TAXONOMY OF CONSUMER COMPLAINT BEHAVIOR: REPLICATION AND EXTENSION

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ABSTRACT

Understanding consumer dissatisfaction and its outcomes plays a key role in post-purchase satisfaction, customer retention, and long-term customer relationships. The research in outcomes of customer dissatisfaction, or "consumer complaint behaviors" (CCB), grows primarily out of the U.S.-based consumer satisfaction/ dissatisfaction research and may have a strong U.S. domestic (vs. international) orientation. The authors analyze the cross-cultural impact on CCB, and then empirically investigate (1) the robustness of Singh's (1988) taxonomy of CCB across different geographic regions in the U.S. and with different product types, and (2) the extension of the taxonomy in different cultures. The findings from both exploratory and confirmatory factor analysis indicate that, while data from individualistic or similar culture countries or regions fit well into Singh's three-factor model (i.e., voice/private/third-party responses), data from a typical collectivist culture country such as Korea fit well into the two-factor model (i.e., public/private responses). The implications of results and further research are discussed.

INTRODUCTION

A central aspect of successful customer relationship management is the effective management of post-purchase satisfaction. However, while studies of cross-cultural factors affecting international business have been dominantly focused on pre-purchase strategy or management, such as entry mode, standardization vs. adaptation, technology transfer, management style, product diffusion, country-of-origin, etc. (Inkpen and Beamish 1994 Wright and Ricks 1994), the area of post-purchase management seems ignored.

No firm is able to provide perfect products or services, especially outside its home country where the product/service operating condition or situation may not be the same as in its home country. Therefore, when firms enter a foreign country with a different culture, no matter how successful their entry strategy is, they may eventually fail there because of poor management for the outcomes of post-purchase dissatisfaction, which leads to the declining of customer retention rates or even worse. Therefore, understanding dissatisfaction and its outcomes plays a key role in post-purchase satisfaction, customer retention, and long-term customer relationships.

The research in outcomes of customer dissatisfaction, or "consumer complaint behaviors" (CCB), grows primarily out of the U.S.-based consumer movement of the 70s, and thus has had a strong U.S. domestic (vs. international) orientation. In recent years, CCB researchers have moved beyond the measurement rates of voice, word-of-mouth (WOM), and exit behaviors to develop taxonomies and typologies of CCB (Richins 1987, Singh 1988, 1989) and to develop and test theories of the antecedents to CCB (Swan and Oliver 1989; Singh 1989; Singh and Wilkes 1996; Westbrook 1987). However, the North American focus of most of the CCB research to date raises the question of its validity in an increasingly worldwide economy. Research in cultural psychology has found that individuals' values, perceptions of others, and patterns of interaction with their environments are profoundly influenced by the "cultural meaning systems" (Triandis 1989) in which they operate. Similarly, patterns of response to post-purchase dissatisfaction may be expected to be affected by culture.

Because the taxonomy of CCB provides the basic foundation and building blocks for further CCB research, it is of practical and theoretical importance to raise questions about the appropriateness of adopting the U.S.-based taxonomy of CCB outside of the U.S. In the following sections, first the conceptual and taxonomic issues in CCB literature are reviewed; next the cross-cultural literature concerning the core concepts such as collectivism, individualism, and construals of the self and the impact of these

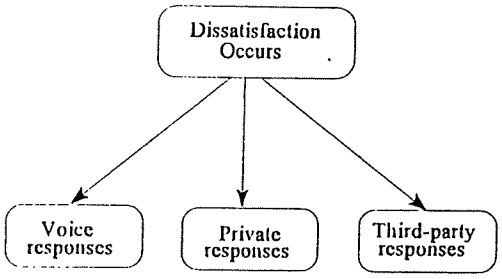
concepts on consumer complaint behavior are discussed; and then the research design is discussed in detail and the results of hypothesis testing with samples from both the U. S. and foreign countries are presented; finally, the results and further research are briefly discussed.

CONCEPTUAL AND TAXONOMIC ISSUES

Singh (1988) has indicated that there is substantial agreement in conceptualizing the CCB phenomenon "as a set of multiple (behavioral and non-behavioral) responses, some or all of which are triggered by perceived dissatisfaction with a purchase episode." CCB behaviors generally have been viewed as falling into one of three categories: "exit" behavior, or the failure to rebuy the offending product; "voice" or complaining behavior addressed to the manufacturer or retail outlet; or "negative word-of -mouth" to friends and associates (Richins 1983, 1987; Singh 1990). Importantly, these are largely independent behaviors: a consumer may switch products, or complain to a retailer, or tell friends about the problem, or do any combination of the three in response to a single dissatisfying consumption incident (Richins 1987).

Most CCB research has concerned itself with one or more of these outcomes and their antecedents without exploring the taxonomy of the CCB construct itself. Several authors have pointed to the importance of properly defining and conceptualizing CCB (Bearden and Teel 1983; Day 1980; Landon 1980; Singh 1988) and various formal classification approaches or taxonomies of CCB have been suggested. Using factor analysis techniques (both exploratory and confirmatory) and a U.S. sample, Singh (1988) found empirical support for the dimensional taxonomy involving "*voice responses*" which are directed to objects that are external to the consumer's social circle and are directly involved in the dissatisfying exchange (e.g., seeking redress from seller), "*private responses*" in which the objects are not external to the consumer's social circle and are not directly involved in the dissatisfying experience (e.g., word-of-mouth communication or exit), and "*third-party responses*" which include objects that are external to the consumer but are not directly involved in the dissatisfying transaction (e.g., reporting to a consumer agency or taking legal action against the firm). FIGURE 1 describes Singh's taxonomy of CCB:

FIGURE 1
Singh's Taxonomy of CCB



However, in his study, Singh (1988) warns that the generalizability of findings would be affected if the respondents were substantively different from persons in his sample which is drawn only from Southwest Texas. Kahle, Liu and Watkins (1992) found values and psychographic variation across United States geographic regions, especially between the South and two other regions: the West and Northeast. In addition, Singh's taxonomy was tested only with four different services and with no tangible goods. Therefore, it is very important to examine the results in different regions of the United States with both services and tangible goods before claiming robustness for the taxonomy of consumer complaint behavior. In other words, it is desirable to replicate Singh's study and to test the following hypothesis with samples from different regions of the U.S. and with different product types (i.e., tangible goods and intangible services) before examining its applicability to cross-cultural settings:

> H1: The taxonomy of CCB (Singh 1988) is robust across different regions of the United States and with different product types (i.e., tangible goods and intangible services).

THE IMPACT OF INDIVIDUALISM, COLLECTIVISM AND IMPORTANCE OF IN-GROUPS ON CCB

While many factors are useful in characterizing and contrasting cultures and subcultures, one of the most widely studied and validated dimensions of culture is that of individualism/collectivism. Triandis (1989) summarizes the differences between collectivists and individualists as falling primarily in the nature of their relationship with significant in-groups: collectivists tend to subordinate their individual goals to the goals of collectives (e.g., family, tribe, firm, etc.) while individualists do not. Markus and Kitayama (1990) argue that collectivists tend to have an interdependent self-view which "entails seeing oneself as part of an encompassing social relation and recognizing that one's behavior is determined, contingent on and, to a large extent, organized by what the actor perceives to be the thoughts, feelings, and actions of others in the relationship." This is in contrast with the individualist's independent self-view wherein the individual is viewed as "an independent, self-contained, autonomous entity who (a) comprises a unique configuration of internal attributes (e.g., traits, abilities, motives, values), and (b) behaves primarily as a consequence of these internal attributes" (Markus and Kitayama 1990). In collectivist cultures, attitudes towards events, actors, and objects depend on how they relate to the individual's need to belong, to fit-in, to engage in actions that are contextually appropriate, to maintain social harmony, and to save face for self and others. In contrast, an individualist's self-esteem and attitudes depend more on success in being unique, in self-expression (including expressing negative emotions), and in validating internal "defining" attributes.

A fundamental attribute of collectivist cultures is that individuals are typically induced to subordinate their personal needs to the needs of one or (at most) a few collectives, which are usually stable in-groups (e.g. family, tribe, company, etc.). Self-definition and self-esteem among collectivists depend on succeeding at belonging, fitting-in, engaging in actions that are contextually appropriate, maintaining social harmony, and saving face for self and others. Emotions, particularly negative emotions, tend not to be outwardly expressed, and are often repressed in intimate social contexts. (Markus and Kitayama 1990).

In contrast, individuals raised in individualistic cultures tend to subordinate group needs and goals to their own personal goals. An individualist's self-construal is relatively independent of social context and depends instead on success in being unique, in self-expression (including expressing negative emotions), and in validating internal attributes. While for collectivists, others aid in self-definition, for individualists, others are relatively more important for self-evaluation (Markus and Kitayama 1990).

Not surprisingly, these differences have profound impacts on group membership and social interaction. For example, collectivists tend to be concerned about the results of their actions on members of their in-groups, tend to share resources with in-group members, and typically go to great lengths to maintain harmonious relationships with in-group members. In collectivist cultures, the relationship of the individual to the in-group tends to be stable; entry and exit are difficult and rare; acceptance of in-group power differences is high; and even when the in-group makes extensive demands, the individual remains loyal (Triandis 1989).

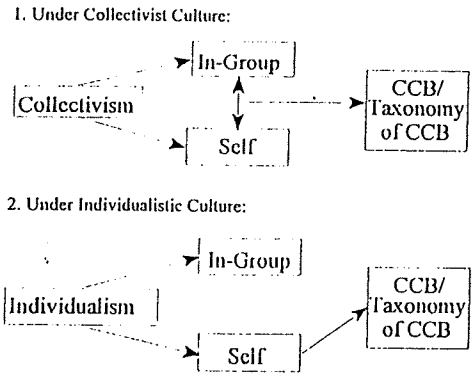
In other words, as shown in FIGURE 2, (1) individualism/collectivism has a direct impact on the meaning and importance of self-construal/self-definition and in-group membership; (2) while self-construal/self-definition and in-group membership interact constantly in a collectivist culture, they are relatively independent in an individualistic culture; (3) while the interaction of self-construal/self-definition and in-group membership has an impact on CCB in a collectivist culture, self construal/self definition affects CCB alone without the interaction with in-group membership in an individualistic culture.

Therefore, as we discussed above, as a theoretical foundation for CCB research as well as a managerial classification of the outcomes of post-purchase dissatisfaction, the taxonomy of CCB might be influenced by consumers' cultural identity as well. Particularly, the taxonomy of CCB in collectivist cultures might be different from the

one in individualistic cultures, which yields the following hypothesis:

H2: There is a difference between the taxonomy of CCB in collectivist cultures and the one in individualistic cultures.

FIGURE 2
Cultural Impact on CCB/Taxonomy of CCB



Furthermore, given that collectivist cultures treat in-groups and out-groups profoundly differently, who is in the in-group(s) or out-group(s) is particularly important. In individualistic cultures, the in-group is defined (Triandis 1972) as "people who are like me in social class, race, beliefs, attitudes, and values." In contrast, the in-group in a collectivist culture is more intimately defined as "family and friends and other people concerned with my welfare" (Triandis 1972). This would imply that in some collectivist cultures, where most interactions with businesses (particularly multinational firms), government representatives, policemen, and so on are out-group interactions, the amount of inter-group conflict and distrust is necessarily high. In particular, the perceived in-group/out-group in collectivist cultures could have an impact on CCB as well as the taxonomy of CCB. For example, in collectivist cultures, a consumer who reports "avoid doing business with a firm because of bad experience with that firm" may also report "convince friends and relatives not to do business with that firm," simply because it is important for a consumer under collectivist culture not to let his in-group members have the same bad experience as he had. On the other hand, the *third-party responses* (i.e., report to consumer agency, court, or local newspaper) and *voice responses* (i.e., complaint to the firm) are all the responses that require interaction with out-groups.

Therefore, it might be more appropriate to treat the third-party responses and voice responses as one factor in collectivist cultures. In contrast to the private responses, this factor, including voice responses and third-party responses, could be referred to as *public responses*. That is:

H3: The taxonomy of CCB in collectivist cultures is a two-dimension structure: private responses and public responses.

RESEARCH DESIGN

Operationalization of CCB

To operationalize CCB, this study used existing scales (Singh 1988) for measuring *voice responses*, *private responses*, and *third-party responses*. However, in the original measures, only one action item was used to measure *exit responses* and two items to measure *voice responses*, but as many as four items to measure *third-party responses*. After pretests and a pilot study with samples from different ethnic backgrounds (e.g., Caucasian-American, Asian-American, etc.) and from different regions in the U.S., we found that the third-party responses were the least likely behavior among the three responses. According to the pretests and pilot study, it would be more balanced and meaningful to reduce one or two items on third-party responses and to add more items on other responses. Therefore, the measures were modified and refined (see Appendix A). All the items were scored on a 7-point scale with anchors "very unlikely (=1)" and "very likely (=7)."

The *voice responses* construct was measured by four items: (I2) discuss the problem with manager or representative of the firm , (I6) ask the firm to take care of the problem, (I10) inform the firm so that they will do better in the future, and

(I9) forget about the incident and do nothing (this item is in reverse order). The *private responses* construct was measured by four items: two exit responses items and two word-of -mouth items: (I3) avoid doing business with the firm from then on, (I7) buy from another firm the next time, (I4) speak to your friends and relatives about your bad experience, and (I8) convince your friends and relatives not to do business with that firm. The *third-party responses* construct was measured by three items: (I1) write a letter to the local newspaper about your bad experience, (I5) report the problem to a consumer agency, and (I11) take legal action against the firm.

Instead of using all services as in Singh's study, we used both services and tangible goods with which the respondents experienced a dissatisfying problem: (1) home appliances, (2) store-bought clothing, and (3) eating at a restaurant.

The questionnaire distributed in the U.S. and India, where English is one of the official languages, was written in English. After translation and back translation, the one distributed in Korea was in the Korean language.

Data

Random samples from the West and Northeast regions of the United States were used, in addition to random samples from India and Korea. While the West and Northeast regions of the U.S. were chosen to represent typical individualist culture, Korea was selected to represent a typical collectivist culture (Hofstede 1980). According to Hofstede's individualism/collectivism dimension continuum of culture, India is in between the U.S. and Korea, although it is often considered as a collectivist-culture country. The degree of collectivism is low because it had been a British colony for a long time and has been influenced by the British individualistic culture ever since. Therefore, we may expect Indian respondents to show some individualistic characteristics.

In the Northeast region of the U.S., a three-step random sampling procedure was followed. First, from 198 towns or cities in eastern Massachusetts, 15 communities were selected; then, 5 blocks of each community were randomly selected through the local street atlas; finally, a questionnaire with a cover letter was randomly distributed to the doors of 3 households of each selected block. After a follow-up contact, 138 completed questionnaires were collected. 21 did not report any dissatisfying problem and another 3 were not usable. The final usable response rate was 50.7%, which is considered very high when compared with those in similar studies in the field.

In the West region of the U.S., the same sampling procedure as in the Northeast region was used. 300 questionnaires were randomly distributed in central California and 176 complete and usable questionnaires were collected. The response rate was 58.7%, which is even higher than in the Northeast region of the U.S.

In Korea, a similar sampling approach was applied in the Seoul area. 200 questionnaires were distributed and 121 complete and usable questionnaires were collected. The response rate was 60.5%.

In India, a professional research firm was hired to conduct the random sampling process. 250 questionnaires were distributed and 164 complete and usable questionnaires were received. The response rate was 65.6%.

In the sampling process, all the questionnaires were distributed and collected by people who were trained for the data collection of this study. Compared to a mail survey, this sampling procedure is very labor intensive and costly, but it produced a very high response rate.

Appendix B summarizes the demographic characteristics of the sample from the four surveys. It shows the balance across different demographic categories in all the four samples. In total, 45% of the respondents reported a dissatisfying problem with home appliances, 20% of them with clothing, and 35% of them with eating at a restaurant. Appendix B also shows variability in some demographic characteristics. For instance, notice that there were more male respondents (55%) than female ones (45%), and it is not surprising to see that more female respondents reported problems with clothing (52%) but not with eating at a restaurant (39%). Marital status also shows some differences: married respondents reported more problems with home appliances and fewer problems with eating at a restaurant than singles. Respondents with lower levels of education reported more problems with

Table 1
Means and Standard Deviations of CCB Items*[b]

Item	Korea	India	West	Northeast	F-value
I1	3.134 (1.678)	3.994 (2.385)	2.153 (1.661)	2.212 (1.605)	33.13**
I2	4.084 (1.973)	5.648 (1.872)	5.653 (1.775)	5.142 (2.107)	19.90**
I3	6.017 (1.420)	5.336 (2.059)	5.324 (1.966)	5.411 (1.832)	4.12**
I4	6.227 (1.060)	5.906 (1.623)	5.869 (1.466)	5.378 (1.780)	6.32**
I5	3.613 (1.733)	4.726 (2.336)	3.233 (2.022)	3.721 (2.045)	15.74**
I6	4.630 (1.910)	5.750 (1.803)	5.801 (1.805)	5.549 (1.937)	11.35**
I7	6.008 (1.387)	5.507 (1.940)	5.625 (1.794)	5.664 (1.649)	2.06
I8	5.345 (1.763)	4.931 (2.070)	4.477 (2.084)	4.964 (1.891)	4.76**
I9[b]	5.471 (1.632)	4.888 (2.213)	5.642 (1.802)	5.150 (2.109)	4.74**
I10	4.193 (1.925)	5.152 (2.079)	5.102 (1.989)	4.794 (2.090)	6.41**
I11	1.924 (1.336)	3.573 (2.222)	1.705 (1.383)	2.372 (1.703)	38.27**

Where:
I1 = Write a letter to the local newspaper about your bad experience?
I2 = Discuss the problem with a manager or representative of the firm?
I3 = Avoid doing business with the firm from then on?
I4 = Speak to your friends and relatives about your bad experience?
I5 = Report the problem to a consumer agency?
I6 = Ask the firm to take care of the problem (to fix or replace item or to return your money)?
I7 = Buy from another firm the next time?
I8 = Convince your friends and relatives not to do business with that firm?
I9 = Forget about the incident and do nothing?[a]
I10 = Inform the firm so that they will do better in the future?
I11 = Take legal action against the firm?

*Standard Deviations are in parentheses.
**P-value is less than 0.01.
[a]It is in reverse order.
[b]Sample size N=575 (N_{Korea}=121, N_{India}=164, N_{West}=176, and $N_{Northeast}$=114).

clothing but fewer with home appliances. However, age does not show significant variability, which is a finding different from those of previous studies (e.g., Singh 1988).

RESULTS

As an initial analysis, Table 1 summarizes the mean and standard deviation for each of the 11 CCB items and the significant differences among the sample means from different regions or countries. An examination of the values in Table 1 shows that there were significant differences among the means for almost all the items, especially the differences between Korea and other areas. For example, Korean respondents rated I2, I6, and I10 (i.e., voice responses) lower and rated I3, I4 , I7, and I8 (i.e., private responses) higher than other areas' respondents.

In order to test the hypotheses in this study, we conducted both exploratory and confirmatory factor analysis. Let us report them in turn.

Exploratory Factor Analysis

Table 2 indicates that the data from the West region and Northeast region of the U.S. clearly generate three-factor results: items for *private responses* clearly load on factor 1 (i.e., I3, I4, I7, and I8), items for *voice responses* clearly load on factor 2 (i.e., I2, I6, I9, and I10), and items for *third-party responses* clearly load on factor 3 (i.e.,

Table 2
Varimax-Rotated Factor Matrix for West Region and Northeast Region Data*

	West Region Sample				Northeast Region Sample		
Item	Factor1	Factor2	Factor 3	Item	Factor1	Factor2	Factor3
I3	**.877**	.08	-.08	I7	**.876**	.12	-.11
I7	**.871**	.05	.03	I3	**.830**	.22	.08
I8	**.709**	-.06	.23	I8	**.662**	.14	.39
I4	**.697**	.21	-.03	I4	**.653**	.38	-.08
I2	.12	**.853**	.12	I10	.17	**.779**	.05
I6	.09	**.834**	.01	I6	.24	**.726**	-.18
I10	.04	**.731**	.15	I9	.06	**.670**	.17
I9	.03	**.652**	-.01	I2	.43	**.646**	.14
I5	.23	.24	**.746**	I11	.03	-.10	**.795**
I1	.09	.18	**.736**	I1	-.06	.06	**.776**
I11	-.14	-.13	**.574**	I5	.12	.15	**.696**
Eigen-value	3.25	2.08	1.36		3.79	1.91	1.16
Percent of Var.	29.5	18.9	12.4		34.5	17.3	10.5
Alpha	.78	.80	.65		.74	.80	.66

*Sample size $N_{West}=176$, and $N_{Northeast}=114$.

Table 3
Varimax-Rotated Factor Matrix for Different Product Types from the U.S. Data

	Home Appliance Data[a]				Meal at Restaurant Data[b]		
Item	Factor1	Factor2	Factor 3	Item	Factor1	Factor2	Factor3
I9	**.812**	.08	-.01	I7	**.898**	.10	-.01
I10	**.764**	-.01	.29	I3	**.866**	.03	.02
I2	**.693**	.37	.14	I8	**.734**	.03	.22
I6	**.686**	.42	-.13	I4	**.718**	.24	-.21
I7	.06	**.883**	.09	I6	.12	**.808**	.05
I3	.26	**.877**	.01	I2	.10	**.798**	.15
I8	.11	**.651**	.30	I10	.05	**.776**	-.07
I4	.41	**.430**	-.01	I9	.05	**.600**	.08
I1	.17	.07	**.784**	I1	-.05	.17	**.758**
I5	.27	.18	**.747**	I5	.11	.19	**.710**
I11	-.30	.04	**.651**	I11	-.01	-.15	**.663**
Eigen-value	3.99	1.66	1.36		3.20	1.99	1.54
Percent of Var.	36.3	15.1	12.4		29.1	18.1	14.1
Alpha	.752	.761	.650		.722	.813	.659

[a]Sample size = 108; [b]Sample size = 142.

Table 4
Varimax-Rotated Factor Matrix for Korean and Indian Data

	Korean Sample				Indian Sample		
Item	Factor1	Factor2	Factor 3	Item	Factor1	Factor2	Factor3
I10	**.797**	-.12	.05	I11	**.797**	.08	.05
I6	**.777**	-.17	.20	I1	**.767**	-.08	.09
I5	**.776**	.30	.09	I5	**.743**	.04	.26
I2	**.737**	-.26	.19				
I1	**.702**	.26	.08	I3	.02	**.736**	.10
I11	**.595**	.28	-.20	I8	-.09	**.722**	.05
				I7	-.02	**.654**	-.10
I7	-.18	**.812**	.10	I4	.14	**.629**	.26
I3	.01	**.797**	-.03				
I8	.25	**.768**	.12	I10	.12	-.04	**.734**
				I6	.24	.05	**.669**
I9	.04	-.05	**.867**	I2	.14	.13	**.658**
I4	.21	.37	**.634**	I9	-.32	.10	**.439**
Eigen-value							
	3.60	2.30	1.16		2.56	1.90	1.24
Percent of Var.							
	32.7	20.9	10.6		23.3	17.3	11.3
Alpha	.84	.75	.41		.70	.65	.72

*Sample size $N_{Korea}=121$, $N_{India}=164$.

I1, I5, and I11). Table 3 reports the same three-factor structure for CCB from the U.S. (i.e., combining both West and Northeast regions) under different product types (i.e., "Home Appliance" and "Meal at Restaurant"). All the results are in favor of H1 and consistent with the findings in Singh's study (1988).

However, Table 4 indicates that the data from foreign countries generate somewhat different results.

The Indian data generate the same three factors with *third-party responses* as factor 1, *private responses* as factor 2, and *voice responses* as factor 3. As we predicted earlier, although the factors had a different order from the ones generated from the U.S. data, the Indian respondents did show individualistic characteristics in their CCB classification.

However, the Korean data generate a different three-factor result in that items I1, I2, I5, I6, I10, and I11 load on factor 1; items I3, I7, and I8 load on factor 2; and items I4 and I9 load on factor 3. It shows that factor 1 represents *public responses*, factor 2 represents *private responses*, and factor 3 is unclear. It is very different from the three-factor structure generated in individualistic cultures, which supports H2.

Because Cronbach's alpha for the third factor from the Korean data was quite low, the measures for the factor might not be very reliable. It may imply that some item(s) might not be appropriate or should be eliminated in the situation of a collectivist culture. In fact, according to a recent study of Liu (1996), when dissatisfied, both Koreans (28.9%) and Americans (22.1%) responded very low on "forgot about the incident and did nothing." In other words, they all "did not forget about the incident and did something." The fundamental difference Liu (1996) found is that, while "did something" means "did some voice actions" for the majority of Americans, it means "did some private actions" for the majority of Koreans.

It explains that, although the factor is not very reliable, this item (i.e., "forget about the incident and do nothing") still loads with a private-response measure (i.e., "speak to your friends and relatives about your bad experience"). Therefore, it is more appropriate to drop this item because when reversing the order of the item, it produces

different meanings in different cultures.

Table 5 shows the results after dropping the item I9. The rotated factor matrix generates two-factor structure with reliable Alpha coefficients for both factors. It is clear to see that one factor is loaded with all public-response measures and the other with all private-response measures, which supports H3.

Table 5
Varimax-Rotated Factor Matrix for Korean Data Without I9*

Item	Factor1	Factor2
I6	**.812**	-.101
I10	**.806**	-.078
I2	**.772**	-.202
I5	**.759**	.348
I1	**.680**	.296
I11	**.530**	.270
I7	-.223	**.807**
I8	.221	**.790**
I3	-.049	**.785**
I4	.292	**.465**
Eigenvalue	3.56	2.303
Percent of Var.	35.6	23.0
Alpha	.825	.729

*Sample size Nkorea=121.

Confirmatory Factor Analysis

A series of confirmatory factor analysis are conducted to further test our hypotheses. The estimated parameters (i.e., λ's, ϕ's, and T-values of these estimated parameters) and overall model fit indexes (i.e., GFI, AGFI, RMSE, and χ^2 with corresponding degree of freedom) by maximum likelihood method through LISREL are reported in Table 6, Table 7, and Table 8.

The estimates for almost all the λ's are statistically significant (t-values > 2.0), and the composite reliability for most constructs exceeds .70, with the highest being .89 and the lowest being .65. All of the cross-construct correlations are significantly different from 1.00; therefore the measures appear to achieve adequate discriminant validity (Bagozzi and Yi 1991). The overall model fit index GFI and AGFI are all greater than .90 and .80 respectively, which are the typical cutoff points for GFI and AGFI according to a rule of thumb (Sharma 1996, p159). Therefore, as expected from the results of exploratory factor analysis, the hypothesized factor structure with voice-response, private-response, and third-party-response dimensions appears to be a reasonably good fit for the West region data, the Northeast region data, the Indian data, and the combined data from the U.S. with different product types. The hypothesized factor structure with public-response and private-response dimensions also has an acceptable fit for the Korean data. Thus, H1, H2, and H3 are all supported in this study.

Table 6
Standardized Value from Confirmatory Factor Analysis with LISREL for India Data, West Region Data, and Northeast Region Data[a,*]

Parameter	India	West	Northeast
λ_{21}	.553 (4.28)	.905 (10.49)	.790 (6.25)
λ_{61}	.594[b]	.800[b]	.674[b]
λ_{91}	.135 (1.36)	.454 (5.82)	.458 (4.16)
$\lambda_{10,1}$	.595 (4.36)	.578 (7.59)	.628 (5.40)
λ_{32}	.652[b]	.874[b]	.836[b]
λ_{42}	.587 (4.57)	.564 (7.64)	.656 (6.95)
λ_{72}	.416 (3.77)	.875 (11.89)	.782 (8.35)
λ_{82}	.551 (4.48)	.556 (7.51)	.604 (6.33)
λ_{13}	.653 (5.81)	.488 (2.05)	.701 (3.87)
λ_{53}	.757 (5.84)	.920 (1.86)	.555 (3.95)
$\lambda_{11,3}$	.625[b]	.173[b]	.652[b]
ϕ_{12}	.305 (2.23)	.230 (2.57)	.687 (4.34)
ϕ_{13}	.486 (3.25)	.391 (1.72)	.153 (1.15)
ϕ_{23}	.089 (0.78)	.239 (1.55)	.104 (0.83)
Overall Model Fit			
GFI	.944	.919	.908
AGFI	.910	.870	.822
RMSE	.026	.021	.030
χ^2 statistic	54.42	83.98	76.46
Degree of freedom	41	41	41

[a]T-values are in parentheses.
[b]Corresponding λ set to 1.0 to fix the scale of measurement.
*Sample size $N_{India}=164$, $N_{West}=176$, and $N_{northeast}=114$.

Table 7
Standardized Value from Confirmatory Factor Analysis with LISREL for Product Types[a]

	Home Appliance*	Meal at Restaurant**
Parameter	**Estimate**	**Estimate**
λ_{21}	.918[b]	.793[b]
λ_{61}	.750 (7.68)	.823 (7.75)
$\lambda_{10,1}$	.696 (5.04)	.726 (5.71)
λ_{91}	.325 (3.21)	.327 (3.52)
λ_{32}	.969[b]	.817[b]
λ_{42}	.633 (4.72)	.649 (8.09)
λ_{72}	.778 (9.31)	.923 (11.32)
λ_{82}	.698 (5.39)	.628 (7.57)
λ_{13}	.751[b]	.705[b]
λ_{53}	.723 (4.40)	.688 (3.91)
$\lambda_{11,3}$	.644 (3.74)	.545 (2.98)
ϕ_{12}	.333 (5.10)	.295 (2.79)
ϕ_{13}	.384 (2.87)	.344 (2.53)
ϕ_{23}	.279 (2.26)	.070 (0.61)
Overall Model Fit		
GFI	.900	.926
AGFI	.820	.872
RMSE	.024	.022
χ^{2} statistic	72.51	64.34
Degree of freedom	38	38

[a]T-values are in parentheses.
[b]Corresponding λ set to 1.0 to fix the scale of measurement.
*Sample size = 108; **Sample size = 142.

Table 8
Standardized Value from Confirmatory Factor Analysis with LISREL for Korean Data Without I9*

Parameter	Estimate[a]
λ_{21}	.722[b]
λ_{61}	.794 (7.94)
$\lambda_{10,1}$	.784 (7.85)
λ_{11}	.696 (6.14)
λ_{51}	.657 (6.83)
$\lambda_{10,1}$	.383 (3.92)
λ_{72}	.763[b]
λ_{82}	.721 (6.55)
λ_{32}	.707 (6.47)
λ_{42}	.536 (3.22)
ϕ_{12}	.230 (4.31)
Overall Model Fit	
GFI	.918
AGFI	.826
RMSE	.015
χ^{2} statistic	57.32
Degree of freedom	26

[a]T-values are in parentheses.
[b]Corresponding λ set to 1.0 to fix the scale of measurement.
*Sample size = 121.

DISCUSSION

This study aimed at empirically investigating the robustness of Singh's (1988) taxonomy of CCB (see FIGURE 1) across different geographic regions in the U.S. and with different product types and the extension of the taxonomy in different cultures. The findings from both exploratory and confirmatory factor analysis indicate that, while data from individualistic or similar culture countries or regions fit well into Singh's three-factor model (i.e., voice/private/third-party responses), data from a typical collectivist culture country such as Korea fit well into the two-factor model (i.e., public/private responses). As described earlier and summarized in FIGURE 2, a collectivist's self-construal/self-definition and in-group membership have a different meaning and importance from an individualist's. This fact has a significant impact on CCB as well as on the taxonomy of CCB.

In addition, consistent with the work of Watkins and Liu (1996) and Liu (1996), this study found that relative to individualists, collectivists (1) are non-confrontational and thus will tend to avoid voice responses and (2) have strong, self-determining social ties and thus will engage in private responses.

The findings from this study have some important implications to researchers and managers. First, this study has confirmed that the taxonomy of CCB in individualistic cultures is

different from the one in collectivist cultures. Therefore, it might not be appropriate to apply the taxonomy discovered in individualistic cultures to an international business setting in collectivist cultures. Second, since the taxonomy of CCB, as building blocks for further CCB study, is different in different cultures, the focus of the antecedents and consequences of CCB should be altered accordingly. For example, because of the dimensions of public responses and private responses, more attention should be paid to personal-approval of complaining in individualistic cultures in studying the antecedents for complaining, while more attention should be paid to social-approval of complaining in collectivist cultures. Third, it is a common practice of customer service departments in the U.S. mainly to handle consumers' voice behavior, which might be appropriate for the U.S. business. When dissatisfied, a majority of American consumers would engage in voice responses, but because of cultural difference, a majority of Korean consumers would engage in private responses (Liu 1996). In other words, while consumers' voice response to the firm is a relevant measure of customer satisfaction/dissatisfaction in the U.S., it is not in Korea. Therefore, it is a new challenge for American firms, especially for customer service departments of the firms, in post-purchase management at foreign countries with different cultures. Instead of paying attention to voice responses only, American managers should pay more attention to consumers' private responses which may have very important effects on the firm. For example, after customers have bought the products or services, the manager should write to the customers not only to greet them to appreciate their business with the firm, but also to express the firm's commitment to quality and customer service, and encourage them to complain if a problem occurs. The key to get friendly complaining responses from customers and to avert their private responses, according to this study, is to provide them with a culturally-appropriate complaining environment which is non-confrontational, non-public, and sincere and friendly. Finally, "when in Rome, do as the Romans do." In a collectivist culture, effective post-purchase management requires establishing long-term customer relationships which transform the firm out-group to in-group and therefore build a successful path.

LIMITATIONS AND FUTURE RESEARCH

The findings should be evaluated in light of some shortcomings. First, although data were collected from four different countries/regions, only one data set represented a collectivist culture. For a more rigorous examination of Singh's model, data from other countries with a typical collectivist culture, such as China, Japan, or Indonesia should be collected. Also, because the sample size was not large enough to break each sample into sub-samples for all the product/service categories (e.g., clothing is not studied as home appliance and meal at restaurant), we were not able to examine the taxonomy issue across all the three product/service categories separately. A similar study across more product/service categories with a larger sample size is recommended. Finally, the preceding assessment of the CCB construct is based on our empirical analysis of 11 items which were developed from the U.S. Though the items included in this study have been refined from the original ones after pretests and a pilot study with an Asian-American sample within the U.S., other or different items might be developed to represent other or different means of CCB under different cultures.

Several aspects could be looked at in future research: (1) to discover what other or different items should be developed under different cultures, future research should compare and contrast the ways or means consumers use to respond to dissatisfaction with the product/service they purchased across cultures rather than within them; (2) because this study has dealt with only one dimension of culture: collectivism/individualism, further research might examine other dimensions of culture such as power distance, risk avoidance, and masculinity-femininity (Hofstede 1980) for their potential impact on CCB; and (3) besides examining the taxonomy of CCB, the study of the relationships between the taxonomy and its antecedents in different cultures is certainly desirable.

APPENDIX A
Items Used to Measure CCB Intentions

How likely is it that you would:

I1 Write a letter to the local newspaper about your bad experience?
I2 Discuss the problem with a manager or representative of the firm?
I3 Avoid doing business with the firm from then on?
I4 Speak to your friends and relatives about your bad experience?
I5 Report the problem to a consumer agency?
I6 Ask the firm to take care of the problem (to fix or replace item or to return your money)?
I7 Buy from another firm the next time?
I8 Convince your friends and relatives not to do business with that firm?
I9 Forget about the incident and do nothing?
I10 Inform the firm so that they will do better in the future?
I11 Take legal action against the firm?

APPENDIX B
Demographic Characteristics of the Four Samples* (all values in percentages)

	Countries/Regions				Product/Service type			
Demographic Characteristics	**Korea**	**India**	**West**	**Northeast**	**Home Appliance**	**Clothing**	**Meal at Restaurant**	**Total**
Sex								
Male	64	60	50	48	53	48	61	55
Female	36	40	50	52	47	52	39	45
Marital Status								
Single	71	32	43	51	43	44	54	47
Married	29	66	50	38	53	51	39	48
Divorced/widow	2	7	11	4	5	7	5	
Age								
<=30	75	47	39	54	52	53	51	52
30<, ,<=50	18	38	43	32	34	35	34	34
>50	7	15	18	14	14	12	15	14
Education								
High school	13	5	27	49	18	26	25	22
College	80	77	56	47	68	64	63	65
Graduate School	7	18	17	4	14	10	12	13
Number of People in Your Household								
=1		3	7	11	4	4	8	5
=2	3	3	31	25	14	16	19	16
=3	6	16	24	25	16	19	20	18
=4	37	30	25	18	30	26	25	28
=5	31	24	7	9	17	19	17	17
>5	22	24	7	11	19	16	11	16
Income Compared with Others								
Much lower	6	7	21	14	14	8	13	12
Little lower	11	7	9	16	9	6	13	10
Average	55	49	33	47	45	50	44	45
Little higher	18	9	25	12	13	19	19	17
Much higher	10	28	13	11	19	17	11	16

*Sample size N=575 (N_{Korea}=121, N_{India}=164, N_{West}=176, and $N_{Northeast}$=114; $N_{Appliance}$=258, $N_{Clothing}$=115, N_{Meal}=202)

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