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SEMANTIC ROLE AGENCY IN PERCEPTIONS OF THE LEXICAL ITEMS SICK AND EVIL

by

Nathan Simmons

A thesis submitted to the faculty of

Brigham Young University

in partial fulfillment of the requirements for the degree of

Master of Arts

Department of Linguistics and English Language

Brigham Young University

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BRIGHAM YOUNG UNIVERSITY

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

SEMANTIC ROLE AGENCY IN PERCEPTIONS OF THE LEXICAL ITEMS SICK AND EVIL

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Inspired by an ongoing debate in the clinical sciences concerning the value of *evil* as a label for human behavior (Mowrer 1960, Staub 1999, Wellman 2000, Williams 2004 etc.), this thesis examines the semantic role of AGENT in the lexical items *sick* and *evil*. Williams makes the argument that the label *evil* removes responsibility from the doctor, whereas, the label *sick* empowers the doctor in bringing about a cure. While this view is not universally accepted in the field, it does bring to light an interesting question in applied linguistic semantics as to the assignment of agency with respect to *sick* and *evil*. Based on the close association of the meanings of *sick* and *evil* that stems from historical, psychological, and legal perspectives, this thesis assumes that the semantic feature [+/- RESPONSIBILITY] is assigned to either *sick* or *evil* at some point along a continuum. This continuum establishes EVIL at one pole and receives [+RESPONSIBILITY] while SICK is at the opposite pole and receives [-RESPONSIBILITY].

Using a variety of prompts to survey 106 respondents, the continuum model is shown to be only partially true. There is a correlation between NON-RESPONSIBILITY and SICK. Also, a continuum exists that allows the assignment of PARTIAL RESPONSIBILITY to both terms. However, there is no definitive significant correlation between RESPONSIBILITY and EVIL.

Further conclusions include the indication of adherence to a legal model of guilt, innocence, and insanity in the general conceptions of SICK and EVIL. Also, demographic variation shows little predictive potential in how people perceive SICK and EVIL. This thesis concludes with a proposal for an alternative model using a Greimas Square to represent the conceptions of SICK and EVIL that more appropriately fits the trends found in the survey data.

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CHAPTER 1: INTRODUCTION

1.1. INTRODUCTION. This thesis appeals to applied linguistic semantics to investigate the relationship between the words *sick* and *evil* in terms of how people use them to define responsibility for actions. These words have been closely associated throughout history, as will be discussed later in this chapter. However, contemporary views of society on the relationship between these terms seem to vacillate among the various steps between a causal relationship and no relationship.

Establishing a line that defines the separation between evil-motivated actions and sickness-motivated actions can prove difficult. The professional fields that address such behavior and hinge on such definitions, in particular psychology and law (though it may extend to other fields), are frequently mired in debate as to what results from sickness and what results from evil. For example, the degree of responsibility that an addict has for crimes depends entirely on whether addiction is viewed as a disease or as a moral infraction (Morse 2000, Herbert 1975).

Labeling something or someone *evil* according to Williams (2004) removes the responsibility for curing that *evil* away from the medical professional. To be useful, she argues, *evil* must give way to labels like *sick*, *ill*, etc. A person no longer commits evil actions, but instead suffers from a mental illness that can, somehow, be cured. Mowrer (1960) attributes the beginning of the debates that pit disease models against moral models to Freud's theories on psychoanalysis and suggests that, even in 1960, the case for *evil* as a motivator for misconduct had already been lost. However, the debate still continues as seen in the work of Staub (1999), and Wellman (2000). Staub argues that the

1

concept of EVIL "could lead ... to more focused exploration of the characteristics of persons, cultures, and situations that lead to harm-doing [e.g. genocide, group violence, bullying, peer pressure, sexual abuse, and inaction]" (181). Wellman (2000), similarly, condemns the "medicalization of racism" (meaning in effect, to brand racism as a kind of sickness) and criticizes the various disease models used to explain it.

This leaves us with the question: What is the current cultural meaning of *evil* and how does it differ from the current cultural meaning of *sick*? While this debate has arisen almost entirely in psychology, the answer itself requires an appeal to the meanings of the words and their effects. In other words, this issue can be thought of as a problem in applied linguistic semantics. This thesis explores aspects of theoretical frameworks used to describe meaning. Then, using the concepts of semantic features and thematic roles as a basis for analysis, this thesis describes my empirical study used to determine the semantic and usage differences between the concepts of SICK and EVIL, as represented by the words *sick* and *evil*.

I hypothesize that the word *evil* assigns the semantic role of AGENT primarily to the subject, whereas the word *sick* (in modern usage) assign agency to an argument other than the subject and that this assignment of agency is based on the semantic feature [+/-RESPONSIBILITY]. Furthermore, *sick* and *evil* establish poles at each end of continuum of RESPONSIBILITY and certain behaviors can therefore be considered both sick and evil simultaneously.

In terms of psychology, this assignment of agency to the subject, in the case of *evil*, has the effect of deferring responsibility for curing the patient away from the psychologist, but places that responsibility on the patient. However, in the case of *sick*, a

person is presumed to have much less, possibly none, of the responsibility/agency for being sick. Thus, agency is not assigned to the subject but to an entity other than the arguments contained in the sentence.

The final section of this introduction will give an overview of historical perceptions of the concepts of SICK and EVIL and how these perceptions have changed to shape the current view. The second chapter presents a review of literature dealing with semantic theories and will offer insight into how these theories apply to the relationship of SICK and EVIL using treatment of these concepts in religion, psychology, and law as a basis for conjecture concerning role assignment. The third chapter outlines a study that surveys public perception of these concepts in order to define the separation and overlap of the meaning of each. The forth chapter analyzes the data collected from the survey. The fifth chapter presents the conclusions drawn from the data and explains their significance.

1.2. A DIACHRONIC VIEW OF *SICK* AND *EVIL*. Attitudes toward illness and evil in pre-modern times tend to equate the two concepts. Kahn (1990) makes no distinction between them when discussing the healing process in pre-modern societies: "pain and evil could be expelled directly ... or indirectly" (79). He further reports the attitudes of pre-modern societies to illness and evil as both being contained by the term *misfortune*:

Primitive people attributed all misfortune – political, economic, social, physiological, and psychological – to the magic of enemies or the whimsy of wicked spirits. Believing that evil caused all pain, they took recourse in rites and rituals devised to rid individuals or whole communities of accumulated suffering (79).

Bloom (2005), similarly, notes that even modern pre-industrialized societies tend to share the perception of illness described in the previous example: "many cultures define illness as punishment for ill-willed behavior toward a deity, a spiritual ancestor, or a competitor" (251).

The congruency of the meanings of *sick* and *evil* is also seen clearly in historical records. This similarity comes through particularly in religious texts, no doubt due to the substantial religious implications of *evil* and its coexistence with *sin* and other terms that express moral infractions. A passage from the Bible presents our first example, "And as Jesus passed by, he saw a man which was blind from his birth. And his disciples asked him, saying, Master, who did sin, this man, or his parents, that he was born blind?" (John 8:1-2, KJV). Here we see a causal relationship assumed by the people asking the questions. The man is blind for a reason and that reason must be sin. Therefore, according to this approach, SICKNESS is the consequence of EVIL.

Centuries later, we see evidence that this causal perspective has amplified to the point that EVIL is caused by external forces. One of Shakespeare's characters attributes EVIL to astrological forces, as seen in this passage of *King Lear*:

We make guilty of our disasters the sun, the moon, and the stars; as if we were villains on necessity; fools by heavenly compulsion; knaves, thieves, and treachers by spherical predominance; drunkards, liars, and adulterers by an enforc'd obedience of planetary influences (1.2.134-140).

This citation is of particular interest because it assigns agency to external forces for moral misconduct. However, it is clear from the citation above that Shakespeare, though recognizing the popularity of this view, also takes issue with it through satire. This same type of causality is seen with the concept of ILLNESS through the etymology of *influenza*:

Italian *influenza* has the same meaning as its English cognate *influence*. But in the fifteenth century, sudden epidemics whose earthly causes were not apparent were blamed on the *influenza* of the stars. The report of a Roman epidemic which spread through much of Europe in 1743 brought the word to England (Mish 1991, 143).

The term *influenza* suggests an outside agency, such as astrological alignments. These

two, roughly contemporaneous, examples show that by the 18th century, if not

significantly sooner, responsibility for both EVIL and ILLNESS had been moved away from

the sufferer to external forces: astrology in both of these examples.

It is notable that the examples cited above rely on a set of culturally held beliefs in

order to explain the phenomenon of sickness. We can glean from this that prior to the

various discoveries of medical science leading to the ability to diagnose and treat illness,

the conventions of society left explanations of the unexplainable, sickness in particular, to

the prevailing religious and superstitious beliefs.

Before the rise of scientific medicine, it was obvious that certain people suddenly became feverish, wasted, and delirious. Then, with some good fortune, they would return to their previous state. The inference was that something had gone wrong, which was often attributed to demonic possession or witchcraft (Klein 1999:422).

The implication of this is that any affliction a person might suffer is a kind of retribution for evil committed.

Besserman (1989), citing the Oxford English Dictionary, also notes that, at times,

there has been complete synonymy between *ill* and *evil*:

Although *ill* is not etymologically related to *evil*, the two words have from the twelfth century been synonymous, and *ill* has been often viewed as a mere variant or reduced form of *evil*. The definitions of *ill* before it came to mean "sick" include "morally evil", "depraved", "vicious" ... (370).

Furthermore, Besserman asserts that "the word sick ... even in Anglo-Saxon times ...

took on, by metaphoric extension, additional pejorative meanings, including: 'spiritually

or morally ailing; corrupt through sin or wrongdoing' (OED s.v. 11.3)" and still maintains many of these meanings (370-1).

Despite the close relationship between *evil* and *sick* illustrated by these examples, modern medical discoveries have reversed the perceived causal relationship between the two concepts. Before, it was commonly thought that evil caused sickness, but now the paradigmatic view is that sickness causes evil by influencing mental stability leading to the commission of crimes. This reversal of presumed cause-effect is likely due to the modern assumption that the medical field has a fairly complete understanding of physical well-being. This presumption may overvalue actual medical advancement (Bloom 2005:258) but, although some physical illnesses remain uncured, they are still, the modernist assumes, largely understood. According to Scheurich (2002), we have cured most diseases capable of being cured and that "most modern diseases are chronic and more likely to be managed than cured" (16). Mowrer (1960) summarizes the status of the medical fields with: "Authority and power ought to go with demonstrated competence, which medicine clearly has in the physical realm but, equally clearly, does not have in 'psychiatry'" (302).

We may conclude that the assignment of causal agency reliably follows the perception of greater power or control. In pre-modern times, religion dominated the thinking of educated people. The principles of morality were thought to be well understood, but the causes of physical illness were not. Therefore the hypothesis that disordered morality caused disordered physicality seemed to be the most logical. In the modern age, the situation is exactly reversed. The principles of physical well-being are thought to be well understood, but the nature of, or even the reality of, moral rightness is hotly debated. Therefore, the hypothesis that disordered physicality causes disordered morality seems to be the most logical.

The majority of the, as yet, unexplained ailments that remain in the medical industry are found within the mind. That is, many of the causes and treatments of mental illness still elude health care professionals because of the difficulty of examining a patient's mind. Mental concepts such as *free will, accountability*, etc. are only explained inasmuch as they are able to be brought into the realm of physicality. Scheurich (2002) summarizes this process:

For much of history, free will seemed most limited by the decrees of fate, by the meddling of the gods, or by God's foreknowledge of human actions, but with the rise of modern science, the chief threat to free will has come from the aggressive reduction of mind to brain (16).

This change in perspective is evident by modern attempts to explain historical accounts of *evil-induced-sickness* such as the hallucinations experienced by the victims of the "witches" in 17th century Salem, Massachusetts. Modern explanations include grain stores infested with hallucinogenic fungus (Caporeal 1976), diseases such as *encephalitis lethargica* (Carlson 1999), or simply fraud (Spanos and Gottlieb 1976). Modern explanations do not include the explanation given by the people living in Salem at this time: witchcraft.

However, the issue as to who is responsible for illness has yet to be resolved. There are those who argue that "the sick man himself creates his disease" (Besserman 1989:386) and assign the patient responsibility for being sick. Similarly, some argue that the healing process benefits from patient participation and therefore assigns the patient a degree of responsibility for bringing about a cure. Bloom (2005) supports this view: "There are several areas of modern research that support the value of providing an explanation of the disease process and some opportunity for the patient and family to do something about the illness" (55). That is, patients have some ability to affect a cure when the process is explained.

While the previous discussion has tried to indicate and generalize trends in perception, it should be apparent that a precise definition of the concepts of SICK and EVIL is difficult to determine. Besserman very appropriately summarizes the historical attitudes toward sickness with:

In the confusion (or call it the variety) of terms for being sick in English, one finds a reflex of centuries and more of confused (or call them various) ways of thinking about illness: as divine punishment, random biological accident, or psychosomatic response. We have never known for sure, and our language reflects our uncertainty and imperfect knowledge, our magical thinking and wishfulfillments, alongside our more neutral observations of the way things really are, or seem to be (1989:371-2).

The variety of definition described above demonstrates the vacillating relationship that *sickness* holds with *evil*. While obtaining a precise definition of any word is difficult due to the complexity of language and contextual influences, defining the relationship between *sick* and *evil* reduces the scope of inquiry to the difference, if any, that separates these two words. Specifically, this thesis intends to explore what function each term plays in usage and how each term affects its corresponding subject. The next chapter will explore applicable linguistic literature and discuss the possibilities of formulating better working descriptions of the relationship between *sick* and *evil* based on that literature.

CHAPTER 2: REVIEW OF LITERATURE

2.1. INTRODUCTION. This thesis builds on the assumption that establishing the meaning of any particular word is best determined by refining the focus of inquiry. That is, the more specific the definition of *meaning*, the more likely an investigation of meaning is to yield reliable results. In order to investigate the meaning of the words sick and evil, this thesis looks specifically at the aspect of meaning that involves assigning the thematic role AGENT to an argument by the stative adjective *sick* or *evil* based on the semantic feature [+/-RESPONSIBILITY]. As justification for these assumptions, this chapter presents a general review of semantic literature that treats such aspects of meaning as thematic role assignment, stative adjectives, and semantic features. The first section gives an overview of general semantic theory and points out the difficulty inherent in developing a theory of meaning and the benefit of specificity in pursuing word meanings. The second section reviews research on thematic roles and presents arguments for the use of semantic features in defining roles as well as the possibility of stative adjectives motivating argument assignment. The third section demonstrates the application of the thematic role discussion to *sick* and *evil*. The fourth section considers the perspectives that religion, law, and psychology could have on how thematic roles are assigned to *sick* and *evil*. The final section reviews several methods for gathering data.

2.2. DEFINING MEANING. The search for a theory of meaning that produces complete, accurate, and definitive descriptions of word usage has generally shown that such descriptions are extremely elusive. This is because meaning is heavily dependent on

context, interpretation, and the mutual understanding of numerous individuals who use a variety of independent experiences to evaluate and refine their understanding of any particular term. Research into meaning, therefore, tends to focus on some specified aspect of meaning. In defining meaning, then, success depends largely on the purpose of the research. Naturally, differences of purpose and interest in varying aspects of meaning have given rise to various approaches and definitions of meaning.

Some of the earliest research into defining meaning is found in the philosophical writings of Plato. He uses the Platonic dialogue in his approach to defining words by asking questions with two options as in this excerpt taken from Plato's *Sophist* as quoted in Allen (2001):

Is angling not a skill or a skill? It is a skill. Is the angler a creator or an acquirer? An acquirer. Is the acquisition by consent or capture? By capture. Is it open-capture or stealthy capture? Stealthy capture. Is it capture of nonliving or of living things? Of living things. Are the living things land animals or water animals? Water animals. Are the water animals caught waterfowl or fish? Fish. Are the fish caught by a net or by striking a blow? By striking a blow. Is this done by using fire at night or by using barbs in the day-time? Using barbs by day. Are the fish struck by a trident from above or struck from below with a hook? From below, with a hook (25-26). The dialogue above shows a series of binary options presented to the examinee to determine the nature of "angling." Specifically, Plato's "purpose was to fix what a

contemporary angler did to merit the title aspalieutes," in other words, the qualities that

activated the use of the Greek term for a fisherman. Plato is essentially presenting possible semantic features that, combined, will make up a rough definition of what "angling" means (25-26). Though this does not, necessarily, demonstrate Plato's working theory or definition of *meaning*, it does indicate an approach to determining meaning through the use of a specific focus: semantic features. The use of semantic features to determine meaning exemplifies the need to refine the specific aspects of meaning that are being investigated. The nature of semantic features allows comparison between certain aspects of words. If certain semantic features are shared among two words, they can be said to be synonyms. If opposing features are shared among two words, they can be said to be antonyms. Semantic features are an important aspect of investigating meaning because they allow the researcher to compare words on a basic level. However, one cannot hope to compile a complete list of all semantic features of a word due to the infinite number of aspects, features, or characteristics of that word's meaning. Semantic features will be discussed more at length later in this chapter as they pertain to the discussion of thematic roles. For now, "it is sufficient to say ... that semantic features are a necessity, not a luxury, for any person attempting to get at the basis of meaning" (Nilsen and Nilsen 1975:86).

Further justification for the claim that inquiry into the meanings of certain words requires refinement comes from the framework of the field itself. Through time, the various frameworks of semantic inquiry have diverged establishing different perspectives on their individual pursuits. Fodor and LePore (1993) describe this divergence: It's an achievement of the last couple of decades that people who work in linguistic semantics and people who work in the philosophy of language have arrived at a friendly de facto agreement as to their respective job descriptions. The terms of this agreement are that the semanticists do the work and the philosophers do the worrying. The semanticists try to construct actual theories of meaning (or truth theories, or model theories, or whatever) for one or another kind of expression in one or another natural language The philosophers, by contrast, keep an eye on the large, foundational issues, such as: what's the relation between sense and denotation; what's the relation between thought and language; whether translation is determinate; and whether life is like a fountain (15).

Though partially tongue-in-cheek, this statement indicates an ideological shift between

the two major fields pursuing semantic studies: linguistics and philosophy.

Despite this separation, there is still a great deal of overlap between these two

fields. As Harris (1993) states, "many of the most substantial contributions [to

understanding meaning] have come from philosophers" (12). Wittgenstein, for example,

provides definitions of meaning that could easily be accepted by linguists:

Wittgenstein's understanding is clear, a definition – verbal or ostensive – is important only to the extent that it tells us how to use a word. Explanations of meaning are no explanations at all if they do not tell us how to use a word. With such an understanding Wittgenstein defines the meaning of a word as *its use in language* (Brown 1976:390-1; italics added).

Definitions of this sort imply a focus on the contextual environment in which we find a

word rather than simply its definition (Harris 1993). Fodor and LePore (1993) emphasize

this point by referring to the philosophically perennial "Morning/Evening Star"

illustration:

The expressions "the Morning Star" and "the Evening Star" mean different things, despite their both being attached to Venus, because they have different *roles in the (English) language*. Frege says "only in the context of a sentence does a word have meaning" and Wittgenstein adds to that "to understand a sentence is to understand a language" (18).

This statement describes meaning as intrinsically attached to context, to the point that meaning does not exist outside of that context. Although it may be a bit extreme to claim

that meaning exists "only in context", it cannot be denied that context has an extremely powerful effect on meaning.

Katz, who also spans the gap addressing papers both to philosophers (1964) and linguists (1980), implies a wide variety of definitions for meaning as he declares his intended definitions as:

...not some specially concocted notion; it is the ordinary, pretheoretical one employed when either linguists or non-linguists speak of words as having the same meaning (being synonymous), of sentences as being meaningful or meaningless (being semantically deviant or non-deviant), of expressions as having more than one meaning (being ambiguous), of noun phrases as being redundant, and so on. Other uses of 'meaning' occur in ordinary speech, but they are not matters of linguistic structure. For example, people sometimes say *Smoke means fire; Freud discovered the meaning of verbal slips; The decline and fall of Rome has meaning for contemporary America; Bogart and Bergman both meant a great deal to Woody Allen.* But references to causal significance, underlying intention, historical lesson, and life importance are extra-linguistic (1980:1-2).

Here, Katz distinguishes between linguistic and non-linguistic definitions of meaning

(obviously preferring linguistic meaning).

There is a sometimes indistinguishable separation between philosophical and linguistic semantics. However, despite this, and the relevance of philosophy to issues of morality (Katz 1964, Wedgwood 2001) and the existence of evil (Berguno 2006), it is the linguists who "do the work," as Fodor and LePore pointed out earlier. That is to say, the task of defining words moves away from the philosophies and theories on meaning into more empirical pursuits. Modern linguists have made great strides in semantic studies, and it is to modern linguistic approaches that we will turn to further our understanding of the meanings and relationship of SICK and EVIL.

Certainly most, if not all, attempts to describe a theory or model of meaning have met with criticism, which may lead one to question the validity of any particular approach. It would seem that the most accurate definition of any word is that word itself. Of course, a theory on meaning that proposes nothing beyond this definitional circularity provides no insight into meaning and leads nowhere in terms of increased understanding of the target word.

According to C.S. Peirce, such pure circularity is avoidable, but the definition of words in terms of other words is not:

The meaning of a representation can be nothing but a representation. In fact, it is nothing but the representation itself conceived as stripped of irrelevant clothing. But this clothing never can be completely stripped off; it is only changed for something more diaphanous (CP 1.339).

Therefore, in order to approach meaning, it is necessary sometimes to accept a degree of vagueness or generality (i.e. the diaphanous) in a definition, in exchange for the stripping away of irrelevant detail. With that in mind, this thesis refines its intended definition of meaning to focus on the thematic roles potentially assigned by *sick* and *evil* and how that assignment of roles is affected by the semantic feature [+/- RESPONSIBILITY].

2.3. THEMATIC ROLES. The difficulty inherent in defining meaning overflows into the definitions of the tools used by semanticists. Specifically, there is much disagreement among researchers as to the proper inventory, determination, and application of THEMATIC ROLES (also referred to as semantic roles, θ -roles, and thematic relations). As Dowty (1991) puts it,

There is perhaps no concept in modern syntactic and semantic theory which is so often involved in so wide a range of contexts, but on which there is so little agreement as to its nature and definition, as THEMATIC ROLE (or THEMATIC RELATION) and its derivative, THETA-ROLE in Government-Binding (GB) theory" (547).

Dowty further points out that "many linguists seem to assume that linguistic theory should include a finite ... language-universal canon of thematic roles" (548). Despite this assumption, thematic role theory has its detractors for reasons that Levin and Rappaport Hovav (2005) point out:

The use of semantic roles has been criticized because it is difficult to find reliable diagnostics for isolating precisely those arguments bearing a particular role. There do not seem to be diagnostic tests which can be consistently applied to an argument with relatively uncontroversial results to determine whether that argument bears a particular role in the way that there are tests for, say, lexical and syntactic categories (38).

Subsequently, many articles on the subject attempt to clarify, refine, expand, simplify, etc. the previous theories and definitions. While an exhaustive review is beyond the scope of this thesis, this section will address some aspects of these theories and how they relate to the *sick/evil* relationship.

DEFINING THEMATIC ROLES. Thematic roles are relatively new, being introduced by Gruber in 1965 as thematic relations and showing significant correspondence to Fillmore's DEEP CASES (1966,1968). There are also aspects that refer back to "ideas of structuralists such as Frank Blake (1930), and ultimately to Pāņini's *kārakas*" (Dowty 1991:548). An obvious "syntax-semantics interface" motivated work with thematic roles in both fields of syntax and semantics with Chomsky introducing the concept into Government-Binding theory, and Jackendoff, "the only semanticist who has studied the concept extensively," developing a semantic approach (Dowty 548).

The traditional list of roles defined by linguists tends to consist of AGENT (*John* kicked the ball), Patient (John kicked the *ball*), Goal (John kicked the ball to the *tree*), Source (John kicked the ball from the *house* to the tree), Experiencer (The ball hit *John*),

etc. However, there is seldom complete agreement of terms when attempting to compile a complete list. New roles are frequently proposed to address inadequate descriptions of an argument's function in a sentence. A few examples of proposed roles are: NEUTRAL (Rozwadowska 1988), LANDMARK (Jackendoff 1982), and SUBJECT (Baker 1985) (taken from Dowty 1991:549). Even Dowty, after discussing this inconsistency, later proposes the new role of INCREMENTAL THEME.

There have also been a number of attempts to collapse two or more roles into larger categories or suggesting that two roles do not present enough distinction to merit separate categories. A few of these proposals include (taken from Dowty 1991:599):

- (1) Foley and Van Valin (1984) Macro-roles: all thematic roles are entailed by the ACTOR and UNDERGOER roles
- (2) Talmy (1985) and Culicover & Wilkins (1986) Separate thematic roles into 2 tiers: Action Tier (AGENT, PAITENT) and Motion Tier (THEME, SOURCE, GOAL); with Jackendoff (1983) adding Temporal Tier (aspect and other time adverbials)
- (3) Keenen (1976, 1984) all thematic roles are entailed by SUBJECT and ABSOLUTIVE roles
- (4) Dowty (1991) all thematic roles are entailed by the Proto-Roles: PROTO-AGENT and PROTO-PATIENT

The variation that appears in the literature regarding Thematic Roles likely stems

from the way in which roles are categorized. There is a tendency to define roles in terms

of semantic features (Rozwadowska 1988, Zaenen 1988). Nilsen and Nilsen (1975:98)

exemplify this by defining AGENT with the features [+ANIMATE] and [+CAUSE],

EXPERIENCER with the features [+ANIMATE] and [+EFFECT], INSTRUMENT with the

features [+INANIMATE] and [+CAUSE], and OBJECT with the features [+INANIMATE] and

[+EFFECT] as seen in Figure 2.1 below:

Deep Case	Inherent Feature	Relational Feature
AGENT	ANIMATE	CAUSE
EXPERIENCER	ANIMATE	EFFECT
INSTRUMENT	INANIMATE	CAUSE
OBJECT	INANIMATE	Effect
D ¹ O 1 O		1

Figure 2.1: Semantic features defining roles

This limited set of categories is easily differentiated by the simple binary distinctions provided in the chart. However, the lines may become a bit blurry if we included a role such as PATIENT in the set. PATIENT would likely be assigned the roles [+ANIMATE] and [+EFFECT] and becomes indistinguishable from EXPERIENCER. If we feel that the role of Patient merits distinction from the role of EXPERIENCER it becomes necessary to add additional features. It is easy to see how a slight increase in the number of categories in a set of roles can quickly complicate feature assignment. Despite this difficulty, Nilsen and Nilsen are loathe to disregard the importance of semantic features:

Although semantic features are extremely complex, they must be directly dealt with because it is through semantic features that we can determine how closely various lexical items are related to each other. The compatibility of two lexical items is a function of the compatibility of the features of these two items (1975:85).

Though Dowty (1991) rejects the "phraseology" of semantic features due to the reality of unclear category boundaries, his Proto-roles essentially divide up the sets of features into two lists as shown in Figure 2.2 (as summarized by Levin and Rappaport Hovav 2005:53-54).

Contributing	-	volitional involvement in the event or state		
properties for the	-	sentience (and/or perception)		
Agent Proto-Role:	-	causing an event or change of state in another participant		
-	-	movement (relative to the position of another participant)		
	-	exists independently of the event named by the verb		
Contributing	-	undergoes change of state		
properties for the	-	incremental theme		
Patient Proto-Role:	-	causally affected by another participant		
	-	stationary relative to movement of another participant		
	-	does not exist independently of the event, or not at all		

Figure 2.2: Summary of Dowty's Proto-Role properties.

Dowty assigns an argument to either the PROTO-AGENT or PROTO-PATIENT according to which list corresponds to the majority of that argument's entailments (it is not necessary that an argument possess all of the properties of either Proto-Role and can contain properties from both). Although the properties listed above can easily be reduced to standard semantic feature format (i.e. evaluating an argument for the PROTO-AGENT "features" could appear as: [+/-VOLITIONAL], [+/-SENTIENT], [+/-CAUSAL], [+/-MOVEMENT], and [+/-EXISTENTIAL]), this approach still serves Dowty's purpose of avoiding rigidity among category boundaries by allowing an argument to entail features from both sets of properties. As Dowty summarizes: "The variety of semantic distinctions that correlate with syntactic and lexical patterns in one way or another is surely enormous. To postulate thematic role types for each of them is, quite possibly, to dilute the notion beyond its usefulness" (1991:561).

Dowty's reductionist approach to thematic roles is well-suited to this thesis due to the narrow scope of its investigation. In fact, this thesis is really only interested in defining one role, that of AGENT. In particular, this thesis hopes to find that the AGENT role is assigned to the subject by *evil* but not by *sick*. While one might assume that failure to assign the AGENT role to an argument would lead to a default assignment of the PATIENT role, indeed this is what Dowty implies, I have limited the definition of agency to the presence of the semantic feature [+ RESPONSIBLE]. Therefore, I do not attempt to assign any roles but AGENT, as any role that does not bear this semantic feature is left undefined.

The justification of reducing the definition of AGENT to [+RESPONSIBLE] lies in the focus of our research. Ultimately, this thesis is trying to discover whether the subject of *sick* or *evil* is responsible his or her behavior while in a state of evil or sickness. Responsibility for behavior implies the various definitions for AGENT that have been discussed above. These are: causation, volition, animacy, sentience, etc. However, these terms, individually, are too specific and use a high register that may complicate the survey instrument discussed in Chapter 3. Therefore, this thesis focuses on the term *responsibility* as a simplified summary of the various definitions given for AGENT.

ARGUMENT ASSIGNMENT. Argument assignment is typically considered to be governed by the verb. That is, each verb carries a certain number of roles that it can assign to the arguments in the sentence. For example, the verb *kiss* is a "two-place predicate" and assigns the roles AGENT and OBJECT. *Give* is a three place predicate and assigns the roles AGENT, EXPERIENCER, and OBJECT (Nilsen and Nilsen 1975:91). This simple description implies a one-to-one correspondence between arguments and roles. However, many researchers argue against such a correspondence (Levin and Rappaport Hovav 2005). Jackendoff (1987), for example, argues that some verbs assign multiple roles to just one argument, some assign one role to multiple arguments, and some verbs assign roles to no arguments. This means, for example, that the subject of a sentence can be both the AGENT and the SOURCE or can consist of multiple arguments each being the

AGENT. This also means that some roles are assigned to no argument at all.

Another trend that has been largely redirected is the tendency to assign a subject the role of AGENT and an object the role of PATIENT:

Since agent-patient verbs constitute a significant part of the class of transitive verbs of every language and are so uniform in their argument realization, many theories of argument realization make direct reference to the semantic roles agent and patient—or its relative theme—and have rules which explicitly realize agents as subjects and patients as objects. However, these simple statements are misleading for two reasons. First, 'agent' and 'patient' are not the only semantic notions associated with subject and object. Second, subject and object often have multiple morphosyntactic realizations, and a complete theory of argument realization needs to take this into consideration (Levin and Rappaport Hovav 2005:24).

Subsequently, much literature has been dedicated to pointing out the flexibility linguists have in identifying thematic roles associated with almost any noun phrase in a sentence. Nilsen and Nilsen (1975:93-95) have a very thorough list of example sentences assigning each of fifteen separate roles to a multitude of nominal arguments. Levin and Rappaport Hovav (2005:24-32) likewise dedicate eight pages to supplying discussion of the variety of roles that can be assigned to any particular part-of-speech. This flexibility is necessary to the success of this thesis since the typical sentence structure used in describing something as *sick* or *evil* is: "<subject> *is sick*" or "<subject> *is evil*." If we were to assume that all subjects were AGENTS, there would be no possibility of further discussion.

PREDICATION FROM NON-VERBS. So far, the discussion has focused entirely on verb-controlled role assignment. However, some researchers believe that thematic roles exist beyond those governed by the verb. Barker (1998) argues that "it is quite possible a priori that nominal expressions in general have *their* own characteristic thematic system

that is ultimately independent of the verbal one" (696). This is a step beyond previous theories that, if they allowed for nominal thematic roles at all, they considered them derived from the verbal structure (695).

Similarly, there appears to be a blurring of the lines between syntactic categories in general, which indicates further transference of thematic role assignment beyond verbs to adjectives. Stative adjectives, in particular, are capable of thematic role assignment. Stative adjectives are adjectives that describe a state of being (such as *red, alive*, or *intelligent*) and contrast with active (or dynamic) adjectives, which describe qualities capable of change (such as *brave, calm*, or *rude*). A large amount of research has been performed that supports this phenomenon in other languages (Denny 1978, Huehnergard 1987, Mithun 1991, Ross 1998), as well as English. Givón (1970:816), citing research by Ross and Lakoff (1967:15), states that:

English adjectives, much like English verbs, seem to divide into stative and active ones. After showing great parallelism in the syntactic behavior of the two classes, using various test frames, Ross & Lakoff concluded that there existed "strong evidence for the assertion that what traditional grammarians called adjectives and verbs are really members of the same major grammatical category ..." (830).

What adjectives and verbs have in common is that both categories ascribe properties (as predicates) to at least one referring expression (as argument). Transference of the predication properties from a linking verb like *is/seems/appears* to a stative adjective (like *sick* or *evil*) is likely due to the lack of semantic elements of the linking verb.

Even though *to be* is the most common stative verb (McIntosh 1977:111), it can do little in terms of communicating semantic information. Because of this, Nilsen and Nilsen (1975:88) propose that stative adjectives assign the thematic role: "Because of the fact that *is* ...has basically a grammatical function, we will not consider it the predicator. Instead we will think of the word *tall* as the predicator in [the sentence *John is tall*]."

Because neither *sick* nor *evil* commonly act as verbs, it is necessary to consider the possibility that parts of speech other than verbs can assign thematic roles to arguments. The next section defines both *sick* and *evil* as stative adjectives and discusses more in depth their potential for motivating argument assignment.

2.4. APPLICATION OF ROLES TO SICK/EVIL. The previous discussion concerning stativity and how thematic roles are assigned is directly applicable to *sick* and *evil*. Both of these terms are stative adjectives as evidenced by their failure to pass the *progressive test* as defined by McIntosh (1977), "If a predicate sounds odd or un-English in the progressive ... we shall call it stative" (111). Example 2.1 below demonstrates how *sick* and *evil* demonstrate failure of this test (the first set of sentences is an example taken from McIntosh to demonstrate success and failure of the test):

Example 2.1

- (1) a. The girl is healthy.
 - b. *The girl is being healthy.
 - c. The girl is noisy.
 - d. The girl is being noisy.
- (2) a. John is sick.
 b. ?John is being sick.
 c. John is evil.
 d. ?John is being evil.

The first set of instances demonstrates how a stative adjective like *healthy* cannot be used in the progressive, while a dynamic adjective like *noisy* can. The second set of instances applies this test to *sick* and *evil*. Both fail the progressive test; although, in the case of *sick*, there is also a dynamic interpretation (synonymous with *gross* or *disgusting*) that allows acceptability. Likewise there is a modern colloquial reading of *being evil* (synonymous with *difficult* or *uncooperative*). However, these interpretations are unrelated to the concepts of mental illness and moral choice that this paper focuses on.

As previously stated, Nilsen and Nilsen allocate to the stative adjective the function of role assignment. They further argue that this assignment is limited to the role of OBJECT. "The reason that *John* is an OBJECT in '*John* is tall,' and an AGENT in '*John* snores,' is that in the latter sentence John is doing something. *Snoring* is an action while *being tall* is a state" (100). However, in defining the features of an OBJECT, Nilsen and Nilsen include [-ANIMATE] (98). Since *John* is very likely animate, we will assume that Nilsen and Nilsen assign him the OBJECT role because he is inanimate in terms of his ability to make himself tall. That is, there is no animate act that John can do to increase his height.

However, if the subject of a stative adjective can influence its state, there should be some flexibility as to its assigned thematic role. Mithum (1991) argues this point, "Arguments of inherent-state predicates [in Central Pomo, a Native American language] are cast as grammatical agents" (521). Mithum also gives several examples of this type of inherent-state predicate: "I'm strong", "I'm good", "I'm alive", etc. Argument realization is much clearer in Central Pomo since the arguments are marked with morphemic indicators of their semantic role. While there is no reason to assume that the arguments for English stative predicates will act similarly, these examples open the possibility for consideration, since English arguments receive no such morphological denotation. Figure 2.3 shows a proposed list of stative adjectives that may be subject to influence from an agentive argument:

Stative adjectives influenced	Stative adjectives	Stative adjective not
by subject	partially influenced	influenced by subject
Hungry	angry	frozen
thirsty	intelligent	tall
humble	unforgivable	short
unbeatable	fearful	bald

Figure 2.3. Variation of stativity

It would seem that in many situations, a person, because of his/her animacy, is able to change his/her state. There is, of course, room for debate as to which states are able to be influenced and to what degree, especially when it comes to emotional and mental states. With *sick* and *evil* defined as stative adjectives, and with the assumption that each arises from mental influences, we are left with the subsequent task of determining to what degree these states can be influenced, if at all.

2.5. EXTERNALLY IMPLIED ROLE ASSIGNMENT. In the case of evil as a stative

adjective and from the perspective of theology, there seems to be little disagreement that a person has control over his/her state of evil or good. This is apparent in many of the world's religions (Palmer et al. 1997) including:

- (1) <u>Christianity</u>: Though some sects believe in pre-determined salvation, many consider evil the consequence of sinful acts and require repentance, confession, or profession of faith to become "good" again.
- (2) <u>Judaism</u>: The Law of Moses as described in the Torah defines how a person becomes evil or "unclean" and the processes by which they can become good or "clean" again. Each change of state requires participation in a rite or ritual.
- (3) <u>Hinduism</u>: Evil actions attach Karma to one's soul thereby affecting the status of that person's next incarnation. Eliminating Karma involves repetition of prayers, good deeds, and other acts of devotion.
- (4) Islam: Salvation and prosperity are considered rewards for faith and devotion.

This list is, by no means, exhaustive. However, these four religions represent some of the wide diversity of religious people and show that the followers in each are responsible for creating their evil state and for removing themselves from it. Therefore, a strictly

religious perspective is likely to assume that a person has complete ability to influence his/her state of evil and failure to become good is due to the individual's choice.

However, religion is not the only factor that defines the sources of evil. Staub (1999) brings *evil* back to psychology and examines the social, cultural, and personality conditions that give rise to it. "Evil usually begins when profoundly important needs of human beings are not fulfilled" (181). Bersoff (1999) and Tsang (2002) examine situational factors that lead to the rationalization of, what they call, unethical behavior and immoral behavior, respectively. Similarly, Moghaddam (2005), more specifically, explores the "staircase" that leads to terrorism. While these articles do not deny responsibility to the actor, they do imply a possible responsibility on the part of the psychologist or society in general to recognize and eliminate the conditions that lead to justification of evil actions. This is, to a large degree, a continuation of the discussion began in Chapter 1. However, this adds the perspective of ability to influence the state of being evil.

This discussion shows that there is some possibility that an evil state is only partially subject to influence from the individual. If a state of being is brought about through social or environmental conditioning, it stands to reason that transforming that state is also greatly influenced by a change of the social or environmental conditions. Therefore, there may be room for debate as to which argument receives the AGENT thematic role in a sentence like *John is evil*. Religion would likely say that *John* is the AGENT. Psychology opens the possibility that *John* is not the AGENT.

In the case of *sick*, there is also a lot of variation as to defining responsibility. Klein (1999) characterizes one view by stating, "Because the sick person has
involuntarily impaired functioning, it is only reasonable to exempt him from normal responsibilities" (421). If the sick person is exempt from responsibility from his/her state of being sick, it is reasonable to assume that the individual has little influence to affect or change that state. Bringing about a change of state in terms of sickness is generally the responsibility of the doctor.

However, the individual is able to influence his/her state to the degree that he/she complies with a doctor's recommendations. Scheurich (2002) points out that the behavior of doctors toward their patients reflects whether or not the doctors feel that the patients are complicit in their illnesses. That is, the curative process for some disorders requires that the patients participate. When the patients do nothing, the doctors are frustrated and consider them "difficult patients." So, *John* may have different degrees of responsibility in sentences such as *John is addicted* and *John is schizophrenic* and, therefore, the role of AGENT becomes difficult to assign, and may likely be assigned to an argument external to the sentence. This becomes especially true when the role of the psychologist is defined as that of a counselor giving "support, consolation, suggestion, persuasion, and advice" (Schachter and Kachele 2007:437), rather than the more traditional "healer," which places the majority of the responsibility on the doctor for bringing about a cure.

The justice system also contributes to our understanding of role assignment in this area by determining a defendant's degree of responsibility for criminal actions and assigning "guilt", "innocence", or "insanity" (with varying degrees of severity) (Ferrell 1992). However, the same difficulty faced by psychologists in defining who is sick/insane applies to the legal system making it increasingly difficult to establish clear guidelines for determining responsibility (Finkle and Slobogin 1995, Tolmie 2001).

There also seems to be a tendency for increased medicalization of criminal activity (Wellman 2000, Albee 1997) making it that much more difficult to assign responsibility due to the paradigm shifts that such medicalization elicits.

This discussion shows that the ability that a person has to influence a state of being evil or sick is not clear. While it is likely that few people will claim that the sick person is completely responsible for a state of being sick or for a change to a state of wellness, it is also evident that there is not complete agreement that the sick person has no responsibility for his/her state. Similarly, the evil person is unlikely to be completely exonerated from being in a state of evil and is likely capable of significant influence over a change of state. However, again, it is likely that total responsibility for change is seldom assigned to the evil person when an appeal to the circumstances of life can be made for shaping that person into his/her state.

In summary, there is support for the perspectives that a sick person has no responsibility or partial responsibility for his/her state. There is also support for the perspectives that the evil person has full responsibility or partial responsibility for his/her state. This suggests that *sick* and *evil* do oppose each other with degrees of responsibility making up a continuum between them. This view was tested using the empirical studied described in Chapter 3. Several data gathering methods that inspired the construction of the study are described in the next section.

2.6. DATA GATHERING. In gathering data, this thesis uses a combination of approaches, the inspiration and justification for which are described in this section. The method used to gather semantic data depends largely on how *meaning* is defined but does

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not always require the complexity of a formal theory. Meaning can be described simply: the movie that plays in your head when you hear a word (Robertson 2005), for instance. This statement harks back to Wittgenstein's definition cited above: the meaning of a word is its use in language. Similarly, Violi (2000) argues that meaning depends largely on experience. The difficulty with these definitions of meaning is that they imply a potential infinite amount of information in defining a word. For data to be meaningful it must allow informants to include as much context, experience, and other contributing factors as can be meaningfully processed (Wray et al. 2001).

It is impossible to process diverse data points which can be correlated in an essentially infinite number of ways. Of course, there are methods that can be applied to these definitions that avoid the complexity of infinite possibilities. Many researchers gather a few instances of a word and compile a miniature corpus from which they extract the apparent meaning of that word or the changes in meaning from one time to another. Examples of this approach include:

- <u>Citing single instances of several words that demonstrate the focus of the study</u> Lehrer (1998) discusses a productive addition to the meaning of *-ist/-ism* illustrated by the coinage of words such as *speciesist, fossilism, auntism,* etc. These neologisms make up the corpus from which Lehrer draws conclusions.
- (2) <u>Citing multiple instances of a few words that demonstrate the focus of the study</u> Shapiro and Shapiro (1993) discuss the inception of *Wimp English*, communication in the service industry marked by exceptional hedging and the use of the modal *would*, participial or deverbal adjectives, and the phrase *if you will*. A corpus is generated from newspapers and third party conversations.
- (3) <u>Comparing word usage from two time periods</u> Hamp (1983) discusses the amelioration of *helluva* drawing evidence from a corpus consisting of personal conversation and the author's recollection of the meaning in the 1930's.

In each of these examples, the researcher gathers data to provide a very basic corpus. By establishing a small body of evidence, the researchers are able to draw conclusions about the words or aspects of words they are studying.

The scope and complexity of the data gathering can be increased to strengthen arguments for a particular semantic analysis. The following are examples of semantic data-gathering methods with increased complexity:

- (1) <u>Combines survey with semantic features</u> Maxwell (1985) surveys residents of several Mayan villages to collect numerous instances of illness words and then again to determine the semantic features of those words.
- (2) <u>Combines corpus with semantic features</u> Cowie et al. (1999) compared published lists of emotion terms against informant responses to generate a list of common emotion terms and then tested subjects on the relevant features.
- (3) <u>Combines corpus with survey</u> Kiesling (2004) assigned his students to gather instances of the word *dude* to compile a corpus. He then distributed a questionnaire requesting information regarding the contexts in which an individual would use *dude*.

In each of these examples, the researcher gathers data from informants in order to determine meaning. Though the researchers do not specifically define meaning, the methods of data gathering used in these examples suggest that they define meaning as determined by usage and context. The articles cited in the above examples reach a conclusion about meaning that pinpoints a specific aspect of that meaning. Naturally, it would be tedious to expand a definition of a term to the complete list of its semantic features. Instead, discussion focuses on only those aspects that are most relevant or subject to variation from a standard.

This thesis is designed to investigate the hypothesis that *sick* and *evil* are partially defined by how they assign the AGENT role, by their place on a continuum of responsibility, and that demographic variation influences a person's use of either *sick* or *evil*. In order to proceed with the investigation, this thesis has targeted specific aspects of meaning, namely: the thematic role of AGENT defined by the presence of the semantic feature [+ RESPONSIBLE]. This focused definition of meaning allows a more focused approach to data gathering. In order to gather appropriate data, this thesis makes use of a

survey using a variety of questions and situations to test for the presence of the semantic feature [+ RESPONSIBLE] in *sick*, *evil* and other related terms. This survey and method of data collection used are described in Chapter 3. The results of the survey are discussed in Chapter 4. Chapter 5 presents the implications of the conclusions and presents limitations and future work.

CHAPTER 3: METHODOLOGY

3.1. INTRODUCTION. The previous chapters have described several of the perspectives that have governed the historical perceptions of SICK and EVIL. They have also reviewed a few theories and approaches to meaning. From the previous discussion we might suppose that SICK and EVIL are differentiated from each other because *evil* assigns an active/agentive thematic role, whereas, *sick* assigns a passive/patient thematic role. The following sections describe a method whereby I evaluated the validity of this claim.

- 3.2. HYPOTHESES. This methodology addressed the following null hypotheses:
- The modern conception and use of *sick* does not include the semantic feature [-RESPONSIBLE],
- (2) The modern conception and use of *evil* does not include the semantic feature [+RESPONSIBLE],
- (3) There is no continuum (overlap of referents) between the concepts of SICK andEVIL that are described as either *sick* or *evil*.
- (4) People who work in the social sciences are not more likely than other occupation groups to define criminal or immoral people as *sick* rather than *evil*.

3.3. SUBJECTS. Individuals were invited to participate as survey subjects through a network of colleagues, friends, associates, coworkers, etc. Invitations were distributed via

email with a request to forward the invitations to people who might be interested. Although this method of distribution cannot be considered absolutely random, it presented several advantages over local distribution using hard copies. These include: (1) increased variety of demographics including region, religion, and profession; (2) direct transfer of data from survey to database for analysis; and (3) it allowed subjects to respond at their convenience. However, there were a number of limitations inherent to this method. These are acknowledged and discussed in Chapter 5.

All data gathered was from adults (persons older than 18 years of age). Also, because of the interdisciplinary scope of this topic, effort was made to recruit subjects from a range of professions and majors. The following demographic information was collected: age, gender, occupation/field of study, and religion. No names were collected to ensure anonymity. This information was used to address the fourth null hypothesis, which treats the issue as to which term the social sciences are more likely to use.

Because of the wide diversity of the information reported by the respondents, it was necessary to group the data into more general categories (e.g. secretaries were placed in the 'business' group along with managers, consultants, and other occupations that could be described as 'business'). Age was not grouped but was analyzed by year as reported by each participant. Occupation was divided into the following groups (with the quantity in each group in parentheses): business (19), education (15), humanities (24), medicine (13), social sciences (9), technical (17), and undeclared (9). Origin was grouped by the following regions of the United States: West (11), Midwest (33), South (25), Central (26), East (11). One respondent was from Canada, which was included in the

Figure 3.1 describes these groupings:

Demographic	Group	Quantity
Total		106
Gender	1. Male	46
	2. Female	60
Occupation	1. Business	19
	2. Education	15
	3. Humanities	24
	4. Medicine	13
	5. Social	9
	Sciences	
	6. Technical	17
	7. Undeclared	9
Origin	1. West	11
	2. Midwest	33
	3. South	25
	4. Central	26
	5. East	11
Religion	1. LDS	80
	2. non-LDS	26

Figure 3.1. Demographic Groups.

Due to the focus of this project on the semantic content of English words, all processed data came from native English speakers. The possibilities of influence from other cultures that have slightly different conceptions of *evil* and *sick* than would a typical native English speaker (as noted by Levin and Rappport Hovav 2005:19) would extend this research beyond its intended scope.

3.4. INSTRUMENTS. A survey was distributed consisting of four sections. These sections were:

(1) Word Association – asked the subject to identify words associated with a series of focus words.

(2) Multiple Choice – asked the subject to answer questions by selecting from among multiple options.

(3) Anecdotal Response – asked the subject to assign guilt based on anecdotes from legal cases.

(4) Likert Scale – Subjects responded to prompts describing potentially sick or evil behavior using a Likert Scale.

The following subsections of this chapter describe the survey in more detail with examples to demonstrate the prompts used in the survey. The entire survey is available in Appendix A.

All sections of the survey were reviewed and revised with the help of a focus group. The focus group consisted of five BYU students. After establishing an initial draft of the survey, it was distributed to the members of the focus group. After they responded to all survey sections, I discussed problems, concerns, and confusions with each focus group member individually. I then implemented changes based on these discussions.

Also, in order for the respondents to focus on specific terms, it was necessary in designing the survey to establish and consistently use certain terms. For example, the survey uses *sick* instead of *ill* or any alternative term because of its predominance in the literature that inspired this study. Similarly, *well* was chosen instead of *healthy*. This choice was made based on its relationship with *good*. *Well* can be seen as a counterpart of *good* in that *well* is the opposite of *sick* in the same way *good* is the opposite of *evil*. Although *healthy* is also the opposite of *sick*, it does not share the same close relationship with *good* that *well* does.

SURVEY SECTION ONE: WORD ASSOCIATION. This section of the survey was intended to address the first two null hypotheses. By having the survey respondents establish word associations between several lists of words, it should be possible to determine how and if RESPONSIBILITY is related to SICK and EVIL.

The word association section of the survey consisted of two lists of words. The first was a list of eight focus words. These words, in the order they were listed on the survey, are: *sick, insane, good, cure, evil, well, guilty,* and *redeem*. Each of these focus words headed a column that presented the second list of words. This second list is the selection list and consists of words that were potential semantic features of the focus words. All of the word lists used in this section of the survey were generated using the Corpus of Contemporary American English created by Dr. Mark Davies. This Corpus is available at <u>www.americancorpus.org</u> and contains over 385 million words from the past two decades.

The list of focus words was selected from an electronic search for collocations of *sick* and *evil* using the Corpus of Contemporary American English (Davies). The first one hundred most frequent words resulting from this search were reviewed for relevance. These were pared down by selecting those words associated with one of the search terms (e.g. *sick*) that shared a counterpart word associated with the other search term (e.g. *evil*). For example, since *good* is an antonym of *evil*, and *well* is an antonym of *sick*, both *good* and *well* were selected as focus words. This process was repeated until there was a list of fourteen of the most relevant words. These words were: *evil*, *good*, *sick*, *well*, *insane*, *wicked*, *virtuous*, *healthy*, *guilty*, *abnormal*, *cure*, *redeem*, *treat*, and *repent*. This list was

further reduced to eight using a focus group to eliminate the least relevant of the selected terms. The terms removed were: *wicked, virtuous, healthy, abnormal, treat,* and *repent*.

The selection list consisted of the following words: addicted, atone, aware, care, choice, criminal, cursed, drunk, heal, impair, inflict, innocent, intention, medicine, penitent, recover, responsibility, soul, suffer, treatment. These words were selected by using the focus words to search the Corpus of Contemporary American English (Davies) for the most frequent collocations. The first ten results of each search were reviewed for relevant words. Those that were determined to be relevant were reviewed by the focus group and reduced to the twenty words listed above. The resulting word list is an attempt to balance several words that are directly related to both *sick* and *evil* with a few, more neutral, terms that still relate to the general genre so as to remain as a possibility for selection. I have also included the word *responsibility* in the word list despite its absence from any of the search results. It was necessary to include *responsibility* in the list as it is intrinsic to the first and second hypotheses, which deal with [+/-RESPONSIBILITY] as a potential semantic feature of *sick* and *evil*.

The intention here was to provide a variety of words that relate to the concepts of SICK and EVIL in order to explore the various facets of meaning in each of these concepts. Using a variety of words, instead of just *sick* and *evil*, served two purposes: (1) the generation of more data, so as to be able to draw sound conclusions; and (2) the ease of discrepancy identification among the perceptions of the participants. The selection list was provided to the subjects as potentially associated with each focus word. The subjects were then asked to select the words from the selection list that they felt corresponded to the focus word above each column. A response rate greater than 62 indicated a positive

association. A response rate of less than 44 indicated a negative association. These

boundaries of significance are explained more in Chapter 4.

Four of the eight columns are presented in Example 3.1 below to demonstrate the prompts used in the survey. The remaining columns are available in Appendix A.

Example 3.1

Please circle all the words in each column that you feel are					
directly associated with the bold word above each list					
Sick	Insane	Good	Cure		
Addicted	Addicted	Addicted	Addicted		
Atone	Atone	Atone	Atone		
Aware	Aware	Aware	Aware		
Care	Care	Care	Care		
Choice	Choice	Choice	Choice		
Criminal	Criminal	Criminal	Criminal		
Cursed	Cursed	Cursed	Cursed		
Drunk	Drunk	Drunk	Drunk		
Heal	Heal	Heal	Heal		
Impair	Impair	Impair	Impair		
Inflict	Inflict	Inflict	Inflict		
Innocent	Innocent	Innocent	Innocent		
Intention	Intention	Intention	Intention		
Medicine	Medicine	Medicine	Medicine		
Penitent	Penitent	Penitent	Penitent		
Recover	Recover	Recover	Recover		
Responsibility	Responsibility	Responsibility	Responsibility		
Soul	Soul	Soul	Soul		
Suffer	Suffer	Suffer	Suffer		
Treatment	Treatment	Treatment	Treatment		

Care was taken in selecting these words to provide a variety of parts of speech and to diminish ambiguity. For example, *treatment* was selected instead of its verb form *treat* in order to reduce the possibility that a subject would interpret an alternative meaning for *treat*, such as the noun that is synonymous with *snack* or *candy* and has no apparent relationship to the concepts being considered in this study. Also, the focus words were not included in the selection lists despite appearing at times as a most frequent collocation in the corpus. These were rejected as part of the selection list in order to maintain uniformity among the columns of selection words. This allowed the respondents to select the corresponding words more quickly and avoided confusion that would likely have emerged from inserting different words into each list.

SURVEY SECTION TWO: MULTIPLE CHOICE. The multiple choice section of the survey consisted of direct questions regarding the subjects' perceptions and usage of *sick* and *evil*. This section was also directed at the first two null hypotheses. The difference between the multiple choice section and the word association section is that the subjects received greater context with the multiple choice questions. This section asked the subjects to respond to ten multiple choice questions. No particular selection method was used in determining these questions other than to ask questions that I felt specifically addressed the issue of the relationships between RESPONSIBILITY, SICK, and EVIL. After creating a number of multiple choice questions, these were reviewed by the focus group and several were determined to be ineffective or confusing. The remaining ten were included in the survey.

These questions focused on defining the difference between *sick* and *evil* with multiple choice options selected to allow the subject to choose from among several "typical" answers. In the event that a single answer did not allow the subject to adequately express his/her perception of the concept in question, it was possible to select as many answers as needed. Three of the questions dealt directly with the role of *responsibility* and *sick*. Three of the questions dealt directly with the role of *responsibility*

and *evil*. The remaining questions asked about how the two terms related to each other. An example of the questions found in this section is:

Example 3.2:

Answer the following questions. Select ALL answers that you feel are true. The use of "sick" or "ill" here refers specifically to mental illness.

The difference between "evil" and "sick" is:

- a. choosing to bring about one's state
- b. accountability for the consequences of one's actions
- c. degree of responsibility
- d. the difference is very slight, the words are almost synonymous

None of the questions were presented with an "opt-out" option, e.g. "other" or "none of the above", in the answer list. This forced the participants to choose from among the answers listed and eliminated the need to guess at possible trends among slightly different answers. This aspect of the methodology does have potential to skew the results but is necessary for statistical analysis. This is addressed further in Chapter 5.

SURVEY SECTION THREE: ANECDOTAL RESPONSE. The third section of the survey was intended to address the third null hypothesis that states that there is no overlap of referent when using *sick* or *evil*. If it is possible to reject this hypothesis, there is support to model the relationship between sick and evil as a continuum with varying degrees of responsibility being assigned to the behavior in question.

This section of the survey consisted of five scenarios adapted from a legal study by Finkel and Slobogin (1995). These scenarios were titled SMITH, JONES, JACOBS, SORENSON, and DANIELS. All five scenarios deal with a form of intentional homicide, which is generally considered an evil act. However, each scenario presented the perpetrator as having some form of mental abnormality that may or may not affect their scenarios came from actual court cases with the exception of DANIELS.

Example 3.3

Read the paragraph and answer the following questions.

1. Smith, a Vietnam veteran, who has a history of violent nightmares, and who once fired an automatic weapon from the roof of his house with no memory of the incident, shoots and kills his wife's brother-in-law after his wife left him a second time. The shooting occurred at midnight under foggy, humid conditions reminiscent of Smith's scouting days in Vietnam. He claims that he believed he was cleaning out a Vietnamese hut, a claim that was bolstered by expert testimony that he was suffering from posttraumatic stress syndrome.

Smith is:a) not responsible for his actions.b) partially responsible for his actions.c) fully responsible for his actions.d) fully responsible but justified in acting the way he did.

The five scenarios were selected to present a range of severity of mental disorder

and, subsequently, degree of culpability and accountability. Figure 3.2 presents each of

the scenarios, the medical diagnosis of the mental state, and the verdict or probable

verdict as presented by Finkel and Slobogin (1995).

Scenario	Diagnosis	Verdict
SMITH	post-traumatic stress syndrome	Insane
JONES	not diagnosed	Insane
JACOBS	not diagnosed but history of chronic depression, suicidal/bizarre behavior, anger	Sane/guilty at trial; insane at appellate trial
SORENSON	battered woman syndrome, learned helplessness	guilty of manslaughter (similar cases yield self-defense or insane verdicts)
DANIELS	Schizophrenia	insane ¹

¹Probable verdict determined by expert consultation (Finkel and Slobogin, 1995: 425)

Figure 3.2. Culpability Scenarios.

The verdicts already show that there is variation in assignment of responsibility in court cases. By including this section in the survey, I intended to verify the societal perspective that responsibility for crime varies depending on the mental state of the defendant by gathering data from a wider demographic than is found on a jury.

SURVEY SECTION FOUR: LIKERT SCALE. The fourth section of the survey was also intended to address the third null hypothesis. This survey section presented sixteen statements and asked subjects to identify their level of agreement with each statement using a Likert scale. Like the third section, this section tried to present a variety of situations to gauge what type of conditions encourage defining one situation as *sick* and another as *evil* and where the two terms might overlap. The participant is asked to rank the situation on a Likert Scale from 1 to 5 according to how sick (1) or evil (5) they feel it is. An example of the type of statement found in this section is: Example 3.4: Crimes committed when under the influence of doctor-prescribed medication. 1 2 3 4 5

This list of behaviors and situations was generated through an effort to balance two areas: law and religion. It was necessary to choose situations that would generate consensus among the participants that the behavior in question is wrong. Therefore, I reviewed the Ten Commandments and the Seven Deadly Sins in an attempt to establish several 'sins' that should be consistent with the belief system of most English speakers due to the language's heavy Judeo-Christian influence. I also tried to use situations that placed the 'sin' as a 'crime' so as to not alienate the non-religious. In total, I generated 20 prompts. With the help of the focus group, these were refined and several were eliminated. This left a total of 16 prompts.

3.5. METHOD. The survey described above was distributed to subjects via an online form and database application that allowed the subjects to enter their responses via the internet. The responses were then stored directly in a database to be analyzed. The URL to access the database was distributed through email. This method of data collection allowed a much wider regional demographic and made it possible to solicit more responses from more subjects since it did not require the subject to manage and return a document to the investigator.

Data is presented in this thesis from 106 participants who accessed the surveys between December 15, 2007 and January 15, 2008. However, the nature of the data collection method is such that the data from many more subjects could be accommodated and processed in a future study. No attempt was made to randomize the data collection as there was no precedent set for randomization in the studies discussed in Chapter 2 on which this method was based.

Because this methodology solicits responses from human subjects it required approval from the Brigham Young University Internal Review Board. The letter of approval is available as Appendix B. The results obtained from the survey are presented and discussed in Chapter 4. The significances of these findings are discussed in Chapter 5 along with possibilities for future work and some limitations of the survey.

CHAPTER 4: ANALYSIS

4.1. INTRODUCTION. The results of the study described in the previous chapter are presented below. This chapter consists of four sections. The first begins with a discussion of the methods used to determine significance followed by the data gathered from the first half of the survey. The second section presents the data gathered from the remaining half of the survey and describes the statistical tests used in their analysis. The third section presents the demographic information gathered and how it relates to the data already presented. The final section presents a discussion of the conclusions that can be drawn from the data.

4.2. DETERMINATION OF SIGNIFICANCE. In the word association and multiple choice sections of the survey, significance is determined by a simple majority. This means that 54 of the 106 respondents must have marked an answer to consider that answer significant. To ensure a 95% degree of confidence that achieving a 50+% response rate is not due to chance, an additional requirement was added that the response rate exceed the upper boundary of a confidence interval. This increases the response rate required of any particular answer, to be confidently considered significant, to 63. All response rates that exceed 63 will be referred to as having a high confidence relationship.

The word association section also establishes, and makes use of, the lower boundary of the 95% confidence interval. This boundary is 43 responses. Response rates below this boundary will be viewed as having a high confidence inverse relationship between the words they describe. However, for simplification, all response rates that exceed the lower boundary will be referred to as having a low confidence relationship. This terminology allows greater contrast between the relationships that exceed the upper boundary and those that exceed the lower boundary as each are determined to be highly confident.

This leaves a range of response rates between 44 and 62 that indicate mid-range confidence. In general, the answers that lie in this range may be discussed in terms of trends or possible indicators but not in terms of confident significance.

SEMANTIC FEATURE ANALYSIS. The word association section of the survey was intended to address the first two null hypotheses. These hypotheses require evaluation of the semantic features of the focus words associated with either SICK or EVIL. Establishing an association between the words in each list is an indication of the semantic features the word from the focus list might bear. The task given to the respondent was to evaluate a potential relationship between a given word and the individual words in the subsequent word list. Figure 4.1 shows the number of responses of each term in relation to the focus word.

	Sick	Evil	Incono	Cuilty	W/all	Cood	Cura	Dodoom
	SICK		Insane	Guilty	weii	Guu	Cule	Redeelli
Addicted	51	49	24	35	1	3	27	3
Atone	2	13	2	20	22	43	28	<u>98</u>
Aware	3	14	9	33	30	52	14	27
Care	39	1	10	5	<u>64</u>	<u>77</u>	52	50
Choice	4	46	5	47	33	<u>74</u>	25	50
Criminal	30	<u>82</u>	47	<u>86</u>	0	0	3	3
Cursed	21	<u>70</u>	37	32	0	1	5	4
Drunk	31	32	9	22	0	0	4	3
Heal	<u>69</u>	2	12	4	<u>67</u>	57	<u>95</u>	<u>65</u>
Impair	45	31	<u>67</u>	17	1	0	6	3
Inflict	34	62	28	43	2	1	4	4
Innocent	7	4	15	20	32	<u>69</u>	5	31
Intention	3	52	10	39	11	32	13	25
Medicine	<u>88</u>	1	41	1	45	27	<u>92</u>	4
Penitent	2	4	4	18	13	39	14	52
Recover	<u>74</u>	2	18	10	62	28	<u>85</u>	54
Responsibility	2	20	14	50	28	<u>70</u>	13	41
Soul	6	40	16	26	26	<u>73</u>	12	<u>81</u>
Suffer	<u>79</u>	<u>70</u>	<u>70</u>	59	3	1	10	17
Treatment	<u>87</u>	2	52	9	43	25	<u>93</u>	25

Figure 4.1. Word association response rates; Significant answers are bolded (low confidence numbers are italicized, high confidence numbers are underlined).

There are a number of significant and insignificant pairings apparent in Figure 4.1. The pairs that exceeded the upper threshold of 63 are: *sick-heal, sick-medicine, sick-recover, sick-suffer, sick-treatment, evil-criminal, evil-cursed, evil-suffer, insane-impair, insane-suffer, guilty-criminal, well-care, well-heal, good-care, good-choice, good-innocent, good-responsibility, good-soul, cure-heal, cure-medicine, cure-recover, cure-treatment, redeem-atone, redeem-heal, and redeem-soul.* These are summarized in Figure 4.2.

The pairs that received fewer responses than the low confidence boundary of 43 are: sick-atone, sick-aware, sick-care, sick-choice, sick-criminal, sick-cursed, sick-drunk, sick-inflict, sick-innocent, sick-intention, sick-penitent, sick-responsibility, sick-soul, evilatone, evil-aware, evil-care, evil-drunk, evil-heal, evil-impair, evil-innocent, evilmedicine, evil-penitent, evil-recover, evil-responsibility, evil-soul, evil-treatment, insaneaddicted, insane-atone, insane-aware, insane-care, insane-choice, insane-cursed, insane-

drunk, insane-heal, insane-inflict, insane-innocent, insane-intention, insane-medicine, insane-penitent, insane-recover, insane-responsibility, insane-soul, guilty-addicted, guilty-aware, guilty-atone, guilty-care, guilty-cursed, guilty-drunk, guilty-heal, guiltyimpair, guilty-inflict, guilty-innocent, guilty-intention, guilty-medicine, guilty-penitent, guilty-recover, guilty-soul, guilty-treatment, well-addicted, well-atone, well-aware, wellchoice, well-criminal, well-cursed, well-drunk, well-impair, well-inflict, well-innocent, well-intention, well-penitent, well-responsibility, well-soul, well-suffer, well-treatment, good-addicted, good-atone, good-criminal, good-cursed, good-drunk, good-impair, good-inflict, good-intention, good-medicine, good-penitent, good-recover, good-suffer, good-treatment, cure-addicted, cure-atone, cure-aware, cure-choice, cure-criminal, curecursed, cure-drunk, cure-impair, cure-inflict, cure-innocent, cure-intention, curepenitent, cure-responsibility, cure-soul, cure-suffer, redeem-addicted, redeem-aware, redeem-criminal, redeem-cursed, redeem-drunk, redeem-impair, redeem-inflict, redeeminnocent, redeem-intention, redeem-medicine, redeem-responsibility, redeem-suffer, and *redeem-treatment*. These are also summarized in Figure 4.2.

	High Confidence	Low Confidence
Sick	Heal, Medicine,	Atone, Aware, Care, Choice, Criminal, Cursed, Drunk,
	Recover, Suffer,	Inflict, Innocent, Intention, Penitent, Responsibility,
	Treatment	Soul
Evil	Criminal, Cursed,	Atone, Aware, Care, Drunk, Heal, Impair, Innocent,
	Suffer	Medicine, Penitent, Recover, Responsibility, Soul,
		Treatment
Insane	Impair, Suffer	Addicted, Atone, Aware, Care, Choice, Cursed, Drunk,
	1 /	Heal, Inflict, Innocent, Intention, Medicine, Penitent,
		Recover, Responsibility, Soul
Guilty	Criminal	Addicted, Aware, Atone, Care, Cursed, Drunk, Heal,
5		Impair, Inflict, Innocent, Intention, Medicine, Penitent,
		Recover, Soul, Treatment
Well	Care, Heal	Addicted, Atone, Aware, Choice, Criminal, Cursed,
	,	Drunk, Impair, Inflict, Innocent, Intention, Penitent,
		Responsibility, Soul, Suffer, Treatment
Good	Care, Choice,	Addicted, Atone, Criminal, Cursed, Drunk, Impair,
	Innocent,	Inflict, Intention, Medicine, Penitent, Recover, Suffer,
	Responsibility, Soul	Treatment
Cure	Heal, Medicine,	Addicted, Atone, Aware, Choice, Criminal, Cursed,
	Recover, Treatment	Drunk, Impair, Inflict, Innocent, Intention, Penitent,
	,	Responsibility, Soul, Suffer
Redeem	Atone, Heal, Soul	Addicted, Aware, Criminal, Cursed, Drunk, Impair.
	- , ,	Inflict, Innocent, Intention, Medicine, Responsibility.
		Suffer, Treatment

Figure 4.2. Extreme Confidence Comparison.

It is apparent from the data that there are many more words from the selection list that show a low confidence relationship with the focus words than there are words from the selection list that show a high confidence relationship with the focus words. In fact, more than half of the selection list has a low confidence relationship with the focus words for each of the focus words. The least number of low confidence relationships for one word was 13 (occurring 4 times) and the greatest number was 17 (occurring once). Conversely, the greatest number of high confidence relationships for one word was 5 (occurring twice) and the lowest was 1 (occurring once). There were no focus words that did not show both a high and low confidence relationship with at least one word from the selection list. The presence of a relationship in Figure 4.2 is an indication that the related word is associated with the meaning of the head word in each row. In the case of a high confidence relationship (listed in the second column of Figure 4.2), I propose that the related word represents a positive semantic feature. This establishes the following semantic features for each focus word:

Sick – [+HEAL], [+MEDICINE], [+RECOVER], [+SUFFER] and [+TREATMENT];

Evil – [+CRIMINAL], [+CURSED] and [+SUFFER];

Insane – [+IMPAIR] and [+SUFFER];

Guilty – [+CRIMINAL];

Well – [+CARE] and [+HEAL];

Good – [+CARE], [+CHOICE], [+INNOCENT], [+RESPONSIBILITY] and [+SOUL];

Cure – [+HEAL], [+MEDICINE], [+RECOVER] and [+TREATMENT];

Redeem – [+ATONE], [+HEAL] and [+SOUL].

In the case of a low confidence relationship (listed in the third column of Figure

4.2), I propose that the related word represents a negative semantic feature. This establishes the following semantic features for each focus word:

- Sick [-ATONE], [-AWARE], [-CARE], [-CHOICE], [-CRIMINAL], [-CURSED], [-DRUNK], [-INFLICT], [-INNOCENT], [-INTENTION], [-PENITENT], [-RESPONSIBILITY] and [-SOUL];
- Evil [-ATONE], [-AWARE], [-CARE], [-DRUNK], [-HEAL], [-IMPAIR], [-INNOCENT], [-MEDICINE], [-PENITENT], [-RECOVER], [-RESPONSIBILITY], [-SOUL] and [-TREATMENT];

Insane – [-ADDICTED], [-ATONE], [-AWARE], [-CARE], [-CHOICE], [-CURSED],

[-DRUNK], [-HEAL], [-INFLICT], [-INNOCENT], [-INTENTION], [-MEDICINE], [-PENITENT], [-RECOVER], [-RESPONSIBILITY] and [-SOUL];

- Guilty [-ADDICTED], [-AWARE], [-ATONE], [-CARE], [-CURSED], [-DRUNK], [-HEAL], [-IMPAIR], [-INFLICT], [-INNOCENT], [-INTENTION], [-MEDICINE], [-PENITENT], [-RECOVER], [-SOUL] and [-TREATMENT];
- Well [-ADDICTED], [-ADDICTED], [-ATONE], [-AWARE], [-CHOICE], [-CRIMINAL], [-CURSED], [-DRUNK], [-IMPAIR], [-INFLICT], [-INNOCENT], [-INTENTION], [-PENITENT], [-RESPONSIBILITY], [-SOUL], [-SUFFER] and [-TREATMENT];
- Good [-ADDICTED], [-ATONE], [-CRIMINAL], [-CURSED], [-DRUNK], [-IMPAIR], [-INFLICT], [-INTENTION], [-MEDICINE], [-PENITENT], [-RECOVER], [-SUFFER] and [-TREATMENT];
- Cure [-ADDICTED], [-ATONE], [-AWARE], [-CHOICE], [-CRIMINAL], [-CURSED], [-DRUNK], [-IMPAIR], [-INFLICT], [-INNOCENT], [-INTENTION], [-PENITENT], [-RESPONSIBILITY], and [-SOUL];
- Redeem [-ADDICTED], [-AWARE], [-CRIMINAL], [-CURSED], [-DRUNK], [-IMPAIR], [-INFLICT], [-INNOCENT], [-INTENTION], [-MEDICINE], [-RESPONSIBILITY], [-SUFFER] and [-TREATMENT].

This thesis is particularly concerned with the proposed semantic feature represented as [+/-RESPONSIBILITY]. To this end, three words from the selection list relating to RESPONSIBILITY were thought to be of particular interest. These words are: *choice, intention,* and *responsibility*. Figure 4.3 shows the relationships represented in the data between these three words and each of the four focus words related to the concept

SICK (*sick, insane, well,* and *cure*) and the four focus words related to the concept EVIL (*evil, guilty, good, redeem*):

	High Confidence	Low Confidence	Mid-Range Confidence
Sick		Choice, Intention,	
		Responsibility	
Well		Choice, Intention,	
		Responsibility	
Insane		Choice, Intention,	
		Responsibility	
Cure		Choice, Intention,	
		Responsibility	
Evil		Responsibility	Choice, Intention
Good	Choice, Responsibility	Intention	
Guilty		Intention	Choice, Responsibility
Redeem		Intention,	Choice
		Responsibility	

Figure 4.3. RESPONSIBILITY Relationships.

Figure 4.3 shows that each of the focus words associated with SICK (*sick, insane, well,* and *cure*) show a low confidence relationship with all three of the words associated with RESPONSIBILITY (*choice, intention, and responsibility*). This indicates that there is good reason to establish a [-RESPONSIBILITY] semantic feature with each of these four focus words and especially with the general concept of SICK. Therefore, the first null hypothesis, that the modern conception and use of *sick* does not include the semantic feature [-RESPONSIBLE], should be rejected. In other words, it is likely that [-RESPONSIBLE] is one of the semantic features of *sick*. The conclusion we can draw from this, that the concept of SICK is related to the lack of RESPONSIBILITY, was an expected outcome of this methodology.

However, the above chart also shows that the only high confidence relationship that exists among the words associated with *responsibility* is seen with *good*. The other three focus words associated with EVIL (*evil, guilty, and redeem*) do not show any high confidence relationship with RESPONSIBILITY. Conversely, there are low confidence relationships between *evil* and *responsibility*, between *guilty* and *intention*, between *good* and *intention*, and between *redeem* and *intention* and *responsibility*. Furthermore, there is a mid-range confidence relationship demonstrated between *evil* and *choice* and *intention*, between *evil* and *choice* and *intention*, between *evil* and *choice* and *responsibility*, and between *redeem* and *choice*. Therefore, there is not sufficient significance among the words associated with EVIL to establish a semantic feature of [+RESPONSIBILITY]. Nor is it possible to establish the opposing feature [-RESPONSIBILITY]. This lack of significance does not allow the second null hypothesis, that the modern conception and use of *evil* does not include the semantic feature [+RESPONSIBLE], to be rejected.

MULTIPLE CHOICE ANALYSIS. The data gathered from the multiple choice section of the survey also addresses the presence of [+/- RESPONSIBILITY] in *sick* and *evil*. Each question with the corresponding answers and response rates is reproduced in Figure 4.4.

Qty	Question	Qty	Question
	1. A person who has a mental disorder		6. The difference between "evil" and "sick" is:
72	a. cannot help being sick	48	a. choosing to bring about one's state
35	b. is most likely to be cured through a conscious choice	57	 accountability for the consequences of one's actions
74	c. is most likely to be cured with the help of a doctor	64	c. degree of responsibility
37	d. is most likely to be cured through his/her own efforts	6	d. the difference is very slight, the words are almost synonymous
	2. How can one prevent sickness?		7. What type of behavior would you describe as evil?
12	a. follow a doctor's advice	81	a. criminal behavior
15	b. exercise	76	b. moral sin
13	c. eat right	42	c. political scandal
63	d. all of the above	14	d. the actions of an insane person
47	e. none of the above there is no way to definitively keep from getting sick	13	e. small offenses (to draw emphasis)
	3. An evil person		8.What type of behavior would you describe as sick?
99	a. is someone who chooses to do wrong	22	a. criminal behavior
32	b. is a criminal	19	b. moral sin
8	c. usually has a mental disorder	5	c. political scandal
24	d. can usually also be described as "sick"	87	d. the actions of an insane person
	4. How does one change their state from evil to good?	14	e. small offenses (to draw emphasis)
92	a. only through conscious effort		9. Do you use the terms "sick" and "evil" (and their synonyms) interchangeably?
28	b. only with the help of a loved one	38	a. Yes, when discussing severe criminal activity
64	c. by ceasing to do evil acts	15	b. Yes, when discussing moral sin
1	d. a change to "good" will eventually occur regardless	8	c. Yes, when discussing despotic political leaders
	5. Can some people be labeled both "sick" and "evil?"	4	d. Yes, when discussing mental disorders
17	a. yes, but that is rare	39	e. Yes, when discussing things that I find repulsive
20	b. no. the nature of sickness is that a person is not	45	f. No, the words should not be used interchangeably
	responsible for their condition, and responsibility is		10. Do you use the phrase "sick and wrong?"
	necessary to be considered evil	51	a. Yes, when something is both sick and wrong
17	c. yes, a drug addict is an example of this overlap	36	b. Yes, by using synonyms I add emphasis to the offensiveness of a thing
58	d, yes, but when that happens, "sick" loses its normal	4	c. No, because I don't like to be redundant
	meaning and becomes more synonymous with "evil"	18	d. No, because the words can seldom be used to describe the same thing.

Figure 4.4. Multiple Choice Response Rates.

The responses that exceeded the significant threshold of 63 are: question 1 – answers "a" and "c"; question 2 – answer "d"; question 3 – answers "a" and "c"; question 4 – answers "a" and "c"; question 5 – no significant answers; question 6 – answer "c"; question 7 – answers "a" and "b"; question 8 – answer "d"; question 9 – no significant answers; question 10 – no significant answers. Reducing the data from Figure 4.4 to those answers that crossed the threshold of significance produces Figure 4.5.

Question	Significant Answers	# of
Question	Significant Answers	responses
1. A person who has a mental	a. cannot help being sick	72
disorder:	c. is most likely to be cured with the help	74
	of a doctor	/4
2. How can one prevent	d. all of the above (eat right, exercise,	(2
sickness?	follow a doctor's advise)	03
3. An evil person:	a. is someone who chooses to do wrong	99
4. How does one change his/her	a. only through conscious effort	92
state from evil to good?	c. by ceasing to do evil acts	64
6. The difference between "evil" and "sick" is:	c. degree of responsibility	64
7. What type of behavior would	a. criminal behavior	81
you describe as "evil?"	b. moral sin	76
8. What type of behavior would you describe as "sick?"	d. the actions of an insane person	87

Figure 4.5. Significant Multiple Choice Answers.

This chart above does not include questions 5, 9, and 10 because they did not yield any significant response rates among their respective answers, however the very fact that responses to these questions did not significantly polarize suggests a general resistance or uncertainty about the combination of the concepts of SICK and EVIL.

The questions above can be divided into 3 groups: (1) questions that address sickness, (2) questions that address evil, and (3) questions that address both. The first group is comprised of questions 1, 2, and 8. The first question shows very strongly that the respondents are not assigning responsibility for being sick to the sick person (evidenced by the high frequency of respondents that chose answer "a"). Answer "c" also shows that the curative process is directed by the doctor. The second question is somewhat anomalous with the rest of the data because it assigns a degree of responsibility to preventing illness. Question 8 verifies one of the fundamental assumptions of this thesis; that insanity is viewed as a type of sickness. The second group is composed of questions 3, 4, and 7, which ask specifically about *evil*. Question 3, in

particular, shows an overwhelming percentage of people who associate individual choice with *evil* as a label. Question 4 also indicates that a change in state from evil to good is left to the will of the person. Question 7 defines *evil* as sin and illegal activity. The third group is composed of question 6, which asks for a comparison of meaning between the two terms with 60% of respondents choosing degree of responsibility as the point of difference between the meanings of SICK and EVIL.

These data mostly support the previous determination that SICK is associated with a lack of responsibility. However, they also support the proposal that EVIL is partly defined by responsibility. This is contradictory to the previous determination that there is no strong relationship between RESPONSIBILITY and EVIL. This indicates a distinction between lexical-semantic classification and world knowledge. The association of RESPONSIBILITY and EVIL in the second section of the survey shows that society does see a relationship between the two concepts. However, this relationship is not maintained on a word association level.

4.3. ANOVA STATISTICAL TEST. The remaining two sections of the survey show very little statistical significance as defined for the previous two survey sections. However, unlike the previous survey sections, the questions were set up to allow a comparison between all responses and therefore are subject to other tests of significance. An Analysis of Variation (ANOVA) was run on each of these sections. This allows for identification of the statistical variation and groupings that exist among the questions.

	SORENSON	JONES	JACOBS	SMITH	DANIELS
	Battered woman	Gov. paranoia	Policeman	Vietnam vet.	Schizophrenia
not responsible	5 (5.3%)	8 (8.5%)	4 (4.2%)	19 (20.1%)	31 (32.9%)
partially					
responsible	33 (35.0%)	34 (36.0%)	37 (39.2%)	59 (62.5%)	48 (50.9%)
fully responsible	38 (40.3%)	60 (63.6%)	57 (60.4%)	22 (23.3%)	22 (23.3%)
responsible but					
justified	29 (30.7%)	3 (3.2%)	7 (7.4%)	5 (5.3%)	4 (4.2%)

ANECDOTAL RESPONSE ANALYSIS. The Anecdotal Response section of the survey resulted in the data presented in Figure 4.6 below.

Figure 4.6. Anecdotal Responses.

Figure 4.6 shows that DANIELS, who had schizophrenia and murdered his mother, was considered the most "not-responsible." JONES, who suffered from paranoia and shot down a plane, killing the pilot, was assigned the greatest amount of full responsibility, but was followed closely by JACOBS, a cop who killed a suspect for no apparent reason. SORENSON, a battered woman who killed her husband, stands out from the other scenarios by receiving 29 points of "responsible but justified" while all other scenarios were assigned a single digit amount of points in this category. SMITH, who suffered from post-traumatic stress syndrome and killed his brother-in-law, received the most points in the "partially responsible" category. For convenience in comparing the raw data, I have transferred it to the graph in Figure 4.7.



Figure 4.7. Anecdotal Data Graph.

An initial look at the data shows that there is a strong indication that SMITH was mostly viewed as only partially responsible for his actions (62.5%). JONES and JACOBS were judged as being fully responsible (63.6% and 60.4% respectively). SORENSON and DANIELS do not show as strong an indication for any particular judgment. However, SORENSON is leaning mostly toward fully responsible (40.3%). SORENSON's responsibility is compounded by the possibility of adding the responses of 'fully responsible' and 'responsible but justified' together. This would seem logical since justification for action does not reduce the level of responsibility for that action. In fact, the 'responsible but justified' response was included as an option so that the respondents would not reanalyze justification as non-responsibility and falsely skew the data. This would increase SORENSON's 'responsible' response rate to 67 or 71.0%. Finally, DANIELS tends toward the lack of responsibility for his actions showing the highest scores among 'not responsible' (32.9%) and 'partially responsible' (50.9%).

A one-way analysis of variance (ANOVA) was run to determine whether the respondents were more likely to judge the actor in one scernairo as more responsible for the crime than another. The dependent variable was each respondent's score for each of the 5 scenarios. This ANOVA revealed a significant effect of scenario (F (4, 105) = 24.16, p < .0001). Further post hoc analyses revealed that the scenarios SMITH and DANIELS were grouped together and were assigned the least responsibility, JONES and JACOBS were grouped together and assigned greater responsibility than SMITH and DANIELS, and SORENSON was ranked as having the greatest responsibility. A comparison of this results to the actual outcomes of these cases, reported by Finkel and Slobogin (1995) and discussed in Chapter 3, shows that our conceptions of responsibility

do align, but only roughly, with the definitions of *guilt*, *innocence* and *insanity* as determined by the legal system. This comparison is presented in Figure 4.8.

Scenario	Actual Verdict	Survey Determination
SORENSON Battered wife	guilty of manslaughter (though similar cases often yield self- defense or insane verdicts)	high responsibility
JONES Gov. paranoia	Insane	medium responsibility
JACOBS Policeman	sane/guilty at trial; insane at appellate trial	medium responsibility
SMITH Vietnam vet.	Insane	least responsibility
DANIELS Schizophrenia	insane ¹	least responsibility

¹Probable verdict determined by expert consultation (Finkel and Slobogin, 1995: 425)

Figure 4.8. Scenarios Compared with Results.

The lowest tier of responsibility, as defined by the ANOVA and containing the SMITH (Vietnam vet who killed his brother-in-law) and DANIELS (schizophrenic who killed his mother) scenarios, shows a similar determination to the actual trial verdict of *insane*. Being in the first tier of the ANOVA indicates the least responsibility for a crime, as does a verdict of *insane*. The second tier of responsibility, consisting of JONES (paranoia sufferer who kills airplane pilot) and JACOBS (policeman who kills suspect), is an indication of indeterminate responsibility. The corresponding verdict would be vacillation between *guilty* and *insane*, which is seen with the two outcomes of JACOBS. JONES does not show this indecision and, unfortunately, there is no data presented to indicate the presence of such indecision in the actual jury deliberation. The ANOVA's third tier of responsibility, consisting of SORENSON (battered woman who kills

husband), is an indication of full responsibility and would correspond to a *guilty* verdict. In the actual trial, SORENSON, was found guilty of manslaughter.

Inasmuch as SICK and EVIL are determined by degree of responsibility, the data presented here show that the modern conceptions of these terms correspond well with the legal definitions of GUILT and INSANITY. Because of the strong relationship between lack of RESPONSIBILITY and SICKNESS demonstrated in the previous sections of the survey, it is probable that there is a strong relationship between the societal conception of INSANITY and the legal conception of INSANITY. However, because the relationship between RESPONSIBILITY and EVIL are less well defined, it is difficult to make the determination that society models its definition of EVIL after the legal definition of GUILT, or vice versa.

Furthermore, because there was no concrete determination of association between RESPONSIBILITY and EVIL, it is impossible to establish that the scenarios that were attributed full responsibility are evil. However, the established association between NON-RESPONSIBILITY and SICK does allows us to establish that the least responsible scenarios were the most sick. Unfortunately, there is insufficient information to reject the third null hypothesis, which states that there is no overlap of referents that are described as either *sick* or *evil*. Had we been able to establish the expected association between RESPONSIBILITY and EVIL, it would be possible to reject this hypothesis based on the intermediate grouping of scenarios with partial responsibility.

LIKERT SCALE ANALYSIS. The data gathered from the Likert Scale section of the survey is presented in Figure 4.9 below. The table shows each prompt as it was presented in the survey with the total rankings selected by the participants. The table also includes the number of abstentions that were collected for each prompt. Although the abstentions were not included in the statistical analysis, I have left them here as part of the data and will address them in Chapter 5.

			Part		Part	
	Abstain	Sick	Sick	Half	Evil	Evil
1. The actions of Adolf Hitler with regard to his						
treatment of Jews and other non-Aryan ethnic						
groups:	2	1	2	8	26	67
2. Failure to intervene in the commission of a crime						
when there is little danger to oneself:	14	4	5	23	12	48
3. A schizophrenic person who frequently steals						
from stores that he claims "owe him":	1	62	28	11	3	1
4. Crimes of passion:	4	1	14	26	32	29
5. An unpopular boy who becomes a bully so others						
will think he is "cool":	5	11	12	25	25	28
6. A wealthy person who steals for the thrill:	3	7	13	7	23	53
7. An intoxicated person who accidentally kills						
someone while driving:	8	21	16	25	14	22
8. A person with a social anxiety disorder who						
refuses to help even when it means saving a person's						
life with minimal effort:	5	46	30	15	8	2
9. Crimes committed when under the influence of						
doctor-prescribed medication:	6	28	33	27	8	4
10. Racism	5	0	2	7	24	68
11. A drug addict who steals in order to buy more						
drugs:	6	9	23	25	25	18
12. Politically motivated genocide:	2	0	0	3	11	90
13. A head of household who is depressed and						
refuses to find work to support his/her family:	3	36	30	23	11	3
14. A person's failure to exercise even though their						
obesity is causing them serious health risks:	11	37	27	21	8	2
15. Addiction:	8	25	25	40	5	3
16. A person who brags constantly about						
accomplishments in order to win social acceptance:	10	17	26	31	16	6
Γ' $40\Gamma'$ 10Γ		•		•	•	

Figure 4.9. Likert Scale Data.

Figure 4.9 reflects a varied distribution of how society views different types of criminal activity. While no items shows complete unanimity in response rates, i.e. no item shows a 100% response rate in any particular category, items 10 (racism) and 12 (genocide) both show zero response rates in the "sick" category and item 12 also shows a zero response rate for "partially sick". Conversely, no item shows a zero response rate for "evil", although there are several items that are very close. These are items 3 (schizophrenic

theft), 8 (fear of saving life), 9 (prescribed medication crimes), 13 (depression induced selfishness), 14 (laziness), 15 (addiction), and 16 (bragging). The rest of the items are best discussed in terms of their statistical groupings.

A one-way analysis of variance (ANOVA) was run to determine whether the respondents were more likely to judge the actor in one scenario as more evil than another. The dependent variable was each respondent's score for each of the 16 scenarios. This ANOVA revealed a significant effect of scenario (F (15, 105) = 86.158, p < .0001). Further post hoc analyses revealed that the scenarios were grouped into six tiers. This grouping moves from most sick to most evil. The first tier (most sick) consists of items 3, 8, and 14. The second tier consists of 9, 13, and 15. The third tier consists of 7, 11, and 16. The fourth tier consists of 4 and 5. The fifth tier consists of 1, 2, and 6. The final tier (most evil) consists of 10 and 12. These groups are described in Figure 4.10 in order from least (most *sick*) to greatest (most *evil*):
Most sick	3. A schizophrenic person who frequently steals from stores that he claims
	"owe him"
i	8. A person with a social anxiety disorder who refuses to help even when
i	it means saving a person's life with minimal effort
i	14. A person's failure to exercise even though their obesity is causing
i	them serious health risks
i	9. Crimes committed when under the influence of doctor-prescribed
i	medication
Í	13. A head of household who is depressed and refuses to find work to
i	support his/her family
Í	15. Addiction
Í	7. An intoxicated person who accidentally kills someone while driving
	11. A drug addict who steals in order to buy more drugs
Í	16. A person who brags constantly about accomplishments in order to win
	social acceptance
	4. Crimes of passion
	5. An unpopular boy who becomes a bully so others will think he is
	"cool"
	1. The actions of Adolf Hitler with regard to his treatment of Jews and
	other non-Aryan ethnic groups
	2. Failure to intervene in the commission of a crime when there is little
	danger to oneself
	6. A wealthy person who steals for the thrill
	10. Racism
Most evil	12. Politically motivated genocide

Figure 4.10. Likert Scale Significant Groupings.

This table shows that items 3 (schizophrenia), 8 (social anxiety disorder), and 14 (obesity) are the most *sick* of the items presented in this section while items 10 (racism) and 12 (genocide) are the most *evil*. All other items fall somewhere in between these two designations.

Figure 4.10 shows that the determination of 'most evil' or 'most sick' is not easily established because most of the items show a great deal of vacillation between whether it is *evil* or *sick*. The fact that there are six tiers along the continuum demonstrates that there is an overlap between referents labeled *sick* and referents labeled *evil*. Therefore, there is reason to reject the third null hypothesis that claims such an overlap does not exist.

4.4. DEMOGRAPHICS. Several types of demographic information were collected to be able to make a determination as to the environmental influences that may be associated with assigning responsibility to *sick* or *evil*. A step-wise multiple regression analysis was used to identify potential demographic predictors. The demographic data was only compared to the last two sections of the survey. The first two sections were not included because grouping the data for analysis would only show the variation in number of responses between demographic groups but would not associate those responses with any particular word or prompt. This information would contribute little to the interests of this thesis.

In the third section of the survey, *occupation* appeared as a predictor in all situations and, in the case of DANIELS, accounted for 87% of the variation in participant response. *Origin* appeared along with *occupation* as a co-predictor for SORENSON in this section. None of the other demographic data showed any predictive potential. Figure 4.11 gives the predictor, associated R-square value (a determination of correlation), and percentage for each of the scenarios in the third section of the survey:

	SORENSON	JONES	JACOBS	SMITH	DANIELS
predictor(s)	a) occupation b) origin	occupation	occupation	occupation	occupation
r-square	a) .366 b) .422	.205	.215	.339	.865
%	a) 37 b) 42	21	22	34	87

Figure 4.11. Anecdotal Section Predictors.

Because *occupation* was such a prominent predictor among these scenarios, an ANOVA was run to identify the occupations that corresponded to declarations of lesser and greater responsibility for a crime. These results are shown in Figure 4.12.

	SORENSON	JONES	JACOBS	SMITH	DANIELS
f-statistic	23.644	5.075	5.828	11.567	196.725
p value	<.001	<.001	<.001	<.001	<.001
upper	undeclared	undeclared	undeclared	undeclared	undeclared
boundary		Technical	social-		
predictors			science		
lower	business	business	business	business	business
boundary	humanities	education	education	education	education
predictors		humanities	humanities	humanities	
		social-		medicine	
		science			

Figure 4.12. Results of ANOVA for Occupation.

The results of the ANOVA showed that those who work in business, education, and the humanities are the least likely to assign responsibility while those in the "undeclared" group (consisting of those who did not declare an occupation and housewives) are most likely to assign responsibility. Those who work in the social sciences show the greatest variation and move at times from the lower boundary to the upper boundary, but are mostly in the intermediate groupings as defined by the ANOVA. Therefore, it appears that those who work in the social sciences are not more likely to assign *sick* rather than *evil* as a label for behavior and we cannot reject the fourth null hypothesis.

The fourth section of the survey showed very low percentage predictors. The more prominent predictors for individual prompts are displayed in Figure 4.13.

	Most sick←→most evil						
	laziness	depression	addiction	bragging	bullying	pleasure theft	racism
predictor(s)	occup.	occup.	occup.	a)occup. b)origin	occup.	occup.	age
r-square	.188	.132	.102	a).875 b).889	.079	.092	.075
%	19	13	10	a)88 b)89	8	9	8

Figure 4.13. Likert Scale Section Predictors.

While *occupation* was still listed as a predictor in many situations (except *racism*), it did not account for as high a level of variation as seen previously except in the case of *bragging*. *Age* resulted as a predictor of *racism* and *origin* demonstrated a high r-square value with *occupation* as predictors of *bragging*.

Because *occupation* proved to be a very salient predictor in the case of *bragging*, an ANOVA was run to determine which occupations accounted for the variation. As seen previously, education made up the lower boundary and 'undeclared' the upper boundary. All other occupations were listed in the middle tiers. I did not run an ANOVA on *origin* despite its high r-square value with *bragging* because it only stood out as a predictor in this one situation.

While *occupation* is pervasive among the data as a predictor, it lacks a high degree of significance for much of the variation it predicts. Furthermore, the greatest upper level correlations are seen in the category of 'unknown,' which is not especially telling with respect to those occupations that work with sick and evil behavior. The lower boundary correlations showed dominance with business and education. The cases where the social sciences emerged as predictors contradicted each other in terms of indicating a trend or drawing a general conclusion. There is very little support for rejecting the fourth null hypothesis: those who work in the social sciences are not more likely than other occupation groups to define criminal or immoral people as *sick* rather than *evil*.

4.5. DISCUSSION. The following discussion is intended to give further insight into the possible significance of the data presented above. The discussion begins with the apparent conclusions that can be made concerning the assignment of semantic features. This is followed by some expanded details of the characteristics that lead to a judgment of *sick* and *evil*.

RELATIONSHIPS OF SEMANTIC FEATURES. The data presented above show very strongly that there is little reason to associate RESPONSIBILITY with SICKNESS, but instead rather strong reasons to associate NON-RESPONSIBILITY with SICKNESS. Conversely there are strong reasons to associate RESPONSIBILITY with NON-SICKNESS (i.e. WELLNESS) due to the fact that there was a high incidence of answers that indicated that a person could take action to prevent sickness and higher than expected association of *choice* and *responsibility* to *well*, despite the fact that the majority of respondents showed that there is very little connection between RESPONSIBILITY and SICKNESS. These results suggest an unexpected but theoretically interesting contribution of negative or null semantic features, rather than positive features, to the meaning of SICK.

On the other hand, the study detected no significant correspondence, at the wordassociation level between RESPONSIBILITY and EVIL. Moving beyond word association to direct questioning, however, many respondents made a connection between these two concepts in the second section of the survey. Also, the data in Figure 4.14 shows that there is a trend to associate *responsibility* with *evil* even if the data did not meet the established level of significance.

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Figure 4.14. Graph of Word Associations. Red lines indicate boundaries of significance.

The above graph shows that, while significance was not universally attained among the words associated with EVIL, there is still much greater association of *responsibility, intention*, and *choice* to the EVIL focus words (last four groups of columns) than to the SICK focus words (first four groups of columns). The only exception is that *evil* shows fewer occurrences of *responsibility* than does *well*, but this is in keeping with the earlier observation that RESPONSIBILITY is a positive feature associated with NON-SICK or WELLNESS, while neither RESPONSIBILITY nor NON-RESPONSIBILITY is associated with EVIL at the word level. Furthermore, if we limit the comparison to like terms (compare *evil* to *sick, guilty* to *insane, good* to *well*, and *redeem* to *cure*) *evil* shows much greater frequency with all *responsibility*-associated terms than does *well*. Therefore, although we find that *well* has a higher frequency of *responsibility* association than *evil*, this is merely in keeping with the theory that RESPONSIBILITY is a positive-feature marking on the word *well*, as well as the word *good*, but only a null or neutral

semantic feature of the word *evil*. The weak but consistent trend shown in Figure 4.14 may be an indication that the threshold of confident significance was set too high.

JUDGMENT MODELING. The three potential models described in this thesis that make definitions of *evil* and *sick* are based on psychology, religion, and law. The data from the Anecdotal Response section of the survey showed that societal perceptions regarding assigning responsibility reflect a legal definition of guilt and innocence.

The Likert Scale section of the survey showed many levels within each definition establishing a continuum of increasing evil with decreasing sickness. That is, those items that were assigned the most instances of *evil* (as opposed to *mostly evil, equally evil and sick, mostly sick,* and *sick*) appear first and move across the graph as fewer and fewer instances of *evil* were assigned. This is demonstrated in Figure 4.15.



Figure 4.15. Likert Scale Line Graph. Showing items in order of descending evil.

This graph indicates that there is an inversely proportional relationship between *evil* and *sick*. Both *sick* and *mostly sick* increase as *evil* decreases. This, again, is reflected in the legal definitions of guilt and insanity. Though each verdict opposes the other in terms of assigning culpability or responsibility for one's actions, there is great variability in how to define a crime, i.e. first degree murder involves premeditation and a high degree of intention while manslaughter is usually accidental and due to recklessness without the intention to kill.

However, even within the continuum between *evil* and *sick* there is some indication that each level is defined by specific indicators. In order to compare the items from the fourth section of the survey, I have arranged them into the groups defined by the

ANOVA and dissected the prompts to describe the features of each. These are presented

in Figure 4.16.

	Item	Substance	Social	Professional	Mental	Crime	Sin
		Abuse	Pressure	Diagnosis	Disorder		
Group	3			+	+	Theft	theft
Ι	8			+	+	good	omission
(most						Samaritan	
sick)	14						sloth
Group	9	+				Crime	crime
II	13				+		sloth
	15	+					gluttony
Group	7	+				DUI/	not kill
III						manslaughter	
	11	+				Theft	theft/
							gluttony
	16		+				pride
Group	4					Crime	crime
IV	5		+				envy
Group	1					Genocide	not kill
V	2					good	omission
						Samaritan	
	6					Theft	theft
Group	10						pride
VI	12					Genocide	not kill
(most							
evil)							

Figure 4.16. Features of Significant Groups.

Figure 4.16 shows that every item involves a sin, as it is usually defined by religion, and most involve a crime, as it is usually defined by law. Group I (most *sick*) is generally defined by diagnosed mental disorders. Groups II, III, and IV are defined by external influences (substance abuse and social pressure). Groups V and VI (most *evil*) are defined by the distinct lack of mitigating factors that negate responsibility. That is, when external influences (e.g. substance abuse, peer pressure, etc.) are not associated with the activities listed above, there is a clear determination that the activity is evil. This gives some indication of a trend that shows the reduction of severity of external

influences as the chart moves from *sick* to *evil*. A diagnosed mental illness, being the most severe type of influence, is defined as sick. Substance abuse and social pressure, which are less severe types of influence than mental illness, are defined as partially evil and partially sick. Finally, those actions that experienced no external influence were defined as evil. Despite this trend that associates decreasing influence with increasing evil, there are also some exceptions to these general indicators. Of particular note is number 13 (depression induced laziness), which is considered somewhat less sick than number 14 (laziness despite health risk) but has a mental disorder to motivate the associated sin (sloth). Number 14, also guilty of sloth, has no associated influence to motivate the sin, but is still grouped in the *most sick* category.

Despite these similarities to the legal model, where degree of responsibility roughly indicates level of legal sanction, there is no indication, demographically, that the responses indicate competition between psychological and religious models. Because psychology works to cure sick people and religion works to cure evil people, one might expect a psychological model to redefine the survey responses to show greater instances of *sick* and a religious model to show greater instances of *evil*; however, there is no indication from the survey that this is the case. The respondents from the social sciences did not show greater tendency toward use of *sick*. Also, religious background was associated with no significant variation (although, the responses were grouped to show variation among religions rather than between the religious and non-religious). Therefore, this study does not rule out the possibility that there is little variation between how professionals view these concepts. Groups may therefore share the same conceptual models and only differ in how they approach treatment and healing.

CHAPTER 5: CONCLUSION

5.1. INTRODUCTION. This thesis has proposed a contrastive analysis of the concepts of SICK and EVIL based on relative degree of agency. However, the basic assumption that responsibility is the dividing force between these concepts was only partially supported by the data collected. This chapter will explore the conclusions to be drawn from these results, discuss implications and propose additional work to be done to improve these conclusions.

5.2. SUMMARY. This study shows that the shift from the historical to modern perceptions of SICK and EVIL reflects a shift in the assignment of responsibility, though perhaps not to the degree expected. Historically, it was very common for the person who experienced a change of state from healthy to sick to be held accountable, but there is now a public perception that places very little responsibility on the subject of the predicate *sick*. Returning to the discussion of Thematic Roles, this shift of responsibility assignment is an indication that the AGENT role is now most commonly assigned to an external argument (i.e. not the subject of the sentence) when dealing with a change of state to *sick*. The examples cited in this thesis show agency assigned to the person that undergoes the change of state, to cosmic forces, to rival tribes, and to angry spirits. Each of these entities removes some degree of responsibility from the person suffering from sickness. The perception of physical illness has developed along with germ theory to the extent that the AGENT role may not even be assignable since the causative entity lacks volition, animacy, and possibly other features that define agency or responsibility.

In the case of mental illness, causation is often more difficult to determine. However, the survey data indicates that assignment of responsibility to a person for a state of mental illness is no more likely than assignment of responsibility for physical illness. As this study demonstrates, there is very little responsibility that is associated with sickness. Without the [+RESPONSIBILITY] feature to transfer to an argument (whether present in the statement or not), *sick* may lack the AGENT role entirely.

Contrastively, despite the lack of association of responsibility with sickness demonstrated in the survey, there does appear to be an indication that a person has some responsibility for maintaining his/her health and affecting a cure for sickness. These indications were not especially pronounced in the data, which may be a concession to the fact that there is no volitional cause of illness. Though there are steps to take in the prevention of illness, and adherence to medical advice is more likely to encourage healing, the actual changes of state are not subject to an individual's will.

In the case of EVIL, there has not been as dramatic a shift in responsibility assignment as expected but there is an indication that [+RESPONSIBILITY] is associated with *evil*. This indication is primarily pronounced in the Multiple Choice section of the survey. It may not be as evident in the Word Association section of the survey due to unanticipated pragmatic aspects of the terms *responsibility*, *choice*, and *intention*. These terms were highly associated with *good*, but not with its antonym *evil*. This may indicate that people view *responsibility*, *choice*, and *intention* in isolation as inherently good. Without context, these terms may have an automatic association with common phrases (e.g. *good intentions*), complements (i.e. to be *responsible* is good), or moral ideals (i.e. the freedom to *choose*). This speculation may account for the disproportionate instances of the survey participants' association of these three terms with *good* relative to the instances of association with *evil*, *guilty*, and *redeem*.

However, the second section of the survey provided more context than the word association section. This context was presented in the form of full questions with multiple options, whereas, the word association section merely offered a list of words. The resulting data from this method show that there is a stronger indication that the point of divergence between SICK and EVIL is the feature [+/- RESPONSIBILITY] where EVIL bears [+RESPONSIBILITY] and SICK bears [-RESPONSIBILITY]. The association of RESPONSIBILITY with EVIL would have the effect of establishing the subject of *evil* as the causal AGENT of the state of being EVIL. The person who undergoes a change of state to EVIL would also be the force that motivates that change. Likewise, a change of state from EVIL to GOOD would be left to the will of the person that experiences that change. Therefore, *evil* would assign the AGENT role to the subject. However, the necessary association of RESPONSIBILITY with EVIL was not consistently manifested in the survey results and it would be premature to draw this conclusion without further study.

This thesis has attempted to present a very polar distinction between EVIL and SICK in terms of agentive influences on changes of state. If a subject is assigned responsibility for the state, then that subject is the AGENT. If there is no responsibility, that subject is not the AGENT. I have further tried to establish that there is a continuum that runs from EVIL to SICK in terms of assigning responsibility for actions. Aspects of these hypotheses were supported by the data as there is an apparent continuum between EVIL and SICK. However, the EVIL end of this continuum appears to be less well defined. That is, the association of NON-RESPONSIBILITY and SICK establishes one pole. The middle ground shows aspects of partial responsibility making it unclear as to whether something is EVIL or SICK. However, that which is clearly defined as EVIL did not have as clear an association of RESPONSIBILITY, but instead a negative association with NON-RESPONSIBILITY, which is a subtle but important distinction. A sick person is not responsible, but an evil person is not so much responsible as NOT not-responsible.

5.3. IMPLICATIONS. One possibility that may address both the expected and unexpected findings of the survey is to reconsider the model that places *sick* and *evil* at polar ends of a continuum. By basing a new model on the survey findings of an association between NON-RESPONSIBILITY/SICK and RESPONSIBILITY/GOOD and placing those into the opposing diagonals of a Greimas Square to show their contradictory relationship, we can draw out further contrasts and entailments. This is presented in Figure 5.1:



Figure 5.1. Greimas Square I.

One line of contradiction (dotted) shows the associations established by the survey and runs from *responsible* to *~responsible*. These associations have been discussed already in

this thesis. The lines of contrast (solid) require use of a term that has not been dealt with in this thesis: *irresponsible*. While *irresponsible* is a likely opposite of *responsible*, it does not necessarily imply a lack of responsibility for one's actions (a preliminary judgment of the meaning seems to indicate that *irresponsibility* implies a lack of awareness or concern for the consequences of one's actions). A criminal can act irresponsibly and still be guilty of a crime. The main point of separation between *responsible* and *irresponsible* is based in the morality of the action (whether it is good or bad). Of course, there is an issue of markedness here that allows one to be *responsible* for both actions that are morally good and morally bad, while *irresponsible* only associates with moral badness. Considering this, the contrast described here gives a possible explanation for the low association of *responsibility* with *evil* in the first section of the survey followed by the high association of *responsibility* with *evil* in the second section. However, verification of this requires the inclusion of *irresponsibility* in the survey.

The final node of the Greimas Square presents the possibility that there is an association between *well* and *~irresponsible*. The term *~irresponsible* can be seen as being the opposite of *irresponsible*. That is, as discussed above, if people are irresponsible, they lack awareness of the consequences of their actions. Therefore, if people are *~*irresponsible, they do not lack this awareness of the consequences. However, this still does not necessarily imply culpability. There is a distinction between being *responsible* and being *~irresponsible* that is best illustrated by analogy: if I leave my door unlocked and am subsequently robbed, I cannot be held responsible for the burglary. However, I did facilitate it through my negligence. Therefore, I am not *responsible*. I am also not *irresponsible* or *~irresponsible*.

The possibility of an association between ~*irresponsible* and *well* is supported by the findings that there is some indication that a person is able to maintain a healthy state through his/her actions. However, this does not necessarily mean that a person is responsible for such a healthy state. Instead, it alludes to the possibility that a person, while not responsible for maintaining a state of wellness, is also ~irresponsible for maintaining that state of wellness. In other words, no matter what steps a person takes to prevent illness (exercise, diet, washing hands, etc.), that person will never be able to take complete control over his/her health so as to deter all illness.

Expanding the square to include labels for the combinations of nodes yields further evidence that this model has the potential to accurately describe the data gathered in the survey by incorporating the legal associations discussed in Chapter 4. Figure 5.2 shows this expansion:



Figure 5.2. Expanded Greimas Square.

The combination of *responsible* (*good*) with *irresponsible* (*evil*) describes moral choice. Both terms imply responsibility for actions but differ in aspect of morality (as discussed above). The combination of ~*irresponsible (well)* and ~*responsible (sick)* are similarly juxtaposed but without the element of culpability and therefore describe goodness and badness in terms of health. *Innocence* is described by combining *responsible (good)* with ~*irresponsible (well)* and the possibility of partial responsibility that has been discussed at length in previous chapters is described by combining *irresponsible (evil)* with ~*responsible (sick)*. Finally, *guilt* is described by the relationship between *irresponsible (evil)* and ~*irresponsible (well)*. This leaves one relationship not labeled, that of *responsible (good)* and ~*responsible (sick)*. To my knowledge, there is not any particular determination for this state of being other than to say a person is *good but sick* or something similar. If the proposed Greimas Square model can be shown to accurately describe the relationships discussed in this thesis, it would be interesting to see if other words used in this survey also display relationships accurately described by this model (e.g. *redeem* and *heal* as they relate to *sin, fall ill*, etc.)

The previously discussed expansion of the Greimas Square brings the discussion back to the legal world. We have seen how the public perception mimics the legal system in terms of assigning responsibility to those who are guilty but not to those who are insane. Therefore, *guilty* would carry the feature [+RESPONSIBLE] and *insane* would carry [-RESPONSIBLE]. However, there is a third determination made by courts: innocence, or in typical verdict parlance "not-guilty." This determination would be the equivalent of *good* the same way that *guilty* equates to *evil*. The interesting point here is that *good/innocent* must also carry the feature [+RESPONSIBILITY] despite the fact that it is essentially a determination of non-responsibility for a crime. Put more simply, to be innocent is to be responsible for not committing a crime. While a verdict of *guilty* is a declaration of a state of responsibility for a crime, a verdict of *not-guilty* is a declaration of a state of responsibility for not committing a crime. Committing a crime involves *choice*, *intention*, *volition*, etc. Similarly, not committing a crime also involves *choice*, *intention*, *volition*, etc. Conversely, a verdict of *innocent by reason of insanity* is a declaration of a state of no responsibility for one's actions. The defendant may have in fact committed a crime but lacks the *choice*, *intention*, *volition*, etc. that define responsibility for the crime. This is summarized by Figure 5.3:

	Responsible	Not Responsible	Good	Evil
Guilty	Х			Х
Not-Guilty	Х		Х	
Insane		Х		

Figure 5.3. Evaluation of legal verdicts.

This chart shows that the distinction between a verdict of guilt or innocence is the moral value of the actions. However, because a verdict of insane does not carry responsibility, the morality of the action is not a factor in its assignment.

This study further implies that [+RESPONSIBLE] is a summary of the various features that define the role AGENT. Such elements as [+ANIMATE], [+CAUSE], [+VOLITION], etc. that are often used to define the AGENT role may also be found as the semantic features of *responsibility*. In other words, *responsibility* may be a synonym of *agency*. However, verification of this claim would require additional research as its validity is not demonstrated in this thesis.

This also leads to the possibility that there are varying degrees of responsibility assigned to an AGENT thematic role. Similar to different definitions of the AGENT role, *responsibility* may entail a variety of features depending on the context of its use. This is shown to some degree in the lack of dominance of either *evil* or *sick* in the survey

questions. However, in terms of *evil* alone, the task remains to identify other factors that mitigate the level of responsibility assigned to such actions and how to classify those factors (i.e. is submission to peer pressure a sickness or something else?).

5.4. ADDITIONAL CONSIDERATIONS. One observation that I made repeatedly as I prepared and executed this study was the polysemous nature of *sick*. The discussion within this thesis ranges from physical to mental infirmities (though the focus was on the mental so as to contrast states of mind as there is no physical counterpart of *evil*). However, the range of meanings of *sick* include many more variations from *disgusting* (as mentioned previously) to *perverted* to a slang term for *good*. While this study has not made an exhaustive analysis of the meanings of *sick* and *evil*, focusing instead on just the aspect of responsibility, it seems apparent that the meaning of *sick* has generalized to the point that precise interpretation of its use depends greatly on context. *Evil*, however, seems to have remained fairly constant and more specific in meaning, relative to *sick*. However, it is possible that *evil* will show much more variation in coming years with its adoption by the political world, showing a spike in use since the 1990's after consistently diminishing in use since the 1950's, according to the Time Magazine Corpus (Davies).

There is also an indication that concepts of NON-RESPONSIBILITY vs. NON-NON-RESPONSIBILITY, as associated with *sick* and *evil* may inform expert descriptions of the relative characteristic behavior of social vs. psychological disorders. The survey data showed that those items that used terms like *schizophrenia, social anxiety disorder,* on one hand and *genocide,* or *racism* on the other hand were on the extremes of the continuum between EVIL and SICK. Therefore, it may be that establishing the label *schizophrenia* carries with it the feature [+SICK] and establishing the label *genocide* carries with it the feature [+EVIL]. Whereas terms that lie in the middle of the continuum, like *addict* or *bully*, do not necessarily carry either semantic feature because there is not consistent association of these terms with either of the polar concepts. Determining the semantic features that these middle-laying terms do carry would be an interesting future study.

SURVEY LIMITATIONS. The sections of the survey were chosen to be consistent with the type of data collection used by other researchers, as discussed in Chapter 2, and to present a wide array of information for analysis. It was hoped that breadth of variation would add validity to the conclusions drawn from the data. However, the structure of the survey sections led to other problems. Some of these issues are:

- The first two sections (word association and multiple choice) presented conflicting data with respect to whether [+RESPONSIBILITY] was associated with *evil*.
- (2) The third section (anecdotal response) was flawed in that it required rejection of the first two null hypotheses in order to establish the anticipated continuum that would lead to the rejection of the third null hypothesis. Because there was no established association between [+RESPONSIBILITY] and *evil*, no conclusions could be drawn from this section.
- (3) The data gathered from the multiple choice and anecdotal response sections was difficult to process and interpret.

(4) The selection method used to generate questions and answer options for the multiple choice section was very biased to my personal views on the subject.

These points lead to the conclusion that the second and third sections (multiple choice and anecdotal response) should be revised or removed from this survey in future distributions. Each of these sections provided interesting insights that could inspire future work if they are revised. However, removal of these sections would also allow the researcher to increase the quantity of prompts in the word association and Likert Scale sections. Increasing these sections could lead to increased confidence in the conclusions already drawn and improve understanding of the processes used in determining agency with respect to *sick, evil* and other associated terms that were not addressed in this study.

Another limitation of the survey is the failure to randomize the distribution. A truly random distribution of the survey may have shown more demographic predictors emerge from the data. As it was, several of the demographic groups had insufficient numbers to show a statistically significant representation of that group. This is particularly true for the social science professionals whose responses were of inherent interest to this thesis. Also, a more representative and diverse grouping of the religious demographic may have provided more interesting results since the 'non-LDS' group included a variety of religions including atheism, Hinduism, and the Native-American Church, and a variety of Christian religions.

Also, as stated in the methodology, the survey was structured to force the participant to choose from among the options presented. This is necessary from a statistical standpoint as it is impossible to analyze "write-in" answers in any meaningful

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way. However, it also allows only limited information to be gathered. Naturally, the pursuit of truth beckons the contribution of all knowledge and by limiting the type of answer that can be processed we can only hope to get somewhere near the truth. I bring this up because the last section of the survey showed a lack of response from several of the participants. While only one participant abstained from answering the entire section, the number of abstentions varied with each question. The highest number of abstentions was fourteen for the question dealing with a person who refuses to assist the victim of a crime. It is impossible to definitively interpret the reason for these abstentions. However, I speculate that many of them were motivated by a perception that the item was neither *sick* nor *evil*.

Two of the participants sent me emails whose contents support this speculation. One specifically pointed out that the participant did not believe that a person's failure to provide for his/her family was either evil or sick but that it was an act of selfishness and this perception carried over to other items besides the one mentioned. From a personal perspective, some (including the author) could respond by saying that selfishness is a type of sin and therefore an act of evil. However, this participant obviously did not share this view and our differing perceptions point out that some people may operate with a more specialized meaning of *evil* than I have assumed in this thesis.

The second email pointed out that the survey did not take into account the variety of Native American cultures that may perceive *sick* and *evil* as having no relationship and therefore, the dichotomy tested in the survey is a false one. This is a valid criticism and points out the very biased Christian slant of the survey (especially with many of the items in the fourth section being based on the Ten Commandments and the Seven Deadly Sins). However, my response is that it is not a test of cultural perception but rather how those perceptions are reflected in the English language. The English language has developed the *sick/evil* relationship independently of the Native American cultures and languages (though perhaps influenced by them). The *sick/evil* relationship also has close ties to the Christian tradition because of the role of the Bible in English literacy. This study does not stand or fall on the assumption that a non-English language would contain the same relationships between words, especially when that relationship is so heavily couched in religion, law, and psychology; fields that are heavily influenced by culture. However, any further study that applies methods similar to those set out in this thesis to languages and cultures ostensibly different from ours would likely reveal further interesting comparisons and contrasts between the concepts of EVIL and SICK in other cultures.

FUTURE WORK. Several possibilities for future work have been mentioned throughout this chapter. These include: verifying the potential of the Greimas Square as a model for the *sick/evil* relationship and extending the focus of inquiry into *irresponsibility* and other related terms, evaluating the connection between legal terminology and the terms used in this thesis, investigating the *sick/evil* relationship in other cultures and languages, etc. However, the possibilities for future work extend beyond these and beyond linguistics. I have already suggested that the lack of a strong linguistic connection between *evil* and *responsibility* may have been motivated by the pragmatics of trying to associate a negative term (*evil*) with a positive feature (*responsibility*). However, this also invites a sociological investigation into what the disassociation of these two terms means for society. Does our world view beyond linguistic implication also disassociate the concepts? Is this an indication of failing morality and/or ethics?

Also, this thesis has not attempted to participate in the debate on the usefulness of EVIL for clinical scientists despite the debate having inspired this thesis. However, the conclusion that there is an overlap of behaviors labeled sick and behaviors labeled evil may contribute something to the fields. For example, to overcome an addiction, 12-step programs require effort from both the individual and the support group. This suggests that an addict is both sick and evil since both the AGENT and PATIENT roles appear to be assigned to the addict. Of course, verification of this proposal requires further research.

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APPENDIX A: SURVEY

CONSENT TO BE A RESEARCH SUBJECT

Introduction

This research study is being conducted by Nathan Simmons, a graduate student at Brigham Young University, to determine the difference in meaning of the terms *sick* and *evil* (and related terms) and what conditions determine use of each term in relation to the other. You are being invited to participate in this study because, as a native English speaker, you have an intuitive understanding of what these terms mean. It is the intention of this study to define that intuitive understanding.

Procedures

You will be asked to complete a questionnaire. The questionnaire consists of five sections with a total of 45 questions and will take approximately 20 minutes. The questions are presented in a variety of formats asking you to indicate word associations, make determinations as to guilt or innocence, and discuss your use of *sick* and *evil* and how you perceive these terms. The survey also asks for a few demographics including age, gender, origin, occupation, and religion.

Risks/Discomforts

There are minimal risks for participation in this study. However, you may feel emotional discomfort when answering questions about personal beliefs or when making judgments about guilt or innocence.

Benefits

There are no direct benefits to subjects. However, it is hoped that through your participation researchers will learn more about how society defines mental illness and guilt for criminal actions that may apply to psychological evaluations and legal determinations.

Confidentiality

All information provided will remain confidential and will only be reported as group data with no identifying information. All data, including your answers to the questionnaire, will be stored in a password protected database with access granted only to the principal investigator. After the research is completed, the data will be deleted.

Participation

Participation in this research study is voluntary. You have the right to withdraw at anytime or refuse to participate entirely without jeopardy to your class status, standing with the university, or other social and professional relationships.

Questions about the Research

If you have questions regarding this study, you may contact Nathan Simmons at (801)422-4414 or ngsimmons@byu.edu.

Questions about your Rights as Research Participants

If you have questions you do not feel comfortable asking the researcher, you may contact Christopher Dromey, Ph.D, IRB Chair, 422-6461, 133 TLRB, 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.

Click the "I agree" box if you wish to participate; click the "I disagree" box if you do not wish to participate:

^O I agree

0

I disagree

SECTION 1: DEMOGRAPHICS

This is the first of five sections. Each section presents a different style of question. Please don't dwell on any particular question. First impressions are more likely to correctly identify your intuitive responses.

After submitting your responses to each section, do not use the back button to go back and change your answers. This will confuse the database interface.

Survey: Please answer the questions below

Age: _____ Gender: M / F Occupation/Major:_____ Hometown:_____ Religion:_____

SECTION 2: WORD ASSOCIATION

Please circle all the words in each column that you feel are directly associated with the **bold** word above each list.

Sick	Good	Evil	Guilty
Addicted	Addicted	Addicted	Addicted
Atone	Atone	Atone	Atone
Aware	Aware	Aware	Aware
Care	Care	Care	Care
Choice	Choice	Choice	Choice
Criminal	Criminal	Criminal	Criminal
Cursed	Cursed	Cursed	Cursed
Drunk	Drunk	Drunk	Drunk
Heal	Heal	Heal	Heal
Impair	Impair	Impair	Impair
Inflict	Inflict	Inflict	Inflict
Innocent	Innocent	Innocent	Innocent
Intention	Intention	Intention	Intention
Medicine	Medicine	Medicine	Medicine
Penitent	Penitent	Penitent	Penitent
Recover	Recover	Recover	Recover
Responsibility	Responsibility	Responsibility	Responsibility
Soul	Soul	Soul	Soul
Suffer	Suffer	Suffer	Suffer
Treatment	Treatment	Treatment	Treatment
Insane	Cure	Well	Redeem
Addicted	Addicted	Addicted	Addicted
Atone	Atone	Atone	Atone
Aware	Aware	Aware	Aware
Care	Care	Care	Care
Choice	Choice	Choice	Choice
Criminal	Criminal	Criminal	Criminal
Cursed	Cursed	Cursed	Cursed
Drunk	Drunk	Drunk	Drunk
Heal	Heal	Heal	Heal
Impair	Impair	Impair	Impair
Inflict	Inflict	Inflict	Inflict
Innocent	Innocent	Innocent	Innocent
Intention	Intention	Intention	Intention
Medicine	Medicine	Medicine	Medicine
Penitent	Penitent	Penitent	Penitent
Recover	Recover	Recover	Recover
Responsibility	Responsibility	Responsibility	Responsibility
Soul	Soul	Soul	Soul
Suffer	Suffer	Suffer	Suffer
Treatment	Treatment	Treatment	Treatment

Answer the following questions. Select ALL answers that you feel are true. The use of "sick" or "ill" here refers specifically to mental illness.

- 1. A person who has a mental disorder
 - a. cannot help being sick
 - b. is most likely to be cured through a conscious choice
 - c. is most likely to be cured with the help of a doctor
 - d. is most likely to be cured through his/her own efforts
- 2. How can one prevent sickness?
 - a. follow a doctor's advice
 - b. exercise
 - c. eat right
 - d. all of the above

e. none of the above... there is no way to definitively keep from getting sick

- 3. An evil person
 - a. is someone who chooses to do wrong
 - b. is a criminal
 - c. usually has a mental disorder
 - d. can usually also be described as "sick"
- 4. How does one change his/her state from evil to good?
 - a. only through conscious effort
 - b. only with the help of a loved one
 - c. by ceasing to do evil acts
 - d. a change to "good" will eventually occur regardless
- 5. Can some people be labeled both "sick" and "evil?"
 - a. yes, but that is rare

b. no, the nature of sickness is that a person is not responsible for their condition, and responsibility is necessary to be considered evil

c. yes, a drug addict is an example of this overlap

d. yes, but when that happens, "sick" loses its normal meaning and becomes more synonymous with "evil"

- 6. The difference between "evil" and "sick" is:
 - a. choosing to bring about one's state
 - b. accountability for the consequences of one's actions
 - c. degree of responsibility
 - d. the difference is very slight, the words are almost synonymous
- 7. What type of behavior would you describe as "evil?"

- a. Criminal behavior
- b. moral sin
- c. political scandal
- d. the actions of an insane person
- e. small offenses (to draw emphasis)
- 8. What type of behavior would you describe as "sick?"
 - a. Criminal behavior
 - b. moral sin
 - c. political scandal
 - d. the actions of an insane person
 - e. small offenses (to draw emphasis)
- 9. Do you use the terms "sick" and "evil" (and their synonyms) interchangeably?
 - a. Yes, when discussing severe criminal activity (e.g., homicide)
 - b. Yes, when discussing moral sin
 - c. Yes, when discussing despotic political leaders
 - d. Yes, when discussing mental disorders
 - e. Yes, when discussing things that I find repulsive
 - f. No, the words should not be used interchangeably
- 10. Do you use the phrase "sick and wrong?"
 - a. Yes, when something is both sick and wrong
 - b. Yes, by using synonyms I add emphasis to the offensiveness of a thing
 - c. No, because I don't like to be redundant
 - d. No, because the words can seldom be used to describe the same thing

SECTION 4: ANECDOTAL JUDGMENT

Read the paragraph and answer the following questions.

1. Smith, a Vietnam veteran, who has a history of violent nightmares, and who once fired an automatic weapon from the roof of his house with no memory of the incident, shoots and kills his wife's brother-in-law after his wife left him a second time. The shooting occurred at midnight under foggy, humid conditions reminiscent of Smith's scouting days in Vietnam. He claims that he believed he was cleaning out a Vietnamese hut, a claim that was bolstered by expert testimony that he was suffering from post-traumatic stress syndrome.

Smith is: a) not responsible for his actions.

b) partially responsible for his actions.

- c) fully responsible for his actions.
- d) fully responsible but justified in acting the way he did.

2. Jones, a 60-year-old retired military person, shoots at a low-flying crop-duster, puncturing the fuselage and causing the plane to crash, killing the pilot. Jones claims that the plane was sent by the government to spy on him and to kill his animals, noting that one of his dogs had died a few days before. There is no objective evidence that the government has ever paid any attention to Jones.

Jones is:

a) not responsible for his actions.

b) partially responsible for his actions.

c) fully responsible for his actions.

d) fully responsible but justified in acting the way he did.

3. Jacobs is a policeman, who killed a person he had just arrested. Three psychiatrists testify that he committed the crime as a result of an unconscious desire to be punished for his failure to be home two years earlier, when his wife and small daughter were brutally murdered. There are a string of incidents to illustrate chronic depression, threats of suicide, bizarre behavior, and bursts of anger. Jacobs, after the shooting, surrenders to his partner, saying, "I don't know why I did it."

Jacobs is: a) not responsible for his actions.

b) partially responsible for his actions.

c) fully responsible for his actions.

d) fully responsible but justified in acting the way he did.

4. Sorenson is a battered woman who kills her husband following a particularly brutal beating and after a long history of brutal beatings and humiliation. While the husband was sleeping, Sorenson went to her mother's house, found a gun there, and returned home and shot her husband while he lay sleeping. Testimony on the battered woman syndrome and learned helplessness was given.

Sorenson is: a) not responsible for her actions.

b) partially responsible for her actions.

c) fully responsible for her actions.

d) fully responsible but justified in acting the way she did.

5. Daniels killed his mother. Doctors testify that Daniels was suffering from schizophrenia, and became convinced that his mother was a witch, casting spells on him. He specifically thought she was casting a spell to make him impotent. His mother had never abused him or neglected him, although she has always been somewhat distant.

Daniels is: a) not responsible for his actions.
b) partially responsible for his actions.
c) fully responsible for his actions.
d) fully responsible but justified in acting the way he did.

SECTION 5: LIKERT SCALE

Indicate your perception of the following phrases and situations using a scale from 1-5 where:

1 = mentally ill, 2 = mostly mentally ill but with some evil intent, 3 = equally mentally ill and evil, 4 = mostly evil but with some influence from mental illness, 5 = evil

The actions of Adolf Hitler with regard to his treatment of Jews and other non-Aryan ethnic groups:

1 2 3 4 5

Failure to intervene in the commission of a crime when there is little danger to oneself: 1 2 3 4 5

A schizophrenic person who frequently steals from stores that he claims "owe him": $1 \quad 2 \quad 3 \quad 4 \quad 5$

Crimes of passion: 1 2 3

An unpopular boy who becomes a bully so others will think he is "cool":

5

1 2 3 4 5

A wealthy person who steals for the thrill: $1 \quad 2 \quad 3 \quad 4 \quad 5$

4

An intoxicated person who accidentally kills someone while driving: $1 \quad 2 \quad 3 \quad 4 \quad 5$

A person with a social anxiety disorder who refuses to help even when it means saving a person's life with minimal effort:
3 4

Crimes committed when under the influence of doctor-prescribed medication:

Racism

A drug addict who steals in order to buy more drugs:

Politically motivated genocide:

A head of household who is depressed and refuses to find work to support his/her family:

A person's failure to exercise even though their obesity is causing them serious health risks:

Addiction:

A person who brags constantly about accomplishments in order to win social acceptance:

APPENDIX B: IRB LETTER OF APPROVAL



INSTITUTIONAL REVIEW BOARD FOR Human subjects

November 30, 2007

Nathan Simmons 123 N 900 E Provo, UT 840606

Re: A Semantic Analysis of "Sick" and "Evil"

Dear Nathan,

This is to inform you that Brigham Young University's IRB has approved the above research study.

The approval period is from 11/30/2007 to 11/29/2008. Your study number is X07-0323. Please be sure to reference this number in any correspondence with the IRB.

Continued approval is conditional upon your compliance with the following requirements:

- A copy of the implied **Informed Consent Document**, approved as of **11/30/2007** is enclosed. No other consent form should be used.
- All protocol amendments and changes to approved research must be submitted to the IRB and not be implemented until approved by the IRB.
- A few months before this date we will send out a continuing review form. There will only be two reminders. Please fill this form out in a timely manner to ensure that there is not a lapse in your approval.

If you have any questions, please do not hesitate to call me.

Sincerely,

Sandee M.P. Muñoz, Administrator Institutional Review Board for Human Subjects CD/se Enclosures

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