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RUNNING HEAD: Social Cognition and Health Insurance

Abstract

There are many types of social cognition which may affect one's health insurance cost-benefit analysis. Similarly, many situational variables could influence the desirability of condition inclusion. The present study examines the effect of cost and condition type (physical or psychological) upon health insurance decision-making. In addition, the effects of Perceived Health Competence, Health Locus of Control, Belief in a Just World, and religious orientation on willingness to insure are examined. Results indicate that, of these variables, the biggest predictor of insurance desirability is the PHLC, or belief in "powerful others" in determining one's health state. In addition, the type of condition has implications for attributions of societal responsibility for treatment of the condition. Implications and directions for future research are discussed.

Social, economic, and political events have made health an increasingly important concern in the lives of many. In response, the psychological field has risen to meet the need for scientific data concerning health behaviors and attitudes. One subject within this line of scientific inquiry that has been neglected, however, is the construct of health insurance. Topics typically explored by health psychologists and those in related fields include the impact of health insurance on health care services utilization (eg. Aday, et al., 1993; North & Smith, 1993; Cummings, & VandenBos, 1981; etc.), health insurance reform (eg. Mechanic, 1993), health insurance ethical concerns (eg. Jecker, 1993), or patient outcome (eg. Ashley, Persel, & Krych, 1993). One area relatively new to psychological examination concerns the underlying attitudes, beliefs, and values that affect one's health insurance cost benefit analysis. That is, the cognitions underlying decision making concerning health insurance acquisition in general, and medical condition inclusion specifically, has been overlooked.

Two major variables may affect one's health insurance valuation; namely, perceived need for health insurance and one's level of sympathy for or empathy with the victim of such a medical condition. Thus, within the single aspect of health insurance, self-interest and altruistic motivations are fused. The individual may wish to include the medical condition in his or her basic health insurance coverage as a result of fear of manifesting the condition himself or herself, or the individual

may wish to include coverage of the condition out of a belief that it is simply important both to society and the individual that such a condition be covered. Depending on the individual, the relative importance of these factors in health insurance valuation will differ. Through examination of specific variables within these two factors, one may gain greater insight into the predictive value of each variable in health insurance coverage decision making. Some specific variables of interest may include one's perceived health competence, one's health locus of control, the presence or absence of just world beliefs, and one's religious orientation.

Variables that may affect one's perception of vulnerability concerning a medical condition include one's perceived health competence and one's health locus of control. An individual displaying a high level of perceived health competence will feel more capable of directing his or her health outcomes and tend to engage in more health positive behaviors (Smith, Wallston, & Smith, 1995). One's belief of competence, or self-efficacy, is related to one's actual health outcomes (O'Leary, 1992) and such an increase in positive outcomes may, in turn, reinforce self-efficacy beliefs, which increase the likely effort towards a goal, (Felson, 1984), in this case, positive health behaviors. Emerging from these beliefs and behavior may well be a decreased level of anxiety concerning the possibility of manifesting a medical condition and thus, a decreased desire for health insurance coverage.

Similarly, one's health locus of control will affect one's perceived vulnerability, health behaviors, and outcomes (Segall & Wynd, 1990). A person with an internal health locus of control is one who believes that he or she is personally responsible for his or her health outcomes. This contrasts with individuals who may attribute such outcomes to powerful others or chance. As stated earlier, one who believes he or she is responsible for his or her health will be more likely to take action to maintain good health. Both the control beliefs about one's health and the positive consequences resulting from such a belief may well serve to decrease one's desire for health insurance. However, if one perceives that health care professionals are responsible for one's health status, insurance may be perceived as much more valuable. Such beliefs may likely lead the individual to be more prone to visiting the doctor and obtaining prescriptions, and such increased use of health facilities would likely influence the cost-benefit analysis concerning health insurance for the individual, specifically, increasing valuation.

Self-interest, however, may not be sufficient to predict health insurance valuation. One's perception of the world around them, one's role in the world, and the view of the world as an ordered system may affect the likelihood that one would seek insurance coverage.

The belief in a just world may be related to one's concern for the victim of a medical condition. Such a belief reflects a supposed need by individuals to believe that people get what they

deserve and deserve what they get (Lerner & Miller, 1978). When one encounters an injustice, he or she feels compelled to restore justice. This may occur in two ways: aiding the victim or blaming the victim.

It has been demonstrated that just world beliefs are likely to increase victim derogation (Gruman & Sloan, 1983), particularly if such a condition is seen as preventable (Sloan & Gruman, 1983). Such derogation depends, however, on one's level of identification with the victim. Chaiken and Darley (1973) demonstrated that if one expects to be in a situation similar to that of the victim, derogation is decreased.

The just world variable may just as likely be listed among those in the category concerning one's perceived vulnerability. Somewhat implicit in the belief in a just world is that the individual holding such beliefs is also responsible for one's successes and failures. One who believes in a just world should feel more in control of his or her life and thus, feel less vulnerable to external control. In fact, the belief in a just world and an internal locus of control have been shown to correlate significantly (Zuckerman & Gerbasi, 1977; Zuckerman, Gerbasi, & Marion, 1977; Rubin & Peplau, 1973). In accordance with this idea, control beliefs have been shown to decline when people have a serious medical condition such as cancer, that is largely beyond their control (Taylor, 1983). This loss of control typically results in an increasingly urgent need to regain the lost control.

One's religious orientation may affect one's view of the world and others in it. High religious orthodoxy has been associated with victim derogation, but only when Christian beliefs were salient (Lee & Hunsberger, 1990). Similarly, Lerner and Elkington (1971) demonstrated that those with stronger religious beliefs were more likely to overlook social injustices. However, those with differing religious views concerning the element of chance, empathy for others, and the control of a higher power in directing our lives may hold greatly varying beliefs concerning both their own control and the control of others in shaping their destiny. Thus, in studying religiosity, it is important to take into account not merely the presence or absence of religious beliefs, but the orientation and nature of such beliefs (Batson & Ventis, 1982). Similarly, it should be remembered that religion extends far beyond the bounds of Christianity and that an agnostic or atheist may too be engaged in existential questioning about the nature and order of earthly existence.

Religiosity is an evasive predictor. This is due, in part, to two opposing factors that are often at work in the believer. Religious teachings emphasize that one should feel empathy for victims of injustice and show compassion for those who are less fortunate. However, religion often serves to buttress the belief of many in a worldly order and justice. Thus, religion, which teaches empathy and compassion, may also promote victim derogation. If an all-powerful god still allows the suffering of

individuals, they must deserve it. It follows, then, that religious and just world beliefs may, for some individuals, share the same foundation. Lea and Hunsberger (1990) note that "one means of dealing with perceived chaos is to order the universe with religion. Just world and religious beliefs may thus share a common reason for their existence: the creation of a structured and predictable cognitive universe" (p. 513, Lea & Hunsberger).

The link between just world beliefs and religiosity has been validated (Sorentino & Hardy, 1974). It has been suggested that this contradiction is, in a sense, perpetuated by the church itself; "All advanced societies require for their perpetuation the formation of some social institution whose major function is to socialize those within its sphere of influence to employ mechanisms of self-enhancement regardless of the amount of compassion felt for or shown towards one's fellowman. This social institution provides its members with ready-made value standards to be employed as bases for rationalization and as frames of reference for morally judging or condemning others on the one hand and for feeling morally superior on the other" (p. 35, Rokeach, 1969).

Religiosity measured as an orientation may, too, be predictors of attitudes and behaviors. "For example, it may be that those who are devout in their adherence to religious beliefs are likely to show more love and concern for their fellow man, while those who are religious only in the nominal sense of being members of a local church and occasionally attending services

will not show increased concern" (p. 139, Batson & Ventis, 1982). It is therefore desirable to not only measure the strength of one's beliefs, but their nature and motivation.

This, too, may fall short of being an accurate predictor, however. For example, the salience of religion may have an impact on one's apparent concern for a victim (Lea & Hunsberger, 1990). In addition, religious beliefs may have an impact nearly opposite to what is anticipated, due to the failure of those high in religiosity to be sensitive to situational information and, thus, actually be less likely to derogate a victim (Sorentino & Hardy, 1974). Further, Frankel and Hewitt (1994) found that religiosity is associated with superior health, both physical and mental. Such health success may decrease the individual insurance desire.

A host of situational factors may also confound the impact of these variables. Demographic variables such as the race, sex, age, etc., in which the disease predominates will affect both one's similarity to and identification with the victim as well as one's assessment of personal risk. The perceived preventability of the illness (eg. stomach cancer vs. heart disease) may also taint one's perception of personal risk and victim blame (Sloan & Gruman, 1983). The disease's pain level and prevalence within society as a whole are additional factors which would likely enter into such an assessment. Similarly, one's perception of what, specifically, the medical condition is may well serve to determine one's level of empathy with the victim as well as one's

perception of risk to his or herself. For example, if the condition is AIDS, it may well lead to a lack of concern for the victim, due to the condition's perceived status as the "gay plague" (Kayal, 1985).

The present study will examine the effects of only two situational variables on health insurance valuation: cost and type of condition. The hypotheses are as follows:

Hypothesis 1: The desire to insure will be lower with increased cost.

Hypothesis 2: The desire to insure will be lower for a psychological, rather than a physical, condition. This hypothesis is based upon two lines of reasoning. The first concerns the anticipated locus of control beliefs on part of the research participants. The second concerns the causal attributions associated with the two types of conditions.

Research participants may feel more in control of their mental well-being than their physical well-being. That is, despite the preventability information presented in the vignette, it is anticipated that research participants will believe that psychological conditions are more preventable than physical conditions. This idea stems in part from the labeling that occurs when people are faced with medical conditions. While victims of physical conditions are often blamed for the conditions, such blame is not as frequent as for those victims of psychological conditions. The cause for psychological conditions is viewed as internal, rather than external, as evidenced by the

prevalence of such terms as "nutcake" or "loony". In addition, the likely greater personal experience with and exposure to loved ones with physical medical conditions may serve to further lessen the internal cause attribution for physical conditions and the concomitant in-group out-group cognition. Personal experience with such phenomena will likely lower the perception of those with physical conditions as implicitly different and deserving of such conditions.

Hypothesis 3: The belief in a just world will be negatively correlated with the desire to insure.

Hypothesis 4: An internal health locus of control will be negatively correlated with the desire to insure.

Hypothesis 5: High perceived health competence will be negatively correlated with the desire to insure.

Hypothesis 6: An interactive religious orientation will be positively correlated with the desire to insure.

Methods

Research Participants

Research participants consisted of 149 introductory psychology students who voluntarily participated in the study. 80% of the subjects were female and the mean age for the entire sample was 18.68 years.

Measures

Perceived Health Competence. Subjects first completed the Perceived Health Competence (PHC) Scale developed by Smith, Wallston, and Smith (1995). The scale contains eight items

designed to assess one's competency beliefs regarding health. Responses were measured on a 6-point Likert scale format. The scale has shown to have excellent internal consistency, with alpha coefficients consistently ranging from .82 to .90, as well as excellent cross-sample validity. The present sample demonstrated similar scale reliability (alpha = .84).

Health Locus of Control. The Multidimensional Health Locus of Control (MHLC) Scale Form B (Wallston, et al., 1978) was then completed by the research participants. This scale measures three dimensions of health locus of control beliefs: internal health locus of control beliefs (IHLC), chance health locus of control beliefs (CHLC), and beliefs of "powerful others" in determining one's health state (PHLC). The three scales have typically shown alpha reliability scores around .70, but the present study found somewhat lower levels (.62, .47, and .60, respectively). These scales are also measured with a 6-point Likert scale format.

Belief in a Just World. Just world beliefs were assessed by utilizing the Belief in a Just World (BJW) scale developed by Rubin and Peplau (1975). This scale is intended to measure the dimension in Lerner's (1980) Just World Hypothesis. This states, essentially, that individuals have a need to believe that they live in a world where individuals get what they deserve and deserve what they get. The scale reliability demonstrated in the present sample (alpha = .69) was somewhat lower than the demonstrated reliability of approximately .80.

Religious Life Inventory. The last of the four attitude inventories used was the Religious Life Inventory (Batson & Ventis, 1982). This inventory contains 6 different scales, each tapping into a separate dimension of religiosity. The scales are then combined by means of factor analysis to yield one of three religious orientations: means, end, or quest. For this study, however, only four of the subscales were utilized: the External Scale, Internal Scale, Interactional Scale, and Buffer Scale. This was done for two reasons; first, to limit the length of the questionnaire, and second, to avoid the restriction of questionnaire response to those with a purely Christian orientation.

The External Scale is said to measure "the degree to which an individual's external social environment has influenced his or her personal religion" (p. 152, Batson & Ventis, 1982). The purpose of the Internal Scale is to assess "the degree to which an individual's religion is a result of internal needs for certainty, strength, and direction" (p. 152, Batson & Ventis, 1982). The third scale, the Interactional Scale, involves "the degree to which an individual's religion involves an open-ended, responsive dialogue with existential questions raised by the contradictions and tragedies of life" (p. 152-3, Batson & Ventis, 1982). The three scales were components of the means, end, and quest orientations respectively.

The External Scale and Internal Scale have been shown to significantly correlate with each other. The Interactional Scale

has not, and this was expected, as it measures a dimension of religiosity not necessarily reflected in the other two. Alpha reliability scores for the External and Internal Religiosity scales in the present sample were quite high (alphas = .86 and .91, respectively), while the Interactional scale reliability was somewhat lower (alpha = .56). In addition, the scales have shown excellent cross-sample reliability.

Vignette. After completing the above questionnaires, the research participants read a vignette describing a medical condition. Within the vignette, the cost of insuring against the condition (low, medium, or high) and the type of condition (physical or psychological) were manipulated. This provided a 3 X 2 design in which the research participants were randomly distributed across conditions before the study began. The vignette read as follows:

> As a health insurance holder, you are invited to participate in reformulating the coverage provided by the basic insurance policy. One coverage consideration concerns a medical condition which results in an average [physical/psychological] pain rating of 8.3 on a pain scale of one to ten (with ten being extreme pain). This condition when not covered by insurance usually results in approximately $30,000 in health costs to the individual. The condition affects all demographic groups equally (such as sex, ethnic group, sexual orientation, and socio-economic status) and 8.5% of the population will experience this condition. This condition is preventable about 20% of the time. The cost of insuring against such an illness would constitute [0.5-1%, 10%, 20%] of your total insurance premium.

The research participants then completed a series of questions concerning willingness to insure, responsibility for the condition, and impact of the condition. The questions read as follows:

How much would you want this condition covered in your benefit package?
How much would you want to include this as a basic benefit in a National Health Insurance plan?
How responsible is this person for his/her condition?
How much impact would this condition have on the individual's life?
How much impact would this condition have on society?
What is society's responsibility to cover this condition?

Each of these questions was treated as a single dependent variable. Originally, these questions were not designed to reflect an underlying construct, however, it demonstrated reasonable internal consistency (alpha = .66). This consistency was still higher when the dimension of individual responsibility was dropped (alpha = .73). This scale may measure an affective dimension concerning an awareness of the brevity and unpredictability of illness. By scoring high on these questions, research participants acknowledge that individuals should have access to health care because illness affects people both on an individual and societal level. In addition, high scores in this scale seem to reflect a belief that health is not always predictable, and membership in society implies a right to some basic health care.

To assess manipulation strength, research participants were asked what percentage of their health insurance premium they would be willing to allocate for this condition and what condition they assumed was being described by the vignette.

Results

Manipulation Check. Examination of manipulation strength suggested that the manipulation was effective. When asked what

condition he or she had in mind when reading the vignette, research participants were more likely to list a psychological condition in the psychological manipulation, and a physical condition in the physical manipulation ($\chi^2(3) = 12.91$, $p < .01$). The majority of responses across conditions were physical conditions (66.9%), but this may be due to a health insurance heuristic. That is, when most people think of health insurance, greater exposure to physical condition coverage may lead to a response bias toward physical conditions.

Research participants were also asked, in a free response format, what percentage of their insurance premium they would allocate to cover such a condition. An ANOVA was conducted and the cost manipulation as well as the medical condition manipulation had significant impact on responses. Research participants were willing to allocate a significantly greater percentage of their premiums in the high cost condition ($F(2,136) = 5.2$, $p < .01$) and were willing to allocate a significantly smaller percentage of their premiums for a psychological, rather than a physical, condition ($F(1,136) = 4.5$, $p < .05$).

Thus, while the manipulation did not have the exact expected effects, it did appear that subjects were affected by the different characteristics of the description of the condition.

To examine the hypotheses, ANOVA's and regression analyses were conducted for each of the dependent variables.

ANOVA's. 3 (cost) X 2 (condition type) X 2 (gender) ANOVA's were conducted to examine cost, gender, and condition effects on

the dependent variables. None of the ANOVA's provided direct support for any of the hypotheses. However, there were significant results that were either different than, or unrelated to, the hypotheses.

Males were less likely to include the condition in a national health plan with low cost, while females did not show a similar cost distinction ($F(2,135) = 2.4$, $p < .05$) (See Table 1). The interaction between cost and gender ceased to exist, however, when PHLC was covaried.

Insert Table 1 about here

With higher cost, less responsibility was attributed to the individual ($F(2,135) = 3.6$, $p < .05$). In addition, there was a cost by condition type interaction. Research participants attributed more responsibility to society for physical conditions that are expensive to insure, and to psychological conditions that are of low cost ($F(2,135) = 3.2$, $p < .05$).

Insert Table 2 about here

Also, males assigned to the low cost condition were less likely to have high PHLC beliefs, while females in the low cost condition were more likely to have strong PHLC beliefs ($F(2,136) = 6.4$, $p < .01$).

Multiple Regression Analyses. Multiple regression analyses were conducted for each of the dependent variables. Each of the dependent variables was regressed on condition type, cost,

gender, religious orientation, HLC, PHC, and JW. None of the six hypotheses gained direct support from the data. Nevertheless, there were several significant findings that were of interest.

High PHLC scores were positively predictive of the desire to include the condition in the basic plan (β = .27, t = 3.18, p < .01), but the overall equation was not significant. The desire to include in a national plan, when regressed, resulted in a significant equation (R^2 = .07, F(11,135) = 2.04, p < .05). The significant predictor was PHLC (β = .30, t = 3.58, p < .001). High PHLC scores were also associated with a greater perceived impact on the individual (β = .17, t = 1.94, p = .0550) and greater societal responsibility attributions (β = .281, t = 3.34, p < .01). The latter equation was significant (R^2 = .07, F(11,135) = 2.01, p < .05) Regression of the vignette scale also resulted in a significant equation (R^2 = .07, F(11,135) = 2.04, p < .05). The significant predictor within this dimension was PHLC (β = .33, t(11) = 3.896, p < .001). PHLC was also predictive of the vignette scale without the individual responsibility dimension (β = .31, t(11) = 3.63, p < .001), although the overall equation was not significant. See Table 3 for a summary of PHLC predictive ability.

Insert Table 3 about here

Those with strong just world beliefs believed that the condition would have lesser impact on the individual than those with weaker just world beliefs (β = -.26, t(11) = -2.96, p <

.01). Also, higher cost was associated with lesser individual responsibility attributions (β = -.18, $t(11) = -2.09$, $p < .05$). Neither of these equations were significant overall.

Discussion

None of the six hypotheses were directly supported by the data. While the cost of insuring the condition and the type of condition did have an impact on health insurance decision-making, those impacts did not occur in the direction anticipated. Similarly, while two of the subject variables did significantly impact decision-making, only one was found to have broad predictive ability.

The stated cost of insuring the condition impacted the maximum amount research participants were willing to allocate to insuring a condition, and perceived individual responsibility. With increased cost, less responsibility was attributed to the individual. In addition, research participants were willing to allocate a greater percentage of their insurance premium when the stated cost of insuring against the condition was listed as high. Thus, in this particular type of cost manipulation, it seems the cost-benefit analysis is not evaluated entirely as an independent construct. There seem to be two likely effects of cost upon health insurance cost-benefit analysis. Simply stating that a condition is expensive to insure appears to provide the impetus for greater allocation on part of the research participants, suggesting, implicitly, that insuring the condition is valued. One additional possibility to further explore may be that, in

this decision making process, the individual's knowledge of cost may influence his or her perception of an individual with such a condition, which may then be the decision-making construct. Since higher insurance costs are associated with decreased perceived individual responsibility, one may gain knowledge of the actual cost, make a judgement about an individual with such a condition, and make an allocation based upon this judgement. Or it may be simply that a high cost estimate elicits a high cost allocation by virtue of comparison.

The type of condition, physical or psychological, had an effect on decision-making, but did not fully support the hypothesis that individuals would be less likely to insure a psychological condition. While research participants were willing to allocate a greater percentage of their insurance premium for a physical, rather than a psychological, condition, no greater willingness to insure a physical condition was shown. There was also a cost by condition type interaction. More societal responsibility was attributed for low cost psychological condition, whereas for a physical condition, higher cost was associated with greater societal responsibility perceptions. High cost psychological treatment, then, is not seen as cost-effective, while high priced physical treatment is.

Perhaps, physical pain is seen more as necessitating treatment than psychological pain. This idea fails to find any support in the data, however, as the relationship between the medical condition manipulation and impact on society or impact on

the individual does not even approach significance. People may perceive expensive physical treatments as more successful than costly psychological treatment. Media portrayals of hospitals for treatment of physical ailments and psychological treatment facilities may provide a bias against psychological treatment. Such a bias may lead research participants to view psychological treatment as unworthy of insurance coverage except in low cost situations.

JWB had an impact on the cost-benefit analysis, but not to the full extent predicted. Those with just world beliefs tended to believe that the medical condition would have a lesser impact on the individual than those with weaker just world beliefs. Thus, those who may use the belief in a just world to justify negative events may engage in an additional cognition, that of minimization. Such a belief may entail that, not only did the victim deserve this condition, but such a condition wouldn't affect the individual's life anyway. Thus, it appears that the belief in a just world is used to minimize dissonance and that additional strategies are employed, but belief in a just world itself is not a factor in one's perception of health insurance desirability.

One dimension of the HLC orientation served as a predictor. Those with internal IHLC beliefs were no less likely to insure. Instead, the predictive scale was the PHLC, or belief in "powerful others" in determining one's health. High PHLC beliefs were associated with a greater willingness to include the

condition in a basic medical plan, a greater willingness to include the condition in a national health plan, greater beliefs in society's responsibility for the condition, and a tendency to believe in a stronger impact on the individual. In addition, PHLC was very predictive of the vignette scale; those with high PHLC scores tended to score high on the vignette scale as well.

Males in the low cost condition were less likely to insure, and less likely to have high PHLC beliefs. When the PHLC scale was covaried out, the willingness to insure difference was not found to be significant, suggesting that the difference in PHLC beliefs was responsible for the willingness to insure differences.

At first glance, PHLC predictive power may seem somewhat incongruent simply because the CHLC and IHLC subscales were not predictive. The optimistic bias that likely accompanies a CHLC orientation may be just strong enough to interfere with predictive ability. While an individual with high CHLC beliefs perceives chance as responsible for his or her health, and optimistic bias may lead such an individual to still perceive low personal health risk. Such an individual may think that, while he or she is not in control of his or her health, s/he is generally quite lucky.

Conversely, an IHLC orientation does not guarantee the perception of perfect health. That is, while an individual believes the burden of responsibility to lie with his- or herself, he or she is not likely to engage in perfect health

behavior. Nearly everyone engages in behaviors not optimal for perfect health, and an internal locus of control makes one aware that both the positive and negative behaviors are at work in determining one's health state. This awareness may temper the potential lower desire for health insurance.

For those with strong "powerful others" beliefs, however, the situation may be quite different. In the first place, if one believes medical authorities are responsible for one's health, then access to such authorities without fear of extreme medical bills is imperative. If someone with "powerful others" beliefs becomes ill, it is believed that neither chance nor the person him or herself can improve the condition. Medical attention is necessary if the condition is to improve. Such attention requires monetary resources, and this need may be supported by health insurance.

The failure for PHC to be predictive is difficult to explain. PHC had no significant predictive tendencies toward any of the dependent variables. However, perceived competence does not imply perceived invulnerability. An awareness by some individuals of the possibility of even the most competent health behaviors failing to give complete assurance of good health may account for the lack of predictive ability of the PHC scale.

Religiosity also failed to be a significant predictor of any of the dependent variables. As suggested earlier, religiosity is an evasive predictor, containing many diverse, even contradictory, beliefs. While it appears that these three

subscales do indeed measure three different aspects of religiosity, these three dimensions may not be three that are predictive of health insurance valuation. These three subscales are designed to examine the impetus for religious beliefs, but not the exact nature of the beliefs themselves. While some inference may be possible, it is not possible to determine what exactly these religious beliefs arising from these orientations may be. Thus, for a better look at the predictive value of religiosity, it may be necessary to look at the specific beliefs arising from these orientations. Examination of religious orthodoxy might be a good place to start. Similarly, a scale to measure Eastern religious beliefs may provide an interesting contrast to the strictly Western spiritual orientation.

With the most significant predictor being a belief in "powerful others" determining one's health, it appears that self-interest is the largest determinant of inclusion desirability of a given medical condition. One's perceived need for medical authorities in health maintenance is essentially individualistic and egocentric. It could be argued, however, that if one perceives this need to hold for others as well, insurance motives are equally an act of self-interest and altruism. In addition, the four dimensions examined in the present study may not be an accurate cross-section of egoistically and altruistically differentiated attitudes in health insurance valuation prediction. In all reality, these two constructs may be inseparable and we may find that seemingly egocentric

motivations, when believed globally, equate with altruistic intentions.

One design aspect of the vignette scale makes interpretation of these results somewhat tentative. The question of individual responsibility assesses general attitudes concerning individual responsibility regarding health status and treatment, but could be more specific to the type of responsibility. That is, there are two ways of being responsible for a medical condition. These are (1) responsibility for an individual manifesting a condition and (2) responsibility for treating the condition. To parallel the question concerning society's treatment responsibility, the individual responsibility question has been interpreted as responsibility for treatment. Nevertheless, this item is a potential confound and, in future applications, the scale should be expanded to accommodate the differentiation of responsibility types. Two possibilities are: "What is the individual's responsibility for treatment of this condition?" and "How responsible is this individual for contracting the condition?". This addition may also clarify the issue of global attributions, as discussed earlier. One could examine the relationship between HLC beliefs and the degree to which those beliefs hold for a hypothetical individual.

Another potential confound concerns the cost manipulation itself. Research participants may, understandably, link the cost to insure with the health care costs to an individual without insurance, thus decreasing the power of the cost manipulation and

possibly confounding cost interpretations. This may hold especially true due to a lack of familiarity on the part of most individuals of actual health insurance costs, particularly concerning the total number of conditions covered and the relative cost share allocations for each individual condition. It is also logical to assume that the cost to insure a health condition would be highly positively correlated to the health care costs to an individual without insurance. When the cost is manipulated as a function of health insurance premium percentage, however, this type of mental calculation is not necessarily relevant.

It is unlikely that research participants went through this type of analysis or have a knowledge of actual percentages allocated to covering conditions of similar prevalence and severity, and this may have affected the given responses. It is desirable to separate these two variables, because, as mentioned earlier, the cost of insuring a condition may have an effect upon the perceived responsibility of the individual. These two different types of cost may create responsibility attribution differences in the same direction, but this has yet to be tested. As a result, cost of insuring as an independent construct was of interest in this study.

A possibly advantageous approach would be the framing of this situation as a condition addition. That is, instead of presenting this situation as requiring a fraction of one's premium, the vignette and question could phrase the situation as

one in which the condition is simply included at greater cost to the individual, above the basic premium. This approach would greater parallel actual benefit acquisition.

Despite the difficulty in isolating these variables and assessing actual cognitive influence, health insurance decision-making is an important and potentially fruitful area of study. Particularly in these times of extensive health care reform debate, greater insight into the needs and opinions of insurance holders is essential. Bently, et al., (1995) stress the importance of an awareness on part of decision makers of citizens' values and the need for such values to be taken into consideration. They show the success of an open-discussion forum in providing an outlet for citizen health coverage concerns and providing an educational experience for participants, and suggest similar forums for other areas in raising awareness of citizens' values to decision makers and the citizens themselves.

It may, however, not be enough to assess opinions of health insurance holders on current and possible coverage options. It may be helpful to further examine the influence of situational and subject variables upon health insurance cost-benefit analysis. From further examination of these impacts, we could examine personality factors or social cognition that may increase the propensity of an individual to prefer certain types of coverage over others. More importantly, greater knowledge of how people arrive at their insurance coverage preferences will expose the possible tendencies in some to base decisions upon irrational

cognition or unrelated factors. From this, greater help may be offered to those who make decisions that actually work to the disadvantage of the individuals themselves as well as the greater community.

Van Dijk and Wilke (1995) provide insight into how the presentation of a situation may affect the decision making heuristics that are employed. The presentation of a decision making situation as a Public Good Dilemma or a Resource Dilemma elicits a separate and distinct heuristic. In Public Good Dilemmas, research participants tend to work towards equal contribution, whereas in Resource Dilemmas, they try to maximize equal outcome. This, they suggest, is an effect of the relative saliency of each in each dilemma.

The assessment of which type of dilemma medical condition coverage consideration is may depend on the nature of the insurance itself. Health insurance as it currently is, as privatized industry, makes insurance acquisition and maintenance appear as a Resource Dilemma. The amount one pays is the result of complex statistical approximation of one's risk. Except in group insurance plans, those who are likely to receive more benefit pay more into the system. If the insurance system were to be switched to a national health plan and the revenues for such were to be gained through a more socialistic method, such as insurance paid by the employer or insurance paid by increased income bracket taxation, the salient emphasis may shift to one similar to a Public Good Dilemma. This potential shift has

caused great debate and controversy, and this heuristic alteration may be partly responsible.

There is still much to be learned about the effects of social cognition upon health insurance valuation. Some of the exploration possibilities beyond the scope of this study are manipulations concerning the level of pain, health care costs to an individual without insurance, the types of demographic groups affected by the condition, the prevalence of the condition in society, and the potential level of preventability. In addition, there are many ways of thinking about oneself and the surrounding world that may significantly predict health insurance valuation. Thus, this rather new area of inquiry affords many exciting opportunities for further research and examination.

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Table 1. ANOVA results for cost by condition type interaction on societal responsibility attributions

	Condition Type					
	Physical			Psychological		
Cost	$\bar{X}$	sd	N	$\bar{X}$	sd	N
Low	4.20	1.38	25	4.87	1.22	23
Mod.	4.36	1.29	25	4.12	1.56	25
High	4.72	1.17	25	4.21	1.19	24

Table 2. ANOVA results for cost by gender interaction on willingness to include in a national plan

	Gender					
	Male			Female		
Cost	$\bar{X}$	sd	N	$\bar{X}$	sd	N
Low	3.00	1.83	10	4.66	1.21	38
Mod.	4.68	1.95	19	4.52	1.67	31
High	4.47	1.30	15	4.53	1.35	34

Table 3. Multiple Regression Analyses for predictive power of PHLC on willingness to insure, responsibility, impact, and vignette scores

Dependent Variable	B	t	df	p
Willingness to include in benefit package	.27	3.18	11	p<.01
Willingness to include in national plan	.30	3.58	11	p<.001
Responsibility of the individual	.12	1.44	11	n.s.
Responsibility of society	.28	3.34	11	p<.01
Impact on the individual	.17	1.94	11	p=.055
Impact on society	.06	.62	11	n.s
Vignette Scale	.33	3.90	11	p<.001
Vignette Scale w/o individual responsibility dimension	.31	3.63	11	p<.001