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LOYOLA UNIVERSITY CHICAGO

AN EXPLORATION OF MIND-BODY CATEGORIES

USING THE PERSONAL BELIEFS SCALE

A THESIS SUBMITTED TO

THE FACULTY OF THE GRADUATE SCHOOL

IN CANDIDACY FOR THE DEGREE OF

MASTER OF ARTS

DEPARTMENT OF

COUNSELING PSYCHOLOGY

BY

SHARON K. BLACK

CHICAGO, ILLINOIS

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ABSTRACT

Much of the early history of psychology encompasses theories of the mind and its relationship to matter. F. F. Centore (1979) provided an inclusive framework of different positions regarding the mind-body debate. He proposed (1979) that views regarding the relationship between the mind and the body can be categorized into six mutually exclusive positions. Embree & Embree (1993) developed The Personal Beliefs Scale as an assessment of the six exclusive categories.

To further this investigation of student's mind-body beliefs, The Personal Beliefs Scale, five open-ended questions, and a demographic information form were administered to a sample of graduate students in counseling psychology. The data were analyzed using qualitative methods based on the Grounded Theory Approach as suggested by Anselm Strauss and Juliet Corbin (1990).

Similar to the Embree & Embree (1993) findings, this sample subscribed to a dominant category describing a mind-body position, but not to the exclusion of relatively high scores on opposing categories. A discussion of the scale as well the mutually exclusive component of Centore's framework is presented. This study concludes with implications of this study and areas for future research.

CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

The mind-body debate has a history that spans several millennia, propagating many theories and crossing philosophical, religious, and psychological domains. In fact, much of the early history of psychology encompasses the explication of terms that refer to concepts such as the soul, mind, spirit, and consciousness (Murray, 1983). Agreement on one theory does not hold up over time, thus, several mind-body positions exist. This study explores the theories and assessment of these beliefs.

It is important to investigate mind-body beliefs in counseling psychology as they are interwoven with our views regarding human nature (Centore, 1979; Churchland, 1984; Embree & Embree, 1993) and are at the core of the philosophical foundations that influence the ways in which we perceive the world (Speight, Myers, Cox, Chikako, & Highlen, 1991). Mind-body beliefs help us define what it means to be a person (Embree & Embree, 1993). In fact, Ibrahim (1985) suggested that a person's philosophy, or world-view, and how this affects his/her relationship with the world has been overlooked in the cross-cultural counseling literature.

Psychological health has shown to be difficult to define and assess (Gelderloos, Hermans, Ahlscrom, & Jacoby, 1989). Francis Vaughan (1991) stated that spiritual

issues are interwoven with psychological health. In fact, The World Health Organization has added spiritual well-being to the definition of overall health (Witmer & Sweeney, 1992). Therefore, it is important to consider spirituality within the context of the mind-body debate.

Vaughan (1991) suggested that spirituality develops as a result of responding to questions of meaning and purpose in life and in death, and when confronting aloneness and existential freedom. These are common issues that arise for clients and are important to consider within the realm of counseling psychology.

According to Churchland (1984), the most common theories of mind among the general public are dualistic. Stanovich (1989) developed the Dualism Scale to assess the degree to which the general public held dualistic theories of mind. He found that the undergraduate students in his sample endorsed dualism with a mean of 79.5. Since scientists tend to reject dualistic theories of mind (Stanovich, 1989), consideration of these beliefs among the general public, as well as students of science is warranted.

By the 70's there was a paradigm war within the behavioral sciences. The mind and its cognitive entities, the spirit and consciousness, were at war with the brain, the physical, and the measurable. To further add to this dichotomy, religion and science are considered to be mutually exclusive realms of human thought. Presenting them in the same context leads to misunderstanding both views. Although they appear to contradict each other, both systems guide our thoughts, behaviors, and beliefs (Sperry, 1991).

Sperry (1991) proposed a framework that relinquishes basic philosophical dichotomies. He proposed that our beliefs, which determine our values, choices, actions, and decisions in social policy-making, may be scientific in nature or religion based. His paradigm gives up the assumption of polar opposites and inherent incompatibility between the materialist and the immaterialist, highlighting the importance of integration at the societal level.

Centore (1979) provided an inclusive framework of the different positions that people have regarding the mind-body problem. He proposed that views regarding the relationship between the mind and the body can be categorized into six positions. Similar to Sperry's model, these categories define a person's relationship with the world. However, they cannot be shared. That is, an individual's beliefs should fall into one and only one of the six mutually exclusive categories.

Reductionistic materialism is the belief that all there is to human existence, and in fact, any life, is the material. The body is recognized as the source of all behavior and any reference to mind is rejected. A popular 20th century materialist, B. F. Skinner, suggested that if it cannot be measured, it does not exist.

Nonreductionistic materialists tolerate reference to the mind, and even the spirit. Humans are unique in that the brain cannot be explained in only molecular terms. Reference to the immaterial is necessary, but only metaphorically and not to be taken literally.

Psychosomaticism acknowledges the existence of both the body and the soul. Mind exists with the body and is not merely a metaphor to express something that we do not fully understand. In fact, they exist simultaneously with one not being a function of the other. Like Cartesian Dualism, there is equal emphasis on the material and the immaterial.

Psychosomaticism is divided into two parts. First-order psychosomaticism (without immortality) rejects the possibility that the soul can live independently of the body. There is no life after death. Second-order psychosomaticism (with immortality) holds that the soul can exist in its own right, independent of the body. The immaterial aspect of human existence survives the material.

Vitalism not only acknowledges the possibility of the existence of the soul after death, but reincarnation is assumed to occur. Within this view, it makes sense that the soul will travel from one body to another, whether human or otherwise, until a final resting point, or salvation, is achieved.

Reductionistic immaterialism is at the opposite pole from reductionistic materialism. Human nature is entirely spiritual. Without the soul, the body does not exist. It cannot survive independent of the soul and any belief in the material is merely an illusion.

Embree & Embree (1993) investigated Centore's mutually exclusive categories and developed The Personal Beliefs Scale as a measure of the six exclusive positions.

They investigated individual differences among 251 undergraduate college students from a small church-related institution.

In accordance with Centore's framework, they hypothesized that participants' scale responses would fall into one category to the exclusion of responses that would place them into an opposing category. That is, subjects should respond to questions that place them into one and only one of the mutually exclusive positions. Their analysis revealed a tendency for this sample to subscribe mostly to second-order psychosomaticism (Embree & Embree, 1993).

Their analysis also revealed that participants did not respond to scale items in an entirely exclusive manner. Rather, they subscribed to scale items that placed them into more than one category. According to Centore's model, this is logically inconsistent. An individual cannot hold beliefs that permeate mind-body positions because such beliefs would be incompatible.

Embree & Embree (1996) later postulated that "fuzzy logic" which manifests in the expression of "degrees of truth," was used by students in their original sample to explain the logically inconsistent style of their responses. Inconsistency in scale response was explained in terms of this sample's tendency to hold unconventional beliefs. They maintained that Centore's positions are mutually exclusive according to the rules of classical logic that are reflected in conventional beliefs.

This study seeks to further the investigation of students' mind-body beliefs. The Personal Beliefs Scale, five open-ended questions, and a demographic information form

were administered to a sample of graduate students in counseling psychology. The data were analyzed using quantitative and qualitative methods.

The quantitative component of this analysis was used in order to empirically test the exclusivity component of Centore's Comparative Approach (1979). Qualitative methods of analysis based on Strauss & Corbin's Grounded Theory Approach (1990) were implemented in order to provide subjective information regarding this sample's mind-body beliefs. This study is exploratory and descriptive, thus no tenet for a correct mind-body position is proposed. It will provide additional questions for future research on the mind-body debate.

CHAPTER 2

METHODOLOGY

Participants

Participants were graduate students in advanced standing in the counseling psychology program. Six were in a master's program in community counseling, three in a master's program in school counseling, and two in a doctoral program in counseling psychology. Students in the later stages of the counseling program are assumed to have had an opportunity to reflect upon their views regarding human nature and have an understanding of the vocabulary used within the context of mind-body debate.

The students in this sample were from a culturally diverse, church related institution, located in a large, urban area. Eight participants were male and three were female, ranging in age from 23 to 34 years old. Ten participants were Caucasian and one was Latino.

Several religions were represented by this sample: Catholic (5), Jewish (2), Protestant (2), and Eastern orthodox (1). In addition, one chose Buddhist, Protestant, and added Red Road (Native American) in specifying his religion. Primary theoretical orientations for these participants were Humanistic/Existential (6), Cognitive-Behavioral (5), Systems (3), Feminist (1), and Transpersonal (1).

The Personal Beliefs Scale

The Personal Beliefs Scale (Embree & Embree, 1993) was developed to measure the relative strength of mind-body positions as proposed by F. F. Centore (1979). It was administered to 251 undergraduate students from a small church-related institution in the Midwest. Their study yielded split-half reliabilities of .83 or greater for the six subscales.

The PBS is a 60 item scale with a paired choice format that measures the relative strength of each mind-body position (see appendix 3). To have an equal number of pairings, some items were repeated. Each statement was rated on a scale from 0, or very strongly disagree, to 6, or very strongly agree (see appendix 3).

Open-ended Questions

To provide a richer understanding of students' subscription to a mind-body category, five open-ended questions were developed. The purpose was to broadly investigate the related concepts found throughout the mind-body literature. Students were instructed to answer the questions in the space provided or clearly numbered on the back of the instrument. Table 1 presents the open-ended questions.

Table 1. Open-ended Questions

1. Please relate an experience in which you found a scientific approach better helped you understand or cope with a personal issue.
2. Please relate an experience in which you found a spiritual approach better helped you understand or cope with a personal issue.
3. In your own words, please describe how you conceptualize the mind, body, and spirit as they make an impact on your life.
4. Have you ever experienced an event that changed your views regarding human nature? How are they different? Please relate.
5a. What practices do you have that enhance your spiritual life?
5b. What practices do you have that enhance your religious life?

Spiritual and *scientific* approaches (questions #1 & #2) were both included because, historically, the mind-body debate incorporates a discussion of the *soul* as well as the *mind*. Paradoxically, it also appears that science and religion propose diverging and incompatible views of this elusive relationship.

Question #3 was included to obtain a direct, subjective model of the mind-body relationship and was analyzed primarily to aid in the interpretation of the categorical data. Question #4 was originally included to detect developmental or situational-specific beliefs. However, disclosure of mind-body models served to be more useful. Question #5

was developed to assess student's perceptions of the differences or similarities between religion and spirituality.

Procedure

During six separate practicum group supervision meetings, 40 students were given the demographic information form, The Personal Beliefs Scale, and five open-ended questions. Informed consent was obtained by all 40 students.

Confidentiality was ensured by number coding the instruments. The students were requested to complete the measure during a two week period and to deliver the measure anonymously to a pre-designated box in the mailroom on campus. Eleven of the 40 students participated in this study.

The Personal Beliefs Scale (PBS) was administered to quantify student's response patterns on each of the six subscales. Students were instructed to answer each question carefully and record their ratings on an enclosed answer sheet. Raw scores obtained from the PBS were calculated, yielding scores for each category.

The open-ended questions were included to generate mind-body themes and to aid in the interpretation of the scale results. They were analyzed based on the accepted qualitative methods of Strauss & Corbin's Grounded Theory Approach (1990). All five of the open questions were reviewed for themes present across participants.

CHAPTER 3

RESULTS

Embree & Embree (1993) designed the Personal Beliefs Scale (PBS) as a measure of the relative strength of mind-body categories as proposed by F. F. Centore (1979). The PBS was used in this study to obtain a score for each of the categories and to quantify subject's response patterns in expression of their mind-body beliefs.

The means and the standard deviations for each category are presented in Table 2. The mean for psychosomaticism with immortality (PS2) was considerably higher than the remaining categories. The means of the other subscales spread out around the PS2 mean, with vitalism (VT) and psychosomaticism without immortality (PS1) almost equally second.

Table 2. Score Distribution

Category	N	Mean	Standard Deviation
RM	0	7.46	4.87
NM	0	9.41	3.9
PS1	1	13.64	7.15
PS2	8	20.46	3.93
VT	2	13.82	6.65
RI	0	9.05	2.72

Note. The categories as proposed by F. F. Centore (1979) are abbreviated as follows:

Reductionistic Materialism (RM), Nonreductionistic Materialism (NR),
Psychosomaticism Without Immortality (PS1), Psychosomaticism With Immortality
(PS2), Vitalism (VT), and Reductionistic Immaterialism (RI).

Similar to the Embree & Embree findings (1993), PS2 was highly represented by this group, but not to the exclusion of relatively high scores in opposing categories.

Individual scores for each category are presented in Appendix 4.

To further ground these findings, the open-ended questions (see methodology) were examined. All of the participants acknowledged the existence of both the material and the immaterial (see table 3), consistent with the dominant world-views of this sample.

Table 3. Responses Reflecting a Belief in the Mind/Spirit and Body

Student	Examples from the open-ended questions
1	"...mind and spirit are...something eternal in each person's spiritual identity that continues to exist... after the body ceases to exist."
2	"The soul is united with the body yet separate."
3	"The mind helps me make decisions...my body gives me transportation...the spirit...will be in the universe."
4	"Mind, body, & spirit all united and working together to create the unique me."
5	"The mind, body, and spirit are linked and inseparable..."
6	"The mind, body, and spirit are all interconnected parts of who I am... I regard my spirit, however, as the most important..."
7	"I appreciate the beauty of having a mind, body & spirit."
8	"God gave us our minds...our bodies...our spirits...to accomplish whatever it is God has set out for us to do in our life on earth."
9	"All three interact [with] one another and are highly interrelated and codependent."
10	"...without [one] I feel I couldn't use the others...mind, body, and spirit work together all the time and constantly impact my life"
11	"I view the body as a sanctuary [for] the mind and soul."

For students who scored highest on the PS2 subscale, Centore postulates two coexisting realities: the material and the immaterial. Furthermore, this belief should be accompanied by the belief in the immortality of the soul. Five out of the eight students who scored highest on the PS2 subscale stated that the soul is immortal (see Table 3), supporting this tenet.

The three remaining participants who scored highest in the PS2 category, acknowledge the existence of the material and immaterial, yet no mention is made to the spiritual afterlife in the open questions. Two of these participants (8 & 9), scored relatively high across subscales, and one (5) scored equally high in the PS2 and VT subscales (17.5).

According to Centore, psychosomaticism without immortality (PS1) reflects the belief in both the existence of both the material and the immaterial, but rejects the belief in the immortal soul. Table 3 shows that participant 10 reflected a belief in the two co-existing realities, but did not make reference to the spiritual afterlife. However, this finding is expected since this subject scored highest in the PS1 subscale.

Centore's approach postulates that vitalists (VT) should reflect beliefs in the existence of the material, the immaterial, immortality, reincarnation, and a disavowal of the uniqueness of the mind. The two participants who scored highest on the VT subscale did, in fact, reflect some of these beliefs.

One of the respondents who scored highest on the VT subscale related that “[souls] need to come back to the material world after death (in some other form, or

body) in order to learn something else...lives on with god or comes back to earth." The other respondent related: "...my body, my soul, all animals...all expressions of God."

Although further research is needed to discriminate between PS1 and PS2, this study partially supports Centore's classification. Dominant categories obtained from responses to the PBS were congruent with responses to the open-ended questions.

The other primary tenet of this model, mutual exclusivity, suggests that participants should not agree with items that represent an opposing category. However, the means of the other subscales were relatively high (see Table 2), failing to support the mutual exclusivity component of Centore's framework. Due to the unexpectedly high scores across subscales, dominant, secondary, and tertiary categories were calculated for each participant and are presented in Table 4.

Table 4. Category Distribution

Student	Dominant	Secondary	Tertiary
1	PS2 (23.5)	PS1 (17)	NR (16)
2	VT (19.5)	RI (13.5)	PS2 (11.5)
3	PS2 (22.5)	VT (18)	PS1 (13)
4	PS2 (21)	VT (15)	NR (10.5)
5	PS2 (17.5)	VT (17.5)	PS1 (14)
6	PS2 (22)	VT (17)	PS1 (13)
7	PS2 (25)	PS1 (18)	VT (13.5)
8	VT (24.5)	PS2 (21)	PS1 (16)
9	PS2 (23)	RM (15.5)	NR (13)
10	PS1 (29)	PS2 (16)	NR (12.5)
11	PS2 (22)	RM (14)	RI (8)

Note. The categories as proposed by F. F. Centore (1979) are abbreviated as follows:

Reductionistic Materialism (RM), Nonreductionistic Materialism (NR),

Psychosomaticism Without Immortality (PS1), Psychosomaticism With Immortality

(PS2), Vitalism (VT), and Reductionistic Immaterialism (RI). The actual category scores are in parentheses.

Three respondents (8, 9, and 11) whose dominant categories were PS2 and VT, also had high scores (at least 1 standard deviation above the mean) in the opposing category reductionistic materialism (RM). For 2 of these respondents, RM was the secondary category. In conjunction with the high score category, responses on the open questions indicate that these respondents do not reject the existence of the immaterial, as RM suggests, and even emphasize its importance (see table 3). This does not support the high scoring RM category.

Table 5 lists the items that contribute the most to the high RM scores. To provide the theory with an advantage, items that reflected a contradictory response pattern, inflating the RM score, were eliminated. These items appeared to be errors in responding in that opposite scores on paired items were found. For example, 2 respondents (2 & 11) rated item #6 ("My body is all there is to me. There is no self or soul to direct my actions") a score of 6 and subsequently a score of 0 on its paired item (#20). Thus, these items are not presented as failing to discriminate between categories.

Table 5. High Scoring Items Representing the Reductionistic Materialism Category

Student	Item	RM Score
8	15. "My human nature is more responding or reacting to the environment than it is planning, thinking, and anticipating."	13
9	21. "Freedom of choice is an illusion because in the end all my actions are caused by some condition within my environment."	15.5
9 & 11	13. "My essential nature is behavior with my actions being caused by forces within the environment or from within my body."	15.5 & 14

Note. A total of 5 participants in this sample scored high (4 or greater) on item #13.

Three RM items explicitly devalue human choice (#39), or the "self" (#6 & #50, see Table 6). As expected, these items received low scores from all of the participants in this sample, effectively discriminating between RM and the dominant categories, PS2 & VT.

Table 6. Low Scoring Items Representing the Reductionistic Materialism Category

Item	Score
6). "My body is all there is to me. There is no self or soul to direct my actions."	0-1
39). "I no more choose my actions than the moon chooses to travel in a path around the earth."	0-2
50). "The notion of a self making choices has no place in modern scientific thinking."	0-2

Note. Item #6 received a high rating of 6 by 2 participants in this sample. It is included here because these students contradicted themselves as they gave its paired item an opposite rating.

The participants in this sample clearly reflect a belief in the existence of the soul, failing to support the high scores on the RM items. Additionally, they related a belief in the existence of the material, or body. However, 3 participants scored high (at least one standard deviation above the mean) in the opposing category reductionistic immaterialism (RI). This category rejects the existence of the material as the spirit is the only true source of human existence. Like the RM category, this too, should be inconsistent with PS2 & VT.

To further lend allowance to the theory, one student who scored high across subscales (8), rated "disagree more than I agree" on every RI item and is, therefore,

excluded from this analysis. This participant's high scoring items cannot be included because high scores were calculated due to frequent ratings of 2 in this subscale, and not necessarily to agreement with the content of these items.

PBS items that contributed the most to the high RI scores are included in this analysis. Responses from the open-ended questions are presented to provide additional information regarding these students' mind-body beliefs.

One respondent (7) who scored highest in the PS2 category (9), also scored high (at least one standard deviation above the mean) on the RI subscale (12). This student relates the belief that the spirit rules both the mind and the body and that God needs the "material body dead so that their soul can live on in God's kingdom." Although these ideas appear to correspond to the RI category, this respondent also relates the belief that the material body is needed to communicate with the material world, opposing the concept of the body as a "mere illusion."

Another participant (2) who scored highest on the VT subscale (19.5), also scored high on the RI subscale (13.5). Responses to the open-ended questions revealed the belief that the body is a "temple" and exists in communication with the material world. This belief is counter to the RI tenet that the body is an illusion and is inconsistent with the high scores on these items.

Both of these participants, scored high (4 or greater) on item #1 ("The so-called material world is an illusion because everything including my body are thoughts of

God”). Agreement with this statement is inconsistent to responses on the open-ended questions.

Both of these students, and three others, highly rated RI item #8 (“In the end, self or soul is the very essence of being a human being since I am spirit only”). Two did not provide sufficient detail in the open questions to support this belief. The remaining three participants emphasized the importance of the soul, but also acknowledged the existence of the material body, failing to support the tenet of this PBS item.

As expected, the remaining RI items (see table 7) received low scores from all of the participants in this sample, effectively discriminating between RI and the dominant categories (PS1, PS2, & VT). These items are effective in capturing the extremes inherent within this category.

Table 7. Low Scoring Items Representing the Reductionistic Immaterialism Category

Item	Score
5). “I am spiritual only; I have no material body at this time.”	0-3
19). “The body cannot die because I have no material body.”	0-2
29). “All reality is spiritual only; there is no such thing as matter.”	0-2
32). “While one may say that the muscles ache, this statement is in error since we literally have no material body.”	0-2

To provide a more detailed account of student’s responses to the open-ended questions (see methodology), a brief description of some of the themes that emerged in the data are presented. The questions were broad and subjects had an opportunity to relate their conceptualizations of the mind-body relationship in their own words. All of the

participants acknowledged the existence of both the material and the immaterial, but described the relationships between them differently. Table 8 presents common themes that emerged from this qualitative component of this analysis.

Table 8. Common Themes Regarding the Mind-Body Relationship

Spirit	Body	Model of Relationship
internal driving force	material aspect of self	hierarchically arranged
most sacred aspect of self	revered as a sanctuary	interrelated or interconnected
immaterial aspect of self		balance for health and life

It is clear that the relationship between the mind, spirit, and body has a spiritual component. For this reason, it is important to consider the beliefs that students hold regarding spirituality. Some of the themes that emerged in the open-ended questions are presented in Table 9.

Table 9. Common Themes Regarding Spirituality

Spiritual Approaches	Spiritual Practices	Religious Practices
to cope with death	meditation	intellectual component
to aid in making major life decisions	self-actualization	differing from spiritual practices

Note. Participants also made reference to God, love, and nature across the open-ended questions.

The quantitative component of this analysis provided scores on each of the mind-body subscales obtained from the PBS. Students tended to subscribe to a dominant category, supporting the PBS in its ability to assess a mind-body category. The

qualitative component of this analysis provided an exploration of student's tendency to score high in more than one category. Common themes that emerged in response to the open-ended questions were also presented. The tenet of mutual exclusivity was not supported and implications of this finding are discussed.

CHAPTER 4

DISCUSSION

This study furthered the mind-body inquiry by investigating mind-body beliefs among a sample of graduate students in counseling psychology. Results from the Personal Beliefs Scale (PBS) found that 100% of the student's highest scores were found either in or within 1 category to the left or to the right of the psychosomaticism with immortality category.

All of the students reflected the necessity of both the material body and the immaterial mind and/or soul for life, health, and even human existence. The relationships between the mind, body, and soul were described as interrelated, interconnected, inseparable, and/or hierarchical.

Agreement between these descriptions found in the open-ended questions and dominant worldviews obtained from scores on the PBS provided support for the scale in assessing Centore's classification. However, due to the inconsistencies found between opposing, yet high scoring categories and these depictions of the relationship, support was not found for the mutually exclusive component of Centore's framework. These findings suggest that Centore's framework be reconsidered and/or the PBS revisited.

Three of the items representing reductionistic materialism and two of the items representing reductionistic immaterialism received unexpectedly high scores from some

of the participants in this sample. First, it is possible that these PBS items failed to discriminate between the dominant worldviews and opposing categories due to errors in responding. This is an important point to consider because subtle errors in responding to items may lead to large inconsistencies in overall scale response. In fact, four out of the eleven participants made 0-2 changes, five made 3-5 changes, and two made 6-10 changes.

Some of these changes were from one end of the rating scale to the other and may be related to rating scale confusion. It may be useful to reformat the question and answer sheet to include a clearer rating system. For example, two respondents wrote “A” for agree and “D” for disagree at the two ends of the numerical scale.

This analysis also found that participants had difficulties with the paired-choice format. Through direct feedback on the answer sheet, two students related that the format was difficult to follow. One student clearly chose between pairs on the answer sheet, even though many paired items were within one numerical rating. As this was the only respondent who literally followed the paired-choice format, this may also be indicative of scale confusion.

Analysis of the open-ended questions and dominant categories provided support for the efficacy of the PBS in assessing the relative strength of mind-body positions among college students. A strength of this study was that the subscales of the PBS aid in the assessment of the six different positions as proposed by F. F. Centore (1979).

However, this strength is also a limitation of this study as the PBS did not lend support for the exclusive nature of these categories as proposed by Centore (1979). To continue the search for support for the exclusivity component of Centore's Approach, it may be helpful to devise a dichotomously scored questionnaire. Because the PBS was created to measure the "relative" strength of each category, "degrees of truth" may be built in to the research design. Perhaps a forced-choice format rather than a paired-choice would better discriminate between categories.

However, it is also possible that further categorization of mind-body theories is counter to capturing the complexity of these beliefs. It is likely that they are multi-dimensional, in which case, total categorization does not add to mind-body theory. It may be more practical to focus on the integration and balance of different theories of mind rather than add to the polarization of theories and attitudes. In fact, one participant in this sample reflected, "You are perpetuating a false dichotomy."

Sperry (1991) proposes a framework that relinquishes basic philosophical dichotomies. His paradigm gives up the assumption of polar opposites and inherent incompatibility between the materialist and the immaterialist, highlighting the importance of integration at the societal level.

The data showed that life events may elicit the use of a spiritual/scientific approach in coping with personal issues. For these participants, some situations called for a spiritual approach whereas others were better left in the realm of science. In support of

Sperry's approach, most of these participants used both approaches to cope with a personal issue.

Another strength of this study was that several religions (6) and theoretical orientations (5) were represented, lending itself to a more representative sample. However, the small sample size was a major limitation of this study.

A larger sample would be helpful in including a more representative sample of religious and theoretical orientations, and a more varied array of ethnic/racial backgrounds. Because this sample was racially homogenous (10 were Caucasian and 1 was Latino), it was not a representative sample of American culture.

Related to restriction of this sample, participants were not random. Although the instruments were distributed to forty practicum students in advanced standing in the program, only eleven participated. It is possible that for these participants, mind-body beliefs were either more interesting or more salient than for those who did not participate.

Theorists have proposed that spirituality is an important component to health (Vaughan, 1991; Witmer & Sweeney, 1992), and that religious beliefs are interwoven with views regarding human nature (Sperry, 1991).

In this study, eight of the participants made reference to God or a higher power in the open-ended questions. To provide a richer understanding of mind-body beliefs, a detailed demographic analysis, correlating mind-body beliefs with religious/spiritual endorsement would be helpful.

Because life experience is fundamental to the acquisition, maintenance, and assimilation of beliefs, it would also be helpful to correlate dominant worldviews with individual developmental stages. Erikson's developmental template of psychosocial stages may provide an effective diagnostic tool to embark on such an endeavor.

Because self actualization and its derivatives were components of religious/spiritual practices, future research may examine more closely their roles in one's spiritual direction. It may be helpful to incorporate Maslow's hierarchy of needs into the study of mind-body beliefs.

A further recommendation is adding a more specific component to the open-ended questions. For example, further research is needed to discriminate between the neighboring categories, psychosomaticism with and without immortality. Because the questions did not specifically address the immortality of the soul, it is unclear whether three of the respondents in this study "rejected" the idea or failed to mention it.

Relatedly, the more specific open-ended questions should be administered within an interview setting, following the scoring of the PBS. Dialogue would permit immediate follow-up on seemingly "inconsistent" responses. The interview setting may also explore individuals' reasoning, or thought processes when responding to the PBS items. This may provide insight with regard to the tendency for students to give high ratings to items that represent opposing subscales.

Embree & Embree (1996) theorized that students engage in unconventional thought processes to explain inconsistency in response patterns. However, the students in

their sample, as well as the participants in this study, demonstrated this “unconventional” thinking to a surprisingly large degree. Future research should consider the philosophical position that “conventional” is defined by the majority.

Given that mind-body beliefs are at the core of an individual's assumptions regarding human nature (Speight et al. , 1991), and that beliefs are instrumental in an individual's life choices (Sperry, 1991), counseling students' mind-body beliefs should be correlated with theoretical orientation. Also, since scientists and laypeople tend to hold differing beliefs (Churchland, 1984), it is important to understand how different philosophical stances between the therapist and the client may affect counseling. Future investigation may focus on mind-body beliefs as a multi-cultural issue that explores the counseling relationship.

In conclusion, it is becoming increasingly more important to consider the existence of beliefs that have been considered non-scientific. During, this time of new-age developments, beliefs held in the public majority regarding the mind-body relationship deserve a seat on the forum of experts discussing the ethics of the latest scientific break-throughs.

APPENDIX 1
PERMISSION LETTERS

APPENDIX 1
PERMISSION LETTERS

Ms. Sharon Black
5621 South Blackstone
Chicago, IL 60637

Dear Ms. Black:

Under the following conditions, we are pleased to grant permission to reproduce Table 1 on pages 414 and 415 of the following article for use in your research at Loyola University in Chicago. The citation **must** appear directly above each copy of the reproduced material and **must** read:

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Embree, R. A., & Embree, M. C. The Personal Beliefs Scale as a measure of individual differences in commitment to the mind-body beliefs proposed by F. F. Centore. *Psychological Reports*, 1993, 73, 411-428. © Psychological Reports 1993

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Sincerely,



S. A. Isbell
Assistant Editor

SAI/srh
Enclosure

Personal Beliefs Scale

I am pleased that you have interest in using the Personal Beliefs Scale in your research. The scale (Embree & Embree, 1993) has logical validity and satisfactory split-half reliability (Embree & Embree, 1993) based samples from undergraduate college students. I am looking forward to receiving a copy of your research results and its contribution to exploring scale validity.

You have permission to use the scale in your research project. You should also obtain permission to use the scale for your research purposes from *Psychological Reports*. Write:

Carol H. Ammons, Ph. D.
Editor
Psychological Reports
Box 9229
Missoula, Montana 59807

Sharon Black is given permission to use the Personal Beliefs Scale for research purposes.

Date November 12 1996 Signed Robert M. Embree

The following is included with the mailing:

- (1) copy of the Personal Belief Scale an answer sheet
- (2) copy of the Personal Belief Scale
- (3) a hand scoring sheet
- (4) a computer scoring program

The computer scoring program assumes the data has been stored using a word processor with the file saved in text form (no formatting) as follows in the order that the ratings appear on the answer sheet (Items 1 to 60):

123230465456345623456456345645654564321234543456633233332324
(Repeat the format for each respondent. One respondent to a row.)

APPENDIX 2
INFORMED CONSENT

APPENDIX 2

INFORMED CONSENT

I am requesting your participation in a research study. The purpose of this study is to explore the ways in which graduate students view the relationship between mind and body. Participation in this research involves completing a questionnaire and completing five open-ended questions. Information obtained from you will be number coded and kept completely confidential. No names will be used at any time.

This study is qualitative and no psychological risk is expected in exploring the ways in which we view human nature. I do not propose a correct or incorrect mind-body belief as variety adds to the intellectual breadth of our society. The benefits of this study include an opportunity for self-exploration and the opportunity to contribute to research.

Your participation is completely voluntary and you will be free to revoke your participation at any time without penalty.

If you have any questions or concerns about your participation, please feel free to contact Sharon Black or Dr. Quinnan at (847) 853-3211

I, _____, acknowledge that I am aware that I may withdraw from participation at any time without prejudice and I am free to ask questions regarding procedures to be followed.

Although no psychological risk is expected, in the event of any distress resulting from this research, counseling will be provided upon request at no cost in accordance with the policy of Loyola University.

I freely and voluntarily consent to participation in this research project.

(Signature of Participant)

(Date)

(Signature of Researcher) SHARON BLACK

(Date)

If you would like to receive a copy of the findings of this study, please print your address below:

APPENDIX 3
PERSONAL BELIEFS SCALE

APPENDIX 3

PERSONAL BELIEFS SCALE

Reproduced with permission of authors and publisher from:

Embree, R.A., & Embree, M.C. The Personal Beliefs Scale as a measure of individual differences in commitment to the mind-body beliefs proposed by F.F. Centore. *Psychological Reports*, 1993, 73, 411-428. (c) Psychological Reports 1993.

PLEASE READ THE INSTRUCTIONS BEFORE BEGINNING

Who are you? What is your nature relative to other living things in the world? Notice that beliefs about the answer to this question come in pairs. In some instances neither statement will reflect your personal beliefs. In other cases, you may agree with one statement but not the other. IF YOU THINK THAT YOU AGREE WITH BOTH STATEMENTS, reread the two statements and compare the beliefs more carefully. At all times, however, indicate your TRUE FEELINGS. Rate each statement in the following manner:

- 6 - I AGREE VERY STRONGLY with this belief
- 5 - I STRONGLY AGREE with this belief
- 4 - I AGREE MORE THAN DISAGREE with this belief
- 3 - UNDECIDED; I don't know if I agree or not
- 2 - I DISAGREE MORE THAN I AGREE with this belief
- 1 - I STRONGLY DISAGREE with this belief
- 0 - I VERY STRONGLY DISAGREE with this belief

CIRCLE the ONE number that BEST represents your PERSONAL OPINION for EACH belief in the pairs. Record your ratings on the answer sheet.

Reductionistic Materialism

1. My body is all there is to me. There is no self or soul to direct my actions. (6, 20)
2. My human nature is more responding or reacting to the environment than it is planning, thinking, and anticipating. (15, 17)
3. Freedom of choice is an illusion because in the end all my actions are caused by some condition within my environment. (21, 44)
4. I no more choose my actions than the moon chooses to travel in a path around the earth. (39, 59)

5. My essential nature is behavior with my actions being caused by forces within the environment or from within my body. (13)
6. The notion of a self making choices has no place in modern scientific thinking. (50)

Nonreductionistic Materialism

7. It is reasonable to attribute free will to my actions even though literally I have no self or soul. (12, 14)
8. I am matter only, yet it is scientifically meaningful to say that the self reasons and make choices. (25, 36)
9. Like other animals I literally have no soul, yet evolution has given me a very special brain that can create and invent. (28, 45)
10. The sense of self is as much a by-product of evolution as is the color of my hair. (31, 43)
11. The human mind affects my actions, yet it is not some unique principle or reality distinct from the body. (56)
12. Self as a psychological mechanism influences my actions, yet I have no immaterial soul. (57)

First-order Psychosomaticism

13. I am a natural unity of body and soul, yet I know that I cannot look forward to life after death. (3, 49)
14. My life would not be possible without my immaterial soul, yet this soul will die with my body. (34, 40)
15. Human life is a joint result of both soul and body even though the soul cannot survive without the body. (38, 46)
16. I believe that I have an immaterial soul that will perish when my body dies. (48, 54)
17. My soul or mind is just as real as my body, but personal immortality is only a fantasy. (11)
18. An immaterial soul is absolutely essential to a living human organism, yet this soul cannot exist without a body. (51)

Second-order Psychosomaticism

19. This material body is the only body that I have ever had, yet my immaterial soul will continue to exist after my body perishes. (2, 47)
20. Human life is a natural unity of a material body and the immaterial soul which are created by God at the time of conception. (7, 33)
21. My eternal soul is what caused my body to be organized in the way that it is, yet I am a natural unity of mind and body. (9, 35)
22. My soul has a natural union with my body; therefore, I do not expect my soul to be united with some other life form when I die. (16, 22)
23. There is a natural unity of soul and body; therefore, it is reasonable to expect a resurrection of the body at some time in the future. (24)
24. While my soul can exist apart from the body, I am confident that my spirit will not leave my body until I die. (27)

Vitalism

25. One should treat all living things with reverence because the soul of that life form may have been one of my ancestors. (4, 42)
26. By accident, my eternal immaterial soul has taken up temporary residence in my present body. (23, 58)
27. The body is often a burden or enemy of the immaterial soul. (30, 52)
28. Death of the material body can be a blessing because it frees the immaterial soul for another body and continued living in this world. (55, 60)
29. It is very likely that my immaterial soul will be united with some other life form after I die. (10)
30. I really believe that I have had many lives before this present one. (18)

Reductionistic Immaterialism

31. The so-called material world is an illusion because everything including my body are thoughts of God. (1, 26)

32. I am spiritual only; I have no material body at this time. (5, 41)
33. All reality is spiritual only; there is no such thing as matter. (29, 37)
34. While one may say that the muscles ache, this statement is in error because we literally have no material body. (32, 53)
35. In the end, self or soul is the very essence of my being a human being since I am a spirit only. (8)
36. The body cannot die because I have no material body. (19)

Note. The numbers in parentheses indicate the actual position of the items in the scale. Some items were repeated for reasons explained in the methods section.

APPENDIX 4
INDIVIDUAL SCORES
FOR EACH CATEGORY

APPENDIX 4

Table 10. Individual Scores for each Category

Category	Students										
	1	2	3	4	5	6	7	8	9	10	11
Reductionistic Materialism	3	5	5	7	0	6.5	8.5	13	15.5	4.5	14
Nonreductionistic Materialism	16	4.5	8.5	10.5	3	9	10	11	13	12.5	5.5
Psychosomaticism Without Immortality	17	0	13	10	14	13	18	16	12.5	29	7.5
Psychosomaticism With Immortality	23.5	11.5	22.5	21	17.5	22	25	21	23	16	22
Vitalism	5.5	19.5	18	15	17.5	17	13.5	24.5	13	4	4.5
Reductionistic Immaterialism	7.5	13.5	6	9	9.5	6	12	12	10.5	5.5	8

Note. High scores are in bold print.

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VITA

The author, Sharon Kim Black, was born in Chicago, Illinois. In 1992, Ms. Black received her Associate of Arts degree in Liberal Arts from Broward Community College, located in Davie, Florida. Ms. Black graduated from the Honor's Institute with a grade point average of 4.0. During this time, Ms. Black was a member and officer of Phi Theta Kappa for two terms. As historian, her duties were to promote fellowship among members, both existing and new. Honors received at Broward Community College include: President's list for every full-time semester completed, National Dean's List for two years, and Who's Who Among American Junior Colleges.

In 1992, Ms. Black received a full academic scholarship from Florida Atlantic University, receiving a Bachelor of Arts degree in psychology in 1994 with a grade point average of 3.99. During this time, Ms. Black was a student affiliate of the American Psychological Association and a member of the psychology club on campus. In fact, Ms. Black created the name for the psychology newsletter, *Mind Over Matter*.

At Florida Atlantic University, Ms. Black received three semesters of research experience under the direction of Brett Larson, Ph. D., in the area of adolescent development. Duties included coding response sheets from several different measures and coordinating with and providing feedback for other team members in order to increase effectiveness. In 1995, Ms. Black entered the master's program for counseling

psychology at Loyola University Chicago. Her thesis was titled: *An Exploration of Mind-Body Categories Using the Personal Beliefs Scale*, under the direction of Edward Quinnan, Ph. D., S. J. & Marilyn Susman, Ph. D. As of Spring, 1997, all coursework was completed, with a grade point average of 4.0

At Loyola University Chicago, Ms. Black served on a research team under the direction of Marilyn Susman, Ph. D. & Martha Ellen Wynne, Ph. D. for three semesters. The research involved an exploration of the inner processes of the therapist during the counseling session. Contribution to the research was in the development of a coding manual for educational purposes. Duties included coding the inner processes of therapists according to the manual, providing feedback for revisions for the coding manual, and coding the datum for three theses/dissertations.

In June of 1996, as a member of this research team, Ms. Black contributed to a poster presentation at the 27th Annual Conference for the Society for Psychotherapy Research located at Amelia Island, Florida. The presentation was titled: *Assessing the Inner Experiences of Experienced Therapists*.

From February of 1996 to current, Ms. Black has been employed by Iyamah Behavioral Healthcare, Ltd as a consultant for Lake Shore Healthcare and Rehabilitation Center located at 7200 N. Sheridan Road in Chicago. Her title is geriatric therapist and duties include group and individual therapy for a total of 25-30 clients per week, coordination of services with the psychosocial staff, and crisis intervention. Clients are geriatric residents in the facility as well as younger residents who received placement in

the facility due to head trauma, debilitating diseases, or illnesses. Ms. Black has received weekly, on-site supervision from Mary Pat Eitzen, Psy. D.

In the Fall of 1996 and the Spring of 1997, Ms. Black completed her practicum requirements at Iyamah Behavioral Healthcare, Ltd., located at 542 N. Western in Chicago. In a different capacity, clients were adults and children who were involved with The Department of Child and Family Services due to child or substance abuse related difficulties. Duties included individual therapy for seven to ten clients per week, communicating and coordinating treatment plans with caseworkers, and writing reports for the referral source and for court. Ms. Black received 1.5 hours of dyadic supervision and 1.5 hours of group supervision biweekly from Marilyn Susman, Ph. D. at Loyola University. Ms. Black received an additional 1-2 hours of individual supervision, on-site, from Michelle Iyamah, Psy. D.

Ms. Black is currently interested in the interaction between the mind and the body as it relates to psychological health, how the transferential relationship guides therapy, the power of the therapeutic relationship, translating psychological language among theoretical orientations, and how ethics in psychology may enhance our professional future at the societal level.

APPROVAL SHEET

The thesis submitted by Sharon Kim Black has been read and approved by the following committee:

Dr. Edward Quinnan, Director
Professor
Loyola University Chicago

Dr. Marilyn Susman, Reader
Professor
Loyola University Chicago

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

4 September 1997
Date

E. J. Quinnan, S.J.
Director's Signature