ranging from zero to one and are easier to compare within each group as well as between groups. Only the parameters which are significant at .05 level are reported. The unstandardized parameter estimates are presented in Table 3.

This model has a good overall fit to the data, as indicated by the various indices (See Table 2). Approximately 8 per cent of the variance in consumer skills and 20 per cent of the variance in materialism have been accounted for in the American youth sample; whereas, 16.4 per cent of the variance in consumer skills and 24 per cent of the variance in materialism have been explained in the Taipei youths.

**Identifying Cross-Cultural Difference in individual Parameters**

Differences or dissimilarities in structural relationships across nation are expected, and are the focal interest of this investigation. The next step was to identify the particular particular parameters in the structural equation model that have significantly different values across samples. A series of chi square difference tests were conducted. The results are presented in Table 3, and the significant cross-sample differences are summarized in Table 4.

**Cross-sample Differences and Dissimilarities**

Except for hypothesis one that parent-child communication on consumption-related topics failed to enhance consumer skills in adolescents in neither youth groups, all the other eight hypotheses received empirical support to some extent. Significant
cross-sample (or cross-cultural) differences are uncovered with regard to the following structural relationships.

1) Communicating with peers on consumption matters contributed positively to the acquisition of consumer skills in the Taipei adolescents but not in the American teenagers (chi square=20.04 df=1, p<.05). Hypothesis 3 is partly supported in the Taipei youth sample but not in the USA youth sample.

2) Newspaper reading was found to enhance consumer skills in the American youths, but not in the Taipei youths. (chi square=6.2 df=1, p<.05). Hypothesis 4 is partially supported in the USA youth sample.

3) High socioeconomic status (SES) was found to result in less materialism among the American adolescents but it failed to show a similar effect on the Taipei adolescents (chi square=7.07 df=1, p<.05). Hypothesis five is partly supported.

4) Age was found to reasult in greater materialism in the Taipei teenagers but not in the American adolescents (chi square=4.24 df=1, p<.05). This result is just to the opposite of the prediction of hypothesis six where age was hypothesized to lead to less materialism.

5) Television viewing seemed to lead to less child-parent communication on consumption matters in the American youths; but it enhanced such communication among the Taipei adolescents (chi square=6.2 df=1, p<.05). Hypothesis seven is partly supported.

6) Concept-oriented family communication pattern was found to contribute positively to cultivating materialism in the Taipei teenagers; by contrast, it seemed to reduce materialistic orientations among the American youths (chi square=11.55, df=1, p<.05). Hypothesis eight is partly supported where it hypothesizes that concept-oriented family communication pattern will reduce materialism.

7) Consumer skills and materialism were found to be negatively associated with each other in the American youths, but no relationship was found between these two latent constructs in the Taipei youths (chi square=4.14 df=1, p<.05).

In addition to the significant cross-cultural differences in the structural relationships mentioned above, there are more trends indicating dissimilarities in the structural relationships between the two groups of teenage consumers; however these dissimilarities failed to reach the .05 significance level in the chi square test. These dissimilarities are summarized in the following.

1) Child-parent communication was found to reduce materialism in Taipei
adolescents, but not in the USA adolescents. This result gives some support to hypothesis two and is consistent with previous findings.

(2) Child-peer communication on consumption matters contributed positively in the development of materialistic orientations in Taipei youths but not in the American youths. This result is in support of hypothesis three and is consistent with findings from previous research.

(3) Television viewing was found to slightly increase materialism among Taipei youths but not in the American youths. That is, hypothesis four received some supports in the Taipei youth sample but not from the American youth sample.

(4) SES was found to slightly increase newspaper reading in Taipei youths but not in American youths. This finding renders some support to hypothesis five.

(5) Age was found to slightly increase newspaper reading among Taipei adolescents but not in American adolescents. Thus hypothesis six receives a partial support in the Taipei youth data.

(6) Newspaper reading was found to contribute positively in enhancing child-parent communication on consumption-related topics among the American youths. This finding renders supports for hypothesis seven and replicates previous findings from various studies as well. However, such a trend did not hold in the Taipei youth sample.

(7) Concept-oriented family communication pattern led to less television viewing in Taipei adolescents, but it had little effects on American youths.

**Similarties in Structural Relationships**

With regard to the similarities in the structural relationships between the two samples, the author was able to uncover the following trends.

(1) High SES was found to result in less television viewing in both youth samples. This finding is in support of hypothesis five.

(2) Age was found to lead to less television viewing, less child-parent communication but more child-peer communication on consumption related matters in both samples. Thus, hypothesis six receives cross-cultural supports.

(3) Television viewing seemed to enhance child-peer communication on consumption matters in both samples. Hypothesis seven receives some cross-cultural empirical supports.

(4) Concept-oriented family communication pattern was found to enhance child-
The Acquisition of Consumer Skills and Materialism in Adolescents

peer communication in both samples. And, this result is confirming with hypothesis nine.

The following findings indicate similar trends in the two youth samples, nevertheless, the strength of the trends differs significantly.

Concept-oriented family communication pattern was found to enhance youth-parent communication in both the USA and the Taipei youth samples. Therefore, hypothesis nine has received supports from cross-cultural data though the result indicates that the path coefficient has a much greater magnitude in the Taipei youth sample than that in the USA youth sample (0.463 vs. 0.243, chi square=4.83 df=1 p<.05).

The two mass media exposure constructs are positively correlated in both youth samples. However, the strength of the association was significantly greater in the USA youth samples than it was in the Taipei sample (0.105 vs. 0.068, chi square=4.38 df=1 p <.05).

**DISCUSSION**

Based on the results from the analyses, the emerging picture seems to suggest that there are more cross-cultural differences and dissimilarities than similarities in the hypothesized structural relationships with regard to the process of consumer socialization. The nine hypotheses are either partly supported in both samples or confirmed in only one sample.

It is possible that because single indicators are used to reflect three of our latent constructs--television exposure, newspaper exposure, and consumer skills--the hypothesized structural relationships between the social learning variables and the learning of consumer skills were not supported. With regard to the learning of consumer skills, only two of the four social learning agents showed significant effects--newspaper reading led to greater consumer skills among the Taipei youths.

As for the acquisition of materialism, three of the social learning agents showed either a positive or a negative impact on the acquisition of materialism among the Taipei youths, however, none of them had any similar effects on the American teen-agers. In a sense, the early observation that parents tended to teach their youngsters basic rational aspects of consumption and peers contributed to the learning of materialistic values was supported in the Taipei youth sample but not in the American adolescent sample.

A similar developmental trend was found in both cultures where age was found to decrease both television viewing and child-parent communication, but to increase child
peer communication over consumption-related topics. Age also showed a facilitating effect on newspaper reading and on the development of materialistic values in Taipei youths but not in the American youths. It is quite understandable and consistent with past research findings that older adolescents tended to read more newspapers. However, the fact that age was found to increase materialism in the Taipei youths is somewhat puzzling. A tentative explanation could be that younger adolescents in Taipei tended to echo the socially desirable answers which they received at school; whereas, older adolescents realized the importance of money and other materialistic possessions in the real world and reported their true feelings and opinions in the questionnaire.

Previous studies found that age was positively related to teenager’s consumer skills. But results from this study tended to modify the previous finding--age per se had no direct impact on teen-age consumer skills at all, rather, it worked through a process of communication with and learning from mass media and reference groups. In other words, older adolescents are not necessarily smarter consumers than younger adolescents, they need to go through the process of social learning from reference groups, and from mass media in order to acquire such desirable and intelligent consumer skills.

Consistent with previous findings, American teen-age consumers from a higher socioeconomic background showed less materialism. In addition, the hypothesis that adolescents from a high SES background would watch less television have been confirmed in both cultures.

With regard to the concept-oriented family communication pattern, two similar patterns were observed across the two youth samples: first, such issue/concept oriented communication activities occurred more frequently in high SES homes; and second, such a family communication environment enhanced both child-parent and child-peer communication on consumption related topics among both the American and Chinese adolescents. This finding has demonstrated that the two theoretical models are indeed related and can be incorporated in the study of socialization processes.

Nevertheless, different effects were observed with regard to the development of materialism and on television viewing between the two samples. In the Taipei youths, the concept-oriented family communication pattern was found to enhance the development of materialism. It may imply that parents of the Taipei youths, whatever SES backgrounds they were from, were more likely to share and to agree with their youngsters on materialistic values. As a result, the concept-oriented family communi-
The Acquisition of Consumer Skills and Materialism in Adolescents

cation environment showed a facilitating effect on the acquisition of materialism among the Taipei youths. On the contrary, the picture emerged for the American youths indicates that frequent discussions about issues and ideas with parents occurred more frequently in higher SES homes and such discussions tended to discourage the development of materialistic orientations. In addition, the two outcome variables--consumer skills and materialism were negatively associated with each other in the American youth sample but unrelated in the Taipei youth sample. Based on these findings, an understatement or an implied message could be that materialism is not considered as negative in the society of Taiwan as it is in the United States. However, in order to support this proposition, a different set of questions need to be asked in future studies.

CONCLUSION

In this study, two theoretical approaches were integrated to examine the acquisition of consumer skills and materialism in both the American and the Chinese teen-age consumers. A versatile multi-group comparison strategy was adopted in testing the hypotheses in a complex context, in which multiple indicators were used and competing explanatory factors as well as important antecedents were controlled. In addition, cross-cultural measurement invariance was verified before the comparison of the hypothesized structural relationships was made. After the measurement invariance was imposed, the author could take the resulting differences and similarities with more confidence because the contamination from measurement errors and measurement incomparability have been taken into consideration.

Interesting findings regarding the structural relationships between the two theoretical approaches were uncovered: the concept-oriented communication pattern at home was found to encourage communication with both parents and peers on consumption matters. Since these two theories involve communication at varying levels, they need to be integrated and investigated together.

Like all empirical studies, this study also has some caveats that need to be mentioned: First, two non-probability samples of 443 American youths and of 712 Chinese youths may not yield generalizable results to represent the consumer behaviors of all American and all Chinese youths. This is a question of the external validity of the study which can always be questioned with most studies whenever nationally representative samples were not used. And this question will remain unsolved until future replications of the results are available. Nevertheless, the author has a firm belief in
the internal validity of the study.

Second, three of the latent variables have only one single indicator (i.e., television viewing, newspaper reading, and consumer skills) as the author selected the measurement items following a stringent screening procedure. The trade-off could be that the single indicator was too crude to represent the underlying concept. As a result, some of the hypothesized relationships were not supported. Better multiple-item scales need to be constructed for the major theoretical constructs so that they may pass the screening procedure in cross-cultural comparisons. In other words, good cross-culturally comparable measurement scales need to be constructed and validated in future studies. Otherwise, without using cross-culturally comparable measurement a cross-cultural comparison is built on a shaky ground.

Finally, this study is a fruitful one in spite of its flaws. A substantially high proportion of the variances in the two outcome variables have been accounted for by the models. The study explored some untouched issues and shed some light for researchers interested in conducting research in this area. With the versatile LISREL technique, an attempt was made to solve the problem of cross-cultural measurement comparability and to present a more holistic picture of the social learning processes in consumer socialization.

Being a smart consumer is not an inborn characteristic. A child's consumer skills do not improve automatically as he or she grows older, rather, it requires learning and education. Results from this study will certainly help consumer educators understand how young people develop consumption related skills, attitudes, and behavior.

**NOTES**

1. The author chose to use the content-free variables for mass media exposure because they don't impose any assumptions on the comparability of program content and newspaper content between the two nations. Although the frequency measures for television viewing and newspaper reading are crude in a sense, however, they may reflect a general pattern of life style and habits of the adolescents living in the two cultures.

2. The following seven questions were asked to obtain information on the adolescent’s socioeconomic level: (1) Father’s occupational status. (2) Mother’s occupational status (if mother also works). (3) Father’s education. (4) Mother’s education. (5) Possessions in the home. (6) Father’s monthly income, and (7) Mother’s monthly income.
3. In using the LISREL covariance analysis, several assumptions are implied. First, the observed indicators are assumed to be multinormally distributed. Second, the residuals (zetas) are assumed to be uncorrelated with the exogenous latent variables (ksis). And third, the measurement errors (epsilon) are assumed to be independent from ksis, etas, and zetas but may correlate among themselves (Joreskog and Sorbom, 1984). Under these assumptions, variance-covariance matrices in conjunction with the maximum likelihood procedure were used to estimate the parameters.

4. The five latent constructs involving multiple indicators included in the confirmatory factor analysis are communicating with family (eta 3), communicating with peers (eta 4), materialism (eta 5), SES (ksi 2), and concept-oriented family communication pattern (ksi 3).

5. For nested models, it is possible to test the statistical significance of the differentiating parameters by use of a chi square difference test. When comparing two nested models, a large change in chi square, compared to the difference in degrees of freedom, indicate that the freed parameters constitute a real improvement. (For more details, please see Bagozzi & Yi, 1988).

BIBLIOGRAPHY


James, L.(1971). *Youth, Media and Advertising*. Austin: University of Texas, Bureau of
The Acquisition of Consumer Skills and Materialism in Adolescents


Table 1:
Test of Invariance of the Measurement Model
for the USA and Taipei Youths

<table>
<thead>
<tr>
<th>Model</th>
<th>chi-square (d.f)</th>
<th>Goodness of Fit USA</th>
<th>Goodness of Fit Taipei</th>
<th>B &amp; B Index</th>
<th>Bollen Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:H(form)</td>
<td>120.94 (df=68)</td>
<td>.965</td>
<td>.985</td>
<td>.941</td>
<td>.973</td>
</tr>
<tr>
<td>2:H(Lambda)</td>
<td>129.08 (df=74)</td>
<td>.962</td>
<td>.984</td>
<td>.937</td>
<td>.972</td>
</tr>
<tr>
<td>3:H(Lambda &amp; Theta)</td>
<td>197.03 (df=85)</td>
<td>.943</td>
<td>.976</td>
<td>.904</td>
<td>.943</td>
</tr>
</tbody>
</table>

Notes: B&B Index: Bentler & Bonett's Fit Index. Bollen's Index: Bollen's Incremental Fit Index.

Table 2:
Test of Invariance of the Structural Equation Model:
for the USA and Taipei Youths

<table>
<thead>
<tr>
<th>Model</th>
<th>chi-square (df)</th>
<th>Goodness of Fit USA</th>
<th>Goodness of Fit TAIPEI</th>
<th>B &amp; B Index</th>
<th>Bollen's Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:H(Lambda)</td>
<td>255.22 (df=126)</td>
<td>.953</td>
<td>.973</td>
<td>.902</td>
<td>.948</td>
</tr>
<tr>
<td>2: (Lambda, Beta, Gamma)</td>
<td>335.79 (df=156)</td>
<td>.938</td>
<td>.966</td>
<td>.871</td>
<td>.927</td>
</tr>
</tbody>
</table>

Notes: B & B Index: Bentler and Bonett's Fit Index. Bollen's Index: Bollen's Incremental Fit Index.
The Acquisition of Consumer Skills and Materialism in Adolescents

Table 3:
A Cross-Group Comparison of
Unstandardized Maximum Likelihood Estimates

### BATA Matrix

<table>
<thead>
<tr>
<th></th>
<th>TVTIME</th>
<th>NPTIME</th>
<th>FACOMM</th>
<th>PEERCOM</th>
<th>SKILL</th>
<th>MAT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TVTIME TPE</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>USA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPTIME TPE</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>USA</td>
<td>-.043</td>
<td>.115</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FACOMM TPE</td>
<td>.045**</td>
<td>ns.</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>USA</td>
<td>.068</td>
<td>ns.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEERCOM TPE</td>
<td>.118</td>
<td>ns.</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>USA</td>
<td>ns.</td>
<td>.344</td>
<td>ns.</td>
<td>ns.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SKILL TPE</td>
<td>ns.</td>
<td>ns.**</td>
<td>ns.</td>
<td>.422**</td>
<td></td>
<td>--</td>
</tr>
<tr>
<td>USA</td>
<td>ns.</td>
<td>ns.</td>
<td>ns.</td>
<td>ns.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT.  TPE</td>
<td>.078</td>
<td>ns.</td>
<td>-.630</td>
<td>.207</td>
<td></td>
<td>--</td>
</tr>
</tbody>
</table>

### GAMMA Matrix

<table>
<thead>
<tr>
<th></th>
<th>AGE</th>
<th>SES</th>
<th>FACOMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>-.163</td>
<td>-.262</td>
<td>ns.</td>
</tr>
<tr>
<td>TVTIME TPE</td>
<td>-.129</td>
<td>-.173</td>
<td>-.174</td>
</tr>
<tr>
<td>USA</td>
<td>ns.</td>
<td>ns.</td>
<td>ns.</td>
</tr>
<tr>
<td>NPTIME TPE</td>
<td>.019</td>
<td>-.031</td>
<td>ns.</td>
</tr>
<tr>
<td>USA</td>
<td>-.060</td>
<td>ns.</td>
<td>.243</td>
</tr>
<tr>
<td>FACOMM TPE</td>
<td>-.032</td>
<td>ns.</td>
<td>.436**</td>
</tr>
<tr>
<td></td>
<td>AGE</td>
<td>SES</td>
<td>FACOMP</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>USA</td>
<td>.090</td>
<td>ns.</td>
<td>.278</td>
</tr>
<tr>
<td>PEERCOM TPE</td>
<td>.047</td>
<td>ns.</td>
<td>.252</td>
</tr>
<tr>
<td>USA</td>
<td>ns.</td>
<td>ns.</td>
<td>ns.</td>
</tr>
<tr>
<td>SKILL TPE</td>
<td>ns.</td>
<td>ns.</td>
<td>ns.</td>
</tr>
<tr>
<td>USA</td>
<td>ns.</td>
<td>-.122**</td>
<td>-.132</td>
</tr>
<tr>
<td>MAT. TPE</td>
<td>.090**</td>
<td>ns.</td>
<td>.251**</td>
</tr>
</tbody>
</table>

PSI Matrix

<table>
<thead>
<tr>
<th></th>
<th>TVTIME</th>
<th>NPTIME</th>
<th>FACOMM</th>
<th>PEERCOM</th>
<th>SKILL</th>
<th>MAT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.A.</td>
<td>2.464</td>
<td>.306</td>
<td>.235</td>
<td>.705</td>
<td>1.005</td>
<td>.266</td>
</tr>
<tr>
<td>Taipei</td>
<td>1.276</td>
<td>.152</td>
<td>.048</td>
<td>.475</td>
<td>.979</td>
<td>.247</td>
</tr>
</tbody>
</table>

U.S.A. PS(1,2)=.105 PS(3,4)=ns. PS(5,6)=-.104**
Taipei PS(1,2)=.068** PS(3,4)=.56 PS(5,6)=ns.

Notes: All parameter estimates are significant at .05 level.
** The pair of parameter estimates are significantly different at the .05 Level in a Chi square difference test.
ns. The parameter estimate is not significant.
-- The parameter is constrained to zero.
### Table 4:
A Summary of Significant Cross-Cultural Differences in Structural Relationships Between Latent Variables

<table>
<thead>
<tr>
<th>Independent Var./Dependent Var.</th>
<th>Michigan Youth</th>
<th>Taipei Youth</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV viewing/Youth-parent communication</td>
<td>Negative</td>
<td>Positive</td>
</tr>
<tr>
<td>Newspaper reading/Consumer skills</td>
<td>Positive</td>
<td>N.S.</td>
</tr>
<tr>
<td>Youth-peer communication/Consumer skills</td>
<td>N.S.</td>
<td>Positive</td>
</tr>
<tr>
<td>Age/Materialism</td>
<td>N.S.</td>
<td>Positive</td>
</tr>
<tr>
<td>SES/Materialism</td>
<td>Negative</td>
<td>N.S.</td>
</tr>
<tr>
<td>Concept-oriented comm. pattern/Materialism</td>
<td>Negative</td>
<td>Positive</td>
</tr>
<tr>
<td>Consumer skills/(Psi 5 6)/Materialism</td>
<td>Negative</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

Notes: 1. All the differences reported are significant at the .05 level of a chi square test.
2. N.S. stands for that the parameter is not significant at the .05 level based on the associated t-values.
Figure 1: Structural Equation Model of Adolescent Consumer Socialization
Figure 2: Parameter Estimates - The Michigan Youth Sample (Standardized Solutions)
Figure 3: Parameter Estimates - The Taipei Youth Sample (Standardized Solutions)