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**THE BIBLE AND RESEARCH:
REFLECTIONS FOR THE CHRISTIAN
RESEARCHER**

by

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It is not uncommon for research and statistics teachers to introduce the subjects they teach by saying, “I teach the courses that students love to hate.” When I talk to students about why they don’t like research and statistics, they usually identify two reasons: 1) it has no relevance to their career and 2) it is too hard to understand and apply. As I thought about the students’ responses, I realized those are the responses many people give for their feelings against the Bible: 1) it has no relevance to life and 2) its concepts are too hard to understand and apply. If people could relate the Bible and research to their everyday lives, perhaps they would not have an aversion to either topic.

Bible principles are often incorporated into our everyday life and activities without a conscious and deliberate decision on our part to employ the principles. For instance, we’re instructed to forgive others as we are forgiven by God. When someone says, “I’m sorry” and we say, “I forgive you”, we do not usually review all Biblical principles and injunctions associated with forgiveness and weigh the impact of our decisions before forgiving the person. We are exercising the Biblical principle—forgive others as we are forgiven by God¹, because it is right to do. Similarly, research is incorporated into many things in our everyday lives. Almost everyone participates in research of some type daily. A toddler manipulates toys or other objects to explore different textures and colors, while the parents of that toddler consult with a realtor and or home buying guides to determine the ideal house for the family’s needs. Teen-agers study college catalogs to identify the college or university where they might receive the best education, and scientists study cures for cancer. The purposes of the toddler, parents, teen-agers, and scientist may be different, but each one demonstrates involvement in a practice that is called research. Although many do not recognize it, Bible principles and research theories influence our daily lives.

The purpose of this essay is to help Christian educators who may be research advisors, mentors, or researchers appreciate the relevance of the Bible in the practice of research, and identify some underlying principles of the Bible that may inform the practice of research. The essay is divided into the following sections: 1) The Purpose of the Bible, 2) the Purpose of Research, 3) God’s Endorsement of Research, 4) Research

¹ Matthew 6:12, Luke 11:4

Components, 5) a Systematic and Orderly, Yet Unpredictable God, and 6) From Concept to Curriculum. Before you begin, please note that in this essay the word “man”, and its derivatives, will be used in the generic sense. Additionally, use of Bible passages and texts are not intended to be either an exegesis or eisegesis of the texts, but rather a catalyst for deeper study of how Bible principles can, do, and should have practical applications to life in general, and the practice of research in particular.

PURPOSE OF THE BIBLE

At the core of this discussion is the belief that the Bible is the inspired Word of God. God speaks to us in His Word and reveals His character to us.² The plan of redemption and restoration of the image of God in the human soul are the central themes of the Bible. What can be learned from the Bible is useful in the practice of research.³ The Bible is possibly the best known example of historical research. In addition to revealing the origin of the world⁴ it traces the separation of man from God and the reconciliation of God back to the world.⁵ It raises some of life’s most critical questions: What must I do to be saved? When the son of man comes, will He find faith in the earth? Who is worthy to open the book and loose the seals thereof? In a systematic and orderly fashion, the Bible provides answers that are the foundation for truth and upon which rests the Christian’s life and hope.

PURPOSE OF RESEARCH

Before discussing the purpose of research, a common definition or understanding of the word is necessary. Webster’s dictionary, defines it as a “careful or diligent search”, a “studious inquiry or examination” aimed at the discovery and interpretation of facts.⁶ Coryn⁷ defines it as a truth-seeking activity, conducted and governed by individuals with a high level of proficiency or expertise, that contributes to knowledge and that is aimed at

² White, E.G. *Steps to Christ*. Washington, DC: Review and Herald Publishing Association. 1908.

³ White, E.G. *Education*. Mt. View, CA: Pacific Press Publishing. 1903.

⁴ King James Version: Genesis 1 & 2.

⁵ Genesis 3; Romans 5:6-11.

⁶ Merriam Webster Dictionary. Available at <http://www.m-w.com/cgi-bin/dictionary>. Accessed February 4, 2007.

⁷ Coryn CLS. (2006). The fundamental characteristics of research. *Journal of MultiDisciplinary Evaluation*. (5):124-133. Available at <http://evaluation.wmich.edu/jmde/content/JMDE>. Accessed March 2, 2007.

describing or explaining the world. Key elements of research are the collection, analysis, and interpretation of data. It is characterized by unhurried, reflective thinking, a thorough review of literature on a topic of interest, careful planning, close attention to detail, and strict adherence to established procedures and protocols. When teaching research methodology, I define it as a purposeful, focused, and systematic⁸ process that may accomplish one of the following purposes: answer a question, describe or explain a phenomenon, test a theory, or identify or solve a problem. While each of the purposes identified is important and has merit, answering the research question is arguably the most important purpose of any research process. Statement of the hypothesis, identification of the population to be studied, variables of interest, instruments and equipment used, procedures for collecting data, data analysis and interpretation, assessment and discussion of findings are all based on answering the research question.

The purpose of research, whether non-experimental or experimental,⁹ is to contribute to the body of knowledge in a particular discipline and that contribution of knowledge is designed to maximize the effectiveness of practice in the discipline.¹⁰ Whether the discovery of knowledge is undertaken through qualitative research, such as a study of the underlying causes of malnutrition and associated health risks in Darfur, or quantitative research, such as the study of the effects of glucose during cellulase and beta-Glucosidase hydrolysis, researchers approach their studies in a systematic, orderly fashion. The characteristics of research mentioned previously—unhurried, reflective thinking, analytic review of literature on the topic of interest, careful planning, close attention to detail, and strict adherence to established procedures and protocol—are constantly at play.

GOD'S ENDORSEMENT OF RESEARCH

Unfortunately, in some arenas, Christians have come to be thought of as shallow,

⁸ Throughout the essay I will use the word systematic when referring to both God and the research process. According to Webster, systematic is defined as using a fixed or organized plan. It is a derivative of the word system, which is an organized set of doctrines, ideas, or principles intended to explain the arrangement or working of a systematic whole. At the root of systems or systematic processes is the concept of order.

⁹ Non-experimental research includes descriptive, historical, exploratory, and even correlational research. These types of studies are often classified as qualitative, or more accurately, observational. Experimental research focuses on the causal relationships between variables and is often classified as quantitative.

¹⁰ Portney LG, Watkins MP. *Foundations of Clinical Research: Applications to Practice*. Upper Saddle River, NJ: Prentice-Hall, Inc. 2000.

anti-intellectual, irrational, and non-thinking beings.¹¹ Too often Christians just talk to other Christians and think in a rut, thereby, minimizing their effectiveness in the world around them.¹² This is not consistent with truly educated people or with God's intent for His children. Educated people, according to Holmes¹², demonstrate independence and creativity of mind, and can fashion new skills, techniques, and new patterns of thought based on their knowledge. God created the intricate neural network and cognitive powers of the brain so man could think, learn, and do. These intellectual powers and mental faculties are, in fact, a talent God requires that men develop. It was His design that "His servants would possess more intelligence and clearer discernment than the worlding".¹³ Development of an inquiring mind is, for the Christian, an expression of faith, hope, and love that is addressed to God and is part of our response to His self-revelation.¹⁴

By virtue of the fact that God has given man the ability to think, learn, and do, we must assume that the practice of research, which clearly requires and involves critical and in depth thinking, learning, and doing, is not only an acceptable activity for man, but that it is endorsed by God. The whole of creation (e.g., the intricacies of the human body, the wonders of the skies and seas, the natural riches of the earth, and even the mind of man) all provide countless opportunities for the practice of research.

Words such as search, consider, perceive, understand, and know that are found in the Bible, are rich with meaning in the original language. For instance, *bâqash* (1245)¹⁵ and *dârash* (1875)¹⁵ suggest a diligent inquiry or searching or pursuit in worship or prayer. That would seem to indicate the worshipper is seeking God. *Bîn* (995),¹⁵ in the Hebrew, includes meanings such as to discern, perceive, observe, pay attention to, understand, and to be intelligent. The primary meaning of *bîn* is understanding or insights. It suggests the mere accumulation of data is not adequate, but superior knowledge and knowing how to use the information wisely is of greater importance. *Yâda* (3045)¹⁵ or knowledge, encompasses the idea to perceive, understand, and acquire knowledge. It expresses a broad variety of meanings for various types of knowledge gained through the senses. It

¹¹ Dawkins R. *The God Delusion*. Boston: Houghton Mifflin Publishers. 2006.

¹² Holmes AF. *The Idea of a Christian College*. Grand Rapids, MI: Eerdmans Publishers. 1984: 5, 6.

¹³ White EG. Talents in E. G. White (Ed.), *Christ Object Lessons*. Washington, DC: Review and Herald Publishing Association. 1941:325-365.

¹⁴ Holmes AF. *The Idea of a Christian College*. Grand Rapids, MI: Eerdmans Publishers. 1984: 31.

¹⁵ Zodhiates S. Hebrew-Greek Key Study Bible. Chattanooga, TN: AMG Publishers. The numbers in parentheses are the corresponding Hebrew words they appear in Strong's dictionaries.

can refer to being acquainted or familiar with a person in a physically intimate or sexual way, or to being known, or reveal oneself, and to being able to distinguish between two things—say right and wrong. All of these terms require thoughtful reflection and thinking and imply God desires that man develop his mind and intellect.

In the Scriptures, we find references where believers studied, searched, or sought after knowledge to undergird their faith. The Bereans, who were called more noble than the those in Thessalonica, reportedly received “the word” with all diligence and eagerness, and studied every day to see if the things they had been told were true.¹⁶ It is not clear whether they studied because they were nobler, or whether they became more noble because they studied. I’d submit that study and nobility are, in this case, related. The gospel of Luke opens with Luke saying he thought a perfect understanding of the things they believed was important. As a result he carefully investigated everything that had been handed down from eyewitnesses, and then wrote down an orderly account so that Theophilus could “know” the certainty of the things he had been taught.¹⁷ We see again a search for truth on which faith would rest.

The way the Bible uses words such as studying, searching, knowing, considering, and perceiving suggests that the practice of research is not only an appropriate activity for men, but it is actually promoted by God. Combine that with the fact that God expects man to develop his intellect and mental faculties, and one can safely conclude God endorses research.

RESEARCH COMPONENTS

The purposes of the Bible and research have been identified and God’s endorsement of the practice of research is assumed. Now, consider a few Biblical principles and their relationship to research, and appreciate if you will their relatedness. With a greater appreciation for the relatedness of Biblical principles and research, the Christian educator has an opportunity to integrate principles that can be and should be applied in all areas of life. There are several Biblical principles where some relatedness can be seen to the components of research. The components considered are the research question, ethics in research, procedures, and results.

¹⁶ Acts 17:10 & 11

¹⁷ Luke 1:1-4

The research question

Arguably the most important part of any research project, either non-experimental or experimental, is development of a research question. The research question is a statement that identifies a phenomenon being studied and gives focus the research study. It can be developed based on the knowledge of the researcher, on a review of pertinent literature, or generated based on practical problems and issues that surface in a particular discipline or every day life. The research question must be plainly articulated in order to obtain as truthful an answer as possible. In qualitative studies, the question is not necessarily defined by the researcher but it emerges from the data that is gathered. A general question is usually identified to initiate the research process.¹⁸

While there is no prescription in the Bible for asking and developing questions, there is evidence that questions do stimulate thought that can eventually reveal the actual state of a matter. One of the first questions asked in the Bible reveals to Adam and Eve their actual physical state and condition. God's question to Adam was "Where are you?" This is the first indication of fear recorded in the Bible. Adam recognized his nakedness and was afraid of God. Then, God asked him how he found out he was naked? The questions themselves did not bring the conditions of fear and nakedness, but they required Adam to stop and think. In so doing, the reality of his condition was revealed and became apparent.¹⁹

Consider also the book of Job, which is replete with questions. Through the questions asked throughout the book, one can sense that there is a desire to know the reality of phenomena which seemed to have no logical explanation. Satan's question, "Doth Job fear God for nought?"²⁰ In this question, Satan is challenging the motives of Job's worship and service to God. To Satan there is no logical explanation for why a man would fear or serve God just for the sake of fearing God, or just because God may have asked him to. Satan's question initiates what I'd call a descriptive study of how God allowed trials and persecution to come to Job to purify him and strengthen his faith. Satan's question served as the basis for Job's story in the same way that research questions become the basis for research studies. In both of the examples above, God's

¹⁸ Portney LG, Watkins MP. *Foundations of Clinical Research: Applications to Practice*. Upper Saddle River, NJ: Prentice Hall. 1999:15.

¹⁹ Genesis 3:6-13.

²⁰ Job 1:9-11.

question to Adam and Satan's question to God, questions stimulated thought and initiated a search for reality. From the questions, the reality about Adam's need for God and Job's love for God were revealed.

Ethics in Research

The practice of research has not always included ethical practices and behavior. During World War II scientists conducted experiments on prisoners of war, in the name of research, which were tantamount to torture. Human beings were exposed to high altitudes, freezing temperatures, incendiary bombs, mustard gas, and other poisons to answer questions about the body's response to these conditions or things. Other research studies like the Tuskegee Syphilis Study, the thalidomide study, and the Willowbrook study helped highlight the need for ethics in research. Research involving human beings is now guided by ethical principles and requirements articulated in the Belmont Report. The principles of the Belmont Report can be thought of as an extension of Biblical principles that are presumably integrated into a Christian researcher's everyday life.

One of the most obvious Biblical principles that influences a Christian researcher's thoughts and behaviors, regarding ethics in research, is found in Matthew 7:12: "So in everything, do to others what you would have them do to you". This principle will guide the Christian researcher's study design, subject recruitment, obtaining informed consent, and data collection processes. The Christian researcher will ask the question, "Would I want to be treated this way if I were to participate in this study?" If that Biblical principle does not guide the researcher, then the injunction, "love thy neighbor as thyself"²¹ should. These Biblical principles will lead the Christian researcher to protect the rights of the study participants based on love for his neighbor.

These are just two Biblical principles that provide a backdrop for ethics in research. The principles of the Belmont Report²² are mandated by the Institutional Review Board of research organizations and were designed to guide the practice of research for all researchers. Those principles are 1) respect for persons, 2) beneficence, and 3) justice.

²¹ Matthew 19:19; 22:39; Mark 12:31.

²² The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. The Belmont Report: Ethical principles and guidelines for the protection of human subjects of research. 1979. Available at <http://ohsr.od.nih.gov/guidelines/belmont.html>. Accessed March 4, 2007.

- *Respect for persons* incorporates the principle that individuals should be treated as autonomous agents. As such, they are capable of deliberating about their personal goals and determining if they want to participate in the study. In other words, a participant's involvement in a research study should be voluntary. The concept of voluntariness is consistent with the fact that God has given to man the power of choice; the power to make decisions about his physical, mental, spiritual, and social life.^{23, 24} In the Bible, we find God placing before man opportunities and giving a recommendation, but the choice is ultimately up to man. In Deuteronomy 30, God says, "I have set before you life and death, blessings and curses. Now choose life, so that you and your children may live."²⁵ Although options are given, man ultimately chooses what course he wants to take.

Additionally, the principle of respect for persons states individuals with diminished autonomy (children, mentally challenged, physically incapacitated) should be protected, and that researchers should make provision for individuals with diminished autonomy. The spirit of this principle, I believe, can be seen in how Jesus advocated for children²⁶ and in Isaiah's counsel that we should learn to do well and relieve the burden of the oppressed.²⁷

- *Beneficence* is understood as the obligation to "do no harm" to research study participants. It is right not to harm individuals, but the principle of beneficence goes farther and instructs the researcher to maximize the benefits of the study while minimizing possible harms. This principle of beneficence is consistent with the principles referenced previously.^{18, 28}
- *Justice* in research ethics says benefits and burdens of the research study should be fairly distributed among study participants, not giving undue benefits or placing undue hardships or burdens on any one group of people. Studies designed to provide benefits to the participants should seek to recruit the educated and less educated, financially advantaged and disadvantaged, and healthy and less healthy. If a researcher is not careful, his desire to find the answer to the research question, or his

²³ White EG. *The Ministry of Healing*. Mountain View, CA: Pacific Press Publishing Association. 1942:176.

²⁴ White EG. *Education*. Mountain View, CA: Pacific Press Publishing Association. 1952:23.

²⁵ Deuteronomy 30:15-20

²⁶ Matthew 19:14; Matthew 18:6

²⁷ Isaiah 1:17 and 58:6

²⁸ Matthew 7:12

discovery for some reality may unintentionally eclipse the importance of fairness.

It is not difficult to appreciate the association between the more obvious Biblical principles mentioned above and the principles of the Belmont Report. There are, however, a few other Christian values not as obvious, but just as essential for the Christian educator who teaches, mentors, or advises students or other researchers. I hesitate to mention them because they are so obvious and should be the warp and woof of any Christian's character, but I must. These values are honesty, integrity, excellence, and compassion.

God called for honesty and integrity when He wrote the Ten Commandments on the tables of stone and said, "Thou shalt not bear false witness against thy neighbor".²⁹ This includes any actions designed specifically to deceive. Consider, if you will, the issue of plagiarism or the neglect to give proper credit for another's work. It is not appropriate or legal to take the work of another individual and advance it as your own because it robs the author of the credit they should have for their original work. Jesus' and other writers' example of properly crediting another's work or words is seen in passages where we see words and phrases like "It is written", ". . . spoken by. . ."³⁰

Honesty and integrity, however, go far beyond the proper citation of others' research. Even in delineating and explaining the potential risks and benefits of a research study, stating the procedures for the study, and recruiting appropriate study participants, these values must be used. Study participants should be able to make a decision to participate in the study, or not, based on forthright explanations by the researcher. Reporting the findings of a study must too be marked by honesty and integrity.

Two other values I am suggesting the Christian researcher should be motivated by are excellence and compassion. Jesus and Solomon alluded to the value of excellence when they directed we should do whatever we do with our might and to the glory of God.³¹ Excellence is not simply adherence to a specified protocol. Excellence, which is defined as "very good, superior, or first-class", is achieved when the researcher exerts every effort to utilize the most appropriate and best resources to conduct a research study. The Christian researcher pursues excellence in the design and execution of the study and

²⁹ Exodus 20:16; Deuteronomy 5:20

³⁰ Matthew 4:3-5. Jesus is referring to what Moses wrote in Deuteronomy 8:3. In Mark 1:1-3 John the Baptist refers to the writings of Malachi (3:1) and Isaiah (40:3) as the ones who first talked about a messenger being sent. Matthew 24:15.

³¹ Ecclesiastes 9:10, 1 Corinthians 10:31

that pursuit for excellence leads the researcher to exert his best efforts to conduct the study.

Papers on ethics in research are not likely to identify compassion as a prerequisite qualification or necessary value for a researcher, but I believe it is, particularly for the Christian researcher. Before proceeding, consider a few definitions of compassion: “A strong feeling of sympathy and sadness for the suffering or bad luck of others AND a desire to help.”³² “Sympathetic consciousness of others’ distress, together with a desire to alleviate it.”³³ Both definitions suggest compassion includes doing something about the problem. At the beginning of this essay, I said one of the purposes of research is problem identification and resolution. Identification of a problem and then doing something about the problem, seeking to alleviate the distress of an individual, and having a desire to help are acts of compassion, as defined in the dictionary. Therefore, the study for a cure for some disease; the study for how to improve the education of impoverished children; the study for ways to make better use of natural resources are based on a desire to alleviate the negative outcomes of distress. Given the definition of compassion and researchers’ goals to identify and solve problem, I believe compassion is a Christian value that should and will motivate the Christian researcher.

As I consider Biblical principles of “do to others as you’d have them do unto you”, “love your neighbor as yourself”; the principles of the Belmont Report that define respect for person, beneficence, and justice; and the Christian values of honesty, integrity, excellence, and compassion, the Bible emerges as an unparalleled guide for studying ethics in research. The Christian researcher who integrates Biblical principles and Christian values into their practice of research is conducting ethical research.

One of the next logical steps in the research process is to consider how the research study will be conducted. The methodology of the research study describes “how” the research study will be designed and executed in order to answer the question posed.

Methodology

You may recall that one of the operative words for research used previously was “systematic”. Research is a systematic and orderly process for gathering and organizing data or information that is then analyzed and interpreted to give meaning to the data. The

³² <http://dictionary.cambridge.org>. Accessed April 1, 2007.

³³ <http://www.m-w.com/dictionary/compassion>. Accessed April 1, 2007.

methodology describes “how” the research question will be answered. An accurate, clearly stated methodology does a couple of things: ensures reproducibility of a study and sets forth the process, which if systematically followed, that can lead the researcher to the reality being sought in the research question. The researcher’s hypothesis can be assessed against the outcome.

Before addressing the methodology section, let us consider an important underlying concept found in the Bible: order. Order suggests arranging, organizing, or systematizing thoughts, ideas, events, or objects in preparation for a particular operation or efficient use. The Bible is replete with examples of order, and how important it is in the government of God. From Genesis, where the problem of sin and estrangement and separation from God is introduced (Genesis 3), to Revelation where man is restored to his original state and original home (Revelation 21 and 22), and everything in between, we see evidence of order, systems, careful planning, close attention to detail, and strict adherence to established procedures to achieve God’s purpose—restoration of the image of God in man. The sanctuary services described in Exodus and Leviticus demonstrate how important procedures are to achieve specific outcomes and how carefully God planned for humanity’s restoration into His image. Although wood on an altar would ultimately burn, it was to be placed on the altar in order.³⁴ Specific instructions for the furniture, services, and activities of the Tabernacle, where God would dwell with man, were given to follow in a specific order.³⁵ For individual and corporate cleansing from sin, the procedures included offering a specific sacrifice, that was to be killed in a specific way, by a specific person, who then transferred the blood to the sanctuary in a specific way to achieve a specific outcome—atonement. With a Biblically informed awareness of the importance of order and Paul’s instruction, “Let all things be done decently and in order”,³⁶ the Christian researcher will, I believe, approach his research with that underlying concept.

The order and systematization of a research study is clearly seen in its methodology. The methodology provides an explanation of the research design and how the study will be executed to answer each research question. Everything about the design is explained, and the steps for the procedures are given: the types of people or population being

³⁴ Genesis 22:9

³⁵ Exodus 26:17; 27:21; 39:37; Leviticus 1:7

³⁶ 1 Corinthians 14:40

studied, variables of interest being studied, the equipment or instruments to be used to measure and collect the data, the source of the instrument, how reliability and validity for the measuring instruments will be established, the time frame for the study, including beginning and ending times for the study, the type of intervention, and how the data will be analyzed. Knowing the design of a study helps the reader determine reproducibility of the study and know if the outcomes and conclusions of the study can be trusted. Everything one needs to know about the research is provided or should be provided in the methodology of the study.

The similarities between research methodologies and what I'd call salvation methodologies are easily observed. Let's think of the science of salvation as a research study with the desired outcome being the restoration of man to the image of God. The methodology for the study is woven throughout the Bible in stories, histories, and prophecies. The methodology can, however, be summarized in a few passages: in 1 John 1:9, the first step in reconciliation is to confess that man is separated from God, or that he has sinned. The very next words of verse nine are a declarative statement of reliability—God is faithful and just and will forgive us our sins and clean us up. . . . In Acts 2, we find another summary of the methodology. When convicted of their separation from God, those gathered at Pentecost said, "What should we do?" Paul presented another summary of the methodology, "Repent and be baptized. . . in the name of Jesus Christ for the forgiveness of your sins. And you will receive the gift of the Holy Spirit."³⁷ In Romans we see the methodology presented for reconciliation of man to God: confess the Lord and believe with the heart to achieve the desired outcome, ". . . thou shalt be saved."³⁸

A systematic and orderly plan for research, like the systematic and orderly plan for the restoration of the image of God in man, is critical for reproducibility and confidence in the study's findings. Ah. But there is a question: Does a flawless research design and methodology, and careful planning and execution of research plans ensure the researcher will obtain expected results that can be trusted?

Results

There are no guarantees that the results or outcomes of a study will be the desired or expected results or outcomes. The most carefully designed study may yield inaccurate

³⁷ Acts 2:37, 38 (NIV).

³⁸ Romans 10:9, 10 (NIV)

results, results that the researcher was not anticipating, or may not have wanted. There are numerous threats to internal validity a researcher can control for, but cannot eliminate completely. In cases such as this, the researcher's responsibility is to present the findings as they were observed. Experienced researchers are aware that research outcomes, findings, and results may sometimes be different than what was anticipated or expected, but they do not conclude that the study was useless, nor do they assume future efforts at research will be futile. In addition to experience, the values of honesty and integrity motivate the Christian researcher to report his findings as observed, without alteration.

To some degree, I believe the Christian researcher is not completely surprised that even the best thought out plans and flawlessly executed research designs sometimes have unexpected results. The Bible is replete with histories and stories that demonstrate the unexpected. It should be noted that many of the Biblical histories and stories that have unexpected results are appropriately characterized as miracles and therefore are not being considered as a direct parallel or equivalent to research studies. I am just suggesting, however, that the Christian researcher should be familiar with unusual and unexpected outcomes because God declares "For my thoughts are not your thoughts, neither are your ways my ways, saith the LORD. For as the heavens are higher than the earth, so are my ways higher than your ways, and my thoughts than your thoughts."³⁹ Although order and systemization, elements of well designed research studies, are clearly seen in Scripture, the results cannot always be anticipated and expected.

A SYSTEMATIC AND ORDERLY YET UNPREDICTABLE GOD

Thus far in this essay, I've shared reflections on similarities between certain Biblical and research concepts and principles, and how they can guide the practice of research for the Christian researcher. In this section, however, I'd like to take a departure from that thought to remind us that despite the similarities and researchers' best attempts to discover and understand all things, our knowledge is still limited and incomplete. If I may use Paul's words, our knowledge is still limited and incomplete because now we see through a glass darkly, but after the return of Christ and the transformation of our minds we will see clearly.⁴⁰ Our understanding of and appreciation for the deepest realities of physical and social sciences are obscured by our humanity. That is not so with God. He

³⁹ Isaiah 55:8

⁴⁰ 1 Corinthians 13:12

is, after all, truth.⁴¹

I've presented two words that are critical to the discussion of research, "systematic" and "orderly", because they allow for a degree of control and reproducibility. With control and reproducibility, particularly in experimental research, relationships between variables that are established, help answer research questions posed or solve problems identified. If the relationship between variables can be identified with some consistency or reliability, it is more likely that the outcomes of a study can be predicted. That is how theories are established.

That may be true in nature, medicine, and other areas of science, but it is not true when it comes to God. Although creation and revelation reveal God as systematic and orderly, and that He is, and although with Him there is no variableness, as James says, neither shadow of turning,⁴² He cannot be controlled or confined by our finite estimations of what should be, nor can He, or His ways be "studied" as a quantitative or qualitative research study. The only thing that can be predicted about Him is that His ways of doing things are beyond our ability to really understand—they are unconventional, unpredictable, and past finding out. Note, that it is His "ways" that are unconventional and unpredictable. His loving kindness is predictable; His character of love is constant; His desire to save us is unchanging. We can predict that He will have mercy on us and that He will love us. But despite how unconventional or unpredictable God's ways or approaches are to us, they produce His desired outcomes and results.

Consider Naaman the leper and the method used for curing him of leprosy.⁴³ He was instructed to wash in the Jordan River seven times. God's method was obviously unconventional even to Naaman. He was outraged that Elisha, the man of God, would not come to him and call on the name of the Lord and wave his hand over him in some ceremonious fashion, and pronounce a cure. How could a ridiculous method such as washing in a muddy Jordan bring healing to a disease that affected the skin?

Then, there's His unconventional approach to achieving "greatness". The greatest among men is the man who becomes humble like a child and is a servant of all.⁴⁴ That's God's unconventional and unpredictable approach to achieving an expected and promised

⁴¹ John 14:6

⁴² James 1:17

⁴³ 2 Kings 5

⁴⁴ Matthew 18:4; 23:11

outcome—greatness. There are many other reports of God’s unconventional and unpredictable approaches to problems, questions, and situations that accomplish His purposes—Joshua brings down the walls of Jericho by blowing trumpets; Jesus uses five loaves of bread and two fishes to feed 5000 men plus women and children; three days and nights in the belly of a great fish change Jonah’s career goals and plans; and the ultimate—blood cleanses. So the systematic and orderly processes we saw in how sacrifices should be offered, in the Tabernacle or sanctuary services, and in how to be reconciled to God are unconventional, but they achieve God’s⁴⁵ desired outcome. How then should the Christian researcher respond to the reality that God does things according to His design?

Through a careful and prayerful study of the Bible from Genesis to Revelation, the Christian researcher can see the systematic and orderly nature of God demonstrated. In those same pages, however, the Christian researcher recognizes God’s ways are marvelous, unsearchable, without number, and are past finding out. The Christian researcher recognizes that scientific methods have limitations. All questions posed by man cannot be answered even with the most flawlessly designed research study. There is a point when the Christian researcher finally says, “I don’t know why, but I believe God does.” This requires faith: a faith that cannot explain everything, but yet still accepts the outcomes. Faith intersects with the Christian researcher’s practice of research when systematic and orderly processes have been utilized, and yet there are no answers to the questions asked, or the answers do not seem to make sense.

CONCLUSION

God has given man the desire to know, and the ability to think and reason, and has provided means whereby he can develop his intellect and the systematic and orderly process of research is one of the ways to develop it. The Christian researcher can employ Biblical principles, Christian values, and scientific inquiry methods to participate in the practice of research and guide him in the discovery of knowledge. While he can find guiding principles in the Bible in the discovery of knowledge, the Christian researcher must also acknowledge that the answer to every question will not or cannot be known. When the answers to questions are unknown or do not appear to be consistent with

⁴⁵ Job 5:9; Job 9:10; Romans 11:33

expected outcomes, researchers should not abandon faith or the practice of research. It is at that point that faith should be exercised. “Consequently, faith comes by hearing the message, and the message is heard through the word of Christ” (Romans 10:17 NIV) which is revealed from Genesis to Revelation. The Bible and research are practical for real life concerns and have everyday applications that can enhance the way life is lived and the way research is practiced. It is the privilege and responsibility of Christian educators to share this reality with Christian research advisors, mentors, students, teachers, and researchers.

FROM CONCEPT TO CURRICULUM

It is nice to sit and think about how Biblical principles can be applied to real life situations, but it is another thing altogether to actually apply them. When reflecting on the Bible and research, how do you move concepts of how the Bible can be used to help teach research, from paper to the curriculum where teaching and learning should come together? How do you use Bible stories, histories, and Biblical principles to demonstrate real life applications? There are numerous examples of observational research in the Bible that can be used to teach different research concepts, but let’s consider a Bible story that illustrates an experimental research design.

Because research follows a systematic and orderly process, the skills learned in research methodology are transferable from discipline to discipline. One method of helping students recognize this and apply research theories is through the use of guided evaluations. In guided evaluations, students are asked to read a research article and then identify research components, such as the purpose of the study, variables of interest, the population being studied, research designs, appropriate data analyses, and study results. If they understand the underlying principles of research methods, they can apply the research knowledge in any area.

Allow me to share an assignment I give to students that uses the Bible and a guided evaluation to help students apply research concepts. The story is in Daniel 1. With a bit of paraphrasing the story can be written in such a way that students have to identify a purpose, variables of interest, study subjects, research design, operational definitions, etc.

Let’s begin with a statement of the problem: The king assigned Daniel and his Hebrew friends a daily amount of food and wine from his table (verse 5), but Daniel

resolved not did not want to “defile” himself with the royal food and wine (verse 8). This was problematic for the master of the eunuchs because his life was at stake if those under his care were not in best of health and intellectually fit. Ashpenaz, the master of the eunuchs asked a question: “Why should he (the king) see you (Daniel and his friends) looking worse than the other young men your age?” (v.10). Given the statement of the problem and the general question, as the teacher, I facilitate the writing of a specific research question: “Is there a difference in the appearance or health of young men who eat simple foods as compared to those that eat kingly foods?” Given that question, a purpose statement is developed. The purpose of the study is to determine if diet affects appearance and health. After the purpose statement is solidified the research hypothesis is established. As a part of the assignment, students are asked to write a one-tailed and two-tailed hypothesis, based on Daniel’s implications.

Now we have a statement of the problem, a research question, and purpose for the study. From that point other concepts are discussed. One of the first questions students should asks is, “What do you mean by “appearance”, “health”, “simple foods” and “kingly foods”? At that point the importance of “operational definitions” can be discussed. Students can determine what each of the words means and how they would be used if this were an actual study. Verse 12 of chapter one gives some insights into Daniel’s idea of “simple foods” and verse 13 provides some insights into the king’s foods. The operational definitions are written according to those parameters.

Then there are the variables of interest. For the question, “Is there a difference in the appearance or health of young men who eat simple foods as compared to those that eat kingly foods?” the independent variable is diet and it has two levels: simple foods and kingly foods. The outcome variable or the dependent variable is appearance or health. Since appearance and health are constructs that have no inherently measurement, I can facilitate a substantive discussion on measurement concepts, how to measure constructs, and even reliability and validity. How the constructs are measured will depend on how they are defined, which goes back to the importance of the operational definition. When teaching, I try to repeat these concepts often so students appreciate and understand the importance of various research components.

What about the research design? Since the question suggests we’re looking at the difference between those who eat simple vs. kingly foods, a single-factor pretest –

posttest design would be the basic structure for the experiment. One group would eat simple foods and the other would eat kingly foods. The research question and the design of the study provide insights into how the data can be analyzed statistically: independent *t*-test.

Other points that can be looked at are the length of the study, 10 days (vs. 12), the data collection and analysis instructions (vs. 13), and the results or outcomes of the study (vs. 15). The final part of the assignment is to assess the outcome of the study in the light of the research question and then write up the findings.

Objectives of an assignment like this are to 1) help students apply research methodology to Biblical stories, 2) illustrate the Bible's relevance to every day life, and 3) show that it is not really that hard to understand and apply. If one student finishes the assignment with a greater appreciation for how Biblical principles can be applied in every day life, then the assignment has done its intended work. If one student finishes the research track accepting God's invitation and challenge to increase his knowledge and develop his intellect, I would consider the results of studying research to be favorable.