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The Study of Spiritual Phenomena with Intelligence Methodology

A Master Thesis

Submitted to the Faculty

of

American Public University

by

Ginny V. Haddock

In Partial Fulfillment of the

Requirements for the Degree

of

Master of Arts

May 2018

American Public University

Charles Town, WV
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DEDICATION

I dedicate this thesis to the seekers of truth who take critical thinking into their own hands with acknowledgement of, but not influence from, societal and personal limitations. May we all adopt the mindset of Ian Stevenson: “Let no one think that I know the answer. I am still seeking” (Stevenson, “Half a Career” 21).
ABSTRACT OF THE THESIS

The Study of Spiritual Phenomena with Intelligence Methodology

by

Ginny V. Haddock

American Public University System

Charles Town, West Virginia

Dr. Kathryn A. Broyles, Thesis Professor

This thesis—drawing from the emerging field of Security Studies—presents the intelligence methodology of Alternative Competing Hypotheses (ACH) as a more effective analytical framework for examining non-testable spiritual phenomena than traditional scientific methodology. The scientific community has largely avoided studying spirituality because of its religious connotations, questioning its scientific merit and the untestable nature of spiritual phenomena, resulting in spiritual experiences being left to philosophical and artistic realms. However, the widespread existence of spiritual phenomena merits their investigation. Spiritual phenomena, particularly those that are non-testable such as past life experiences, contact with the divine, and near death experiences, tend to present inconsistently and involve a subjective human component, much like issues analyzed in the intelligence field. Although a systematic method of examining these types of phenomena is lacking in scientific methodology,
intelligence methodology, specifically the ACH method, focuses on rigorously analyzing issues analytically rather than experimentally. The published case of a boy with alleged past life experiences illustrates the effectiveness of the technique over scientific methodology for examining non-testable spiritual phenomena. Spirituality is a multi-faceted component of society, and the rigorous analysis of spiritual phenomena through the ACH method will add another dimension to understanding the spiritual influences within a culture.
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CHAPTER 1:
Introduction

Spirituality is an integral element of the human experience, manifesting both personally and communally within society as individual experiences and as organized religious movements. Spirituality pervades numerous aspects of society: it is expressed in artistic and literary works, philosophical belief systems, cultural customs, and power structures. Societal elements affect religion and religion affects society (Livingston 124). From this symbiosis, the importance and influence of spirituality has ebbed and flowed over time and through cultures, both on an individual and a societal level.

Up through the 17th century, organized religion\(^1\) played a primary role in society, influencing the political and cultural realms in addition to the religious. Throughout history, individuals have turned to religion for explanations of events like famines, epidemics, and natural disasters—attributing such calamities to the feelings and actions of the gods or God. Through the Middle Ages, theology held uncontested authority on explanations of the natural world (Zakai 126). The 17th century population, including many great thinkers of the time such as Francis Bacon, Johannes Kepler, and Isaac Newton, did not consider looking beyond the church for understanding of the Divine, with scientific and philosophic inquiry largely confined to the realm of religion. Additionally, the more aesthetic aspects of culture maintained a heavy religious focus. Religious and political leaders were the primary commissioners of works of art in the 16th and 17th centuries (Hooker 7, Wood 227). Major literary works focused on spiritual themes: from Ovid’s *Metamorphosis* in the 1st century to Dante Alighieri’s *The Divine Comedy* in the 14th century to John Milton’s *Paradise Lost* in the 17th century. From these connections, spirituality maintained a presence with much of society.

Organized religion’s multifaceted connection to the realm of scientific inquiry affected a decline in its influence in society. Organized religion played a significant role in educating scientists\(^2\) prior to the

---

\(^1\) For this thesis, the terms “organized religion” and “the church” refer to the Christian church in the West.
\(^2\) For this thesis, the term “scientist” will be used to maintain consistency in language; however, the term was not coined until the early 19th century, and earlier scientists were referred to as astronomers, natural philosophers, and/or mathematicians (Hill 356).
18th century and laid the foundation for the growth of scientific activity and knowledge. Scientific inquiry continued through the Middle Ages in the Islamic world. However, the fall of the Roman Empire significantly impeded progress in the West (Europe) (Hannam 9). It was the Christian church’s creation of systematic education that stimulated scientific study in the West in the late Middle Ages. Organized religion maintained further influence over scientists by creating the universities in which they studied and, thus, controlling what they studied, with the natural world understood as an aspect of the Divine not as a focus of “science.” However, with the onset of the scientific revolution in the 17th century, the church’s influence waned as philosophers and scientists such as René Descartes, Thomas Hobbes, and Baruch Spinoza began to question church dogma and the church’s control over scientific inquiry (Ellenzweig 38). Such scientists increasingly considered physical rather than supernatural causes as a means to explain the natural world. With the solidification of scientific inquiry provided by universities, scientists “gradually denied theology’s regal role in explaining how nature works” (Zakai 149). Moreover, the requirement to study theology as a component of university studies was removed, allowing scientists to spend their time on purely scientific efforts with minimal influence from the church. As a result, the physical sciences became more commonly studied than theology by the turn of the 19th century (Hannam 9, 338). Soon organized religion, which once exerted significant influence over society, was usurped by the political and economic spheres.

By the 19th century, the church’s influence in society had diminished; however, religious leaders, partially in an attempt to keep their beliefs intact and partially to hold on to their power over society, refused to give credence to scientific ideas that countered their beliefs and dogma, thus creating a rift between science and religion. The ability of scientific investigation and mathematics to explain events in the world increasingly displaced religious explanations from the 17th century forward, exacerbating the church’s negative reaction to much of the findings of science. This rift filtered into society as a whole as scientific theories such as the sun-centered universe and the age of the earth began to prove more accurate than those of religion. With religious leaders’ continual dismissal of scientific ideas, many in the
scientific community began to question the church’s teachings in general, soon relegating religion and spirituality altogether to the realm of mythology and fantasy.

Scientists have long avoided examining spiritual phenomena\(^3\) as a result of this rift between science and spirituality that began in the West centuries ago and continues to this day. A variety of phenomena that was spiritual in nature continued to arise; however, because these phenomena seemed connected to a spiritual realm and could not be examined as physical phenomena, the scientific community ignored them. Spiritual phenomena typically arose as anecdotal cases, making them suspect by those who did not encounter them; these phenomena include contact with the divine, extrasensory perception, near death experiences, and past life experiences, among others. Few scientists attempted to research these phenomena, and those who did were soon stymied by the difficulty in researching because of a lack of knowledge and technical capability relating to how the phenomena occurred. Moreover, the connection to religious ideas made these areas less palatable as serious areas of study, particularly with the expanding research into the numerous physical sciences as other options. As a result, spiritual phenomena were not considered seriously by the scientific community.

From the centuries of avoidance of research into spiritual phenomena by the scientific community, research methodology for the physical sciences became the standard method of inquiry for all knowledge deemed “legitimate.” This methodology arose with Francis Bacon’s ideas of experimentation in the 15th century and solidified with the scientific revolution of the 17\(^{th}\) century as scientist began routinely examining physical phenomena by experimentation that recreated the phenomena, from which they then developed theories to predict the phenomena. This methodology soon developed into a scientific method that was used throughout various fields of science. The focus on scientific methodology further pushed inquiry into spiritual phenomena out of vogue as most of these types of phenomena cannot be studied through experimentation. These types of issues present differently and inconsistently among people and situations, so they are not easily (if at all) examined through traditional scientific

---

\(^3\) For this thesis, the term spiritual phenomena encompasses both psi phenomena (forms of extrasensory perception) and survival phenomena (divine communication or past life experiences).
methodology. Moreover, much of the scientific community continues to eschew research into these types of phenomena because they are often subjective and emotion-laden. The presence of subjective, emotional aspects of an issue persistently impedes critical thinking and analysis by clouding and overtaking factual information. This is a significant problem with examining issues to which people attach significant emotion, and supernatural import, such as spiritual phenomena.

Given the continuing experiences worldwide of spiritual phenomena, but the inability of the scientific method to study, measure, and explain such experiences, this research posits that spiritual phenomena that present physical or anecdotal evidence but cannot be tested and studied in a laboratory, such as divine contact, near-death experiences, or past life memories, still warrant critical examination. Many spiritual phenomena have evidence that cannot yet be examined physically because of limitations in current scientific knowledge or technology, but they can be examined analytically. However, a systematic method of rigorously assessing these phenomena is lacking in scientific methodology. Thus, a different type of methodology that can assess these types of phenomena with academic rigor while still considering the subjective component of them must be considered. Such a methodology already exists in the field of intelligence analysis, a component of the burgeoning field of Security Studies, specifically through the analytical technique of alternative competing hypotheses (ACH) developed by senior intelligence analyst, Richards J. Heuer, Jr., at the Central Intelligence Agency. The purpose of this thesis is to advance the study of critical thinking and analysis in the humanities by examining how the intelligence analysis technique ACH can be used as a framework for assessing spiritual phenomena that manifest physically but are difficult to examine with traditional scientific methods yet through art, literature, and personal narrative continue to be attested to constantly—even in the present. Guiding the research is the question: How can spiritual phenomena with significant anecdotal evidence, heretofore the domain of religion, philosophy, and art, be rigorously and effectively analyzed?

Methods used to assess issues in the intelligence field do not have the same requirements for examination as scientific methodology; thus, they could provide a better methodology for examining these phenomena. Because intelligence issues involve human behavior and thinking, they never present in
exactly the same manner, similar to many, if not most, types of spiritual phenomena. Further, intelligence analysts often must draw conclusions with inadequate, incomplete, or potentially incorrect information. For example, assessing a foreign leader’s military movements is based not only on known information but also on estimations of secret information and deceptive information that is purposely leaked. Additionally, intelligence issues involve cognitive limitations such as biases that are mitigated by specific structured analytic techniques that consider the human element of the issue (whereas scientific studies remove bias through controlling variables in a laboratory or mathematical equations). Intelligence methods systematically consider personal biases of the analyst or researcher as well as that of the subject, which is critical to an analysis of spiritual phenomena. Moreover, for intelligence issues, as well as for many types of non-testable spiritual phenomena, the true nature cannot be accurately determined by finding what is true by what can be confirmed; instead, the truth is within the set of possibilities that are not yet disproved. Often, given the knowledge and capabilities relating to an issue, only a best guess of the likely possibilities can be made. Scientific methodology that relies on testability cannot make this best guess; however, the systematic and structured methodology of the intelligence field can. The intelligence analysis technique of alternative competing hypotheses provides a more effective framework than traditional scientific methodology for examining non-testable spiritual phenomena, and its application is demonstrated in this study by the analysis of the published case of a small child with alleged past life experiences.
CHAPTER 2:

Theoretical Lenses

The theoretical lenses are designed to provide the reader with a comprehensive understanding of the comparison between traditional scientific methods and the intelligence method of alternative competing hypotheses (ACH) as a potential framework for investigating spiritual phenomena such as divine contact, near-death experiences, or past life experiences, which will allow for spiritual phenomena to be considered beyond the realm of religion, philosophy, and artistic endeavors. Currently, there are numerous variations in the scientific method for use in specific fields; however, no current method provides an effective way to rigorously examine phenomena such as divine contact, near-death experiences, and past life experiences that do not fit the physical science standards of reproducibility through experimental or theoretical testing because they do not present uniformly or consistently among the population. As a result, scientific investigation is left to theories of reason and logic to examine these types of non-testable phenomena. However, the methodology of another field can fill this gap—that of the intelligence field. Intelligence methods assess issues involving human behavior and actions, which are variable, occur inconsistently, and rarely have a knowable solution, much like non-testable spiritual phenomena.

The research on the topics in this paper is divided into three main topics: scientific methodology and the neglect of spiritual phenomena, intelligence methodology and the ACH method, and the case study on the spiritual phenomena of alleged past life experiences of a small child. The first section discusses the historical development and current limitations of the scientific method and the neglect of spiritual phenomena by science. The second section examines the methodology of intelligence structured analytical techniques (SATs) and specifically that of the ACH method. The final section describes the published case study of past life experiences of a small child and illustrates the use of the ACH method on a specific case.

Scientific Methodology
The scientific method arose from the change in thinking about how to acquire knowledge in the physical world and has been the foundation of inquiry into physical events and phenomena for centuries. Francis Bacon, who eschewed the traditional Aristotelian methods of science because they did not provide a “general theory of science” (Klein), provides the foundation of the scientific method in his seminal work, *Instauratio Magna*, particularly the section *Novum Organum or True Suggestions for the Interpretation of Nature* within that work. Bacon’s method rejects the traditional focus of the senses to gain insight into the workings of the natural world because of their inherent biases and instead focuses on using strategies of experimentation to gain a more accurate understanding. Bacon’s method is not the scientific method as it is known today; however, his change in thinking about inquiry laid the foundation for others to engage in, and refine the methods of, experimentation, from Isaac Newton in physics to Antoine Lavoisier in chemistry and Robert Hooke in biology.

Philosophers and historians of science such as David Hume, Thomas S. Kuhn, and Karl Popper continued discussing the merits of both reasoning and experimentation, with discussions on induction versus deduction and the process of scientific advancement. In particular, Thomas S. Kuhn’s work, *The Structure of Scientific Revolutions*, provides an overall understanding of the role of the scientific method in scientific progress. In his work, Kuhn examines the nature and development of advances in science. Rather than looking at the results of science, Kuhn examines the steps along the way that created the results. Kuhn’s work focuses on the new ideas that the scientific community initially shunned for their lack of adherence to the current thinking but that then often became the springboard to major advances in science. Similarly, the study of spiritual phenomena has been avoided by much of the scientific community, while current research suggests the possibility of novel advances arising from their research. Even with some focus on this process of scientific advancement, most scientists increasingly engaged in the work of science, experimenting and developing an expanding knowledge base of scientific information that seems to accurately explain the workings of the natural world; these “results” became the focus of science, with the thinking about the methods deemed less important.
Within this topic, the rift between the scientific and religious communities that arose in the Middle Ages and continues to some extent into the present day—combined with the focus on experimentation—has scientists questioning the validity of spiritual phenomena as a serious research topic, which impeded their investigation. To counter this, researchers have focused on research efforts to show the credibility of the field. Spiritual phenomena research has been conducted for over a century, and several organizations have been at the forefront. The Society for Psychical Research, established in England in 1882, and the American Society for Psychical Research, established in 1885, commenced serious examination in the late 19th century. One founder of the American society, psychologist and philosopher William James, presents a seminal work in the study of spiritual phenomena that arose out of non-testable anecdotal evidence that did not have a physical explanation. In his work, *The Varieties of Religious Experiences*, James considers individual personal experiences with the Divine rather than the doctrine of organized religion as the way to understand religion. From this focus, James collects and examines cases of spiritual phenomena through which he assesses the validity of the cases. James’ work, published at the turn of the 20th century, is one of the first rigorous studies of non-testable phenomena. However, in the early 20th century, the Rhine Research Center at Duke University took the lead role in studying spiritual phenomena and changed the focus to researching phenomena that can be tested, such as extra sensory perception or remote viewing. A second significant research center, the Division of Perceptual Studies at the University of Virginia (UVA), was established by Ian Stevenson, a psychiatrist and preeminent researcher in non-testable spiritual phenomena, who investigated a significant number of case studies on near death experiences and past life experiences (several thousand). Currently, researchers also are endeavoring to bridge the gap between science and spirituality by focusing on the scientific research being conducted on spiritual phenomena. In his book, *Science and Psychic Phenomena: The Fall of the House of Skeptics*, Chris Carter looks beyond the scientific evidence itself to examine the arguments of those who question the legitimacy of the field, including the philosophical arguments of 18th century philosopher David Hume that have resurfaced and the religious dogma that the phenomena often contradict. The work of these researchers reveals the current scientific methods of investigation into
testable spiritual phenomena. Most postmodern academic study of spiritual phenomena focuses on the aspects that can be measured and assessed in laboratory experiments; however, this is less relevant for the study of past life experiences as they are not investigated in a laboratory. Thus, with the delayed start into research in spiritual phenomena, the research and knowledge base in this field continues to lag behind that of most other sciences.

**Intelligence Methodology**

The increasing focus on thinking about how science is conducted by Thomas Kuhn and later Karl Popper may not have changed the actual methods used in scientific investigation, but it has improved the thinking in other fields. In particular, the methodology of the intelligence field is largely based in Karl Popper’s idea of falsification. Sherman Kent brought scientific methodology of examining the past to assess the future into the intelligence field (Davis, “Introduction” xvii). Then, in The Psychology of Intelligence Analysis, Richards J. Heuer, Jr incorporated Popper’s falsification theory into the foundation for the techniques used to assess intelligence issues; he based the assessment of an issue on examining several hypotheses and discarding the false ones while keeping all possible ones in the analysis. This idea became the basis for intelligence methodology; while dozens of techniques have since been developed, the idea of falsification remains at the core. Intelligence methodologies consider many possible hypotheses from the start of the analysis and only discard those that have been proven untrue. Intelligence methods consider the most likely options by keeping all the possible hypotheses as possible until they are proven impossible. As a result, the most likely hypothesis, or potential truth, regarding the situation remains in the mix of possibilities, regardless of its seeming unlikelihood based on what is currently known about the issue. By contrast, scientific methodology (in general) narrows the research efforts to the most likely hypothesis and focuses on it early in the research; as such, the most accurate explanation may be discarded before it is even seriously considered. For spiritual phenomena in general and non-testable spiritual phenomena in particular, much of the field is as yet unknown to researchers, so many possible hypotheses are not even considered. While the intelligence field casts a wide net in the beginning of the research to consider all possibilities, the scientific methodology starts from what is known and takes steps
out from that to consider the next possible idea. Although this works for the study of many phenomena, for those in which there is a lack of knowledge and experience regarding the subject of the hypothesis, this method will significantly constrain advancements in research as the most likely hypothesis could possibly not even be considered.

The focus of intelligence methodology on examining a phenomena based in inconstant human behavior is relevant to assessing non-testable spiritual phenomena as they typically are experienced by a subject individually and can have an emotional effect on the subject as well as the researcher, with the viewpoint of each being seen through the lens of their emotion and biases relating to the issue. While scientific methodology typically dismisses this type of evidence because it is not objective, intelligence methodology deals primarily with subjective information and issues, as well as issues involving emotion, so its use is applicable to studying spiritual phenomena as well. In addition to the work on falsifying hypotheses, Heuer’s work with Randolph Pherson, *Structured Analytic Techniques for Intelligence Analysis*, provides a comprehensive listing of the many SATs used in intelligence analysis and imparts an understanding of the place of the ACH method, as well as its individual components, in the overall methodology; it also describes how to conduct the ACH method and the techniques that are part of it.

Heuer, as well as others in the field such as Douglas MacEachin and Randolph Pherson, also significantly focused on the cognitive limitations that arise in thinking, incorporating techniques to mitigate these within the intelligence methodology. Although these cognitive limitations arise in all thinking, they are particular prevalent in the study of topics that involve human behavior and action that cannot be controlled for in an experimental setup, such as intelligence issues as well as cases of non-testable spiritual phenomena.

While scientific methodology is based in the scientific method, intelligence methodology is based in structured analysis. Intelligence methodology’s effectiveness lies in its focus on SATs that analysts use to assess the components of an issue while considering the cognitive limitations and emotional aspects that inherently affect both the researcher and the subject of the study. The SATs are largely based on various elements of critical thinking, which are then used in combination to analyze an issue. Richard
Paul and Linda Elder, fellows of The Foundation for Critical Thinking, provide the fundamentals of critical thinking in their comprehensive and succinct work, *The Thinker’s Guide to Analytic Thinking: How to Take Thinking Apart and What to Look for When You Do*. In this small work, the authors provide an outline of the fundamental ideas in critical thinking with a focus on how these apply to various fields such as the sciences, history, and sociology. The fundamental theories of many of the great philosophers such as Francis Bacon and René Descartes can be seen in this work. Another central aspect of SATs is questioning, which is also central to critical thinking in general. Warren Berger addresses the significance of questioning in his book, *A More Beautiful Question: The Power of Inquiry to Spark Breakthrough Ideas*. Although there are an increasing number of works on critical thinking, Berger’s focus on the foundational element of questioning shows it as an encompassing technique of inquiry in any field. Although basic, questioning is the basis of critical thinking and of many of the SATs in intelligence methodology. Critical thinking works such as these provide insight into the ideas that underlie thinking in general and are relevant to both scientific methodology and intelligence methodology.

The intelligence analysis technique of ACH, in particular, would be an effective method for examining non-testable spiritual phenomena. The ACH method is a SAT used in assessing intelligence issues. SATs, including the ACH method, use “a step-by-step process that externalizes the analyst’s thinking…[and are] believed to mitigate the adverse impact on analysis of cognitive limitations” (Heuer and Pherson 22). Using the ACH method, the researcher systematically examines the pieces of evidence of a specific case while considering the possible cognitive limitations of the subject as well as the researcher throughout each step of the analysis. The structure of the ACH method forces the objective examination of a topic, which is critical in examining spiritual phenomena because they typically have many subjective components. Every hypothesis and piece of evidence is assessed for legitimacy, accuracy, and relevance. From this structured technique, non-testable spiritual phenomena can more effectively and more rigorously be examined than through scientific methodology. Further, analyzing a spiritual phenomenon using the ACH method will reveal the effectiveness of the method beyond the
intelligence field. Thus, the ACH method provides a more effective framework than traditional scientific methodology for examining non-testable spiritual phenomena.

**Case Study**

A comprehensive understanding of the field of spiritual phenomena is necessary to understand the place of the study of past life experiences within the overall field, as well as the factors that have affected the way in which it has been investigated. A seminal work in the field is *Parapsychology: A Handbook for the 21st Century*, edited by Etzel Cardeña, John Palmer, and David Marcusson-Clavertz. Published in 2015, it is a current compendium of works by 38 experts in fields ranging from philosophy to psychology and psychiatry to physics and biology. This collection provides information and assessments on all aspects of the study of spiritual phenomena, giving the current research, methodologies, issues, and mindsets regarding the study in the field. However, a significant portion of the collection focuses on research on the physical elements of the phenomena that can be measured in a laboratory, such as biological reactions relating to the phenomena. This emphasis reveals that most research in this field has focused (and continues to focus) on experimental methodology. This attests to the need for additional methodologies that address the systematic investigation of spiritual phenomena that cannot be tested in a laboratory, such as that given in this thesis and illustrated for past life experiences.

Although a significant number of researchers currently study spiritual phenomena, there is a much greater focus on measurable phenomena than unmeasurable phenomena, such as past life experiences. As such, a focus on individuals who investigate past life experiences is necessary. Ian Stevenson’s research is the most comprehensive and rigorous work in past life investigations, so his case study methodology and that of his colleagues are significant resources regarding the study of non-testable spiritual phenomena. A primary source of information is a lecture series given by Stevenson entitled “Some of My Journeys in Medicine” in which Stevenson describes the evolution of his academic work from and through conventional psychology to that of spiritual phenomena (which he terms paranormal) and documents the resistance by the mainstream scientific community to investigating spiritual phenomena and past life experiences. The series also provides some details on the academic basis of his
works from a social science perspective as opposed to a physical science perspective and the benefits and drawbacks of each perspective. Further, Stevenson’s prior decades in scientific investigation as a psychiatrist based strongly in the scientific methods, prior to his interest in spiritual phenomena, give credibility to his work and make it a fundamental resource on the study of spiritual phenomena, and in particular past life phenomena. Stevenson’s colleagues at UVA, Jim B. Tucker, Edward F. Kelly, Emily Williams Kelly, and Antonia Mills, discuss details of the methodology developed by Stevenson as well as insight into his thought processes when investigating the subjects and when dealing with the varying reactions of the scientific community. In the most relevant work, the reincarnation chapter of *Parapsychology: A Handbook for the 21st Century*, written by Antonia Mills and Jim B. Tucker, the authors provide a clear and concise description of the history of the scientific investigation of past life experiences, with a significant focus on the work of Ian Stevenson as he has been the primary investigator in the field. These sources will provide the details of researching past life experiences that are necessary for examining how the phenomena have been and can be studied.

A significant element within the history of the study of the spiritual phenomena of past life experiences is the negative perspective held by much of the scientific community. Although most spiritual phenomena have endured hasty denunciation, phenomena that cannot be tested in a laboratory such as past life experiences have garnered the most criticism. The work by Paul Edwards, *Reincarnation: A Critical Examination*, a philosophy professor and the editor of the *Encyclopedia of Philosophy*, provides considerable insight into these criticisms. Edwards delineates each of the claims against such study; however, his focus on Western cases and early studies of spiritual phenomena before rigorous academic study could be undertaken of them undercuts the validity of his criticisms. Further, in this work, Edwards reveals significant details on the historical bias in the scientific community regarding research into past life experiences, as well as spiritual phenomena in general. In an additional work, *Parapsychology: A Handbook for the 21st Century*, the editors included and addressed many of the criticisms of the study of spiritual phenomena made by the scientific community. The discussion was balanced as they explained
why some of the criticisms were invalid as well as discussed why some of the criticisms hold. Both of these works will benefit an examination of the critiques of the study of past life phenomena for this thesis.

From the overview of the study of spiritual phenomena and past life experiences, this thesis will examine a published case study of a small child with past life memories and experiences. The case study used is the actual case conducted by researcher Ohkada Masayuki. Masayuki analyzed the case of a young Japanese child who experienced memories and experiences of a former life in Scotland. Masayuki reported his findings on this case and the past life memories in several articles in the *Journal of Scientific Exploration*, the primary one being “A Case of a Japanese Child with Past-Life Memories” in the Winter of 2014. In the article, Masayuki delineates the specific pieces of evidence, as well as the possible explanations for them, which will be used in assessing the case using the ACH method. The case for this thesis was purposely not selected from among those conducted by Ian Stevenson and his colleagues to keep the focus on the methodology and reveal the methodology of other researchers. This case gives specific detailed evidence, so it will be effective for use within the framework of the intelligence ACH method.

From these theoretical lenses, a greater understanding of the problems in objectively analyzing spiritual phenomena that cannot be tested in a laboratory can be seen. Phenomena that arise from anecdotal evidence but are not able to be shown in experimentation or disproven by current scientific methods can instead be rigorously examined through intelligence methodology. Further, a specific case study on spiritual phenomena can illustrate the use and effectiveness of the intelligence methodology of the ACH method for such cases.
CHAPTER 3:  

Research Design  

The research design for this thesis is a qualitative research approach as the research question and topic are not easily quantified because the phenomena in question present differently for different subjects and at different times and, thus, are non-numerical phenomena. A comparative study of scientific methodology and intelligence methodology will be conducted. The research design will also include a structured analysis component that focuses on techniques used to systematically analyze situations and issues with inconsistent and changing variables. Structured analysis is a research design separate from qualitative and quantitative research methods and is typically used in the intelligence field (both government and private industry) (Heuer and Pherson 19-20). Structured analysis consists of structured analytic techniques that are based in critical thinking ideas and are used to mitigate cognitive limitations that are inherent in all thinking, particularly thinking on controversial issues, which are typically based in human behavior and emotion, a component that is difficult to account for and mitigate in scientific methodology. The research method used for this paper comprises analyzing primary and secondary sources on the topics of scientific methodology; intelligence structured analytic techniques, particularly the alternative competing hypotheses (ACH) method; and non-testable spiritual phenomena, with a focus and case study on past life experiences. The sources will include books, academic journals articles, and other relevant documents such as government reports, lectures, and university research programs.

A case study will be the research method used to illustrate the ACH method and assess its use for examining non-testable spiritual phenomena, specifically that of past life experiences. Many spiritual phenomena have a measurable component and can be examined with scientific methodology; however, many types do not and can be more effectively examined analytically. These non-testable phenomena include contact with the divine, near death experiences, extrasensory perception, and past life experiences, among others. For this thesis, the spiritual phenomena of past life experiences will be examined with the ACH method because it is a topic that has been seriously studied by academic researchers and, thus, has a body of historical and current research using scientific methodology to
compare to the ACH methodology. The case study is that of a young child in Japan allegedly having past life experiences of a life in Scotland. The case will be analyzed using the ACH method to show the effectiveness of the method for assessing non-testable spiritual phenomena.

The limitation of this study lies largely in being unable to identify and interview a new specific subject for the case study as the most effective cases involve young subjects (of just a few years), so they are usually unknown until several years after the phenomena present. Instead, this case study will use interviews conducted by competent researchers. The benefit of this is that there will be an analysis conducted by these researchers to compare to analysis through the ACH method. A further limitation is that the scope of the paper is limited to one case study. However, spiritual phenomena typically arise as a single case and must be examined individually. The ACH method (as well as intelligence methodology in general) is used to assess a single issue at a time, so it is effective for examining a case study. Moreover, this case study will show how the ACH method can be a template for use in future studies of non-testable phenomena, both spiritual and in other fields. As such, using the framework for assessing additional phenomena will be the subject of future research. Further, the analysis has implications in the study of critical thinking in general, particularly in a time when false information is readily accessible and is often taken as true based on emotion and cognitive limitations rather than actual research and critical thinking. From this arises a related subject of future research: the use of intelligence methodology to assess emotion-laden topics.
CHAPTER 4:
Background of Science and Spirituality

The Rift between Science and Religion

Humanity’s thinking and actions have long been affected by beliefs propagated through time. In general, personal experience combined with cultural ideas of one’s society form these beliefs. From the earliest days of humankind, these beliefs influenced how and what was thought individually and societally. Leaders within society, both political and religious, were key in creating these beliefs. Leaders developed and disseminated explanations of events in the world, from personal afflictions such as sickness and poverty to societal actions such as war to environmental events such as floods and the movements of the sun, moon, and stars. These explanations were based largely in religion, placing the onus on the actions of the “gods,” with leaders asserting that individuals and society at large must take specific actions and behaviors to appease the gods. The populace believed that the leaders had privileged access to the gods and simply took their word as truth. This enabled political and religious leaders to maintain significant control over the populace.

Even as scientists started investigating the natural world, religion continued to play a significant role in their work as they examined nature through the lens of the Divine. This is largely because most scientists, as well as the general population, believed that the Divine had a role in the workings of the world. Prior to the 17th century, organized religion held significant influence over political, cultural, and educational activities within society, so belief in God was inherently a part of life. Additionally, even as scientists began considering scientific explanations for events in the world, they maintained a belief in God and his presence. Even the great minds of the times (the philosophers and scientists) considered some phenomena to be the result of actions by the spirit world (Carter 21). Scientific inquiry included a spiritual element; scientists often held strong religious beliefs and believed that they were examining the world to discover how the Divine forces were at work. The two were not considered mutually exclusive. Moreover, many scientists of the 16th and 17th centuries, such as Kepler, Galileo, Newton, and Bacon,
continued to maintain a religious belief, one that they considered compatible with scientific inquiry (Dosdad 259). As a result, religious ideas were comingled with those of scientific inquiry.

The enduring connection between science and religion was strengthened by the creation of universities by organized religion through which scientists studied theology in addition to the sciences. Organized religion established universities for their clergymen to become more knowledgeable and included the study of the natural world through astronomy (and soon other sciences) and mathematics to support the teachings of the church by learning about the workings of God’s world (Hannam 340). As a result, those who attended university did so under the tutelage of religion. Moreover, it was only by connecting scientific inquiry to religious ideas that science was encouraged in the university: scientists attempted to reconcile religious ideas with their findings and astronomers emphasized the religious element of their work to gain church approval (Spelda 35, 50). Although the church’s motivation differed from that of many (or maybe most) scientists of 17th century and earlier, its universities were vital to the advancement of science. Through these universities, scientific knowledge became increasingly systematic, detailed, and disseminated among those working in science. Science in the West eventually became significantly more advanced than that in the East because of universities (Lynn 324-5). Eventually, the scientific fields (including mathematics) became a greater focus in universities than religion, soon becoming separate fields of study from theology (Zakai 149-150). Scientists could then study science alone rather than science as a component of theology, which further expanded the scope and improved the findings of science.

University education taught scientists to question their world, which resulted in them questioning the role of the church in scientific inquiry, commencing a separation between science and religion. Organized religion created universities in response to the Reformation and Counter Reformation of the 16th century “to ensure the universities could supply well educated clergymen capable of defending the new faith in the religious controversies raging at the time” (Fowler). While this taught the clergy to effectively question and argue against the doctrine of the opposing church, it also taught the more scientifically minded to question other aspects of society, including fundamental church doctrine and
organized religion’s role in scientific inquiry. The 17th century brought a mechanical view of the world that dismissed the idea of souls in nature (Carter xi). With this view, scientists focused on the physical components and workings of nature. The scientific revolution was brought on by scientists increasingly feeling that “scripture was not intended to describe the phenomena of the world; hence theology had no business assessing the merit of astronomical arguments or in explaining how nature works” (Zakai 127, 149). From Copernicus in the 16th century to Kepler and Galileo in the 17th century, the control of religion over science created a need for a separation between the two, although allowing for each to continue to have their own spheres, particularly as an increasing number of scientific ideas seemed to conflict with church doctrine. As a result, scientists focused on science for explaining the natural world through physical causes rather than the supernatural causes touted by religion. By the 18th century, scientists increasingly pulled away from the very authority that originally gave them their livelihood—the church.

This separation expanded and eroded early connections between science and religion as a result of the church’s negative reactions to scientific findings that contradicted their doctrines. Organized religion derided scientists whose hypotheses did not support the church teachings, often deeming the ideas heretical and jailing and torturing those who advanced the ideas. The church had a censorship body that ordered inquiries into scientists and their ideas and forced them to recant or change them, such as demanding Copernicus change his theory or jailing Galileo (Hannam 307, 328). The interference and censorship of scientific inquiry by organized religion enhanced the distrust and disbelief in religious ideas by scientists and increasingly by the public. For instance, when scientists began to show that the sun was the center of the universe not the earth in the 16th and 17th centuries and organized religion dismissed it as false, much of the educated population began to question the church’s credibility. The rift continued to grow as the church continually refused to accept scientific facts that seemed to negate their teaching. Increasing specialization in science brought more accurate knowledge in earth sciences, archaeology, and biology that seemed to discredit numerous teachings of the church such as the reliability of the bible, the evolution of humans and animals, and the age of the earth (Hill 356). The increased precision and
technological capabilities in numerous fields repeatedly showed science as the method for understanding the world as its methods could provide physical and mathematical evidence of the ideas. However, this did not sway the church, which held steadfast in its belief that the Bible was the accurate source of information about the world. As a result, organized religion’s rigidity in denying new scientific knowledge and discoveries caused many scientists, as well as educated individuals, to pull even further away from religion and beliefs in the Divine and phenomena related to the Divine.

This questioning led scientists to reject phenomena associated with spirituality as they increasingly believed that science could explain the world with no need for phenomena being relegated to the Divine. Throughout time, the elements of the world that people could not understand were attributed to the actions of God that were unknowable to man. For instance, in the 16th and 17th centuries, when Kepler was unable to determine why the universe moved as it did, he attributed it to being a part of God that we cannot understand (Kepler Chapter 9). As science could explain more aspects of the natural world, the realm of the world that was relegated to the workings of God diminished. In the postmodern era, many scientists believe that the unknown components of the universe are simply ideas that people cannot yet decipher rather than components that only God could know. For example, in the early 20th century, Einstein does not ascribe the unknown components of our world to the Divine but asserts that people merely do yet understand them (Isaacson 551). The increasing belief that science alone can explain the world, combined with the evidence of scientific investigations increasingly showing church ideas as inaccurate, resulted in anything that had a connection to religion being determined to be myth. As a result, scientists did not consider phenomena associated with spirituality for serious study.

The division between science and religion was not “war” with only one possible victor; science was not proclaiming the non-existence of the Divine but was staking its claim rather than religion’s in the ability to accurately examine the physical world. Although some assert a great divide between science and religion, this is not the case. There have been conflicting ideas between the two. However, the idea of a divisive “war” was created by 19th century rationalists who wanted “all religious beliefs swept away as outdated superstition” (Bowler and Morus 341). The intermingling of science and religion prior to the
recent centuries has created a connection that has not yet been broken but instead has changed. Scientists in general could allow, to varying extents, the existence of the Divine while retaining science’s more effective capability at investigating the world, thus, simply keeping the two realms apart. Many scientists maintained a belief in God but held this belief separate from their scientific activities. However, from this separation came a gap in scientific research: phenomena that seemed religious were not studied in the sciences. Science started with the desire to “drive back the boundaries of ignorance and superstition” (Bowler and Morus 2). However, this idea of superstition encompassed all aspects of religion and spirituality. Eventually, all ideas with a spiritual or religious connotation were then viewed as elements of superstition rather than possible phenomena to be studied.

**Spiritual Phenomena and the Neglect by Science**

The separation of science and religion gave rise to an avoidance of studying phenomena that could be considered religious in nature, creating a dearth of research in the field and further fueling the lack of knowledge and thus lack of interest in the field. The nature of scientific investigation focuses on confirming and expanding theories to discover the various aspects on the nature of phenomena. Scientific advances came from theories based in experimentation and mathematical reasoning, and hypothesis testing provided material for future research and investigation. This reliance on prior research to conduct current and future research accounts for the progressive nature of scientific advancement (Gower 130). However, scientists who researched spiritual phenomena suffered ridicule and snubbing from the scientific community, decreasing their numbers and thus the overall research in the field. Even in the postmodern era, most researchers of spiritual phenomena work in other fields and investigate spiritual phenomena as a peripheral interest (Zingrone, et.al. 23). This has engendered a scientific community unwilling, on the whole, to engage in scientific research of topics and phenomena that have a spiritual basis or connection. In general, gaps in knowledge arise from scientists’ refusal to study certain topics (Bowler and Morus 10). These gaps arose in various fields in addition to spiritual phenomena in the 19th century, such as psychology and biology. However, that of spiritual phenomena remains one of the most significant in postmodern times, continuing to hinder research and advances in the field. With the
baggage of its negative associations with religion combined with this gap, research into and knowledge of
spiritual phenomena lagged behind that of most (if not all) other fields from the 19th and through the 21st
centuries.

Because spiritual phenomena existed, they were examined; however, as a result of science’s
negative connotation of religion, their investigation remained largely in the philosophical and psychological
realms almost until the 20th century. The major religions believe that the human has a part that transcends
the physical body, a belief based in individual human experience not dogma (Kelly and Kelly 75). As
such, this type of experience began as a component of religion, with a strong separation from the physical
sciences. Philosophically, William James, a Harvard psychologist and professor of philosophy, was one
of the most notable early researchers in this field; he studied personal religious experience rather than the
dogma and rituals of the church as a method to understand the truth of religion as a component of
consciousness studies (American Society of Psychical Research). James posits that the emotion of
personal experience must first exist for the theology to be developed, so this experience will show the
truth of religion (James 372). He did become involved in experimental investigation of these phenomena,
as one of the founders of the American Society of Psychical Research in the late 19th century; however,
much of his early focus (and that of much of the scientific community) remained philosophical.
Additionally, the study of these phenomena inherently involved the field of psychology. The ruling belief
of the time was that these experiences were abnormalities in the mind not an experience that could
actually be occurring. This can be seen in James attempts to show that religious experiences are “not
hallucinations of mind” by providing examples of nonbelievers having divine experiences (James 320).
Interestingly, individual experiences of spiritual phenomena have been ignored not only by scientific
fields but by organized religion as well (Lovejoy 147), which maintained that one could connect with the
divine only through it. Both groups relegated these experiences to psychological problems of the person.
Although considering spiritual phenomena through the lens of philosophy and psychology provided some
understanding of spiritual phenomena, a disbelief in the possibility of the phenomena occurring led to a
lack of rigorous research, which kept the study from expanding to serious investigation involving examining the nature of the phenomena and, thus, slowed the pace of study in the field.

Relegating spiritual phenomena to discarded outliers instead of potential discoveries significantly impeded research in the field. In general, cases of anomalous phenomena are typically discarded as outliers, incorporated into the existing theories through modifications, or examined as a potential innovation in science. Outliers have also played a significant role in scientific advances as they are frequently how the study of revolutionary ideas begins (Kuhn 52-53). A researcher encountering inconsistent information has started investigation into some of the most significant advances in science. Outliers are an important component in both experimental and theoretical science: “the ability to recognize something out of the ordinary, something other than the expected, is important whether experimenting in a biochemical laboratory or observing the night sky” (Gower 242). The focus on anomalous phenomena is how much of science moves forward. Moreover, ignoring outliers, in general, significantly impedes scientific progress. “It could be argued that the classical machinery of hypothesis testing and refining tends to draw scientific enquiry into ever smaller circles around existing foci of interest, at the risk of creating islands of insight in a largely unexplored sea of ignorance” (Scheffer, et al. 2). This is the case with spiritual phenomena, which were considered outliers to recognized theory. Spiritual phenomena were considered anomalous because they “defy the mechanistic explanation” of the world (Carter 23). Because spiritual phenomena were associated with religious ideas, they were taboo in the scientific world and were quickly deemed unimportant and discarded rather than recognized as potential advances in science. This convention reveals the hesitancy among scientists to attribute physical evidence to spiritual phenomena. This significantly contributed to the limited research in the field. As a result, without the continual research such as that being undertaken in other scientific fields, knowledge and advancements in the study of spiritual phenomena severely lagged behind advances in other fields through the 20th century.
Another aspect of spiritual phenomena that limited its research was the resistance, both purposeful and subconscious, to upsetting social and scientific paradigms. Although considered objective, scientific research is affected by social and culture beliefs:

Historical investigation purports to show that cultural, political and ideological convictions are brought to bear on the decisions scientists make; to this extent the scientific beliefs incorporated in a paradigm are socially constructed. The same conclusion follows from the recognition that it is beliefs about the facts rather than the facts themselves which influence the scientist’s decision making, and because of the inclusive scope of paradigms these beliefs are inevitably part of that paradigm. (Gower 244)

The existence of some spiritual phenomena threatens some worldviews philosophically and culturally. For instance, the possibility of past life experiences, and thereby reincarnation, being a true phenomenon contradicts Western religious beliefs. Thus, people automatically and subconsciously regard the phenomenon as fantasy because the alternative would be too detrimental to societal beliefs and thus stability. Similar to the possible philosophical and religious implications of spiritual phenomena being true, there is a resistance to the study of spiritual phenomena in the scientific community because of the belief that they are not consistent with current science and, thus, are not possible. Kuhn asserts that most scientists try to “extend or refine the dominant paradigm in their field” and incorporate outliers into the paradigm, “often suppressing fundamental novelties because they are necessarily subversive of its basic commitments” (Kuhn 5). Thus, there is resistance to upsetting that paradigm, particularly the longer a scientist works in the field. Fortunately, advances in some scientific fields are revealing that spiritual phenomena are possibly consistent with current paradigms. Many leading physicists have asserted that quantum physics does not preclude the existence of spiritual phenomena, with physicist Costa de Beauregard asserting that it “virtually demands” it, and the majority position in consciousness studies in cognitive psychology is that consciousness exerts a causal effect, which could account for many types of spiritual phenomena (Carter 135, 174). The resistance within both of the societal and scientific realms
will be resolved together; once science can provide stronger evidence, the ideas will be increasingly accepted by both scientists and then society as a whole. However, the field is currently far from this point.

**Spiritual Phenomena Research**

Even with the obstacles and drawbacks to studying spiritual phenomena, researchers began researching them as the persistent existence of these phenomena sparked interest and, thus, merited their investigation. Scientific investigation of spiritual phenomena began with the Society for Psychical Research, in England, and the American Society for Psychical Research established in 1882 and 1885, respectively. Much of the early research into spiritual phenomena was on the question of survival and focused on case studies (Carter 17, 61). Survival phenomena include phenomena that revealed mind or soul activity beyond the body such as near death experiences, past life experiences, and divine contact. These groups initially focused on “exposing fake phenomena,” but they quickly expanded to investigating phenomena through experimentation (Society for Psychical Research). Spiritual phenomena that seemed to be explainable began to arise, which led to scientific investigation starting in earnest in the late 19th century. By the 1920’s, the major research center for spiritual phenomena moved to the Rhine Research Center that was established at Duke University as the first university laboratory for research into spiritual phenomena. The researchers at Rhine used the scientific method of experimentation to determine the nature of spiritual phenomena that presented physically. They initially focused on card guessing games to investigate extrasensory perception (ESP), and the Center’s positive results encouraged the spread of experimentation to other researchers in the 1930s and 1940s (Carter 69-70). The Rhine’s research set the study of spiritual phenomena on a trajectory of focusing on experimentation that continues to current times.

Early investigation of spiritual phenomena was impeded by cases of fraud, which caused controversy for the study of the phenomena. A single case of fraud often led the scientific community to rule similar cases as fraudulent. Because of the overall negativity toward the study of spiritual phenomena, claiming universal fraud rather than investigating was an easy out for the scientific community. Subconsciously wanting to not believe the phenomena, it did not take much to convince the
scientific community. One needs significantly less information to be persuaded of an idea that one believes in than an idea that one does not (Bauer 4-5). The cases of fraud gave enough evidence for most scientists, having aversion to studying spiritual phenomena anyway, to deem the entire field fraudulent. Further, the spiritual nature of the topic made the existence of fraudulent people in the field decrease the credibility of the subject even more. The subconscious mindset and aversion to upsetting current paradigm was an easy out.

Because of spiritual phenomena’s negative reputation from cases of fraud, early researchers focused on spiritual phenomena that could be tested, a trend that continues to current times. The Rhine Center, leading the research in the field, originally studied case studies to analyze them “only to general hypotheses for experimental work” (Kelly and Tucker 64) and continued with its focus on experimental research into the 21st century. Research of the 20th century and forward focuses more on understanding how spiritual phenomena work by manipulating variables in experiments. Since the 1970s, most research has been experimental studies of ESP and psychokinesis as these phenomena present with measurable, and thus testable, aspects (Zingrone, et. al. 13). For instance, the Rhine Center contains a Bio-Energy Lab to conduct experiments of increased energy production by some individuals, and UVA’s Division of Perceptual Studies includes a neuroimaging laboratory to focus on experimental research (Rhine Research Center, UVA Perceptual Studies).

Scientists avoided researching non-testable spiritual phenomena until the middle of the 20th century when the prevalence of outliers became too prevalent to ignore. The study of non-testable spiritual phenomena relating to survival of the mind or soul, such as past life experiences, near-death experiences, and divine contact, were previously largely avoided because they could not be tested scientifically. Some argue that the survival phenomena are untestable and thus are “unproductive areas of research” (Zingrone, et. al. 17). However, researchers who encountered anomalous phenomena in their research of conventional topics were some of the first to consider and examine spiritual phenomena. Most of the scientists were researching in other fields and came across an outlier that seemed to defy explanations based on current knowledge in the field. Many researchers in this field have
psychology/psychiatry backgrounds because these are the fields in which many of the spiritual phenomena outliers present. This was the case with Ian Stevenson, one of the most significant researchers in the study of non-testable spiritual phenomena. He medically trained in psychiatry and psychosomatic medicine and was a professor and researcher in these fields at UVA prior to his interest in spiritual phenomena. Ian Stevenson began the study of non-testable phenomena in the 1960s when he came upon the unexplainable case of a small child with alleged past life experiences. He started the study of spiritual phenomena at UVA and continued research in the field into the 21st century, amassing data on thousands of cases of non-testable spiritual phenomena. With his research experience and reputation for academic rigor, Stevenson brought credibility to the study of non-testable spiritual phenomena.

The last several decades have brought increased research into spiritual phenomena through participation by researchers in other fields. The importance of the study of spiritual phenomena goes beyond the benefits of understanding it for its own sake; the connection between spiritual phenomena and other fields, such as psychology, physics, biology, and the humanities, can bring advances in each. For instance, in physics, the effect of time and space on some spiritual phenomena is providing insight not found in the study of other phenomena (Millar 165). Additionally, “an intensifying debate about the nature of consciousness makes the evidence from parapsychology more relevant than ever before” (Carter xii). This multi-disciplinary approach to the study of phenomena provides a fertile research environment. “Breakthrough in science often comes from a novel connection between existing but thus far isolated ideas” (Scheffer, et al. 3). The interdisciplinary background of many of the researchers of spiritual phenomena will expand the knowledge based of the phenomena in each field.

**History of the Scientific Method**

The lack of research on spiritual phenomena that arose out of scientists avoiding research in the field was then compounded by the scientific methodology being ineffective at studying many types of spiritual phenomena. Those that did attempt to study these phenomena were stymied by not being able to easily (if at all) examine them through traditional scientific methodology. The scientific method grew out of critical thinking of earlier centuries, which was based in logic. Investigation into the world had once
been in the field of philosophy, with the thinkers in that field deemed natural philosophers. Theories were developed by *thinking* about rather than *testing* natural phenomena. For example, the world was once believed to be flat; it was the thinking of how a ship disappeared at the horizon, not a physical experiment, that initiated the idea that the earth was round. Experimentation changed this methodology, resulting in the scientific method. With the advent of the scientific method, a more rigorous method of analyzing the world arose, starting with the analysis of physical phenomena and spreading to the social sciences. However, this methodology also restricted the serious study of phenomena that could not be observed in an experiment, such as non-testable spiritual phenomena of past life experiences, divine contact, and near death experiences, leaving a gap in research in those fields.

The scientific method has varied through the centuries, but Francis Bacon laid the foundation for it when he challenged the traditional methods of considering the world of his time. Bacon, a lawyer turned philosopher in 15th century England, proposed adding experimentation into scientific inquiry in his work, *Novum Organum or True Suggestions for the Interpretation of Nature*. He criticized the traditional methods of science that were based in Aristotelian ideas of gaining knowledge of the world from one’s senses (Klein). Bacon believed that there were idols (biases) that impeded true understanding of the world using senses alone. In *De Augmentis*, he comments on “the deepest fallacies of the human mind: For they do not deceive in particulars, as the others do, by clouding and snaring the judgment; but by a corrupt and ill-ordered predisposition of mind, which as it were perverts and infects all the anticipations of the intellect” (Bacon, *De Augmentis* Book IV). Bacon believed that this old methodology led to there being “important parts of the structure of learning where ignorance and superstition prevailed” (Gower 43). Instead of this focus on thinking, Bacon thought experimenting on natural phenomena would bring a greater understanding than observation alone, thereby bypassing the inherent inability of people to accurately perceive natural phenomena. He asserts that “the human mind is prone to suppose the existence of more order and regularity in the world than it finds,” making one prone to see order where it did not exist (Bacon, *Novum Organum* Aphorism 45). To complicate the situation, in this time, if an observation
conflicted with a theory, the observation was assumed to be incorrect not the theory. Thus, inaccurate perceptions of the world continued to prevail.

With this background, Bacon’s focus on experimentation became a significant step in the advancement of science. Prior to the 17th century, “the practical skills necessary for successful experimental investigation, such as those of various kinds of artists and craftsmen, had no clear connection with the theoretical concerns of natural philosophers” (Gower 45). Scientists engaged more in cataloguing nature, which had no need for experimentation. As far back as the ancient Babylonians, people observed and recorded the natural workings of the world; they did not “engage in science” because “they did not propose theories to explain how these facts fit together” (Carter 212). Bacon changed this by suggesting experimentation. Bringing the two ideas together was a vital step in the advancement in scientific methodology. It laid the foundation for the experimentation–based inquiry of the 17th century and after: “the scientific revolution initiated around the turn of the seventeenth century…sought to replace abstract reasoning with observations” (Stevenson, “Some of My Journeys” 10). Major advances in science in this time that resulted from experimental methods fueled the interest in and expansion of experimentation. For instance, Isaac Newton’s study of both physics (motion) and optics created interest from scientists in several scientific fields (Bowler and Morus 50). Although logic and reasoning remained a part of scientific inquiry, it became secondary to physical experimentation. Thus, Bacon’s idea changed how science was considered and engaged in and became the foundation for what became the scientific method.

Although religious control over education and the research thereof hindered the spread of experimentation, the scientific method began to effectively reveal the workings of the world and thus eventually prevailed. The focus switched from thinking to doing. Essentially, the method evolved to become the process of making an observation, collecting data about the observation, making a guess that is consistent with the data, and verifying the accuracy of the guess. From Bacon’s ideas, experimentation was added: from that initial guess, a hypothesis was developed and then tested through experiments, gathering additional observations, or reexamining previously collected data (Noon 26). From this testing,
the hypothesis should predict the behavior of the phenomena; from accurate predictions, the hypothesis is
developed into a theory, which holds until evidence arises that disproves it or another theory is develop to
supersede it. By the 18th century, “the modern study of the natural sciences was initiated and the search
for laws, axioms, and principles of the physical world was developed” (Gray 6). As scientific
explanations were shown to be true based on verified facts, scientists increasingly used scientific
methodology to investigate the world.

From these components, a general scientific method evolved that covered most investigation into
natural phenomena. In general, the scientific method involves the following steps:
1. Observe phenomena
2. Develop hypothesis to explain phenomena
3. Use the hypothesis to predict the phenomena (new observations of it)
4. Test the predictions using experiments; the actions of the phenomena in the experiment either confirm
   or refute the hypothesis

If the experiment disproves the hypothesis, then it is rejected or modified and the process begins
again. If repeated experiments confirm the hypothesis, it becomes a theory, which holds until otherwise
proven false or supplanted by a new theory. A hypothesis is partially false if it holds for a subset of a
phenomenon rather than for the entire range of the phenomenon. For instance, Newton’s laws of motion
in the 17th century were considered the undisputed law for centuries; however, with the development of
relativity and quantum physics, they have been relegated to laws that describe only a subset of physical
phenomena.

At first glance, it seems that the scientific method cannot examine phenomena that cannot be
tested in a laboratory; however, the method does encompass physical phenomena that cannot be tested in
a laboratory but can be tested theoretically with mathematics. Not all physical phenomena can be
investigated with experimentation. For instance, researchers in astronomy typically cannot control
variables and conduct physical experiments, but phenomena can be observed and tested with
mathematical formulas to determine possible truths in the field. In this manner, the scientific method
covers theoretical investigation into phenomena much as it does for experimental investigation. For theoretical issues, the change in the actual method is in step four. Instead of testing the predictions using an experiment, the hypothesis is tested with a mathematical relationship. If the observed phenomenon makes the equation true, the hypothesis is confirmed; if it does not, the hypothesis is disproven. As such, advances in mathematics significantly enhanced and contributed to advances in science using scientific methodology. Overall, “the real world of laboratories and experiments is the proper province of natural science; the ideal world of abstract thought is the proper province of mathematics” (Gower 237). However, both are necessary in scientific investigation of our world. In the end, the scientific method encompasses both categories of scientific investigation: experimental, which is based in laboratory testing, and theoretical, which is based in mathematics. In each, hypotheses are tested through observation of phenomena—whether that phenomena is in a controlled laboratory setting or in the night sky.

The scientific method of thinking spread through various fields of study, evolving for use in various disciplines. Beyond the natural sciences, scientific methodology began to be used for biology and psychiatry. This took longer than for many of the natural sciences because the knowledge base (particularly of the human body) had to be built to where experimentation in these areas could be conducted. Laboratory examination of the social sciences did not begin until the 19th century in the field of psychology and expanded with Darwin’s effective methods of natural observation (Gray 6-7). The use of the scientific methodology then spread to the social sciences. However, this methodology still could not effectively study cases based on human behavior. It is more difficult to conduct experiments in the social sciences because of the variability of people (Carter 207). Additionally, because many aspects of the social sciences could not be examined in a laboratory, the tenets rather than the experimentation of the scientific method, such as objectivity in examination, reliability through replicability of phenomena, and precision and validity of evidence, were incorporated into their study (Gray 10-13). For instance, researchers attempted to be objective by seeking out opposing viewpoints. Thus, the earlier focus of scientific inquiry based in logic and reasoning formed the basis for social science study, with the tenets of scientific methodology included as best as possible.
With the use of the scientific method to examine phenomena in the physical and social sciences, one group of phenomena has been largely ignored in the scientific investigation of the world over the last few centuries—that of spiritual phenomena such as ESP, past life experiences, and contact with the divine. Although some aspects of spiritual phenomena can be examined in a laboratory, much of it cannot. Similar to non-testable social science issues, phenomena that cannot be tested experimentally or theoretically are left to the original thinking of scientific inquiry: logic and reasoning, with the inclusion of the tenets of the methodology incorporated when possible. This is an improvement over reason from centuries before; however, it is still inadequate for an effective examination of spiritual phenomena. One postmodern attempt to examine spiritual phenomena using the scientific method was conducted by Theodore Schick, Jr. and Lewis Vaughn who assessed several types of anomalous phenomena, including spiritual phenomena. The authors asserted an objective examination, basing their work in “the notions of possibility, plausibility, and reality” (Schick and Vaughn 16). However, their analysis contains the same flaw as many others: they discredit the possibility of possible explanations based on the belief that they contradict known scientific laws. However, many innovations in science are the result of discovering an anomaly that contradicts known laws. This type of dismissal on the basis of a lack of knowledge in a field emphasizes the inability of scientific methodology to address unknown phenomena. Although the scientific method was touted as the most effective method for examining nearly any phenomena, this has not been the case with non-testable spiritual phenomena.

The Scientific Method and Spiritual Phenomena

Although the scientific method greatly improved the accuracy in examining the natural world and developing probably theories regarding phenomena, a problem arose in that it was not effective at studying many types of spiritual phenomena, which led to a lack of research in the field. A critical component of the scientific method is that experiments are conducted to verify or disprove a hypothesis; scientists reproduce a phenomenon by provoking it in the laboratory and controlling the variables that might affect its behavior. However, a phenomenon based in subjective evidence that cannot be provoked, does not present consistently, and has variables that cannot be controlled cannot be examined effectively.
by the scientific methodology. The limited knowledge and technical capability relevant to these spiritual phenomena further hinder their research. Additionally, the inconsistent nature of the phenomena requires each to be studied individually on a case-by-case basis, which is not the process of scientific methodology. Consequently, scientists do not investigate phenomena that do not fit these parameters, so many types of spiritual phenomena are not, and cannot, be effectively examined with scientific methodology.

One reason that spiritual phenomena were not commonly studied was that they were not easily, if at all, studied experimentally, in the laboratory or with mathematics because the evidence does not present consistently. The scientific method requires that phenomena be repeated in laboratory experiments to assess for similarity in results or be confirmed by a mathematical equation. The evidence used to conduct the experiments must be consistently created in the laboratory and tested. However, many spiritual phenomena cannot be tested in these ways because the phenomena do not present the same way in all subjects or even for the same individual in different settings. These phenomena, by their nature, happen to some people and not to others, so studying them is difficult. Further, the evidence is subjective by nature; it is anecdotal and can vary for a single observation of a phenomenon as it is based on the recounting by a subject who, often subconsciously, provides inconsistent or inaccurate information. Anecdotal evidence can only be considered suggestive, not conclusive (Carter 57). Because these phenomena do not present consistently among a population and primarily have subjective evidence for support, scientists cannot recreate them or rigorously and objectively examine them, which is the basis of scientific methodology.

Spiritual phenomena are difficult to study scientifically because the variables affecting the phenomena cannot be controlled. In scientific methodology, the phenomena must be isolated by controlling for extraneous factors; this can be done both in a laboratory experiment and in a mathematical equation. Typically, the phenomenon hypothesis is then tested by manipulating the variables and making small changes to see the effects. Many types of spiritual phenomena cannot adhere to these criteria as they cannot be controlled. They also typically arise without any provocation by the person experiencing them,
so the person has no control over provoking the phenomenon again. Spiritual phenomena are typically need-based: they arise out of need (for instance, in a time of stress or bereavement), so they arise without effort (Palmer 215). An unknown stressor brings on the phenomena; moreover, this stressor varies for different people. Further, attempting to create them in experiments with effort may affect their ability to arise (Carter 234-235). These situations occur in the real world not a laboratory, which makes it even more difficult to control variables that could affect the phenomena. Moreover, spiritual phenomena often only have subjective, anecdotal evidence that is affected and often motivated by human emotion.

Variables based in human emotion are inherently variable at best and erratic at worst, so they cannot be controlled in an experiment. Because these phenomena cannot be dependably provoked, they cannot be effectively measured or studied in an experiment, which is a principal step in scientific methodology.

Another aspect of scientific methodology that makes it unable to examine some spiritual phenomena is that current knowledge and technical capability are inadequate for studying the phenomena through experimentation (both in a laboratory and mathematically). This issue has arisen in other fields as well, such as the study of biology. It was not until theories in the field, such as on the nature of cells and blood, were developed that the study of biology could advance (Bowler and Morus 165-66). This same issue has been occurring in the study of spiritual phenomena largely because they consist of both physical and mental processes. Research of the physical aspects of spiritual phenomena considers, for instance, how information is passed between individuals or the individual and the environment, whereas mental (psychological) research considers how the phenomena manifest in the consciousness (Carter 225). With a possible non-mechanical component, these phenomena are difficult to study with scientific methodology with the current knowledge and technology. Because of limited research in the field, there are significant gaps in knowledge and experience regarding spiritual phenomena. This can affect accuracy in research. For instance, the hypothesis that might most accurately assess the phenomena is often not even considered, or, if it is, it is discarded immediately. The connection between spiritual phenomena and research in other fields such as consciousness is beginning to add to the understanding of the phenomena. For instance, research in psychophysiology provides methods for understanding the subconscious nature
of spiritual phenomena (Radan and Pierce 230). However, only after research increases enough to provide a knowledge base in the field will the relevant information for the study of the phenomena be available and will advances be made.

Because of the human component of spiritual phenomena, each case of the phenomenon must be examined individually without relation to prior similar cases; however, this opposes the main component of scientific methodology. Scientific methodology focuses on examining phenomena that are universal, not isolated events (Carter 222). There are natural phenomena that also must be examined singularly, such as the case of an exploding supernova of which there may be only one. With these natural phenomena, an understanding of one phenomenon can help develop information on that phenomenon in general because the underlying physical properties will be alike. Knowledge of the phenomena is based on repeated experiments (laboratory and mathematical): “we construct and justify scientific knowledge on the basis of experimental evidence” (Gower 11). Once additional data is collected for additional cases, connections and potential theories can begin to be developed. However, many types of spiritual phenomena present as isolated events because they are not consistent among cases. Spiritual phenomena, particularly non-testable cases, need to be examined as a single case study, and insight from their study is not directly transferable to other cases. Although some researchers give equal weight to case studies and experiments (Cardeña 400), overall, the scientific community prefers experimental evidence. The limited research and experience studying spiritual phenomena compounds this, making the universal nature of the phenomena as yet unknown. Further, the human component of spiritual phenomena makes each case unique, requiring an analysis that cannot be based on prior assessments of similar phenomena. Although cases can be compared and assessed with meta-analysis, each individual phenomenon must be examined in total without being based on prior cases. Scientific methodology is not conducive for this type of assessment.

The study of spiritual phenomena requires suspending doubt while investigating the phenomena, which is the opposite of the requirements of scientific methodology. The inclusion and practice of doubt is a critical element of scientific methodology (Carter 16). A phenomenon, the evidence for it, and the related variables are each objectively examined for inclusion in examining the phenomenon. However,
because of the subjective nature of spiritual phenomena, doubt as to the outcome must be suspended to ensure that all of the possible evidence, as well as the most accurate hypotheses, are considered. Critics of the study of spiritual phenomena have used this attribute to damage the credibility of the field. James Alcock, a vocal critic of the study of the spiritual phenomena, asserts that the “general willingness to suspend doubt is another indication that parapsychology is more than the quest to explain anomalous experiences” but is “the attempt to establish the reality of a nonmaterial aspect of human existence, rather than a search for explanations for anomalous phenomena” (Alcock 553). Alcock emphasizes the “religious” nature of the phenomena in an attempt to discredit it. Although some early research of spiritual phenomena did have the intent to find “evidence of an afterlife” (Rhine Research Center), a more scientific basis has become the foundation of study in the field in the 20th century, with a focus on understanding how the phenomena physically occur. Suspending doubt is required for the study of phenomena that potentially have novel explanations and in which so little is known of their nature, such as spiritual phenomena. This does not mean in believing without rigor but suspending doubt—recognizing and searching out pitfalls in the argument systematically rather than broadly doubting its truth. Scientific methodology does not readily incorporate this concept.

As a result of these issues, an effective examination of non-testable spiritual ideas is difficult with scientific methodology. Scientific methodology is effectual for examining phenomena that can be tested experimentally or mathematically. Some spiritual phenomena that present measurable and observable aspects have been examined with scientific methodology (Cardeña, et. al. 4). However, for some phenomena, such as many types of spiritual phenomena that cannot be tested, the methodology is lacking, leaving those attempting to investigate it to revert to logic and reason rather than a structured methodology. The mere existence of these phenomena requires attention. Observations of phenomena, particularly outliers, are what spark innovative research. Thus, the existence of seemingly strange phenomena, such as spiritual phenomena, necessitates their examination. As shown, this examination cannot come from scientific methodology. Instead of investigating through experimentation, these phenomena must be investigated analytically. Although social scientists attempt to incorporate the tenets
of scientific methodology into their study, their use is not systematic and rigorous in application. A method to systematically examine existing evidence and the possible explanations for spiritual phenomena that considers the issues inherent in phenomena based in human emotion is needed. This is what the methodology of the intelligence field does.
CHAPTER 5:
Comparison of Intelligence and Scientific Methodologies

Intelligence Methodology

Methods used to assess issues in the intelligence field are wide ranging and do not have the requirements and limitations of scientific methodology, so they provide a more effective methodology for examining spiritual phenomena that cannot be tested in a laboratory. The goal of intelligence methodology is not to explain the natural laws of the world with a consistent explanation of phenomena but to estimate the dynamic actions of a human. Intelligence methods assess issues involving human behavior and actions, which are variable, occur inconsistently, and must be examined as individual cases, much like non-testable spiritual phenomena. Intelligence methodology uses structured analytic techniques (SATs) to examine not only the components of an issue but also the cognitive limitations and emotional aspects that inherently arise on the part of the researcher and the subject as a result of the subjective nature of the issue being examined.

Intelligence methodology “processes” information to form usable intelligence regarding a specific situation. The product, intelligence, is the information with value added by the analyst. This “value added” is the result of using SATs to analyze the information by breaking down the problem and assessing the components individually and in relation to each other. This results in findings that give the possible outcomes of the situations, as well as the significance and likelihood of each outcome. Originally, intelligence issues were assessed in a manner similar to non-testable scientific phenomena—using reason and logic. However, inaccurate assessments that resulted from cognitive limitations led to changing methods in the 1980’s and the development and then expansion of SATs in the following two decades (Heuer and Pherson 8-9). Cognitive limitations are the innate mindsets, biases, and mental processes that are a part of all thinking and, thus, that inherently influence all thinking. Intelligence is “about best answers in ambiguous situations” (Moore 87). The findings often are revised with the addition of new information to provide a more accurate “answer” to the situation. For issues or
phenomena in which the most likely hypothesis may not be knowable, intelligence methodology facilitates a rigorous analysis that focuses on the most likely ones.

The foundation of intelligence methodology is the SATs, which are structured techniques with specific steps that aid in assessing an issue as accurately as possible. SATs are the “scientific methods” of intelligence methodology. SATs help focus on facts rather than the emotional attachment to specific ideas or hypotheses. SATs are “intended to stimulate or to resolve productive conflict rather than emotional conflict” (emphasis added) (Heuer and Pherson 304). It does this by removing emotional and biased thinking from the process. Because of the wide-ranging and ever-changing nature of intelligence issues, there are dozens of SATs that are used to analyze an issue. SATs force the systematic examination of each component of an issue, including the possible outcomes, assumptions, variables, and evidence, as well as the thinking and assessment process of the analyst. In the intelligence field, analysts rarely have direct access to the subject (Krizan 32); they cannot observe the components of the issue. As a result, they must use SATs to consider the issues that arise in the process of the evidence getting from the subject to their desk, such as deception or misinterpretation. Critical thinking is not simply using logic or analytical methods; it focuses not only on the results of thinking but also on the process of thinking (Moore 18-19). SATs force analysts to consider how they think about the components of an issue that they are assessing—both what is thought about each element of the issue and why it is thought. This second part is critical: “We can upgrade the quality of our reasoning when we understand the intellectual processes that underlie reasoning” (Paul and Elder 6). SATs help the analyst pay attention to thinking as they analyze the issue.

Cognitive Limitations in Intelligence

SATs are necessary because cognitive limitations are an inherent part of thinking and must be recognized, identified, and mitigated. Beyond creating a framework by which an issue is broken down and analyzed, SATs mitigate the effects of cognitive limitations in the thinking process by focusing on that process while in it. Cognitive limitations are inherent biases, mindsets, and mental biases. All thinking contains these limitations, and these limitations exist within both the researcher and the subject
of the research. Additionally, if the analyst has a preconceived idea of the most likely outcome, bias can subconsciously affect the selection of hypotheses and evidence, as well as the analysis. For instance, the analyst may seek out evidence that supports one hypothesis over the others or may give more credibility to evidence that supports the preferred hypothesis, often without realizing that this is occurring. Similarly, the subject will present evidence that is influenced by one’s belief system, and the analyst must identify and address this. SATs mitigate these issues.

A cognitive limitation that influences accurate assessment of any issue is personal mindsets. The human mind works through the lens of experiences and knowledge gained, which together inherently create mindsets and biases while also being the foundational elements of thinking. Mindsets are inherent and differ for everyone: “people construct their own version of ‘reality’ on the basis of information provided by the senses…influenced by past experience, education, cultural values, role requirements and organized norms” (Heuer 4). However, mindsets significantly impede accurate perception. People need to be able to reconcile their own experience and beliefs with the truth or possible truths, but this is difficult to do. In the intelligence field, “the analyst brings his or her own unique thought patterns” that provides the framework for assessing the situation; however, it also provides a subjective lens through which the analyst views the information (Krizan 36). This is also the case with all thinking. We “default to the set of knowledge and experience each one of us has” (Maureen O’Neill quoted in Berger 79). We have preconceived notions that arise from our mindsets and create the biases that then continually creep into our thinking and assessment. Mindsets cannot be easily changed: “Mindsets tend to be quick to form but resistant to change” (Heuer 10). They evolve based on one’s thinking, but they are difficult to identify and thus to mitigate in thinking.

A second type of cognitive limitation that impedes accurate analysis is cognitive biases. Cognitive biases, in general, are the result of “subconscious mental procedures for processing information” (Heuer 111). As a result, they are somewhat predictable and can be mitigate by using techniques to address them. There are numerous types of cognitive biases that must be considered and
mitigated in analyzing an issue; two of the primary ones relevant to this work are confirmation bias and ethnocentrism.

A major bias impeding accurate analysis is confirmation bias, which is the tendency to see what one expects or wants to see. Confirmation bias is a major concern in all thinking. Because of it, “most people seek only the information that supports what they already believe. They ignore or discredit the rest” (Paul and Elder 16). This has been a known problem in critical thinking for centuries. Francis Bacon recognized this issue in his discussion of idols; he states, “man always believes more readily that which he prefers” (Bacon, Novum Organum XLIX). People hold innumerable preconceived notions—ideas on an issue that are not based in fact—which form the basis for confirmation bias. These ideas are strongly held, so they impede accurate perception and thinking regarding observed phenomena. Additionally, gaps in knowledge often go unnoticed because of confirmation bias (Heuer 119). It is difficult to find gaps without considering all viewpoints on an issue. As a result, it is difficult for individuals to NOT give in to their confirmation bias, so mitigating it is necessary (Moore 218). Moreover, confirmation bias can become ingrained within a group—be it a company or a society, “Confirmation bias can develop over time and eventually become institutionalized through repeated positive reinforcement of the behavior (Noon 33). Societal biases are constantly re-affirmed, creating an even stronger bond to the false information, making them more difficult to combat and significantly increasing the need for SATs in thinking.

The second major bias that impedes effective analysis is ethnocentrism in which one projects one’s own culture and beliefs on another, assuming that they will act in a similar manner. Many people have the inability to see or consider a viewpoint that differs from their own, particularly if they have no personal experience with it or have a negative judgment or bias of something involved in the issue. From this, “new information is assimilated to existing images” (Heuer 11), which results in an inaccurate understanding of a situation. This is a significant problem for studying phenomena and issues involving humans, particularly those occurring in another culture, as the thought processes, mindsets, and behaviors of the subject are often different from one’s own and are often considered irrational from one’s own
perspective although they are rational within the other culture. We often assess an issue based on its similarity to a prior issue, ignoring any distinct differences between the two (Heuer 43). We inherently make generalizations regarding issues and phenomena. This is because of our “innate tendency to characterize the unexpected and unlikely according to our worldview” (Burton 185). As a result, an unexpected phenomenon that has any connection to expected phenomena is often considered an aspect of the expected and brushed aside as something novel. SATs prevent this from occurring by forcing the analyst to consider the unexpected possibilities.

SATs mitigate cognitive limitations in general by questioning every element of analysis, which highlights and mitigates the limitations. Many of the specific SATs incorporate questioning. As a general critical thinking element, questioning can enhance accurate thinking on any subject. Historian David Hackett Fischer stresses the importance of questions, stating that they “are the engines of intellect—cerebral machines that convert curiosity into controlled inquiry” (quoted in Berger 15). Even when examining an issue that seems to have a clear-cut explanation, each step must be questioned to ensure that it is not based in following preconceived notions. Forced questioning will bring up many components of an issue to allow for a more accurate assessment. Questioning also can mitigate biases because it “can begin to shift the way we perceive or think about something” (Berger 8). There are dozens of SATs that do this. Some are used for specific situations, and many are used for innumerable types of situations. “It may be impossible to remove all of our biases, so an analyst must constantly struggle to mitigate them” (Hess and Freidel 33); this can be done first and foremost by questioning every component of an issue as well as the underlying thinking. In the end, if a hypothesis and evidence are accurate, they will hold up to questioning; if not, their falseness will come out in questioning, making questioning an imperative part of the process. [Specific SATs relevant to this work will be discussed in the Case Study chapter.]

Discussion: Intelligence and Scientific Methodologies

Intelligence methodology can more effectively assess non-testable spiritual phenomena because it systematically examines issues to provide the most accurate explanation for a situation involving dynamic human behavior and inadequate knowledge on a topic, two principal components of non-testable spiritual
phenomena. Research in the physical sciences attempts to determine the natural laws of the world from which consistent explanations of phenomena can be developed. In intelligence, research attempts to determine the dynamic thinking and behavior of people from which the most likely options of potential outcomes for a situation can be developed. Non-testable spiritual phenomena follow this latter process more closely than the former. Intelligence methodology’s focus on the cognitive and emotional elements of an issue will make it effective at assessing non-testable spiritual phenomena as they typically are experienced by a subject individually and can have an emotional effect on the subject and the researcher as each sees the phenomenon and related evidence through the viewpoint of their biases relating to the issue. Intelligence methodology deals primarily with subjective information and issues involving emotional components; the variables are not static, the testing environment cannot be controlled, the evidence is not clear-cut, and all hypotheses that are not disproven by the evidence are considered, regardless of likelihood. By contrast, scientific methodology typically dismisses evidence that is not objective and hypotheses that are not believed to be likely and instead focuses on the controllable variables of an issue to assess a single hypothesis, which is determined based on known information and experience with the phenomena. Further, intelligence methodology involves non-automatic human behavior that varies considerable among individuals and must be considered individually on a case-by-case basis. Thus, it is better suited for use in examining spiritual phenomena than scientific methodology.

A connection between scientific methodology and intelligence methodology can be seen in Karl Popper’s assessment that science proceeds on the idea of falsification, which provides the foundation for intelligence methodology. Popper believes that “scientific reasoning should start with multiple hypotheses and proceed by rejecting or eliminating hypotheses, while tentatively accepting only those hypotheses that cannot be refuted,” which is the foundation for intelligence methodology (Heuer and Pherson 148). In scientific methodology, Popper’s idea remains largely in the realm of the history of science rather than application—it is an explanation of what has been occurring not how it is actively pursued. However, Popper’s idea has been directly applied in intelligence methodology; it is a founding principle upon which intelligence methodology is based. Many intelligence issues must be examined without the possibility of a
definitive truth arising; as such, all hypotheses that could possibly explain the issue must remain in consideration in the analysis. Similarly, many spiritual phenomena cannot be shown to be valid or invalid, so a method to effectively examine them is required. Spiritual ideas are believed to be non-falsifiable and, thus, cannot be examined (Noon 51). This may be true from an experimentation viewpoint; however, phenomena that are non-testable still need to be examined and can be examined analytically with intelligence methodology.

Intelligence methodology can better examine non-testable spiritual phenomena because both intelligence issues and spiritual phenomena are inherently subjective while scientific methodology relies on objective examination of phenomena. Intelligence issues typically involve human behavior and actions, which are not consistent across a population and cannot be one hundred percent accurately predicted. Further, evidence for intelligence issues is typically incomplete or inaccurate (purposely deceptive), so the methodology must account for this. Similarly, non-testable spiritual phenomena typically are based on personal accounts of events that happen to one person or a small group of people. People expect and seek patterns and order in the world, so often they impose relationships where they do not exist, particularly based on their personal biases (Heuer 129-130). As such, the beliefs and mindset of the subject inherently affect these phenomena, so they are not objective. By contrast, scientific methodology purposefully removes subjectivity in examining the phenomena. The purpose of scientific methodology is for phenomena to be examined objectively, so the results are repeatable—the same results are produced regardless of who is conducting the experiment. Although objectivity is a component of the intelligence methodology, the nature of the situation being examined is subjective, so specific techniques must be considered in its examination. Spiritual phenomena require a similar consideration.

A primary element of the intelligence methodology that lends itself to the study of spiritual phenomena is its ability to effectively deal with issues that have a significant element of emotion. Intelligence methodology addresses this human element, which exists in both intelligence issues and spiritual phenomena, more effectively than does scientific methodology. A key element in scientific methodology is controlling for variables that may affect the phenomena in question other than the one
being tested. In general, this type of methodology cannot be conducted for intelligence issues as most situations are individual events; although they may have similarities with other events, they do not present the same. Behaviors and actions vary between individuals, among cultures, and even within one person, so the variables are dynamic rather than static. Non-testable spiritual phenomena occur in the same manner. Intelligence methodology comprises numerous SATs that remove the emotional component of an issue (largely arising in possible and inherent biases) to allow for examining the facts. SATs can analytically examine issues in a structured process while considering and mitigating cognitive limitations such as biases that often arise in issues with an emotional component. The scientific method accounts for bias in a twofold manner. First, the experiments are conducted using detailed notation of parameters and variables to allow for reproducibility. Second, experiments are reproduced by numerous researchers; because the bias of one researcher will differ from bias of others, a consistent bias will not occur. However, for phenomena that cannot be tested because it cannot be reproduced in a laboratory, this methodology will not work. Intelligence SATs address bias throughout the analytical process, from evidence collection through analysis and from both the researcher and the subject of the examination; thus, intelligence methodology more effectively addresses these concerns in spiritual phenomena.

A related characteristic in intelligence methodology that is relevant to the study of non-testable spiritual phenomena is that the evidence itself must be assessed for validity. In intelligence methodology, the evidence is not straightforward: it varies among individuals, places, and circumstances and deception is often involved, both of which require assessing the evidence. Because the evidence involves human behavior or action, each piece of evidence must be examined to determine its level of accuracy, objectivity, and relevance. Similarly, the evidence of a spiritual phenomenon must be evaluated in relation to the individual giving it. For instance, an individual who wants to believe that he has had a divine contact may exaggerate the phenomena; SATs enable the researcher to determine this. By contrast, in scientific methodology, evidence is physical in nature, so certain things act in certain ways, are measurable, and often are mathematically-based. This works for testable spiritual phenomena. However, for case studies of non-testable spiritual phenomena, the scientific method considers evidence based
largely in interviewing techniques of psychology. Although somewhat effective, it is not structured to systematically consider each piece of evidence. In addition to the subject’s influence on the evidence, the bias of the researcher can affect how the evidence is assessed and must be considered in examining both intelligence issues and spiritual phenomena. For testable phenomena, the scientific method effectively accounts for this in its structure of controlling variables as well as the consistent and measurable nature of the evidence. However, in examining non-testable spiritual phenomena, neither of these components exists. Scientific methods do not have structured techniques to force the examination of every piece of evidence in light of the viewpoint of both the subject and the researcher, whereas intelligence SATs do.

Another aspect of intelligence methodology that makes it more effective than scientific methodology to study spiritual phenomena is that it considers all possible hypotheses simultaneously from the start of the analysis, which provides a much greater likelihood that the accurate hypothesis will be considered. Intelligence issues are subjective and inconsistent in nature, so the intelligence methodology must consider many possible hypotheses to account for the subjectivity in the issues. Then, to ensure this, only those hypotheses that are proven untrue are discarded. As a result, the most likely hypothesis of the issue, or hypotheses if it is not narrowed to one, remains as a possibility, regardless of its apparent unlikelihood based on what is currently known or not known about the issue. In intelligence, there is rarely a single, definite conclusion to a situation while it is in process; once the situation is resolved, the conclusion is known and the analysis is complete (no longer necessary). This is similar to scientific phenomena in which the various possibilities of each are examined until the nature of the phenomena is understood. However, the scientific method, with its experimentation, focuses on the single most likely hypothesis; only after it is assessed are the variables manipulated to consider another hypothesis, which is based on the results of the prior one. This is effective for testable phenomena; however, it is not feasible for non-testable phenomena. With the scientific method, non-testable phenomena can be examined one hypothesis at a time. However, many of these phenomena may have novel (and thus seemingly unlikely) solutions that would rarely arise in the scientific method. Because of the biases inherent in these phenomena, those hypotheses (even if they do surface) would quickly be
discarded before being seriously examined. For example, the research by Schick and Vaughn into numerous anomalous phenomena includes a component of considering numerous hypotheses; however, they immediately discredit those for which current scientific knowledge cannot account (225-227). For spiritual phenomena, and in particular non-testable spiritual phenomena, there is much more that is unknown than is known in the field, so many possible hypotheses that could explain the phenomena would not even be considered with Schick and Vaughn’s method. Intelligence methodology forces developing and including novel hypotheses by using creativity to develop hypotheses and considering those rejected from bias in the SATs. Although both scientific methodology and intelligence methodology revise and re-assess hypotheses, intelligence gives a range of possibilities to ensure that the most likely one is not discarded, which is necessary for examining issues with knowledge gaps, such as non-testable spiritual phenomena.

Because of the discussed aspects of non-testable spiritual phenomena, each must be examined analytically as an individual case rather than experimentally, which is how intelligence methodology assesses issues. In intelligence, although some situations have similarities, because of the human factor and the variation in variables among even seemingly similar situations, each case must be studied individually, as a completely new situation. Knowledge of similar situations will aid in the assessment, such as in developing possible hypotheses and assessing evidence; however, the analysis itself cannot be transferred. Similarly, non-testable spiritual phenomena must be examined individually, regardless of similarities to prior cases. As with intelligence issues, the human component requires a comprehensive analysis of the issue, including assessments of every item relevant to the phenomenon or issue. For example, a spiritual phenomenon that looks exactly like another could be the result of fraud—the subject is lying. This does not happen in testable natural phenomena because the evidence is based on physical action. Scientific methodology has been used to study non-testable spiritual phenomena, largely through qualitative methods describing cases (Zingrone, et. al. 19). However, a systematic methodology is lacking. As a result, intelligence methodology will better address this aspect of spiritual phenomena.
A final feature of intelligence methodology that makes it more effective than scientific methodology to study spiritual phenomena is its requirement to withhold judgment to allow for novel ideas to arise and be examined. A primary attribute of the effective use of intelligence methodology is the suspension of judgment, which is vital to making an accurate assessment because it requires keeping all hypotheses as possibilities until proven not to be as well as delineating the evidence prior to assessing relevance or validity. This is also necessary in the study of spiritual phenomena for which little of their nature is understood and possible explanations for their existence are seemingly unlikely based on current knowledge. Where scientific methodology would use doubt to eliminate these possibilities, intelligence methodology suspends judgement to ensure that the most likely possibility is not discarded.

The preference for intelligence methods over the scientific methods in the study of non-testable spiritual phenomena does not mean that the former is a better methodology than the latter for all phenomena. Scientific methodology has its place. Both methodologies focus on eliminating bias in examining phenomena. Both systematically assess possible hypotheses in an attempt to understand a specific phenomenon. Both focus on making a best guess to explain a phenomenon. However, each methodology is more effective in the study of certain types of phenomena. For some types of phenomena, we cannot yet rely on the “truth” of it being found only by what we can confirm; the truth often is found within the set of what is not yet disproved. Often, it can only be a best guess at this point in our capabilities and knowledge of the issue. Spiritual phenomena need a methodology that can systematically examine anecdotal evidence and human actions as opposed to consistent workings in the world, and this methodology is the intelligence methodology.
CHAPTER 6:

Case Study

The case study used to illustrate the effectiveness of intelligence methodology for non-intelligence issues will be a non-testable spiritual phenomenon of alleged past life experiences, which must be examined individually as a case. The intelligence structured analytic technique (SAT) of alternative competing hypotheses (ACH), in particular, is an effective method for examining non-testable spiritual phenomena. The ACH method is used to examine one specific issue at a time that has a large amount of evidence but none significant enough to necessarily determine a most likely hypothesis or outcome, while accounting for potential cognitive limitations in both the subject and the researcher that affect an accurate examination of the phenomenon. Furthermore, often issues are examined to obtain a greater understanding of a situation rather than to gain a specific answer, for many cases do not yet have definite “answer.” This is the case with spiritual phenomena that may not yet be testable or may not have an adequate knowledge base and thus require ongoing assessment as more information is collected before a conclusion can be drawn.

ACH Method

With the ACH method, the researcher systematically examines the pieces of evidence of a specific case in relation to all possible hypotheses. All possible explanations for the phenomena are considered until they are proven false, which allows for a continual analysis that can be updated as new information arises. Keeping all of the possible hypotheses in the mix is critical to an accurate analysis; assessments of the likelihood of each are provided in the findings to give the most effective conclusion. For instance, in assessing the possible actions of a world leader with a history of erratic behavior, identifying the possible hypotheses and ranking them according to the likelihood of each is more effective than identifying only the most likely hypothesis. Similarly, when not enough information is available or able to be fully assessed, each of the possible explanations (hypotheses) must be discussed to show the strengths and weaknesses of each as an explanation of the phenomena. Giving only the one deemed “most likely” is ineffective as new evidence may then show the next option as “most likely,” which will be
unanticipated if it was not mentioned in the conclusion. Further, the ACH method systematically considers and mitigates the possible and inherent cognitive limitations of the researcher as well as of the subject being studied. From the structure of the ACH method, researchers can more effectively, objectively, and rigorously examine non-testable spiritual phenomena.

The ACH method visually structures information to enable the systematic examination of an issue as well as the biases that arise from the subjective nature of the issue. In the method, the pieces of evidence collected regarding an issue are evaluated against all possible hypotheses. This is done through a visual representation in a matrix to ensure that each element of the issue is adequately considered. To determine the hypothesis that most accurately accounts for the facts, the ACH method then focuses on discarding invalid hypotheses and designating the probabilities of each of the remaining hypotheses. Additionally, the ACH method enables a comprehensive analysis while considering the emotional factors that influence the objective assessment of an issue. Cognitive limitations, such as confirmation bias, preconceived notions, and ethnocentrism, arise in the development of the hypotheses, the collection of the evidence, and the evaluation of the evidence against the hypotheses. The systematic methodology of the ACH method recognizes these limits and “helps to depersonalize the argumentation” (Heuer and Pherson 304). Thus, subjective issues can be assessed rigorously.

*Steps of the ACH Method*

Richards J. Heuer, Jr, an intelligence analyst at the Central Intelligence Agency that created much of the intelligence methodology and related structure analytic techniques (SATs), developed the ACH method. It consists of eight steps:

Step 1. Generate possible hypotheses.

Step 2. List significant evidence for and against each hypothesis.

Step 3. Construct a matrix with hypotheses along the top and evidence down the side and analyze the diagnosticity of each piece of evidence.


Step 5. Draw tentative conclusions for hypotheses by trying to disprove each.

Step 7. Report the conclusions of the likelihood of all remaining hypotheses.

Step 8. Identify future observations that indicate an outcome different from the analysis.

(Heuer 97).

The first step is to generate the possible hypotheses that could account for the existence of the issue or phenomenon. The key in the first step is to brainstorm and document the variety of possibilities to allow little known ones to arise. It is only after the obvious ideas are out of the mind that the more remote ones can emerge; “when it comes to idea generation, quantity is the most predictable path to quality” (Grant 37-38). Considering opposing hypotheses or slight changes in the initial hypotheses can often lead to the development of other hypotheses. Further, additional hypotheses are often added into the matrix throughout the process of using the ACH method as new insights, and thus new possible explanations for the phenomenon, often arise. The most important point in developing the hypotheses is being as open-minded and inclusive as possible. It is critical that all possibilities are included in the matrix.

The second step involves identifying the evidence related to the issue or phenomenon. This begins with delineating that which is known or observed. Then, evidence for and against each hypothesis is actively sought. Evidence is considered with qualifications on its certainty rather than being accepted or rejected outright (Heuer 122-123). Finally, evidence that is missing (evidence that would be expected to exist if the hypothesis is valid but that does not seem to) is developed for each hypothesis and included in the assessment against all hypotheses. Although missing evidence can reveal that a hypothesis (or more than one) is incorrect, it can also disclose gaps in the collection of information, which should then be addressed. Evidence should be evaluated for relevancy to the issue and validity of the source (Krivan 26). Assumptions are also included as pieces of evidence to ensure that the ideas influencing the analysis are evident. This is important for revealing if the analysis is based on assumptions more than on facts (Heuer and Pherson 163). The evidence gathered on the intelligence issues is inherently ever-changing, incomplete, and often inaccurate or deceptive. As a result, additional pieces of evidence are typically added to the matrix throughout the process of using the ACH method.
The third step is constructing the ACH matrix. The hypotheses are listed along the top of the matrix, and the evidence is down the left side. Then, each piece of evidence is assessed in relation to each of the hypotheses. The chart is filled out by placing a “C” in the box if the evidence is consistent with the hypothesis, an “I” if it is inconsistent, and a “—” if it is not relevant. For evidence that very strongly supports or weakens a hypothesis, “CC” and “II” are used, respectively; this presents a weighting on the evidence to allow the more significant pieces of evidence to be clear. Assumptions can be determined in this step; if the thought when considering a piece of evidence is “it depends,” then there is an underlying assumption that must be determined and included in the matrix (Heuer and Pherson 163). The matrix should be filled in completely from this step.

The fourth step consists of refining the matrix by reconsidering the hypotheses. Any new hypothesis should be added and assessed following Step 3. Additionally, some hypotheses may be connected and should be combined in this step while others may need to be re-worded. At this point, if a hypothesis is disproved, it can be removed from the matrix (but kept for future reference).

The fifth step involves drawing tentative conclusions for the hypotheses by trying to disprove each. Each hypothesis is considered individually by looking down the column of the hypothesis and assessing the evidence as a whole in relation to it. The total number of “I” and “II” in each column is added to reveal which hypotheses have insufficient and/or inconsistent evidence. Considering the hypotheses together, the ones with the greatest number of “I” and “II” are evaluated to determine their validity based on the evidence. These hypotheses are considered the least likely, and those with the least number of “I” and “II” are considered the most likely. If a hypothesis is disproved, it can be removed; however, those that are unproven but not disproved should remain. Note that the hypotheses are NOT being proven but are being disproved; otherwise, they are left in the matrix for consideration.

The sixth step consists of determining the critical pieces of evidence to show how sensitive the analysis is to one piece or a few pieces of evidence. This is based on the pieces of evidence with the greatest number of “I” and “II,” which are then deemed “critical.” These pieces of evidence must be examined in light of “the consequences for your analysis if that evidence were wrong, misleading, or
subject to a different interpretation” (Heuer 97). Again, the relative number of assumptions versus number of facts should be considered. This step often requires additional research or checking of information. Visually sorting the matrix shows this as the pieces of evidence that are most critical being at the top and listed in descending order. Similarly, the hypotheses (columns) are sorted most likely to least likely from left to right.

The seventh step entails reporting the conclusions. This includes the relative likelihood of hypotheses (not just the one deemed most likely) as well as the pieces of evidence that most contributed to the assessment of each hypothesis. Ranking the alternatives instead of only choosing the best one increases the consideration of each option (Moyzisch and Schulz-Hardt 804). The analytical findings have an element of uncertainty and can be given only with the qualification of a probability because the conclusions are an analysis of people’s behavior (which is not static or consistent, often changing in a moment) rather than a physical process that has a constant set of laws.

The eighth and final step of the ACH method is to identify potential future observations or pieces of evidence that will support or contradict analysis. This step is a check on the analysis and focuses on both verification of the assessment and changes in the situation being assessed. Intelligence issues are often ongoing, so incorporating new information and re-assessing the hypotheses are often required. The presence of these potential future pieces of evidence will show if the analysis needs to be adjusted. The new information should be incorporated into the matrix and the assessment re-evaluated. This is a critical step in assessing an issue in which not all of the evidence is present during the initial assessment. Intelligence assessments “should always be regarded as tentative” (Heuer 97). As such, continual monitoring of the situation and updating of the ACH matrix is typically required.

The ACH method effectively mitigates cognitive limitations because not only is it an SAT itself but it also incorporates numerous SATs in its process. At the core of the method is the idea of withholding judgment, as this is part of every step in the process. The ACH method facilitates withholding judgment in the entire process through including numerous SATs (See Table in Appendix 2). For instance, withholding is built into the first step of the method—generating hypotheses through the
SAT of Structured Brainstorming. Structured Brainstorming mitigates preconceived ideas and biases by forcing the generation of as many hypotheses as possible to explain the phenomenon. After the well-known and favored hypotheses are listed, the less likely arise. As brainstorming requires listing without judging, all possibilities are included. Through these techniques, a complete list of hypotheses is developed as the opposite of the hypotheses that are most compelling are also included in the list. Similarly, the process forces recording evidence that opposes our initial stance to counter research and evidence that focuses only on the favored ideas. One of the most important elements of critical thinking is actively investigating alternative viewpoints. “Without forced consideration of alternatives, results are biased” (Moore 87). The SATs do this. Assessing the evidence against the hypotheses is methodical to ensure that each is not just “considered” mentally, and thus briefly, as would be the case in thinking about the evidence as opposed to listing it in the matrix and being forced to assess it. This works for the final step as well—identifying future indicators. The SATs compel the inclusion of indicators that one would want to see as well as the opposite of those. To strengthen any assessment of an issue, the variety of opposing viewpoints and opinions must be considered.

Once the process is completed, the ACH method then deliberately and systematically examines the analysis and conclusions to reveal any bias in the analysis. Even with careful analysis, bias can creep in. Examining the completed analysis can facilitate identifying and correcting bias. These SATs are not part of the ACH method steps but are conducted after the process is complete. These SATs focus on examining the analysis either in reverse (Argument Mapping) or step-by-step (Structured Self-Critique) (See Table in Appendix 2). The analyst’s cognitive limitations are integral to thinking, so SAT’s must be used to minimize their effects by being aware of and seeking out the pitfalls that they engender (Davis, “Combatting” 13-14). Reviewing the completed analysis with SATs provides a second level of review on these limitations.

Strengths of the ACH Method

A major strength of the ACH method is that it provides a visual representation of the information being assessed, which allows for a more accurate analysis. The ACH method often includes more than a
few hypotheses and dozens (often hundreds) of pieces of evidence; however, it is not possible to accurately and effectively assess the issue without a visual representation of this amount of information. The human mind can only retain about seven items, so the capacity to weigh evidence consciously is limited to approximately seven factors (Miller 87). The analyst needs to externalize the information to effectively consider all of it. “Employing structured methods of reasoning [such as the ACH method] extends this capacity” (Moore 87). Without the structured visual matrix of the ACH method, instead of fully focusing on each piece of evidence for each hypothesis, one would consider each briefly and include it or toss it based on an initial hunch. Unfortunately, inherent biases that are a part of all thinking, such as errors in judgment and preconceived ideas, play a significant role in this quick assessment. Situations in which anecdotal evidence and evidence based in human actions and beliefs, in particular, need to be considered with a visual representation to fully focus on the possible biases resulting from the human component of both the subject and the researcher. Additionally, people inherently think that they know more than they do regarding most topics, which keeps them from fully researching an idea (Burton 175). Visualizing the information can reveal and mitigate these cognitive limitations. Finally, the visual component brings greater cognitive power to the analysis. Visually seeing the information engages areas of the brain other than those areas used for thinking, and often the “aha moment” comes when looking at information from a different vantage point (Jones xv, Duggan 23). A visual representation of an issue forces this vantage point. The visual format of the ACH method forces the systematic examination of each part of an issue, revealing and thus mitigating the inherent cognitive limitations influencing the analysis and showing how each hypothesis stacks up to the facts; thus, it enables a more effective assessment.

A second major strength of the ACH method is that it is cyclical, so it can be continually updated to reassess the issue when additional information arises. Intelligence in general is cyclical in nature, with issues needing to be assessed in a manner that allows them to be constantly updated. Not all SATs have a cyclical aspect. The ACH method does, so it is effective for situations that need to be continuously monitored or updated and reassessed. With the ACH method, once the analysis is complete, it is not
necessarily done. If the issue is a continuing situation, additional information will be collected and incorporated into the ACH matrix for another analysis. This process continues until the situation is resolved or until all hypotheses are disproven except one through analysis.

Finally, the ACH method reveals doubt in the analysis by stating it in the findings. Because the method only discards hypotheses that are proven inaccurate, the remaining hypotheses must be considered. This is inherent in the ACH method: the findings state the likelihood of each and delineate what is fact versus what is opinion. This allows those reading the analysis to understand not only the conclusions but also on what the conclusions are based. The findings could also include the sensitivity analysis SAT, which shows how sensitive the conclusion is to a few pieces of evidence or assumptions. In other words, if those pieces turned out to be wrong, how might it affect the conclusion? (Heuer 69).

Overall, the findings need to express the possibilities of all of the hypotheses that have not been discarded (and can even include a discussion of the discarded ones to reveal the full thinking on the subject).

The benefits of the ACH method are numerous. It mitigates major cognitive impediments itself as well as by incorporating numerous other SATs. It is a complete method that systematically assesses each element of the issue and can continually assess a changing issue as additional information arises. Finally, it visually represents the information of the issue to ensure that each step is thoroughly completed. The effectiveness of the ACH method relies on methodically completing each step in the process. The more precision taken in conducting each step—from developing the hypotheses, to collecting the evidence, to evaluating the diagnosticity of the evidence and so on—the more accurate the conclusions.

The ACH method can be used for examining numerous types of issues beyond those in the intelligence field. Because it focuses on assessing dynamic human behavior and actions, it can be used to examine nearly any issue that includes a human component, including assessing minor issues such as buying a house or deciding between political candidates to more important issues such as assessing one’s health options or religious activity. The ACH method is effective for examining controversial issues because it not only provides a methodology for accurate examination but it also provides an “audit trail” in the use of the matrix “to show what evidence was considered” (Heuer and Pherson 160-161). As such,
the ACH method will be effective for examining spiritual phenomena, particularly non-testable phenomena, which are controversial in the current scientific community and do not have a most likely conclusion because of gaps in knowledge in the field.

**The Case: Alleged Past Life Experiences**

The spiritual phenomena of past life experiences is selected to be examined using the ACH method because it is a non-testable spiritual topic that has been seriously studied by academic researchers but is difficult to examine with scientific methodology. Past life experiences refer to memories and behaviors of a person that arise with the person appearing to have no normal method of acquiring them, such as memories of a prior family, knowledge of specific events from a time period before birth, birthmarks reflecting marks of a specific prior personality, and behaviors and actions not prevalent in one’s current culture such as speaking a foreign language with no prior exposure to it. These cases present spontaneously typically in children of just a few years old, so these are the cases most frequently studied. The age of the subjects and the individual nature of each case make the study of alleged past life cases difficult. Even proponents of the study of spiritual phenomena recognize that the study of cases of past life experiences “faces many methodological challenges” (Cardeña, et al. 9). The study of past life experiences has endured the same fate as that of other spiritual phenomena that scientists have neglected; however, because it does not have components that can be examined in a laboratory, it has been eschewed much longer than the study of many (if not most) other types of spiritual research such as ESP, which has been experimentally examined for nearly one hundred years. Additionally, the direct religious implications of the possibility of past lives (which supports the idea of reincarnation, which contradicts Western organized religion) further dissuades the study of the phenomena. It is these factors that make the phenomena an interesting case for examination with the ACH method because the hesitancy to believe that these phenomena were the result of past life (and thus reincarnation) forces researchers to consider numerous possible explanations for them (the hypotheses). Moreover, conventional explanations have always been included in research of spiritual phenomena, including past life experiences (Zingrone, et. al.)
Thus, the focus in examining these phenomena has remained more (if not completely) scientific than religious. The ACH method continues this rigorous and non-religious consideration of the phenomena.

The study of past life cases began in earnest in the 1960s by Ian Stevenson who observed these phenomena as outliers within the context of normal scientific knowledge, largely in his study within psychiatry. Stevenson, who was a medically trained psychiatrist and researcher, was puzzled by the accounts of alleged past life cases. Even with his vast knowledge of and experience in psychiatry and psychiatric research methods, Stevenson could not account for the experiences that he was seeing in the children in these cases. The first cases of past life experiences were recorded in the late 19th century, with more cases, and more thoroughly reported cases, in the first half of the 20th century (Mills and Tucker 319). However, it was not until Stevenson earnestly began researching in the second half of the 20th century that significantly more cases began to arise. Stevenson was hesitant to assert that reincarnation explained the phenomena. It was not until decades into his research, with thousands of cases amassed, that he began to see evidence in which reincarnation was the best explanation for some cases (even in these he maintained that numerous explanations were possible, with reincarnation being just one) (Tucker, “Ian Stevenson and Cases” 41).

Another significant component of Stevenson’s work is that he addresses the phenomena without the religious dogma of the idea of reincarnation, which begins to give credibility to the topic as a scientific not religious phenomenon. Reincarnation is a primary tenet of several religions, such as Hinduism in which reincarnation is based on one’s actions in one life, which gives better or worse conditions in the next. Although Stevenson examined hundreds of cases in these cultures, he maintained a scientific perspective on the phenomena, consistently looking at numerous possible explanations for it while removing the religious ideas within the phenomena to consider believe in life after death outside the realm of religion (Stevenson, “Some of My Journeys” 12). Further, Stevenson kept his focus on the scientific examination of the cases, with his goal being scientific not theological, which further increased the credibility of the field. One of Stevenson’s primary objectives was to collect enough empirical data on spiritual phenomena to bring the possibility of a soul surviving after death into the scientific conversation.
(Kelly and Kelly 79). As the most significant scientific researcher in the field, Stevenson was able to make some headway with this: “Before 1960 few parapsychologists would have been willing to consider reincarnation as a serious interpretation…[by 1977] most parapsychologists would agree that reincarnation is at least entitled to inclusion in any list of possible interpretations” (Stevenson, “Reincarnation: Field Studies” 657).

The specific case study of a small child in Japan who allegedly had past life experiences and memories of being a boy in Scotland, United Kingdom, will be analyzed in this work using the ACH method to illustrate the intelligence methodology. This case was selected because it was a young child who had no connection to the location or people of the alleged prior life and no relevant birthmarks or scars or the prior life, which makes the case more manageable as an example. Current researchers use four categories of evidence of past life experiences to examine cases: birthmarks, distance between current family and prior family, behaviors, and statements (Tucker “A Scale” 573). Selecting a case with only two of these types of evidence makes it possible to examine here. Additionally, many alleged past life cases have hundreds of pieces of evidence and factors, which would be prohibitive in this work, so a more in-depth case would be unmanageable. Finally, the focus of much of the past life research (Stevenson and many others) has largely be on children of a few years old for two main reasons: it was easier to determine if they had learned information from another source at this age and children spontaneously talked about a prior life (with no need for outside influences, such as hypnosis or drugs, to elicit it), which increases the validity of the evidence (Mills and Tucker 314). Thus, this case, with a limited number of pieces of evidences, will be used to illustrate the use of the ACH method.

**Analysis of Case with ACH Method**

*Step 1. Generate possible hypotheses.*

In the intelligence field, the ACH method is conducted by either an expert in the situation being assessed or a group of analysts, so hypotheses are generated based on this knowledge base. For those who do not have knowledge on the situation being assessed, research of others working in the field provides possible hypotheses. The SATs typically used in this step are Structured Brainstorming, Hypothesis
For this case study, because researchers of alleged past life cases have considered several possible explanations for these types of cases, there is a credible list of hypotheses to use. The hypotheses brainstormed here and those of prior researchers are listed in Appendix 4. After conducting the first two SATs, Structured Brainstorming and Hypothesis Generation, only one additional hypothesis is developed beyond that of known researchers: universal consciousness (memories obtained from a universal consciousness field of all memories). The other hypotheses are determined from numerous researchers engaged in the study of past life experiences. Antonia Mills and Jim B. Tucker, who wrote the “Reincarnation” chapter in the 2015 Parapsychology: A Handbook for the 21st Century, provide five possible hypotheses considered by most researchers today: fraud (the memories are deception), paramnesia (memories obtained from family of prior personality), cryptomnesia (memories obtained from normal means – family, education, media, etc.), extrasensory perception (ESP) (memories obtained mentally from family and acquaintances of prior life personality), possession (memories obtained from another personality mentally within the subject), and reincarnation (the subject lived a prior life) (321-322). The paramnesia hypothesis is excluded here because no prior life personality was discovered, so there was no contact with the family to obtain information. To these hypotheses is added the skeptics’ hypothesis of fantasy (the subject is making up the memories) to ensure that the various sides of the topic are represented in the hypotheses list.

For the deception detection SAT, deception is included as a hypothesis (Fraud); the SAT is further used in step 2. The final possible hypotheses are listed as the column headers in the matrix (See ACH Matrix in Appendix 5). Of note, in considering the hypotheses, other than Fraud, all hypotheses are considered as coming from the child alone, with no influence from the parent.

**Step 2. List significant evidence for and against each hypothesis.**

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4 Structured Brainstorming is used to determine possible hypotheses while Hypothesis Generation is used to group the possible hypotheses and identify those to be used in the analysis. Deception Detection is used to identify possible deception as a hypothesis.
In the intelligence field, in addition to the evidence that presents itself, the analyst also searches for evidence that both supports and refutes each of the hypotheses. The types of evidence to be considered are determined using the following SATs: Structured Brainstorming, Deception Detection, Red Hat Analysis, Key Assumptions Check, and Indicators (See the Tables in Appendix 2 and Appendix 3). Through the use of these SATs, a comprehensive list of evidence (and missing pieces of evidence) can be delineated. The key to this step is to systematically take the pro-side of each hypothesis and then the con-side of each to consider possible evidence, with particular focus on the Red Hat Analysis SAT. As this case study is based on a prior investigation, searching for additional evidence is not possible, so some of these SATs will not be used here. However, in general, it will be a critical step in investigating alleged past life cases. Secondly, assumptions need to be checked. Assumptions are the underlying ideas that bring about an assessment of a piece of evidence. The assumptions should be checked to ensure that they are valid. Often the chart needs to be updated once assumptions are considered. Assumptions can be seen in this step and Step 3.

Things to consider when examining the evidence include the personal nature of the information, which is an aspect of evidence in both intelligence issues and spiritual phenomena. Personal experience with evidence often makes it seem more reliable and impactful than it may be (Heuer 115-116). A second component is the personal desire to have or not have a past life experience. Controversy in the study of spiritual phenomena is typically over interpreting the evidence as each side typically sees the evidence as supporting their view (Carter 18). Finally, because the children are so young when they begin having the alleged memories, individuals close to the child must relay what occurred. This can present faulty evidence as family sometimes embellish the memories or incorrectly remember what occurred (Tucker, “Children who Claim” 549-550). These elements must be considered when collecting each piece of evidence and when considering underlying assumptions, which can be done using the SATs listed above.

For this case study, the researcher has provided the pieces of evidence. The records kept by the mother of the child at the time of the occurrences enhance the credibility of the evidence, so lapses in or changes to memories are not an issue. Additionally, the case investigator confirms the authenticity of the
evidence based on the child being taken to a psychiatrist who wrote a report on the case, in addition to his own investigations (Masayuki 626). Further, missing evidence and indicators are not elements in this case as additional collection will not be undertaken. In a case being investigated first hand, each piece of evidence would be examined for credibility (with use of the Deception Detection SAT) and missing evidence and indicators would be developed; however, that is not feasible for the more general nature of the case analysis that is conducted here. Only 18 pieces of evidence are included to keep the matrix manageable for this paper (all evidence would typically be included).

The general belief in the validity of the evidence is the basis for the assumptions in this case. The main assumptions developed are the child’s lack of access to knowledge on Western culture and the lack of connection between the families. The first assumption appears to be valid as the family seems to not inadvertently give this knowledge to the child as it is very specific (if they even had it) and occurred in the early 2000s, prior to ubiquitous internet access. The second assumption appears to be valid in that no connection seems to exist between the two. Using the Key Assumptions Check SAT, if either assumption turned out to be incorrect, the analysis would be affected by the possibility of Fraud and Cryptomnesia being more likely. However, the validity of the case evidence has been confirmed as highly credible (as discussed). The pieces of evidence are listed down the left of the matrix (See the initial ACH Matrix in Appendix 5).

Step 3. Construct a matrix with hypotheses along the top and evidence down the side and analyze the diagnosticity of each piece of evidence.

In the intelligence field, the ACH method itself is the SAT used in this step; it ensures an accurate evaluation by forcing the assessment of each hypothesis and piece of evidence combination. Additionally, the Key Assumptions Check SAT is used; underlying assumptions must be recognized for the assessment of each hypothesis with each piece of evidence. When considering each hypothesis with the evidence, each hypothesis should be considered from the viewpoint of a supporter of it and then as an opponent to ensure that both sides are included in the evaluation.
The visual component of the ACH method reveals its importance in this step because the matrix forces the researcher to assess each piece of evidence with each hypothesis. Bias that arises in evaluating evidence is easily ignored by “considering” the evidence mentally and discounting it, making the researcher “feel” as though he has fully assessed each piece. However, the matrix forces the thinking by requiring that a designation be given to the thinking of each piece (a “C”, “CC”, “I”, “II” or “—” must be in each box in the matrix.

For this case study, bias must be kept in mind, as with the study of any controversial topic like spiritual phenomena, as a researcher that engages in this work is likely to have a bias toward believing in the phenomena in a certain way (for instance, wanting to “prove” the likelihood of reincarnation and past life experiences or vice versa). One must be cognizant of this bias to ensure to not assess the evidence to be reflective of the past life experience hypothesis when it should not or vice versa. This is mitigated by examining each piece of evidence from all possible sides and arguing for and against each with each hypothesis.

Step 3 ACH Matrix

<table>
<thead>
<tr>
<th>ACH analysis of Japanese child with alleged past life experiences of a prior life in Scotland</th>
<th>Fraud</th>
<th>Cryptomnesia</th>
<th>ESP</th>
<th>Possession</th>
<th>Reincarnation</th>
<th>Fantasy</th>
<th>Universal Consciousness</th>
</tr>
</thead>
<tbody>
<tr>
<td>First wrote with Roman not Japanese letters</td>
<td>C</td>
<td>I</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>I</td>
<td>C</td>
</tr>
<tr>
<td>Sang English song the first time he heard it</td>
<td>C</td>
<td>I</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>I</td>
<td>C</td>
</tr>
<tr>
<td>Ability to peel garlic skillfully</td>
<td>C</td>
<td>I</td>
<td>I</td>
<td>C</td>
<td>C</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>Peels garlic with non-dominant hand</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>C</td>
<td>C</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>Pointed out UK on globe and said he lived there</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Pointed out Edinburgh on map</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Touched forward for kiss (done in UK, not in Japan)</td>
<td>I</td>
<td>I</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>I</td>
<td>C</td>
</tr>
<tr>
<td>Could describe a dog John he had</td>
<td>C</td>
<td>I</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Repeated phrase “John John my very John John”</td>
<td>C</td>
<td>I</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Said UK mother said “I love you” (Japanese don’t)</td>
<td>I</td>
<td>I</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>I</td>
<td>C</td>
</tr>
<tr>
<td>Used “washbasin” term not the Japanese</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>I</td>
<td>C</td>
</tr>
<tr>
<td>Knew the money was pounds not yen</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>I</td>
<td>C</td>
</tr>
<tr>
<td>Called soy sauce “Japanese soy sauce”</td>
<td>C</td>
<td>I</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>I</td>
<td>C</td>
</tr>
<tr>
<td>He said, “This time I chose a strong body.”</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Said he drank black coffee, but now he cannot (too young)</td>
<td>C</td>
<td>I</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Said he saw train crash on TV when in hospital (it did</td>
<td>I</td>
<td>II</td>
<td>CC</td>
<td>CC</td>
<td>CC</td>
<td>II</td>
<td>CC</td>
</tr>
</tbody>
</table>
He described chili ingredients & hot taste (had not eaten it)  | C  | I  | C  | C  | C  | I  | C  |
Described his family – brother 5 years older  | C  | I  | C  | C  | C  | C  | C  |
Parents did not give knowledge of UK to child (assumption)  | I  | C  | C  | C  | C  | C  | C  |

**NUMBER OF INCONSISTENCIES**  | 6  | 14 | 3  | 1  | 0  | 11 | 3  |


**Step 4. Refine hypotheses and evidence in matrix.**

In the intelligence field, the additional collection of evidence through the second stage of the process often requires adding or modifying the list of possible hypotheses. Additionally, any hypotheses that have been disproved will be removed from the matrix (but kept for future reference of the research).

Again, the ACH method itself is the SAT used in this step.

For this case study, because the evidence is taken as given with no additional research, this step requires no changes to the matrix based on additional evidence. Further, as the types of possible explanations are similar for all past life cases (at this point, with the current knowledge of the phenomenon), there will not often be additional hypotheses or changes to the existing list, at least not until there are significant advances in knowledge and/or technology that reveal new possibilities.

However, there may be (and likely will be) alleged past life cases in which one or more hypotheses have been disproven and can thus be removed. For this case, all hypotheses will remain in the matrix.

**Step 5. Draw tentative conclusions for hypotheses by trying to disprove each.**

In the intelligence field, tentative conclusions for the hypotheses are drawn by trying to disprove each. Each hypothesis is considered separately from the others to determine its likelihood based on the relevant evidence. This step is largely to determine if any hypothesis has been disproven. Once again, the ACH method itself is the SAT used in this step.

Because of the controversial nature of the study of spiritual phenomena, a hypothesis should remain in the matrix unless the evidence against it is overwhelming and it is disproved. To some extent, the analyst’s judgment determines at what point a hypothesis is disproved. For controversial topics, the
analyst must err on the side of being conservative; the evidence must be significant and fully understood before a hypothesis is discarded.

For this case study, each of the hypotheses has been considered. The least likely hypothesis is “Fantasy”; however, it could only be removed from the matrix by confirmation from the family of the prior life in some of the details (dog names John, brother, etc.), which would disprove that the memories were Fantasy. As there is no family to consult, this hypothesis is not removed. Thus, no hypotheses are discarded in this step.

**Step 6. Determine critical pieces of evidence.**

In the intelligence field, determining the critical pieces of evidence is a vital step because these pieces, if shown to be inaccurate, could have damaging (and fatal) consequences. The relative importance of the various pieces of evidence must be considered. A greater weight must be given to the factors that are more important and a lesser weight to those that are less important. The matrix is sorted to place the most critical pieces at the top of the matrix. Similarly, the hypotheses are then ranked and sorted with the most likely being placed on the left in the matrix. Again, the ACH method itself is the SAT used in this step as both of these rankings are based on the numerical calculation of the assessments made for each piece of evidence in Step 3.

Again, the visual representation of the matrix forces an unbiased examination of the facts in this step. Most researchers begin with some idea of what they consider the best option, particularly with issues involving emotion, as exist in both intelligence and spiritual phenomena. By ranking the options in this step with the visual representation of the matrix, a conclusion that is different than is expected cannot be ignored because the evidence will support it and visually show it.

**Step 6 ACH Matrix**

<table>
<thead>
<tr>
<th>ACH analysis of Japanese child with alleged past life experiences of a prior life in Scotland</th>
<th>Reincarnation</th>
<th>Possession</th>
<th>ESP</th>
<th>Universal Consciousness</th>
<th>Fraud</th>
<th>Fantasy</th>
<th>Cryptomnesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Said he saw train crash on TV when in hospital (it did occur)</td>
<td>CC</td>
<td>CC</td>
<td>CC</td>
<td>CC</td>
<td>I</td>
<td>II</td>
<td>II</td>
</tr>
</tbody>
</table>
No connection between family and prior life family (assumption)  | - | - | - | II | II | II
---|---|---|---|---|---|---
He said, “This time I chose a strong body.” | C | I | I | I | C | I
Peels garlic with non-dominant hand | C | C | I | I | I | I
Ability to peel garlic skillfully | C | C | I | I | C | I
Touched forward for kiss (done in UK, not in Japan) | C | C | C | C | I | I
Said UK mother said “I love you” (Japanese don’t) | C | C | C | C | I | I
First wrote with Roman not Japanese letters | C | C | C | C | C | I
Sang English song the first time he heard it | C | C | C | C | C | I
Called soy sauce “Japanese soy sauce” | C | C | C | C | C | I
He described chili ingredients & hot taste (had not eaten it) | C | C | C | C | I | I
Parents did not give knowledge of UK to child (assumption) | C | C | C | C | I | C
Could describe a dog John he had | C | C | C | C | C | I
Repeated phrase “John John my very John John” | C | C | C | C | C | I
Said he drank black coffee, but now he cannot (too young) | C | C | C | C | C | I
Described his family – brother 5 years older | C | C | C | C | C | I
Used “washbasin” term not the Japanese | C | C | C | C | I | C
Knew the money was pounds not yen | C | C | C | C | C | I
Pointed out UK on globe and said he lived there | C | C | C | C | C | C
Pointed out Edinburgh on map | C | C | C | C | C | C
NUMBER OF INCONSISTENCIES | 0 | 1 | 3 | 3 | 7 | 12 | 15


For this case study, one of the strongest pieces of evidence is the train crash, which was verified to have occurred at the time the child asserted that he had been in the hospital and could have seen it on television. As such, this is critical support for the hypotheses for which this evidence is consistent and critical refutation of those for which it is inconsistent. The second strong piece of evidence is the distance between the child (as well as his family) and the alleged prior life family as there is no connection of the child with the family. Additionally, there is no connection by which to form the knowledge of the United Kingdom, so the child’s knowledge of the country in general, and of UK culture in particular, increases the credibility of the evidence relating to the United Kingdom and thus the hypotheses for which these pieces of evidence are consistent. The specific evidence that is important for each individual hypothesis is discussed in Step 7.

Step 7. Report the conclusions of the likelihood of all remaining hypotheses.
In the intelligence field, giving the relative likelihood of all possible hypotheses (not just the one deemed most likely) as well as the pieces of evidence that most contributed to the assessment for each hypothesis is critical to showing the analysis of the situation. The conclusions in intelligence situations have an element of uncertainty and can be given only with qualifications of the likelihood of each hypothesis. When considering the likelihoods, a good rule is given by mathematician Henri Poincaré who asserts that a hypothesis’ probability is increased if it can explain otherwise inexplicable data (Gower 142). With the ACH method, this idea is used but with a focus on the least number of inconsistent pieces of evidence.

Similarly, for non-testable spiritual phenomena, there is often no definite conclusion, so the likelihood of each should be discussed. The individual assessment of each hypothesis forces a non-biased consideration as the evidence in the matrix backs it up. Moreover, the discussion of each hypothesis with its supporting and non-supporting evidence enhances the credibility of the analysis.

For this case study, from the matrix, the most likely hypothesis (as seen in the matrix in the left columns) is Reincarnation followed by Possession, the former with no inconsistencies and the latter with only one, the child’s comment that he had another body. The next two most likely hypotheses both have three inconsistencies in the evidence—ESP and Universal Consciousness. The inconsistencies are the same for both—the comment on another body and the two pieces of evidence regarding peeling garlic. Both of these hypotheses are based on a mental connection that provides the memories, so the physical evidence relating to the garlic is inconsistent for both and they have a similar assessment. However, additional evidence could be consistent for only one, thus changing the likelihood of each and their placement in the matrix.

The three least likely hypotheses are Fraud followed by Fantasy and Cryptomnesia. Fraud is the only hypothesis for which the deception detection SAT is as important as the inconsistent pieces of evidence. Both must be considered in assessing the hypothesis; moreover, detecting fraud in the evidence will change the entire assessment and if the case itself is proven fraudulent, the assessment is not needed. Because additional evidence can arise, the Fraud hypothesis must be included in the matrix. The next to
the least likely hypothesis is Fantasy; this is likely because the child’s lack of experience with or knowledge of the distant culture (being such a young age) prohibits his ability to create the memories. The matrix shows this with the only consistent pieces of evidence being the non-factual personal pieces; all others are inconsistent. Finally, the least likely hypothesis is Cryptomnesia; this is not surprising as there is little likelihood that the child (or the family) could obtain the memories through normal means when they did not have a connection with the UK culture. Thus, the information would not have arisen to then be forgotten by the child.

*Step 8. Identify future observations that indicate an outcome different from the analysis.*

In the intelligence field, indicators are based on knowledge of the situation (and in some cases comparison to similar prior situations). This step focuses on changes that may arise in the situation in the future. Most intelligence issues are continuous, with new information often needing to be incorporated into the analysis. The SATs used in this step are Structured Brainstorming and Indicators; however, each SAT used throughout the process can be incorporated as this step often requires the ACH method to be repeated with the arrival of new information (See Table in Appendix 2).

Similarly, for spiritual cases, using the ACH method from the initial stages of investigation into a case will require a continual updating of the analysis. Although this will largely come from additional research into the case, there may be indicators that can be delineated; these would vary among cases and information known versus information that is not known, similar to with intelligence situations.

For this case study, because the investigation into the case was conducted previously, there will be no future evidence to consider.

*Post-Analysis*

Several post-analysis steps exist to evaluate the strength of the analysis and identify any specific weaknesses. These include the SATs of Argument Mapping and Structured Self-Critique. Typically, only one of these is used to evaluate the analysis, and, for this case, it will be Argument Mapping. Argument Mapping consists of examining the analysis of the most likely hypothesis to test the soundness of the conclusion.
Examining how the hypothesis of Reincarnation could be true, the evidence shows that the final assessment is quite sound. There is no inconsistent evidence, although future evidence could be inconsistent (if it were collected here). This does not mean the hypothesis is true, only that it is not disproven and is most likely based on the known information. The main objections to this conclusion likely lie more in the philosophical and scientific realms than the analytical. As discussed earlier, the possibility of reincarnation contradicts Western religious traditions and is not able to be confirmed with current scientific knowledge and capabilities. However, these objections are largely made by those who have not researched the field and believe that most of the options are unlikely (or even impossible). However, upon review of the anecdotal evidence (its existence requires its examination) and the scientific evidence (expanding knowledge in some fields is increasing understanding the phenomena related to these hypotheses), the hypotheses are possibilities, until they can be proven otherwise.

**Discussion: Case Study**

As seen from the example, the case of past life experiences can be effectively and systematically examined with the ACH method, providing a more accurate assessment than examination using the investigative methods based in scientific methodology. The researcher’s initial examination of the case was not objective or comprehensive as his purpose was to show that past life cases exist in Japan not to determine the most accurate conclusion from the evidence. Thus, he does not suggest or consider other possibilities for the evidence. The researcher did investigate the claims by researching the factual information online and through organizations in Scotland and searching for the potential past life personality based on the birth and death dates given by the child (this is difficult without a name). However, the researcher did not systematically assess each piece of evidence to show if it could also support a different hypothesis. He simply explains the evidence to support the claim of being past life memories. For controversial issues, alternative explanations for phenomena must be considered and must be based on the evidence. From the ACH analysis, we can see that the conclusion is the same as the original researcher in this case; however, it is based on rigorous assessment of all possible hypotheses rather than focusing on validating one. Further, additional evidence in the case could result in a different
conclusion. Without the visual aspect of the ACH matrix, new evidence is often “mentally considered” and dismissed if it contradicts the initial conclusion. With the ACH method, the evidence would be added and the case reassessed by analyzing each hypothesis against the new evidence. Of course, the original researcher likely analyzed the case (along with other cases) to determine the most likely one to be representative of a past life experience. For instance, if a case had been found to be fraudulent, or seemingly fraudulent, then it would not have been consider for the researcher’s purpose. However, a thorough and systematic analysis as conducted with the ACH method would provide validity to the conclusion because the matrix shows the comprehensive analysis. Again, the visual aspect of the ACH method reveals its importance by showing the process of thinking to those examining the case, clearly outlining the arguments and analysis of each element.

The ACH method is most effective when conducted early in the research process, as the research guides the analysis and the analysis guides the research. The method is continual, so additional information that is discovered is added and the analysis updated, which is how investigating these types of phenomena often occurs. Additionally, the structure of the method facilitates assessment at each step to ensure that a case is not discarded too early or that elements of the case are not ignored. Finally, the ACH method removes the “emotion” from the process, so the researcher can see the facts in spite of his own opinions and inherent biases. It is not that scientific methodology is not useful; however, in individual cases of non-testable spiritual phenomena, the ACH method can more effectively and systematically assess the evidence while accounting for problems and limitations inherent in research involving human behavior, emotion, and thinking.

It is important to note that the ACH method only works if the researcher is objective throughout the process. The researcher must not have preconceived ideas of the results, or, if he does, he must recognize this and be willing to admit that he is wrong and change his opinion. If the researcher starts with a biased view of the information or a belief in the most likely hypothesis, he will “find a way to interpret the evidence as consistent with that belief” (Heuer and Pherson 161). The steps of the ACH method and related SATs facilitate this objectivity, but it must also be actively cultivated by the
researcher. To improve critical thinking, one must be willing to improve the disposition to thinking critically as both are essential to accurate analysis (Facione, et. al 31-32). However, this is not a natural way of thinking, and some are inherently better at it than others; the need to examine individual and societal long-held beliefs is a requirement of accurate analysis but is difficult for most. Thus, the ability to cultivate this mentality is another aspect that must be considered when using the ACH method.
CHAPTER 7:

Conclusion

This case study of alleged past life experiences shows how the ACH method can effectively and rigorously examine non-testable phenomena. Although the scientific community as a whole is far from readily accepting the study of spiritual phenomena, the improvement in examination and analysis will move it a step forward. The ACH method is particularly effective for assessing controversial and emotion-laden issues because it not only systematically examines all of the possible explanations but also visually shows this examination. Having an ‘audit trail’ of the thinking increases credibility of the analysis. Researchers of spiritual phenomena know that there will be a segment of the scientific community who, regardless of the credibility of evidence, “privileges rhetoric over substance” (Krippner, et. al. 7). However, the more rigorous and systematic the assessment of spiritual phenomena, the more accurate the understanding of the phenomena will be, which will inherently enhance its validity.

Many problems in the study of spiritual phenomena continue to hinder its progress, although there is hope. First, there are not many full-time researchers in the field, and the disadvantages of working in this controversial field (social, financial, and intellectual) dissuade many academic researchers from participating (Zingrone, et. al. 19, 23). On the other hand, this also benefits the field in its attempts at gaining credibility from the scientific community as a whole. Because most researchers in the field are academic researchers in other scientific fields, they have experience and credibility from their work in these other disciplines that can translate to the study of spiritual phenomena (Hovelmann 390). This credibility of the researchers can be seen in the methods used to examine spiritual phenomena by early researchers. Because the field is controversial, researchers were rigorous and innovative in their attempts to study spiritual phenomena, having even conducted the first comprehensive meta-analysis in scientific history (Baptista, et. al. 192). For future advances, there is a need to improve the experimental aspect of spiritual phenomena as significantly more about phenomena and the variables that affect them needs to be understood to move forward in the field (Cardeña 401). However, this can only occur with concurrent investigation into the outliers of the field as outliers provide new information on the phenomena and often
on related phenomena as well. Thus, the future provides a place for both scientific methodology and
intelligence methodology in the field of spiritual phenomena.

With intelligence methodology, widespread consideration of spiritual phenomena can move
beyond the lens of the artistic, religious, and philosophical realms. Because of the varying connectedness
of spirituality within society, it has become an element in the study of numerous aspects of a culture. This
interconnectedness requires a consideration of many fields of study to fully understand the influence of
spirituality. The interdisciplinary nature of this study lays the foundation for the addition of intelligence
methodology to the realm of spiritual phenomena inquiry.

The connection between science and religion will remain conflicted in some corners of each field;
however, the association is not entirely negative. Some within the scientific community will continue to
consider all spiritual topics fantasy or mythical with little scientific merit and eschew engaging in
research on them, regardless of the evidence. Similarly, some segments of the religious community assert
that faith is all that is necessary for belief in religious ideas and refuse to consider possibilities other than
what the church affirms, thereby relegating scientific ideas that conflict with the church as false. On the
whole, science has more influence over the knowledge of society in the postmodern era than religion.
Unfortunately, many in the scientific field now claim science to be the ultimate source of knowledge
much the same way that the church once did. Most scientists are open-minded about spiritual phenomena,
largely because they have experienced it or know someone that has; however, they “keep their interest
private, fearing scorn or ridicule” (Carter xii). Similarly, this has resulted in some of the public doubting
the claims of science as it once did to those of religion. Whereas organized religion once refused to accept
scientific evidence that question their doctrine, now many in the scientific community refuse to accept
evidence of spiritual phenomena that question their current theories of how the world works. However,
the persistent effort by skeptics to discredit spiritual phenomena has made the public increasingly
question the claims of science (Carter 43). As a result, many see science as claiming the same monopoly
on knowing that religion had claimed in the prior centuries. Although this is not all-encompassing, it is
significant. Fortunately, there is common ground: “Nothing is more powerful than Truth and that is a
common element in both science and religion” (Dosdad and Manrique 261). From this joint goal, a more congenial balance can be struck in the future

**Future Research**

This thesis brings up areas for future research in assessing additional types of emotion-laden or controversial topics, as well as in critical thinking in general. The ACH method can be a framework for critical thinking to examine an issue in which one does not have direct access to the information or only has part of the information. For instance, for this case study, if someone read the article on this case of alleged past life experiences and wanted to consider other possible explanations for the information (much like was done here), the ACH would be an effective method by which to do this. Moreover, because spirituality is a multifaceted element of society, analyzing it through the ACH method can provide an additional piece of the puzzle in understanding a culture as well as another lens through which the traditional realms of spiritual focus—philosophy and the arts—can be examined. Although the ACH method seems complex and contains many SATs in its use, the focus on visually representing information allows it to be simplified for use in analyzing a variety of issues. Simply filling out the matrix can highlight information that would otherwise have been overlooked. Even without use of all of the components of the ACH method (and its relevant SATs), the visual element of the method would allow for a more effective and accurate assessment of the topic than simply thinking about it or just writing down the relevant facts. Although a simplified version is not recommended for rigorous analysis, it can still provide a substantial boost to critical thinking on any topic. Because the ACH method forces the examination of every possible explanation (hypotheses) with every piece of evidence, it will inherently force a more accurate assessment than would otherwise occur.

The ACH method also can be easily expanded to examine issues beyond those rigorously studied by a researcher; it is effective for critical thinking in individual decision making on a variety of topics, particularly social science issues as well as critical thinking on personal issues that are emotion-laden. For instance, the method can improve personal decision making regarding a health issue that has diverse and conflicting information from a variety of sources. Additionally, it can be used to decide between political
candidates or possible homes to purchase, with the focus being on step 3, which considers the critical pieces of evidence that are involved in prioritizing components of a problem, as these priorities differ for each person. Because an issue is based in emotion does not mean that it is false, but the reasoning can be. The ACH method will mitigate poor reasoning. In what has been deemed a “post-truth world,” with false information rampant and readily believed as true as a result of inherent cognitive limitations and minimal personal research on facts, analyzing the validity of sources and evidence and assessing a situation for oneself is increasingly important. Intelligence methodology, and the ACH method in particular, can provide the framework for effective analysis of these topics by an individual.
Works Cited


APPENDIX 1:
Definition of Terms

Spiritual Terminology

Parapsychology – the study of spiritual phenomena; the term is contested by some because the field is not a subset of the psychology field and relates to numerous other scientific fields. As such, the phrase “the study of spiritual phenomena” will be used in this thesis

Spiritual Phenomena – phenomena deemed spiritual because they are based on ideas found in spiritual or religious realms and seem to not follow current laws that explain the physical world. Consist of psi phenomena and survival phenomena; also known as paranormal or anomalous phenomena

Psi Phenomena – Phenomena that present as forms of extrasensory perception; include telepathy, clairvoyance, precognition, and psychokinesis

Survival Phenomena – Phenomena that present as representative of survival of consciousness after bodily death; include near death experiences, past life experiences, and contact with the divine

Non-testable Spiritual Phenomena – Spiritual phenomena that do not have a measurable component and cannot be examined with scientific methodology

Past Life Experiences case – Spiritual phenomena that seem to reveal the idea of reincarnation (that a soul continues after bodily death and inhabits a new body in a new life); also known as case of the reincarnation type (CORT)

Intelligence Terminology

Analyst – A researcher in the intelligence field; also known as an intelligence analyst

Intelligence Field – The study of potential adversaries to mitigate threats to national security

Structured Analytic Techniques (SATs) - Critical thinking techniques used to examine the components of an issue as well as mitigate the negative effects of cognitive limitations and emotional aspects that are inherent in thinking
### APPENDIX 2:

Chart of SATs used in the ACH Method

<table>
<thead>
<tr>
<th>SAT</th>
<th>Use</th>
<th>How to Use</th>
<th>Used In</th>
<th>Source Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structured Brainstorming</td>
<td>To delineate numerous ideas on a topic beyond those commonly identified.</td>
<td>Write down as many ideas as can develop. Be creative and include outliers. Do not consider the likelihood; simply record the ideas.</td>
<td>Step 1, Step 2, Step 8</td>
<td>92-93</td>
</tr>
<tr>
<td>Hypothesis Generation</td>
<td>To narrow the ideas for hypotheses to usable hypotheses for analysis.</td>
<td>From the list of possible hypotheses, group related ideas together. Consider variables of the problem to look for gaps. Identify main hypotheses that are not repetitive yet cover all possibilities.</td>
<td>Step 1</td>
<td>151-153</td>
</tr>
<tr>
<td>Deception Detection</td>
<td>To detect deception in a situation.</td>
<td>Using the deception checklist (see Appendix 3), identify the possibility of deception by the sources of information.</td>
<td>Step 1, Step 2</td>
<td>173-175</td>
</tr>
<tr>
<td>Red Hat Analysis</td>
<td>To seek opposing views by perceiving information as it is seen by others.</td>
<td>With a strong understanding of the opposing culture, determine how a person in the other culture will most likely act in the situation.</td>
<td>Step 2</td>
<td>197-199</td>
</tr>
<tr>
<td>Key Assumptions Check</td>
<td>To systematically check the influence of assumptions in the analysis.</td>
<td>Identify key assumptions from Step 2 and assess if the assumption could be incorrect and if it turns out to be incorrect, what the effect on the analysis would be.</td>
<td>Step 2, Step 3</td>
<td>184-186</td>
</tr>
<tr>
<td>Indicators</td>
<td>To monitor changes to and recognize unexpected variables of an issue over time.</td>
<td>Identify possible future evidence that would reveal a change in the situation or confirm an existing hypothesis. Monitor for signs of the evidence. Lack of listed indicator may be evidence in the ACH.</td>
<td>Step 2, Step 8</td>
<td>134-136</td>
</tr>
<tr>
<td>Argument Mapping</td>
<td>To evaluate an analytical judgment on a most likely hypothesis.</td>
<td>Starting with the contention that the hypothesis is true, map evidence to visually show how it can be true as well as the weakness of the argument.</td>
<td>Post-ACH</td>
<td>170-172</td>
</tr>
<tr>
<td>Structured Self-Critique</td>
<td>To identify weaknesses in an argument.</td>
<td>Critique every aspect of analysis in search of flawed or inaccurate thinking.</td>
<td>Post-ACH</td>
<td>226-228</td>
</tr>
</tbody>
</table>

APPENDIX 3:
Deception Checklist

Motion, Opportunity, and Means:
Motive: What are the goals and motives of the potential deceiver?
Channels: What means are available to the potential deceiver to feed information to us?
Risks: What consequences would the adversary suffer if such a deception were revealed?
Costs: Would the potential deceiver need to sacrifice sensitive information to establish the credibility of the deception channel?
Feedback: Does the potential deceiver have a feedback mechanism to monitor the impact of the deception operation?

Past Opposition Practices:
Does the adversary have a history of engaging in deception?
Does the current circumstance fit the pattern of past deceptions?
If not, are there other historical precedents?
If not, are there changed circumstances that would explain using this form of deception at this time?

Manipulability of Sources:
Is the source vulnerable to control of manipulation by the potential deceiver?
What is the basis for judging the source to be reliable?
Does the source have direct access or only indirect access to the information?
How good is the source’s track record of reporting?

Evaluation of Evidence:
How accurate is the source’s reporting? Has the whole chain of evidence including translations been checked?
Does the critical evidence check out? Remember, the sub-source can be more critical than the source?
Does evidence from one source of reporting conflict with that coming from another source?
Do other sources of information provide corroborating evidence?
Is any evidence one would expect to see noteworthy by its absence?

APPENDIX 4:

Step 1 Structured Brainstorming and Hypothesis Generation

Structured Brainstorming

Hypotheses delineated from brainstorming session:
- self-delusion
- deception by child
- fraud by parents
- fraud by researcher
- multiple personality disorder
- learned through normal methods
- universal consciousness
- reincarnation
- extra-sensory perception

Hypotheses added from research:
- paramnesia
- cryptomnesia
- possession
- fantasy
- inherited memory

Hypothesis Generation

Fraud hypotheses:
- deception by child
  - fraud by parents
  - fraud by researcher

Mental hypotheses:
- self-delusion
  - multiple personality disorder
  - fantasy

Paranormal Connection to memories:
- universal consciousness
- reincarnation
- extra-sensory perception
- possession
- paramnesia
- inherited memory

Learned information hypotheses:
- learned through normal methods
  - cryptomnesia

Fraud hypotheses: Because of the age of the child, deception is not an option, so fraud would be by the parent or the researcher. A psychologist originally documented the case, so fraud by the researcher is ruled out. The Fraud hypothesis will focus on fraud by the parents.

Mental hypotheses: All three hypotheses relate to a mental fabrication of the information by the child. As such, the Fantasy hypothesis will be the term to cover this possibility.

Paranormal Connection to memories: Paramnesia and Inherited Memory relate to cases in which the subject (child) has a connection to the prior personality family. This connection does not exist in this case (Japan and Scotland), so these two are excluded from the list. Each of the remaining hypotheses is included in the matrix.

Learned information hypotheses: Cryptomnesia is memories obtained from normal means, which covers the second option in this category, so the Cryptomnesia hypothesis will be the term to cover this possibility.
## APPENDIX 5:

**Initial ACH Matrix**

ACH Matrix with Hypotheses and Evidence – Steps 1 and 2

<table>
<thead>
<tr>
<th>ACH analysis of Japanese child with alleged past life experiences of a prior life in Scotland</th>
<th>Fraud</th>
<th>Cryptomnesia</th>
<th>ESP</th>
<th>Possession</th>
<th>Reincarnation</th>
<th>Fantasy</th>
<th>Universal Consciousness</th>
</tr>
</thead>
<tbody>
<tr>
<td>First wrote with Roman not Japanese letters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sang English song the first time he heard it</td>
<td></td>
<td></td>
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<td>Ability to peel garlic skillfully</td>
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<td>Peels garlic with non-dominant hand</td>
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<td>Pointed out UK on globe and said he lived there</td>
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<td>Pointed out Edinburgh on map</td>
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<td>Touched forward for kiss (done in UK, not in Japan)</td>
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<td>Could describe a dog John he had</td>
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<td>Repeated phrase “John John my very John John”</td>
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<td>Said UK mother said “I love you” (Japanese don’t)</td>
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<td>Used “washbasin” term not the Japanese</td>
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<td>Knew the money was pounds not yen</td>
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<td>Called soy sauce “Japanese soy sauce”</td>
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<td>He said, “This time I chose a strong body.”</td>
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<td>Said he drank black coffee, but now he cannot (too young)</td>
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<td>Said he saw train crash on TV when in hospital (it did occur)</td>
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<td>He described chili ingredients &amp; hot taste (had not eaten it)</td>
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<td>Described his family – brother 5 years older</td>
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<td>Parents did not give knowledge of UK to child (assumption)</td>
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