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THE EPISTEMIC QUALITIES OF QUANTUM TRANSFORMATION

by

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GRADUATE COMMITTEE APPROVAL

of a thesis submitted by

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This thesis has been read by each member of the following graduate committee and by majority vote has been found to be satisfactory.

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ABSTRACT

THE EPISTEMIC QUALITIES OF QUANTUM TRANSFORMATION

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Master of Science

Growth and development are central constituents of the human experience. Although the American Psychological Association aims to understand change and behavior in ways that embrace all aspects of experience (APA, 2008), sudden, life-altering or *quantum* transformation has been disregarded throughout the history of psychology until recently (see Miller & C' de Baca, 1994, 2001). Quantum transformation is similar to self-surrender conversion (James, 1902), but different from peak experiences (Maslow, 1964) and near death experiences (Lorimer, 1990) because quantum transformation, by definition, involves lasting change. Quantum transformation contains epistemic qualities, which refer to the content and process of knowing (Miller & C' de Baca, 2001), but little is known about these qualities.

The current study employed a qualitative method to better understand the epistemic qualities of quantum transformation. Fourteen participants were extensively interviewed about their experience. Analysis involved hermeneutic methods (Kvale,

1996) and phenomenological description (Giorgi & Giorgi, 2003).

Quantum transformation is essentially a process of knowing that unfolded in the form of disintegration, insight, and integration in the present study. First, disintegration is presented by themes of Overwhelming stress, Relational struggle, Hopelessness, Holding-on, Control, Psychological turmoil, Self-discrepancy, and Guilt. Second, insight is presented by the Content and Tacit knowing of the experience. Third, integration is presented by Changes in values, Other-orientation, and A process of development.

The results suggest that the disintegration and the suffering that characterizes the pre-transformation milieu inform how quantum transformation relates to lasting change. Therapists that automatically aim to alleviate moral-emotional sorrow or guilt should consider whether the emotional experience can bring about positive transformation. Quantum transformation resembles near death experience and likewise has potentially major implications for our understanding of personality change and moral development.

ACKNOWLEDGEMENTS

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Introduction

Growth and development are central constituents of the human experience. Almost all divisions of the American Psychological Association (APA) aim to better understand the processes of change that characterize the human experience. In particular, the APA Divisions of developmental, personality and social, clinical, counseling, psychotherapy, humanistic, psychology of religion, psychoanalysis, group psychology, and addictions are especially connected with better understanding the processes of change. Psychology books and journals are replete with descriptions of ordinary change.

It seems that change is like the wind, in which there can be stillness or breezes, but every so often there comes a powerful gust. Although the APA seeks to better understand behavior and change in ways that "embrace all aspects of the human experience" (APA, 2008), these great bursts of change have been disregarded in psychology. Miller and C' de Baca (2001) observed how behavioral science lacked a term to describe sudden, broad transformation (p. 6). Miller used the term *quantum* to describe transformations occurring within "a relatively short period of time" and involving "a deep shift in core values, feelings, attitudes or actions" (Conaway, 1991, p. C1).

This study sought to better understand the epistemic qualities of quantum transformation. By epistemic qualities, I refer to both the process and the content of knowing that are associated with the experience. In other words, this study aimed to describe how and what individuals come to know and understand in quantum transformation. Individuals that experienced quantum transformation almost universally described a new, meaningful reality or that an important truth was revealed to them

(Miller & C' de Baca, 1994, 2001), and this study aimed to better understand this process. Before more specifically discussing the present study, however, I will define what is meant by transformation and I will discuss the study of transformation in the history of psychology.

Transformation

Transformation implies "new form." The Latin term *trānsfŏrmāre* etymologically derives from *trāns* and *fŏrma* and denotes "across or beyond form" (Transformation, n.d.). In the natural sciences, *transformation* implies an abrupt change that significantly alters the general character of an organism (Transformation, n.d.). For example, the transformation of a once larval caterpillar emerges from the chrysalis cocoon as a butterfly. Similarly, transformation is discrete, deep, and involves positive change for the human person.

Transformation may be similar to *conversion*, but transformation is here conceptualized as broader in scope than conversion. For example, religious conversion is often used to describe a change of religious tradition or affiliation. According to Muldoon (1997), *conversion* is "the rejection of one religious tradition in favor of another" (p. 1). This type of conversion may not be authentic. By authentic, I refer to a change of heart, where heart refers to the vital center and source of being for the individual.

Rambo (1993) provides a descriptive typology for conversion. In his structure, *tradition transition* is similar to Muldoon's definition of conversion and involves movement from one religious tradition to another (e.g., from Islam to Christianity). *Institutional transition* involves a change of group or community within a major tradition

(e.g., from Catholic to Baptist). *Affiliation* is movement from no or minimal religious commitment to full involvement with a community of faith (e.g., new religious movements). *Intensification* is a revitalized commitment to a faith in which the individual has had previous formal or informal affiliation. All of Rambo's (1993) conversion types explicitly involve a religious group with a shared tradition or affiliation.

Although authentic or intensification conversions may exist as a type of quantum transformation, Miller and C' de Baca (2001) explain how quantum transformations "*frequently are not* described in religious terms (by the participants)" and "*do not usually* lead to committed involvement in organized religion" (p. 7, emphasis added). In harmony with findings by Miller and C' de Baca (1994, 2001) and for the purposes of this study, quantum transformation is here conceptualized as "a much larger phenomenon than religious conversion" (Miller & C' de Baca, 2001, p. 7).

Historical Literature Review

As will be shown, around the turn of the 20th century there were numerous studies of transformation (Ullman, 1989, p. 4), but psychoanalysis and behaviorism were antagonistic to the subject matter. Eventually, humanistic psychology moved the field closer to meaningful consideration of the topic, and set the stage for more recent contributions.

Transformation: William James

Around the turn of the 20th century, religious revivals were common in North American evangelical Protestant culture (Gaustad, 1966). At the time, psychology was a young discipline, still forming an identity independent of philosophy and other disciplines like theology (Wulff, 1997, p. 23-24). As a budding field, psychology was

free to study religious conversion (Spilka, 2003). North American psychologists Leuba (1896), Starbuck (in 1897), and James (1902) provided early contributions to the study of conversion. *Conversion* was generally used to denote an intrinsic intensification conversion (see Rambo, 1993) involving the aims and purposes of the religion itself (see Allport, 1950). For example, Ullman (1989) writes how most of the early studies of conversion investigated an "abrupt religious experience involving an increased commitment within the framework of the person's own religious group" (p. 5).

William James (1902/1958) relied heavily on first-person narratives to understand conversion (thus defined). James (1902/1958) differentiated whether the individual was actively or passively involved in the experience of conversion (as volitional and self-surrender types respectively). The volitional type was a gradual building, piece by piece, of habits (James 1902/1958, p. 169; Leuba, 1896). The self-surrender type, on the other hand, was a less controlled letting go of individual will that often led to dramatic personal change (James 1902/1958, p. 170; Leuba, 1896). James acknowledged how each type contains elements of the other (James 1902/1958). Although he did not emphasize either as preferable, he was particularly interested in understanding how value changes can occur in rapid, sweeping fashion (James 1902/1958, p. 170).

For James (1902), conversion was a kind of transformation, but the later was something potentially more profound. James (1902) hints how we tend to wonder at transformation:

> Our ordinary alterations of character as we pass from one of our aims to another, are not commonly called transformations, because each of them is so rapidly succeeded by another in the reverse direction; but whenever one aim grows so

stable as to expel definitively its previous rivals from the individual's life, we tend to speak of the phenomenon, and perhaps wonder at it, as a "transformation" (p. 98).

Thus, for James (1902), transformation was a change of values and character that involved the centralizing of an understanding (epistemic quality). James (1902/1958) further explains how transformation involves peripheral ideas that are suddenly centralized "in consciousness, [and] now take a central place,… to form the habitual centre of energy" (p. 162). The contributions of William James were salient, but further study of transformation in psychology soon halted due to the rise of psychoanalysis and behaviorism.

Antagonistic Forces

Psychoanalysis. Although Freudian psychoanalysis intends to provoke instantaneous changes in the psyche or mind of the patient, Freudian psychoanalysis has been largely antagonistic to transformation (as defined by James). During Freud's era, transformation was associated with conversion. Freud conceived of religion as a defense mechanism and ascribed the Western belief in God as a heavenly father to an unconscious longing for a father figure (Ullman, 1989). The effect of Freudian psychoanalysis on contemporary psychology can be observed in Ullman's (1989) study of conversion. She argues that conversion is the result of childhood and adolescent turmoil and discusses Freudian themes of infatuation with a powerful authority figure. Interestingly, Ullman (1989) defined *conversion* as mere change in religious affiliation, and the study had few authentic transformations marked by greater integration and development.

Behaviorism. With greater consequence for psychology, the rise of behaviorism in the early part of the 20th century was a detriment to the psychological study of transformation. Although psychology originated as the study of the psyche or mind, with the rise of behaviorism, psychology sought to become "a purely objective experimental branch of natural science" (Watson, 1913, p. 158). Watson (1913) focused psychology on observable behavior:

> What we need to do is start work upon psychology, making *behavior*, not *consciousness*, the objective point of our attack. Certainly there are enough problems in the control of behavior to keep us all working many lifetimes without ever allowing us time to think of consciousness. (p. 177)

Watson (1913) was clearly focused on the prediction and control of behavior. This focus assumed that the human person was entirely dictated by the environment (Wulff, 2001). Consider, for example, Watson's (1930) famous statement:

> Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select – doctor, lawyer, artist, merchant-chief and, yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors. (p. 82)

James (1902) previously defined the experience of transformation as a change in values that involved the centralizing of an understanding "in *consciousness*" (p. 162, emphasis added). Again, behaviorism did not attend to consciousness. Further, transformation was apparently unpredictable. For example, Miller and C' de Baca used the term "quantum" to describe transformation, drawing from the seemingly

unpredictable nature of quantum mechanics (Miller & C' de Baca, 2001). As transformation involves consciousness and an unpredictable nature, it should be no wonder that psychology was bereft of study about transformation during this period of its history.

Peak Experience: Abraham Maslow

Behaviorism failed to recognize the rational, volitional, and intentional aspects of human behavior (Robinson, 1995, p. 348), and humanistic psychology evolved as a reaction to this oversight. Humanistic psychology, as the name suggests, was a revitalized focus on what it means to be human. For example, Abraham Maslow (1964, 1971) began by asking what it meant to be *fully* human. He knew that meaningful experiences were necessary in the processes of growth and development towards becoming our best selves via self-actualization (1964). So he asked individuals to describe moments when they felt fully alive and carefully observed the qualities of their "peak-experiences" (Maslow, 1964, p. xi).

Peak experiences, for Maslow, often involved coming to know something (i.e., epistemic qualities). For example, peak experiences may be characterized by the perception of the world as beautiful with good and evil as necessary (Maslow, 1964, pp. 59-68). In peak experiences the self may move towards perception of unity and integration in the world with more love and acceptance towards others (Maslow, 1964, pp. 59-68).

Maslow sought to demystify mystical experience as a naturally occurring phenomenon worthy of scientific study. For example, Maslow describes how "science and religion have been too narrowly conceived, and have been too exclusively

dichotomized and separated from each other, that they have been seen to be two mutually exclusive worlds" (1964, p. 11). He further writes:

> It has been discovered that this same kind of subjective experiential response (which has been thought to be triggered only in religious or mystical contexts, and which has, therefore, been considered to be only religious or mystical) is also triggered by many other stimuli or situations" (Maslow, 1964, p. xi).

Maslow assumed that by demystifying mystical experience as a naturally occurring phenomenon, mystical experience could now be investigated by science and explained by natural law.

According to Maslow, peak-experiences can be transforming, but they do not always result in lasting change. He (1968) was considering this issue when he wrote, "On the whole, these good aftereffects are easy enough to understand. What is more difficult to explain is the absence of discernible aftereffect in some people" (p. 102). Overall, Maslow does not appear to answer this question.

This lack of lasting effect may relate to how peak-experiences span a broad, naturally-occurring range of experience (Maslow, 1964). For example, peak-experiences can occur "in principle throughout the whole of life" and may involve sexual love, philosophical insight, and athletic success (Maslow, 1964, p. xii). Studies of peak experience have simply involved subjects reporting moments of intense happiness. Obviously, individuals are often happy when life is going well, and peak experiences may serve to confirm the individual's current way of being. Overall, Maslow's work opened doors to meaningful consideration of the topic and set the stage for recent contributions.

Quantum Change: Miller and C' de Baca

William R. Miller, a clinical psychologist specializing in the treatment of

addictive behaviors (Miller & Heather, 1998), observed sudden instances of

transformation in Alcoholics Anonymous (AA) (Miller, 2004). Miller considered reports

like the experience of AA co-founder, William "Bill" Wilson:

> Suddenly the room lit up with a great white light. I was caught up into an ecstasy
>
> which there are no words to describe. It seemed to me, in the mind's eye, that I
>
> was on a mountain and that a wind not of air but of spirit was blowing. And then
>
> it burst upon me that I was a free man. (Kurtz, 1979, pp. 19–20)

Since Wilson wrote *The Big Book* in 1937, his transformation has served as an emblem

for the AA program. As a result, AA has aimed at facilitating transformative experience

as a means for assisting alcoholics to overcome the debilitating effects of addiction

(Wilson, 1962).

Miller was further inspired by stories in our popular culture like *A Christmas*

Carol by Charles Dickens and the film *It's a Wonderful Life*. A local newspaper featured

an article about Miller's interest and displayed images of Ebenezer Scrooge and George

Bailey (Conaway, 1991). A surprising number of individuals contacted the researchers to

share their stories of transformation, and fifty-five participants were included in the study

(Miller & C' de Baca, 1994, 2001).

A series of specific questions were developed and asked of all participants. This

structured interview became known as the Quantum Experiences Retrospective Interview

(QUERI; Miller & C' de Baca, 1994). The researchers administered a value card-sort

task to identify the ten highest and ten lowest priorities with rank ordering within each of

these sets of ten (Miller & C' de Baca, 1994, p. 258). Participants ordered their values both before their transformation and currently. Semantic differential items were used to obtain self-description before and after the experience, and the Life Experiences Survey (Sarason, Johnson, & Siegel, 1978) yielded information about positive and negative life events the year before quantum experience (Miller & C' de Baca, 1994). Current and past religious behaviors were investigated with the Religious Background and Beliefs Scale (Tonigan & Miller, 1990). Finally, the Myers-Briggs Type Indicator (Myers & McCaulley, 1985), a locus of control scale, and an absorption scale (to assess the tendency to become involved in external experiences) were all included to explore various dimensions of personality (for references see Miller & C' de Baca, 1994).

The results of the study were published in *Can personality change?* and *Quantum change: When epiphanies and sudden insights transform ordinary lives* (Miller & C' de Baca, 1994, 2001). The participants provided narratives that were characterized by vividness, surprise, benevolence, and permanence. The researchers observed the distribution of reported experiences as bimodal and described two categories of quantum experience. Some experiences fit both categories, but most were what they described as either insightful or mystical types of quantum transformation.

The insightful type of transformation was characterized by a sudden realization that related to life challenges, identity, and/or reality. It came as an "a-ha" to the individual with a convincing force that was sometimes surprising (Miller & C' de Baca, 2001, p. 18). The individual was often immediately certain of its truth.

Miller and C' de Baca (2001) described the mystical type of transformation as more difficult to explain and understand. Individuals were often unable to explain and

understand the experience themselves. Mystic transformation was similar to the insightful type as described above, but distinctively involved experiencing the presence of an outside source. One subject of Miller and C' de Baca's (2001) study reported:

> The exciting part of this was that there was no way in the world I was even prepared for this, that it was an answer to a question that I've been struggling with for a long time in my life, and when I wasn't seeking the answer or seeking a sign or seeking the Presence, the Presence came through. (p. 97)

Miller and C' de Baca (2001) wrote how participants sometimes "experience their mind and body responding to a will outside their own" (p. 80). Similarly, James (1902) described how mystic experience often has a quality in which the will of the individual is "in abeyance, and indeed sometimes as if grasped and held by a superior power" (p. 293).

Miller and C' de Baca (2001) illustrated how mystic quantum transformation displays many of the qualities of mystic experience. To James (1902/1958), mystical experiences were most notably characterized by their ineffability and noetic (epistemic) qualities, but also by transiency and passivity. Ineffability describes how the experience defies description, and for the individual, "no adequate report of its content can be given in words" (James, 1902/1958, p. 293). James (1902/1958) writes how mystic experience involves epistemic qualities:

> [They are] states of insight into depths of truth unplumbed by the discursive intellect. They are illuminations, revelations, full of significance and importance, all inarticulate though they remain; and as a rule they carry with them a curious sense of authority for after-time. (p. 293)

Transiency describes how the experiences are not usually sustained for long, and passivity relates to Miller and C' de Baca's observations about subjects responding to a will outside of their own.

Mystic experience does not always relate to lasting change. Miller and C' de Baca (2001) suggest that, "Perhaps the proper question is not why some mystical experiences induce permanent changes in people, but rather how so profound an experience could *fail* to produce a lasting effect" (p. 73). It is possible that some mystical experiences, like peak experiences, involve a confirmation about the individual's current way of being in the world. In this way, a mystical experience might be significant for the individual but not life-altering. Perhaps human agency[1] can further explain why some individuals engage in transformative processes. For example, individuals may *choose* to adopt a new aim and definitively expel previous rival aims (James, 1902).

Individuals that experienced quantum transformation often adopted new aims. For example, the vast majority of quantum transformation participants reported that an important truth was revealed to them (Miller & C' de Baca, 1994). For example, quantum transformation was associated with the perception of material reality as a small part of all that is (Miller & C' de Baca, 2001). Participants reported moving away from a self-centered world view, and personal possessions were reported to be less important to them. Additionally, many participants reported an experience with the divine, feeling profoundly connected to others, and living with greater acceptance and forgiveness.

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[1] This study maintains a conception of the human person as a moral agent (Williams, 2005), and this ontological assumption is later discussed.

This adopting of a new, central aim related to dramatic shifts in values. Miller and C' de Baca (1994) asked individuals to retrospectively rank their values before and after their quantum transformation. Men reported prioritizing wealth, adventure, achievement, pleasure, and being respected before quantum transformation, and endorsed spirituality, personal peace, family, God's will, and honesty after (as the top-five respectively). As part of this, men showed a radically different prioritization of wealth. Wealth was placed as the number one priority before quantum transformation and number fifty (last) after. Women valued family, independence, career, fitting in, and attractiveness before quantum transformation, and growth, self-esteem, personal peace, spirituality, and generosity after. A second ten-year follow-up study of the original participants (C' de Baca & Wilbourne, 2004) found that this new value ordering was maintained with little variability.

Other Contributions

Other than the research by Miller and C' de Baca (2004), there has been little work done on transformation in recent years. One exception is William White's (2004) analysis of the life-changing experiences of seven individuals whose recoveries from addiction spawned advocacy or revitalization movements (i.e., Handsome Lake, John Gough, Francis Murphy, Jerry McAuley, Bill Wilson, Marty Mann, and Malcom X). White (2004) suggested that the transformational changes of these individuals were notably marked by unanticipated suddenness, vividness, comprehensiveness as a "revolution in character," positiveness, and enduring effects (pp. 464-466). He also provided some basic guidelines about transformational change for psychotherapists. As a second exception, psychotherapist Diana Fosha (2006) built on research by James (1902)

and Miller (2001) and aimed to facilitate quantum transformation in therapy by way of

Accelerated Experiential-Dynamic Psychotherapy (AEDP; see Fosha, 2006 for more

information). Fosha (2006) writes how "psychotherapeutic changes can be, but *need not*

only be, gradual and cumulative; [psychotherapeutic changes] can also be discontinuous,

sudden, and rapid" (p. 569).

<div align="center">*The Present Study*</div>

As has been shown, until recently, quantum transformation has been largely

disregarded in the history of psychology by researchers. The phenomenon has often been

dismissed as an anomaly. "Yet it is precisely through the exceptions to established

expectations that a science itself sometimes undergoes important transformations" (Miller

& C' de Baca, 1994, p. 276). The study of anomalous experiences may even afford some

transformation of psychology.

This study was specifically orchestrated to better understand the content and

process of knowing in quantum transformation. In other words, what do individuals

come to know and how do they come to know it? James (1902) provides some salient

treatment of these questions in *The Varieties of Religious Experience*, but he particularly

focused on conversion. Miller and C' de Baca (1994) focused on whether quantum

transformation was a real phenomenon and the possibility of sudden personality change.

In the last chapter of their book, Miller and C' de Baca (2001) muse over the "knowing of

truth" that accompanies the experience. Now that quantum transformation has received

some visibility in the field of psychology (see Fosha, 2006; Miller & C' de Baca, 1994,

2001), the content and process of knowing in quantum transformation requires further

consideration. A better understanding of the epistemic qualities of quantum

transformation (i.e., the content and the process of knowing) may provide some insight as to why quantum transformation, as opposed to other experiences (e.g., mystical or peak experiences), relates to lasting change.

A Qualitative Method

The present study employed a qualitative method, which was particularly well-suited for exploring the phenomenon of quantum transformation. The questions of this study were focused on the meanings of peoples' experience, and qualitative methods are generally designed to "make sense of, or interpret, phenomena in terms of the meanings people bring to them" (Denzin & Lincoln, 2005, p. 3) and "unfold the meaning of people's experiences" (Kvale, 1996, p. 1). Specifically, in the present study, qualitative methods were useful in understanding the meaning of what participants came to know in transformation. In addition, qualitative methods served to generate themes that characterize the process of knowing.

Are Qualitative Methods Scientific?

Recent discoveries and technological advances have been accredited to science. As a result, most individuals esteem science as the best means for understanding and explaining the world. But what *is* science? The definition of *science* is complex and multifaceted. Kvale (1994) reminds us that, "Neither textbooks on social science methodology nor dictionaries of the English language provide any unequivocal and generally accepted definition of science" (p. 150). For example, the American Heritage Dictionary (2009) defines *science* as the "observation, identification, description, experimental investigation, and theoretical explanation of phenomena," a

"methodological activity," an "activity that appears to require study and method," and knowledge gained through experience.

Most individuals think of science as a solitary activity. For example, most people do not think of the scientific method as *a* scientific method, but *the* scientific method (Slife & Gantt, 1999). However, these individuals may be unaware that the scientific method derives from philosophical assumptions about the universe (e.g., ontological, epistemological, etc.). For example, the scientific method generally posits naturalism (in terms of ontology) and empiricism (in terms of epistemology).

Naturalism holds that the universe is governed by natural laws. These natural laws are central in understanding and explaining the world. We assume that these laws exist, even though we cannot know them all (e.g., Newton's law of universal gravitation) (Slife, 2002). Empiricism holds that the only reliable way to know about the universe is by way of seeing or otherwise experiencing with the physical senses (e.g., experimentation).

Some individuals are aware that science involves philosophical assumptions but wrongly conclude that naturalism and empiricism have been proven as true. However, nothing can prove philosophical assumptions. For example, individuals may see the *manifestation* of a natural law, but only when they assume that natural laws actually exist. Individuals can never empirically observe the natural law itself (e.g., individuals see objects falling to the earth but can never actually see "Newton's law of universal gravitation"). Further, one cannot see or otherwise experience empiricism itself with the physical senses. In other words, there is no empirical evidence for empiricism (Slife &

Williams, 1997). Overall, science involves philosophical assumptions, which are by nature *uncertain*.

Naturalistic assumptions place the human person at the mercy of natural laws that dictate thought and behavior (Slife & Gantt, 1999). For example, a rock rolling down a hill cannot have any purpose or meaning in its behavior, because the rock's behavior is dictated by the natural laws of gravity and friction (Slife & Gantt, 1999). Individuals may ascribe meaning to the rock's movement but cannot reasonably suggest that the rock had any meaning (of its own) in its behavior.

In contrast, qualitative methods assume that human beings possess meaning in their lives (Slife & Gantt, 1999). The entity of qualitative study is the meaning of lived experience (Denzin & Lincoln, 2005). Some might suggest that qualitative researchers are merely focused on the subjective meanings of their participants' world, but this conclusion is superficial and overlooks the fundamental philosophical difference between naturalism and qualitative alternatives (Slife, 2005). From a qualitative methods perspective, the world is not fundamentally an objective (physical) world and a subjective (interpretative) world, but the world is centrally and fundamentally a world of meaning. To understand the meaning of lived experience, interview and conversation constitute a viable and genuinely empirical epistemology (Kvale, 1996).

Qualitative methods are empirical in the sense that they involve understanding by way of experience. In this way, qualitative methods fall under a broad definition of science. Polkinghorne (1983) promotes such a definition:

Science is not seen as an activity of following methodological recipes that yield acceptable results. Science becomes the creative search to understand better, and

it uses whatever approaches are responsive to the particular questions and subject matters addressed. Those methods are acceptable which produce results that convince the community that the new understanding is deeper, fuller, and more useful than the previous understanding. (p. 3)

Qualitative methods should be endorsed as a scientific and empirical way of obtaining information about the world. Kvale (1996) affirms that, "The automatic rejection of qualitative research as unscientific reflects a specific, limited conception of science" (p. 61) that confines the potential for significant discovery.

Philosophical Paradigm

Qualitative researchers are guided by a combination of beliefs about ontology (What is primary and fundamental? What *is* the human being?), epistemology (What is the relationship between the knower and the known?), axiology (What is the role of values?), and methodology (Bateson, 1972, p. 320; Denzin & Lincoln, 2005). This combination of philosophical beliefs constitutes the philosophical paradigm of a qualitative study (Denzin & Lincoln, 2005). The philosophical paradigm for this study is broadly classified as interpretive (see Ponterotto, 2005; see Schwandt, 2000). The methodology of this study mainly involved hermeneutic methods (Kvale, 1996) and included phenomenological description (Giorgi, 1975; Giorgi & Giorgi, 2003). The assumptions that follow are brief summaries, and it is beyond the purposes of this study to discuss these philosophical assumptions at length[2].

Ontology. Ontology regards the matter of what is fundamental and what the human being *is*. This study assumed that relationships are fundamental for understanding

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[2] Please see relevant citations for more detailed information.

human experience and that the human person is a moral agent. First, this study maintained a relational ontology (see Jackson, Smith, & Hill, 2003; Slife, 2005; Slife, 2009a, p. 1; Slife, 2009b, p. 1). Overall, a relational ontology assumes a mutually constitutive "holistic relation in which all or most of the qualities of things stem from their relationship to other things. Thus, identity is simultaneously individual, as a unique nexus of relations, and communal because all things have a shared being" (Slife, 2009, p. 1). In this way, a relational ontology conceptualizes the human person as fundamentally a unique nexus of relations *and* as communal in nature. As a result, it was assumed that the transformational changes should be understood in terms of how they relate to and involve relationships with others.

Second, the human person was here conceptualized as an agent. Williams (2005) argues the importance of this philosophical issue:

> Unless we are human agents such that we have a genuine capacity for self-direction, which thus gives rise to genuine possibilities, and unless our pasts and our futures are in some fundamental sense, open-ended and not merely given [or necessarily determined], it is impossible to attribute real meaning to our actions or maintain a sense of meaning in our lives and relationships. (p. 122)

Agency here refers to possibilities and meanings in the lives of the human person (unlike a rock rolling down a hill). By possibilities, I refer to constrained capacities to do and be otherwise. The human person is constrained by his or her context (e.g., their nature and nurture), but this does not mean that the human person is dictated by nature or nurture factors (Slife & Gantt, 1999).

Often the issue of agency is conflated with free will and incorrectly dichotomized as determinism versus indeterminism (Rychlak, 1992). Determinism often involves the premise that all events are caused by natural laws (like a rock rolling), but a minimalist definition of determinism suggests that all events (and human action) simply have meaningful antecedents (Williams, 2005). Indeterminism suggests that events (and human action) have no meaningful antecedents (Williams, 2005). However, an event can meaningfully relate to a prior event or set of conditions without the prior event or set of conditions necessarily determining the subsequent event. In this way, agency was here conceptualized as possibilities that flow from meaningful antecedents. As a result, this study did not seek laws or principles that explain transformation. This study sought to understand persons' experiential meanings, and assumed that these meanings foster linguistic and behavioral patterns, and thus predictability (Slife & Gantt, 1999).

Epistemology. As mentioned, epistemology refers to the relationship between the knower and the known. In other words, epistemology describes how we obtain knowledge about the world. The epistemological approach of this study was hermeneutic and dialectic (Denzin & Lincoln, 2005). A key premise of this approach is that understanding is participative and *produced* in dialogue, not *reproduced* by an interpreter (Schwandt, 2000, p. 195). The interview is considered a construction site of knowledge (Kvale, 1996). In other words, the knower and respondent co-create understandings. Overall, the epistemological interview approach of this study can be summarized by the following (adapted from Kvale, 1996, pp. 30-31):

1. Attention to the everyday "life world" of the participant. For example, the topic of the interview was the everyday lived world of the interviewee and his or her relation to it.

2. Efforts to understand the meaning of the themes in the experience of the participant. For example, the interviewer registered and interpreted the meaning of what was said as well as how it was said.

3. Dialogue aimed at qualitative rather than quantitative knowledge.

4. Encouragement of in-depth descriptions of the participant's experience.

5. Encouragement of descriptions of specific experiences.

6. A deliberate naïveté involving openness to new and unexpected perspectives. For example, the interviewer did not have ready-made categories and schemes of interpretation.

7. Focus on the phenomenon of interest without using restrictive questions. For example, the interview was not strictly structured with standardized questions.

8. Acknowledgement of possible ambiguities and contradictions in the dialogue.

9. Awareness that the participant may have new insights and come to change his or her descriptions during the course of the interview.

10. Awareness that each interviewer brings varying degrees of sensitivity to different aspects of the participants' experiences and perspectives (which is discussed more in axiology below).

Axiology. As mentioned, axiology refers to the role of values. Contemporary philosophy of science has shown that the methods of science are not neutral, value-free, objective, or unbiased (Polkinghorne, 1983; Slife & Gantt, 1999). Phenomenological and

hermeneutical methods differ in their approaches to values. In phenomenological approaches, the researcher attempts to bracket and suspend values, beliefs, and biases that may alter the interpretation of data (Giorgi, 1975). Husserl refers to this suspension as "epoche," which constitutes an effort to perceive phenomenon as if for the first time (Moustakas, 1994). However, in hermeneutical philosophy, our past experience and tradition is not something from which we can free and distance ourselves (Gadamer, 1975). The key tenet is that understanding requires the *engagement* of one's biases (Schwandt, 2000). As Garrison (1996) explains:

> Prejudices are necessary to make our way, however tentatively, in everyday thought, conversation, and action…. The point is not to free ourselves of all prejudice, but to examine our historically inherited and unreflectively held prejudice and alter those that disable our efforts to understand others and ourselves. (p. 434)

This study is most consistent with these latter hermeneutic notions and assumes that our context shapes what we are and how we understand the world. Stepping outside of our context (e.g., experience, relationships, etc.) would be like stepping outside of our skins. We never get outside of our experience (Slife & Gantt, 1999). Consistent with these later notions of bias, I sought to regularly consider my own context, experience, and presuppositions as Kvale suggests (1994):

> Bias in research cannot be completely avoided, but counteracted by carefully checking for effects of bias in subject and researchers. Regarding the latter, efforts by the researcher to formulate explicitly and reflect upon his/her own

presuppositions and prejudices will be one step towards counteracting their

unwitting influence on research findings. (p. 155)

As such, I was interviewed twice by third parties about my interest, experience, and

presuppositions regarding quantum transformation. It is noteworthy that I experienced a

quantum transformation. My experience resembles intensification (see Rambo, 1993)

within the Roman Catholic tradition. A few months following this quantum

transformation, I underwent an affiliation transition (conversion) from Roman Catholic to

Latter-day Saint. Due to my personal experiences of both quantum transformation and

conversion, I conceptualize transformation as potentially occurring outside of the context

of a shared *religious* group. However, I also assume that relationships are central to

understanding transformation. Overall, my personal experience leads me to agreed with

Miller and C' de Baca's (2001) distinction between transformation and conversion. One

of these two interviews was transcribed and revisited throughout the research process to

regularly engage my biases regarding emerging themes and findings.

Method

Participants

Fourteen participants provided demographic information (see Appendix B) and

were interviewed regarding their experience of quantum transformation. Thirteen

participants were White, non-Hispanic, and one participant was Hispanic. Nine

participants reported Latter-day Saint religious affiliation, two reported Evangelical

Christian, and one reported Protestant Christian. Seven participants were male, and

seven participants were female. Participants ranged in age from 20-75 years old with an

average age of 35. The average reported age when the experience occurred was 26 years

old, and on average nine years had passed since the experience. The mean reported annual individual and household income was $36,000 and $60,000, respectively, with this data being negatively skewed by low-income college student participants. All of the participants reported an education level of some college or higher with the majority reporting "some college." Seven of the participants reported "single, never married," while the other seven participants reported married, divorced, or widowed.

The sample size in this study was consistent with Kvale's (1996) suggestion that the number of participants for a qualitative study be around 15 (a large number of interviews can be too time-consuming for thorough interpretation and may result in a superficial product). However, the sample size was not predetermined. Rather, interviews were conducted until the participants' stories approached redundancy in essential characteristics and meaning (Kvale, 1996). When added interviews were unlikely to afford a richer, more holistic understanding of the phenomenon, no additional interviews were conducted.

Recruiting

Purposive criterion sampling was used to access participants who had experienced quantum transformation based on predetermined criteria (Patton, 1990). Interested participants were eventually screened using the criteria described below. First, a mass email was used to access individuals from Brigham Young University and internet postings were placed on craigslist.com for Provo/Orem, Salt Lake City, and the Norwest Suburbs of Chicago. Flyers were also posted in the aforementioned communities. All of these advertisements inquired, "Have you had a sudden, transforming experience… an out-of-the-ordinary experience of coming to know something and suddenly changing core

values?" (see Appendix A). Participants were offered $10 for participation. In addition, transcribed copies of the interview were offered to participants as a comprehensive record of the experience.

Screening

 Interested individuals were instructed to email or telephone the author of the study. They were then asked to provide a brief description of their experience in writing or over the phone. If the experience was summarized verbally by the potential participant over the phone, then handwritten notes recorded whether the experience satisfied criteria.

As mentioned, purposive criterion sampling was used to access participants (Patton, 1990). The following five criteria were used to determine whether the experience was suitable for further interview:

1. The experience should be discrete such that the individual is capable of remembering and describing a singular experience.

2. The experience should differ subjectively from ordinary change.

3. The experience should involve something insightful for the individual.

4. The experience should affect a broad range of behaviors that infuses almost to the level of personality (e.g., the individual may say, "I became a different person."). The experience should involve more than a solitary behavioral change (e.g., stopping the use of cigarettes).

5. The experience should involve positive changes. Though transformative experience can be negative (Miller & C' de Baca, 2001; for discussion of negative transformation see Nowinski, 2004), this study focused on positive changes.

For example, the following description satisfied the criteria for interview:

> About two years ago, over Christmas break, I had a dream. It was a very
> interesting dream that I still remember very clearly [discrete], and I knew that the
> message from it was to not be scared of the unknown [coming to know something
> insightful]. Since then I have participated in many activities that I wouldn't have
> before…. This dream continues to impact my life in a large way [different
> subjectively from ordinary change, subtle indications of positive changes]. In
> fact, it opened up a whole new way of life for me that I am still following [subtle
> indications of affecting a broad range of behaviors].

Once it was determined that the reported experience satisfied the selection criteria, the
individual was scheduled for a more in-depth interview. It was deemed better to conduct
an interview and then make further decisions about the appropriateness of the experience.
If the interview revealed that an experience was actually inappropriate for the research
questions of the study, then the interview was not transcribed or was not interpreted.
This happened on one occasion, because the participant was unable to describe a discrete
experience.

<div align="center">Interviews</div>

Interview logistics

All of the interviews were conducted by the researcher. Interviews were mainly
conducted at Brigham Young University, while some interviews were conducted at other
locations (e.g., a public library or the participant's home when appropriate). At each
interview appointment, Olympus DS-40 Digital Voice Recorder equipment was first set
up and tested. Then, participants received and signed an informed consent form (see

Appendix B), responded to demographic questions regarding gender, age, income, education, religion, ethnicity, and marital status (see Appendix C), provided contact information (see Appendix D), and signed an interview release form (see Appendix E).

Interview questions

The researcher first explained that he seeks to understand the participants' experiences from their perspectives. The participants were informed that they would be asked to clarify some meanings with added description or with an example experience. Then the participants were instructed, "First, I would like to hear your story. Please provide me with a detailed description of your experience." Questions ensued about the content and process of knowing for the participants. Interviews frequently involved many follow-up questions in order to understand the meanings of participants' lived world. An interview guide was created to organize interview topics (see Appendix F). The interview guide was useful to increase the depth and breadth of interviewee response and minimize leading questions (Patton, 1990).

This study assumed that the participants' actual descriptions of their lived experiences are more meaningful than the participants' abstractions. In other words, the participants' explanations and theories about their experience are less meaningful than descriptions of the actual experiences themselves. For example, a person might say, "After my transformation, I was much more outgoing." The example explanation above is abstract and less meaningful than descriptions of actual lived experiences that pertain to this theme (e.g., "Last week, I was at the grocery store when I saw an older man. I said hello, and asked if I could help him with his grocery bags....")

Initial interviews

The initial interviews functioned like pilot interviews, but any relevant data gleaned from these interviews were not discarded. The initial interviews were intermittent so that time was allotted for reflection about interview effectiveness. Initial interview audio recordings were revisited frequently, and attention was given to transcription decisions (Oliver, Serovich, & Mason, 2005).

Transcription

Undergraduate research assistants were recruited to assist with transcription and trained to understand:

1. Qualitative methods in general and by way of relevant sources (Kvale, 1996; Creswell, 2007; Denzin & Lincoln, 2005).

2. The research questions and philosophical paradigm of this study.

3. Transcription as *translation* and part of the interpretive process (Kvale, 1996; Oliver et al., 2005).

4. Olympus A-2300 digital transcription software.

Time was allotted to ensure that research assistants understood the costs and benefits of different transcription approaches, such as naturalized versus denaturalized transcription (Oliver et al., 2005). The latter denaturalized approach was selected in order to focus on the "meanings and perceptions created and shared during a conversation" (p. 1277). Oliver et al. (2005) describe how a denaturalized approach attempts a verbatim depiction of speech (like the naturalized approach), but has less to do with depicting accents or involuntary vocalization (p. 1277). For a denaturalized approach, accuracy concerns the substance and meanings of the interview.

Analysis

As mentioned, the epistemology of this study was hermeneutic and dialectic (Kvale, 1996; Denzin & Lincoln, 2005). Analysis involved an interpretive method (Kvale, 1996) and incorporated phenomenological description (Giorgi, 1975; Giorgi & Giorgi, 2003). Kvale (1996) writes how analysis is not a single step, but permeates the entire interview process:

> A recognition of the pervasiveness of interpretation throughout an entire interview inquiry may counteract a common overemphasis on methods of analysis as *the* one way to find the meaning of interviews. (p. 205)

Analysis began in the interview itself with notes and tentative interpretations. These interpretations were checked with the participants during interview. For example, the participants had opportunities to confirm or disconfirm interpretations of meaning and explicate when necessary (e.g., "That is precisely what I was trying to say" or "It was more like…"). As interviews were transcribed, interpretation notes from the interview were reconsidered in light of the audio, the research assistant's perspective, and the transcript text (i.e., the whole). The resulting interpretations were recorded as comments in the margins of the transcript (using the Review, Comment feature of Microsoft Word).

The general process of post-interview interpretation that followed involved three interrelated, sometimes simultaneously-occurring aspects (adapted from Jackson et al., 2003):

1. Conduct unspecified, intuitive overviews of the text as a whole to approximate the meanings of the participant's lived world (Kvale, 1996).

2. Make progressively deeper interpretations through successive readings of the material. The process of interpretation, known as the hermeneutic circle,

involves a back-and-forth process between the whole and its parts (Kvale, 1996). Kvale (1996) describes it thus:

> It is common to read an interview through first to get at the more or less general meaning. One then goes back to certain themes and special expressions, tries to develop their meaning, then again returns to the more global meaning of the interview in the light of the deepened meaning of the parts, and so on. (p. 48)

3. Find language that conveys the interpretations as precisely as possible. Although hermeneutical canons of interpretation hold that the text should be understood on the basis of its own frame of reference (Kvale, 1996, p. 49), Kvale (1996) writes how the interpreter "goes beyond what is directly said to work out structures and relations of meanings not *immediately* apparent in the text" (Kvale, 1996, p. 201, emphasis added). Researchers aim to refine language that precisely captures the meaning of valid interpretations and themes.

QSR NVivo V8.0 qualitative analysis computer software was used to simplify the organization and examination of texts. First, the author of this study conducted several readings of all the interview texts using the system outlined above. Research assistants were assigned two to three texts each and similarly conducted several readings of their assigned texts. After this phase of individual reading and interpretation, the author met with each research assistant to discuss interpretations. The research assistant first shared his or her interpretations so that the impressions were less affected by the power structure of the researcher-research assistant relationship. Interpretations were compared,

discussed, and reconsidered using the process outline above. In addition, the author and research assistant sought to validate interpretations by searching for disconfirming evidence. Some themes were dropped or clarified. Overall, the research assistants functioned like auditors. In addition, three participants in this study were available for consultation about the interpretations and themes. The author met with these three participants and presented the themes. These participants supported the accuracy of the findings and helped refine themes.

In addition, a modified phenomenological approach (Giorgi, 1975; Giorgi & Giorgi 2003) was used to explicate the situated structures of the interviews. Situated structures were essentially descriptive summaries of the experience. New research assistants were used to assist with this portion of interview analysis. This methodological approach involved the following steps (adapted from Giorgi & Giorgi, 2003):

1. Reading for a sense of the whole.

2. Determining parts: Establishing meaning units (See Appendix G).

3. Arranging meaning units along thematic/temporal lines.

4. Transforming meaning units into psychologically sensitive expressions (See Appendix G).

5. Explicating the situated structure (See Appendix G).

6. Synthesizing multiple situated structures into general thematic elements.

Steps 2, 4, and 5 are conveyed in Appendix G. These situated structures were useful in understanding quantum transformation as a process of knowing. In addition, this approach provided a new lens of interpretation regarding the general thematic elements of the experience.

Results

The Stories

The participants' stories are displayed here with short descriptions and brief quotations[3]. This is an effort to first present data free from added interpretation. In some important ways the stories speak for themselves. These summarizes also provide brief contexts for later quotations and discussion (e.g., the reader may want to later return to these summaries).

Elizabeth

Elizabeth was "born into a home that had a lot of issues." She described "hard liquor, wine, pills, and all kinds of things" with "physical abuse and all the abuses that goes on in those kinds of things." Elizabeth experienced many ensuing challenges throughout her life and wrestled with suicidal tendencies. She described how she "found a life" through her experience. She said her "epiphany" was that "I was worth fighting for, that God had faith in me, that He believed in me." It "culminated in me changing my name and going forward." She said, "The epiphany was that not only did I need to have faith in God but that God has faith in me. And he believes in me, and he trusts me, and all those wonderful things. It's just been huge…."

Henry

Henry went to be alone on a secluded part of the farm where he grew up. He started praying and asking "those basic questions" about God and religion. Everything

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[3] Consent was obtained to "quote, paraphrase, reproduce, publish, distribute, or otherwise use" all or any portion of the interview materials. Biographical data in connection with this material was altered for presentation.

became quite still. He began feeling the warmth on his back "more acutely than ever before" and the sensations of his body were "*heightened*." Everything became even more still and his senses were "very aware," when he felt the words "'Be still and know that I am God' *accompanied* with the most warm feeling." He described it as a "breathing-in of warm, heavy, moisture-laden air." Henry said, "It was such a unique and singular experience unlike anything that I have ever felt or expected to feel."

Josh

Josh noticed major changes in his friend. His friend had cleaned up his language and was exhibiting what Josh saw to be love. Josh was interested in the changes and accepted an invitation to attend church the following Sunday. During the service, Josh was engrossed in the love and connectedness of the community. "Everything was so different than what I had ever experienced. And I *wanted* that." When there was an altar call, Josh stepped forward and "accepted Jesus into [his] heart." Josh said, "So that was— that was my experience. And I noticed a *huge* difference." "It was such a big change in my life."

Kevin

Kevin changed to part-time student status in order to pursue a startup business opportunity. He enjoyed much business success. After a few years, his parent company went out of business, and Kevin was left with hanging leases and overhead costs that he had personally guaranteed. Stress levels escalated as Kevin struggled to meet financial obligations. He started seeing physical ramification of the stress and began shaking uncontrollably. Kevin was about to seek professional help when he had what he describes as a paradigm shift of "just realizing that…my best is enough." He let go and

rebounded from the stress. As a result, Kevin dramatically shifted his values and describes himself as the "best financially, mentally, physically, and emotionally" that he has ever been.

Melissa

Melissa struggled to accept her family's religious affiliation throughout her life. She described herself as somewhat rebellious. She felt like she never measured up to the expectations of her family and community. Melissa felt comfortable in the third congregation her young family attended. "We had a good feeling." The pastor spoke a great deal about being saved. Melissa was "finally getting it" and ready to be "in the shadow of Christ, in the presence of Him and also be part of Him. And to take Him on and allow Him to take [her] on." She and her husband met with the pastor for Bible study and prayer. "It was the most desperate measures of prayer could ever be. My soul was open and I received it." She said that "since that point I've been able to have a more intimate relationship with God during my prayers, and my thought process is more 'I know He is right next to me.'"

Michelle

Michelle was working at a hospital neonatal intensive care unit when an infant took a turn for the worst. Death was imminent unless medications or rescue breathing could save him. She stayed for hours after her shift to help with the events, and her family was also involved. Michelle's mother was a nurse on the unit, and her father provided a photography service for the family of the infant. Michelle lost herself in the service of this infant and says, "It changed my life because I realize how precious life

really is." As a result, she had a significant shift in her values. Now she cares about other more and volunteers frequently.

Morgan

Morgan wrestled with challenges throughout her life. After her recent divorce, she was alone in bed, crying, upset, and feeling miserable. As she wondered what she was going to do, she suddenly realized her own strength. Morgan was empowered. "It was just like a huge weight lifted off of me." She stopped crying and got up. She said that she "didn't sleep all that night" and paced around the house. She was talking to herself and said in the interview, "You probably would have thought I was nuts. But it was like that was the defining moment." She was revitalized with hope and started making various changes in her life.

Rebecca

Rebecca was having a lot of conflict with her father. Her parents "decided to send [her] off" on a weeklong religious retreat. Rebecca was angry, and "really legitimately hated who [she] was." She wondered why she did not see God in her life. She got down on her knees and asked God, "What did I do wrong? Why are you ignoring me? Where are you?" Rebecca wondered why she was unable to feel God's presence. She said that she was not searching for a religious experience so much as she was just being angry. As she was sobbing, she said that she experienced a voice that said to her, "You have nothing to be ashamed of." It was as if God had spoken to her. She felt an incredible sense of relief and stopped blaming herself. She said, "And so after that I—things were really different because I knew that God loved me and that made it a lot easier to love myself."

Robert

Unusual things were happening in Robert's life. He said that he received communication from an outside source. His predictions were coming true. When he cursed people, things happened to them. He said, "I was seeing things that were coming true" and eventually "it was very taxing on me." Robert began to think that he was practicing "black arts, or that there were demoniacs obeying me." He was at a lake with his friend when he prayed to God and demanded that the forces leave him. They experienced a graphic vision of the "invisible, spiritual world." He said that "we were able to kind of watch it flitter into space and be gone."

Sarah

Sarah had a significant dream. She dreamed that she joined the circus. She was observing and waiting for a circus assignment when she "saw the acrobats, and they were just flipping and flying through the air." She badly wished that she could experience the trapezes, but she was afraid to try. Then she thought that the fact that she *had not* done it did not mean that she *could not* do it. Suddenly, she was an acrobat flying through the air! When she awoke, she thought "I could apply this to my life!" Sarah "really took this dream to heart" and made some significant changes. She is no longer as afraid to try new things, and her life has been much more enjoyable.

Susan

Susan was struggling to cope with academic pressures until she had a sudden shift in her perspective. She moved into a new high school and was taking an advanced class that was extremely difficult for her. She says that it was tearing her soul apart and that she "was *not* alive in most senses of the word." Despite encouragement from her family

and teacher, she was unable to cope. She remembers the night when her perspective

suddenly changed. She realized that things were not what they appeared and that she was

capable of overcoming her challenges. From there, "everything *happened,*" and she was

empowered by the experience. It became the foundation of her faith, because she "let the

Savior take it from [her]."

Thomas

Thomas said that he was often depressed and stressed out about school when he

was growing up. He rarely felt good enough for his mother, which was "the biggest

stressor." He describes himself as a nerd that did not fit in. Thomas was struggling with

personal problems and stressed about an advanced course. He remembers walking in the

class and feeling overwhelmed.   He "felt as though [his] mind was about to snap." He

said that he was going over the edge when he experience an overwhelming calm come

over him. He said, "God spoke directly to me, like, 'Thomas, stop. It is okay.'" Thomas

made various changes and says that life is "much, much better now."

<p align="center">*General Themes*</p>

Theistic Faith

All of the participants conveyed some form of theistic faith. Many of the

participants were raised in The Church of Jesus Christ of Latter-day Saints. However,

theistic faith was certainly not a prerequisite for inclusion in this study, and the

experiences themselves often served as the seminal foundation for religious belief. This

finding is consistent with previous research (C' de Baca & Wilbourne, 2004; Miller & C'

de Baca, 1994, 2001). Miller and C' de Baca (1994) found that men endorsed spirituality

as their top value following transformation. A ten-year follow-up study of the original

participants (C' de Baca & Wilbourne, 2004) found that the only significant difference in values involved *higher* prioritizing of God's will. God's will was now reported as the number one value for one-third of the original participants, and the majority of the participants continued to describe themselves as currently spiritual or religious (C' de Baca & Wilbourne, 2004).

Two Types?

The stories of this study blur distinctions between the insightful and mystical transformation types (Miller & C' de Baca, 2001). This may relate to high levels of theistic faith in this sample. Miller and C' de Baca (2001) note that in the mystical type of quantum transformation, the individual experiences an awe-inspiring presence or Other that confers truth. In contrast, insightful quantum transformation involves the experience of knowledge originating internally or from an unknown origin. Elizabeth, Kevin, Michelle, Morgan, Sarah, and Susan appear to fit the insightful category because they did not explicitly experience the presence of an Other *during* their insightful experience (see Table 1).

Table 1
Insightful Quantum Transformation Type Summaries

Participant	Brief summary of experience
Elizabeth	insight about personal worth and God after significant struggles
Kevin	shift in world view after the loss of wealth
Michelle	realization after witnessing an infant die
Morgan	insight about personal worth after divorce
Sarah	insightful dream after social struggles

Susan	shift in thinking about academic demands

Although these participants do not describe the presence of an Other during the insightful experience itself, they ascribe the events that surround the insightful experience to an Other. To put it more simply, the participants often understood the *contextual events* of the experience as purposively given by an Other. For example, Michelle described her experience thus:

> I guess you could say that it was an unfortunate situation, but I had to go through that in order to change. It was just one of those events that the problem was specifically tailored to me. I was supposed to be a part of that, so I could learn and grow from it. It was one of those trials that was certainly supposed to affect your life, and it's up to you to learn to accept it and change your life or just kind of pass it off as just another event.

The events that surround her insightful quantum transformation were "specifically tailored" for her needs as a trial that was "supposed" to affect her life. When these observations are considered with the interview as a whole, Michelle interprets the events that surround the experience as given by an Other. Michelle's experience and the experiences listed in Table 1 are also quite mystical. Thus, the distinction between insightful and mystical quantum transformation types is not fitting for this sample.

Miller and C' de Baca (2001) describe how the mystical type involves a sense of *receiving* in which an understanding is imparted to the individual from a source outside of the self. The experiences that follow fit the mystical category as defined by Miller and C' de Baca (1994, 2001) and clearly involved the presence of an Other during the experience (see Table 2):

Table 2
Mystical Quantum Transformation Type Summaries

Participant	Brief summary of experience
Beth	responded to an invitation to be saved
Henry	came to have faith in God through prayer
Josh	responded to an invitation to be saved
Matthew	came to have faith in God through prayer
Rebecca	came to have faith in God through prayer
Robert	experienced a vision of the spiritual world
Thomas	heard a voice from God that brought peace

Summary

The proposed typology of quantum transformation as either insightful or mystical may be useful but requires some important clarification. It is noteworthy that the participants in this study often attribute a Presence to the events that surround quantum transformation. These events that might be separated from the transformation experience itself are better understood as constituting the whole experience. From this perspective, the distinction between insightful and mystical types becomes less clear, and some insightful experiences resemble the mystical type. Overall, quantum transformations for a religious sample are mostly a single mystical type.

Preliminary Consideration

Interview inquiry was organized into three main areas for organizational purposes (See Appendix F). Generally, the first part of the interview involved a description of the experience. The second part of the interview involved additional inquiry about the

content and process of knowing. The last part of the interview involved additional inquiry about changes in values and across relationships.

The resulting themes were often interdependent and representative of multiple areas. Themes did not merge well with this a priori trisecting of the experience. It is beneficial to conceptualize the experience as a unified whole. For example, in many ways quantum transformation *is* essentially a process of knowing.

<div align="center">*Quantum Transformation as a Process of Knowing*</div>

If we consider the whole of quantum transformation to be a process of knowing, the process can be organized before, during, and after the pinnacle moment of insight. The process of knowing takes the basic form of disintegration (before), insight (during), and integration (after). *Integration* comes from the Latin *integro*, ablative of "integer," and suggests action toward an undivided whole. Thus, *disintegration* here describes movement away from prior accord. For developmental psychologist Robert Kegan (1982, 1994), integration is a process of relating to and more fully knowing a new perception (insight), for insight is a "new way of organizing reality" (Miller & C' de Baca, 2001, p.7). Kegan later said that "the process by which each living thing in the universe organizes and reorganizes itself—which is transformation—is a process by which each living piece, or part, is, in a certain way, better recognizing [and coming to know] its true nature" (Debold, 2002, p. 3).

Disintegration

Disintegration characterizes how constructions of the self and world seem to be falling apart. Miller and C' de Baca (2001) observed challenges to "the way in which the person has been perceiving reality and making sense out of life [which] triggers the inner

search" for a new way of organizing reality (p. 7). Disintegration is generally characterized by suffering[4], and the disintegration themes that follow are: Overwhelming stress, Relational struggle, Self-discrepancy, Hopelessness, Holding on, Control, Psychological conflict, and Guilt.

Overwhelming stress. Participants were frequently experiencing overwhelming stress prior to transformation. Some of these stresses are readily observed in the short summaries of the experiences above. If stress is not apparent in the summary, they often emerge in a simple reading of the larger interview text. These stresses involved family conflict, divorce, relationship loss, depression, physical illness, financial pressures, academic pressures, and insecurities. Miller and C' de Baca (2001) observed how prior to quantum transformation, individuals were often "hitting bottom." For example, Kevin's stress was so overwhelming that he started having "having physical ramifications of [the] stress":

> Which pretty much just led to—and it could have been coupled with a lack of sleep—but I just started shaking uncontrollably, 24 hours a—well not while I was sleeping—while I was awake, just like a nervous person. And um, I thought I had cerebral palsy, or I was getting some other type of disease! But it was really just the stress of the situation, of getting non-stop calls and letters, and everyone trying to collect.

Relational struggles. Nearly all of the participants describe relational struggles prior to transformation. As mentioned above, family conflict, divorce, and relationship

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[4]I depart from conventional conceptions which suggest that suffering is bad, and I espouse a more purposive understanding of suffering (Gantt, 2005).

loss are some examples. Slife (2009) affirms that interpersonal relationships are the most vital aspects of life and living, because "we all want to be part of something larger than ourselves." Yet participants often did not feel accepted by others. "The fear of rejection, the fear that we do not belong, are not accepted, or have no meaningful relationships is the greatest fear and anxiety of all" (Slife, 2009). This can be observed in Thomas's description:

> I guess the biggest stressor was I never seemed good enough for my mom especially. She was always like "you can do better you can do better." It was probably the biggest stressor. But growing up another stressor was I was a huge nerd. Think of the stereotypical nerd you see on TV: doesn't shower, wears the same clothes for like a week, that was me growing up through elementary school. I kind of stopped doing that by middle school, but it was too late, because everybody already knew me as the nerd, the disgusting nerd. Growing up, as I was getting older I kept asking myself the question "What's wrong with me? Why don't I fit in with people?" I kept thinking there was something wrong with me. "Why is nothing I do ever good enough for my mom? What's wrong with me?"

Often, observations that did not appear explicitly relational on the surface (i.e., physical illness, financial loss, etc.) were meaningful to the participants because of how they affected relationships. For example, Kevin describes how his financial struggle affected his relationship with his wife:

> It is one thing to lose a business, but it's another thing to now be personally pursued for a business responsibility. And so, wow, yeah, me and my wife's

world just kind of got turned upside down…. We had children at the time, and

yeah, basically went from riches to rags in a very short period of time. So, that

had a relationship strain with me and my wife.

Hopelessness. The disintegration and suffering was so overwhelming that

individuals experienced a variety of negative emotions. Individuals experienced some

relational fear, were depressed, and often (but not always) experienced hopelessness.

Miller and C' de Baca (2001) observed that stories of quantum transformation often

involve the sense of being trapped, with no way out. Similarly, in the present study some

participants were unable to navigate the stresses. They tried everything, and all of the

possibilities had been exhausted. Kevin described his feeling of hopelessness:

And you know me feeling somewhat hopeless; that I had done everything that I

could possibly do to make the situation as good as I can with all the resources of

the business and my personal resources. We sold our big home and relocated to

an apartment, to where we could get some more solid footing, financial footing.

He later said, "I felt like just all hope was lost and couldn't really see my life going in any

other direction other than down."

Holding on. Holding on describes a lack of willingness to change. Participants

were often holding on to notions of the self or the world and resisting alternatives. Kegan

(Debold, 2002, p. 3) observes, "We not only put the world together [a certain] way, we

then defend [our notions of the world]" and hold on despite contradictions within the

environment. Often their notions were disintegrating, and participants kept holding on.

When Kevin describes his psychological conflict, he speaks about holding on

until he was compelled to let go of his conception: "And so I was almost just compelled

to let go, to let it go… because if I didn't, if I held on to that, it's just going to destroy me." At the time, Kevin was holding on to a conception of himself as the ideal businessman:

> Up into this point I was blemish free; perfect credit history, perfectly responsible, perfect reputation. I don't know, just kind of the ideal figure, someone who you would want to… I don't know, trust, invest with, manage with, work for.

Susan was holding on to an almost perfect, ideal self as skinny, pretty, and good at school. Her notions of the self and what she *should* be were unsustainable but she was holding on:

> The constant thing was what I *should* be. And I wanted to be able to do that. And it couldn't make sense that I couldn't. I should be able to, you know, pull off homework assignments and papers in a flash, and… I should be *confident*, and I should…

Research by physicists Halloun and Hestenes (1985) demonstrated that even "A" students resist reconceptualizing their theories of motion after performing well in an introductory physics class and being presented with disconfirming evidence. If changing an academic mindset is so difficult, then it should be no surprise that individuals resist opportunities to reconceptualize and transform their lives.

Control. Themes related to control can be observed throughout the participants' stories, and control issues are deep-seated within the processes of change (Shapiro & Astin, 1998). Participants let go of control, were empowered to assume greater control, or otherwise assumed a more appropriate position in relation to others and their world. These observations regarding control present an interesting paradox, and participants

were rigidly holding on (as described above) prior to their insight; then they let go. Disintegration themes like Overwhelming stress, Relational struggle, Hopelessness, etc. relate to a sense of losing control, and Shapiro and Astin (1998) observe that "little is as baneful to the integrity of the individual psyche [or] the quality of interpersonal relationships" (p. i) as the sense of losing control. Fosha (2006) describes how quantum transformation can involve feeling out of control, and she promotes the patient's sense of control during therapy.

Kevin is a good example of the sense of losing control (see Psychological conflict below and Hopelessness above). Kevin also discussed other issues related to control:

I was trying to control everything and the people that I cared most about saw that, you know. When I say control, I don't mean people, I don't try to control people, I try to control situations that I think will lead to success or flourish. And now, I kind of let things work themselves out a little bit.

Susan described her need to control this way:

[When] you're with the Lord, you're okay, and you can let go of the need to control everything. And yeah, I guess control is the way you say it. So I think it kind of generalized to other areas of my life. I don't know if I can really back that up, but it feels like I just—and maybe this has been a general thing over the past longer while, since then—but just not being so uptight and needing to be in control.

While some participants let go, some participants were empowered to assume greater control. Participants had a greater acceptance of the events in the world in general (e.g., Things happen for a reason.). For example, Robert said, "Even things that

don't make sense, *make sense.* You know like crime or this and that. It all makes sense in its own realm, in the big picture." This seems to be related to participants' understandings about their role, an Other's role, or their role together in controlling the world. For example, some participants became aware that they ultimately control their world of thoughts and feelings. This is consistent with findings from Miller and C' de Baca (2001). For example, one participant described his realization this way:

> I realized that I could set myself free from my past and really live now, that I could choose at any moment in time how I feel…. What's in my mind really is my choice. I never had seen it that way before. (p. 44)

> *Psychological turmoil.* Sometimes psychological turmoil was so apparent for participants that it merits separate consideration here. The meaning and significance of disintegration and relevant themes (e.g., Overwhelming stress, Relational struggle, Hopelessness, Control) can be perceived when we consider the following participants' statements about psychological turmoil. As mentioned, little is as baneful to the psyche as the sense of losing control. Thomas said:

> "I can't keep up with this class and home and this and that and everything"—all of the sudden I felt as though my mind was about to snap. I was about to… they talk about psychotic breaks—I really felt like my mind was seriously just about to break. I was walking to class. I felt myself going over the edge, and all of the sudden, I had this overwhelming calm come over me and… God spoke directly to me.

Kevin described the psychological turmoil this way:

I never felt worst [*sic*] than I had at that time. And I knew that I had to get…

feeling good again, about myself, about my relationship. And so I was almost just

compelled to let go, to let it go… because if I didn't, if I held on to that, it's just

going to destroy me. It was destroying me, mentally and emotionally. My psyche

was just in a very dark place. So… yeah, I can't say it was just something that I

wanted to do. It was just… I had to do it or my life wasn't going to… well at the

time, life felt like it was just going to end.

Self-discrepancy. Self-Discrepancy Theory suggests three basic domains of the

self: The actual self, ideal self, and ought self (Higgins, 1987). These three selves are

cognitive "representations" of the attributes that one believes one actually posseses,

would like to, ideally, posses, and should or ought to possess, respectively (Higgins,

1987, pp. 320-321). The ideal self is distinguishable from the ought self, as the latter

suggests a moral sense. Discrepancies between the actual self and the ideal and/or ought

self relate to "negative psychological situations that are associated with different kinds of

discomfort" and suffering (Higgins, 1987, p. 319). Often participants conveyed

discrepancies between the actual self and ought self, and some participants conveyed

discrepancies between the actual self and the ideal self.

Participants often knew with various degrees of awareness that they should or

ought to be different. It was as if participants were incongruent with their moral sense.

This theme required a comprehensive understanding of the participants' lived worlds and

emerged after deep interpretation. Sarah is more explicit than other participants in her

description of this theme:

This was an appropriate way for me to learn this lesson or to learn how to become better, because I've always had a drive in me that says, 'Do your best and don't settle.' So I've always had that in me —something that said, 'You're settling, don't do it.' But I was settling for less than my best or less than what I could do. But it—that little, that little thing inside me was there already. The dream just brought it to my consciousness, [and] made me think 'Okay, time to really listen to myself or time to really listen to God.'

Although this description may be somewhat removed from her experience, the concept is validated by other descriptions of her lived experience. For example, when she was describing her life prior to her dream, she said, "So I knew it was there, but I was frustrated that I didn't feel confident enough to be that way all the time— so I didn't like the part of myself that just restricted myself…."

Disintegration involved more than discrepancy between cognitive thoughts and behavior. Participants' moral discrepancy involved a deep sense of identity. Participants knew with various degrees of awareness that *they* should be different. They often felt incongruent with a sense of good or better that was part of *them*. Sarah always had that something which was part of her that said "don't do it." After her dream, it was "time to really listen to [*herself*]."

Self-Discrepancy Theory focuses on *conscious*, cognitive representations of the self and their congruence with behavior. Similarly, Cognitive Dissonance Theory involves conscious activity (Festinger, 1957). However, Warner (1997) suggests that after a morally discrepant action, or self-betrayal, an individual is self-deceived and *unaware* of moral discrepancy (i.e., between the actual self and the ought self). After

self-betrayal, the individual will self-justify, and the conscious becomes distorted. Negative emotions arise from self-betrayal and outside of cognitive awareness about discrepancy. For example, one participant said, "Sometimes I would just sit there and do nothing — just wait for someone to ask me to do something, instead of doing it by myself. And so then I'd just have a bad attitude the rest of the day." In this example, the participant does not explicitly describe a self-discrepant awareness. Here the bad attitude seems connected with the participant's way of being.

Self-betrayal affects a larger *way of being* that is deeper than thoughts or behaviors (Warner, 1997). For the participants, it seemed that fixing self-discrepancy was often not simply a matter of changing certain thoughts or behaviors. The participants felt like *they* needed to change fundamentally.

Guilt. Some researchers posit important distinctions between the self-conscious emotions of guilt and shame (Lewis, 1971; Tangney, 2002), and the participants in this study exhibited both guilt and shame prior to their transformative experience. Lewis (1971) writes how shame involves a negative global evaluation about the self, while guilt involves a negative evaluation about a specific action or behavior. The difference involves a subtle distinction between the self (e.g., *I* did a bad thing) and behavior (e.g., I *did* a bad *thing*) (Tangney, 2002, p. 387). Given this distinction, guilt is related to empathy, reparative action, and prosocial behavior, while shame is maladaptive and related to negative outcomes (Tangney, 2002).

The results of this study align with the aforementioned research. Guilt prior to the transformative experience was related to positive post-transformation outcomes. Josh described his experience of guilt this way:

I felt guilty—and still do to a certain extent— because we were married 15 years before I came to the Lord. And I'm sure I didn't treat her as good [*sic*] as I should have on many occasions. Now, all of the sudden, I felt the need to do that. So we went to church together, we prayed together, [and] we became closer.

Shame was connected to greater suffering and disintegration prior to the transformative experience, and shame was connected to less integration following the transformative experience. Although there is considerable overlap between the two emotions, the participants that were experiencing shame were usually focused on themselves. They describe how prior to their experience, they were making evaluative comparisons of themselves and others. Although Susan uses guilt and shame synonymously (like most individuals), she described her experience of shame, "for not being perfect." She later explained:

[Shame] and the blame were *such* a big part of it. And they've continued to be, and it's been like, kind of a… this… a renewing… you know, thing, in college. And I would call my mom and tell her how stressed I was, and she would *always* [laughing] have to say "I want you to eliminate blame from this whole thing." And I'd be like "Oh-kaaay" [imitating sobs/joking]. But like, it was *so* hard for me.

Summary. Disintegration was often marked by Overwhelming stress, Relational struggle, Hopelessness, Holding on, Control, Psychological turmoil, Self-Discrepancy, and Guilt. This is not to suggest that the aforementioned themes entirely explain the transformations that followed. Participants were observed actively choosing their response to these themes. Although Kevin describes how he was compelled, he later

independently expresses that he made "a conscious choice there to, uh, adopt a new set of values and disconnect from what [he] thought was important prior to that." Be it reminded that individuals that did not positively change in response to similar disintegration were not included in this study. For example, it is possible that an individual may have been unable to cope with similar disintegration to the point of suicide, and Nowinski (2004) describes the real possibility for individuals to choose a dark or negative transformation.

Fosha (2006) describes how transformation involves a "violation of our expectations [and these] disruptions generate intense emotions" (p. 570). Individuals choose how they respond to these significant emotions. Fosha (2006) suggests that whether individuals avoid and withdraw or "approach and explore [these intense] emotions [to] reap their adaptive benefits" relates to "the presence ─or absence─ of a trusted other" (p. 570). She emphasizes that, "There is a world of difference between being alone with overwhelming emotions and being with a trusted other in the affect storm" (Fosha, 2006, p. 570).

As mentioned this sample was largely theistic, and the participants either experienced the presence of a trusted Other during the experience or perceived the presence of an Other through the events that accompanied the experience. In addition the participants of this study often had close, though not always immediate, support of spouse, family members, and friends. Kevin describes the support of his wife:

> She gave me words of affirmation and tried to help me, you know, through this
> hard time or whatever. She was just, you know, always there. Kind of like

oxygen and every time you press the water fountain, you're going to get water out

of it.

Although some participants may have felt hopeless, they did not feel alone. These

observations suggest that relationships are central in successfully progressing through

some overwhelming emotional experiences.

Disintegration often involved shedding a part of the self that was preventing a

greater focus on relationships. In some ways, participants seemed drawn towards

transformation, and in the salient preface of his famous philosophical work

Phänomenologie des Geistes, translated "The Phenomenology of Spirit or Mind",

Hegel (1807/1967) writes that the spirit "sets about its own transformation. It is indeed

never at rest, but carried along the stream of progress ever onward… ripe for the new

form it is to assume" (p. 75). Warner (2005) would say that the truth about others and

ourselves *influences* us. For Warner we are co-constituted by others, and when we open

ourselves up to the truth about others, we fundamentally change our way of being.

Insight

Following disintegration, insight can erupt as a whole world of new meaning. It

is as though what was once only a world of trees is suddenly perceived for the first time

as *forest* and part of a larger landscape. Thus, *everything* is different for the individual.

Miller and C' de Baca (2001) describe insight as a "new way of organizing reality," the

self, and the world (p. 7). In the *Transforming Moment*, Loder (1989) describes how

insight occurs as a "rupture [or breaking] in the knowing context" that brings about an

"insight, intuition, or vision on the border between the conscious and the unconscious,

usually with convincing force" (p. 38).

Content. It is as though what was once only a world of trees is suddenly perceived for the first time as *forest* and part of a larger landscape. As the individual leaves the trees and comes to know that there is a world beyond, "forest" can summarize the content of what the individual came to know. However, a summary inherently minimizes the power and meaning of the experience in the individual's experience. The summaries that follow were experienced like an individual coming to know a larger landscape. Although these summaries may minimize the power and meaning of the experience for the participants, they illustrate life-altering centers of motivation. As James (1902, p. 98) suggests:

> It makes a great difference to a man whether one set of his ideas, or another, be the centre of his energy; and it makes a great difference, as regards any set of ideas which he may possess, whether they become central or remain peripheral in him.

Table 3
Participant Insights

Participant	Summary of insight
Elizabeth	I was worth fighting for, that God had faith in me, that He believed in me
Henry	that God answers prayers and that He is God, really
Kevin	stop worrying about things that aren't in my control
Josh	The Lord was there and I could talk to him and I could turn to him if I need help
Melissa	I know He is right next to me
Michelle	Life is precious, and we need to get all we can out of it

Morgan	I am [strong]. I really, really am
Sarah	I am a human being with a lot of potential, and that I can fulfill that potential
Rebecca	I was important to Him and that I mattered and that He cared about me
Robert	that there is a spirit world. We are spiritual beings in a physical world
Susan	The Lord (Savior) was waiting to help me the whole time, and I *was* doing enough
Thomas	1) God was there and 2) that He was watching me, He knew me

Dr. William Silkworth noted how transformations in AA (Alcoholics Anonymous, 1976) involve: "Ideas, emotions, and attitudes which were once the guiding forces of the lives of these [people] are suddenly cast to one side, and a completely new set of conceptions and motives begin to dominate them" (p. 27).

Tacit knowing. Participants conveyed a tacit, unexpressed understanding of their insight prior to transformation. The participants experienced some awareness prior to their experience; as if someone once told them there was a world beyond the trees. James (1902) describes: "As life goes on, there is a constant change of our interests, and a consequent change of place in our systems of ideas, from more central to more peripheral, and from more peripheral to more central parts of consciousness" (p. 98). In transformation, tacit knowledge and meaning that was "previously peripheral in [a person's] consciousness, now take a central place [and] form the habitual center of [his or her] energy" (James, 1902, p. 162). Michelle described her experience thus:

I guess I always kind of knew it, but I'd never really thought about it, because they always teach us that in church about how we're all children of God and we

have purpose on earth. I had never really thought about it and how important that

really was—and that it's a huge thing —and [now] that's what I want to base my

life around.

She then said, "I'd never really thought about it before. It was just kind of like a light

bulb—that's what I'm supposed to do." Michelle also explained, "It's kind of like a

hidden knowledge, because I always wanted to do the right things—but now it's in my

mind a lot more."

Transformation seems to involve the centralizing of peripheral ideas that were

"subconsciously incubated" (James, 1902, p. 115) in that "that great subliminal or trans-

marginal region" (p. 286)[5]. This subconscious incubation involved a "maturing of

motives deposited by the experiences of life [and when] ripe, the results [hatched] out, or

burst into flower" (p. 122). James's explanation gives credence to the way in which

participants often make sense of their experience. He went so far as to suggest that if

Deity "can directly touch us, the psychological condition of [God's] doing so *might be*

our possession of a subconscious region which alone should yield access" (James, 1902,

p. 129).

Integration

Integration suggests action toward wholeness and "new form". The transformed

individual moved towards new form as the insightful realization was integrated into

his/her lived experience. Integration was a process of knowing that evolved in meaning

as the individual experienced and related to a new reality. Integration is hereafter

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[5] James (1902) was not wedded to term "subliminal" and suggested that the reader "call it by any other

name [he/she] please to distinguish it from the level of full sunlit consciousness" (p. 329).

capitalized to distinguish it from the integration that preceded disintegration. Integration is also capitalized because it involves a more meaningful reality that involves the "true nature" of the participants (Debold, 2002, p. 3).

Overall, Integration was characterized by movement towards being a more loving person in relation to others. This is consistent with previous findings in which individuals describe themselves as more loving, accepting, and forgiving of others (Miler & C' de Baca, 1994). Integration themes involved Changes in values, Other orientation, and Empathy, that often occurred as A process of development.

Changes in values. There were clearly changes in values described by the participants. Participants either described their values as different or strengthened. Some participants emphasize how their values are different, and Kevin described how his values were new:

> To be able to move on with your life and now value a new set of values so that you can be happy. Most critical for me—that experience was just critical for me. It was probably the best thing that could happen—and I say it's the best thing that could've happened, because my life is so much more rewarding than it once was. You can't put a price tag on certain, um… events that maybe I missed before— certain events, and a marriage, and a family, birthdays, you know? Certain things that are just really fun to be a part of are more meaningful, and it is happiness— the kind that lasts. I know I'm not saying anything new here, you know? I know these truths have been around forever. But for me they're new. For me I—I experienced these things for the first time. I mean, I know, I know, everyone

knows that family's important and blah-blah-blah, but until you really put those

things first… [*sic*]

Relationships became much more important to the participants. Spirituality and religion

also became more important to the participants. Participants often described a dramatic

devaluing of wealth and material possessions following their experience. These findings

are consistent with observations by Miller and C' de Baca (1994, 2001).

Other participants like Michelle described how their values were made stronger:

"I don't know that [my values] are really *different*, they're just stronger." For these

participants, "new" values were sometimes consciously present prior to the experience.

They previously came into consciousness but were never centralized and maintained.

James (1902) observed how values were present prior to transformative experience, but

there were vacillations and "alterations of [values and] character" succeeded by other

values "in the reverse direction" (James, 1902, p. 98). As Michelle said, "I was always, I

always kind of wanted to help people. It just wasn't a priority really."

Other-orientation. As mentioned, relationships became much more important for

the participants. After their experience, participants valued relationships and were

inclined towards service and helping others. Sarah said, "And afterwards, I think,

definitely people became so much more important. Service became so much more

important." She goes on to say:

And I don't measure success by how well I do in school, as I used to do. Now I

measure success by my—how much time I spend serving and doing those things,

because those—serving and being with people—are really what bring me

satisfaction now.

This shift in focus towards others is related to how participants were often focused on themselves prior to their transformative experience. For example, Robert said, "I was so prideful and caught up in myself." He explained that prior to his experience:

> It was all about me, money, [and] reputation. I was kind of more like a pseudo-mafia. I wanted to be power [*sic*]. I wanted prestige—wanted to have money and throw around money. It was all about me, me, me, me, me—nothing about God or common man. I didn't really care.

Likewise Kevin "valued money" and the associated freedoms prior to his experience. He was focused on himself and "didn't really have friends then". He went on to explain:

> I mean I didn't have time for friends, and they weren't a priority. Um, I know I am kind of painting myself into a monster here, but like, yeah I just—that didn't fit into the agenda, you know? That wasn't part of my life at the time.

Following his experience, friends became more important, and Kevin was clearly more compassionate. If participants made changes in their relationships, like seeing certain friends less often, participants still seemed to care for their original friends. Overall, participants were more connected with their spouses, family, and friends after their experience. Some participants that were married were particularly more unified with their spouses.

A process of development. The meaning of the experience and related changes developed over time as a process of integration. Rambo's (1993) way of interpreting conversion as a *process* is helpful for understanding quantum transformation. He writes, "Perhaps the word *converting* captures the phenomenology of the process [better than conversion]" (Rambo, 1993, p. 7). Sarah said:

I don't necessarily, um… always think about this dream, because now it's just been integrated into my life. It was, it was an instigator that started me on a path that helped me to become who I am today and who I'm becoming.

If we consider Plato's allegory of the cave, it is as though individuals moved from a cave to the light of a new world. The individual may momentarily perceive the new reality, but it will be a blinding light: "When he approaches the light his eyes will be dazzled, and he will not be able to see anything at all of what are now called realities" (Plato, 2008, book VII, para. 18). The individual must *experience* the new world. The integration of change seems to be a function of experience in this new world. As Plato (2008) writes:

> He will require to grow accustomed to the sight of the upper world. And first he will see the shadows best, next the reflections of men and other objects in the water, and then the objects themselves; then he will gaze upon the light of the moon and the stars and the spangled heaven; and he will see the sky and the stars by night better than the sun or the light of the sun by day? (book VII, para. 20)

On the surface, some participants described how the resulting changes were dramatic. Participants sometimes described how different they were from their former self. Upon deeper analysis it seemed that participants were trying to emphasize the meaning and significance of the experience, because they often acknowledged that the changes were a process. Similarly, Kegan (1994) observed the "tendency to pretend to completeness [while actually being incomplete]" (p. 313). Kegan's (1982) stages of development involve a temporary meaning-making balance in which individuals regularly vacillate. Vacillations were observed with some of the participants. Robert

said, "I've been pursuing Christianity, and maybe not as [pause] I'm still a beer drinker, and I still backslide, and you know."

Overall, participants remembered the experiences vividly, and this is consistent with previous findings (Miller & C' de Baca, 1994, 2001). The majority of participants in this study report the exact year, month, and time of day when the experience occurred. Some participants report actively remembering the experience. For Michelle, integration related to thinking about the experience:

> But now it's in my mind a lot more. I try to think about it every day, instead of just saying, "Oh yeah, I totally do that." I mean, "I'm a good person, I help people". Now I *really* think about it. It's a huge thing that I base my life around now. [The change is] really not something that just happened, or I just grew into it you could say. [*sic*]

It is noteworthy that Michelle presented as more fully integrated. She exhibited a meaningful understanding about her experience and much personal growth.

Discussion

Quantum transformation did not merge well with an a priori organization that compartmentalized the context, process of knowing, and changes (see Appendix F). It was best to conceptualize the whole experience as a process of knowing, and the resulting themes took the form of disintegration, insight, and Integration. This later inductive organization was useful for conceptualizing quantum transformation. The central observation for this organization was movement towards wholeness and integration. James (1902/2008) observed how transformation involves a unifying of the self from chaos to a stable system. James (1902/2008) writes:

The normal evolution of character chiefly consist(s) in the straightening out and

unifying of the inner self. The higher and the lower feeling, the useful and the

erring impulses, begin by being a comparative chaos within us—they must end by

forming a stable system of functions in right subordination. (Lecture VIII, p. 90)

Disintegration and Insight

This study illustrates how disintegration characterizes the pre-transformation

milieu. The disintegration themes of this study strikingly illustrate how individuals are

suffering prior to their transformation. The observed quality of participant suffering was

unanticipated. Unlike some mystical or peak experiences, individuals that experienced

quantum transformation were often discontent with the world and/or themselves prior to

their transformation, and there was a real need for change. Quantum transformation was

different from other types of experience (e.g., peak experience and mystical experience),

because quantum transformation by definition involves lasting change.

Peak experiences, mystical experiences, or near death experiences may overlap

with quantum transformations if they involve lasting change[6]. Individuals that

experience one of the former three types may be content with the world and/or

themselves prior to their experience. Peak, mystical, or near death experience might

serve to confirm the individual's current way being in the world. Overall, the moral-

emotional suffering prior to the experience seems related to lasting change.

This observation of moral-emotional suffering carries significant implications for

therapists and researchers. Some therapists routinely endeavor to ease the suffering of

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[6]For example, various experiences in this study are mystical as defined by James (1902) and Pahnke

(Doblin, 1991).

their clients. Hence, therapists that automatically aim to alleviate moral-emotional sorrow or guilt should consider whether the emotional experience can bring about positive transformation. Similarly, White (2004) encourages therapists to avoid the superficial amelioration of quantum transformation's more disquieting aspects. In addition, Nowinski (2004) emphasizes how therapists should understand the worldview and identity of client while promoting choice to minimize the number of individuals that choose a dark vision and identity. Finally, Accelerated Experiential-Dynamic Psychotherapy (see Fosha, 2006) may afford some useful approaches in helping clients willfully navigate these difficult emotional experiences.

Participants were observed making choices and choosing an alternative way of being in response to disintegration. Although quantum transformation seems to involve unconscious qualities, participants often made conscious choices about how to apply and integrate the meanings of their experiences. A psychoanalyst might describe quantum transformation as the dramatic emergence of repressed, unconscious forces. Indeed, transformative insight is like a rupture in which there seems to be a *subconscious* incubation of motives below the surface (James, 1902, p. 169). However, Miller and C' de Baca (2001) reminded us that psychoanalytic explanations do not explain the phenomenon and "only describe the fact that the work that led up to it is not within the conscious awareness of the individual who experiences it" (p. 166). The central aspect is that motives were often outside of the awareness of the individual. For example, sometimes "the person cannot say how it happened, because it just seemed to appear from nowhere" (Miller & C' de Baca, 2001, p. 166). Although James (1902) provides for subconscious possibilities, he suggests God may be involved in this process. Again, he

(1902) writes that if indeed Deity "can directly touch us, the psychological condition of [God's] doing so *might be* our possession of a subconscious region which alone should yield access" (p. 129).

<center>*Near Death Experiences*</center>

Quantum transformations such as those described in the present study resemble near death experiences that involve an encounter with "the light" and/or involve a life review (Farr, 1993; Gibbs, 2003; Lorimer, 1990; Morse & Perry, 1992). Morse and Perry (1992) argue that, in near death experiences, an encounter with the light is a key feature that accounts for moral and personality transformation. Two cases from their study suggest that an encounter with the light is responsible for deeper insight, inspiration, and subsequent life changes (Morse & Perry, 1992). A life review is more than a panoramic memory or brief vision of one's life, because the former elicits "emotional involvement and moral assessment" (Lorimer 1990, p. 10). Some life reviews involve "[reliving] events through the consciousness of the person with whom they were interacting at the time" (Lorimer, 1990, pp. 1-2). Such an experience is sorrowful for participants, and life reviews often relate to moral insight and transformation (Lorimer, 1990). For example, one man's life review relates to what he described as an "abrupt" change "from a [self]-righteous, self-motivated person to a spirituality motivated individual who now priorities helping others" (Farr, 1993, p. 60).

Lorimer's (1990) research on near death experiences brought him to affirm that "human beings are connected at a deep level which is occasionally experience by those who transcend the boundaries and limitations of ordinary perception" (p. 104). The insights and moral development of quantum transformation tend to support this

possibility. Gibbs (2003) suggests that near death experience (and likewise quantum transformation) have "potentially major implications for our understanding of moral development [theory] and reality" (p. 196).

Models

Quantum transformation and near death experiences do not fit well with the moral developmental theories of Kohlberg and Hoffman (see Gibbs, 2003). Such theories suggest serial development and/or successive stages. Gibbs (2003) goes beyond these two theories in suggesting that life span moral development has two main overlapping phases, which he describes as standard and existential. Quantum transformation and near death experiences transcend the standard moral judgment stages and constitute that latter existential phase of development. Gibbs (2003) writes how persons may develop existentially "from sudden insights or inspirations (as may occur during meditation, 'soul-searching' crises, life-threatening circumstances, or other existentially profound events)" (p. 76).

Quantum transformation also does not fit well with Prochaska and DeClimente's (1984, 1998) Transtheoretical Model of Change (TMC) and the associated stages of precontemplation, contemplation, preparation, action, and maintenance. Although TMC is a useful tool for understanding intention and motivation for change (see Stockwell, 1992), quantum transformation involves little or no conscious motivation. Participants did not overtly display various motivational constructs like precontemplation and contemplation. Individuals apparently move through multiple stages suddenly and permanently. TMC, and similarly moral development, initially "conceptualized change as a linear progression through the stages; people were supposed to progress simply and

discretely through each step" (Davidson, 1994, p. 1104). Although Prochaska and DeClimente (1998) re-conceptualized the model as a spiral to allow for relapse back to prior stages and recycling through stages, these models do not account for immediate and lasting change.

Loder (1989) writes how transformation involves a different logic that is "seemingly bizarre" (p. 183). What is *normal* development is "actually abnormally narrow" when we consider the full range of being human (Loder, 1989, p. 183). *Quantum* physicist Richard Feynman (1990) reminds us that, "The more you see how strangely nature behaves, the harder it is to make a model that explains how even the simplest phenomena actually work."

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Appendix A

Have you had a sudden, transforming experience?

Maybe you have had an experience similar to Ebenezer Scrooge or the Apostle Paul.

Researchers at Brigham Young University are looking for individuals that have had an **out-of-the-ordinary** experience of coming to know something and **suddenly changing core values.**

Would you be willing to participate in an hour interview about your experience?

You will receive ten dollars compensation and may receive a transcribed copy of the interview as a record of your experience.

Ebenezer Scrooge

Saul of Tarsus/The Apostle Paul

If you are interested in participating, please call Jonathan Skalski at (847) 980-4816 or email: suddenlifechange@gmail.com

Appendix B

Informed Consent

A Qualitative Study of Quantum Transformation

Introduction. This study is being conducted by Jonathan Skalski, a current graduate student of psychology at Brigham Young University, under the direction and supervision of Dr. Sam Hardy. This study seeks to better understand sudden, significant life change. You are being invited to participate because you have indicated that you have had a sudden experience that changed your life. The meanings and themes of life changing experiences are of interest to the researchers of this study, and could prove useful in therapeutic settings.

Procedures. You will be asked to sign an interview release form, provide some general information about yourself, and participate in an interview. The interview will last approximately 60 minutes. It will involve questions about your experience and how it has impacted your life. The interview will be digitally recorded. If the interview is transcribed as a typed document, you may receive a copy by email and may be contacted to briefly discuss research interpretations over the phone.

Risks/Discomforts. There are minimal risks for your participation in this study. You may experience some discomfort if we elect to discuss emotionally charged, potentially traumatic experiences. Such topics will be treated with compassion and gentleness. If you are uncomfortable with a part of the interview we can alter the direction of the discussion.

Benefits
 -You may experience some personal insight about your experience.
 -You may receive a transcribed written copy of the interview.
 -Previous studies (Miller & C' de Baca, 1994) suggest that you might experience some relief and gratitude to know that other people have had similar experiences.

Confidentiality. Everything we discuss in the interview will be completely confidential, unless we discuss something of imminent danger to yourself or others.

After the interview, your name will be disconnected from the information you provide. Any information that relates to your identity will be guarded as confidential and altered when presenting results of the study. You will be asked to sign an interview release form explaining the use of interview information. Please feel free to ask any questions.

All data will be maintained on the research lab computers, which will be in locked rooms, and access to the computers will be password protected. Paper materials and notes will be stored in file cabinets also kept in these rooms, and will be retained for a period of 5 years then destroyed. Only members of the research team will have access to the original data.

Compensation. You will receive $10 dollars for your participation in the study. Compensation will not be prorated.

Participation. Participation in this research study is voluntary. You have the right to withdraw at any time or refuse to participate entirely without jeopardy. Withdrawing from the study or refusing to participate will not affect your standing at BYU.

Questions about the Research. If you have questions regarding this study, you may contact Jonathan Skalski at jskalski@byu.edu 847-980-4816 or Dr. Sam Hardy at sam_hardy@byu.edu 801-422-7138.

Questions about your Rights as Research Participants. If you have questions regarding your rights as a research participant, you may contact Christopher Dromey, PhD, IRB Chair, 422-6461, 133 TLRB, Brigham Young University, Provo, UT 84602, Christopher_Dromey@byu.edu.

I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study.

Signature: Date:

Appendix C

Demographic Questions

1) What is your gender?

☐ Male

☐ Female

2) What is your age?_____

3) What is the highest level of education you have completed?

☐ Less than High School

☐ High School/GED

☐ Some College

☐ 2-Year College Degree (Associates)

☐ 4-Year College Degree (BA,BS)

☐ Master's Degree

☐ Doctoral Degree

4) What is your own yearly income?

5) What is your total household income, including all earners in your household?

6) What is your current marital status?

☐ Single, Never Married

☐ Married

☐ Separated

☐ Divorced

☐ Widowed

7) What is your religious affiliation?

☐ Protestant Christian

☐ Roman Catholic

☐ Evangelical Christian

☐ Jewish

☐ Muslim

☐ Hindu

☐ Buddhist

☐ Other: [   ]

8) What is your race?

☐ White, non-Hispanic

☐ African American

☐ Hispanic

☐ Asian-Pacific Islander

☐ Native American

9) What is the highest level of education your mother has completed?

☐ Less than High School

☐ High School/GED

☐ Some College

☐ 2-Year College Degree (Associates)

☐ 4-Year College Degree (BA,BS)

☐ Master's Degree

☐ Doctoral Degree

10) What is the highest level of education your father has completed?

☐ Less than High School

☐ High School/GED

☐ Some College

☐ 2-Year College Degree (Associates)

☐ 4-Year College Degree (BA,BS)

☐ Master's Degree

☐ Doctoral Degree

11) Do you remember about when your experience occurred?

Do you remember the exact year?	☐ No	☐ Yes, it was in _____
Do you remember the exact month?	☐ No	☐ Yes, it was in _____
Do you remember the exact date?	☐ No	☐ Yes, it was on _____
Do you remember the day of the week	☐ No	☐ Yes, it was on a _____

Do you remember the time of day when it began? ☐ No ☐ Yes, it was_____

12) How old were you when it happened?   _____ years old

13) Is there anything else I should know about you?

Appendix D

Contact Information

Name_____

Address_____City_____Zip_____

Primary phone number_____Secondary phone number_____

Email address #1_____Email address #2_____

Appendix E

Interview Release Form

I understand that Jonathan Edward Skalski (the Author) is preparing and writing a work (the Work), tentatively titled A Qualitative Study of Quantum Transformation for journal publication.

In order to assist the Author and the Press in the preparation of the Work, I have agreed (a) to be interviewed, (b) to the recording of this interview in any form and in any media, and (c) to provide information and other materials to be used in connection with the Work, including my personal experiences, remarks, incidents, dialogues, actions, and recollections that I may give to the Author or the Press (collectively, the Interview Materials).

I hereby grant to the Author and the Press, and to the licensees, successors, and assigns of each:

The right to quote, paraphrase, reproduce, publish, distribute, or otherwise use all or any portion of the Interview Materials in the Work, and in advertising and related promotion of the Work, in all forms and in all media throughout the world and in perpetuity.

My name and biographical data in connection with any use of the Interview Materials will be kept confidential and altered for presentation.

I acknowledge that I have no copyright or other rights in the Work.

I hereby release and discharge the Press, the Author, and the licensees, successors, and assigns of each, from any and all claims, demands, or causes of action that I may have against them regarding any use of the Interview Materials or regarding anything contained in the Work or in related advertising or promotional materials, including (but not limited to) any claims based on the right to privacy, the right to publicity, copyright, libel, defamation, or any other right.

Agreed and confirmed:

Signature: _____   Date: _____

Name (print): _____

Appendix F

INTERVIEW GUIDE

I am trying to understand *your* experience from your point of view, so I will be asking you lots of questions. As you talk about your experience, I will probably ask you what *you* mean by certain things. I may ask you to share a story or example of what you mean.

I am interested in 1) your experience, 2) what you came to know, and 3) how you have changed

YOUR EXPERIENCE…

First, I would like to hear your story. Please provide me with a detailed description of your experience.

All of the questions that follow are simply examples

WHAT YOU CAME TO KNOW… The Process of Knowing

Through the experience did you come to know something?

How did you come to know this? How did you feel?

Is this something that you knew before this experience?

HOW YOU HAVE CHANGED … The Changes

How are you different?

How are you the same?

What did you value (or what was important to you) before your experience?

What did you value (or what is important to you) after your experience? What about now?

… family, parents, siblings, romantic relationships, close friends, community, God

Future relationships?

How might you explain what happened to you?

We have discussed this, but how might you summarize what you learned from your experience? What else should I know to better understand… (your experience)? Is there anything else you would like to share with me? Do you have any questions?

Appendix G

Phenomenological Description, steps 2, 4, and 5 (Giorgi & Giorgi, 2003)

Step 2- Determination of parts: Establishing meaning units

7[Um, you know we sold me and my wife, sold our big home up at the top of the mountain in [biographical information omitted]. And uh, relocated to an apartment. To where we could get some more solid footing, you know financial footing. And get a…I guess a restart on things.] 8[And uh, this is kind of the part where it turns positive. Um, it really had-I felt like just all hope was lost and couldn't really see my life going in any other direction other than down, you know. At the worst part of this experience, things started-and I was…probably a few days away from you know seeing a psychologist, trying to get some help. It was just really mentally challenge-the hardest mental challenge that I've been through and um, seeing it affect me physically was even a little more scarier, that I couldn't control. The shakes I was having, you know, just constant nervousness and not sleeping at all. And uh, I had already talked to my wife about you know, gosh, going to see someone who could help me through this mentally.] 9[Um, any time you have financial challenges, that affects your relationship. We had three children at the time, um, and um, yeah basically went from riches to rags. You know in a very short period of time and so that had a-a relationship strain with me and my wife.] 10[But basically it's pretty simple how I uh, bounced back or recovered from this life changing event. And it was just realizing that…my best is enough. All I can do is all I can do and that's enough. Um, that um…I need not worry about things that are not in my control anymore. You know, and, I was trying to keep my arms around a situation, trying to find ways to borrow, and pay this person and worry how I'd pay that person and it just, try to keep things afloat. And um, you know, facing reality, you know. And um, so I guess it was my symptoms um, and confidence started-my symptoms started diminishing, in terms of the shaking and I started getting more sleep, when I just realized that…I've done all I can do. I can't do any more. I've used up all my resources. And my best just you know, has to be good enough because I can't offer anymore. You know, I'm… I put everything out there on the line and uh, um… has to be good enough for whoever it is. And they have to understand that you know. And uh, that's essentially when I started getting better was you know, stop worrying about things that aren't in my control. If it's in my control, if I have means to fix the problem (claps hands) work on it tirelessly. But if I don't, stop worrying about it, you know it's just destroying you, it's lowering your self confidence which is going to then cycle out of control and I rebounded nicely.]

Step 4- Transformation of meaning units into psychologically sensitive expressions

7[Um, you know we sold me and my wife, sold our big home up at the top of the mountain in North Salt Lake. And uh, relocated to an apartment. To where we could get some more solid footing, you know financial footing. And get a…I guess a restart on things.]

S. had to sell his large home and relocate to a small apartment in order to become more financially stable.

8[And uh, this is kind of the part where it turns positive. Um, it really had-I felt like just all hope was lost and couldn't really see my life going in any other direction other than down, you know. At the worst part of this experience, things started-and I was…probably a few days away from you know seeing a psychologist, trying to get some help. It was just really mentally challenge-the hardest mental challenge that I've been through and um, seeing it affect me physically was even a little more scarier, that I couldn't control. The shakes I was having, you know, just constant nervousness and not sleeping at all. And uh, I had already talked to my wife about you know, gosh, going to see someone who could help me through this mentally.]

S. felt like he needed to see a psychologist to receive help with his mental and physical stress.

9[Um, any time you have financial challenges, that affects your relationship. We had three children at the time, um, and um, yeah basically went from riches to rags. You know in a very short period of time and so that had a-a relationship strain with me and my wife.]

S. felt a strain on his familial relationships because of the great financial change.

Step 5- Explication of situated structure

S. felt a strain on his familial relationships because of the great financial change. S. believes that his relationship with his wife was the most effected by his experience. S. and his wife could not sleep through the night because of the stress. His wife had a hard time adjusting to their financial difficulty. S. felt that his wife had lost confidence in him as a provider and this affected his self value. S. and his wife did not fight during their hard time, but they did get depressed, and this affected their relationship. S. feels that his problems also affected his sister a great deal. She was concerned for his mental and health. S. feels that his children were not affected by his financial problems. S. feels that his relationship with his parents was not affected during his business's failure, other than an increase of their parental concern for him. S. believes that his wife was the most affected by his deteriorating mental state.