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Consumer Health under the Scope

CHRISTINE MOORMAN*

This essay offers two new lenses for studying consumer health. Theories of psychoimmunology and institutional environments bring a wider array of individual, social, cultural, and organizational drivers into view, and they expose how higher-stakes and more typical consumer activities involve important health issues. This more complex accounting reveals that not only is health a critical issue for many topics in the field but that consumer research can make important contributions to the study of health and the resolution of health problems.

The title of this essay is meant to convey both my objective and my evaluation of how the field of consumer research has examined the subject of health. While consumer research has examined health from an information-processing perspective, I examine it from the perspective of theories of psychoimmunology and institutional environments. Both approaches expose unique conceptions of the drivers of consumer health that have not been discussed in our literature and hence represent important research opportunities. I overview the literature in each area and follow with directions for consumer health research. One caveat: I chose two vast research areas in unique domains because I thought this was the best way to challenge the field. I make no claims about being exhaustive. My goal was to scout out some interesting directions.

MIND-BODY-BEHAVIOR RELATIONSHIPS IN CONSUMER HEALTH

The Study of Psychoimmunology

Examining the mind-body-behavior interface is intellectually complicated and emotionally charged. Consider Paul Martin's (1997) overview in *The Sickening Mind: Brain, Behaviour, Immunity, and Disease*:

We have seen that our psychological and emotional state can shape our perception of health and hence our sickness-related behavior. . . . But our minds do far more than alter our perception of reality: they alter reality itself. The mind can affect our susceptibility to real physical diseases by modi-

fying our behavior or by directly influencing our immune defenses to which it is connected via electrical and chemical pathways (p. 80). The mind-immunity connections have been demonstrated and replicated in so many ways and in so many laboratories that they can no longer be considered even mildly controversial (p. 116).

Let me share with you some of Martin's most intriguing observations regarding these linkages.¹ I begin by describing the role of the mind in health outcomes and then the mind-body-behavior interrelationships responsible for observed health outcomes.

The Mind's Role in Health Outcomes. An impressive set of field studies considers the presence of an external threat (missiles, earthquakes, nuclear leakages) that causes more long-term disease than can be accounted for by the physical threat alone. For example, Israeli scientists analyzed official mortality statistics following the 1991 Iraqi launch of Scud missiles against Israeli civilians. The Iraqi weapons killed only two people; yet, there were 147 deaths on the day of the attack—54 more than expected based on mortality statistics for that time of year. Heart failure brought on by the severe emotional stress created by the missiles was the main source of these unexpected deaths.

Longitudinal studies also reveal dramatic consequences of the physical effects of stressors. In a Harvard project, for example, students were exposed to mild stress in a series of lab experiments. The way they reacted to these experiments predicted the onset of physical illness, including heart disease, 35 years later. Other researchers took psychological profiles and then manipulated the introduction of cold-inducing rhinoviruses into volunteers. This approach ruled out behavioral factors that may follow from psychological factors (e.g., shy people do not go out and thereby have less

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¹Please reference Martin (1997) for specific citations. Dohrenwend's (1998) *Adversity, Stress, and Psychopathology* is also highly recommended as a primary source, as well as Kahneman, Diener, and Schwarz's (1999) edited volume *Well-Being*, which contains a section on biological perspectives.

exposure to colds). This study showed, in fact, that introverted personalities and stressful life events increased the risk of infection and the severity of the subsequent cold. Recent work by Marucha, Keicolt-Glaser, and Favagehi (1998) goes further by showing that biopsy healing rates for the same dental students are slower in a stressful (i.e., test-taking) situation compared to a vacation situation.

The Mind's Role in Immune Responses. There are two ways in which the brain and immune system influence one another. First, the brain stimulates the immune system using electric pathways embedded in nerve connections. Second, the brain and immune system interact through a complex set of biochemical communications such as neurotransmitters, hormones, and immunotransmitters that produce additional chemical messengers (e.g., endorphins and adrenocorticotrophic hormone), which affects how we feel and our actual health.

Research documented by Martin shows that the mind does, in fact, influence the immune system. The death of a spouse, for example, reduces bereaved subjects' lymphocyte responsiveness, and both anticipated and actual testing induces physiological changes in immune responses among students. Even though there was no apparent threat of cancer following the Three Mile Island disaster, researchers found that cancer rates were 50% higher three years after the accident but lower than average three years after that. Although they conceded the disaster could promote the growth of existing, early-stage tumors due to stress-induced worry, this would not explain the subsequent drop in cancer. In the end, researchers concluded that the publicity related to the disaster increased the local population's attention to early symptoms, allowing them to detect existing cancers at an earlier stage.

Martin also notes that despite these documented negative effects, stress is not bad per se. If it is short, can be controlled, and is predictable, then stress might actually build up immune system resiliency. In fact, Bosch et al. (2001) recently found that active coping by taking a time-paced memory test enhanced immune outcomes, while passive coping by viewing a gory video suppressed immune outcomes. Control has likewise been exposed as an important factor in consumer health behaviors (Block and Keller 1998; Moorman and Matulich 1993).

The Immune System's Role in the Mind and Behavior. If the mind affects the immune system, can the immune system affect the mind? Research is sparse. Martin notes that ill people suffer memory loss and reduced mental performance, and, in more severe cases, may feel depressed, lethargic, and experience a loss or gain in appetite. He cites research examining the effects of autoimmune diseases, such as lupus or herpes, which reveal behavioral and learning changes in lab mice. He also notes that well-known mental illnesses, such as schizophrenia, are suspected to be triggered by antibody-mediated immune responses.

In addition, Martin notes that physiological stress responses associated with the immune system impact behavior

and awareness of physical symptoms. The heightened arousal of stress can, on the one hand, direct attention to health symptoms, as occurred in the Three Mile Island findings. On the other hand, stress can create denial, which results in less attention to physical symptoms. The latter is, in part, due to the fact that focal attention is allocated to the stressor and not to the symptoms. Finally, Martin also documents that stress-induced immune responses are linked to excessive use of alcohol, drugs, and tobacco as well as to an inability to quit smoking.

Behavior's Role in Immune System Effects. Research has shown that people who exercise exhibit a different immune response to stress compared to people who do not exercise. Specifically, arteries tend to expand under stress in people who exercise and constrict under stress in people who do not exercise. In addition, moderate exercise can increase positive immune responses, such as phagocytic (cell-eating) activity of certain white blood cells, the level of interleukin-1 (a cytokine which stimulates the immune system), the number and activity of natural killer cells, and possibly interferon levels (a category of cytokines).

The Role of Personality Factors. Long-term studies of pessimists and optimists find that pessimists are more prone to illness and die younger on average. Classic work by Friedman and Rosenman (1974) discovered a cluster of personality traits associated with cardiac patients. Not all type A behaviors have been found to be important predictors over the years. However, both hostility and the tendency to feel angry—but not to express it openly—are robust findings. Type A's also deny more symptoms; consume larger quantities of alcohol, tobacco, and fatty foods; and experience stronger biological mechanisms such as heightened reactivity to stressors (e.g., high blood pressure). Recent work shows that this biological reactivity is, in fact, unconscious.

Although more controversial, research now suggests that there also may be a type C personality that tends to covary with cancer. Type C's tend to lack assertiveness, avoid conflict, approach life unemotionally, maintain the appearance of niceness, and feel helpless or hopeless. Doctors who displayed type C characteristics while students were 16 times more likely to acquire cancer over the following 30 years. For type C women, a finding of breast cancer (rather than a benign lump) can be predicted with a success rate of over 80%.

The Role of Social Community. Martin documents the important role of relationships in preventing and recovering from illness. For example, social isolation leads to more disease, longer recoveries, harder childbirth, greater use of pain medication during childbirth, and smaller babies. Social relationships also facilitate the formation of more accurate and objective perceptions of our health; offer encouragement to seek timely medical attention when we are ill; reduce excessive indulgence in tobacco, alcohol, and sweets; and increase seat belt use. On the other hand, the

social role associated with a diseased state can be reinforced by relationships.

Consumer Health Research Lessons from the Study of Psychoimmunology

The Mediating Role of Health Interpretations. Martin notes: "People's perceptions of their health, rather than objective measures of health, are what largely determine their initial usage of medical facilities" (1997, p. 55). Following other traditions, consumer research could extend this view by examining the extent to which health interpretations mediate the relationships among the following:

1. An event and a stress response: Is the loss of a spouse interpreted as a health opportunity ("I need to take care of myself to provide for my family") or a health threat ("Disease will take people no matter what they do")? Clearly, the interpretation will affect the stress-response level (Luce and Kahn 1999).
2. A stress response and health behaviors: Does depression (a stress response) require medical care (health behavior) or should it be ignored? Do chest pains (a stress response) require a doctor's visit (health behavior) or will they go away? The interpretation should explain health behavior.
3. Health behaviors and health outcomes: Are changes in diet viewed as restriction or freedom? Are doctor's visits viewed as helpful or a waste of time? These interpretations will influence whether health behaviors are sustained and therefore affect health outcomes.

Reciprocal Relationships. Consumer research could benefit from importing Martin's complex treatment of mind-body-behavior relationships. Across both health and non-health domains, consumer researchers might consider how the outcomes they study drive other mind-body-behavior outcomes that have important implications for both objective and subjective assessments of well being (Kahneman et al. 1999).

Health Implications of Living in a Highly Developed Consumer Society. As far back as Veblen ([1899] 1970), scholars have observed that awareness of consumption (e.g., the accumulation and display of material wealth) may create aspirations that are inconsistent with resource levels. Whether this creates long-term health problems is an open question. Dohrenwend (1998), for example, speculates that strong adherence to material goals and the constant comparison to others who are better off might be a source of perceived deprivation that may cause deleterious health effects. In addition to examining such negative effects, consumer research could also investigate whether positive health responses are associated with products, services, or philanthropies that express deeply held emotional or symbolic needs.

Health Implications Associated with High-Stakes Consumer Activities. Among well-established stress-ratings scales (e.g., Dohrenwend et al. 1978), many events involve consumer activities related to the home (e.g., purchasing a home), finances (e.g., buying a car), and recreation (e.g., taking up a new hobby). Consumer research can contribute by studying other important activities in consumers' lives and by using our skills to understand these stressors and how to mitigate their long-term impacts on health.

Health Implications of Consumer Marketplace Behaviors, Beliefs, and Choices. Is consumer engagement in marketplace activities (e.g., following sales) a source of stress that hurts or helps consumers? Feick and Price (1987) argue that some consumers—market mavens—use marketplace interaction to deepen their social connections. Likewise, do long-term relationships with firms and brands provide community, which mitigates health problems (Muniz and O'Guinn 2001)? Finally, does consumer vigilance in observing and protesting marketplace harms produce better health (due to perceptions of control) or does it produce more stress?

Health Implications of Social Class or Socioeconomic Status. While Martin focuses on the role of social factors in health responses, other literature examines the social causation hypothesis, which suggests that environmental advantages or disadvantages related to social class or socioeconomic status impact what Dohrenwend (1998) refers to as ongoing situations (e.g., social networks, education, material outcomes). These situations, in turn, impact coping mechanisms and adaptive/maladaptive responses that impact health outcomes. Surprisingly, consumer research has generally avoided issues related to socioeconomic status—despite its obvious centrality to consumer behavior. Given that both enduring social events and personality predispositions can impact health, Dohrenwend and others (1998) work to tease out social causation (social) and social selection (individual) explanations. Likewise, consumer researchers entertaining longer-term health effects will need to consider these competing theories.

INSTITUTIONAL ENVIRONMENTS AND INDIVIDUAL CONSUMER HEALTH

As a field we have overlooked how consumer health behavior is influenced by the institutional environment in which it occurs. Institutional theory in sociology suggests that both individuals and organizations exist within a larger institutional environment. This environment is filled with regulative, normative, and cultural-cognitive elements that guide thoughts, decisions, and behavior via relational systems (roles), routines (e.g., scripts, standard operating procedures), artifacts (the material resource environment), and symbolic systems (e.g., schema, meaning). Researchers use the term "logic" to describe the institutional environment's impact on what is considered meaningful, appropriate, and comprehensible (Friedland and Alford 1991). At a macro-

level, logics provide explanations for interpreting the meaning of material environments and behaviors. Logics also explain that change occurs because new logics emerge from organizational and individual actors (e.g., activists) or from events (e.g., technological change) in the environment (Thornton 2002).

Historically, scholarship has focused on the impact of the institutional environment on individual actors. Consistent with this, consumer research has exposed the sociocultural foundations of meanings and choices (e.g., Levy 1981; Nicosia and Mayer 1976; Thompson 1996). Another approach examines the way institutional systems are expressed in organizational forms and routines (e.g., Haveman and Rao 1997) that influence individual consumers. Two recent books examine this theoretical approach, *The Nation's Diet* (Murtcott 1998) and *Institutional Change and Healthcare Organizations* (Scott et al. 2000). I also draw heavily on Dick Scott's *Institutions and Organizations* (2001), which provides excellent background.

I analyzed a set of organizations that represent different societal sectors and their institutional logics: (i) the corporation, (ii) the state, and (iii) the family (Friedland and Alford 1991). I offer a set of prevailing logics that describes the current nature of each type of organization and a set of countervailing logics that challenge the prevailing logics. In general, my formulation of the latter complements, not replaces, the former.

Institutionalized Health Logics within the Corporation

Healthcare Organizations. Like many institutionalists, Scott et al.'s (2000) primary thesis is that the transformation of healthcare can be understood by examining the actual characteristics of healthcare organizations. In an impressive array of data analyses covering 60 years, the authors argue persuasively that healthcare organizations have been affected by three waves of institutional logics: (1) professional dominance (1946–65) during which doctors were the key social actors and logic focused on quality of care; (2) federal government dominance (1966–82) during which Medicaid and Medicare were born and logic focused on equity of access; and (3) market dominance (1983 to present) during which logic focused on cost controls and market mechanisms (e.g., competition). Although this progression appears categorical, in fact, most environments remain heterogeneous (which is one reason change can occur). Hence, healthcare organizations retain an important role for health professionals.

Although Scott et al. (2000) offer evidence of shifts in institutional logics, they tell us nothing about the impact of these logics on consumer health behaviors or outcomes and fail to articulate fully the content of the health norms that are embedded in these institutional logics for managing health. A review of other recent literature on health management systems, however, produces a set of prevailing and countervailing logics, including the view that: (1) health is

the absence of disease, as opposed to the presence of health quality; (2) health treatments should focus on specific physical or mental solutions, as opposed to more integrative solutions; and (3) health systems should be compensated on the basis of how many patients are served, as opposed to how many members utilize preventive measures or the health quality of their members.

Manufacturing Organizations. Freedom of choice is a key part of the logic of business organizations offering food and health products and services. The prevailing logic appears to be that it is optimal (within cost constraints) to offer numerous choices with unique attributes and then let consumers choose products that most effectively meet their needs. A counterlogic is that large selections do not represent much true variety and that overchoice leaves consumers fatigued and less satisfied. In addition, the prevailing logic of consumer freedom and choice brings with it the assumption that consumers can adjudicate between health offerings. A counterlogic is that healthcare is a credence good that is difficult for consumers to judge.

In addition, although espousing the importance of a customer focus, many firms embrace a logic that considers competitive boundaries a strategic firm choice involving careful targeting through advertising or store placement. A counterlogic relies on objective nutrition content to determine substitutability and, hence, competitive boundaries.

Finally, it could be argued that a three-part health logic permeates new product development activities in manufacturing organizations. First, some might argue that there is a prevailing logic of consumer want, as opposed to consumer need, that results in firms performing more marketing analysis than nutrition analysis in new product development. Second, the logic appears to emphasize large and growing segments, not the development of niche products that serve smaller segments concerned with health. Third, the logic assumes that consumers cannot be convinced that healthy products are satisfying hedonically.

Retailing Organizations. In *The Nation's Diet*, Fine et al.'s (1998) chapter, "What We Eat and Why: Social Norms and Systems of Provision," argues for a sociology of agriculture in which he shows that societal food norms (calculated from secondary food purchase data) are influenced by food supply and governance systems as well as consumer preferences.

Wrigley's (1998) chapter, "How British Retailers Have Shaped Food Choice," describes an efficiency logic that allowed major U.K. food retailers to evolve into a position of mediating producer-consumer relations. The author argues that this logic was supported by the development of centralized, quick-response distribution systems infused with sophisticated computer-based IT systems, which gave retailers the information they needed to improve efficiency. Armed with better information, supply-chain systems maximized efficiency by moving global and standardized sources of products into all markets. A counterlogic to this trend is the emergence of the slow-food movement, which

focuses on the experience of food preparation/consumption as well as the preservation of local supply systems.

Wrigley (1998) also highlights that the efficiency logic allowed retail operations to evolve into superstore environments (often located on the edge of cities). These large stores are extremely profitable because of their margins and sales per square foot but draw consumers away from local neighborhoods and family-owned markets that eventually close, creating access problems for consumers without cars. A counterlogic would include equity of customer access as an objective.

Institutionalized Health Logics within the State

The Public Policy of Urban Design. There are no studies of urban planning in the consumer research literature. However, are not many consumer behaviors a function of the design of cities and attendant retail and recreation spaces? Peattie, Peattie, and Clark (2001) note that tree or building coverage over play areas substantially reduces excessive sun exposure for children. Unfortunately, decision makers do not focus on health issues when they design such structures because the prevailing and countervailing institutional logic that pervades urban design decision making appears to be: (1) health is a matter of private as opposed to public choices; (2) urban design choices do not impact public health as opposed to investigating potential effects; (3) individual health behaviors can overcome, as opposed to be influenced by, urban design choices; and (4) urban design systems should be developed in a cost-effective manner, which excludes consideration of health-care costs associated with lifestyle choices.

Regulatory Agencies. In *The Nation's Diet*, Flynn et al.'s (1998) chapter on "Regulation, Rights, and Structuring of Food Choices" examines the role of government institutions in consumer choices. Consumer research has generally focused on how regulation affects consumer information processing and behavior. Institutionalists might instead examine the logic that regulation offers both firms and consumers. Flynn et al. (1998) used a historical approach to argue that food choice has been a freedom-to-consume logic controlled by retailers, while the logic of food standards has been controlled by the government. Consumer research could follow the institutionalist's approach by focusing on what consumers believe about regulation's role as a predictor of information processing and behavior outcomes. This focus follows Nelson's (1970) observation that regulation might lead consumers to become overconfident, thereby reducing their level of vigilance in monitoring and acquiring information from the market. This is obviously an unintended consequence of public policy (Merton [1949] 1968).

Institutionalized Health Logics within the Family

Although consumer researchers acknowledge the role of the family, we underestimate the way in which larger in-

stitutional forces define parental roles and family routines. The prevailing logic appears to emphasize parental roles that help children gain access to opportunity and choices that supersede their own. However, it could be argued that this may not be effective with respect to health decisions. The latest statistics from the Centers for Disease Control and Prevention show an increase in the number of overweight kids ages 6–11 (7% in the late 1970s; 14% in 1999) and ages 12–19 (5% in 1970; 14% in 1999). Instead, consider a counterlogic in which parents actively mediate commercial and noncommercial stimuli that may impact their children's health behaviors.

Consumer Health Research Lessons from the Study of Institutional Environments

Consumer Health Effects Associated with Different Institutional Logics. Scott et al. (2001) do not examine the health outcomes associated with institutional logics. Consumer researchers could contribute by assessing the impact of different logics on health behaviors, including the purchase of health products and services.

Considering the role of social factors on health (see Martin 1997), what are the implications of consumers embracing a logic that replaces traditional social structures with market-based versions, such as brand or internet communities (Muniz and O'Guinn 2001)? Do market-based versions supply the same support? At a more abstract level, what logic legitimizes the substitution of traditional social institutions for market institutions?

Consumer Psychology of Institutional Health Logics. A key feature of institutions lies within the cultural-cognitive realm and how they shape conceptions of objects, ideas, and behaviors. Developing a consumer psychology of institutional health logics would examine what determines the acceptability or legitimacy of everyday health beliefs, behaviors, and choices to consumers (e.g., Holt 1998; Thompson 1996).

Role of the Individual Consumer. Giddens (1984) suggests that individuals exist within an institutional structure that is both a platform for and a product of their action. In this role, the individual is afforded some agency as the creator of meaning, action, and form. Consumer health activists and consumers using health information provided on the internet are examples of consumer agency. It is interesting, however, that consumers often do not perceive their role as agents of change. Consumer researchers could contribute by examining which individual and social elements give rise to a sense of consumer agency in health and elsewhere.

Consumer Reality of Institutional Health Environments. Direct-to-consumer drug advertising used to be illegal. As logics shifted from professional to market dominance, however, consumer choice mechanisms emerged and with them certain assumptions, including that consumers can make accurate evaluations about healthcare quality. How well do consumers operate within this logic? If ineffective, what does this say about the sustainability of the logic? Scott et al. (2000) assume that organizational survival provides information about organizational legitimacy. We know, however, that consumers often choose to interact with an organization because they are ignorant of other options, because they are ill equipped to evaluate quality, or because they were socialized to be loyal to certain organizations and brands. Consumer research could contribute by examining whether institutional environments are sustained through consumer inertia, ignorance, or reflective choice.

Consumers and the Deinstitutionalization Process. Scott (2001) suggests that deinstitutionalization occurs when functional, social, and political pressures arise. Functional pressures emerge when performance does not meet expectations; political pressures result from shifting power distributions; social pressures occur as divergent beliefs are expressed about an institution. Although consumer researchers have tended to focus on functional pressures, analysis of consumer activity exerting political and social pressures could also help explain what determines institutional change in health and elsewhere (e.g., Moorman 1998).

CONCLUSION

Given the \$1.6 trillion spent worldwide on healthcare in 2000, it is clear that healthcare is not a fringe area of consumer activity. Not only is health big business, but it is of vital interest to all of us. Consumer research has immense potential to contribute to the study of health. There is room for a great diversity of theory and method. By reviewing recent books on psychoimmunology and institutional environments, I hoped to provide a more complex accounting of the individual, social, cultural, and organizational elements and their interrelationships in this field of inquiry; to reveal the critical health issues that are a part of consumer activity; and to highlight the need for consumer research to play a bigger role in the study of health.

[David Glen Mick served as editor for this article.]

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