

Toward a theory of motivation and personality with application to word-of-mouth communications

John C. Mowen ^{a,*}, Sojin Park ^{b,1}, Alex Zablah ^{a,2}

^a Oklahoma State University, Spears School of Business, Oklahoma State University, Stillwater, OK 74078, United States

^b School of Business Administration, Chonbuk National University, South Korea

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Abstract

Literally hundreds of scales have been developed to measure personality constructs relevant to consumer behavior, marketing, and organizational behavior issues. A key problem is that to our knowledge no theory or model has been developed that provides an organizational structure for understanding the relationships among these many scales. The present article has two goals. The first is to present the theoretical basis for the 3M Model of Motivation and Personality [Mowen JC. The 3M Model of Motivation and Personality: Theory and Empirical Applications to Consumer Behavior. Kluwer Academic Publishers, 2000.] and identify how the model works to organize personality constructs into a hierarchically ordered nomological net. In addition, the article illustrates the 3M Model approach via an empirical study that compares the trait antecedents of enduring dispositions to send and receive marketplace information of respondents in the United States and Korea.

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1. Introduction

What is the current state of personality research in consumer behavior? McCrae and Costa (1996) describe its state in psychology, "...existing personality theories as a body do not give a coherent view of the field. At the end of a course in personality, students do not know whether they should be concerned about dreams, conditioned responses, or personality constructs, or motives, or identities" (p. 55). With one exception, the situation is no different in consumer behavior, or for that matter other arenas, such as organizational behavior and marketing. In particular, the study of the impact of personality on consumer behaviors is hindered by the lack of a theoretical framework within which to place a nomological net of trait predictors.

Developed in part to provide an organizing structure for understanding the interrelationships among personality con-

structs, Mowen (2000) published the Metatheoretic Model of Motivation and Personality (or 3M Model). While a number of journal articles report the use of the 3M Model since the time of its introduction (e.g., Mowen and Sujan, 2005; Mowen, 2004; Mowen and Carlson, 2003; Licata et al., 2003), the control theory base of the 3M Model has thus far been presented only in the book published in 2000. In order to stimulate the critical assessment of the 3M Model, this article has two goals. First, we present the theoretical tenets of the model, and explain how it can be utilized to organize traits within a nomological net. The second goal of the article is to illustrate the 3M Model by using the approach to investigate the trait characteristics of the senders and receivers of word-of-mouth communications in the United States and Korea. The next section of the paper addresses the first goal by reviewing the 3M Model and its theoretical basis.

2. The 3M model of motivation and personality

The 3M Model integrates four theoretical approaches. First, it describes how traits motivate behavior by employing a control theory framework. Second, it borrows from trait theory the idea that valid and reliable scales can be developed to measure

* Corresponding author. Tel.: +1 405 744 5112.

E-mail addresses: John.mowen@okstate.edu (J.C. Mowen), Sojin616@yahoo.com (S. Park), alex.zablah@okstate.edu (A. Zablah).

¹ Tel.: +82 63 270 2986.

² Tel.: +1 405 744 5089.

intrapyschic dispositions to behave. Third, ideas from hierarchical models of personality are employed to propose that traits reside in a structure in which more abstract, cross-situational traits influence narrower situation-specific behavioral tendencies, which in turn influence behavior. Finally, the 3M Model borrows concepts from evolutionary psychology to propose that the needs for arousal, for material resources, and for body resources represent highly basic elemental traits.

The control theory component of the 3M Model is based, in part, upon work by Carver and Scheier (1990), who propose a 3-level feedback model. In this model a generalized self-concept leads to a set of behavioral principles (e.g., be kind to others), which in turn lead to programs of behavior (e.g., helping a neighbor), which in turn lead to planned sets of activities (e.g., shoveling a neighbor’s snow). Mowen (2000) integrates a hierarchical trait model with the control theory approach. Instead of using the proposal that a generalized self-concept begins the feedback system, he proposes that a 4-level hierarchy of traits provides reference points in the behavioral system. In addition, he proposes that these traits form the basis of an individual’s self-concept. Consistent with Carver and Scheier (1990), he also includes the idea of the comparator in the model. Thus, a comparison process influences behavior in which actual, or anticipated, outcomes are compared to the hierarchically

arranged personality traits. The control theory model developed by Mowen (2000, see Figure 2.4, p. 33) is shown in Fig. 1.

Based, in part, upon Allport (1961), Mowen (2000) identifies four levels of traits—elemental, compound, situational, and surface. A physics metaphor is employed in developing the names. Elemental traits result from genetics and the early learning history of the individual. Like physical elements, there are a limited number of eight elemental traits. Five are adapted from Saucier’s (1994) version of the Five-Factor Model of Personality (i.e., openness to experience, conscientiousness, extraversion, agreeableness, and emotional stability). Substantial evidence suggests that each of these traits has a genetic origin (Wiggins, 1996). Using an evolutionary perspective, Mowen (2000) identifies three additional elemental traits—the need for arousal, the need for material resources, and the need to protect and enhance body resources. An example of the logic of the evolutionary perspective is the proposal that material needs reside at the elemental level. That is, individuals who more frequently create and protect material things (e.g., tools, weapons, clothing, and shelter) have a competitive advantage. As a result, through selective selection processes a need for material resources evolves. For a similar set of ideas, see Gazzaniga and Festinger (2006), who discusses the idea that early humans control their evolution by manipulating the environment using their hands (body resources) and their tools (material resources). In a series of studies, the internal reliability and predictive and construct validity of the eight elemental traits are supported (Mowen, 2000).

Compound traits represent the second level in the hierarchy. Using the physics metaphor, he proposes that compound traits result in part from the effects of multiple elemental traits as well as from the effects of culture and subcultures. Like physical compounds, compound traits have different properties than the elemental traits; yet, they are composed in part from the effects of multiple elemental traits. (That is, they afford greater predictive power than the elemental traits alone.) Mowen (2000) proposes that their added predictive ability is a function of the fact that, while compound traits result in part from elemental traits, they represent different constructs. Compound traits are conceptualized as cross-situational in nature, and include such behavioral predispositions as the need for activity, competitiveness, the need for play, general self-efficacy, and task orientation. For example, in a metaanalysis of five studies, Mowen (2000) finds that six of the elemental traits account for an average of 39% of the variance in competitiveness.

Situational traits reside at the third level in the hierarchy and represent enduring dispositions to behave within a general situational context. They are influenced by the pressures of the situational environment and by the effects of elemental and compound traits. Situational traits differ from elemental and compound traits because they are situationally constrained. For example, in the illustrative empirical example presented in this paper (see Section 3), a measure of shopping enjoyment is employed as a situational trait. As is revealed by the items utilized to measure the construct, shopping enjoyment occurs within the general situational context of purchasing products. Finally, at the most concrete level in the trait hierarchy are

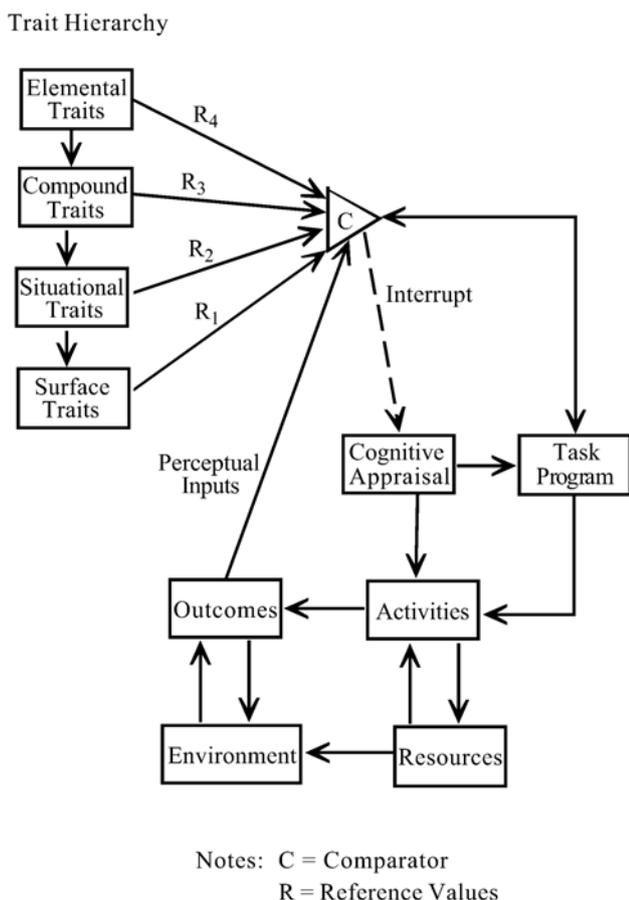


Fig. 1. The 3M model. The Figure is used with kind permission of Springer Science and Business Media.

surface-level dispositions. Surface traits are highly specific dispositions that result from the effects of elemental, compound, and situational traits as well as from the press of the context-specific environment. Surface traits occur in narrower contexts than the more general situational traits. Thus, in the case of the illustrative example present in this study, we anticipate that shopping enjoyment will influence the more specific surface traits of sending information and receiving information.

Finally, the 3M Model proposes that a combination of traits from the different levels of the hierarchy directly and/or indirectly influence outcomes. Outcomes are measured by assessing the direct response to specific stimuli (e.g., reactions to an advertisement) or to the level of activities taking place within a given time period. Because of their specificity, surface traits are expected to be strongly predictive of outcomes.

As shown in Fig. 1, the 3M Model begins with the trait hierarchy composed of the elemental, compound, situational, and surface traits. The traits are linked to a comparator. They provide reference points to which the comparator compares expected or experienced outcomes. When expectancies/outcomes match the trait reference points, no changes occur in the task program, or activities employed to complete the task program. Various resources (e.g., material, information, social, and body) are employed to help the individual perform the activities. In addition, environmental factors influence the experienced outcomes. When the trait reference points are inconsistent with expectancies/outcomes, an interruption occurs which results in cognitive appraisal and a potential change in the task program and/or activities.

3. An empirical study

To illustrate the 3M Model, the present study investigates the trait antecedents of two surface level traits—an enduring disposition to communicate market information to others and an enduring disposition to receive market information from others. The study of sending and receiving information is closely related to the field of word-of-mouth communications. The importance of this area is found in the work of Mummert (2000). He finds that many companies have adopted referral reward programs and/or member-get-member programs. Critical to the success of these programs, however, is the need to identify the characteristics of individuals who are willing to act as senders and receivers of product information. In the present research, the 3M Model is employed to identify the trait predictors of sending and receiving marketplace information. Based upon an understanding of these traits, it is possible to develop persuasive communications.

A variety of researchers have investigated factors influencing the causes and effects of word-of-mouth communications. The findings indicate that across a wide range of product classes, interpersonal sources are more likely to influence consumer choice than any other source of information (Assel, 1984). One important source of word-of-mouth information is the opinion leader. Other individuals regard opinion leaders as having expertise and knowledge on a particular subject. Feick and Price (1987) identify a new type of marketplace influencer—the

market maven. They report evidence that the influence of market mavens is based, not on knowledge or expertise in a particular product category, but rather on more general knowledge and experience with markets.

Clark and Goldsmith (2005) investigate the traits of the market maven construct and the effects of these traits and the market maven construct on opinion leadership for fashions. They find that self-esteem, the tendency to conform, susceptibility to normative influence and consumer need for uniqueness are positively related to the market maven construct. In addition, they find that market mavenism, susceptibility to normative influence, and consumer need for uniqueness to be positively related to opinion leadership for fashion.

While the work of Clark and Goldsmith (2005) provides information on the trait characteristics of the market maven and fashion opinion leaders, to the authors' knowledge, no research has compared the trait characteristics of information senders and receivers. In an attempt to address this knowledge gap and illustrate the 3M Model, the present research investigates a proposed motivational network of traits predictive of information senders and receivers in the United States and Korea. A graphical summary of the exploratory model is presented in Fig. 2. An overview of the model and expected relationships is offered in the paragraphs that follow.

Rather than investigating opinion leaders, market mavens, early adopters, or other specific types of potential information senders, the study employs broad measures of information sending and seeking. Based upon the work of Mummert (2000), the present study focuses on understanding the characteristics of those who have a general disposition to either send or to receive marketplace information. The process begins by identifying items for the broad measure of the enduring disposition to send information. The items come from the market maven scale developed by Feick and Price (1987), as well as opinion leadership scales items from King and Summers (1970) and Childers (1986). An example of one of the items is: "I frequently tell others about new products and brands" (for a complete list of the items see Appendix A). After identifying an initial set of items to measure information giving, the same set of items is reworded so as to assess the enduring disposition to seek information. For example, the sample item referenced above is changed to: "I frequently ask others about new products and brands."

Consistent with a 3M Model approach, four situational traits (fashion innovativeness, susceptibility to influence, shopping enjoyment and value consciousness) and two compound traits (need for play and need for learning) are identified as predictive of the surface traits of interest (i.e. the disposition to send and receive market information). Because of the need for brevity and the exploratory nature of the present research, we provide brief rationales for the selection of the trait antecedents of information senders and receivers. Briefly, Clark and Goldsmith (2005) employ the situational traits of susceptibility to social influence and fashion innovativeness as precursors of market mavenism. (Please note that the data collection effort for this study occurred prior to the publication of the Clark and Goldsmith article, and these traits are included based upon

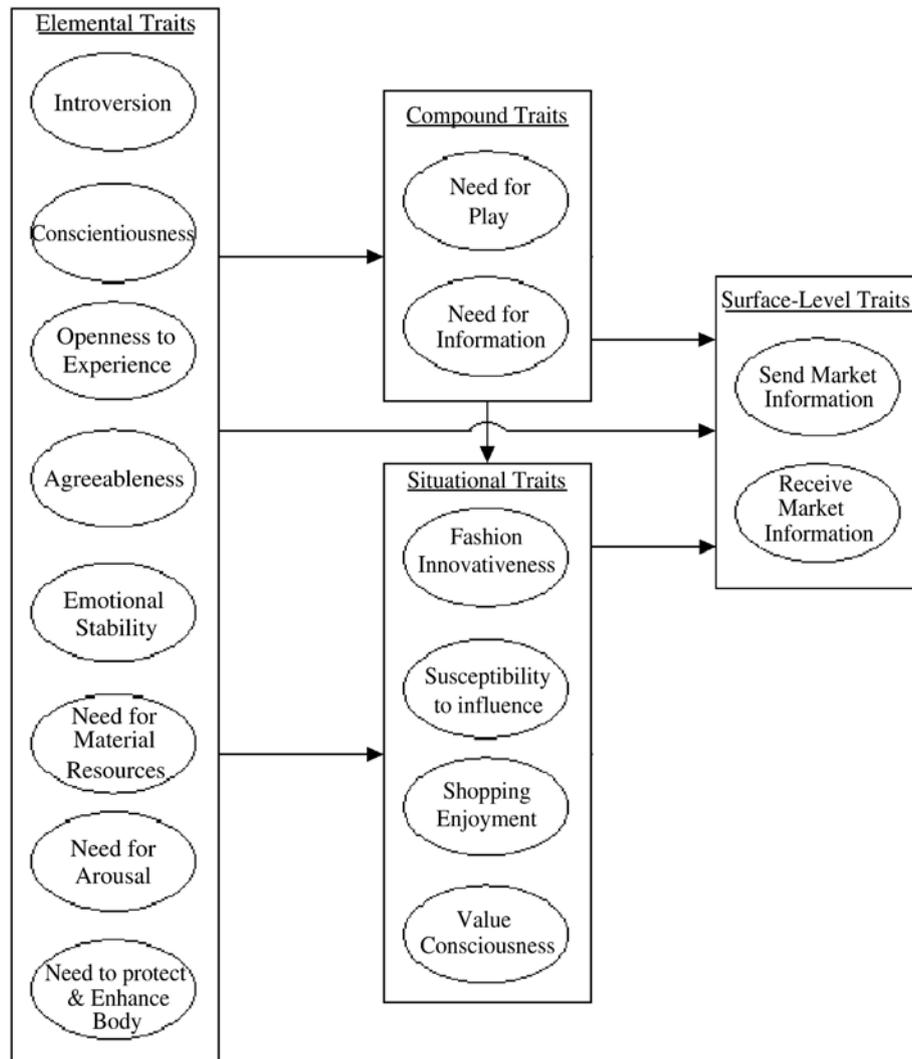


Fig. 2. An exploratory 3M model of consumers' disposition to seek and receive market information.

logical analysis.) Value consciousness is included in the model because it is a likely motive for receiving information. Shopping enjoyment is included because the sending and receiving of marketplace information frequently concerns shopping issues, and those who enjoy shopping would logically be interested in such information. Building on the work of Holbrook and Hirschman (1982), the need for play is selected for inclusion as a relevant compound trait antecedent. That is, sending and receiving market information may be a form of play. Finally, the study includes the need for learning in the model because both senders and receivers are dealing with information, which is central to the need for learning.

As Mowen (2000) recommends, the model includes eight elemental traits as control variables for two reasons. First the correlation between a situational or compound and a surface trait could result as a consequence of the effects of one or more elemental traits. That is, given that the compound and situational traits are composed (in part) of elemental traits, it is necessary to control for the elemental trait effects before examining the relationship between the surface traits and their more proximal trait antecedents (i.e. the compound and situational trait

antecedents). A second reason for the inclusion of the elemental traits as control variables is the fact that the 3M Model is a partial mediation model. Thus, in accordance with the 3M approach to personality research, it is possible that one or more of the elemental traits may have a direct effect on the surface traits. Indeed, it is anticipated that the need for material resources may be a motive for sending and/or receiving marketplace information.

3.1. Method

Surveys are distributed and completed in the United States and South Korea during the same one-month time period. The items for the Korean version are developed through a back-translation process. The participants in the U.S. are students enrolled in consumer behavior and introductory marketing classes at a large mid-western university. Subjects in South Korea are also students enrolled in a marketing-related class at a major national university. The survey is completed as an in-class exercise. Three hundred seventy-one surveys are completed in the U.S. and 285 in Korea. After deleting respondents who did not complete all of the questions or revealed high levels

of yea-saying, acceptable questionnaires remain from 369 respondents in the U.S. and 274 respondents in Korea.

Measures of the elemental traits are taken from Licata et al. (2003), and the compound traits are taken from Mowen (2000). Subjects are asked “How often do you feel/act this way,” and respond on 9-point scales anchored by “never” and “always.” The 3-item measure of shopping enjoyment is taken from O’Guinn and Faber (1989) and is measured by 7-point scales. Higher scores indicate that respondents feel shopping is a fun activity. The items for fashion innovativeness are taken from Goldsmith, Freiden, and Kilsheimer (1993) and are measured by 7-point scales. The items for value consciousness scales are taken from Lichtenstein et al. (1990) and are measured by 7-point scales. Susceptibility to normative influence is taken from Bearden et al. (1989). As described previously, the items for the information sending construct are taken from a subset of items from opinion leadership scales (i.e., King and Summers, 1970; Childers, 1986) and from the market maven scale (Feick and Price, 1987). Again, 7-point scales are employed.

3.2. Results

A total of 71 items are initially selected to measure the 16 different constructs in the model (8 elemental traits, 2 compound traits, 4 situational traits and 2 surface traits). LISREL 8.72 is employed to analyze the data. Standard procedures found in the structural equations modeling literature (e.g., Gerbing and Anderson, 1988; Steenkamp and Baumgartner, 1998) are followed to test for model fit, reliability, validity, and invariance across samples in the different cultures. Across the constructs, twelve items had to be dropped in order to achieve partial cross-national metric invariance. All fit indices are well above acceptable levels. (Details of the analysis can be obtained from the third author.) Given the size and complexity of the exploratory model tested, single-item indicators (with measurement error) are employed for each of the constructs (i.e. each construct is represented by a single scale score).

The analysis suggests that the model presented in Fig. 2 fits the data well ($\chi^2=135.47$, $df=7$, comparative fit index [CFI]=.96, standardized root means squared residual [SRMR]=.0026, normative fit index [NFI]=0.96). The model accounts for a significant proportion of the variance in the two focal dependent variables of interest ($R^2_{\text{send market information}}=0.54$, $R^2_{\text{receive market information}}=0.30$). In addition, the model accounts for a substantial amount of the variance in the compound ($R^2_{\text{need for play}}=0.39$, $R^2_{\text{need for information}}=0.68$), and situational trait variables ($R^2_{\text{shopping enjoyment}}=0.36$, $R^2_{\text{fashion innovativeness}}=0.34$, $R^2_{\text{value consciousness}}=0.11$, $R^2_{\text{susceptibility to influence}}=0.12$).

Because of space limitations, the results section of this study focuses on the trait predictors of the surface-level constructs of sending information and receiving information. Table 1 presents the path and significance estimates related to the impact of elemental, compound, and situational traits on the needs to send and receive market information. Significant predictors of sending information are: need for information, fashion innovativeness, shopping enjoyment, value consciousness, and need for material resources. Significant predictors of

Table 1

Elemental, compound and situational trait predictors of the disposition to send and receive market information

Relationship	Standardized path estimate	t-values
<i>Elemental traits</i>		
Introversion → send market information	−0.02	−0.51
Conscientiousness → send market information	−0.03	−0.65
Openness to experience → send market information	−0.12	−1.58
Agreeableness → send market information	−0.06	−1.24
Emotional stability → send market information	−0.06	−1.43
Need for material resources → send market information	0.33	5.64***
Need for arousal → send market information	−0.11	−1.75
Need to protect and enhance body → send market information	−0.02	−0.40
Introversion → receive market information	−0.03	−0.69
Conscientiousness → receive market information	0.04	0.73
Openness to experience → receive market information	−0.26	−3.13***
Agreeableness → receive market information	0.07	1.18
Emotional stability → receive market information	0.01	0.30
Need for material resources → receive market information	0.26	3.93***
Need for arousal → receive market information	−0.03	−0.42
Need to protect and enhance body → receive market information	−0.09	−1.69
<i>Compound traits</i>		
Need for play → send market information	0.07	1.48
Need for play → receive market information	0.07	1.19
Need for information → send market information	0.42	4.09***
Need for information → receive market information	0.23	1.98**
<i>Situational traits</i>		
Fashion innovativeness → send market information	0.30	6.83***
Fashion innovativeness → receive market information	0.18	3.55***
Susceptibility to influence → send market information	−0.05	−1.24
Susceptibility to influence → receive market information	0.08	1.98**
Shopping enjoyment → send market information	0.11	2.40**
Shopping enjoyment → receive market information	0.11	2.01**
Value consciousness → send market information	0.13	3.54***
Value consciousness → receive market information	0.19	4.40***

** $p < .05$; *** $p < .01$.

receiving information are: need for information, fashion innovativeness, susceptibility to influence, shopping enjoyment, value consciousness, openness to experience (negative relationship) and need for material resources.

In order to further assess the adequacy of the exploratory model tested, it is compared to an alternative, plausible model by means of a chi-square difference test. The competing model selected for comparison is one in which the effect of the elemental and compound traits on the surface-level traits (i.e. need to send and receive market information) is fully-mediated by the four situational traits. The fully-mediated model (which

is more parsimonious in nature) offers a good basis for comparison given that the 3M approach (and hence the tested model) is based on the assumption of partial mediation. The chi-square difference test (χ^2 difference = 156.60, 20 *df*) is significant ($p < .01$), which provides further support for the partial mediation model proposed and tested in this study.

Given the exploratory and cross-cultural nature of this effort, the study also examines whether the influence of the elemental, compound, and situational traits on the surface-level traits vary across cultures. To this end, a series of 12 multi-group (U.S. vs. Korea) chi-square difference tests is performed. For each of the tests, two models are run: one in which the path between the constructs of interest is allowed to vary across cultures and another in which the focal path is constrained to be equal across cultures. Only two of the tested relationships (need for play → send market information; susceptibility to influence → send market information) differ significantly ($p < .05$) across cultures. Interestingly, in each case the effect is significantly stronger for respondents in the Korean sample.

3.3. Discussion

Overall, the results support the model of the trait predictors of dispositions to send and receive market information. As expected, fashion innovativeness, shopping interest, and material resource needs are significant predictors of information sending. In addition, the predictors of information receiving are susceptibility to normative influence, value consciousness, and need for learning. Unexpectedly, openness to experience is negatively related to information receiving. A post hoc explanation is that information receivers are not “open” to exploring on their own. As a result, they seek assistance from others.

Some of the findings are contrary to the expectations. For example, the results reveal that among Americans the need for play is not a significant motive for either receiving or sending information. This suggests that the sending and receiving of marketplace information is serious business that does not involve a motive to play at least among the American sample. Also of interest is the finding that, inconsistent with Feick et al. (1986), among Americans a significant relationship is *not* found between susceptibility to social influence (SNI) and the disposition to send information. In contrast, the results support a positive relationship between SNI and information receiving. These findings suggest that the Feick et al. (1986) finding may have resulted from the senders and receivers of information having similar antecedents. Thus, when the full system of traits is investigated, the effect is not obtained.

The present research also investigates whether differences are found in the tested path relationships across cultures. To that end, the measures employed in the study are subjected to a test of cross-national metric invariance. The results of the measurement analysis suggest that the constructs possess partial metric invariance. This finding is important because it suggests that with minor modifications the elemental, compound, and situational traits obtained from the 3M Model may be used with Korean respondents and possibly in other cross-cultural contexts. Furthermore, it is also important to underscore that the

cross-cultural analysis reveals that the traits associated with the sending and receiving of information are remarkably similar for the Korean and U.S. samples. The multi-group analysis suggests that a significant difference is present in only two of the paths. More specifically, the results reveals that in the Korean sample there is a significant path between the need for play and sending market information and a significant path from susceptibility to normative influence and sending market information. Why would the path relationships be so similar in two very different cultures? One possible explanation is that the motivational network of traits for sending and receiving information is similar among young adults in universities. Another possibility is that the respondents are thinking of sending and receiving information from peers. It is possible that if the information is exchanged between individuals of different societal ranks, the path relationships may be quite different because of the greater hierarchical structure found in the Korean culture. Future research should investigate this possibility.

The results support two aspects of the 3M Model. First, the findings are consistent with the proposal that traits can be arranged into a four-level hierarchy. Thus, multiple elemental traits account for substantial variance in each of the compound traits (i.e., 36% for need for play and 68% for need for information.) Similarly, a combination of elemental and compound traits account for substantial variance in the situational traits (i.e., 36% for shopping enjoyment, 24% shopping innovativeness, 11% value consciousness, and 12% susceptibility to normative influence). In addition, a combination of elemental, compound, and situational traits account for large amounts of variance in surface traits (i.e., 54% for sending information and 30% for receiving information). These results support the use of a hierarchical approach for understanding the relationships among personality traits. A second finding consistent with the 3M Model is the support for the partial mediation model. The 3M Model proposes that partial mediation exists among the hierarchically arranged traits. Thus, the findings support the proposal that behavior results from a motivational network of traits, rather than from single traits acting in isolation of each other.

The study has several limitations. First, the use of student samples in the two countries limits the generalizability of the results. The use of the student samples, however, has a positive benefit. That is, because both groups are roughly equivalent in terms of age and education, comparing the effects of culture on path relationships more directly is possible. A second limitation of the research is that the study it does not include behavioral outcomes. However, because of the close relationship of the scale with the market maven construct, the research should have good predictive validity. In addition, future research should investigate whether the information seeking scale assesses a passive or active information search process.

A third limitation of the research is the failure to include self-esteem, the tendency to conform, and need for uniqueness as antecedents of the surface traits, which are identified by Clark and Goldsmith (2005) as precursors to the market maven construct. In defense, the article came out after the data were collected for the present research. Future studies should investigate these constructs, as well as others, as part of the nomological net

of traits predictive of the enduring desire to send information and to receive information.

Appendix A. Measures of surface traits

Send market information:

1. I like introducing new brands and products to others.
2. I like helping people by providing them with information about many kinds of products.
3. People ask me for information about products, places to shop, or sales.
4. If someone asks me where to get the best buy on several types of products, I could tell him or her where to shop.
5. My friends think of me as a good source of information when it comes to new products or sales.
6. I frequently tell others about new products and brands.
7. I enjoy helping people find products that fit their needs.

Receive Market Information:

1. I like to have others introduce me to new brands and products.
2. I like to get others to provide me with information about many kinds of products.
3. I ask other people for information about products, places to shop, or sales.
4. I like to ask people, who can give an informed opinion, questions about products.
5. I like to find friends who are good sources of information when it comes to new products or sales.
6. I frequently ask others about new products and brands.
7. I enjoy having others find products for me that fit my needs.*

Note: Item with an asterisk is dropped from the final analysis.

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