EPISTEMOLOGICAL DEVELOPMENT IN PRE-MINISTRY UNDERGRADUATES: A CROSS-INSTITUTIONAL APPLICATION OF THE PERRY SCHEME

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EPISTEMOLOGICAL DEVELOPMENT IN
PRE-MINISTRY UNDERGRADUATES:
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OF THE PERRY SCHEME

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Read and Approved by:

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Hal K. Pettegrew (Chair)

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Anthony W. Foster

Date_____

To Brittany,

my wife, my love.

Brought to me by God's beautiful grace.

Partner with me on a vibrant journey,

full of life.

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LIST OF ABBREVIATIONS

CSID Center for the Study of Intellectual Development

RJM Reflective Judgment Model

WWK *Women's Ways of Knowing*

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PREFACE

The topic and nature of this undertaking has, in so many ways, been a product and reflection of my personal journey–my own "Pilgrim's Progress." As I arrive at this milepost and reflect on the relationships and experiences that have marked my path thus far, I can only marvel at the providential, guiding hand of God. It is only in his grace that I stand. My foremost hope is thus that readers of this work would be reminded, as I have been, of the most ultimate aim of epistemological development: "Let not the wise man boast in his wisdom, let not the mighty man boast in his might, let not the rich man boast in his riches, but let him who boasts boast in this, that he understands and knows me, that I am the LORD who practices steadfast love, justice, and righteousness in the earth. For in these things I delight, declares the LORD" (Jer 9:23-24).

Many have contributed prominently to the accomplishment of this dissertation. Among these, I must first express my deepest love and appreciation for my wife, Brittany, who has taken every step of this process alongside me–sharing each challenge, celebrating each small victory. To Mother and Daddy: you are my lifeblood, the essential conduit of God's love and provision in my life; so much of who I am is a reflection of your intentional molding, your faithful example, and your constant provision, wisdom, and direction; this achievement belongs to you as much as anyone. Also, to my original learning community–my two brothers, Nathan and Travis, and my (favorite) sister, Jennifer: I am so thankful to God that according to his infinite wisdom and sovereign plan, he intertwined our lives; I simply cannot conceive of growing or developing without looking to each of you for guidance.

I wish to thank the faculty in the School of Church Ministries at the Southern Baptist Theological Seminary, who welcomed me into the Ph.D. program and served so

faithfully as teachers, leaders, and exemplars. In particular, I am most grateful to Dr. Hal Pettigrew, for his warm, Christlike character, his humble-yet-determined passion for learning and scholarship, and the continual generosity he displayed by investing himself personally in me as a fellow learner, fellow husband, and fellow disciple of Christ. Thank you to my dissertation committee, Dr. Pettigrew and Dr. Anthony Foster, who have been instrumental in the formation and sharpening of this work. Thank you to Dr. Brian Richardson, for initially encouraging me to enter the Ph.D. program. Thank you to Dr. Richardson, Dr. Michael Wilder, Dr. Timothy Paul Jones, and Dr. Troy Temple for the many, incredible opportunities you gave me to engage learners alongside you during my time as a Ph.D. student. Also, a huge thanks must go to my brothers and sister in Cohort 4, who have enriched these years of my life with joy, friendship, steady support, and genuine self-sacrificing concern.

Finally, to my beloved family of believers at First Baptist Church in Mount Washington: thank you for your blessing, investment, and support of me throughout this endeavor; it is my joy and privilege to serve the Kingdom together with you.

Soli Deo Gloria!

John David Trentham

Louisville, Kentucky

December 2012

CHAPTER 1

INTRODUCTION

This study addressed epistemological development in pre-ministry undergraduates. William Perry's developmental scheme[1] proposes that undergraduates move toward epistemological maturity by progressing through a series of positions which represent movement away from dualistic forms of thinking in favor of forms that are contextual and relativistic, propelled by decentering[2] encounters with diversity through the college experience. A guiding premise for this study was that there is an evident consistency between the pattern of development suggested by Perry and the biblical pattern for transformative maturation unto wisdom through progressive sanctification. This study, therefore, interacted with the Perry Scheme[3] as a means for evaluating and comparing developmental trends among pre-ministry undergraduate students across different institutional contexts.

Introduction to the Research Problem

The body of literature comprised by studies on the topic of undergraduate epistemological maturation is well-established and wide-ranging. Existing studies explore intellectual development according multiple variables and contexts, including gender,[4]

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[1]William G. Perry, Jr., *Forms of Ethical and Intellectual Development in the College Years: A Scheme* (New York: Holt, Rinehart and Winston, 1970).

[2]The concept of "decentering" (detailed in chap. 2) is adopted from Piaget by Perry as an analogy for the entire developmental phenomenon, and entails a refocusing of one's perspective at each level of development.

[3]This title, which is used primarily throughout this study, is the most common reference to Perry's model.

[4]Marcia B. Baxter Magolda, *Knowing and Reasoning in College: Gender-Related Patterns in Students' Intellectual Development* (San Francisco: Jossey-Bass, 1992).

curriculum,[5] discipline of study,[6] and student type.[7] One recent qualitative study explores the respective personal epistemologies of Christian college students studying education at a Bible college and a state university.[8] The findings of these existing studies are inadequate, however, to address the distinctiveness of varying types of institutions in promoting epistemological maturity among evangelical students. Also, while studies exist that address epistemological development among specific populations of students based on academic major and future occupation,[9] no study explored intellectual development among pre-ministry undergraduates prior to the undertaking of this research. This population represents a diverse range of college students who experience cognitive maturation, identity-formation, social assimilation, and professional preparation in markedly differing environments, depending on which type of college they attend. Given the formative nature of the college years[10] and the essentiality of environmental factors in human development,[11] the influence of institutional type represents an important topic worthy of exploration with regard to pre-ministry undergraduates' worldview, identity, and lifestyle.

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[5]See Marcia Mentkowski and Michael J. Strait, *A Longitudinal Study of Student Change in Cognitive Development and Generic Abilities in an Outcome-Centered Liberal Arts Curriculum* (Milwaukee: Alverno College Productions, 1983).

[6]Christopher C. Burnham, "The Perry Scheme and the Teaching of Writing," *Rhetoric Review* 4 (1986): 152-58.

[7]Nancy K. Elwell, "An Investigation of the Epistemological Development of Traditional and Nontraditional College Students using William Perry's Scheme of Intellectual and Moral Development" (Ph.D. diss., Capella University, 2004).

[8]Dennis R. Humphrey, "Influence of Educational Context on Students' Personal Epistemology: A Study of Christ Following Students in a Bible College and a State University" (Ph.D. diss., Trinity International University, 2010).

[9]See Rose M. Marra, Betsy Palmer, and Thomas A. Litzinger, "The Effects of a First-Year Engineering Design Course on Student Intellectual Development as Measured by the Perry Scheme," *Journal of Engineering Education* 89 (2000): 39-45.

[10]The most recent and exhaustive analysis of the influence of the college experience is Ernest T. Pascarella and Patrick T. Terenzini, *How College Affects Students: A Third Decade of Research*, 2nd ed. (San Francisco: Jossey-Bass, 2005).

[11]This is described by Lewin's interactionist equation, B = f (P X E), which is the foundational principle for understanding college student development theory. See Nancy Evans et al., *Student Development in College: Theory Research and Practice*, 2nd ed. (San Francisco: Jossey-Bass, 2010), 29.

Need for Study

The primary need for this study stems from the diverse nature of the target population. Epistemological maturity, which corresponds to the concept of biblical wisdom,[12] is a developmental outcome that is essential for ministry professionals. As the Perry Scheme suggests, the college experience represents a formational phase of life in which individuals develop permanent tendencies regarding the acquisition, possession, and maintenance of knowledge. Also, unlike many professions that require mastery of specified disciplines of study on the undergraduate level, there are no specific prerequisite degree requirements for pre-ministry students, regardless of whether or not they enroll in seminary. The result of this is that students preparing for a career in ministry develop epistemological priorities and values through a number of different institutional contexts–contexts which, by their diverging nature, have unique developmental influences and manifestations. This study explored this divergence through a comparative exploration of three types of undergraduate institutions: secular university, confessional Christian liberal arts university, and Bible college.

The aim of this study was *not* be to arrive at an objective conclusion as to which type of institution is ideal or most beneficial for all pre-ministry students. The aim of this study was thus not be to suggest or prescribe the "best" type of school for the target population. Rather, the chief contributions of this study were the identification of epistemological trends among pre-ministry undergraduates according to institutional type, and the suggestion of some distinctive environmental conditions inherent in particular higher educational contexts with respect to the the impact of social and academic experiences on student maturation. The awareness afforded by the recognition of these trends ultimately serves to benefit the Kingdom of God by providing fresh insights regarding the holistic formation of future ministry leaders.

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[12]This assertion may be summarized by the concept of "faith seeking understanding," and is substantiated in chap. 2.

Benefit of Study

This study provides benefit to at least three particular groups. First, for pre-ministry college students, this study provides an informed perspective regarding the nature of one's institutional context. Such may afford students an awareness of ways in which they should seek to capitalize on the opportunities provided within their own contexts, as well as ways in which they may seek to expand their personal growth and preparedness for ministry by engaging outside contexts. Second, for college teachers, administrators, and student service professionals at institutions that train future ministers, this study highlights some environmental characteristics of different types of institutions which influence student formation. Also for higher education personnel, this study identifies characteristic distinctions related to the process of curriculum design and implementation, which significantly impacts students' epistemological maturation. Third, for seminary faculty and administrators, this study provides helpful insights regarding the variation of epistemic positions and maturity of incoming seminarians according to their differing collegiate backgrounds. These insights may afford seminary personnel with an increased level of understanding by which to tailor assimilation procedures and curricular goals and objectives.

Theoretical Foundations

This study affirmed, as a theoretical premise, that social-environmental influences are pervasive and consequential in the lives of all people. Human development thus occurs according to one's experience in his or her or cultural context(s). According to the Christian worldview, this is a reality established in the relational aspect of God's creation of man in his own image. It is the *imago Dei* that defines the uniqueness of personhood, including the human dependency on relationships. Man, like God, is a social being whose primary persona involves relationality.[13] All people are imbued with God's

[13]Anthony A. Hoekema, *Created in God's Image* (Grand Rapids: William B. Eerdmans, 1994), 14.

image and therefore develop according to environmental factors consistent with the social norms of their various communities and contexts. Guided by the indwelling Spirit, Christians develop according to their identification with the "community of faith" (Col 3:9-17) as well as their familial and societal contexts.

Anthropological Foundations

Sociologists and psychologists who avoid biological determinism affirm the concept of development within community. Christian Smith posits that the most basic constructs of human identity are the superempirical elements of morality and belief understood through social narratives.[14] Recognizing the universality of moral values, Smith articulates the sociological implication by concluding that larger systems of human moral order provide the basis for value attributions on the part of individuals. Cultures consist of individuals who subscribe to common moral orders. Cultural rules and schemas govern the function of social systems, structures, and institutions.[15]

Psychologists Martin, Sugarman, and Thompson, who subscribe to a naturalistic worldview, articulate the notion of individualism with regard to the influence of social-environmental factors in human psychological development. They reject both hard determinism and libertarianism and put forth a compatibilist formulation that avoids both extremes. The authors reject determinism by observing that human beings are self-conscious actors of deliberation from their own first-person perspectives.[16] Also, they reject libertarianism by positing that the existence of sociocultural groups allows for the "adaptation" that is psychological individuals.[17] The psychological reality of individualism is thus a consequence of societal and cultural influence. This formulation is

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[14]Christian Smith, *Moral, Believing Animals* (New York: Oxford University Press, 2009).

[15]Ibid., 21.

[16]J. J. Martin, J. Sugarman, and J. Thompson, *Psychology and the Question of Agency*, Alternatives in Psychology (Albany, NY: State University of New York Press, 2003), 101.

[17]Ibid., 106-08.

representative of Perry's concept of the individual with regard to the role of community and context in human maturation.

Christian social scientists Balswick, King, and Reimer, put forth a theologically based model that explains the inextricability of social relationality and individual personhood. The basis of their formulation is the Godhead, which necessarily includes both unity and uniqueness.[18] They say, "The particularity of the Father, Son, and Spirit is as vital as their unity as one. In addition, there is an ontological interdependence and reciprocity of three persons of the Trinity."[19] Made in the image of God, the uniqueness of human personhood is defined by this same pattern of reciprocity. Thus, the authors articulate their anthropological model as "The Reciprocating Self," i.e., human development spurred by living "in a mutual relationship of sharing and receiving with another."[20] This notion of development as a function of mutual exchange between persons was adopted in this study.

Epistemological Development in College: The Perry Scheme

While much research has examined the phenomenon of development among college students, William Perry's landmark publication, *Forms of Intellectual and Ethical Development in the College Years: A Scheme*, represents the standard upon which all others are based. Even forty years removed from its original publication, and through extensive scholarly analysis, the Perry Scheme remains the touchstone for identifying and explaining the connections between the undergraduate learner, subject matter, and process of knowing.[21]

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[18]Jack O. Balswick, Pamela Ebstyne King, and Kevin S. Reimer, *The Reciprocating Self: Human Development in Theological Perspective* (Downers Grove, IL: InterVarsity Press, 2005), 32.

[19]Ibid.

[20]Ibid., 49.

[21]William S. Moore, "Understanding Learning in a Postmodern World: Reconsidering the Perry Scheme of Intellectual and Ethical Development," in *Personal Epistemology: The Psychology of Beliefs about Knowledge and Knowing*, ed. Barbara K. Hofer and Paul R. Pintrich (Mahwah, NJ: Lawrence

The Perry Scheme proposes a model by which to identify the progression of epistemological growth in college students. One of the core underlying principles evident in the scheme is that there are limits to formal logic and reason.[22] Perry concludes that beliefs are inherently contextual and relativistic and require faith commitments. College students are confronted with this reality through the culture and content of higher education. Growth, for Perry, is the liberalization of a student's perspective, from epistemological absolutism to contextual relativism. Successful cognitive growth entails an increasing, convictional commitment[23] to one's own values and assumptions (formed on the basis of a critical and reflective criteria of assessment), while remaining open to revision of one's worldview through continual testing and discernment in light of alternate, potentially valid truth claims.

Perry's foundations. The Perry Scheme is a cognitive-structural theory, formulated according to the Piagetian developmental paradigm. His model is thus predicated on the processes of assimilation and accommodation which underlie the creation and maintenance of a person's worldview and values.[24] Perry identifies his study as reflecting the process articulated by Piaget as the "period of formal operations." Piaget's methodological approach of capturing the self-reports of participants is also adopted by Perry.

Perry identifies the primary philosophical underpinnings of his work as sharing the assumptions of "modern contextualistic pragmatism."[25] This is most notably apparent

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Erlbaum Associates, 2008), 18.

[22]Richard E. Butman and David R. Moore, "The Power of Perry and Belenky," in *Nurture that is Christian: Developmental Perspectives on Christian Education*, ed. James C. Wilhoit and John M. Dettoni (Grand Rapids: Baker Books, 1998), 107-08.

[23]The ultimate position of epistemological maturity according to the Perry Scheme is "Commitment in Relativism." The nature of commitment, for Perry, entails the acceptance of responsibility and is thus the essential link between the cognitive and ethical components of development.

[24]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 228.

[25]Ibid., 201.

in the scheme's concept of *purpose*. I.e., the primary purpose of the college student is the solidification and responsible maintenance of one's own worldview and self-identity. According to the Perry Scheme, epistemic maturity involves the realization that "facts" are always interpreted within a given context;[26] conclusions regarding reality and truth must be drawn, therefore, based on the most desirable effect of one's commitments within his given context.

The scheme. As a cognitive-structural model, the Perry Scheme describes the way in which people think and view the world (i.e., their *forms* of epistemology) rather than assessing the specific content of people's thoughts.[27] Perry characterizes the scheme as a "Pilgrim's Progress"[28] of development, thus indicating the progressive, intentional nature of a student's growth, propelled by disequilibrizing experiences which necessitate active commitments in one's approach to identity, knowledge, learning, and values. The scheme may be summarized according to four periods, which include multiple positions and continual opportunities for both promotion and digression: Dualism, Multiplicity, Contextual Relativism, and Commitment within Relativism.[29]

Perry equates the initial position, indicative of some incoming college freshmen, as an epistemological "Garden of Eden."[30] "Dualism" refers to a student's conception that there is a reality composed of stark dualities, e.g., between truth and

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[26]Joanne Kurfiss, "Intellectual, Psychological, and Moral Development in College: Four Major Theories," in *Teaching and Learning in the College Classroom*, ed. Kenneth A. Feldman and Michael B. Paulsen (Needham Heights, MA: Simon & Schuster, 1994), 175.

[27]Butman and Moore, "The Power of Perry and Belenky," 111.

[28]Perry characterizes the scheme in this way in each major publications in which he articulates the model. See William G. Perry Jr., "Cognitive and Ethical Growth: The Making of Meaning," in *The Modern American College: Responding to the New Realities of Diverse Students and a Changing Society*, ed. Arthur W. Chickering (San Francisco: Jossey-Bass, 1981), 77.

[29]Perry commonly characterizes the scheme more generally, consisting of two primary forms of thinking–dualistic (Positions 1-4) and relativistic (Positions 6-9)–which pivot on the recognition of all knowledge as contextual (Position 5). The four-period classification is a helpful summation that highlights the transition from Dualisim to Relativism via Multiplicity. See Moore, "Understanding Learning in a Postmodern World," 20-22.

[30]Perry, "Cognitive and Ethical Growth," 80.

falsehood, right and wrong, good and bad, etc. These students live in a world of unquestioned, objective absolutes. Their concept of knowledge and learning is thus equivalent to "having the right answer." Dualism is marked by the assumption that the ultimate source of authority is located outside the self.[31] Education is thus conceived as a passive exercise, in which the student simply receives knowledge by listening to qualified Authorities (capital A) who impart what is assumed to be objectively right and true.[32] As a result, dualistic thinkers tend to be conformists whose identity is defined by what others think of them. This perspective shifts drastically in the following period.

As a student progresses to the period of Multiplicity, he recognizes the reality of diversity and uncertainty, and the possibility that there may be more than one solution or point of view with which to engage an issue.[33] Perry suggests that a better term than Multiplicity may be "personalism," to describe the simplistic structure of cognition in which a student recognizes (legitimizes) uncertainty, but lacks the capacity to comparatively analyze different perspectives.[34] What results is an epistemically irresponsible attitude that glorifies personal opinion.[35] Multiplicity is thus still a form of dualistic thinking, as the student considers knowledge and truth in terms of absolute propositions and values–substantiated completely according to one's own arbitrary inclinations.

The transition from Multiplicity to Contextual Relativism represents the most significant and consequential moment of epistemic maturation in the Perry Scheme.[36] From this position (Position 5), students may either progress-toward or deflect-from

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[31]Sharon Parks, *The Critical Years: Young Adults and the Search for Meaning, Faith, and Commitment* (New York: HarperCollins, 1986), 45.

[32]Butman and Moore, "The Power of Perry and Belenky," 112.

[33]Ibid., 109.

[34]Perry, "Cognitive and Ethical Growth," 85.

[35]Perry, *Forms of Intellectual and Ethical Development in the College Years*, 135.

[36]Moore, "Understanding Learning in a Postmodern World," 20.

further growth.[37] Students who move forward undergo a fundamental worldview reorientation, from viewing knowledge and values in dualistic terms (with an ever-increasing number of exceptions to the rule), to recognizing that knowledge and values are essentially contextual and relativistic. Perry identifies this reorientation by the discovery of "metathought," or the capacity to examine thought, including one's own.[38] Rather than "proving" certain propositions to be true in an absolute or objective sense, theories are understood to offer interpretations of reality. Those interpretations may be analyzed and substantiated (to an extent) based on their validity in comparison to other interpretations.[39] Progression to Relativism entails a student's accommodation of the realization that "reasonable people will reasonably disagree." This involves the recognition of "inescapable uncertainty," at which point contextual relativism emerges as the only viable epistemological lens by which to evaluate theories and truth claims. Since Relativism is still an essentially cerebral (i.e., not affective) position, Perry calls it the "space of meaninglessness between received belief and creative faith."[40]

A full awareness and a responsible acceptance of the implications of internally-based meaning are commensurate with emergence into the final period of development, Commitment within Relativism.[41] The necessity of making responsible judgments within a relativistic world represents the basis of the scheme's characterization as both intellectual and ethical.[42] Perry says that positive growth through this final stage requires faith commitments, which at first often involves "arbitrary faith," or "the willing

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[37]Deflections are possible at any stage, according to Perry, but the increased disequlibrium of one's discovery of contextual relativism presents a student with a greater temptation to deflect by entrenching in an earlier position or stagnating in Position 5.

[38]Perry, "Cognitive and Ethical Growth," 88.

[39]Ibid.

[40]Ibid., 92.

[41]Ibid.

[42]Moore, "Understanding Learning in a Postmodern World," 21.

suspension of disbelief."[43] Such a shift in language, from terms such as "knowledge and reason" to "faith and commitment" represents an orientation toward the inescapable, ethical dimensions of epistemology.

Perry suggests that the only means of escaping the loneliness that comes with personal commitments in a relativistic world is community, which he describes as consisting of those with a "shared realization of aloneness."[44] A key element of the higher ranges of human development, according to Perry, is an embrace of epistemological vulnerability. Such is exhibited only when one recognizes that he must make commitments–in order to be intellectually honest and personally authentic–and that those commitments must be held with simultaneous conviction and tenuousness. One must always be prepared for reformation–willing to reflectively evaluate and consider truth claims that serve to confront or challenge one's established beliefs.

Variance of Institutional Types

This study explored epistemological development in pre-ministry undergraduates across three types of institutions: secular university, confessional Christian liberal arts university, and Bible college. Each of these types vary significantly according to their respective identities and purposes, as well as in the organization and implementation of curricula. The differing characteristics of the educational and social environments at varying types of institutions provide differing contexts in which worldview formation takes place among pre-ministry undergraduates. At the most basic level, such environmental differences may be recognized by observing various statements of identity, mission, and purpose put forth by representative schools from each category. The following are statements of mission and purpose taken from the most recent catalog published by Western Kentucky University, a secular university from which participants

[43]Perry, "Cognitive and Ethical Growth," 92.

[44]Ibid., 97.

were enlisted for this study:

> Western Kentucky University prepares students to be productive, engaged, and socially responsible citizen-leaders of a global society. It provides research, service, and lifelong learning opportunities for its constituents. WKU is responsible for stewarding a high quality of life for those within its reach . . . . As a nationally prominent university, WKU is engaged internationally in acclaimed, technologically driven academic programs . . . . WKU recognizes that its mission continues to evolve in response to regional, national, and global changes, and the need for lifelong learning.[45]

The following are statements of identity and mission taken from the most recent catalog published by Union University, a Christian liberal arts university from which participants for this study were enlisted:

> Union University is an academic community, affiliated with the Tennessee Baptist Convention, equipping persons to think Christianly and serve faithfully in ways consistent with its core values of being excellence-driven, Christ-centered, people-focused, and future-directed . . . . Union University provides Christ-centered education that promotes excellence and character development in service to Church and society.[46]

The following are statements of mission and purpose taken from the most recent catalog published by Boyce College, a Bible college from which participants for this study were enlisted:

> Boyce College is the undergraduate school of The Southern Baptist Theological Seminary. As such, it functions under the mission statement of Southern Seminary: Under the lordship of Jesus Christ, the mission of The Southern Baptist Theological Seminary is to be totally committed to the Bible as the Word of God, to the Great Commission as our mandate, and to be a servant of the churches of the Southern Baptist Convention by training, educating, and preparing ministers of the gospel for more faithful service. Within the mission of Southern Seminary, the purpose of Boyce College is to conduct undergraduate programs in biblical studies to prepare students for the task of Great Commission ministry in local churches, as well as in the agencies and institutions of the Southern Baptist Convention.[47]

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[45]Western Kentucky University, "2011-2012 Undergraduate Catalog," http://www.wku.edu/undergraduatecatalog/documents/the_university.pdf (accessed July 14, 2012).

[46]Union University, "2012-2013 Undergraduate Academic Catalogue," http://www.uu.edu/catalogue/pdfs/1213fullcatalogue.pdf (accessed July 14, 2012).

[47]Boyce Bible College, "2011-2012 Academic Catalog," http://www.boycecollege.com/files/bc-110346-boyce-catalog_web01_10_11_11.pdf (accessed July 14, 2012).

Theological Foundations

This study maintained that the glory of God is the chief aim and purpose of all creation, including the existence and development of human beings. While the biblical ideal for development is normative for the Christian life, redemptive development is impossible apart from the indwelling presence of the Holy Spirit. Also, this study assumed the capability of interaction with secular developmental models. The notion that Christians may adopt secular developmental models as accurately descriptive or fully compatible with the biblical principles for sanctification, however, was avoided. Thus, a principle for interaction was identified by which to engage in utilization of the Perry Scheme as an interpretive tool.

Theological Foundations for Personal Identity and Epistemological Maturity

For Christians, adoption (Rom 8:15) and sanctification (Col 3:10) represent the defining elements of personal identity and development. The initiative of God the Father in adopting his children before creation (Eph 1:5) establishes the believer's assurance that he will persevere in his faith by growing in Godly conviction and commitment, and by doing good works as he is indwelled with the same Spirit that raised Christ from the dead (Rom 8:11). Holiness is the positional and developmental identity of every believer individually, and also of the entire church, for whom Christ "gave himself up . . . that he might sanctify her . . . that she might be holy and without blemish" (Eph 5:25-27). In redemption, Christians are brought into genuine communion with God and made part of his family, along with the rest of "God's household." Christian formation is thus contingent on the provision of mutual support and interdependence within the context of the faith community (Eph 2:19-22).

The nature of positive development in Scripture is defined by the doctrine of sanctification. For believers, sanctification provides the means of obtaining and growing in genuine knowledge–a knowledge of God that is intrinsically personal, relational, and

active. The knowledge of God may be characterized as (1) a product of revelation, (2) a means of glorifying the sovereign God by seeking his truth, (3) a transformative pattern of development enabled by redemption, (4) a manifestation of the redemptive activity by each member of the Godhead, and (5) a responsive posture of worship, faith, and obedience by believers.[48] Believers' personal, relational knowledge of God entails a transformative, progressive, pilgrimage of development as Christians are conformed to the *imago Christi* (Rom 8:29). The Bible thus encourages believers to "put on Christ," (Rom 13:14) as they are "transformed into the same image" (2 Cor 3:18).

The biblical expectation of transformative conformity to Christ's image highlights the truth that development is not static, but dynamic.[49] Believers are *being renewed* (Col 3:10) in the image of God as they await ultimate redemption. Thus, the most evidential mark of epistemic virtuosity is growth toward Christlikeness, coupled with a determined commitment to the "upward call" (Phil 3:13-14). The nature of sanctification is such that it is never fully obtained (Phil 3:12), but is to be actively pursued (1 Tim 6:11). Propositional knowledge must therefore always be coupled with personal affirmation and application, bearing fruit in obedience and wisdom.

Scripture presents a clear objective with regard to believers' epistemological maturation: wisdom. Wisdom relates primarily to daily living; it is acting in accordance with God's prescribed order for creation, or "living skillfully" within God's embedded structure.[50] The factory of wisdom is thus an individual's ongoing, God-fearing quest for patterns of living that conform to God's design and purpose. Thus, for Christians the ultimate aim and purpose of wisdom is the person of Christ, "the power of God and the wisdom of God" (1 Cor 1:24).

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[48] J. I. Packer, *Knowing God*, 20th ann. ed. (Downers Grove, IL: InterVarsity Press, 1993), 20, offers this categorization, which serves as a basis for evaluating the concepts of knowledge and identity from a theological perspective in the next chapter.

[49]Hoekema, *Created in God's Image*, 28.

[50]Daniel J. Estes, *Hear My Son: Teaching and Learning in Proverbs 1-9*, New Studies in Biblical Theology (Downers Grove, IL: InterVarsity Press, 1997), 26.

True wisdom, knowledge, and understanding–obtained only by those who submit to God's lordship–derive from the same source: the fear of the Lord (Ps 110:10; Prov 1:7, 9:10; 15:33).[51] The fear of the Lord is a God-given component of man's noetic structure in creation, and as such it represents a "properly basic" worldview foundation for believers.[52] The concept of Godly fear as the basis of genuine knowledge, understanding, and wisdom strongly asserts the centrality of faith as the central defining element which propels epistemological maturation. Such faith is founded on the presupposition that Scripture accurately and fully articulates truth as well as normative prescriptions for development. Thus, biblical wisdom–rooted in faith-centric knowledge and understanding–is the natural outworking of a God-glorifying character, and evidence of the transformational renewal brought about by redemption (Rom 12:2).

Theological Foundations for Interaction with Secular Developmental Theories

A commitment to the authority and sufficiency of Scripture must be the guiding evaluative premise on which all secular developmental models, including the Perry Scheme, are assessed. In order to adequately describe the uniqueness of human beings and normative patterns of epistemological development, it is crucial to begin with the truth of God's word and the framework of biblical-historical metanarrative. The orderly world is so created by God that secular social science research can observe and accurately identify human developmental patterns and behaviors. The noetic effects of sin are so pervasive, however, that the ability of secular researchers to rightly *interpret* those patterns is radically limited. Thus, what is put forth as positive or "natural" development according to secular research is often a description of a "pattern of fallenness."[53]

[51]John M. Frame, *The Doctrine of God: A Theology of Lordship* (Phillipsburg, NJ: Presbyterian and Reformed Publishing Company, 2002), 508.

[52]See Alvin Plantinga, "Reason and Belief in God," in *Faith and Rationality: Reason and Belief in God*, ed. Alvin Plantinga and Nicholas Wolterstorff (Notre Dame, IN: University of Notre Dame Press, 2007), 73-91.

[53]Timothy Paul Jones, "Journeying Toward a Biblical Basis for Lifespan Development,"

In observing elements of *God's* design through general revelation, secular developmental theorists deduce aspects of *human* nature. For that reason, namely anthropocentricity, secular social scientific analysis cannot rightly prescribe biblical norms of epistemological development. Scripture declares that the proper goal of cognitive and ethical development is conformity to Christ (Rom 8:29). When positive development is conceived in terms of fallen human behaviors which are by nature contrary to the normative biblical pattern, the goal and purpose of life is defined as "self-identity" or "self-actualization"—concepts with which "Christlikeness" is mutually exclusive. Secular and biblical development models include consistent patterns of maturation, but are oriented toward two opposite goals, respectively: self and Christ. Thus, *inverse consistencies* exist between the biblical notion of positive maturation–unto Christlikeness–and secular developmental notions–which in the Perry Scheme entails existentialist self-identification and commitment.

Purpose Statement

The intent of this study was to explore the variance of epistemological development in pre-ministry undergraduates across different institutional contexts, using the Perry Scheme as a theoretical lens.

Research Questions

1. What is the relationship, if any, between the type of institution a pre-ministry undergraduate attends and progression through Perry's positions of intellectual and ethical development?
    a. What is the relationship between attendance at a secular college or university and progression through Perry's positions?
    b. What is the relationship between attendance at a confessional Christian college or university and progression through Perry's positions?
    c. What is the relationship between attendance at a Bible college and progression through Perry's positions?

2. What are the distinctions between pre-ministry college seniors and recent graduates from differing institutional contexts regarding how they express their approaches to

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unpublished paper. See Appendix 1.

acquiring and maintaining knowledge?

3. What is the relationship, if any, between differing social-environmental conditions and the development of epistemological maturity among pre-ministry undergraduates?
    a. What is the relationship between personal confrontation and interaction with non-biblical worldviews and the development of epistemological maturity among pre-ministry undergraduates?
    b. What is the relationship between the experience of interfaith dialogue within the academic community and the development of epistemological maturity among pre-ministry undergraduates?
    c. What is the relationship between exposure to interdisciplinary studies and the development of epistemological maturity among pre-ministry undergraduates?

Delimitations

1. This research was delimited to the specific institutional contexts of the students who participated in the interviews.

2. This research was delimited to include pre-ministry undergraduates who planned to enroll at an evangelical seminary after graduation. This delimitation created a more homogeneous sample which allowed the researcher to generate more specific conclusions.

3. This research was delimited to include individuals who were "traditional" college seniors or recent graduates (ages 20-25). This delimitation eliminated numerous factors of variability within the sample that could have potentially negated the significance of the findings.

4. This research was delimited to include only college seniors or recent graduates from four-year institutions, who were earning (or had recently earned) a bachelor's degree.

5. This research was delimited to the observation of college students in their final academic year before graduation, or in the immediate months following graduation. This study thus did not trace epistemological development throughout students' college careers. The interviews did, however, capture students' reflections concerning their undergraduate experiences.

Terminology

Bible college: Educational institution that entails a Christian environment with regard to curriculum and community, guided and governed by a Protestant-evangelical statement of faith. Curricular offerings solely include ministry-based courses, emphasizing biblical and theological studies. Profession of Christian faith and active church membership are required for admission.[54]

[54]Definition derived from information provided in official publications by representative institutions.

Biblical wisdom: Application of God's revealed truth through the practice of one's daily life, or *living skillfully* within God's embedded structure.[55]

Commitment (uppercase C): A personal affirmation, choice, or decision made–even while acknowledging the contextual nature of knowledge and truth–as a means of defining one's identity and worldview.[56]

(*Confessional) Christian liberal arts university*: Educational institution that entails a Christian environment with regard to curriculum and community, guided and governed by a Protestant-evangelical statement of faith. Academic offerings range across multiple disciplines, emphasizing a liberal arts core curriculum and the integration of faith and reason. Neither profession of Christian faith nor church membership is required for admission.[57]

Decentering: Developmental process that is reiterated at each new stage of growth, in which one undergoes a refocusing of perspective in order to make sense of new knowledge and experience; mediated by the processes of assimilation and accommodation.[58]

Dualism: Form of thinking which conceives of all knowledge and meaning as divided into two realms or absolute categories, e.g., good versus bad, right versus wrong, we versus they; all knowledge is regarded as quantitative.[59]

Evangelical: Broad, transdenominational designation for Christians, churches, and Christian institutions that subscribe to a particular set of essential beliefs, including

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[55]Daniel J. Estes, *Hear My Son: Teaching and Learning in Proverbs 1-9* (Downers Grove, IL: InterVarsity Press, 1997), 26.

[56]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 150.

[57]Definition derived from information provided in official publications by representative institutions.

[58]Barbel Inhelder and Jean Piaget, *The Growth of Logical Thinking from Childhood to Adolescence* (New York: Basic Books, 1958), 341-42. See also William G. Perry, Jr., *Patterns of Development in Thoughts and Values of Students in a Liberal Arts College: A Validation of a Scheme* (Cambridge, MA: Bureau of Study Counsel, Harvard University, 1968), 12.

[59]Perry, "Cognitive and Ethical Growth," 79.

"(1) the Reformation doctrine of the final authority of the Bible, (2) the real historical character of God's saving work recorded in Scripture, (3) salvation to eternal life based on the redemptive work of Christ, (4) the importance of evangelism and missions, and (5) the importance of a spiritually transformed life."[60]

Inverse consistency: Principle which maintains that secular and biblical models of development observe and prescribe similar patterns, but are inversely oriented with regard to *telos* (self-identification versus Christlikeness). Secular models observe and prescribe "patterns of fallenness" rather than patterns commensurate with biblical norms.[61]

Metathinking: The formal-operational process of reflectively examining thought, including one's own.[62]

Multiplicity: Personalistic form of thinking which recognizes the existence of a plurality of viewpoints about a particular issue, and assumes that judgments cannot be made among opinions; characterized by the statement, "Anyone has a right to his own opinion."[63]

Perry Scheme: Most common reference to William G. Perry, Jr.'s model of epistemological development.[64]

Positions: Stages of development in the Perry Scheme (1-9), representing a continuum of perspectives regarding knowledge, truth, and authority.[65]

Progressive sanctification: An operation of the Holy Spirit that compels a

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[60]George M. Mardsen, *Understanding Fundamentalism and Evangelicalism* (Grand Rapids: William B. Eerdmans, 1991), 4-6.

[61]Jones, "Journeying Toward a Biblical Basis for Lifespan Development."

[62]Perry, "Cognitive and Ethical Growth," 88.

[63]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 287.

[64]Perry expresses embarrassment at this shortening, since "the evolution of the scheme required teamwork involving more than thirty people over a span of fifteen years–six to eight counselors at any one time, working in a small office without formal provisions for research." See Perry, "Cognitive and Ethical Growth," 77 n.1.

[65]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 287.

gradual, continual renewal of the image of God in man–involving man's responsible, active participation.[66]

Reformed epistemology: Philosophical-theological formulation of episetmology in the tradition of John Calvin and Thomas Reid, among others; articulated chiefly by Plantinga, Wolterstorff, Mavrodes, and Alston; characterized by a rejection of classical ("narrow") foundationalism and evidentialism, and the assertion that belief in God is "properly basic."[67]

Relativism: Form of thinking in which all knowledge and truth is regarded as qualitative and dependent on context for meaning.[68]

Secular university: Educational institution which entails a secular environment with regard to curriculum and community. Academic offerings range across a wide variety of disciplines, emphasizing research, progress, and diversity.[69]

Procedural Overview

The methodological design for this study was fully qualitative, employing semi-structured interviews to collect data from the sample population. The sample consisted of thirty pre-ministry students, who were either engaged in their final academic year before graduation, or graduates as of the most recent academic semester.[70] Through contact with personal, denominational, campus ministry, and higher education personnel networks, the researcher contacted and enlisted ten interviewees from each institutional context. Multiple institutions from each context were represented, with the exception of the Bible college context. This allowed for some comparability *within* as well as *across*

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[66] Hoekema, *Created in God's Image*, 8, 86.

[67]See summary statement in Plantinga, "Reason and Belief in God," 90.

[68]Perry, "Cognitive and Ethical Growth," 80.

[69]Definition derived from information provided in official publications by representative institutions.

[70]A pilot study was carried out with a small group, in order to test and evaluate the instrumentation, and develop the researcher's competency in executing the study.

institutional contexts.

Interviews were conducted with ten students from each of three institutional contexts: secular university, confessional Christian liberal arts university, and Bible college. The sample thus reflected the environmental and curricular uniquenesses of the institutional contexts in which the students underwent maturation through the college years.

The researcher obtained general personal information from participants prior to the interview via email correspondence, including school and degree-program information, future academic and vocational intentions, and church affiliation. The interviews were conducted via telephone, according to a time predetermined jointly by the researcher and participant.

The semi-structured interviews were organized according to an adapted and customized version of the Perry Interview Protocol,[71] which was developed through consultation between the researcher and William S. Moore, director of the Center for the Study of Intellectual Development (CSID).[72] Similar to Perry's method, the interviews consisted of open-ended questions that were general in nature, followed by more specific "probes" designed to elicit responses that articulate interviewees' respective epistemological positions and values. The duration of each interview was approximately one hour. The researcher recorded (audio) each interview for the purpose of transcription.

The rationale for limiting the study to a fully qualitative design hinged on the fact that there were no precedent studies for this particular population related to Perry's model. Interview research yielded data that was "deep rather than broad," allowing for the interviewees to be analyzed according to their own unique perspectives. The intention of this study was thus exploratory, seeking to discern the possibility of generalizable

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[71]Center for the Study of Intellectual Development, "Structured Perry Interview Format," http://www.perrynetwork.org/interviewprotocols.html (accessed July 14, 2012). See Appendices 3 and 4 for standard and alternate Perry interview protocols.

[72]See Appendix 6 for detailed information regarding Moore and the CSID.

patterns of development–potentially as a precursor to a broader, large-sample or longitudinal study.

This study required a number of research competencies. First, the study required the ability of the researcher to purposefully locate and enlist an adequate number of population members for participation. The study also required training from the CSID for competency in the design and execution of the personal interview as a data-gathering instrument. Also, the study required the ability to create an authentic, accurate transcription from an audio recording of each interview. Finally, the study required the ability to evaluate and interpret the collected data, in conjunction with the professional scoring and analysis conducted by the CSID.

Research Assumptions

1. Interviewees provided accurate representations of their personal beliefs and characteristics.
2. The CSID provided unbiased and scholarly-informed scoring and analysis of the transcribed interviews.

CHAPTER 2

PRECEDENT LITERATURE

This research study explored the variance of epistemological development in pre-ministry undergraduates. This chapter serves to define and elucidate the context of this study by drawing from key biblical and theoretical sources to present a thorough review of human development (generally) and intellectual maturation (specifically).

The concepts of epistemology and human development are given thorough treatment in Scripture, leaving no ambiguity regarding the biblical expectation for human beings. Through the prophet Jeremiah, God says, "Let not the wise man boast in his wisdom, let not the mighty man boast in his might, let not the rich man boast in his riches, but let him who boasts boast in this, that he understands and knows me, that I am the LORD who practices steadfast love, justice, and righteousness in the earth. For in these things I delight, declares the LORD" (Jer 9:23-24). The first major grouping of sub-sections presented below includes a biblical-theological analysis of epistemological development. An overview of human knowledge and development according to the redemptive-historical metanarrative is offered as framework to guide later discussion and analysis. Then, two prominent biblical themes are addressed that relate specifically to epistemological development. First, various points of Scriptural emphasis regarding the issue of the knowledge of God and development are discussed within the systematic-theological categorizations of J. I. Packer. Second, the canonical wisdom texts are consulted in order to examine the nature and implications of biblical wisdom with regard to epistemological development.

The second major grouping of sub-sections includes a thorough review of the Perry Scheme in three parts: theoretical and philosophical underpinnings of the model,

the model itself, and major extensions and elaborations of Perry's model. The final major section presents the "principle of inverse consistency" as an interpretive paradigm for interacting with Perry, and developmental theories in general, from a biblical worldview.

Human Development and the Redemptive-Historical Metanarrative

According to Calvin, "We cannot have a clear and complete knowledge of God unless it is accompanied by a corresponding knowledge of ourselves. This knowledge of ourselves is twofold: namely, to know what we were like when we were first created and what our condition became after the fall of Adam."[1] The biblical worldview maintains that the glory of God is the chief aim and purpose of all creation, including the existence and development of human beings. This most basic theme is expressed all throughout the story of "salvation through judgment"[2] that is presented in Scripture through the biblical-historical metanarrative: creation, fall, redemption, and consummation. A distinct, prescribed telos for humanity is evident throughout the story of redemption, which defines the norm for human development in terms of relations to God and social community. Gentry and Wellum say, "The biblical story begins with the fact that there is only one God. He has created everything and especially made humankind to rule under him. In this context, God is the center of the universe and we humans find our purpose in having a right relationship to God and to one another."[3]

Creation

In creation, man was created in the image of God. The *imago Dei* is the defining quality of human personhood. The divine image identifies man as existing in

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[1]Quoted in Gregg R. Allison, *Historical Theology: An Introduction to Christian Doctrine* (Grand Rapids: Zondervan, 2011), 332.

[2]For a biblical-theology based on this articulation, see James M. Hamilton, Jr., *God's Glory in Salvation through Judgment: A Biblical Theology* (Wheaton, IL: Crossway, 2010).

[3]Peter J. Gentry and Stephen J. Wellum, *Kingdom through Covenant: A Biblical-Theological Understanding of the Covenants* (Wheaton, IL: Crossway, 2012), 139.

covenant relationship with God, and exercising dominion on God's behalf as his representative and vicegerent on earth.[4] When Scripture reveals that human beings are made in God's image and likeness (Gen 1:26), it communicates that man is a unique creature in the cosmos, distinguishable from all other animals and specifically related to God.[5] The relational capability of humans to know God is a primary outworking of the divine image in man. Human beings are of the same order as God himself, and thus they are able to communicate with him and know Him.[6] Human knowledge is thus an extension of God's revelation to man, and true knowledge is only available as one rightly acknowledges God (Prov 1:7).

Man lived in a state of complete moral integrity in the original creation. Adam and Eve were not, however, fully developed image bearers. In Augustine's terms, they possessed the *posse non peccare* (ability not to sin) but not the *non posse peccare* (inability to sin). The first couple lived in a dynamic relationship with God, and there was no possibility of remaining developmentally static: either they would progress to greater holiness or fall into sin.[7] Adam and Eve lived in a state of integrity, but not unchangeable perfection. The possibility of sin was ever-present, and they lived with the real temptation to disobey God.

Fall

At the fall, when humanity became depraved, the *imago Dei* was profoundly affected, including man's capacity for recognizing and discerning truth. Carl Henry depicts the comprehensiveness of sin's impact in this way:

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[4]See Peter J. Gentry, "Kingdom through Covenant: Humanity as the Divine Image," *Southern Baptist Journal of Theology* 12 (2008): 16-42.

[5]Carl Ferdinand Howard Henry, *God, Revelation, and Authority* (Wheaton, IL: Crossway Books, 1999), 2: 124.

[6]Charles Hodge, *Systematic Theology* (Oak Harbor, WA: Logos Research Systems, 1997), 2:97.

[7]Anthony A. Hoekema, *Created in God's Image* (Grand Rapids: William B. Eerdmans, 1994), 82.

> The fall of man was a catastrophic personality shock; it fractured human existence with a devastating fault. Ever since, man's worship and contemplation of the living God have been broken, his devotion to the divine will shattered. Man's revolt against God therefore affects his entire being; he is now motivated by an inordinate will; he no longer loves God nor his neighbor; he devotes human reasoning to the cause of spiritual rebellion. He seeks escape from the claim of God upon his life and blames his fellow man for his own predicament. His revolt against God is at the same time a revolt against truth and the good; his rejection of truth is a rejection of God and the good, his defection from the good a repudiation of God and the truth."[8]

As an effect of the fall, sin obscures almost everything about God in the human mind, conscience, and will–except for the awareness of his existence, the *sensus divinitatus*. While human beings are depraved and incapable of self-discovered special revelation,[9] they must still have the ability to know God exists. Otherwise, they would be capable merely of skepticism.[10] Still, however, the *saving* knowledge of God–a personal relationship with Him–is completely oppressed by sinners who exist in a state of *non posse non peccare* (inability not to sin). Calvin describes the noetic effects of sin as causing individuals to suffer from "epistemic blindness."[11] As a result of the fall, nonbelievers are left hopelessly incapable of responding positively to the gospel, even while retaining enough of the *imago Dei*–through the *sensus*–by which to acknowledge their guilt before God.

Redemption

Reflecting on the magnitude of sin and the sublimity of redemption, Schreiner observes, "the power and depth of sin function as the backdrop to God's saving promises, for such promises represent astonishing good news, given the devastation that sin inflicts on human beings."[12] The fall did not thwart the eternal plan of God. Hamilton says,

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[8]Henry, *God, Revelation, and Authority*, 2:134-35.

[9]Timothy Paul Jones, "John Calvin and the Problem of Philosophical Apologetics," *Perspectives in Religious Studies* 23 (1996): 402

[10]Henry, *God, Revelation, and Authority*, 2:135.

[11]Jones, "John Calvin and the Problem of Philosophical Apologetics," 396.

[12]Thomas R. Schreiner, *New Testament Theology: Magnifying God in Christ* (Grand Rapids: Baker Academic, 2008), 545.

"Mysteriously—in a way that was not revealed until Jesus came—even the failure of Adam and Israel and the judgment that fell on them was part of the outworking of God's purpose."[13] Redemption was secured for God's people through the atoning work of Christ, "who was delivered up for our trespasses and raised for our justification" (Rom 4:25). In Scripture, redemption always comes through judgment.[14]

At the moment of justification, sanctification begins. When one invests his allegiance in Christ, his status as justified and holy before God is made permanently secure, and he begins the lifelong trend toward glorification. Thus, as Ferguson says, "Justification and sanctification can no more be separated than Christ himself can be divided."[15] For Christians, adoption (Rom 8:15) and sanctification (Col 3:10) represent the defining elements of personal identity and development. Having been made new through the salvation earned by Christ, Christians necessarily undergo a transformative, progressive, continuous pilgrimage of development as they are conformed to the *imago Christi* (Rom 8:29). The sole initiative of God the Father in adopting his children from eternity past (Eph 1:5) establishes the believer's assurance that he will persevere in his belief, grow in faith and Godly conviction, and exhibit good works as he is indwelled with the same Spirit that raised Christ from the dead (Rom 8:11).

Holiness is the positional and developmental basis of identity of every believer individually, and also of the entire church, for whom Christ "gave himself up . . . that he might sanctify her . . . that she might be holy and without blemish" (Eph 5:25-27). In redemption, Christians are brought into genuine communion with God and made part of his family, along with the rest of "God's household." Sanctification is not an individual process; it occurs in the lives of individuals, but through the *context* of the faith community. Progressive renewal occurs as a believer actively develops the fruits of the

[13]Hamilton, *God's Glory in Salvation through Judgment*, 51.

[14]Ibid., 57.

[15]Sinclair B. Ferguson, "The Reformed View," in *Christian Spirituality: Five Views of Sanctification*, ed. Donald L. Alexander (Downers Grove, IL: IVP Academic, 1988), 54.

Spirit within the body of Christ. Christian formation is thus contingent on the mutual support and interdependence of the faith community (Eph 2:19-22).

The effect of sanctification in a believer's life is reorientation, which brings about "a change of direction rather than a change of substance."[16] The "natural" pattern of one's knowledge and development is thus countered with a new natural pattern that strains toward an opposite telos. Whereas in sin the original orientation of man's heart is inverted *away* from God, in redemption the Spirit inverts the sinful orientation of man's heart *toward* God, such that he increasingly lives according God's statues, in obedience to his laws (Jer 31:33; Ezek 36:26-27). Increasing holiness is evident in one's foremost desire to follow the example of Christ in every facet of life, thereby actively seeking to become more like him. Still, however, believers are "genuinely new, though not yet totally new."[17]

Consummation

While redemption allows for consistent victory over sin, the "desires of the flesh" remain obstacles in a Christian's life (Gal 5:17). Through earthly sanctification, slavery to sin is progressively abandoned (Rom 6:17); complete freedom from sin and likeness to Christ, however, is anticipated only in the eternal state, when "we shall be like him, because we shall see him as he is" (1 John 3:2). In the new creation, the church will naturally exhibit the complete attributes of the *imago Dei* even to a fuller extent than man in his original state of moral integrity. It is commonly understood that final redemption will entail a restoration of the original creation. In actuality, final redemption for believers will include much more than the mere integrity enjoyed by Adam and Eve in creation; it will entail conformity to Christ's image to such a degree that sin will have no bearing whatsoever. Believers will possess the *non posse peccare*. As Paul says, "For

[16]Anthony A. Hoekema, "The Reformed Perspective," in *Five Views of Sanctification*, ed. Stanley N. Gundry (Grand Rapids: Zondervan, 1987), 62.

[17]Ibid., 74.

now we see in a mirror dimly, but then face to face. Now I know in part; then I shall *know fully*, even as I have been fully known" (1 Cor 13:12; emphasis added).

The Knowledge of God: Identity and Development in Theological Perspective

The most important kind of knowledge, according to Scripture, is the knowledge of God. Knowing God is the "beginning" of all other knowledge (Prov 1:7). Human beings depend entirely on God for knowledge, while God's own knowledge, consistent with his aseity, is self-attesting, self-referential, and self-sufficient; God "knows all things by knowing himself and knowing his plan for the universe."[18] Packer's five foundational principles of the knowledge of God provide an overarching framework which identifies the biblical precedent for epistemological development within a systematic-theological paradigm. These principles, which are utilized as organizational categories in the following discussion, relate to the nature of knowledge, the function of knowing, and scriptural norms for Christian identity and development. Certain issues germane to the topics of epistemology and development which extend from the five principles are also addressed. In summary, the knowledge of God may be characterized as (1) a product of revelation, (2) a means of glorifying the sovereign God by seeking his truth, (3) a transformative pattern of development enabled by redemption, (4) a manifestation of the redemptive activity by each member of the Godhead, and (5) a responsive posture of worship, faith, and obedience by believers.

Revelation

The most primary theological principle regarding knowledge is, as Packer observes, "God has spoken to man, and Bible is his Word, given to us to make us wise unto salvation."[19] Numerous attributes of knowledge and knowing may be observed in

[18]John M. Frame, *The Doctrine of God*, A Theology of Lordship (Phillipsburg, NJ: Presbyterian and Reformed Publishing Company, (2002), 481.

[19]J. I. Packer, *Knowing God*, 20th ann. ed. (Downers Grove, IL: InterVarsity Press, 1993), 20.

light of this statement. First and foremost, all human knowledge must be qualified as flowing-from and dependent-on the *revelation* of God. The most important reality in Scripture regarding knowledge is this: God has made himself known to people. Frame says, "In our coming to know God, it is He who takes the initiative. He does not passively wait for us to discover him, but he makes himself known."[20] Ignorance of God on the part of man is thus a "culpable ignorance,"[21] for "what can be known about God is plain to them, because God has shown it to them. For his invisible attributes, namely, his eternal power and divine nature, have been clearly perceived, ever since the creation of the world, in the things that have been made. So they are without excuse" (Rom 1:19-20). The saving knowledge possessed only by believers is also a product of God's revelation. Jesus says, "All things have been handed over to me by my Father, and no one knows the Son except the Father, and no one knows the Father except the Son and anyone to whom the Son chooses to reveal him" (Matt 11:27). In addition to God's general revelation through nature, he has provided his word, which is a "definitive written revelation, the covenant constitution of the people of God."[22]

Knowability and incomprehensibility. While God is immanent and knowable, Scripture simultaneously identifies him as transcendent and incomprehensible. Through the prophet Isaiah, God says, "For my thoughts are not your thoughts, neither are your ways my ways, declares 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" (Isa 55:8-9). Grudem observes, "It is not only true that we can never fully understand God; it is also true that we can never fully understand any single thing about God. His greatness (Ps. 145:3), his understanding (Ps. 147:5), his knowledge (Ps. 139:6), his riches, wisdom,

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[20]John M. Frame, *The Doctrine of the Knowledge of God*, A Theology of Lordship (Phillipsburg, NJ: Presbyterian and Reformed Publishing Company, 1987), 42.

[21]Frame, *The Doctrine of God*, 200.

[22]Ibid.

judgments, and ways (Rom 11:33) are all beyond our ability to understand fully."[23]

How can God be both knowable and incomprehensible at the same time? Frame observes that, similar to other paradoxical elements of reality presented in Scripture, the biblical writers do not treat God's transcendence and immanence as a problem; they "never see the incomprehensibility of God as detracting from the reliability or authority of his revelation. The mysteriousness of God is never the basis of a general agnosticism. God's revelation is mysterious, but it is a genuine revelation."[24] God's essence is genuinely revealed and therefore knowable, but not exhaustively.[25]

What is vital to observe is that according to Scripture, God's incomprehensibility does not compromise his knowability. In fact, one must acknowledge God's incomprehensibility in order to know anything truly. His incompressibility, in conjunction with his transcendent authority and control over all creation, counters any claim on the part of human beings to self-sufficiency or autonomy in discerning truth apart from the God, who sovereignly controls and possesses all things. Under God's authoritative rule, his revelation of himself serves to govern and limit human knowledge and speech. His revelation in Scripture is "perfectly adequate to accomplish its purpose;"[26] it is "profitable for teaching, for reproof, for correction, and for training in righteousness, that the man of God may be complete, equipped for every good work" (2 Tim 3:16).

The human limitation of knowledge, in light of God's revelation, precludes any human claims to outright objectivity or certainty with regard to knowledge. Human beings are limited to the *interpretation* of God's revelation–a function which orients a person epistemically and developmentally toward or away from God depending on the

[23]Wayne Grudem, *Systematic Theology: An Introduction to Biblical Doctrine* (Grand Rapids: Zondervan, 1994), 150.

[24]Frame, *The Doctrine of God*, 202.

[25]Grudem, *Systematic Theology*, 150. See also Frame, *The Doctrine of God*, 205.

[26]Frame, *The Doctrine of God*, 206.

presence or absence of the indwelling Holy Spirit. According to the biblical worldview, Scripture must be regarded as the most certain knowledge available. As such, Scripture alone serves to "govern our acceptance or rejection of other propositions," and "there is no proposition that can call it into question."[27] Thus, Scripture represents the foremost *presupposition* for Christians.

God's revelatory word. Knowledge of God cannot be accurately comprehended, understood, or responsibly applied apart from his revelatory Word, which is contained in Scripture and embodied in Christ (John 1:14). This implies another important attribute, with regard to the character of all knowledge: it is *personal*. All knowledge entails, to a greater or lesser degree, man's reception of God's personal communication. In reference to the discussion of immanence above, God is not portrayed in Scripture as an abstract principle or force but rather "a living person who fellowships with his people."[28] His word is therefore "living and active … discerning the thoughts and intentions of the heart" (Heb 4:12). Even the delivery of Scripture was initiated by God's through personal interaction: "For no prophecy was ever produced by the will of man, but men spoke from God as they were carried along by the Holy Spirit" (2 Pet 1:21). More generally, God's revelatory word highlights his closeness to creation. He is personally involved at every moment, and personally revealed in every aspect. Meek says, "I've learned to see every feature of creation, as John Calvin says, as God's clothes. They move because he acts. There is nothing in between."[29]

Purposeful revelation. Also, revelatory knowledge is inherently *purposeful*; it is intended to serve as an avenue unto wisdom. Wisdom is portrayed in Scripture as the

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[27]Frame, *The Doctrine of the Knowledge of God*, 45.

[28]Ibid., 17.

[29]Esther Lightcap Meek, *Longing to Know: The Philosophy of Knowledge for Ordinary People* (Grand Rapids: Brazos Press, 2003), 88.

desired outcome of knowledge acquisition, without which knowledge is incomplete. Thus, knowledge pursued for its own sake–devoid of conviction and application–fails to uphold the most fundamental aspect of knowledge presented in Scripture. When one acquires or pursues knowledge outside the context of its ultimate Source and purpose, he is automatically misguided. Such misguidance results in two categories of sinful outcomes: an idolatry of impersonal, non-convictional propositions rather than personal, faith-oriented truth, and a misapplication of knowledge–or failure to apply knowledge altogether. The manifestation of misguided knowledge entails consequences that are ethical as well as cognitive. This may be observed among Christians whose fixation on theological propositions can lead to prideful arrogance and personal indifference. Packer says,

> If we pursue theological knowledge for its own sake, it is bound to go bad on us. It will make us proud and conceited. The very greatness of the subject matter will intoxicate us, and we shall come to think of ourselves as a cut above other Christians because of our interest in it and grasp of it; and we shall look down on those whose theological ideas seem to us crude and inadequate and dismiss them as very poor specimens.[30]

God-Glorifying Truth

Packer's second principle reflects the nature of God himself with regard to man's chief aim: "God is Lord and King over his world; he rules all things for his own glory, displaying his perfections in all that he does, in order that men and angels may worship and adore him."[31] The glory of God extends from his sovereignty, and represents the theme and purpose of all existence. In light of God's sovereign lordship and perfect character, the most crucial aspect of any claim to knowledge is its relation to the *truth*. Truth is contained fully in God, and revealed exclusively by God. No truth exists apart from him. In this sense, God *is* truth. He never conforms to other truths, because he is truth in himself. Frame observes, "There is no higher standard than God against which his

[30]Packer, *Knowing God*, 20.

[31]Ibid., 21.

truth may be measured. So God's metaphysical ultimacy implies that he is the standard of propositional truth."[32] God's word thus "cannot be subject to human interrogation."[33] Such is the source of Paul's rejoicing in his letter to the Romans:

> Oh, the depth of the riches and wisdom and knowledge of God! How unsearchable are his judgments and how inscrutable his ways! "For who has known the mind of the Lord, or who has been his counselor?" "Or who has given a gift to him that he might be repaid?" For from him and through him and to him are all things. To him be glory forever. Amen. (Rom 11:33-36)

Since God's nature defines truth, his words are truth; he can neither lie nor be in error (Num 23:19; Heb 4:12). The centerpiece of biblical truth is the person of Christ–the Word who became flesh, revealing God's glory (John 1:14).

Genuine seeking. Knowing truth depends entirely on knowing God, and God is glorified only by those who truly seek him. He promises, "You will seek me and find me, when you seek me with all your heart" (Jer 29:13). In order to know truth, human beings must seek God according to his word, which is the wellspring of sanctification. This is made clear in Jesus' High Priestly Prayer, in which he prays for his disciples, "They are not of the world, just as I am not of the world. Sanctify them in the truth; your word is truth. As you sent me into the world, so I have sent them into the world. And for their sake I consecrate myself, that they also may be sanctified in truth" (John 17:16-19). Knowledge that is "of the world" is any knowledge that does not conform to God's word. Such knowledge, even if it is inherently reasonable or internally logical, is *inversely oriented* away from the truth and does not glorify God. Thus, according to the analogy presented by Christ in the final lesson of his Sermon on the Mount, those who heed God's word and act accordingly are "founded on the rock" and will be sustained, while those who do not heed God's word build their houses (though they may be structurally sound houses in their own right) "on the sand" and will perish (Matt 7:24-26).

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[32]Frame, *The Doctrine of God*, 477.

[33]Peter Jensen, *The Revelation of God*, Contours of Christian Theology (Downers Grove, IL: InterVarsity Press), 43.

Redeemed versus worldly knowledge. Two types of "knowledge" are thus evident in Scripture: God-glorifying knowledge which grasps and pursues God's truth, and knowledge which is blinded to God's truth. It is vital to recognize the difference between redeemed and worldly knowledge, as this difference determines the trajectory of development by which believers and nonbelievers mature, respectively. In one sense all people know God (Rom 1:21), while in another sense the knowledge of God "is the exclusive privilege of God's redeemed people and indeed the ultimate goal of the believer's life."[34] Only believers operate with a biblical teleology, according to the knowledge of God in Christ–which leads to eternal life. Thus, John says, "And we know that the Son of God has come and has given us understanding, so that we may know him who is true; and we are in him who is true, in his Son Jesus Christ. He is the true God and eternal life" (1 John 5:20). The saving knowledge of God is clearly presented in the person of Jesus Christ, and this knowledge is embraced and upheld by the redeemed, for whom God has given ". . . the light of the knowledge of the glory of God in the face of Jesus Christ" (2 Cor 4:6). The true knowledge of God, however, is suppressed and distorted by nonbelievers, with consequences that are both earthly and eternal. Frame offers a comparison of the different perspectives and implications:

> Fallen man exchanges the truth for a lie. Adopting a lie affects not only the contents of our heads but every area of our lives. Fallen man lives as if this were not God's world; he lives as if the world were his own ultimate creation. And having abandoned the criteria furnished by revelation, the only criteria by which he can distinguish truth and falsehood, he has no way of correcting his mistake. On the basis of his false criteria, his false world seems to be the real world, the only world that there is. Thus in an important sense, the sinner is a "secondary creator," one who chooses to live in a world—a dream world—that he invented. The believer, too is a secondary creator, one who adopts God's world as his own.[35]

Faith-grounded interpretation. The nonbeliever's fallen nature leads him to assume that what is false is true, and aside from the calling of the Holy Spirit, he is

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[34]Frame, *The Doctrine of the Knowledge of God*, 2.

[35]Ibid., 28.

helpless to remedy this condition. Again, the knowledge of God is the most important kind of knowledge. Unbiblical metaphysical presuppositions about God are necessarily manifested in false epistemological assumptions, which entail false beliefs, false motives, and false wisdom. In rejecting God's revelation, nonbelievers reject true reality. Related to this, Frame observes that both fallen and regenerate man function epistemically by patterns that are consistent with one another–namely, according to their faith-grounded *interpretations* rather than validating facts–but with inverse orientations that bear forth inverse developmental trajectories. He says,

> There is no such thing as "brute fact" by which fallen man can seek to validate his interpretation over against God's. Fallen man can only reject the facts and seek to live in a world of his own making. Similarly, the believer, in working out a faithful interpretation of the facts, is not merely "interpreting" data but is affirming creation as it really is; he is accepting creation as the world that God made, and he is accepting the responsibility to live in that world as it really is.[36]

Human interpretation is a function of the active, conviction-based process of *faith* (Heb 11:1), on the basis of trust, according to one's presuppositions regarding ultimate matters. In other words, "faith seeks understanding." One's God-glorifying grasp and application of truth results only from the gift of the Holy Spirit, who is able to impart what Calvin calls "the spectacles of faith,"[37] which allow a sinner to see and interpret God's revelation for what it truly is. Without active, committed faith, therefore, it is impossible to please God (Heb 11:6). Meek describes biblical faith as "a necessary ingredient of every single act of knowing . . . . It is the personal submitting of ourselves to the pattern we have shaped and recognized or chosen. It sustains our grasp on the pattern. It is our confidence in the pattern. It doesn't oppose rationality; it is the oxygen that sustains rationality."[38]

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[36]Ibid.

[37]Referenced in Millard J. Erickson, *Christian Theology*, 2nd ed. (Grand Rapids: Baker, 1998), 195-96.

[38]Meek, *Longing to Know*, 173-74.

Redemptive Development

The third theological principle related to the knowledge of God is, "God is Savior, active in sovereign love through the Lord Jesus Christ to rescue believers from the guilt and power of sin, to adopt them as his children and to bless them accordingly."[39] As addressed above, the redemption secured by Christ's sacrifice and resurrection is the premise on which the whole Christian concept of life, purpose, and hope rests. Redemption is both the starting point and ultimate hope of development. Apart from redemption in Christ, all humanity is hopeless to escape the clutches of sin effected by the fall. They are "children of wrath, like the rest of mankind" (Eph 2:3). In redemption, however, one is enabled to "die to sin and live to righteousness" (1 Pet 2:24). The impact of the transformation that occurs in redemption is consistent with a completely redirected orientation regarding reality, self-identity, and living. Yount describes the resulting trend of redemptive development as an epistemological progression unto wisdom. He says,

> The process of spiritual, rational growth is continuous. We grow in personal, experiential knowledge of God and His kingdom (*epignosis*). We clarify our perceptions and perspectives about life and the world in light of God's Word (*sunesis*). We live out what we know and understand in everyday problems and situations (*sophia*). Knowledge begets understanding, understanding begets wisdom, and wisdom begets further knowledge in an upward spiral.[40]

This new orientation fundamentally redefines the nature and purpose of development to center on glorifying God through active obedience, proclaiming and extending the same grace one has received. With particular reference to epistemological developmental elements addressed by Yount, Paul describes the redemptive pattern of development in this way, as he communicates his prayer for the believers in Colossae:

> that you may be filled with the knowledge of his will in all spiritual wisdom and understanding, so as to walk in a manner worthy of the Lord, fully pleasing to him, bearing fruit in every good work and increasing in the knowledge of God. May you be strengthened with all power, according to his glorious might, for all endurance

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[39]Packer, *Knowing God*, 20.

[40]William R. Yount, *Created to Learn: A Christian Teacher's Introduction to Educational Psychology*, 2nd ed. (Nashville: B&H Academic, 2010), 15.

> and patience with joy, giving thanks to the Father, who has qualified you to share in the inheritance of the saints in light. He has delivered us from the domain of darkness and transferred us to the kingdom of his beloved Son, in whom we have redemption, the forgiveness of sins. (Col 1:9-14)

Redeemed development is thus *holistic* development. Just as it is not possible to separate one's epistemological assumptions from his metaphysical and axiological convictions, it is also not possible to pursue intellectual development apart from lifestyle maturation. Holistic human development may thus be characterized as cognitive, affective, and behavioral. The intellectual assent to the truth of the gospel is intertwined with one's affections and convictions, which bears forth practical applications of faith. Holistic development is thus critical to maturity. A mature Christian knows the gospel, resonates with the gospel, and applies the gospel–thus gaining wisdom. Numerous passages could be cited to exhibit the biblical principle of holistic growth, but none are more prominent than the greatest commandment: "Hear, O Israel: The LORD our God, the LORD is one. You shall love the LORD your God with all your heart and with all your soul and with all your might" (Deut 6:4-5).

The Trinity in Salvation and Relationality

Packer says, "God is triune; there are within the Godhead three persons, the Father, the Son, and the Holy Spirit; and the work of salvation is one in which all three act together, the Father purposing redemption, the Son securing it and the Spirit applying it."[41] Knowledge of God as Trinitarian is essential to the biblical concept of growth unto Christlikeness. Salvation is the sole determining factor in the direction of development–toward or away from Christ. As Packer observes, the Father, Son, and Holy Spirit are intrinsic in the process of initiating, securing, and applying salvation, respectively. One passage that evidences the interactive work of the Godhead in salvation is found in Paul's letter to the Galatians, in which he says, "But when the fullness of time had come, God sent forth his Son, born of woman, born under the law, to redeem those who were under

[41]Packer, *Knowing God*, 20.

the law, so that we might receive adoption as sons. And because you are sons, God has sent the Spirit of his Son into our hearts, crying, "Abba! Father!" So you are no longer a slave, but a son, and if a son, then an heir through God" (Gal 4:4-7).

Relational interdependency. The Trinitarian nature of God is also relevant to the issue of human uniqueness, generally, and the concepts of relationality and community, particularly. The Trinity provides a model for the mutual spirit of love and unity that should characterize human relationships, especially in the context of the body of Christ.[42] Ware says, "The very fact that God, though singular in nature, is plural and societal in person, indicates that we should not view ourselves as isolated individuals who happen to exist in close proximity to others, but as interconnected, interdependent relational persons in community."[43] This has important implications regarding the role of community in development and maturation. Peterson says, "When God sanctifies us as individuals, he establishes us as members of a holy fellowship, enabling us to play our part in maintaining and expressing the holiness of the church, in doctrine and lifestyle."[44] God has so designed human beings as to be interconnected and interdependent, influencing the lives of one another (1 Cor 12:14-26). He has not designed human beings such that they operate completely in unison, however. As a reflection of God's harmonious diversity, human beings are created to interact, grow, and mature in contexts which are both relational and diverse. In fact, the ideal setting for learning and development is one in which "distinct individuals contribute to a unity of purpose or activity."[45] Drawing from the musical analogy of unison and harmony, Ware observes,

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[42]Erickson, *Christian Theology*, 367.

[43]Bruce A. Ware, *Father, Son, & Holy Spirit: Relationships, Roles, and Relevance* (Wheaton, IL: Crossway, 2005), 134.

[44] David Peterson, *Possessed by God: A New Testament Theology of Sanctification and Holiness*, New Studies in Biblical Theology (Downers Grove, IL: InterVarsity, 1995).

[45]Grudem, *Systematic Theology*, 257.

> There is in harmony a kind of glorious unity with texture and complexity that is simply lacking with unison. The unity achieved through harmony avoids redundancy, for every voice matters, and every part contributes its unique sound. The beauty of harmony is a beauty of diversity without discord, of distinctiveness without disarray, of complexity without cacophony.[46]

Relationality and development. The nature of human personhood as essentially relational and socially interdependent, in reflection of the Trinity, affirms the primacy of community and social contexts for human development. From a general sociological perspective Christian Smith posits that the most basic constructs of human identity are the superempirical elements of morality and belief understood through social narratives.[47] Recognizing the universality of moral values, Smith articulates the sociological implication by concluding that larger systems of human moral order provide the basis for value attributions on the part of individuals. Cultures consist of individuals who subscribe to common moral orders. Cultural rules and schemas govern the function of social systems, structures, and institutions.[48]

Christian social scientists, Balswick, King, and Reimer, put forth a theologically-based model that explains the inextricability of social relationality and individual personhood. The basis of their formulation is the Godhead, which necessarily includes both unity and uniqueness.[49] They say, "The particularity of the Father, Son, and Spirit is as vital as their unity as one. In addition, there is an ontological interdependence and reciprocity of three persons of the Trinity."[50] Made in the image of God, the uniqueness of human personhood is defined by this same pattern of reciprocity. The authors articulate their anthropological model as "The Reciprocating Self," i.e., human development spurred by living "in a mutual relationship of sharing and receiving with

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[46]Ware, *Father, Son, & Holy Spirit*, 135.

[47]Christian Smith, *Moral Believing Animals* (New York: Oxford University Press, 2009).

[48]Ibid., 21.

[49]Jack O. Balswick, Pamela Ebstyne King, and Kevin S. Reimer, *The Reciprocating Self: Human Development in Theological Perspective* (Downers Grove, IL: InterVarsity Press, 2005), 32.

[50]Ibid.

another."[51]

Worship, Faith, and Obedience:
Redeemed Identity

The final principle put forth by Packer describes the posture of believers in light of their knowledge of God: "Godliness means responding to God's revelation in trust and obedience, faith and worship, prayer and praise, submission and service. Life must be seen and lived in the light of God's Word. This, and nothing else, is true religion."[52] Redeemed knowledge is evidenced by convictional faith–an attitude of trust–and active, responsible obedience in light of one's convictions. Knowledge is therefore, inherently ethical as well as intellectual. Scripture represents obedience as genuine devotion to God–indeed, therefore, genuine knowledge of God–which bears forth in good works. Obedience is thus "the criterion of knowledge,"[53] and active obedience is knowing God "as He wants to be known."[54] The ethical nature of knowledge thus derives from the reality that knowing and living are never an autonomous endeavors; they are subject to God's authority. Meek thus defines obedience as "*lived* truth."[55]

Committed pursuit of God's will. Furthermore, it must be understood that Christians "are not their own," for they have been "bought with a price" (1 Cor 6:19-20). The Christian life thus demands increasing, holistic *commitment*. With this in mind, the ultimate nature and aim of Christian formation–including epistemological growth–is elucidated in Paul's appeal to the Romans: "by the mercies of God, to present your bodies as a living sacrifice, holy and acceptable to God, which is your spiritual worship. Do not be conformed to this world, but be transformed by the renewal of your mind, that by

[51]Ibid., 49.

[52]Packer, *Knowing God*, 20.

[53]Frame, *The Doctrine of the Knowledge of God*, 44.

[54]Ibid., 63.

[55]Meek, *Longing to Know*, 140.

testing you may discern what is the will of God, what is good and acceptable and perfect" (Rom 12:1-2). Rather than mere acquisition of truth propositions, the biblical developmental precedent involves transformative growth consistent with a lifestyle of progressive identification with Christ, evidenced by one's committed, active, and discerning pursuit of God's will. The distinctive marks of a Christian are displayed in the practical applications of such a pursuit–aptly characterized by Paul as authentic worship.

Created in Christ for good works. In Scripture, saving faith is tested, revealed, and assured by good works. Such works represent the essence of spiritual worship and the substantiation of a truly changed life. Schreiner says, "The changed lives of believers simply reveal the object of their trust. It demonstrates whether they are a rotten tree or a healthy one."[56] Without Godly works, James says, saving faith does not exist; such faith is "useless" (Jas 2:14-26). Such an emphasis on works is consistent with the nature of all God-imparted knowledge as inherently purposeful. Believers are, after all, "his workmanship, created in Christ Jesus for good works, which God prepared beforehand, that we should walk in them" (Eph 2:10). In this passage, the Apostle identifies the inherent purposefulness of knowledge and knowing as applied to the lifestyle of Christians, such that their identity is expressed most completely in the God-glorifying works they undertake. Believers' knowledge of God is inextricable and concomitant with their expressions of worship and obedience as they continually, progressively embody their true, redeemed identity: adopted sons and daughters of God (Eph 1:5).

Rather than pursuing "self-identification," Christians recognize that they are "created in Christ Jesus." Thus, redeemed development necessarily entails a trend of growth that is inversely oriented from the concept of "self-actualization." Such is depicted, for example, in the admonition of Peter to the fledgling church in Asia Minor,

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[56]Schreiner, *New Testament Theology*, 616.

who he encouraged to "grow in the grace and knowledge of our Lord and Savior Jesus Christ" (2 Pet 3:18).

Christ-like service. As Packer suggests, Christian identity, knowledge, and development involves service to the Kingdom of Christ, applied through service to others. The Christian concept of identity formation through selfless service is fundamentally different from the notion of "self-denial," which retains the individual self as the focus and benefactor of development. Rather than engaging in altruistic acts for the purpose of self-identification, Scripture defines service as identifying more closely with Christ, within the community of faith. Paul expresses the nature of Christian development as identification with Christ through humble, Spirit-guided service to others, embodied and pursued in community. In his letter to the church at Philippi, he says,

> So if there is any encouragement in Christ, any comfort from love, any participation in the Spirit, any affection and sympathy, complete my joy by being of the same mind, having the same love, being in full accord and of one mind. Do nothing from selfish ambition or conceit, but in humility count others more significant than yourselves. Let each of you look not only to his own interests, but also to the interests of others. Have this mind among yourselves, which is yours in Christ Jesus. (Phil 2:1-5)

Biblical Wisdom and Epistemological Development

Scripture implores the children of God to gain understanding and *wisdom*–at all costs, through all means, by determined and unending pursuit–in order to find life and obtain the Lord's favor (Prov 2:1-6, 8:17, 35).[57] For believers, wisdom is the "prime value in life" (Prov 4:5-7).[58] Proverbs 1:7 represents the general motto of the biblical wisdom writings, proclaiming the diverging positions of the righteous versus the unrighteous, before God: "The fear of the Lord is the beginning of knowledge; fools

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[57]This section is adapted from John David Trentham, "Toward a Wisdom-Based Christian Epistemology" (paper presented at the annual meeting of the North American Professors of Christian Education, Seattle, WA, October 21, 2011).

[58]Daniel J. Estes, *Hear My Son: Teaching and Learning in Proverbs 1-9*, New Studies in Biblical Theology (Downers Grove, IL: InterVarsity Press, 1997), 43.

despise wisdom and instruction" (see Prov 9:10, 15:33, Ps 111:10; Job 28:28).[59] The premise to be maintained in this section is that biblical wisdom–rooted in faith-centric knowledge and understanding–is the natural outworking of a God-glorifying character, and evidence of the transformational renewal brought about by redemption (Rom 12:2). While Scripture includes numerous instances of wisdom teaching throughout the canon, the following draws primarily from the three major wisdom books: Job, Proverbs, and Ecclesiastes.

Biblical Wisdom

Biblical wisdom begins with general revelation (Rom 1:19-20). Much like psalms that appeal to creation (e.g., Pss 19, 104), biblical wisdom literature presents divine truth by observing nature (Job 38:2-41:34; Prov 6:6-8).[60] Wisdom relates primarily to daily living; it is acting in accordance with God's prescribed order for creation, or *living skillfully* within God's embedded structure.[61] Considering the reality of such a prescribed order, the relationship between personal acts and consequences is generally predictable, is due consideration. Kaiser describes the essence of biblical wisdom as "the practical art of being skillful and successful in life. Biblical wisdom is religion gone out into the streets and marketplaces of life with the fear of God as its guide."[62]

Wisdom entails the constant search for meaning in the midst of life's events (Eccl 7:25, 8:16).[63] This suggests an individual component to wisdom, as the movement of epistemological development necessarily flows through the filter of one's unique

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[59]Derek Kidner, *Proverbs: An Introduction and Commentary*, Tyndale Old Testament Commentaries, vol. 17 (Downers Grove, IL: InterVarsity Press, 1964), 56.

[60]Estes, *Hear My Son*, 89.

[61]Ibid., 26.

[62]Walter C. Kaiser, Jr., *The Old Testament Documents: Are They Reliable & Relevant?* (Downers Grove, IL: InterVarsity Press, 2001), 150.

[63]Timothy Paul Jones and Michael S. Wilder, "Faith Development and Christian Formation," in *Christian Formation: Integrating Theology and Human Development*, ed. James R. Estep and Jonathan H. Kim (Nashville: B&H Academic, 2010), 190.

experiences. Those experiences, however, are born out of one's socio-cultural context, so the individualistic concept of outright epistemological autonomy on the part of the individual–such as that put forth in existentialist philosophies–is denied. Biblical wisdom simply begins with the recognition that all knowledge and understanding is drawn from the personal revelation of God.

Jones and Wilder propose that the biblical concept of wisdom elucidates the formulations of social-science theories that attempt to describe "faith" development.[64] Wisdom begins with the acknowledgment of recognizable–yet transcendent–orderliness and overarching design in the universe, i.e., "the fear of the Lord." The factory of wisdom is thus an individual's ongoing, God-fearing quest for patterns of living that conform to God's design and purpose.

Wisdom in the Ancient Near East. The literature of ancient Israel proposes that wisdom is *not* attained through advanced, formalized intellectual pursuits, but in the daily affairs of life. As such, it provides a basis for formalized systems of teaching and learning.[65]

The wisdom tradition of ancient Israel was not unique from other near-eastern cultures of that time with regard to the practical ends prescribed by its teaching. In fact, many elements of Hebrew wisdom teachings were adapted from outside sources.[66] As Goldsworthy says, "Obviously Israel's wisdom had much in common with that of her neighbors, and this is not surprising since they all belonged to the same humanity in the same world. They faced the same matters of personal and social interaction, and they all had to learn to live, as far as possible, in harmony with the environment."[67] Wisdom is

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[64]Ibid., 189.

[65]Estes, *Hear My Son*, 30.

[66]Kaiser, *The Old Testament Documents*, 148.

[67]Graeme Goldsworthy, Wisdom and its Literature in Biblical-Theological Context," *Southern Baptist Journal of Theology* 15 (2011): 43.

pursued and developed in virtually all cultures. Wisdom that is distinctively God-fearing, however, while identical in developmental pattern to that of worldly wisdom, strains toward an opposite telos (Phil 3:13-14). Thus, the treasury of Israelite wisdom is inclusivist regarding many of its vetted, commonsense maxims, and it is exclusivist in its conviction that Yahweh is wisdom's only source and only true end.[68]

Biblical wisdom versus worldly wisdom. As noted, there is a certain extent to which experiential wisdom is available to all (Prov 14:33). *Godly* wisdom, however, is only available to those who understand wisdom's true source and goal. Certainly the Bible teaches that worldly wisdom exists, but worldly wisdom flows from knowledge that is devoid of the fear of the Lord; it derives from the insight of those who suffer from "epistemic blindness."[69] Hence, "A scoffer seeks wisdom in vain, but knowledge is easy for a man of understanding" (Prov 14:6).

Wisdom that is distinctively biblical stems from the knowledge and understanding that is obtained on the basis of God's special revelation, specifically in light of redemption in Christ. Thus, the "wisdom of the world" is made foolish by God (1 Cor 1:20). As one is enabled to view the world through the eyes of faith-centered reason, his pursuit of wisdom is naturally God-glorifying.[70]

In the literature of ancient Israel, the fundamental difference between Godly wisdom and worldly wisdom hinges on the foundational truth of Genesis 1-2: Yahweh is the almighty, infinitely good creator of all things. Kaiser says, "Wisdom is radically oriented toward God from start to finish: A God who is personal, communicative, creative, just, righteous, directing the whole secular and sacred process from start to

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[68]Paul R. House, *Old Testament Theology* (Downers Grove, IL: IVP Academic, 1998), 454.

[69]See Timothy Paul Jones, "John Calvin and the Problem of Philosophical Apologetics," *Perspectives in Religious Studies* 23 (1996): 387-403.

[70]Frame, *The Doctrine of God*, 199.

finish."[71] Simply put, redeemed wisdom extends from a God who is not obscure, but intimately revealed and ubiquitously present in the lives of his people, such that the whole of their existence is defined by his abiding presence.[72]

Biblical Wisdom and Faith-Centric Epistemology

The starting point for both biblical wisdom and epistemological formulations that focus on the activity of faith is the universally-accessible general revelation of God in creation, the *sensus Divinitatus* (see Job 38, Ps 19; Rom 1:19-20).[73] Proponents of "Reformed Epistemology," including Plantinga, Mavrodes, Wolterstorff, and Alston, follow Calvin and Reid in asserting that "humans are psychologically so constructed by their Maker that when they undergo certain kinds of experiences, a belief in God is naturally and noninferentially the result."[74] True wisdom, knowledge, and understanding–obtained only by those who submit to God's lordship–derive from one source: the fear of the Lord (Ps 110:10; Prov 1:7, 9:10; 15:33).[75] This Godly fear, according to Reformed Epistemology, is a God-given component of man's noetic structure in creation. Fear of the Lord–shown forth by believers' reverence, belief, and active faith–is a "natural" and "reliable" function of human epistemic faculties.[76] Thus, belief in God is "properly basic," and does not require logical or empirical justifying evidence.[77] Bavinck says,

[71]Kaiser, *The Old Testament Documents*, 154.

[72]Graeme Goldsworthy, *According to Plan: The Unfolding Revelation of God in the Bible* (Downers Grove, IL: InterVarsity Press, 1991), 172.

[73]James R. Estep, Jr., "Developmental Theories: Foe, Friend, or Folly? The Role of Developmental Theories in Christian Formation," in *Christian Formation: Integrating Theology and Human Development*, ed. James R. Estep and Jonathan H. Kim (Nashville: B&H Academic, 2010), 45.

[74]Jay W. Wood, *Epistemology: Becoming Intellectually Virtuous* (Downers Grove, IL: InterVarsity Press, 1998), 162.

[75]Frame, *The Doctrine of God*, 508.

[76]In particular, Plantinga's epistemology is defined as "naturalistic"–contra classical foundationalism, and as focusing on the qualities of "reliabilism" with regard to knowledge rather than strict criteria for "justification." See Alvin Plantinga, *Warrant: The Current Debate* (New York: Oxford University Press, 1993).

[77]See Alvin Plantinga, "Reason and Belief in God," in *Faith and Rationality: Reason and*

"Scripture . . . does not make God the conclusion of a syllogism, leaving it to us whether we think the argument holds or not. But it speaks with authority. Both theologically and religiously it proceeds from God as the starting point."[78] All human beings are "believers" who naturally and unavoidably trust the deliverances of their cognitive faculties of perception for knowledge, rather than principles of objective verification.[79] In creation, man's natural perception provided communion with God. The noetic effects of the fall are such, however, that man's natural Godly fear is replaced by a defective nature that seeks to identify truth by looking inwardly–to himself–rather than looking outwardly to God.[80]

The centrality of faith. The concept of "the fear of the Lord" as the basis of knowledge, understanding, and wisdom strongly asserts the centrality of faith as the platform for epistemological maturity unto wisdom. Passages that articulate this truth form the backdrop for the centuries-old Christian position of "faith seeking understanding," articulated famously by Augustine and Anselm.[81] Reformed epistemology suggests that most often faith is elicited through the stimulation of a person's cognitive faculties through revelatory experiences rather than by argument or

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Belief in God, ed. Alvin Plantinga and Nicholas Wolterstorff (Notre Dame, IN: University of Notre Dame Press, 2007), 73-91.

[78]Quoted in Plantinga, "Reason and Belief in God," 72.

[79]In *Moral Believing Animals*, 45-61, Christian Smith develops the idea that belief is a universal aspect of humanness. He concludes, "we simply cannot function at all in our human lives without first committing ourselves to sets of assumptions and presupposed beliefs that make any functioning human life possible."

[80]See Michael E. Wittmer, *Don't Stop Believing: Why Living Like Jesus is Not Enough* (Grand Rapids: Zondervan, 2008), 138-42. Wittmer observes the inward focus at the core of both modernism and postmodernism regarding knowledge. Modernists focus on *certainty*, e.g., "If you can prove it, you can know it." Postmodernists focus on *humility*, e.g., "You can't prove it, so you can't know it." The biblical notion of knowledge converges these two extremes and focuses on humble assurance, e.g., "You can't prove it, but you can still know it." Wittmer says, "Modern thinkers (both secular and Christian) and postmodern innovators make the same mistake: they start with themselves. Both groups claim to know only what their minds can prove."

[81]Brad Green, "Theological and Philosophical Foundations," in *Shaping a Christian Worldview: The Foundations of Christian Higher Education*, ed. David S. Dockery and Gregory Alan Thornbury (Nashville: Broadman & Holman, 2002), 80-81.

reason.[82]

The most defining aspect of wisdom is relevant, trustworthy, practical application of revealed truth to daily living. The manner in which one encounters, engages, and interprets the situations of everyday life are directly influenced by one's most basic presuppositions about ultimate matters, i.e., by one's metaphysical priorities or "worldview." One's worldview is comprised by basic beliefs. *Faith* consists of basic beliefs that are held with a personal sense of "claiming," i.e., with conviction and hope (Heb 11:1). Wisdom is the application of one's faith. There is an evident progression, therefore, between worldview formation and wisdom, within which faith exists as the central defining element which propels Godly understanding and growth. Set in reverse order: wisdom–the ultimate epistemic goal–is the application of one's faith; faith is the convictional personal claiming of basic beliefs; and basic beliefs are products of the universal human function of natural perception.

Trust and warrant. In order to know anything at all, therefore, one must trust his natural, belief-forming faculties of perception. All knowledge requires the foundation of basic beliefs, which are ungrounded by empirical or logical justification. Mavrodes discusses this in relation to the "proved-premise principle" in logic, which suggests that every claim must be verified by a proven premise.[83] Such a premise is impossible to maintain solely by the employment of logic, he observes, since premises are foundational by nature. Without an infinite series of arguments, therefore, the demand for proof in the form of logical irrefutability cannot be met. The whole enterprise of systematic logic is predicated on axiomatic statements and claims which, though accepted, are logically unverified. Mavrodes thus identifies the "termination rule," which simply recognizes the

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[82]Jay Wood, *Epistemology: Becoming Intellectually Virtuous* (Downers Grove, IL: InterVarsity Press, 1998), 164.

[83]George I. Mavrodes, *Belief in God: A Study in the Epistemology of Religion* (New York: Random House, 1970), 27.

necessity of terminating the grounds or foundations of one's beliefs at a decided point. He concludes that "if there is any knowledge at all, then there must be some source of knowledge other than argumentation."[84] That source for Mavrodes, and all others who fear the Lord, is the revelation of God contained in Scripture and embodied in Christ.

In an age of skepticism, Thomas Reid boldly declared the limits of philosophical reasoning.[85] Reid, whose philosophy was dominant in American higher education during the late eighteenth and nineteenth centuries,[86] asserted–contra Hume, Berkeley, and Locke–that the most basic element of man's epistemic function is that of unverifiable belief rooted in perception or direct awareness. Wolterstorff identifies the most fundamental component of Reidian epistemology as *trust*. He says,

> Not only is the transition that occurs in perception, from sensation to conception and belief of the external object, not a transition effected by reason. We can also neither establish the reliability of this transition without falling into practical circularity nor can we offer an explanation of it. In all those ways it is ungrounded: *rationally ungrounded*. Yet we are so constituted–or so ruled–that we do in fact trust its reliability. Ungrounded trust, trust without reasons for trusting, that's what is deepest in Reidian piety.[87]

Basic beliefs are clearly vital and consequential. One's presuppositions guide the formation of his worldview, which infiltrates every aspect of his life–including the orientation of his personal identity and development. Scripture thus portrays the directionality of growth as following one of two opposite paths: "following the course of this world," or with the church, "being built together into a dwelling place for God by the Spirit" (Eph 2:2, 22). Thus, the determinative factor in the perception of true basic beliefs is redemption in Christ accompanied by convictional faith and good works. Faith, by its

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[84]Ibid., 49.

[85]Nicholas Wolterstorff, "Reid on Common Sense," in *The Cambridge Companion to Thomas Reid*, Cambridge Companions to Philosophy, ed. Tereence Cuneo and Rene Van Woudenberg (New York: Cambridge University Press, 2004), 90.

[86]William C. Ringenberg, *The Christian College: A History of Protestant Higher Education in America*, 2nd ed. (Grand Rapids: Baker Academic, 2006), 43.

[87]Nicholas Wolterstorff, *Thomas Reid and the Story of Epistemology* (New York: Cambridge University Press, 2004), 261.

very nature, is not substantiated by evidence–though it may well buttressed or defensible by evidence. "Justification" of knowledge–a criteria by which basic beliefs can be demonstrated as purely objective and non-fiduciary–is thus an illusory concept.[88] A Christian's beliefs are not formed with no criteria of reliability, however.

Reformed Epistemologists such as Plantinga and Alston propose that the concept of justification should be dismissed in favor of a focus on "truth-conducive" features of belief, or "warrant."[89] For Plantinga, warrant is the quality that converts belief into knowledge, and a belief may be warranted if: it is formed while one's mind and senses are functioning properly, if it is formed in an environment suitable for detecting truth, and if it has a reasonable likelihood of being true.[90] On this basis, Reformed Epistemology is characterized as a "naturalistic" and "broad foundationalist" epistemological formulation, which counts warranted beliefs as "innocent until proven guilty" rather than the reverse.[91] To be sure, warrant does not determine the truth of a belief. It does, however, substantiate Christian belief–which presupposes the truth of Scripture–to the same degree that *any* belief may possibly be substantiated. As Wittmer says, "… although I cannot prove my belief in God or prove that Scripture is God's word, I am permitted to start there. I must be prepared to defend these beliefs against any and all objections, but I do not need to withhold belief until I prove them."[92]

Christ: The sum and goal of wisdom. Wisdom, the informed practice of living daily in light of God's truth, draws from the root of epistemological foundations, or

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[88]William P. Alston, *Beyond "Justification": Dimensions of Epistemic Evaluation* (Ithaca, NY: Cornell University Press, 2006), 21.

[89]See Alston, *Beyond "Justification,"* and Alvin Plantinga, *Warranted Christian Belief* (New York: Oxford University Press, 2000).

[90]Alvin Plantinga, *Warrant and Proper Function* (New York: Oxford University Press, 1993), 46.

[91]Alston, *Beyond "Justification,"* 200.

[92]Wittmer, *Don't Stop Believing*, 154.

warranted beliefs. One's warranted presupposition of the truth of Scripture informs and guides one's faith, which is the essential substance that enables maturity unto wisdom. As the root grows stronger, wisdom likewise increases and flourishes. Thus, the telltale indication of epistemic growth is righteous living, while the indication of epistemic restriction is "knowledge" unaccompanied by conviction and application. John thus urges the church, "Little children, let us not love in word or talk but in deed and in truth" (1 John 3:18). James likewise calls believers to be "doers of the word, and not hearers only, deceiving yourselves" (Jas 1:22). Godly deeds represent the "completion" of genuine faith (Jas 2:22). Wisdom, therefore, is the natural result of genuine, active Christian faith based in the fear of the Lord. In sum, biblical wisdom entails the perception and acquisition of warranted beliefs which are personally claimed by faith and put into action for the ultimate purpose of identification with Christ: "the power of God and the wisdom of God" (1 Cor 1:24). Commenting on this passage, Goldsworthy observes, "Not only is the true locus of God's wisdom found in Christ, and him crucified, but such wisdom shows that all human wisdom is folly when it is not founded on Christ."[93]

Yahweh: Wisdom's Beginning and End

God's infinite wisdom derives from his origination of all things, and his comprehensive understanding of the universe (Job 28:20-28). Full understanding and wisdom dwells only in God, and cannot be obtained by human beings. God originated wisdom in the universe, and is continuously aware of every facet of created existence. As Andersen observes, "The place of wisdom is not simply in the mind of God. Wisdom is what God *understands* when he *looks to the ends of the earth*. Wisdom is observable in the universe because God embodied it in his creation. . . . Men can see this for themselves, but only when God himself shows it to them (Rom 1:19)."[94] Humankind's

[93]Goldsworthy, "Wisdom and its Literature in Biblical-Theological Context," 46.

[94]Francis I. Andersen, *Job: An Introduction and Commentary*, Tyndale Old Testament Commentaries, vol. 14 (Downers Grove, IL: InterVarsity Press, 1976), 246-47.

dependency on God's revelatory impartation of wisdom buttresses the straightforward conclusion that earthly wisdom consists of fearing the Lord and shunning evil (Job 28:28).

God's sovereign wisdom. The words of Solomon explicate the connection between God's sovereignty and the appropriate human response: "I perceived that whatever God does endures forever; nothing can be added to it, nor anything taken from it. God has done it, so that people fear before him" (Eccl 3:14). God, being almighty and unbound by time (as opposed to man) is completely sovereign and infinitely wise. Far different from human and earthly establishments, the sovereign grace of God provides ultimate security. His plans never fail, his will is effective and complete, and his actions are invincible to any opposition.[95] Moreover, no earthly wisdom, understanding, or counsel can stand against the wisdom of God (Prov 21:30). Given that Yahweh fashioned the earth in *his* wisdom, it follows that no ideology can overtake his will and plan. Thus, Garrett says, "We are altogether contingent beings and our only appropriate response is reverence."[96]

Wisdom by which the earth was founded. God created the world in the context of wisdom. He fashioned its every facet intentionally, with organization and cohesion.[97] Wisdom itself is a natural byproduct of God's character.[98] The governing hand of God rules over every part of the universe that he founded in wisdom. Wisdom is established by Yahweh, and is therefore not a separate (or even complementary) force in the created order. Wisdom was imbued by God into the creation from the beginning, to

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[95]Michael A. Eaton, *Ecclesiastes: An Introduction and Commentary*, Tyndale Old Testament Commentaries, vol. 18 (Downers Grove, IL: InterVarsity Press, 1983), 96.

[96]Duane A. Garrett, *Proverbs, Ecclesiastes, Song of Songs*, The New American Commentary, vol. 14 (Nashville: Broadman & Holman, 2001), 300.

[97]House, *Old Testament Theology*, 443.

[98]Ibid., 444.

such a comprehensive degree that Proverbs declares, "The Lord by wisdom founded the earth; by understanding he established the heavens; by his knowledge the deeps broke open, and the clouds drop down the dew" (Prov 3:19-20). This foundational wisdom permeates the design, order, and function of God's world. Thus, as one submits to God's will and grows in wisdom, he is essentially put in harmony with creation;[99] or, if one abandons the pursuit of wisdom he chooses to fight against the very structure by which all things were made.[100]

Fear of Yahweh:
The Engine of Epistemic Vitality

The forgoing section established the centrality of faith as essential for biblical maturity unto wisdom. This section extends that notion specifically in light of the "fear of the Lord" motif in biblical wisdom literature. In sum, Godly fear–in the positive sense of awe and reverence–precludes any claim to epistemological autonomy on the part of an individual. As Estes observes, "The fear of Yahweh as the crucial principle for wisdom indicates that in biblical wisdom knowledge is impossible without belief. In other words, it teaches that faith seeks understanding."[101]

The beginning of knowledge and wisdom. Proverbs begins with the emphatic introductory statement, "The fear of the Lord is the beginning of knowledge" (1:7). In view of the relationship between biblical wisdom and a faith-centric epistemological paradigm, it is important to note that *knowledge*, in its fullest sense, "is a relationship, dependent on revelation and inseparable from character."[102] Proverbs 9:10 bookends the introductory section of the book with a reiteration of the guiding premise throughout

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[99]Estes, *Hear My Son*, 23.

[100]Garrett, *Proverbs, Ecclesiastes, Song of Songs*, 83.

[101]Estes, *Hear My Son*, 38.

[102]Kidner, *Proverbs*, 56.

biblical wisdom literature: "The fear of the Lord is the beginning of wisdom, and the knowledge of the Holy One is insight." The crux of this statement is the profound assertion that true wisdom apart from the covenant God is simply impossible; thus, secular or atheistic ethics are thus implicitly rejected.[103] When God is not recognized as the founder and initiator of all knowledge and insight, wisdom will be claimed by individuals as a product of their own epistemic autonomy. In terms of biblical wisdom, such a position–even in cases of those who may be quite learned and experienced–is a mark of foolishness and ultimate hopelessness (Prov 26:12).

The moral dimension of wisdom. Wise living involves fearing the Lord and shunning evil (Job 28:28). The nature of wisdom identifies the ethical component of intellectual progress and development: knowledge is useful only to the extent that it informs one's behavior and character.[104] In Proverbs 8, personified wisdom proclaims that wisdom stems from the God-fearing desire to flee evil, which particularly involves a rejection of pride, arrogance, and perverted speech (Prov 8:13). It is impossible to live (skillfully) as God intended without pursuing holiness. As Kidner observes, "What is repugnant to godliness is repugnant to wisdom: there is no conflict of interests."[105]

It is thus only in the spirit of humility–rightly attributing all authority to God–that one will diligently seek the revelation of God. When sought with godly intention, however, wisdom is not elusive, but ever-present and clear. This is a key biblical theme that ties together necessary elements of the Christian life: sanctification, steadfast prayer, and redeemed epistemic maturation. In all matters of faith and practice–as well as in the initial receiving of God's grace in salvation–it is one's forgoing submission to God's will that brings about a Spirit-induced character that is righteous and in conformity with

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[103]Garrett, *Proverbs, Ecclesiastes, Song of Songs*, 115.

[104]Andrew E. Hill, "Hebrew Poetic and Wisdom Literature," in *A Survey of the Old Testament*, ed. Andrew E. Hill and John W. Walton (Grand Rapids: Zondervan, 2000), 322.

[105]Kidner, *Proverbs*, 73.

God's design and plan. The basis of a believer's righteous character is God's unconditional election, not intellectual assent or intrinsic goodness. In light of this truth, consider the words of Christ: "You did not choose me, but I chose you and appointed you that you should go and bear fruit and that your fruit should abide, so that whatever you ask the Father in my name, he may give it to you" (John 15:16).[106]

Epistemological Implications from Biblical Wisdom Teachings

The notion that wisdom cannot be separated from ethics and morality is a distinctive characteristic of biblical wisdom that introduces a key epistemological implication. Contra Greek and philosophical conceptions of ethics, Hebrew wisdom held that the starting point for understanding good and evil is Yahweh's moral order rather than the supposed autonomous reasoning capability of human beings.[107] This is consistent with the primary assertion of Reformed Epistemology, which holds "that a believer is entirely rational, entirely within his epistemic rights, in *starting with* belief in God, in accepting it as basic, and in taking it as premise for argument to other conclusions."[108] Having this association between wisdom and cognitive reasoning in mind, one may consider some other important implications that emerge regarding developmental presuppositions and the process of teaching and learning.

True understanding: A gift of the Spirit. In his rebuke of Job's friends, Elihu states that true understanding comes from the spirit of God in man, not simply age and experience (Job 32.8-9). While wisdom should increase with age, it does not necessarily do so. Scripture is clear that age is not the guarantor of wisdom. As Alden says, "Gray

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[106]Regarding the supplication of believers who approach God with genuine faith and obedience, see also Ps 37:4; Jer 29:13; Matt 7:7-8; Acts 2:21; Rom 10:13; Jas 1:5; 1 John 3:22, 5:14.

[107]Estes, *Hear My Son*, 26.

[108]Plantinga, "Reason and Belief in God," 72.

hair does not ensure understanding."[109] In fact, the Spirit of God may grant that one is wise beyond his years (Eccl 4:13).[110]

The pursuit of wisdom illuminates an important biblical principle regarding the relationship of God's sovereignty and human responsibility in the process of sanctification. Indwelled by the Holy Spirit, redeemed individuals are set on a new course in which their lifestyles are transformed and defined by the desire for righteousness rather than sin (Rom 6:18). With this reversal of natural desires, growth in Godly wisdom is made possible. Christians are thus enabled to reflect on life experiences from the perspective of God's truth, and then live and mature accordingly. Such reflection represents the expectation for all believers set forth in biblical wisdom literature, that they must think and live according to a thoroughly biblical teleology–Christlikeness. Goldsworthy says, "In revelation, God gives the framework for godly thinking but he will not do our thinking for us. We are responsible for the decisions we make to be wise (to think in a godly way) and to avoid being foolish (to think in a godless way). Decisions are wise when they are made in the light of the life which God sets before us as our goal."[111]

Pursuing righteousness unto wisdom. Biblical wisdom involves the pursuit of godly righteousness, and it is that righteousness that grounds prudence–not the other way around.[112] So, for instance, sexual restraint is valued as a quality of righteousness, and as such it entails prudent ends, such as respect, fulfillment in marital relationships, and physical health and well-being. Those prudence ends, however, do not establish righteousness; they are the outworking of a righteous (wise) choice.

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[109]Robert L. Alden, *Job*, The New American Commentary, vol. 11 (Nashville: Broadman & Holman, 2001), 319.

[110]Eaton, *Ecclesiastes*, 110.

[111]Goldsworthy, *According to Plan*, 176.

[112]Estes, *Hear My Son*, 42.

Regarding the relationship between faith and works presented in Scripture, it must be understood that wisdom is founded in one's convictions, which are warranted by faith. In this way biblical wisdom (and epistemic development) requires trust rather than self-confidence.[113] Wisdom essentially entails the acceptance that human knowledge is limited insofar as it is dependent on Yahweh's revelation. Such trust in the goodness and righteousness of God (Prov 3:5, 11), elicits a humble, teachable spirit, that provides fertile soil for training in wisdom.[114]

Teachability and epistemic growth. It may seem redundant to state that growth in knowledge and understanding requires teachability. The writers of biblical wisdom literature, however, are quite intentional in calling on God's people to have a teachable spirit. This is most clearly seen in passages that speak of God's discipline and reproof. For instance, "Whoever loves discipline loves knowledge, but he who hates reproof is stupid. . . . The way of a fool is right in his own eyes, but a wise man listens to advice" (Prov 12:1,15). Here, the nature of epistemic maturation is aligned with active learning, or *change*. For one to undergo the change brought about by active learning, he must be ever-ready to confront his need for deeper knowledge and understanding. As one seeks to grow in godliness through daily living, this sort of confrontation is the quintessential component of the Lord's disciplinary action and reproof.

The willingness to receive correction and rebuke is a distinguishing mark of a "man of understanding" (Prov 17:10). Conversely, a foolish man is described as one who seeks to opine rather than understand (Prov 18:2). Stemming from the necessity of teachability, becoming wise requires a lifestyle commitment to progressive understanding rather than close-minded knowledge. When one's epistemic faculties are ruled completely by his own established opinions, he is sure to disable his capacity to grow in wisdom.

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[113]Ibid., 43.

[114]Ibid., 45.

The never-ending pursuit of wisdom. Given that teachability is grounded in the fear of Yahweh (Prov 9:10), wisdom is thus a commitment to lifelong learning.[115] This expectation–that the wise continue to grow–is articulated clearly by the statement, "Give instruction to a wise man, and he will be still wiser; teach a righteous man, and he will increase in learning" (Prov 9:9).

The Lord gives wisdom; he is its sole source (Prov 2:6). In Proverbs, this wisdom is articulated and suggested by the teacher, who calls his student, "My Son" (Prov 2:1). The instructor's relaying of the truth of wisdom, however, must not be mistaken for the fashioning of that wisdom in the first place. Nor should the comprehension of wisdom be merely a function of hearing, but of aligning one's heart to the revelation of God as it relates to living a righteous life in God's world. The fear of the Lord, as it relates to the apprehension of wisdom, is the prioritization of seeking God foremost in all areas of life. Along with absolute reverence, there is a distinct element of humility to this search, in that the seeker must long to grow in wisdom while realizing he will never arrive at the end of his pursuit. The wisdom of God is, after all, unsearchable (Rom 11:33).

In Ecclesiastes 4:13, Solomon exposes the sinful foolishness of considering oneself wise enough. He says, "Better was a poor and wise youth than an old and foolish king who no longer knew how to take advice." Essentially, wisdom is a product of ongoing *transformation* (Rom 12:2; 2 Cor 3:18), rather than *arrival*. At the point one becomes so "wise" that he needs not take advice, he precludes himself from the very quality that legitimizes his authority and guidance of others in the first place. Solomon's statement rightly underscores the "folly of self-sufficiency."[116] In contrast, the biblical mark of a wise man is his intentional willingness to seek counsel (Prov 13:10).[117]

[115]Ibid., 47-48.

[116]Eaton, *Ecclesiastes*, 109-10.

[117]Roland Murphy, *Ecclesiastes*, Word Biblical Commentary, vol. 23A (Dallas: Word, 2002), 42.

Guidance and committed seeking. While wisdom is transmitted by both parents and teachers, most of the references to father and son in Proverbs (e.g., Prov 4:1-9) best fit the relationship of teacher and pupil.[118] The nature of the teaching and learning process as intimately formational underlies this parental association. Citing Shupak's[119] analysis of progressive stages of learning in ancient Israel, Estep observes that biblical wisdom literature portrays epistemological development as an individual's progression from abstract content mastery to active learning.[120] Such learning underlies one's entire concept of life, rather than merely his inward, intellectual processes. The concept of teaching, therefore, while including teacher-centered methods of indoctrination for younger or less-mature students, has as its end-goal the facilitation of learning that leads to learners' independent undertaking of the pursuit of wisdom.

The instruction technique put forth in Proverbs entails guiding the learner onto the path of wisdom–equipping him with the tools and values by which to follow God and seek wisdom.[121] Commenting on the role of the teacher according to the precedent set forth in closing part of Proverbs' opening section (9:1-6, 13-18), Estes says, "The teacher's role is to bring the learner to the point where he himself is capable of evaluating the alternatives and making a responsible decision. The teacher equips the learner to make the decision, but his role is not to decide for the learner what he must do."[122]

If the goal of teaching is to guide the learner onto the path of wisdom, so that the student may become independently competent in skillfully living within God's created order, the role of the learner is to effectuate a pattern of assimilating wisdom as

[118]Estes, *Hear My Son*, 32.

[119]Nili Shupak, "Learning Methods in Ancient Israel," *Vetus Testamentum* 53 (2003): 416-26, proposes an apparent pattern of learning in ancient Israel from studying the terminology of the Hebrew wisdom literature, particularly Proverbs and Ecclesiastes. Learning methods progress from passive techniques (listening, obedience, observance) to active involvement (understanding, mastery, searching/ pondering).

[120]Estep, "Developmental Theories," 78-79.

[121]Estes, *Hear My Son*, 104.

[122]Ibid., 128.

one's philosophy of life.[123] Students must realize that wisdom does not come from experience alone, but from diligent preparation under the guidance of a trusted, authoritative guide. The invaluable experience of receiving counsel and instruction is a necessary prerequisite to living a life of wisdom: "Listen to advice and accept instruction, that you may gain wisdom in the future" (Prov 19:20).

Teaching that inculcates wisdom intentionally and effectively cultivates learners' desires to pursue the appropriation of wisdom–rather than knowledge acquisition.[124] Such learning makes commitment to God's truth its prime value, and the active pursuit of truth its chief end (Prov 2:1-4). Estes says, "Unlike a student who memorizes facts for an examination only to forget them promptly after the test is past, the learner in Proverbs is challenged to keep the truth ever before him."[125]

Biblical Wisdom and the Christian Life

According to biblical wisdom literature, the curriculum of wisdom teaching is life. This follows from the presupposition that Yahweh created the world in his infinite wisdom, thus imbuing it with comprehendible order. God's order is not only perfectly designed but–as a reflection of his character–perfectly just. Biblical wisdom is thus not amoral pragmatism, but skillful adherence to the practice of Godly character.[126] God's people are called to pursue and acquire wisdom, and they are to progressively develop into maturity. Such is the thrust of the entire book of Proverbs.[127] The basis of wisdom development is transformational learning–not merely receiving facts, but developing a holistic worldview molded by the special revelation of God, and enacted by intentional application. This is the beginning and end of knowledge and learning. This is the

[123]Ibid., 133, 147.

[124]Ibid., 65.

[125]Ibid., 66.

[126]Ibid., 27.

[127]House, *Old Testament Theology*, 441.

beginning and end of the Christian life.

The Perry Scheme: Theoretical and Philosophical Underpinnings

The foregoing overview of biblical foundations, priorities, and prescriptions regarding knowledge and development represents an evangelical paradigm against which the foundations, priorities, and prescriptions of the Perry Scheme may be juxtaposed, revealing consistent developmental patterns and divergent presuppositions and values. William Perry's scheme of ethical and intellectual development is a formulation derived from major developmental and ideological paradigms which were prominent at the time of Perry's original study. This section introduces the underlying foundations upon which Perry's study was conceived and according to which his scheme was generated and organized. The essential theoretical setting of the Perry Scheme primarily includes Piagetian developmental premises. Perry's philosophical platform issues from a synthesis of contextual pragmatism and existentialism, drawing most significantly from Dewey and Polanyi. These formative influences are manifestly present throughout Perry's work, as evidenced in the review below.

Theoretical Underpinnings

When Perry and his associates discovered that the phenomenon of development they observed could not be interpreted adequately through personality theory, they chose to analyze and interpret their data from a developmental perspective, loosely based on the most established framework at the time–Jean Piaget's.[128] The Perry Scheme traces a process of development which is analogous to Piaget's concept of "decentering" throughout multiple stages of maturation.[129] Perry conceives of this

[128]William S. Moore, "Understanding Learning in a Postmodern World: Reconsidering the Perry Scheme of Ethical and Intellectual Development," in *Personal Epistemology: The Psychology of Beliefs about Knowledge and Knowing*, ed. Barbara K. Hofer and Paul R. Pintrich (Mahwah, NJ: Lawrence Erlbaum Associates, 2002), 31.

[129]William G. Perry, Jr. *Patterns of Development in Thoughts and Values of Students in a*

decentering as mediated by assimilations and accommodations that occur in the structures of the mind through which people make sense of their experiences. The process of equilibrizing that takes place through the college experience which is explored by Perry, provides a unique elaboration and extension of Piagetian theory.

Cognitive-structural theory. The Perry Scheme is one of a number of "cognitive structural" theories of development–all of which have their origins in the thought of Jean Piaget.[130] Cognitive-structural theorists, following Piaget, "seek to describe the nature and processes of change, concentrating on the epistemological structures individuals construct to give meaning to their worlds."[131] Three important elements identify almost all cognitive-structural theories: an ordered, series of stages of development through which an individual passes, and a hierarchical organization and pattern of those stages–each stage serving as a prerequisite for the next, and an assumption that development occurs through a process of stimulus and response followed by adaptations which involve either assimilation or accommodation.[132] The developmental process is thus viewed as a continuous series of constructions and reconstructions, or, as Perry says, "differentiations and reorganizations."[133] Most cognitive-structural theories maintain that progression through stages is irreversible, while others–including the Perry Scheme–hold that both forward and backward movement may occur.

Piaget conceived of development in *stages*, wherein a process of balancing and

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Liberal Arts College: A Validation of a Scheme (Cambridge, MA: Bureau of Study Counsel, Harvard University, 1968), 12.

[130]Ernest T. Pascarella and Patrick T. Terenzini, *How College Affects Students: A Third Decade of Research*, 2nd ed. (San Francisco: Jossey-Bass, 2005), 33.

[131]Ibid., 33.

[132]Ibid., 33-34.

[133]William G. Perry, Jr., *Forms of Ethical and Intellectual Development in the College Years: A Scheme* (San Francisco: Jossey-Bass, 1999), 3.

rebalancing takes place through *assimilation* and *accommodation*. Stages are simply structures of the mind which serve to guide and construct one's assumptions about how to adapt and organize his life and worldview in relation to his environment.[134] Assimilation is the cognitive process of interpreting new information according to one's already existing worldview structures. This process is usually attempted first. If an effort to assimilate fails, a new, more complex structure must be created in the mind. This creative act is accommodation. Accommodation occurs when one's existing structures for knowledge and meaning cannot account for new information, thus requiring that one's cognitive structures be changed or adjusted in order to make room for new concepts or realities. Perry notes that assimilation involves "selection, simplification, and distortion," while accommodation involves "recombinations and transformations which result in new forms of expectancy."[135] He also observes that a person is usually unaware when the process of assimilation is underway, becoming conscious of those assimilations he has made only upon retrospect.[136] Most assimilations are therefore implicit rather than explicit. By contrast, one is usually consciously aware of accommodations as they occur, by a sense of realization.[137] In Perry's interviews, he was most intent to capture explicit and implicit instances of such realizations.

The balance that is sought through the joint processes of assimilation and accommodation is termed *equilibrium* by Piaget. Human beings seek equilibrium, and development is halted if too much of either assimilation or accommodation occurs. Development is thus "an evolving movement from equilibrium through disequilibrium toward a new equilibrium."[138] Kurfiss notes that there is a limit to the amount of

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[134]Nancy J. Evans et al., *Student Development in College: Theory, Research, and Practice*, 2nd ed. (San Francisco: Jossey-Bass, 2010), 43.

[135]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 46.

[136]Ibid.

[137]Ibid., 47.

[138]Sharon Parks, *The Critical Years: Young Adults and the Search for Meaning, Faith, and*

disequilibration that students can handle at once. Both Piaget and Perry contend that an individual cannot be expected to advance more than one position forward at a time. This tenet is equivalent to the "+I principle" identified in developmental psychology.[139]

The whole developmental phenomenon may be described as *decentering*–a process which "constantly subjects increases in knowledge to a refocusing of perspective."[140] Furthermore, the process of decentering is recapitulated in and throughout every stage of development, from the lowest to the highest levels.[141] This is a key concept for Perry in his depiction of recursive development.

Piaget's key overall insight, according to Parks, is that human beings actually grow in their ability to construct meaning in the world by interacting with their environments and developing increasingly complex processes of thinking and knowing.[142] In this way, Piaget precedes Perry in conceiving of the goal of epistemic maturation as becoming the decisive architect of one's own worldview. His theory is described as "constructionist" or "interactionist" since it emphasizes the active participation of the learner in formulation his own worldview positions.[143] Rather than mere knowledge acquisition, Piaget focuses on how a person ties together all aspects of his life and learning to construct a coherent life narrative, thus making sense of his world.

Piaget: Adolescent development. Piaget identifies the capacity to think and act according to abstract notions (rather than according to what is immediately present) as an essential competency for entrance into adulthood. "Formal thinking," he says, "is both

Commitment (San Francisco: HarperCollins, 1991), 33.

[139]Joanne Kurfiss, "Intellectual, Psychosocial, and Moral Development in College: Four Major Theories," in *Teaching and Learning in the College Classroom*, ed. Kenneth A. Feldman and Michael B. Paulsen (Needham Heights, MA: Simon & Schuster, 1994), 166.

[140]Barbel Inhelder and Jean Piaget, *The Growth of Logical Thinking from Childhood to Adolescence* (New York: Basic Books, 1958), 341.

[141]Ibid., 342.

[142]Parks, *The Critical Years*, 33.

[143]Kurfiss, "Intellectual, Psychosocial, and Moral Development in College," 167.

thinking about thought and a reversal of relations between what is real and what is possible."[144] This concept of "formal operations" is basically synonymous with Perry's concept of "metathought"–the ability to think about thinking. For Piaget and Perry, these underlying structures of thought actually condition the way human beings grasp and interpret reality.[145]

In their extensive study, Piaget and Inhelder observed the first manifestations of worldview formulation in an adolescent population. They say, "The adolescent not only builds new theories or rehabilitates old ones; he also feels he has to work out a conception of life which gives him an opportunity to assert himself and to create something new (thus the close relationship between his system and his life program)."[146]

Inhelder and Piaget suggest that decentering leads to a transition from dualistic (Perry's term) to "objective" modes of thinking in both childhood and adolescence. They say, "Objectivity presupposes a decentering–i.e., a continual refocusing of perspective. Egocentrism, on the other hand, is the undifferentiated state prior to multiple perspectives, whereas objectivity implies both differentiation and coordination of the points of view which have been differentiated."[147] The same mechanism (decentering) that shifts the cognitive structures of children away from egocentrism also accounts for the cognitive development of adolescents.[148] The climax of the decentering process (i.e., when mature thought structures finally emerge), according to Piaget, occurs as an individual into the professional world, or at the beginning of serious professional training.[149] At that point, one exchanges his strictly formal, idealistic perspective for more

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[144]Inhelder and Piaget, *The Growth of Logical Thinking from Childhood to Adolescence*, 341.

[145]Parks, *The Critical Years*, 34.

[146]Inhelder and Piaget, *The Growth of Logical Thinking from Childhood to Adolescence*, 341.

[147]Ibid., 345.

[148]Ibid., 346.

[149]Ibid.

realistic, applied ways of thinking.

Comparing Perry and Piaget. While drawing directly from Piagetian premises, Perry extended and deepened the work of Piaget. Piaget's model describes the development of structures and processes that characterize formal logical thinking. Perry's scheme provides a closer examination of how students think about knowledge and authority by mapping the epistemological perspectives that profoundly affect the processes of learning and personal identity development.[150] Also, the Perry Scheme does not employ a strict criteria for stage construction. In this sense, Perry's is a "soft" cognitive-structural model which does not fit strictly into Piaget's ("hard") theoretical mold.[151]

Perry specifies numerous significant ways in which his study bears distinct similarity to the work of Piaget. First, the Perry Scheme is predicated on the processes of assimilation and accommodation, which explain the creation and maintenance of structures in the mind which guide one's worldview and values.[152] Also, Perry's study shares Piaget's methodological approach–depending primarily on the self-reports of individuals to describe their experiences and reactions to hypothetical problems.[153] For both theorists, this methodology entails a large scope of generalization about human development, taken from a relatively small population sample.

More specifically, Perry identifies his study as reflecting the process articulated by Piaget as the "period of formal operations." This period recapitulates the pattern of developmental experiences at earlier (sensory-motor and concrete operational) stages, in which one progressively departs from naive egocentric perspectives in favor of a more differentiated awareness of his environment. The new awareness of self that emerges

[150]Kurfiss, "Intellectual, Psychosocial, and Moral Development in College," 166.

[151]Moore, "Understanding Learning in a Postmodern World," 31.

[152]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 228.

[153]Ibid., 229.

from this process serves to "make possible a complex dynamic equilibrium between self and environment."[154] Perry's study is thus unique in its exploration of development through late adolescence and early adulthood, but it is anticipated by Piaget in his observance of how an adolescent applies his formal-operational capacities to consider not only what "is" but also what "might be."

The primary distinguishing factor of Perry's research in comparison to Piaget's is the later life stage represented by Perry's population. Piagetian analysis is limited to individuals up to the age of fifteen, while Perry addresses late adolescence and young adulthood. The ages of Perry's population enabled him to explore post-formal development in individuals with significantly more varied and diverse life experiences. Hence, the uniqueness of Perry's analysis is that he observes and reveals students' acquisition and application of metathought–a phenomenon Piaget merely defined. Perry says, "The powers of objectivity and detachment consequent on the ability to meta-think (which in our present culture appears to flower most noticeably after age 15) make it possible for the person to address an entirely new environment. He can now move from the moral environment to the ethical, from the formal to the existential."[155] Perry thus describes his scheme as "adding an advanced 'period' to Piaget's outline."[156] Specifically, Perry's Positions 6-9 are qualitatively different from any Piagetian conception. These stages depict ethical and intellectual maturation as an expression of personal commitments–a developmental priority which emerges from Perry's philosophical roots.

Philosophical Underpinnings

Perry identifies the philosophical context of his study as sharing the assumptions of the contextual-pragmatic and existential traditions.[157] Two major thinkers

[154]Ibid.

[155]Ibid., 229-30.

[156]Ibid., 230.

[157]Ibid., 226.

provide articulation to Perry's philosophical foundations: John Dewey and Michael Polanyi. This section provides a summary of the philosophical positions of these thinkers, particularly with reference to those positions which inform and direct the assumptions of the Perry Scheme.

Dewey: Contextualistic pragmatism. The broadest philosophical context into which Perry categorizes his study is "modern contextualistic pragmatism." This connection is most clearly represented by Perry's emphasis on *purpose*. He says, "The students' ultimate purpose is postulated to be to find those forms through which they may best understand and confront with integrity the nature of the human condition."[158] For Perry, epistemic maturity involves the realization that "facts" are always interpreted within a given context. Conclusions should be drawn, therefore, based on the most desirable effect of one's commitments within his given context. Dewey describes the contextual nature of all knowledge in this way: "Objects of knowledge are not given to us defined, classified, and labeled, ready for labels and pigeon-holes. We bring to the simplest observation a complex apparatus of habits, of accepted meanings and techniques. Otherwise observation is the blankest of stares, and the natural object is a tale told by an idiot, full only of sound and fury."[159]

In pragmatism, the idea of "truth" hinges solely on the notion of practice.[160] Thus, the guiding ideal is effectiveness and utility. Dewey, whose views are grounded in naturalism, maintained that knowledge is a product of active adaptations of the human organism to its environment.[161] By extension, Dewey held to epistemological and moral "fallibilism," the view that no claim to knowledge or morality ever precludes critical

[158]Ibid.

[159]John Dewey, *Experience and Nature*, 2nd ed. (New York: Dover Publications, 1958), 219.

[160]Ted Honderich, ed., *The Oxford Companion to Philosophy* (New York: Oxford University Press, 1995), 710.

[161]Richard Field, "John Dewey (1859-1952)," in *Internet Encyclopedia of Philosophy*, ed. James Fieser and Bradley Dowden, http://www.iep.utm.edu/dewey (accessed July 10, 2012).

inquiry or revision.[162] This view is supported by the notion that rationality and reasoning is ultimately an expression of personal *intuition*, refined and substantiated through critical reflection. Dewey says, "In actuality the difference between an 'intuitive' and an analytic person is at most a matter of degree, of relative emphasis. The 'reasoning' person is one who makes his 'intuitions' more articulate, more deliverable in speech, as explicit sequence of initial premises, jointures, and conclusions."[163] This existentialistic position is a key aspect of Polanyian epistemology as well (see below), and is echoed by Perry in his articulation of higher-level epistemological development.

Stemming from his view of knowledge as a process of adaptation induced by obstacles to human action,[164] Dewey pioneered the teaching method known as "instrumentalism," a process of posing problems that require active inquiry to address and solve, enabling the problem-solver to make a warranted assertion or coherent action.[165] Dewey decried the traditional system of learning, asserting instead that the human mind is a muscle to be trained for application, not a *tabula rasa* or empty receptacle to be passively filled with static information. Perry's adoption of this principle is evident in his concept of "meaning-making"–the mature epistemic activity of a student who formulates his own meaning through the urging and encouragement of a teacher-facilitator and the community of learning.

Related to meaning-making, Dewey's thought is also relevant to Perry's concept of the "costs of growth." Dewey asserts that there is virtually no capacity for cognitive maturation in a person who shuts himself off from introspective analysis or critical inspection of his own worldview. One's willingness to be "open" in this way, however, brings about the distinctive consequences commensurate with transformative

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[162]Honderich, *The Oxford Companion to Philosophy*, 197.

[163]Dewey, *Experience and Nature*, 300.

[164]Field, "John Dewey (1859-1952)."

[165]Honderich, *The Oxford Companion to Philosophy*, 197.

development–namely, a deferral of outright control regarding the formation of one's concept of reality and self-identity. Genuine growth involves the sacrifice of forms of thinking that are comfortable, familiar, and safe. Also, a conscious "surrendering" must take place, in which one accepts the risk of pursuing a path which leads to realities (i.e., worldviews and personal identities) that are unknown, unpredictable, and dynamic. Dewey says,

> The individual, the self, centred in a settled world which owns and sponsors it, and which in turn it owns and enjoys, is finished, closed. Surrender of what is possessed, disowning of what supports one in secure ease, is involved in all inquiry and discovery; the latter implicate an individual still to make, with all the risks implied therein. For to arrive at new truth and vision is to alter. The old self is put off and the new self is only forming, and the form it finally takes will depend upon the unforeseeable result of an adventure. No one discovers a new world without forsaking an old one; and no one discovers a new world who exacts guarantee in advance for what it shall be, or who puts the act of discovery under bonds with respect to what the new world shall do to him when it comes into vision.[166]

Dewey also speaks to the ethical issue of personal responsibility in knowing which is so intrinsic to Perry's developmental values. Progressive maturation entails that one must exhibit the courage of responsible risk-taking. The failure or avoidance of such risk is equivalent to epistemic irresponsibility, which carries its own consequences. As Dewey says, "Those who do not fare forth and take the risks attendant upon the formation of new objects and the growth of a new self, are subjected perforce to inevitable change of the settled and close world they have made their own."[167] Perry's Dualism (Positions 1-3) represents this naive form of knowing, which may commonly serve as a beachhead for attitudes of indifference, intolerance, and bigotry.[168]

Polanyi: Personal, committed knowledge. The latter positions described in the Perry Scheme portray epistemic maturity as resulting from the reflective and continual activity of making active, personal Commitments (capital C) in the face of

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[166]Dewey, *Experience and Nature*, 245-46.

[167]Ibid., 246.

[168]Perry, *Patterns of Development in Thought and Values*, 19.

uncertainty. This conception of the ultimate, desired aim of development as "Commitment in Relativism" represents philosophical assumptions consistent with a synthesis of contextual-pragmatism and existentialism. For Perry, Michael Polanyi, more than any other thinker, provides the articulation of this synthesis.

Like Dewey, Polanyi was a harsh critic of the modernist epistemological paradigm. He termed his epistemology "personal knowledge" as a stark contrast to the modernist claim of outright objectivity with regard to knowledge. Such a claim is dubious, self-defeating, and even tyrannical, according to Polanyi. His central assertion is "that into every act of knowing there enters a passionate contribution of the person knowing what is being known, and that this coefficient is no mere imperfection but a vital component of his knowledge."[169]

Polanyi observes that Modernism, while attempting to reduce man's importance, influence, or centrality in the world, actually elevates the single component of man's *rationality* as being capable of providing the means by which to identify, describe, understand, interpret, and apply every aspect of the universe.[170] But scientific "verification" cannot possibly entail sole reliance on experiments that can be repeated by any person *at will*, Polanyi observes. It must also rely on man's "natural" (inherent) ability to recognize rationality in nature.[171] Thus, personal intuition is basic to both rationality and scientific objectivity. Knowing, therefore, always involves an *appraisal*, and "this personal coefficient, which shapes all factual knowledge, bridges in doing so the (modernist) disjunction between subjectivity and objectivity."[172]

Polanyi maintains that a person's socio-cultural context sets parameters for knowledge that he cannot willingly set aside. He says that the "tacit sharing of

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[169]Michael Polanyi, *Personal Knowledge: Towards a Post-Critical* Philosophy (Chicago: University of Chicago Press, 1974), viii.

[170]Ibid., 5.

[171]Ibid., 13.

[172]Ibid., 17.

knowledge" that inevitably occurs within societies "underlies every single act of articulate communication."[173] The unavoidable, formative influence of social context on human knowledge prompts the realization that one's convictions are acquired by his particular upbringing, which then leads to "suspicion that in holding our convictions as valid in themselves we are acting in bad faith."[174] It is in light of this quandary that Polanyi presents his concept of justification.

Justification of knowledge, according to Polanyi, is founded in the human act of making assertions from one's own genuine convictions. Without personal conviction, a "fact" is devoid of any meaning. Recognizing the "paradox of self-set standards" that arises from this existential orientation, Polanyi says, "If the criteria of reasonableness to which I subject my own beliefs are ultimately upheld by my confidence in them, the whole process of justifying such beliefs may appear but a futile authorization of my own authority."[175] To the challenge of this paradox, he simply responds, "*Yet so be it*." This system of personal epistemology is the alternative to both religious dogmatism and scientific positivism, which Polanyi calls "soul-destroying tyrannies."[176] His system, by comparison, "asks our own intellectual powers, lacking any fixed external criteria, to say on what grounds truth can be asserted in the absence of such criteria. To the question, 'Who convinces whom here?' it answers simply, I am trying to convince myself.'"[177] This theme is particularly evident in Perry's articulation of the "aloneness" one experiences upon the discovery of contextual relativism.

Polanyi's "yet so be it" attitude seems to portray Perry's epistemological position of Multiplicity or "personalism." For Polanyi, however, ultimate substantiation

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[173]Ibid., 203.

[174]Ibid., 204.

[175]Ibid., 256.

[176]Ibid., 265.

[177]Ibid.

of knowledge relies not on personal opinion, but rather on personal *commitment*. He describes commitment as fulfillment of "the ultimate requirements of self-criticism."[178] He says, "I am obliged to form such personal beliefs and can hold them in a responsible manner, even though I recognize that such a claim can have no other justification than such as it derives from being declared in the very terms which it endorses. Logically, the whole of my argument is but an elaboration of this circle; it is a systematic course in teaching myself to hold my own beliefs."[179] Commitment is thus a *fiduciary*[180] construct which enables a person to maintain his beliefs steadfastly, with "universal intent," and to affirm his own convictions against opposing claims. Commitment is also the means by which people may "cast of the limitations of objectivism," and "make up our minds about the whole range of matters with which man is properly concerned." These elements of authentic commitment are central to Perry's depiction of ethical and intellectual maturity, to which this chapter now turns.

The Perry Scheme of Ethical and Intellectual Development

The Perry Scheme is a map of the worldview reinterpretations which result from the challenges a student encounters through the course of his undergraduate experience. Each challenge precipitates (provides opportunity for) progression along a "Pilgrim's Progress of ways of knowing, complete with Sloughs of Despond."[181] Since its initial publication in 1968 and subsequent book publication in 1970, through extensive scholarly analysis and application, the Perry Scheme "continues to reflect the most critical dimension to educators' understanding of learning and students' approaches to

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[178]Ibid., 299.

[179]Ibid., 265.

[180]Perry addresses the concept of "faith" versus "belief" in his discussion of genuine commitments.

[181]William G. Perry, Jr., "Cognitive and Ethical Growth: The Making of Meaning," in *The Modern American College: Responding to the New Realities of Diverse Students and a Changing Society*, ed. Arthur W. Chickering (San Francisco: Jossey-Bass, 1981), 77.

learning."[182] This section provides a detailed review of the Perry Scheme, including its developmental character and structure, as well as a detailed analysis of each position. Also, a reiteration of key, formative developmental elements of the scheme is included.

Perry's Study

Prior to undertaking his study, Perry hypothesized that the forms of development he would observe would contrast sharply with early or pre-twentieth century forms, due to the emergence of pluralism in society, generally, and in liberal arts colleges like Harvard and Radcliffe, particularly. He thus intended his scheme to carry implications for all higher educational contexts "with a diverse student body and a pluralistic outlook."[183] The immersion of the undergraduate in this context is such that, according to Perry, "the confrontation with pluralism of values has become inescapable, not only in his courses but in his daily life with his peers."[184]

Setting and methodology. More than a decade removed from the first publishing of *Forms of Ethical and Intellectual Development in the College Years*, Perry reflected on the methodology and evolution of the study in this way:

> Twenty years ago, a small group of us, counselors and teachers, were so puzzled by students' varied and contradictory perceptions of ourselves and their other teachers that we set out to document their experience. We invited volunteers to tell us, at the end of their freshman year, what had 'stood out' to them. We encouraged them to talk freely in the interview without preformed questions from us, and the diversity of their reports exceeded even our own expectations. After the manner of the time, we supposed the differences arose from differences in 'personality types.' However, as the same students returned to report their experience year by year, we were startled by their reinterpretations of their lives. Then these reinterpretations seemed to fall into a logical progression. Each step represented a challenge to the students' current view of the world. Different students might respond differently, with courage or defeat, but all faced the same basic challenges to making meaning in a complex world.[185]

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[182]Moore, "Understanding Learning in a Postmodern World," 18.

[183]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 5.

[184]Ibid.

[185]Perry, "Cognitive and Ethical Growth," 77.

Perry's study employed open-ended interviews which were conducted with Harvard and Radcliffe undergraduates at the end of each academic year. Perry's interview technique was intentional to avoid "dictating the structure of a student's thought" through the structure of particular questions, and to allow each student to be "as free as possible to speak from his own ways of perceiving himself and his world."[186] Each interview thus began with the question, "Would you like to say what has stood out for you during the year?"[187] Commenting on this approach, White says that Perry "rejects all shortcuts and time-saving devices in procuring his observations. He invites the students to think, taking their own time, doing it in their own way, choosing their own topics."[188] Perry's methodology allowed for the procurement of students' genuine, authentic expressions drawn directly from their own lifestyle orientations and experiences, rather than on-the-spot manufactured responses to abstract topics.

A total of 109 students participated in the study, amassing a total of 366 interviews, including 67 complete sets from all four years of students' undergraduate careers.[189] After Perry and his team articulated the pilgrimage of development in terms of specific positions, transitions, and deflections, the developmental "map" was tested through the employment of raters who independently analyzed the transcribed interviews of students in order to arrive at their independent conclusions regarding the placement of individual students along the given scheme. When the analyses of the raters proved consistent, it became clear that the scheme provided an accurate description of the developmental nature of the sample population.[190] In fact, the consensus of the judges' ratings was such that the Perry Scheme was confirmed as representing a valid and reliable

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[186]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 8, 19.

[187]Ibid., 8.

[188]Robert W. White, foreword, in *Forms of Ethical and Intellectual Development in the College Years: A Scheme*, by William G. Perry, Jr. (San Francisco: Jossey-Bass, 1999), xl.

[189]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 9.

[190]Perry, "Cognitive and Ethical Growth," 78.

paradigm according to which the epistemological development of every participant (and each report from each participant) of the study could be ably described.[191]

From description to prescription. In the years following the first publishing of the study, the Perry Scheme expanded from being a solely descriptive scheme of development to a prescriptive tool suitable for wide-ranging application in higher education. Such was not Perry's original intent or desire, but he later recognized the prescriptive potential of the scheme. Although education cannot "coerce" genuine epistemological growth, modes of teaching and curricula can "be optimally designed to invite, encourage, challenge, and support students in such development."[192] Thus, Perry concluded that the scheme "is helpful to the extent that it contributes to the ability of planners and teachers to *communicate* with students who make meaning in different ways and to provide differential opportunities for their progress."[193]

The Scheme's Character

The Perry Scheme is essentially a descriptive analysis of the "path from adolescence to adulthood."[194] This path includes a journey from simplistic forms of thinking through which one's worldview is dualistic and absolutist, to more complex forms of thought in which one's worldview is formulated in full awareness of the contextual nature of all knowledge and values. Though many factors are at play in the progression of maturity along the scheme, the most basic factor which serves as the engine of development is "successive confrontations with diversity."[195] Moore describes the Perry Scheme as a cycle of encountering diversity through "multiples": multiple

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[191]Perry, *Patterns of Development in Thought and Values*, 5.

[192]Perry, "Cognitive and Ethical Growth," 107.

[193]Ibid.

[194]Perry, *Forms of Ethical and Intellectual Development in the College Years*, xliii.

[195]Ibid., 3.

opinions about a given subject (Positions 1-3), multiple perspectives according to which one may analyze arguments and determine what is true and valuable (Positions 4-6), and multiple Commitments by which one formulates his worldview and identity (Positions 7-9).[196] The primary aim of Perry's original study was to observe and trace the "forms" of epistemic maturation in students, rather than identify or parse particular attitudes or concerns. As such, the Perry Scheme seeks to transcend particular content areas by recognizing an overarching schema of development.[197]

Life's obvious discoveries. While the Perry Scheme is particularly descriptive of undergraduate development, it may also serve as a helpful paradigm through which to understand the overarching maturation that occurs through the human lifespan. With this in mind, Perry characterizes the scheme by articulating four "little discoveries of the obvious that we all make in life."[198] For young children, it becomes obvious that there are authorities who know what they are doing, who therefore wield the right to tell children what to do and what not to do. This is the first developmental discovery. The second developmental discovery is that authorities do not know what they are doing after all, and therefore one is "free" from authorities' control and justified in forming one's own opinion–which is as good as any other opinion. "Discovery 3," Perry says, "is that when I get out from under their tyranny I walk smack into a plate-glass wall and find that I am still subject to a tyranny, not of *they*, but of *fact*. And in that tyranny of reality I discover that, although there are a lot of differences of opinion among reasonable people, not every opinion is as good as any other, including some which I have that are no good at

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[196]William S. Moore, "Student and Faculty Epistemology in the College Classroom: The Perry Schema of Ethical And Intellectual Development," in *Handbook of College Teaching: Theory and Applications*, ed. Keith W. Prichard and R. McLaren Sawyer (Westport, CT: Greenwood Press, 1994), 51.

[197]Perry, *Forms of Ethical and Intellectual Development in the College Years*, xliii.

[198]William G. Perry, Jr., "Sharing in the Costs of Growth," in *Encouraging the Development of College Students*, ed. Clyde A. Parker (Minneapolis: University of Minnesota Press, 1978), 267.

all."[199] The third discovery thus compels an obligation to think critically about opposing beliefs and knowledge claims–including religious claims. The final "obvious" developmental discovery is a matter of personal identity: "Given so many differences of opinion among reasonable people, differences which reason alone cannot resolve, I see that I can never be sure I am making the 'right' decisions in life. And yet I must decide."[200] The nature of living with an awareness of the ethical necessity to make genuine, informed personal commitments entails "coming into one's own" as an adult–but also a conscientious narrowing of possibilities in one's life. Assuming first-person character again, Perry says, "Unless I am going to weasel out of really living, I must choose what I believe in and own the consequences, and never know what lay down the roads I did not take. I have discovered what Robert Frost meant, and what it means to commit."[201] This narrative of development is particularly indicative of the college experience, but it also represents the ideal of a recursive, expanding narrative of personal maturation that occurs throughout the lifespan.

Positions and transitions. The structure of the Perry Scheme is organized according to positions, or stages of development. While positions are basically synonymous with "stage," Perry intentionally used the term "position" for three reasons: position implies no assumption about duration, position more ably communicates a student's dominant form of epistemic identity when multiple forms may be present, and position more appropriately represents the image of one's personal outlook or worldview.[202] Knefelkamp notes that Perry's notion of positionality anticipated the emergence of standpoint theory[203] more than a decade after the Perry Scheme was first

[199]Ibid., 268.

[200]Ibid.

[201]Ibid.

[202]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 54.

[203]According to standpoint theory, "people are situated in specific social standpoints–they

published in 1968.[204] In articulating his scheme in terms of positions, Perry "both conformed to traditional hierarchical notions and, at the same time, broke free of them. Just as he always saw the student as more complex than any theory, he heard in their thinking more complexity than any benchmark along the way of his model."[205]

Perry recognizes however, that "positions" are static by definition, whereas "development" is necessarily dynamic.[206] He thus observes that development consists of both positions–stable forms of development–and *transitions*–less-stable, mediating forms.[207] Perry suggests that transitions are equally (if not more) significant to growth and maturation than positions or stages, since they actually address movement. Thus, while the scheme's positions delineate meaningful ways in which students engage the concept of knowledge, the vibrancy of students' development was evident in "the variety and ingenuity of the ways students found to move from a familiar pattern of meanings that had failed them to a new vision that promised to make sense of their broadening experience, while it also threatened them with unanticipated implications for their selfhood and their lives."[208] In this light, Perry remarks, "Perhaps development is all transition and 'stages' are only resting points along the way."[209]

Development as cognitive and ethical. Perry defines cognitive and ethical development as "the evolving ways of seeing the world, knowledge and education,

occupy different places in the social hierarchy. Because of this, individuals view the social situation from particular vantage points. By necessity, each vantage point provides only a partial understanding of the social whole." See West, Richard L., and Lynn H. Turner, *Introducing Communication Theory: Analysis and Application*, 2nd ed. (New York: McGraw Hill, 2004); definition available at http://www.mhhe.com/mayfieldpub/westturner/student_resources/theories.htm (accessed August 24, 2012).

[204]L. Lee Knefelkamp, introduction, in *Forms of Ethical and Intellectual Development in the College Years: A Scheme*, by William G. Perry, Jr. (San Francisco: Jossey-Bass, 1999), xii.

[205]Ibid.

[206]Perry, "Cognitive and Ethical Growth," 78.

[207]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 52.

[208]Perry, "Cognitive and Ethical Growth," 78.

[209]Ibid.

values, and oneself."[210] Perry's notion of development as cognitive and ethical was rooted in the classical Greek notions of "character," "identity," and "sense of self."[211] A perspective shift in terms in how one views knowledge precipitates a change in a person's sense of self-identity, which reflects on one's values and responsibilities. The Perry Scheme is primarily intellectual in its early positions, and primarily ethical in its later positions. As a student progresses along the scheme, from a dualistic mentality to accepting and engaging contextual relativism, he undergoes a "radical redefinitions in responsibility."[212] Also, through the educational process that confronts students with reasonably differing points of view, individuals are compelled to recognize the value and significance of varying truth claims. More importantly, they increasingly value the persons behind those claims. The most valuable element in epistemological maturation– and the element that coordinates ethical and intellectual virtuosity–is thus compassion.[213]

The Scheme's Structure

The overall scheme may be conceived as consisting of two distinct categories of development representing dualistic (Positions 1-4) and relativistic (Positions 6-9) epistemic patterns. Position 5 is situated between these two major categories of positions and thus represents the most crucial position of development at which knowledge and values are perceived as relative, contingent, and contextual.[214] From Position 5, one may progress and extend into more mature positions or deflect to a lower or stagnated position. Prior to Position 5, a student moves from a worldview defined by dualistic absolutism to generalized relativism. After Position 5, a person's development involves a continual pursuit of truth within a relativistic world by means of personal Commitments.

[210]Ibid.

[211]Moore, "Student and Faculty Epistemology in the College Classroom," 60.

[212]Perry, *Patterns of Development in Thoughts and Values*, 12.

[213]Perry, "Sharing in the Costs of Growth," 269.

[214]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 64.

Figure 1[215] illustrates the two-category structure of the Perry Scheme.

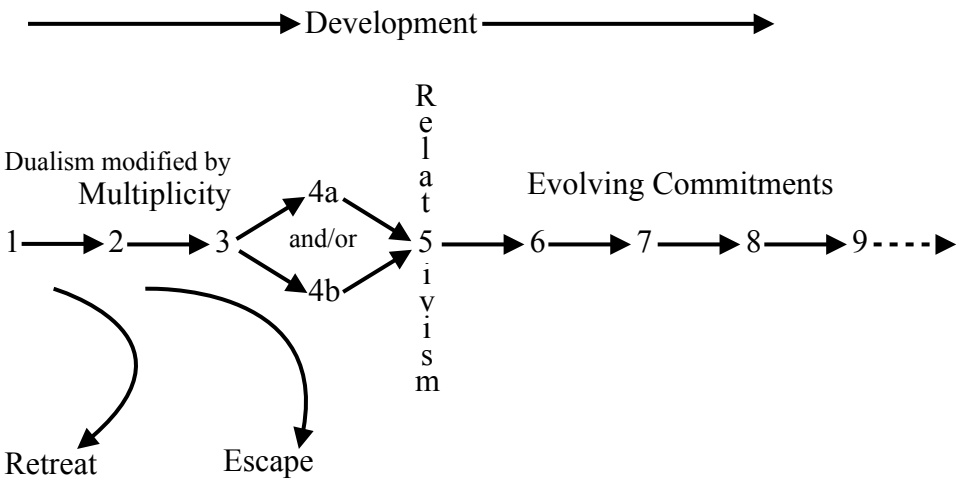

Figure 1. The Perry Scheme map of development

Each position of the Perry Scheme "includes and transcends" earlier positions, meaning that students in later stages understand and progress beyond the former stages. By contrast, students at earlier stages cannot understand or incorporate later stages.[216] Positions 1 and 9 are generally outside the scope of expectation for college student development, and are included primarily as logical, limit-defining extrapolations of the scheme.[217] Perry found that most college students finished their first year in Positions 3, 4, or 5, while most graduating seniors were dispersed among Positions 6, 7, and 8.[218] Figure 2[219] presents brief descriptions of each position, as well as the conditions for delay, deflection, or regression.

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[215]Figure 1 is a recreation of the display presented in Perry, "Cognitive and Ethical Growth," 81.

[216]Perry, "Cognitive and Ethical Growth," 78.

[217]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 62.

[218]Ibid.

[219]Descriptions included in Figure 2 are Perry's own articulations in *Forms of Ethical and Intellectual Development*, 10-11.

Position	Description
Position 1: Basic Duality	The student sees the world in polar terms of we-right-good vs. other-wrong-bad. Right answers for everything exist in the Absolute, known to Authority whose role is to mediate (teach) them. Knowledge and goodness are perceived as quantitative accretions of discrete rightnesses to be collected by hard work and obedience (paradigm: a spelling test).
Position 2: Multiplicity Pre-Legitimate	The student perceives diversity of opinion, and uncertainty, and accounts for them as unwarranted confusion in poorly qualified Authorities or as mere exercises set by Authority "so we can learn to find The Answer for ourselves."
Position 3: Multiplicity Subordinate	The student accepts diversity and uncertainty as legitimate but still *temporary* in areas where Authority "hasn't found The Answer yet." He supposes Authority grades him in these areas on "good expression" but remains puzzled as to standards.
Position 4 (a or b): Multiplicity Correlate or Relativism Subordinate	(*a*) The student perceives legitimate uncertainty (and therefore diversity of opinion) to be extensive and raises it to the status of an unstructured epistemological realm of its own in which "anyone has a right to his own opinion," a realm which he sets over against Authority's realm where right–wrong still prevails, or (*b*) the student discovers qualitative contextual relativistic reasoning as a special case of "what They want" within Authority's realm.
Position 5: Relativism Correlate, Competing, or Diffuse	The student perceives all knowledge and values (including authority's) as contextual and relativistic and subordinates dualistic right–wrong functions to the status of a special case, in context.
Conditions of Delay, Deflection, and Regression	(1) *Temporizing*: The student delays in some Position for a year, exploring its implications or explicitly hesitating to take the next step. (2) *Escape*: The student exploits the opportunity for detachment offered by the structures of Positions 4 and 5 to deny responsibility through passive or opportunistic alienation. (3) *Retreat*: The student entrenches in the dualistic, absolutistic structures of Position 2 or 3.
Position 6: Commitment Foreseen	The student apprehends the necessity of orienting himself in a relativistic world through some form of personal Commitment (as distinct from unquestioned or unconsidered commitment to simple belief in certainty).
Position 7: Initial Commitment	The student makes an initial Commitment in some area.
Position 8: Orientation in Implications of Commitment	The student experiences the implications of Commitment, and explores the subjective and stylistic issues of responsibility.
Position 9: Developing Commitments	The student experiences the affirmation of identity among multiple responsibilities and realizes Commitment as an ongoing, unfolding activity through which he expresses his life style.

Figure 2. Main line of development in the Perry Scheme

Positions 1-5:
From Dualism to Multiplicity to Relativism

Positions 1-5 represent the various epistemological points of development indicative of college students through the first two or three years of their undergraduate experience (in Perry's study). This initial progression of positions traces the evolution of students' epistemological and axiological values from a fundamentally dualistic worldview to a contextual, relativistic understanding of knowledge and truth–through the malaise of Multiplicity.

Position 1: Basic Duality. Dualistic conceptions of knowledge and values take a black-and-white perspective in which Authorities (e.g., parents, teachers, the church) are unquestioned, and no alternative points of view are tolerated.[220] Basic Duality is an epistemological position in which an individual is completely embedded in a mentality of "We-Right-Good" and "Others-Wrong-Bad."[221] This perspective considers all truth and morality to be judged on the basis of in-group (the familiar world) versus out-group (the alien, outside world).[222] All truth is considered to be absolute, and "right answers" are those rendered to the student by Authorities (capital A). The role of the teacher is thus to mediate the Absolute to the student through the imparting correct knowledge.

Perry describes Position 1 as analogous to man's epistemic condition as portrayed in the Garden of Eden in *Genesis*. He says, "It was, after all, the serpent who pointed out that the Absolute (the truth about good and evil) was distinct from the Deity and might therefore be known independently–without his mediation. The Fall consisted of man's taking upon himself, at the serpent's suggestion, the knowledge of values and therefore the potential of judgment."[223] For college students, the university is the

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[220]Moore, "Understanding Learning in a Postmodern World," 20.

[221]Perry, "Cognitive and Ethical Growth," 80.

[222]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 66.

[223]Ibid., 67.

equivalent of the serpent, which seduces students away from absolutist worldviews through the curricular and extracurricular elements which confront students with diversity.

This confrontation occurs most commonly and powerfully through interactions with peers from varying backgrounds.[224] Soon after one enters the pluralistic liberal arts college environment (such as that observed in Perry's study), he is forced into a new confrontation with diversity. Often for the first time (and almost always to an increased degree) students are immersed in interaction with peers who differ radically from them "in regard to the things they assign to right or wrong, and to the determinable or the indeterminable."[225]

The dualistic worldview is one that Perry describes as "the prototype of the structure of bigotry and intolerance."[226] For students entering college who come from homogeneous cultural settings, however, dualism is not a function of intolerance or bigotry–which apply only to those who consciously choose a hardened, naive form of dualism in full awareness of the presence of genuine diversity. Thus, Position 1 is common among incoming freshman undergraduates, but it is almost never a student's position by the end of his first academic year.[227] Of the 109 students who participated in Perry's study, only three or four reported having arrived at college at this position, and none remained at this level by the end of their freshman year.[228]

Position 2: Multiplicity Pre-Legitimate. In Position 2, a student assimilates his experience with diversity, uncertainty, and complexity. In cases in which it is recognized that different Authorities make competing claims, the student reasons that the

[224]Ibid., 77.

[225]Ibid., 35.

[226]Perry, *Patterns of Development in Thought and Values*, 19.

[227]Perry, "Cognitive and Ethical Growth," 81.

[228]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 67.

differing claims are "unwarranted confusion in poorly qualified Authorities."[229] Students regard complexity as a mere facade covering up the simple and absolute Truth, which is "really there."[230] Classroom material and assignments that force the student to judge between conflicting claims are regarded as mere exercises for the purpose of learning to find the right answers on one's own.[231] This acknowledgment, however, that truth can sometime be sought by the individual student apart from the direct revelation by the teacher, serves as a transition to the next position. The major concession of Position 2 is that *some* complexity and groping in uncertainty is given a place. Even though "experienced as an annoying impediment or as an intriguing area of interest," Multiplicity is given a foothold and the "path toward doubt" is opened.[232]

Although Multiplicity is acknowledged in Position 2, it is not fully realized for what it truly is, but rather a mere illusions of fundamental differences. Perry says, "… difference of opinion is allowed into the family, but only because it is quite temporary, good for the mind, resolvable, and therefore ultimately *unreal*."[233] Some students in Position 2 decide to choose a scientific field of study, rather than the humanities, simply because the sciences are perceived to deal with "facts" rather than ambiguity.[234]

Position 3: Multiplicity Legitimate. At Position 3, the multiplistic nature of some (not all) truth claims is clearly recognized and acknowledged (e.g, even in scientific fields). While the presence of uncertainty is realized in the minds of students, however, it is regarded as a temporary situation.[235] Diversity of opinion is legitimate, but only until

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[229]Perry, "Cognitive and Ethical Growth," 82.

[230]Perry, *Patterns of Development in Thought and Values*, 25.

[231]Perry, "Cognitive and Ethical Growth," 82.

[232]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 97.

[233]Ibid., 87.

[234]Ibid., 88.

[235]Perry, "Cognitive and Ethical Growth," 82.

the point at which the correct Opinions may be discerned. Absolute truth exists; it simply cannot be reached *yet*–in certain cases. The transition to the next Position–and away from Dualism altogether–occurs as students continue to legitimize uncertainty in more cases. This leads to the recognition that uncertainty is in fact not temporary and not consigned to specific cases. Uncertainty is then accepted as unavoidable. As Perry says, "The tie between Authority and the Absolute has been loosened."[236]

At this point, a severe epistemic dilemma is at hand for students, who must now come to terms with educational practices in which their answers are evaluated and judged. Also, having legitimized uncertainty and accepted that "Authority does not know *the* answer yet," students are compelled to consider, "Is not every answer as good as another?"[237] Serious questioning emerges regarding (moral) issues of "rightness and hard work," which seem to fade in importance, leaving only "good expression."[238] At this juncture, in which the student may become heavily disillusioned and embittered, the attitude of the student to the teacher is of crucial importance. If a student positions himself in an "oppositional" manner toward his teachers, he is likely to either abandon his pilgrimage ("escape") or revert back to the comfort of simplistic dualism ("retreat").[239] Students who maintain an attitude of trust or "adherence" with their teachers, however, are likely to progress to further stages of development.

Position 4: Two paths. Perry offers this first-person representation of the discovery and reaction to Multiplicity: "I suddenly see that the world is not as I first thought, divided between right and wrong. No, it is divided between those things about which opinions can be determined to be right or wrong and those things about which

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[236]Ibid., 83.

[237]Ibid.

[238]Ibid.

[239]Ibid., 84.

'anyone has a right to his own opinion.'"[240] Position 4 includes two paths which are taken by students en route to Position 5, according to their attitude toward teachers. Some students recognize that teachers "want" them to think contextually and relativistically and react with opposition. Other students more readily conform to teachers' preference for critical thinking. Ironically, it is the latter "conformist" group who progress more naturally to Relativism.[241]

Position 4a: Multiplicity Coordinate. Multiplicity Coordinate, the path taken by students with an oppositional attitude toward teachers, is marked by the "personalism" of knowledge. Statements representative of this position include, "Everyone has a right to his own opinion," and "Where Authorities do not know the Answer, any opinion is as good as any other."[242] From this position, students equate "having" an opinion with "being right"–at least as right as anyone could possibly be. This form of "egocentric personalism" is the essence of Multiplicity.[243] This position is also representative of the "pure relativism"[244] or misapplied "openness" decried by Allan Bloom, who said with regard to the American higher education system's acquiescence to cultural relativism: "Openness used to be the virtue that permitted us to seek the good by using reason. It now means accepting everything and denying reason's power."[245]

In Multiplicity, "all debatable propositions remain atomistic."[246] I.e., knowledge claims (in unresolved areas) are completely unrelated to any criteria of

[240]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 34.

[241]Ibid., 106.

[242]Perry, "Cognitive and Ethical Growth," 84.

[243]Ibid., 85.

[244]Bloom's and others' use of the term "relativism" to describe what Perry terms "multiplicity" is commonly a source of misinterpretation or misrepresentation of Perry's concept of "contextual" relativism. Perry's relativism entails a radical departure from multiplicity and Bloom's typification of "relativism." See discussion below.

[245]Allan Bloom, *The Closing of the American Mind* (New York: Simon & Schuster, 1987), 38.

[246]Perry, "Cognitive and Ethical Growth," 85.

substantiation aside from personal opinion. Resolved areas are decided and rendered authoritatively by Authorities, and unresolved areas are decided and rendered authoritatively by subjective opinion. This is still a fundamentally dualistic epistemic position, therefore, since "the world so construed is not yet open to Relativism's analysis, rules of evidence, disciplines of inference, and concern for the integrity of interpretations and systems of thought."[247]

Perry notes that oppositional students tend to become entrapped by their argumentation. He says, "Unable to leave well enough alone, he demands that Authority justify itself by *reasons*, and, most fatally, by *evidence*. Unwittingly he may then be caught in the necessity to do the same."[248] It is this "being caught" which hopefully serves to precipitate the student's transition and forward movement.

Students who have progressed to this stage "are poised at the edge of a fateful moment in their destinies."[249] For both students and teachers, this is most critical moment in the course of the epistemological pilgrimage.[250] A potentially positive developmental function of this position is to aid the student in making sense of diversity, and more importantly, to express a respect for the views of others.[251] The transition from this position to Relativism (Position 5) is commonly precipitated by a student's acceptance of responsibility to substantiate his own opinions, often after being challenged to do so by his more advanced peers.

Position 4b: Relativism Subordinate. There is a smoother path by which to reach the Position 5–one taken by "adherent" or trusting students. This pathway from Position 3 to 5 is the route taken by a majority of college students, who discern that

[247]Ibid.

[248]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 110.

[249]Perry, "Cognitive and Ethical Growth," 85.

[250]Ibid.

[251]Ibid.

contextual thinking accords with the teacher's desire for what they should produce.[252] Rather than entrenching oneself in Multiplicity, these students trust that teachers are still Authorities who have valid grounds for assessing their work, even in areas of uncertainty, and they set about to discover those grounds.[253] In the course of this task, students at the position of "Relativism Subordinate" discover "the way teachers want us to think." Students perceive that teachers are just as if not more concerned with the process of thinking (*how*) as they are with the content (*what*) of thinking. This discovery compels the student to engage in critical thinking for the purpose of academic success. Whereas students once only considered the content of meaning, they now consider the process of thinking, including the complex nature of how certain concepts relate to one another. Students thus engage in thinking about thinking, or *metathought*–whether or not they realize they are doing so. In any case, a great shift is occurring. Perry says, "The person, previously a *holder* of meaning, has become a *maker* of meaning. Still, at this stage the student's motivation and intent is simply to accord with how they perceive their teachers want them to think. "The paradox for liberal education," Perry says, "lies in the fact that so many of our students learned to think this way because it was 'the way They want you to think'–that is, out of a readiness to conform."[254]

The transition from this position to Relativism involves a progressive transformation in one's view of "context." A dualist conceives of context as secondary to "particular" truths. From that perspective, context is devoid of meaning in itself. A relativist, on the other hand, conceives of context as the source of meaning. As they progress, students first learn to think contextually because they perceive that is how the teacher wants them to think. In time, however, students think contextually because they perceive that it is the *only* way to think–seeing all ideas and concepts (and truth claims) in

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[252]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 111.

[253]Perry, "Cognitive and Ethical Growth," 86.

[254]Ibid., 87.

relation to one another. Often times, the shift to a contextual way of thinking is forced by an increasing realization of the vastness of particular uncertainties and diversities.[255]

Position 5: Relativism. Emergence to Position 5 constitutes a revolutionary restructuring of one's worldview. Relativism (Position 5)–or more specifically, "contextual relativism"–is the developmental resting point at which students accommodate "the simultaneous discovery of disciplined meta-thought and irreducible uncertainty."[256] The most significant element that characterizes the departure of the "pseudorelativism" of Multiplicity and the emergence of a contextual mentality is one's self-conscious awareness that he is an "active maker of meaning."[257]

It is important to note that in Perry's formulation, Relativism is fundamentally distinct from Multiplicity. Perry laments the fact that Relativism (the position in the Perry Scheme) has been equated with Multiplicity, the notion that "anyone has a right to his own opinion." Considering this, he says a more representative term for the position might be "personalism."[258] In light of this distinction, Knefelkamp describes Relativism as a position "far from being anchorless," which requires "a great deal of cognitive complexity and intellectual moral courage to investigate and compare things and to make judgments about adequacy or inadequacy, appropriateness or inappropriateness."[259]

In Relativism, the dualistic framework on which students previously depended continually and increasingly fails to conform to the complexities and diversities of reality. The majority of students who come into Relativism from Relativism Subordinate, realize the levelness of the epistemic playing field between themselves and their teachers: "Not only do 'They want' us to think this way, They have to think this way too. We're all in the

[255]Ibid., 88.

[256]Ibid.

[257]Moore, "Understanding Learning in a Postmodern World," 21.

[258]Perry, "Cognitive and Ethical Growth," 85.

[259]Knefelkamp, introduction, xx.

same boat."[260] Where once students understood a hierarchical relation between students and teachers, they now see that relation as horizontal.[261] Students thus internalize many of the responsibilities and initiatives once designated only for Authorities.[262]

In many ways, this is a period of prolonged exploration, in which a student takes time to consider various areas of academic discipline and life through his newly acquired contextual lens.[263] Exploration alone, without personal commitment, in this position, is indicative of students in Position 5. That being the case, many students experience anxiety as a result of their awareness and acceptance of contextual relativism. It is natural, at this stage, for students to regret the "loss" of certainty and objectivity intrinsic to their former worldview.

Relativism is therefore often a disequilibrizing discovery. Perry characterizes a student's personal acknowledgment of the implications of contextual relativism in this way: "I apprehend all too poignantly now that in the most fateful decisions of my life I will be the only person with a first-hand view of the really relevant data, and only part of it at that."[264] Since one's personal sense of identity hinges on a sense of continuity regarding one's knowledge and values, Relativism represents a serious threat: "If one comes to look upon all knowing and all valuing as contingent on context, and if one is then confronted with an infinite universe of potential contexts for truth and care, one is threatened with loss of identity. From one context to another what one will see as true and what one will care about will be discontinuous; one will not know who 'I' am."[265] Relativism thus often proves to be unbearably disorienting.[266] Looking ahead, however,

[260]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 128.

[261]Ibid., 135.

[262]Perry, "Cognitive and Ethical Growth," 89.

[263]Ibid.

[264]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 37.

[265]Ibid., 149.

[266]Ibid.

Perry says, "It is not for nothing that the undergraduate turns metaphysician."[267]

Deflections from Growth

Having abandoned dualistic thinking for relativism, students increasingly realize that "even the most careful analytical thought and logical reasoning will not, in many areas vital to their lives, restore the hope of ultimate rightness and certainty promised by Authority in the Eden they have left behind."[268] Whereas they were once "secure in the expectation of an answer" to problems and issues, students now experience the disquieting reality that all knowledge is by nature relativistic, probabilistic, and contingent. Moreover, "*A*uthority appears as limited *a*uthority, uncertain even in its specialties, and ignorant beyond them."[269] Resolution must be gained out of this epistemic quagmire, and it will–though sometimes not in positive ways. Perry describes three modes of deflection evident in students who resolved the epistemic problem of relativism in negative ways: temporizing, retreat, and escape.

Temporizing. Students who respond to the disequilibration of relativism by *temporizing* are those who wait to move forward in development for a year or more. Temporizing may occur at any position along the scale of development. Students who temporize choose to postpone rather than pursue further maturation. In some cases, Perry says, temporizing may be more adequately described as "lateral growth"–a deliberate consolidation of previous gains before further maturation.[270]

Retreat. Some students respond to relativism by regressing to an earlier dualistic position. Perry termed this reaction *retreat*. While each step of development

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[267]Perry, *Patterns of Development in Thought and Values,* 33.

[268]Perry, "Cognitive and Ethical Growth," 90.

[269]Ibid.

[270]Perry, *Patterns of Development in Thought and Values*, 44.

along the Perry Scheme entails a distinct challenge facing the student, the transition from a dualistic to relativistic worldview (Positions 4-5) may be more ably characterized as a "point of crisis." This crisis stems from the demand that the student "relinquish old assumptions about truth, about certainty, and about the guidelines of moral conduct in exchange for new and problematical assumptions based on self-limited contextual and procedural criteria."[271] For this reason, Retreat or Escape are significant possibilities at this transitional stage.

Escape. Another negative reaction to the realization of the ubiquitous presence of relativism is *escape*, in which students abandon the responsibility to personally engage a relativistic worldview. For students at the level of Multiplicity, there is a serious risk of "escape through detachment," as the student has discovered the "bland personalism where 'anything goes,'" and where individual intuition (rather than critical thinking) alone is necessary for formulating and maintaining one's worldview.[272]

The most common path to escape, according to Perry, is temporizing.[273] Escape can become a permanent position, or it may eventually serve as a time of transition to the resumption of development and the eventual acceptance of one's responsibility to form personal commitments in relativism. Perry describes escape and the transition out of it in this way: "In this time the self is lost through the very effort to hold onto it in the face of inexorable change in the world's appearance. It is a space of meaninglessness between received belief and creative faith. In their rebirth they experience in themselves the origin of meanings, which they had previously expected to come to them from outside."[274]

Two types of escape are identified. The first of these is "disassociation," in which a student drifts into passivity with regard to commitment-making. When one

[271]Ibid., 122.

[272]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 119.

[273]Ibid., 212.

[274]Perry, "Cognitive and Ethical Growth," 92.

disassociates with development, he abandons the responsibility of actively participating in the formation of his own identity.[275] The second path to Escape is "encapsulation," in which the individual becomes a gamesman who operates under the guise of competence, either in his intellect or his activities.[276] The focus on "doing," for one in Encapsulation, is a means of avoiding engagement with deeper levels of meaning. This particular form of escape, described as an "escape into commitment," is an established concept in philosophy and theology.[277] Commitment can function as growth *in* a relativistic world, but also an escape *from* complexity.

Positions 6-9: Commitments in Relativism

Positions 6-9 represent various levels of applied commitments in relativism. These positions move beyond intellectual development (the acknowledgment of relativism) to focus primarily on ethical development (personal responsibility in light of relativism). The roles of both teacher and student are fundamentally redefined from this perspective. Teachers–once viewed as Authorities who dispel Truth–are now perceived as authorities with specific areas of expertise who share their resources with students. The student's role–once viewed as passively receiving the right knowledge–is now perceived as an active responsibility to define arguments and create knowledge and meaning.[278] In Perry's study, seventy-five percent of the participants attained the degree of commitment consistent with Position 7 or 8.[279]

Position 6: Commitment Foreseen. In order for epistemic progress to be made, students must realize the necessity for making personal commitments in a

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[275]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 213.

[276]Ibid.

[277]Perry, *Patterns of Development in Thought and Values*, 49.

[278]Moore, "Understanding Learning in a Postmodern World," 22.

[279]Perry, *Patterns of Development in Thought and Values*, 42.

relativistic world. In Position 6, "Commitment Foreseen," students begin to accept responsibility for formulating their own worldviews through making commitments, even if those commitments might at first seem to require an "arbitrary faith, or even a willing suspension of disbelief."[280] The first steps of commitment require a deliberate "narrowing," in which a students resigns himself to many alternatives and possibilities.[281] Another crucial element of epistemic growth through commitment is the recognition and acceptance of the consequences of "staking one's claim" in an uncertain world. For students at Position 6, commitment is something they "sense" or "feel" internally, without yet exercising commitments in practical ways.

Positions 7-9: The art of commitment. Position 7 is reached when a student invests himself in making an initial personal commitment in the face of relativistic reality. It is the first instance in which a student decides that he will be the sole responsible party in deciding "who he is, or who he will be, in some major area of his life."[282] Such a decision is understood to entail personal risk and the cost of forsaking other commitments which may be equally reasonable. The first commitment can emerge through one of multiple contexts, including personal values, a relationship, or (most commonly) a decision to pursue a particular career or field. Perry describes the action of one's first commitment as carrying a sense of "claiming" on the part of the individual.[283] Those Commitments (capital c) one makes for oneself are now consciously understood as fundamentally different from former commitments (lowercase c) which were merely received and unquestioned from Authorities.

Once Position 7 has been reached, there are no further structural gains to be made. Epistemological maturation from this point is purely ethical–related solely to an

[280]Perry, "Cognitive and Ethical Growth," 93.

[281]Ibid.

[282]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 170.

[283]Perry, "Cognitive and Ethical Growth," 94.

individual's continual and recurring acceptance of responsibility in formulating, reformulating, applying his Commitments.

After making one's first major Commitment, one realizes that Commitment-making must become his way of living, rather than simply a means of resolving particular issues or problems. In Positions 8 and 9, a method for ordering, prioritizing, and balancing Commitments is established–a process that can often be difficult and painful.[284] Positions 8 and 9 thus represent "degrees of ripeness in an art of living."[285] Position 8 involves a "period of exploration of the implication of Commitment(s) made."[286] Position 8 is attained as the implications of Commitment-making are fully understood and more readily applied. Position 9 is the ultimate level of epistemological maturity, at which one's personal identity is fully aligned with his ongoing Commitments, pervading every aspect of his lifestyle. Rather than a culmination of growth, Position nine represents "a resolve to continue," or "an active existential stance."[287]

For college students, the teacher-learner relationship at these later positions point is crucial. Perry says, "In the loneliness or separateness implicit in these integrations and reintegrations, students seek among their elders for models not only of knowledgeability but of courage to affirm commitment in full awareness of uncertainty."[288]

Reiteration of Formative Developmental Elements

Given the detailed presentation of the Perry's Scheme's structure and developmental characteristics above, multiple formative elements of epistemological

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[284]Ibid., 95.

[285]Perry, *Patterns of Development in Thought and Values*, 40.

[286]Ibid., 40-41.

[287]Knefelkamp, introduction, xxi.

[288]Perry, "Cognitive and Ethical Growth," 95.

maturation may be highlighted and reiterated. These elements address critical thinking, personal commitments, social-interactive influences, and recursive development.

Metathinking. The capacity to think critically about thinking itself is the most essential trait of humanness, according to Perry, and therefore the most essential objective for liberal education. He says, "Man is distinguished from the ape not by his reason, at which the ape is often no slouch, but by his meta-reason, which is a blessing with which the ape is presumably uncursed. The characteristic of the liberal arts education of today . . . is its demand for a sophistication about one's own line of reasoning contrasted with other possible lines of reasoning. In short, it demands meta-thinking."[289] Metathought, defined as "the ability to examine thought, including one's own" is the necessary competency for epistemic maturation in a relativistic world.[290] With this ability to think critically, Perry says,

> Theories become, not 'truth,' but metaphors or 'models,' approximating the order of observed data or experience. Comparison, involving systems of logic, assumptions, and inferences, all relative to context, will show some interpretations to be 'better,' others 'worse,' many worthless. Yet even after extensive analysis there will remain areas of great concern in which reasonable people will reasonably disagree. It is in this sense that relativism is inescapable and forms the epistemological context of all further developments.[291]

Commitment: Cognitive and ethical growth. Perry characterizes "commitments" as much deeper than mere obligations. Commitments, for Perry, represent "an affirmatory experience through which the man continuously defines his identity and his involvements in the world."[292] Commitment is an intensely personal endeavor that both founds and activates one's (metaphysical and epistemological) assumptions, convictions, and interactions with the world. It thus serves as the crucial

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[289]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 37.

[290]Perry, "Cognitive and Ethical Growth," 88.

[291]Ibid., 88.

[292]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 150.

element that integrates cognitive and ethical dimensions of knowledge and development.

Perry identifies the distinction between simple belief and faith as parallel to the distinction between examined and unexamined personal commitments. He says, "Belief may come from one's culture, one's parents, one's habit; faith is an affirmation by the person. Faith can exist only after the realization of the possibility of doubt."[293] Parks observes that in contemporary usage, the term "belief" is used most commonly to refer to an aspect of personal knowledge that is purely cognitive or propositional. Furthermore, Parks says, "it [belief] connotes mere opinion–or even the dubious and the false–rather than matters of truth, reality and ultimate importance."[294] This notion of belief is consistent with multiplistic conceptions of knowledge, truth, and learning. Faith, therefore, in contrast to belief (so conceived), has its basis in active commitment. Parks says, "Faith is not simply a set of beliefs that religious people have; it is something that all human beings do."[295] While faith is a universal aspect of personhood, however, the virtue of courage with regard to faith is revealed only by those who self-consciously examine their convictions and formulate their lifestyle commitments accordingly. The distinguishing factor of a person's ethical and intellectual maturity is thus his intentional enactment of his beliefs–by faith–through *committed* discernment, testing, and application.

At the core of commitment lies two consequential moral principles which serve as navigational tools in a relativistic world: "Commitments require the *courage* of *responsibility*, and presuppose an acceptance of human limits, including the limits of reason" (emphasis added).[296] Such courage and responsibility is enacted through one's conduct in matters which demand choice but propose multiple viable options among

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[293]Ibid., 38.

[294]Parks, *The Critical Years*, 11-12.

[295]Ibid., 12.

[296]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 150.

which reason cannot solely prioritize. Perry says, "Reason alone will leave the thinker with several legitimate contexts and no way of choosing among them–no way at least, that he can justify through reason alone."[297] One is thus obliged to commit himself with the aid of reason, but on the basis of "faith."[298]

The notion of making Commitments in a relativistic world raises an important question: "If one knows one's Commitments are to flow and fluctuate and conflict and reform, is one committed at all?"[299] Perry observed that epistemologically mature students understood the paradox of being simultaneously wholehearted and tentative with their worldview Commitments.[300] This dialectical mode of thinking requires one to be wholehearted in his convictions–maintaining his worldview positions genuinely and with absolute intent–and at the same time he must be tentative in his conclusions about all matters–continually ready to accommodate new information heretofore unknown to him, and willing to adjust or reform his worldview accordingly. This manner of worldview formulation and maintenance through making Commitments with "provisional ultimacy" is a matter of lifestyle for individuals in the mature stages of epistemological development. Perry says,

> In short, it is in one's way of affirming Commitments that one finds at last the elusive sense of "identity" one has searched for elsewhere, fearful lest Commitments might narrow and compromise the very self that only the investment of care can create. It is in the affirmation of Commitments that the themes of epistemology, intellectual development, ethics, and identity merge. Knowing that 'such and such is true' is an act of personal commitment (Polanyi, 1958) from which all else follows. Commitments structure the relativistic world by providing focus in it and affirming the inseparable relation of the knower and the known.[301]

The courage and cost of commitment. The epistemic transition from dualism

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[297]Ibid., 151.

[298]Ibid.

[299]Perry, "Cognitive and Ethical Growth," 96.

[300]Ibid.

[301]Ibid., 97.

to relativism is a movement from a world of certainty to "a world where all of what was solid and known is crumbling."[302] Thus, while the process of epistemological maturation is a rewarding, enlightening experience in which one grasps reality more clearly, it is also a process that involves a sacrifice of the security and comfort of one's prior worldview. A fundamental shift must occur, away from a life paradigm that is established, comfortable, and secure, in favor of the new relativistic paradigm. This exchange is one that replaces an identity of (supposed) certainty with identities that are unknown, dynamic, transitional, and tentative. Parks describes this disequilibrium of fundamental epistemic shifts as the experience of "shipwreck." She says, "To undergo shipwreck is to be threatened in a most total and primary way. Shipwreck is the coming apart of what has served as shelter and protection and has held and carried one where one wanted to go–the collapse of a structure that once promised trustworthiness."[303]

For college students, initially, this often feels equivalent to abandoning meaning altogether, and thus brings about a sense of sadness and grief. Perry illustrates this shift in terms of moving from one's "home" to a new house. He says, "What do we do about the house we just sold out of? What do we do about the old simple world? It may be a great joy to discover a new and more complex way of thinking and seeing, but what do we do about all the hopes that we had invested and experienced in those simpler terms? When we leave those terms behind, are we to leave hope, too?"[304] In light of this chilling reality, the temptation to deflect from developmental progress is real and constant. Such disequilibrium, recognition of cost, and the related temptation to deflect underscores the importance of the ethical (and epistemic) virtue of *courage*–a product of personal fortitude and community support. Thus, Perry's characterization of epistemic growth as a function of personal courage implies the corollary demand of *encouragement*

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[302]Perry, "Sharing in the Costs of Growth," 270.

[303]Parks, *The Critical Years*, 24.

[304]Perry, "Sharing in the Costs of Growth," 271.

on the part of the learning community.

The cost of epistemological maturation is consistent with the sensation of loss. Perry considers this experience of loss as a vital construct of the transition from simpler to more complex modes of development. As such, one's sense of loss must not be disregarded, but rather must be reflectively engaged as a crucial moment in the maturing process. Perry says, "When you have taken one step in development, you cannot take another until you have grieved the losses of the first."[305] This coming-to-grips is a function of cognitive maturation, intellectual honesty, and courageous commitment.

For college students, one particular area which serves to induce the necessity of commitment and a sense of loss is one's choice of career. As a student progresses through his undergraduate career, he must make decisions that restrict his future career options. Such a choice involves a narrowing of life possibilities that often entails a sense of loss. Perry characterizes the experience as one in which it feels as though "you are losing all the other selves that you could have been."[306] As a person decides to pursue a particular vocation or field, he not only chooses what he is going to do; he also gives up all the "other selves" he is not going to be.[307]

The role and support of community. Considering the demand for courage and the required cost of epistemic maturation through commitment-making, the role of community relationships is vital to the sustainment and furtherance of personal identity and development. Knefelkamp remembers Perry's conception of students, "not as potted plants to be watered in some academic hothouse, nor were they to be subjects of academic experiments. They were simply to be seen as courageous human beings who needed company and understanding along the way."[308] Through the peer relationships

[305]Ibid.

[306]Ibid.

[307]Ibid.

[308]Knefelkamp, introduction, xiii.

that occur in the educational context, Perry says, "we can be nourished with the strength and joy of intimacy, through the perilous sharing of vulnerability."[309] Also, the stark difference between modern and pre-pluralistic educational practices has direct implications on the community of learning and teacher-student relationship. To this point, Perry says,

> At the turn of the [twentieth] century the epistemological assumptions of the university were themselves more in keeping with the right-wrong assumptions characterizing Positions 1-4 in our scheme. Community could then be found with peers in action and reaction to an Authority whose primary function was expository and evaluative. Today authority itself requires the student to go beyond such a defined world to confront the loneliness of affirming his own meanings and decisions in a world devoid of certainty. It is not really paradoxical to say that at this advanced point in his development the student may need not less support but more.[310]

The demand of courage on the part of the student implies a reciprocal obligation on the part of the educational community: "to recognize the student in his courage and to confirm the membership he achieves as he assumes the risks of each forward movement."[311] These risks involve the personal "claiming" that takes place at each transition and position of development, in which the student progressively assumes responsibility for his own worldview and identity. These are claims that must be staked by the individual, alone to himself. One must not, however, be alone in the experience of aloneness.[312]

The key relational responsibility of a teacher in promoting and facilitating development among those who are traversing the epistemological pathway from dualism to relativism, according to Perry, is to personally acknowledge and encourage students' struggles and difficulties as they undergo epistemic transformation. He says, "Our mentors can, if they are wise and humble, welcome us into a community paradoxically

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[309]Perry, "Cognitive and Ethical Growth," 97.

[310]Perry, *Patterns of Development in Thought and Values*, 123.

[311]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 241.

[312]Ibid.

welded by this "shared realization of aloneness."[313] Students draw support from teachers who engage with them empathetically as well as horizontally–i.e., as more experienced pilgrims who share the same experience and challenge of responsibly making commitments in relativism. Teachers are, in this sense, *mentors* who simultaneously teach, model, and facilitate authentic community. For the college students in Perry's study, "It was this social confirmation which made the very loneliness involved in Commitment a shared bond of community and a rite of membership among mature men."[314]

The role of the teacher. As students begin to accommodate the contextual nature of reality, the role of teachers in promoting a lifestyle of Commitment-making is vitally consequential. Perry says, "We need to teach dialectically–that is, to introduce our students, as our greatest teachers have introduced us, not only to the orderly certainties of our subject matter but to its unresolved dilemmas. This is an art that requires timing, learned only by paying close attention to students' ways of making meaning."[315] The art of good timing in teaching for epistemological maturity implies the need for patience as well as initiative on the part of the teacher. Teachers must encourage but not force students to make genuine commitments. In this sense, "a nudge is better than a shove" in matters of teaching for ethical and intellectual transformation.[316] With this in mind, Knefelkamp identifies four distinctive variables that characterize learning environments that are most conducive for progression along the Perry Scheme by offering students both challenge and support:

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[313]Perry, "Cognitive and Ethical Growth," 97.

[314]Perry, *Patterns of Development in Thought and Values*, 124.

[315]Perry, "Cognitive and Ethical Growth," 109.

[316]Robert J. Kloss, "A Nudge is Best: Helping Students through the Perry Scheme of Intellectual Development," *College Teaching* 42 (1994), *Academic Search Premier*, EBSCO*host* (accessed July 1, 2012).

> (1) The student's experience of and response to diversity; (2) the amount of authority-provided structure for the learning environment; (3) the nature of experiential learning that was experienced as part of the class; and (4) the degree to which the class could be characterized as respectful, collaborative, and able to relate the subject matter to the context of the students' lives (personalism).[317]

Teaching in such a way that encourages and facilitates intellectual growth and personal transformation while simultaneously honoring and respecting students' present level of epistemic maturity is an art form that requires skill and sensitivity, equally. It is an art which, though challenging, must be pursued by all instructors. Teachers must gain an awareness of the epistemic foundations of their students' worldviews, and then teach with patience, responsiveness, and versatility–always poised to initiate and capitalize-on opportunities for growth within the context of students' preparedness for movement. With reference to this sort of awareness and responsibility on the part of teachers, White says, "What is a freshman's meat may be a senior's poison."[318]

The role of the teacher in the arduous, cost-laden process of establishing a relativistic worldview and pursuing genuine commitments is crucial, according to Perry. There is no strategy or method in teaching which can prevent alienation from growth. Indeed, as Perry observes, it should not be prevented even if it could, for it proves in many cases to be "a vital experience in growth–part of the very temptation in the wilderness that gives meaning to subsequent Commitment."[319] Relating this to the role of the teacher, Perry says, "The educator's problem is therefore certainly not to prevent alienation, or even to make the option less available. His problem is to provide as best he can for the sustenance of care."[320] Perry equates the teacher's responsibility with that of a grief counselor: "to stay, as it were, with the student's past and to the very extent that we invite the student to grow beyond it."[321] In this sense, the essential competencies of good

[317]Knefelkamp, introduction, xxiv.

[318]White, foreword, xxxix.

[319]Perry, *Patterns of Development in Thought and Values*, 52.

[320]Ibid., 53.

[321]Perry, "Sharing in the Costs of Growth," 272.

teaching are sensitivity, empathy, and compassion–ethical and intellectual qualities inherent in the mentality of one who considers himself as a fellow-learner, who exhibits the wisdom consistent with an experiential knowledge of all the costs and benefits of epistemological pilgrimage.

Recursive development. Perry's study traces the progression of individuals along a Pilgrim's Progress of development through the college years. The pattern he describes, however, is not consigned the undergraduate experience. It is rather a pattern to be repeatedly engaged throughout the course of one's life. With this in mind, Perry says, "Perhaps the best model for growth is neither the straight line nor the circle, but a helix, perhaps with an expanding radius to show that when we face the "same" old issues we do so from a different and broader perspective."[322] The ultimate educational purpose and aim of liberal education is thus the facilitation of development unto increasingly mature levels of personal commitment in relativism. Perry illustrates the ideal in this way:

> The liberally educated man, be he a graduate of college or not, is one who has learned to think about even his own thoughts, to examine the way he orders his data and the assumptions he is making, and to compare these with other thoughts that other men might have. If he has gone the whole way . . . he has realized that he thinks this way not because his teachers ask him to but because this is how the world "really is," this is man's present relation to the universe. From this position he can take responsibility for his own stand and negotiate–with respect–with other men."[323]

The Perry Scheme: Extensions and Elaborations

Since the initial publication of Perry's study in 1968 as well as the subsequent book, *Forms of Ethical and Intellectual Development in the College Years*, the Perry Scheme has been subject to extensive analysis, testing, and application in numerous higher education contexts. While the Perry Scheme has not undergone any major changes in either structure or scope, elaborations have served provide significant insights

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[322]Perry, "Cognitive and Ethical Growth," 97.

[323]Perry, *Forms of Ethical and Intellectual Development in the College Years*, 44.

regarding the characteristics of the model and of students involved in epistemological development.[324] This section summarizes three major studies which have extended Perry's original work (while retaining his theoretical framework) and contributed significantly to the study of ethical and intellectual development: Belenky et al.'s study of epistemological development in women, Baxter Magolda's longitudinal study of gender-related patterns of intellectual development, and King and Kitchener's Reflective Judgment Model.[325] With regard to these major extensions and elaborations, it is important to note, as Moore observes, that "all of these efforts represent important areas of scholarship with respect to intellectual development, but rather than being separate theoretical models they extend and expand descriptions of the same fundamental journey described by Perry's framework."[326]

Belenky et al.: Women's Ways of Knowing

Perhaps the most influential expansion of Perry's original work is *Women's Ways of Knowing* (*WWK*), a landmark publication that paralleled and extended Perry's research by providing the first investigation of epistemological development among women. The study was conducted by four women: Mary Belenky, Blythe Clinchy, Nancy Goldberger, and Jill Tarule. Among the chief contributions of *WWK* to the overall study

[324]Knefelkamp, introduction, xv.

[325]These represent the most significant and influential studies undertaken by researchers who have retained Perry's basic framework and program of developmental progression. Another significant researcher in the area of epistemological development who deserves mention in the context of this review is Marlene Schommer-Aikins, who developed the notion of an "epistemological belief system." Schommer Aikins adopts much of Perry's theoretical values and assumptions–including recursive development, the primary distinctions between advanced and unadvanced thinking, and the relativistic perspective as representative of personal intellectual maturity–but departs from Perry's continuum-oriented paradigm, positing instead that epistemological beliefs (though comprising a system) are independent and do not necessarily develop in synchrony. Thus, "Epistemological beliefs are better characterized as frequency distributions rather than dichotomies or continuums." See Marlene Schommer, "Synthesizing Epistemological Belief Research: Tentative Understandings and Provocative Confusions," *Educational Psychology Review* 6 (1994): 293-319; Marlene Schommer-Aikins, "An Evolving Theoretical Framework for an Epistemological Belief System," in *Personal Epistemology: The Psychology of Beliefs about Knowledge and Knowing*, ed. Barbara K. Hofer and Paul R. Pintrich (Mahwah, NJ: Lawrence Erlbaum Associates, 2002), 103-18; and Marlene Schommer-Aikins, "Explaining the Epistemological Belief System: Introducing the Embedded Systemic Model and Coordinated Research Approach," *Educational Psychologist* 39 (2004): 19-29.

[326]Moore, "Understanding Learning in a Postmodern World," 24.

of intellectual development is the concept of "separate" versus "connected" forms of knowing. The work of Belenky et al. is differentiated from Perry primarily in that they studied women, whereas Perry's population was almost exclusively male. Also, Belenky et al. included students from various types of colleges, compared to Perry's inclusion of students from only Harvard and Radcliffe.

The authors of *WWK* were compelled to engage in their study in the 1970s when they "became concerned about why women speak so frequently of problems and gaps in their learning and so often doubt their intellectual competence."[327] Though the original intention of the researchers was not solely to explore the epistemological characteristics of women, it became clear as the researchers coded the interviews they had conducted that "the women's epistemological assumptions were central to their perceptions of themselves and their worlds," thus epistemology emerged as the organizing principle for the authors' analysis and interpretation."[328]

WWK presents five "perspectives" that depict the various worldview assumptions and positions of the women who participated in the study. In conceiving of these perspectives, the Perry Scheme served as the guiding paradigm. According to Clinchy,

> Perry's scheme provided the scaffolding we used in coding the women's responses, and the perspectives we present are deeply grounded in his 'positions,' although we emphasize slightly different aspects of epistemology. Perry's positions are defined mainly in terms of the nature of knowledge and truth (truth as absolute, for example, versus multiple) whereas we stress the women's relation to knowledge and truth, their conceptions of themselves as knowers.[329]

While Belenky et al. adopted Perry's general outline, many of the responses they received from women could not be fitted directly into it. Thus, "When the data the women

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[327]Mary Field Belenky et al., *Women's Ways of Knowing: The Development of Self, Voice, and Mind* (New York: BasicBooks, 1997), 4.

[328]Ibid., xviii.

[329]Blythe McVicker Clinchy, "Revisiting Women's Ways of Knowing," in *Personal Epistemology: The Psychology of Beliefs about Knowledge and Knowing*, ed. Barbara K. Hofer and Paul R. Pintrich (Mahwah, NJ: Lawrence Erlbaum Associates, 2002), 64.

provided diverged from the theories we had brought to the project, we forced ourselves to believe the women and let go of the theories."[330]

Silence. The first perspective recognized by Belenky et al. is one in which women are essentially "voiceless." These women consider themselves to be utterly incapable of understanding or even retaining information.[331] As a result, silent women sense that they are unable to articulate their own thoughts and feelings to others, and "rarely wend their way into institutions of higher learning."[332] A feeling of embarrassment and and fear of having one's ignorance or naivety exposed are common, as in one case reported in *WWK*: "I had trouble talking. If I tried to explain something and someone told me that it was wrong, I'd burst into tears over it. I'd just fall apart."[333] Silence cannot be placed as a position on any developmental continuum. Rather, it is a failure to develop, or a perspective of "not knowing."[334]

Received Knowing and Subjectivism. The second perspective described in *WWK* is indicative of Perry's "Dualism." Women from this perspective see the world in black-white, right-wrong terms, and believe that there exists a single, correct answer for every question.[335] Truth, from this perspective, is completely external, dispensed by Authorities to whom one is utterly dependent. Clinchy describes these learners as those who "tend to see knowledge as something to be stored and reproduced, but not to be used and never to be questioned."[336] Departing from Perry's attitude toward dualistic learners,

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[330]Belenky et al., *Women's Ways of Knowing*, xiii-xiv.

[331]Clinchy, "Revisiting Women's Ways of Knowing," 65.

[332]Ibid.

[333]Belenky et al., *Women's Ways of Knowing*, 65.

[334]Clinchy, "Revisiting Women's Ways of Knowing," 65.

[335]Ibid., 66.

[336]Ibid., 67.

however, Clinchy identifies distinctive virtues of women who represent Received Knowing. These learners are receptive–they will listen, and strive to take-in information (unlike silenced learners); these learners are also appreciative of expertise and desire to make proper use of it.[337] Still, the serious limitation for these students is their assumption that Authorities are the only source of knowledge.

Compared to Received Knowing, the opposite perspective is Subjectivism. Rather than believing and valuing Absolute Truths, Subjectivists adopt a "multiplistic" (Perry's term) worldview. Authority-bound, external absolute *T*ruth becomes personalistic, individual *t*ruth substantiated singularly by one's personal opinion. Clinchy says, "While Received Knowers see knowledge as external and utterly objective, subjectivists look inside themselves for knowledge; for them, truth springs from the heart or the gut."[338] A common attitude on the part of a subjectivist is that she "just knows" what she knows.[339] "Tolerance" according to this form of knowing often appeals to the biblical proof-text, "Judge not, that you be not judged." Clinchy observes that subjectivism precludes any sort of critical reflection, which serves to effectively quench openness to challenge and growth. She says, "Subjectivists do not see values–their own or anyone else's–as a subject for reflection, and without reflection there can be no genuine dialogue."[340] The tolerance preached by Subjectivists is thus an "aloof tolerance" in which one may listen, but not truly "hear" alternate or points of view.

Both Received Knowing and Subjectivism are uncritical forms of knowing, and are thus categorized as Preprocedural. Clinchy says, "People who rely solely on received or subjective knowledge are in some sense not really thinking. They have no systematic, deliberate procedures for developing new ideas or for testing the validity of

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[337]Ibid.

[338]Ibid., 69.

[339]Ibid., 70.

[340]Ibid., 71.

ideas."[341] Often, she observes, first or second year college students will simultaneously apply Received Knowing principles to mathematical or scientific studies, and an attitude of Subjectivism in the humanities.[342]

Procedural Knowing. Students who take the next step of epistemological development engage in Procedural Knowing, characterized by the realization that knowledge is a product of an active criteria of assessment applied by the knower, rather than a function of "immediate apprehension."[343] From this perspective, knowledge is seen as a dynamic process, rather than merely a compilation of stored facts and data. As such, knowledge requires work. Clinchy says, "Knowing requires the application of procedures for comparing and contrasting and constructing interpretations, and the quality of knowledge depends on the skill of the knower."[344]

Separate and Connected Knowing. Two diverging procedural approaches are described in *WWK*: Separate and Connected knowing. The authors distinguish these two types by addressing the qualitative differences between knowledge and understanding. Whereas *knowledge* implies "separation from the object and mastery over it," *understanding* involves "intimacy and equality between self and object."[345] In this light, Clinchy differentiates the two types of knowing as having different purposes: "while Connected Knowers are primarily interested in understanding the object of attention, Separate Knowers are primarily oriented toward its validity.[346]

Separate Knowing, consistent with the prioritization of knowledge (so defined

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[341]Ibid., 72.

[342]Ibid.

[343]Ibid.

[344]Ibid., 73.

[345]Belenky et al., *Women's Ways of Knowing*, 101.

[346]Clinchy, "Revisiting Women's Ways of Knowing," 74.

above), hinges primarily on using the best techniques–as prescribed by instructors or authorities–in order to gain knowledge. This is the perspective described by Perry in his Position 4b (Relativism Subordinate), in which students begin to apply relativistic thinking on the basis of utilizing methods that accord with "the way the teacher wants you to think."[347]

Connected Knowing occurs when "the self is allowed to participate" in the construction of knowledge.[348] That construction, while personal, is others-oriented. Building from the subjectivist mentality that the most trustworthy knowledge is rooted in personal experience, Connected Knowers transcend personalistic Subjectivism by developing "procedures for gaining access to other people's knowledge."[349] A key epistemic virtue underlying Connected Knowing is thus, empathy. Belenky et al. say, "In describing connected knowing the women we interviewed used images not of invading another mind but of opening up to receive another's experience into their own minds."[350]

In general, Connecting Knowing involves a "believing stance" toward the author of an idea, while Separate Knowing involves a critical or adversarial perspective which measures the quality of a knowledge claim against impersonal criteria such as logic. It is important to note that the two types are ideals, and neither one is exhibited wholly or exclusively.[351] Belenky et al. offer this helpful summation of the similarities and differences between the two types of procedural knowing:

> Connected knowers begin with an interest in the facts of other people's lives, but they gradually shift the focus to other people's ways of thinking. As in all procedural knowing, it is the form rather than the content of knowing that is central. Separate knowers learn through explicit formal instruction how to adopt a different lens–how, for example, to think like a sociologist. Connected knowers learn through

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[347]Belenky et al., *Women's Ways of Knowing*, 103.

[348]Ibid., 112.

[349]Ibid., 112-13.

[350]Ibid., 122.

[351]Clinchy, "Revisiting Women's Ways of Knowing," 77.

> empathy. Both learn to get out from behind their own eyes and use a different lens, in one case the lens of a discipline, in the other the lens of another person.[352]

Constructed Knowing. Perry's Position 5 (Relativism) is basically descriptive of Constructed Knowing. In this position, "Complexity and ambiguity are assumed, and 'right answers are a special case.'"[353] The primary insights of constructivist thought are presented in *WWK* as twofold: "*All knowledge is constructed*, and *the knower is an intimate part of the known*."[354] While Procedural Knowers describe their ways of learning and knowing in terms of organized criteria, Constructivists "struggle to find images to express the process, and the images are more circular than linear."[355] Also similar to the progression described by Perry, the authors of *WWK* describe a movement from intellectual to ethical knowing: "Once knowers assume the general relativity of knowledge, that their frame of reference matters and that they can construct and reconstruct frames of reference, they feel responsible for examining, questioning, and developing the systems that they will use for constructing knowledge."[356] The virtue of empathy is also extended, according to the authors. They say, "Compared to other positions, there is a capacity at the position of constructed knowledge to attend to another person and to feel related to that person in spite of what may be enormous differences."[357]

Baxter Magolda: Gender-Related Knowing Patterns

Whereas neither Perry nor Belenky et al. set out to perform a study epistemological development per se, nor did either group explicitly explore gender differences with regard to epistemic growth, Marcia Baxter Magolda's focused her

[352]Belenky et al., *Women's Ways of Knowing*, 115.

[353]Clinchy, "Revisiting Women's Ways of Knowing," 81.

[354]Belenky et al., *Women's Ways of Knowing*, 137.

[355]Clinchy, "Revisiting Women's Ways of Knowing," 81.

[356]Belenky et al., *Women's Ways of Knowing*, 139.

[357]Ibid., 143.

attention intentionally on the role of gender and "epistemological reflection."[358] Baxter Magolda's Epistemological Reflection Model is "one theory of how assumptions about the nature, limits, and certainty of knowledge evolve during young adulthood."[359] Her study represents an extension of Perry, King and Kitchener, and Belenky et al.– identifying structures and patterns utilized by young adults as they move from dependence on authority to self-authorship.[360]

One unique aspect of Baxter Magolda's research is that it provides exploration of intellectual development in the college years as well as eight years after college. She carried out her study in two phases. Phase 1, "the college phase," was intentioned to describe a gender-inclusive model of epistemological development; the goal of Phase 2, "the postcollege phase," was to explore epistemological development according to the role of gender, up until age 30.[361] Semi-structured interviews were employed yearly throughout the study in order to allow participants to express their epistemological positions with reference to their own experiences and interests. Ultimately, Baxter Magolda observed four patterns, each with gender-related distinctions. It is important to note, regarding "gender-related" distinctions, that no one pattern is used exclusively by men or women, but there do exist discernible *trends* related to gender.

Absolute Knowing. The first pattern, "Absolute Knowing," is characterized by the assumption that "knowledge is certain and people designated as authorities know the truth."[362] Within this category, Baxter Magolda suggests that women tend to "receive"

[358]Barbara K. Hofer, "Personal Epistemology as a Psychological and Educational Construct: An Introduction," in *Personal Epistemology: The Psychology of Beliefs about Knowledge and Knowing*, ed. Barbara K. Hofer and Paul R. Pintrich (Mahwah, NJ: Lawrence Erlbaum Associates, 2002), 5.

[359]Marcia B. Baxter Magolda, "Epistemological Reflection: The Evolution of Epistemological Assumptions from Age 18 to 30," in *Personal Epistemology: The Psychology of Beliefs about Knowledge and Knowing*, ed. Barbara K. Hofer and Paul R. Pintrich (Mahwah, NJ: Lawrence Erlbaum Associates, 2002), 90.

[360]Ibid., 93.

[361]Ibid., 91.

[362]Ibid., 93.

knowledge, while men tend to "master" knowledge.[363] The receiving pattern–mainly used by women–is characterized by a reliance on peers to be supportive and ask questions. By contrast, the mastery pattern–mainly used by men–entails a preference that peers engage in debate and quizzing in order to promote mastery.[364] Baxter Magolda reports that the absolute knowing perspective is prevalent in the first two years of college, including (in her study) 68% of freshman and 49% of sophomores.[365]

Transitional Knowing. The second pattern, "Transitional Knowing," is marked by the assumption that knowledge is uncertain in cases where different interpretations exist.[366] Like Belenky et al., Baxter Magolda observes that Transitional Knowers often regard knowledge as certain in mathematics and science, and uncertain in areas such as the humanities or social sciences.[367] Baxter Magolda also suggests that students using transitional patterns alter their focus from acquiring knowledge to understanding knowledge.[368] Women who utilize the transitional perspective tend to be "interpersonal," seeking to connect with others in an attempt to reconcile uncertain areas.[369] For this reason, women usually enjoy and appreciate uncertainty more than men, who tend to be "impersonal" in their transitional perspectives. In contrast to the interpersonal pattern, men tend to keep a certain distance between themselves and others in the learning environment. Men focus more on "defending their views" than women, who are more intent on "sharing their views."[370] The transitional knowing perspective

[363]Ibid., 93-94.

[364]Ibid., 94.

[365]Ibid.

[366]Ibid.

[367]Ibid.

[368]Marcia B. Baxter Magolda, *Knowing and Reasoning in College: Gender-Related Patterns in Students' Intellectual Development* (San Francisco: Jossey-Bass, 1992), 105.

[369]Baxter Magolda, "Epistemological Reflection," 94.

[370]Ibid.

was found to be dominant among the college students in Baxter Magolda's study, including 53% of sophomores, and more than 80% of both juniors and seniors.[371]

Independent Knowing. A radically new assumption is presented in the third epistemological pattern described by Baxter Magolda. The hallmark of "Independent Knowing" is thinking for oneself.[372] From this perspective it is assumed that "Each individual has their own truth."[373] Within this category, women tend to be "interindividual" pattern knowers, who are "quick to see how others' views could be right and amenable to changing their views accordingly."[374] Men, on the other hand, tend to be "individual" pattern knowers, who hold tightly to their own views and struggle to genuinely hear the perspectives of others. This echoes Belenky et al.'s description of separate versus connected knowing, and suggests that men and women tend to be distinguished accordingly. Among college students in Baxter Magolda's study, only 16% of seniors exhibited the independent pattern.[375] In the first year after college, however, a majority of participants expressed this perspective.

Contextual Knowing. In the postcollege years, a final pattern emerges: "Contextual Knowing." This perspective retains the notion of thinking for oneself, but involves a recognition on the part of the individual that one must think for oneself "within the context of knowledge generated by others."[376] Furthermore, since all knowledge is constructed in a particular context, good solutions and judgments must be gained through critical thinking, contextual application of knowledge, and employing a

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[371]Ibid.

[372]Baxter Magolda, *Knowing and Reasoning in College*, 168.

[373]Baxter Magolda, "Epistemological Reflection," 95.

[374]Ibid.

[375]Ibid.

[376]Baxter Magolda, *Knowing and Reasoning in College*, 168.

criteria for substantiating knowledge.[377] At this position, Baxter Magolda observed that the role of gender "appeared to dissipate in the postcollege years as participants integrated relational and impersonal patterns."[378] While almost nonexistent among college students, the contextual pattern of knowing became prevalent as participants gained experience in the professional world, advanced education, and mature personal relationships.[379]

Taking a step back from the specific patterns that she observed in the participants of her particular study, Baxter Magolda articulates three "underlying story lines" that form the general basis for intellectual development among all young adults. These include "the development and emergence of voice, the changing relationship with authority, and the evolving relationships with peers."[380] Her study thus retains both the developmental characteristics and theoretical framework of the Perry Scheme, modified to include Belenky et al.'s emphasis on "voice," and expanded to highlight the particular variable of gender roles in epistemological development.

King and Kitchener: Reflective Judgment

King and Kitchener's work in developing the Reflective Judgment Model (RJM) is an integration of the concepts of critical thinking skills and personal epistemology, and represents one of the most comprehensive treatments ever produced regarding intellectual development.[381] The premise of the RJM is that epistemic maturation is "intrinsically tied to the ability to understand the nature of ill-structured problems and to construct solutions for them."[382] The primary manner in which RJM

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[377]Baxter Magolda, "Epistemological Reflection," 96.

[378]Ibid., 97.

[379]Ibid., 95.

[380]Baxter Magolda, *Knowing and Reasoning in College*, 191.

[381]Hofer, "Personal Epistemology as a Psychological and Educational Construct," 6.

[382]Patricia M. King and Karen Strohm Kitchener, "The Reflective Judgment Model: Twenty

research expanded Perry's initial study is in the development of a new diagnostic tool, the Reflective Judgment Interview, together with extensive application and testing. *Developing Reflective Judgment*, published in 1994, includes analysis drawn from the administration of the Reflective Judgment Interview to more than 1,700 participants, as well as reports from a longitudinal study including three cohorts of students over ten years.[383]

Perry's work provided the building blocks for King and Kitchener's understanding of intellectual development and to the formulation of their model. The main distinguishing feature of the RJM compared to the Perry Scheme is that the RJM focuses explicitly on "judgment" in the later stages of development, whereas Perry focuses mainly on epistemic responsibility and identity development.[384] Another primary influence is Dewey, from whom the emphasis on reflection is adopted. Dewey observes that reflective thinking is necessary when one realizes a problem cannot be solved with certainty. He says, "Demand for the solution of a perplexity is the steadying and guiding factor in the entire process of reflection."[385] The RJM consists of seven successive stages, or "sets of assumptions about knowledge and justification of beliefs about ill-structured problems that tend to develop in relationship to each other."[386] As sets of assumptions progress, more complexity is involved with regard to the forms of justification employed.[387] The stages of the RJM may be grouped into three major periods: Pre-

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Years of Research on Epistemic Cognition," in *Personal Epistemology: The Psychology of Beliefs about Knowledge and Knowing*, ed. Barbara K. Hofer and Paul R. Pintrich (Mahwah, NJ: Lawrence Erlbaum Associates, 2002), 38.

[383]Ibid., 43.

[384]Patricia M. King and Karen Strohm Kitchener, *Developing Reflective Judgment: Understanding and Promoting Intellectual Growth and Critical Thinking in Adolescents and Adults* (San Francisco: Jossey-Bass, 1994), 38.

[385]John Dewey, *How We Think* (New York: D.C. Heath & Co., 1910), 181-82, Kindle Electronic ed.

[386]King and Kitchener, *Developing Reflective Judgment*, 42.

[387]King and Kitchener, "The Reflective Judgment Model," 39.

Reflective, Quasi-Reflective, and Reflective.

Pre-Reflective Thinking. Pre-Reflective Thinking (Stages 1-3) consists of an assumption that knowledge is gained through the impartation of an authority figure or firsthand observation, rather than evaluation.[388] Absolute knowledge and certainty are assumed to be the essential attribute of truth, and all problems are treated as though they are "well-structured"–completely defined and subject to objective resolution.[389] Stage 1 is described as "the epitome of cognitive simplicity," and entails a failure even to perceive that differing positions exist on a certain issue.[390] This stage bears some similarity to Belenky et al.'s notion of silence, or "not knowing." In Stage 2, one maintains his belief in a true, fixed reality, but acknowledges that this reality is not known by everyone.[391] In Stage 3, individuals discover that there are areas in which even authorities may not have the truth, but only due to the fact that the truth has not yet been uncovered.[392]

Quasi-Reflective Thinking. The assumptions consistent with Quasi-Reflective Thinking include a recognition that knowledge claims contain elements of uncertainty due to missing information or ineffective methods for obtaining proper evidence.[393] Evidence and judgments in this period of development are highly idiosyncratic (e.g., one may choose evidence based on what most closely accords with his already existing belief).[394] Stage 4 involves the belief that knowledge is uncertain and ambiguous, and therefore judgments are an exclusively personal function. In Stage 5, people believe that

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[388]Ibid.

[389]Ibid.

[390]King and Kitchener, *Developing Reflective Judgment*, 52.

[391]Ibid., 51.

[392]Ibid., 55.

[393] King and Kitchener, "The Reflective Judgment Model," 40.

[394]Ibid., 40-41.

even though they may not obtain certainty in knowing, they may know subjectively–according to context.[395]

Reflective Thinking. Recognizing that knowledge claims cannot be made with certainty, people who engage in Reflective Thinking "make judgments that are 'most reasonable' and about which they are 'reasonably certain,' based on their evaluation of the available data."[396] Reflective thinkers believe they must actively construct their own decisions and beliefs, and that all knowledge claims must be evaluated for validity according to the contexts in which those claims are generated. They are also always prepared to reexamine their own assumptions if and when new information emerges to challenge their held beliefs. This sort of critical thinking represents the ideal put forth by Dewey:

> Thinking begins in what may fairly enough be called a forked-road situation, a situation which is ambiguous, which presents a dilemma, which proposes alternatives. As long as our activity glides smoothly along from one thing to another, or as long as we permit our imagination to entertain fancies at pleasure, there is no call for reflection. Difficulty or obstruction in the way of reaching a belief brings us, however, to a pause. In the suspense of uncertainty, we metaphorically climb a tree; we try to find some standpoint from which we may survey additional facts and, getting a more commanding view of the situation, may decide how the facts stand related to one another.[397]

In Stage 6, knowing is regarded as a process in which the knower must actively engage.[398] Stage 7 represents the ultimate level of cognitive development, in which one believes "that while reality is never a given, interpretations of evidence and opinion can be synthesized into epistemically justifiable conjectures about the nature of the problem under consideration."[399] King and Kitchener maintain that cognitive-structural development does not progress past Relativism, Perry's Position 5.

[395]King and Kitchener, *Developing Reflective Judgment*, 62.

[396]King and Kitchener, "The Reflective Judgment Model," 40.

[397]Dewey, *How We Think*, 176-81.

[398]King and Kitchener, *Developing Reflective Judgment*, 66.

[399]Ibid., 70.

Inverse Consistency:
A Principle for Interaction with the Perry Scheme

A commitment to the authority and sufficiency of Scripture must be the guiding evaluative premise on which all secular developmental models, including the Perry Scheme, are assessed and utilized. To aptly describe the uniqueness of human beings and normative patterns of epistemological development, it is crucial to begin with the truth of God's word and the developmental realities apparent in the redemptive-historical metanarrative. The premise that is maintained in this section is that the orderly world is so created by God that secular social science research can observe and accurately identify human developmental patterns and behaviors. The noetic effects of sin are so pervasive, however, that the ability of secular research to rightly *interpret* those patterns is radically limited. Thus, what is put forth as positive or "natural" development according to secular research is often a description of a "pattern of fallenness."[400]

Diverging teleologies. The vast majority of developmental theories, including the Perry Scheme, operate on the basis of non-biblical metaphysical presuppositions. Specifically, they share a commitment to a naturalistic worldview.[401] With this in mind, it is crucial to recognize the implications of the fundamental divergences between biblical and secular conceptions of development. Developmental theories are inherently theological in the sense that all theories advance particular metaphysical claims based on presuppositional commitments. The metaphysical positions upon which any theory or model is based determines its prescribed trajectory of positive growth, according to its distinct teleological conceptions. A theory's accepted notion of truth thus serves as a teleological compass, identifying preferred forms of advancement as the equivalent of true north. This prescriptive directionality guides a theory's preferred trend of development. Furthermore, every theory is unavoidably values-laden, because every

[400]Timothy Paul Jones, "Journeying Toward a Biblical Basis for Lifespan Development" (unpublished paper). See Appendix 1.

[401]Balswick, King, and Reimer, *The Reciprocating Self*, 17.

theory implicitly asserts that forward movement is good and arrest or digression is bad.[402] The Perry Scheme is inherently values-laden as it proposes a progressive journey toward a more desirable state of epistemological identity.

From a biblical perspective–which defines truth according to God's explicit revelation in Scripture–one must carefully assess and interact with developmental theories in light of how their guiding presuppositions compare with biblical precedents. Webb-Mitchell says,

> Human developmental theories are not theologically neutral, nor is their advancement in the life of the church necessarily a good thing for Christ's body. For according to these theories, we are not first and foremost God's children, created in God's image. Instead, we become the sum of our many divided and disparate developmental categories. We are our psychosexual, cognitive, psychosocial, moral, or faith development portrait, depending on which developmental theory is being used. Each theory is inextricably connected with certain assumptions both about the self, our relationship with one another and the means by which we grow, and about the particular ends to which we are growing.[403]

Individualism. The primary theological assumption regarding the nature of human beings in secular developmental models may be identified as individualism. Individualistic developmental models–including Perry's which entails an existential formulation of self-identity and development–are associated with Maslow's self-actualization theory, which suggests that the most essential aspect of human personhood is a "hierarchy of needs." Webb-Mitchell observes that under the Piagetian premises adopted by Perry, "The author of life is the individual who pokes and prods the context in which she lives. . . . This individual is the primary actor, the solitary meaning maker who acts on the world with the purpose of keeping a certain balance, or equilibrium, with outside forces."[404] In this way, secular developmental theories contradict the biblical

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[402]Patricia Bizzel, *Academic Discourse and Critical Consciousness* (Pittsburgh: University of Pittsburgh Press, 1992), 156.

[403]Brett Webb-Mitchell, "Leaving Development Behind and Beginning Our Pilgrimage," in *Care for the Soul: Exploring the Intersection of Psychology and Theology*, ed. Mark R. McMinn and Timothy R. Phillips (Downers Grove, IL: InterVarsity Press, 2001), 81.

[404]Webb-Mitchell, "Leaving Development Behind and Beginning our Pilgrimage," 84.

definition of personhood: man as God's image bearer, purposed to actively reflect God's glory through covenant relationship with God and one's fellowman.

The secular portrayal of man essentially subjugates God as "an adjunct to 'my needs.'"[405] Such a portrayal is an evident assumption in the Perry Scheme. For Perry, even though the role of community and social context is prominent and vital, relationships are conceived primarily as a resource for obtaining meaningful self-identification, thus fulfilling one's internal longing for actualization. Recognizing this distinction between biblical and secular views regarding the essential nature of human beings, Welch observes, "An obvious difference between the image-as-needs-for-relationship and the image-as-reflecting-glory is where you find this actual image. The needs view suggests that the image is a place inside you. It is a location–a hollow core–that is passive and easily damaged. But the image-as-actively-bringing-glory defines man as active, either bringing glory to God or to self."[406]

Psychologists Martin, Sugarman, and Thompson, who subscribe to a naturalistic worldview, articulate the notion of individualism with regard to the influence of social-environmental factors in human psychological development. They reject both hard determinism and libertarianism and put forth a compatibilist formulation that avoids both extremes. The authors reject determinism by observing that human beings are self-conscious actors of deliberation from their own first-person perspectives.[407] Also, they reject libertarianism by positing that the existence of sociocultural groups allows for the "adaptation" that is psychological individuals.[408] The psychological reality of individualism is thus a consequence of societal and cultural influence. This formulation is

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[405]Edward T. Welch, "Who are We? Needs, Longings, and the Image of God in Man," *Journal of Biblical Counseling* 13 (1994): 27.

[406]Welch, "Who are We?" 33.

[407]J. J. Martin, J. Sugarman and J. Thompson, *Psychology and the Question of Agency*, Alternatives in Psychology (Albany: State University of New York Press, 2003), 101.

[408]Ibid., 106-08.

representative of Perry's concept of the individual with regard to the role of community and context in human maturation.

Adaptation. For Piaget as well as Perry, the key telos for developmental growth is *adaptation*.[409] Consistent with naturalistic principles, the ultimate purpose and aim of human maturation is consistent and progressive change according to one's social-environmental context. Adaptation for its own sake, therefore, is the goal of personhood. The biblical precedent for growth is consistent with the thought of Perry and Piaget in prescribing the necessity for continual growth and maturation, but it is inversely oriented in its prescribed ultimate goal–Christlikeness (Col 3:10; Rom 8:29). Webb-Mitchell reflects specifically on the nature and implications of Piaget's metaphysical allegiances with regard to individualism and the value of naturalistic adaptation:

> For Piaget, the individual maintains equilibrium through the formulaic machinations of adaptation, which equals assimilation plus accommodation. This structure of adaptation makes it possible for us to grow or develop. Even the word *develop* is taken from the modern biological sciences; we are like a plant that grows or evolves over time. According to Piaget, such growth in the individual is a result of the individual negotiating several forces independently: 'Development = Physical maturation + Experience with the physical environment + Social experience + Equilibration.' These four forces work on me, cause me, the individual, to grow–whether I like it or not. After all, this is a social Darwinistic model: survival of the fittest, adapt or die.[410]

Christian interactive alternatives. For Christians committed to upholding a commitment to the authority of Scripture, a careful way forward regarding the assessment and utilization of secular developmental theories must be discerned. Two main interpretive approaches are put forward among evangelical Christians regarding the nature and method of interacting with secular developmental theories. Related specifically to the fields of psychology and counseling, Powlison distinguishes between these diverging positions by comparing the academic departments at two major

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[409]Balswick, King, and Reimer, *The Reciprocating Self*, 17.

[410]Webb-Mitchell, "Leaving Development Behind and Beginning our Pilgrimage," 84-85.

evangelical institutions. The core agenda at Fuller Seminary's Graduate School of Psychology may be characterized this way: "Wise counseling requires that evangelical faith be carefully integrated with the theories, therapeutic methods and professional roles of the modern psychologies." By contrast, the core agenda at Westminster Seminary's Christian Counseling and Educational Foundation may be as thus: "Wise counseling recognizes that the Bible mandates development of a comprehensive pastoral theology that is distinct from prevailing cultural paradigms."[411] The agendas of these two departments represent two distinct alternatives for interaction with developmental theories: "Comprehensive-Internal" and "Vital External."

The Vital-External (VITEX) approach is an integrationist perspective which asserts that secular theories make vital, external contributions to the construction of Christian conceptions of human personhood and development. According to Powlison, "VITEX asserts that while biblical faith and practice give us controls to evaluate outside input, it does not give enough detail to constitute a model."[412] The Comprehensive-Internal approach (COMPIN) maintains that Scripture and biblical doctrine supply comprehensive, internal resources by which human personhood and development may be conceived. Powlison says, "COMPIN asserts that while psychologies may stimulate and inform, they are unnecessary for the constitution of a robust model.[413] In sum, VITEX is primarily focused on the integration of secular theory along with biblical precedents, while COMPIN is primarily focused on the sufficiency of Scripture to inform and define all notions of human development from the outset. Powlison articulates his biblical-theological argument for the COMPIN approach in this way:

Fallen though it is, this world is God's stage of redemption. But appropriation of

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[411]David Powlison, "Questions at the Crossroads: The Care of Souls and Modern Psychotherapies," in *Care for the Soul: Exploring the Intersection of Psychology and Theology*, ed. Mark R. McMinn and Timothy R. Phillips (Downers Grove, IL: InterVarsity Press, 2001), 25.

[412]Powlison, "Questions at the Crossroads," 32.

[413]Ibid.

> culture should always be subordinated first to a clear-eyed grasp of God's truth, and second to a keen-eyed skepticism about fallen alternatives. Paul obviously learned a great deal from his culture. But he did not learn the living, systematic truth he proclaimed from sterile and deviant substitutes; rather, the truth he proclaimed radically reworked those substitutes."[414]

Powlison's three "epistemological priorities" for interaction with secular theories include: First, "… to articulate positive biblical truth, a systematic practical theology of those things that our culture labels [developmental] issues," second, "to expose, debunk and reinterpret alternative models to biblical discipleship," and third "to learn what we can from defective models."[415] The interactive view adopted and utilized by the researcher in this study is most consistent with these priorities and the Comprehensive-Internal approach.

Interactive realities and priorities. In observing elements of *God's* design through general revelation, secular developmental theorists deduce aspects of *human* nature. For that reason, namely anthropocentricity, "social-scientific methods and terminology can never provide the decisive description of any human behavior or relationship."[416] Scripture declares that the proper goal of human development is conformity to Christ (Rom 8:29). When positive growth is conceived in terms of fallen human behaviors which are by nature contrary to the normative biblical pattern, the goal and purpose of life is defined as "self-identity" or "self-actualization"—concepts with which "Christlikeness" is mutually exclusive.

Secular and biblical developmental models include consistent patterns of maturation, but are oriented toward two opposite goals, respectively: self and Christ. Thus, *inverse consistencies* exist between the biblical notion of positive maturation (unto Christlikeness) and secular-developmental notions–which in the Perry Scheme entails existentialist self-identification and commitment. The primary distinction between Perry's

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[414]Ibid., 36.

[415]Ibid., 35.

[416]Jones, "Journeying Toward a Biblical Basis for Lifespan Development."

concept of human development and the biblical concept of progressive sanctification is thus teleological.

The end goal prescribed by the Perry scheme is "commitment in relativism," an epistemological position in which one maintains commitment to his vetted structure of belief and lives his life accordingly–all the while remaining open to reforming his belief system, given his awareness that knowledge and values are not objective and never certain. As such, Perry's assumptions provide for the possibility of interaction with certain biblical tenets, including the progressive nature of development, and the rejection of logical positivism. It must be realized, however, that Perry's presuppositions identify the ultimate goal of human development as necessarily self-focused and centered in naturalistic life (*bios*) rather than eternal life (*zoê*).[417] Thus, a fundamental departure with Perry is in order. From a biblical perspective, utilization of Perry's theory as an interpretive map for describing epistemological development must be "critically interactive" rather than "wholly integrative." By this approach, one may learn from the patterns observed by Perry while remaining faithful to the ultimate Source of truth, according to the Word of life. As Jones says,

> The sole sufficient and determinative foundation by which we understand not only Christian formation but also human development, human relationship, and human behaviors is and must remain the Word of God. It is with Scripture that our understanding of human development begins, and it is by Scripture that our understanding of human development must constantly be tested.[418]

Figure 3 provides an illustration of the principle of inverse consistency as it may be applied to the Perry Scheme with respect to various key elements of epistemological priorities and values.

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[417]Numerous examples of this distinction occur in the New Testament. See Luke 21:34, "But watch yourselves lest your hearts be weighed down with dissipation and drunkenness and cares of this life (root, *bios*), and that day come upon you suddenly like a trap," and John 10:10, "The thief comes only to steal and kill and destroy. I came that they may have life (root, *zoê*) and have it abundantly."

[418]Jones, "Journeying Toward a Biblical Basis for Lifespan Development."

Applying the Principle of Inverse Consistency to the Perry Scheme	
Regarding the limits of formal logic and reason . . .	
Perry: Human beings cannot ascertain *Truth* (capital T), only *truth*–since absolute Truth is illusory.	Scripture: Human beings cannot ascertain Truth (capital T), only *truth*–since absolute Truth is solely determined by an almighty, infinite Creator.
There are limits to formal logic and reason, thus *faith commitments are required for knowledge*; belief is basic to knowledge–knowledge is impossible apart from the adoption of an (ungrounded) starting point; faith (conviction) activates belief. [Ref. Polanyi (*Personal Epistemology*), Mavrodes (*Belief in God*) "proved-premise principle" and "termination rule"]	
Perry: Faith commitment requires "arbitrary faith" and represents the "willing suspension of disbelief."	Scripture: Faith commitment requires "revelatory faith" and represents "the *assurance* of things hoped for; the conviction of things not seen" (Heb 11:1).
Regarding the objectivity of knowledge . . .	
Perry: All knowledge is mediated by context and no truth claim is objectively justifiable; individuals must therefore "make meaning" for themselves.	Scripture (Reformed Epistemology): All knowledge is mediated by general and special revelation and no knowledge is objectively justifiable; individuals must therefore aim to "think God's thoughts after him" (ref. Bavinck).
Regarding contextual knowledge . . .	
Perry: Knowledge is contingent on the unique contexts brought to bear in a naturalistic universe, devoid of ultimate purpose and without a foundational metanarrative—thus knowledge must be continually pursued and "created" by human beings according to *internally-based* processes of substantiation	Scripture: knowledge is contingent on the unique contexts brought to bear in a God-initiated, God-designed, God-ruled universe, infused with purpose and grounded by the overarching biblical metanarrative—thus knowledge must be continually pursued and "discerned" by human beings according to *revelation-based* processes of substantiation.
Regarding positive maturation . . .	
Perry: Given naturalistic reality, successful cognitive growth entails increasing, convictional commitment to one's own values and assumptions–formed on the basis of a critical and reflective criteria of assessment–while remaining open to revision of one's worldview through continual testing and discernment in light of alternate, potentially valid truth claims.	Scripture: Given theistic, Christocentric reality, successful cognitive growth entails increasing, convictional commitment to biblical values and assumptions–formed on the basis of a critical and reflective criteria of assessment–while remaining open to revision of one's worldview through continual testing and discernment in light of alternate, potentially valid truth (not Truth) claims.
Regarding commitment . . .	
Perry: Commitment involves maintaining one's worldview "with universal intent"–i.e., exercising steadfast, convictional faith, acknowledging that one's commitment is the only means by which to genuinely fulfill one's longing for purposeful identity, albeit through commitments that are arbitrary, groundless, and personally beneficial (ref. Polanyi).	Scripture: Commitment involves maintaining one's worldview "with universal intent"–i.e., exercising steadfast, convictional faith, acknowledging that one's commitment is the only means by which to genuinely fulfill one's longing for purposeful identity, through commitments that enable one to "draw near" to God, seek his will, and serve the benefit of his Kingdom (Heb. 11:6).

Figure 3. Applying the principle of inverse consistency to the Perry Scheme

Regarding the "cost" or "risk" of commitment . . .	
Perry: The cost of commitment involves abandoning numerous potentialities by wholeheartedly pursuing one's chosen path, so that one may "find his life" and forge his own unique identity in the world.	Scripture: The cost of commitment involves abandoning numerous potentialities by denying oneself, taking up one's cross, and following Christ, so that one may "find his life" by losing it–and pursue his shared identity with Jesus (Matt 16:24).
Regarding the role and support of community . . .	
Perry: Genuine community engenders a "shared realization of aloneness."	Scripture: Genuine community engenders a shared realization of unified belonging and purpose.

Figure 3—Continued. Applying the Principle of Inverse Consistency to the Perry Scheme

CHAPTER 3

METHODOLOGICAL DESIGN

This chapter describes the methods and procedures that were employed for this research study, which explored epistemological development among pre-ministry undergraduates across different institutional contexts. It includes explanations of the research questions, design overview, population, sample, delimitations, limitations of generalization, and instrumentation.

Research Question Synopsis

1. What is the relationship, if any, between the type of institution a pre-ministry undergraduate attends and progression through Perry's positions of intellectual and ethical development?
    a. What is the relationship between attendance at a secular college or university and progression through Perry's positions?
    b. What is the relationship between attendance at a confessional Christian college or university and progression through Perry's positions?
    c. What is the relationship between attendance at a Bible college and progression through Perry's positions?

2. What are the distinctions between pre-ministry college seniors and recent graduates from differing institutional contexts regarding how they express their approaches to acquiring and maintaining knowledge?

3. What is the relationship, if any, between differing social-environmental conditions and the development of epistemological maturity among pre-ministry undergraduates?
    a. What is the relationship between personal confrontation and interaction with non-biblical worldviews and the development of epistemological maturity among pre-ministry undergraduates?
    b. What is the relationship between the experience of interfaith dialogue within the academic community and the development of epistemological maturity among pre-ministry undergraduates?
    c. What is the relationship between exposure to interdisciplinary studies and the development of epistemological maturity among pre-ministry undergraduates?

Design Overview

This research was a fully qualitative study of the variance of epistemological

development among pre-ministry undergraduates across varying institutional contexts. Data was primarily collected through the implementation of a "semi-structured life world interview," defined by Kvale and Brinkman as "an interview with the purpose of obtaining descriptions of the life world of the interviewee in order to interpret the meaning of the described phenomena."[1] The strength of this data gathering approach is its capability of eliciting information about individuals' personal perspectives with unique depth and accuracy. Such constitutes the chief aim of qualitative interviewing: to understand the world from the interviewees' points of view, to comprehend the meanings of their experiences, and to discover their worldviews apart from scientific explanations.[2]

Students from three specific institutional types were represented in this study: secular university, confessional Christian liberal arts university, and Bible college. This research thus employed a "stratified purposeful sampling" technique that identified and engaged three fairly homogeneous samples.[3] Interviews were conducted in a one-on-one scenario, by telephone, with ten students from each sample stratum. Interviews took place at specific times scheduled by the researcher and each interviewee. All interviews were recorded for the purpose of transcription.

The interviewer gained access to the population sample through contact with personal, denominational, campus ministry, and higher education personnel networks. The following three attributes qualified each participant: willingness to participate in the study, "traditional" classification regarding age and length of undergraduate career, and impending graduation in less than one academic year *or* recent graduation as of the most recent academic semester. Cresswell identifies the necessity that interview participants must be those "who are not hesitant to speak and share ideas . . . the less articulate, shy

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[1]Steinar Kvale and Svend Brinkmann, *InterViews: Learning the Craft of Qualitative Research Interviewing*, 2nd ed. (Thousand Oaks, CA: Sage, 2009), 3.

[2]Ibid., 1.

[3]Patton, Michael Quinn, *Qualitative Research & Evaluation Methods*, 3rd ed. (Thousand Oaks, CA: Sage, 2002), 240.

interviewee may present the researcher with a challenge and less than adequate data."[4] Participants' willingness to openly share their own ideas and perspectives was confirmed by the researcher prior to scheduling each interview.

Interviews were organized according to a customized adaptation of the Perry Interview Protocol. Customization of the protocol, as well as interview training, occurred through personal consultation between the researcher and William S. Moore, director of the Center for the Study of Intellectual Development (CSID).[5] The format of each interview consisted of predetermined, open-ended questions, followed by more specific "probes" which served to focus the interviewees' responses such that they articulated their own perspectives on matters relevant to their epistemological positions and values. Upon completion, interview transcripts were submitted to the CSID for formal rating purposes. The researcher designed and performed his own systematic content analysis procedure prior to receiving the results from the CSID. Once interview scoring was completed by the CSID, the researcher engaged in evaluation, analysis, and formulation of findings for the research study.

Population

The population for this study consisted of pre-ministry undergraduates. For the purposes of this study, "pre-ministry" status was determined by three characteristics: a student's active membership in a local church, their intention to pursue vocational ministry, and their intention to enroll in seminary.[6]

Samples

From the total population of pre-ministry undergraduates, this study drew three

[4]John W. Cresswell, *Qualitative Inquiry and Research Design: Choosing among Five Approaches*, 2nd ed. (Thousand Oaks, CA, 2007), 133.

[5]See Appendix 6 for detailed information regarding Moore and the CSID.

[6]Two pre-ministry students were included in the study who planned to attend graduate school at non-seminary institutions. It was determined by the researcher and his dissertation committee that this minor variation would not preclude inclusion of these students in the sample.

sample groupings, including students from three institutional contexts: secular university, confessional Christian liberal arts university, and Bible college. These contexts, while not inclusive of every member of the entire population, represent the majority of seminary-bound college graduates. As such, these purposefully selected samples provided information-rich cases that enabled in-depth exploration and implications that were more specific and targeted.[7] In addition, this study's purposeful sampling approach eliminated a host of potentially confounding variables.

Delimitations

1. This research was delimited to the specific institutional contexts of the students who participate in the interviews.
2. This research was delimited to include pre-ministry undergraduates who planned to enroll at an evangelical seminary after graduation. This delimitation created a more homogeneous sample which allowed the researcher to generate more specific conclusions.
3. This research was delimited to include individuals who were "traditional" college seniors or recent graduates (ages 20-25). This delimitation eliminated numerous factors of variability within the sample that could have potentially negated the significance of the findings.
4. This research was delimited to include only college seniors or recent graduates from four-year institutions, who were earning (or recently earned) a bachelor's degree.
5. This research was delimited to the observation of college students during their final academic year before graduation, or during the immediate months following graduation. This study thus did not trace epistemological development throughout students' college careers. The interviews did, however, capture students' reflections concerning their undergraduate experiences.

Limits of Generalization

1. As with Perry's original study, the generalization of research findings was limited to the specific institutional context of each group of interviewees.
2. Since all interviewees affirmed Protestant religious beliefs, the findings of the research were not generalizable to pre-ministry undergraduates of non-Protestant faiths or denominations.
3. Since interviewees had enrolled or planned to enroll in an evangelical theological

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[7]Patton, *Qualitative Research & Evaluation Methods*, 230.

seminary at the time of the interview, the findings of this research were specifically generalizable to pre-ministry undergraduates with evangelical convictions. Thus, while the study has relevance for the larger Christian community, it offers more conclusive significance within evangelical Protestantism.

Instrumentation

Data-gathering for this study was accomplished primarily through semi-structured interviews with the selected sample groupings of pre-ministry undergraduates. Prior to the one-on-one interviews, an initial research phase involved the completion of the Dissertation Study Participation Form by each potential participant. The second phase of the data gathering process involved conducting personal interviews with each participant, according to an adapted and customized version of the Perry Interview Protocol.

Dissertation Study Participation Form

The purpose of the Dissertation Study Participation Form was to confirm potential participants' willingness to participate and qualification for inclusion in this research study. It also provided the interviewer with a basic introduction to each interviewee. The first section consisted of the "Agreement to Participate" statement, which was read and affirmed by each participant. The second section included prompts and questions regarding school and degree-program information, future academic and vocational intentions, and church affiliation. The content of the form is included in Appendix 2.

Interview Protocol

The semi-structured interviews were organized according to an adapted and customized version of the Perry Interview Protocol, which was developed through consultation between the researcher and William S. Moore, director of the CSID. The duration of each interview was approximately one hour. The researcher recorded each interview for the purpose of transcription. Research interviews consisted of

predetermined, open-ended questions that were general in nature, followed by more specific "probes" designed to elicit responses that articulate the interviewee's epistemological positions and values. See Appendices 3-4 for the CSID's standardized Perry Interview Protocol and the CSID's alternative Perry Interview Protocol. The customized interview protocol adapted for this study is included in Appendix 5.

Procedures

The researcher implemented the research design through six steps. These steps included: (1) contact and enlist participants for the study, and obtain a Dissertation Study Participation Form from each participant, (2) customize the Perry Interview Protocol, (3) conduct a pilot study, (4) conduct and transcribe the research interviews, and submit transcriptions to the CSID for scoring, (5) perform an independent content analysis, and (6) evaluate the CSID's ratings and content analysis results together, in order to formulate findings and draw implications.

Contact Participants and Obtain Participation Forms

The researcher utilized personal, denominational, campus ministry, and higher education personnel networks to contact and enlist potential participants for the study. Upon confirmation of each student's interest in participation, the researcher confirmed his or her qualification through personal correspondence. An electronic version of the Dissertation Study Participation Form was then sent via email to all participants, including pilot study participants. Each participant completed the form and returned it via email to the researcher.

Customize the Perry Interview Protocol

The next step of this research study procedure was customizing and refining the interview technique by which the data was collected. The researcher adapted

the Perry Interview Protocol to more adequately address the research questions for this study, while retaining the main themes of the original protocol. William S. Moore provided consultation throughout the process of designing the revised protocol, to ensure that the instrument was sufficient for obtaining the data needed in order for the CSID to apply ratings to the interviews according to the Perry Scheme. Moore also provided the researcher with interview training materials prepared by CSID. This training, in addition to personal correspondence with Moore, assisted the researcher in recognizing and implementing methods and techniques that enabled him to facilitate interview discussions in which students clearly articulated their own epistemological positions and values.

Conduct a Pilot Study

A pilot study was conducted with a small group of participants in order to provide validation of the researcher's interview protocol. Also, the pilot study provided an opportunity for the researcher to practice and refine his interviewing methods and techniques.

Conduct and Transcribe the Research Interviews

Upon final confirmation of the population sample groupings and receipt of all participation forms, the researcher corresponded with each participant to schedule a specific date and time for the one-on-one interview. Before each interview, the researcher examined the participant's Dissertation Study Participation Form and considered potential strategic points of interaction. Interviews were approximately one hour in length. An audio recording of each interview was transcribed by the researcher, and transcriptions were submitted to the CSID for scoring.

Design and Implement Independent Content Analysis

The researcher undertook his own independent analysis before receiving the

interview rating scores from the CSID. The researcher sought to identify various forms of students' articulations relating to the following epistemological priorities and competencies:[8] (1) a recognition of the God of the Bible as metaphysically ultimate, and of revelation as the source and most basic component for knowledge and development; (2) a clear articulation of the relationship between faith and rationality; (3) a preference for higher-level forms of thinking according to Bloom's Taxonomy;[9] (4) a prioritization of wisdom-oriented modes of learning and living; (5) a reflective criteria of assessing one's own beliefs and values, as well as divergent beliefs and values; (6) a recognition of social-environmental influences on one's learning and maturation; (7) a pursuit of personal development that results from mutual interdependence and reciprocity in one's relationships with authority figures and peers; (8) a sense of personal responsibility for gaining, maintaining, and progressing in knowledge; (9) a preference for active involvement in the teaching and learning process; and (10) a convictional commitment to one's own worldview–maintained with critical awareness of personal contexts, ways of thinking, and challenges brought to bear by alternative worldviews–through testing and discernment. These ten elements may be classified in three categories: Biblically-founded presuppositions for knowledge and development (1); metacognition, critical reflection, and contextualistic orientation (2-5); and personal responsibility for knowledge acquisition and maintenance–within community (6-9). Figure 4 presents a chart that illustrates the scope and structure of the researcher's content analysis regarding epistemological priorities and competencies.

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[8]This list is the researcher's formulation based on epistemological priorities and values synthesized from biblical-theological sources and Perry-related sources, as presented in the precedent literature chapter of this study.

[9]Benjamin S. Bloom et al., *Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook 1: Cognitive Domain* (New York: Longman, 1956). Bloom's hierarchical formulation is a standard tool for recognizing and classifying the most "important and long-lasting fruits of education" in terms of cognitive complexity. The Taxonomy identifies a progression of cognitive modes, moving from recognition or recall of information to understanding and use of knowledge. The Revised Taxonomy includes six categories: Remember, Understand, Apply, Analyze, Evaluate, and Create. See David R. Krathwohl, "A Revision of Bloom's Taxonomy: An Overview," *Theory into Practice* 41 (2002): 212-18.

<table>
<tr><th>I. Biblically-founded presuppositions for knowledge and development</th><th>II. Metacognition, critical reflection, and contextualistic orientation</th><th>III. Personal responsibility for knowledge acquisition and maintenance–within community</th></tr>
<tr><td rowspan="3">A recognition of the God of the Bible as metaphysically ultimate, and of revelation as the source and most basic component for knowledge and development</td><td>A preference for higher-level forms of thinking according to Bloom's taxonomy</td><td rowspan="2">A pursuit of personal development that results from mutual interdependence and reciprocity in one's relationships with authority figures and peers</td></tr>
<tr><td>A prioritization of wisdom-oriented modes of learning and living</td></tr>
<tr><td rowspan="2">A reflective criteria of assessing one's own beliefs and values, as well as divergent beliefs and values</td><td>A sense of personal responsibility for gaining, maintaining, and progressing in knowledge</td></tr>
<tr><td rowspan="3">A clear articulation of the relationship between faith and rationality</td><td rowspan="3">A recognition of social-environmental influences on one's learning and maturation</td><td>A preference for active involvement in the teaching and learning process</td></tr>
<tr><td>A convictional commitment to one's own worldview–maintained with critical awareness of personal contexts, ways of thinking, and challenges brought to bear by alternative worldviews–through testing and discernment</td></tr>
</table>

Figure 4. Categorical chart for assessing epistemological priorities and competencies

In addition to this structured analysis portion of the researcher's content analysis, he identified prominent themes that emerged from interviewees' articulations which relate directly or indirectly to epistemological development. These themes were primarily noted based on consistent recurrence among students within or across differing institutional types. Also, the researcher discerned categories of perspectives regarding students' positions on various relevant issues that were addressed in most interviews, including: the overall impact of college, the most significant aspects of the college experience, the influence and importance of mentors, the nature of the teacher-student relationship, the primary purpose of college education, students' motivation and rationale for attending seminary, the nature of students' interaction with ideological diversity, and

the perceived impact of exposure to multiple disciplines.

Evaluate Findings and Draw Conclusions

The CSID scored each interview according to established rating processes.[10] When the process of scoring the interviews was completed, the CSID provided the researcher with its results. These results included an overall score based on each interview, identifying the Perry Scheme position that most adequately characterized each participant. Also, the CSID identified and notated specific statements and reasoning patterns that substantiated the determined scores for each participant. Finally, further evaluation by the researcher was undertaken in which he analyzed and interpreted the CSID's ratings together with the results of the independent content analysis, in order to formulate findings and draw conclusions related to the study's guiding research questions.

[10]See Appendix 7 for a full explanation of the CSID's scoring and reporting procedure.

CHAPTER 4

ANALYSIS OF FINDINGS

This study explored the variance of epistemological maturity among pre-ministry undergraduates across three differing institutional contexts. The design of this study was fully qualitative, utilizing purposeful sampling and semi-structured interviews to gather data from the population sample groupings. This chapter includes an analysis of the findings of the research study. The compilation of data is presented, as well as an evaluation of the strengths and weaknesses of the research design.

Compilation Protocol

The data for this study was gathered primarily through the personal interviews conducted by the researcher with each member of the population sample. Prior to the actual interviews, each participant completed the Dissertation Study Participation Form. Research interviews were conducted according to a customized version of the Perry Interview Protocol. The participation form and adapted interview protocol for this study are included in Appendices 2 and 5.

Data was recorded with electronic audio recording software during the one-hour personal interviews. The researcher transcribed the recording of each interview, and delivered the complete set of data to the CSID. The CSID evaluated and scored the data for the purpose of identifying participants' epistemological positions according to the positions identified in the Perry Scheme. The researcher formulated the findings of the research study by engaging in an independently designed, structured content analysis, and through interpretation and analysis of the ratings provided by the CSID.

Participation Form Data

The data collected in the Dissertation Study Participation Form served to inform the study in three ways. First, completion of the participation form formally confirmed each participant's willingness and agreement to participate in the study. Participants' qualification for inclusion in the study based on the prescribed criteria was confirmed as well. Second, the participation form served to frame and supplement the analysis of findings by providing observations regarding the makeup and contextual features of the sample population. These observations are addressed in the tables below. In addition to these purposes, the questionnaire provided the interviewer with a basic introduction and understanding of each interviewee, which enabled him to prepare for potential lines of discussion, inquiry, follow-up questions, and probes.

Given the fact that seminary populations are predominantly male, it is expected that any representative sample of pre-ministry undergraduates will include a high percentage of men. Of the thirty participants in this study, only four individuals were female. Table 1 indicates the distribution of gender among participants, according to each context. While Perry-based studies have not shown a significant distinction in epistemological maturity according to gender, the research of Baxter Magolda and others have shown important differences in epistemic patterns among men and women. This study focused on positional epistemic classification according to the Perry Scheme and environmental distinctions across institutional types.

The sample population in this study included students and recent graduates from ten different institutions. Such provided the study with a helpful aggregation that allowed for comparability within as well as across institutional categories–with the exception of the Bible college sample grouping which included students from a single institution. The most varied sample grouping included secular university students, who represented six different schools from two states. The liberal arts grouping included a unique element of geographical comparability, including students and recent graduates

Table 1. Distribution of gender among participants according to institutional context

Institutional Type	*Male*	*Female*
Secular University	90%	10%
Christian Liberal Arts	90%	10%
Bible College	80%	20%

from three universities in three different states. Table 2 indicates the specific institutions that are represented in this study according to each context, as well as the number of participants included in the study from each school.

Table 2. Institutions represented by context

Secular University	*Christian Lib. Arts*	*Bible College*
W. Kentucky Univ., KY (3)	Union Univ., TN (6)	Boyce College, KY (10)
Austin Peay State, TN (2)	Liberty Univ., VA (3)	
Kentucky State Univ., KY (2)	Cedarville Univ., OH (1)	
Middle Tennesse State, TN (1)		
Murray State Univ., KY (1)		
Univ. of Louisville, KY (1)		

The focus of this study was an exploration of differences among pre-ministry students according to institutional type. Levels of epistemic maturity and patterns of reasoning have been evidenced to correlate with students' undergraduate degree and discipline of study, however. For this reason, the participation form obtained data from participants regarding degree type and major. Overall, the sample included a reasonably

balanced mix of undergraduates who earned or were earning a Bachelor of Arts or Bachelor of Science degrees–seventeen B.A. students and thirteen B.S. students. Table 3 indicates the earned or forthcoming undergraduate degrees and majors (double-majors in two cases) of participants, according to each context.

Table 3. Participants' earned or forthcoming degrees according to institutional context

Secular University	*Christian Lib. Arts*	*Bible College*
Liberal Studies	Biblical Languages	Biblical & Theol. Studies (4)
Political Science	Christian Ethics	Worldviews & Apologetics
Philosophy, Relig. Studies	Church History	Biblical Counseling
Religious Studies (2)	Comprehensive Bible	Humanities/Missions
Studio Art	Philosophy	Music Ministry
Mathematics	Philosophy, Theology	Missions & Evangelism
Computer Science	Religion (3)	Youth Ministry
Industrial Engineering	Social Work	
Math Education		

One unique feature of this research is that it focused exclusively on evangelical students who are preparing for vocational ministry. For these students, active involvement in local churches is often a defining element of their college experiences that is equally as formative and significant as their institutional environment. Without exception, participants in this study reported that they maintained active membership in a local church during college. The participation form also asked students to report if they actively invested themselves in a particular area(s) of local church ministry during their college experience. Only two students did not submit a response to this prompt. Such

indicated that generally speaking, a consistent baseline of local church involvement existed among the sample population of this study. Table 4 indicates the percentages of students who served actively in positions of significant responsibility in their local churches during college, according to each context.

Table 4. Percentages of participants actively serving in particular areas of local church ministry according to institutional context

Secular University	80%
Christian Lib. Arts	100%
Bible College	100%

In addition to the impact of local church involvement, membership and participation in campus-based Christian ministries, interdenominational Christian outreach organizations, local community ministries, or humanitarian organizations often constitutes a vital aspect of the formation of evangelical college students' lives. The participation form asked participants to report if they were in involved in service organizations or groups outside their own local churches. Overall, a majority of students responded to the prompt. Among secular university students, nine of the ten participants responded, and they often reported involvement in multiple organizations–most commonly one of two campus-based ministries: Campus Crusade for Christ and Baptist Collegiate Ministries. Nearly half of Bible college and liberal arts university students responded to the prompt. This may suggest that students from these two contexts are less likely to seek opportunities for involvement in para-church organizations during college due to the fact that their respective contexts are naturally conducive to authentic Christian community. Table 5 indicates the percentage of students who were actively involved with ministries outside their own local churches, according to institutional context.

Table 5. Percentages of participants actively serving in para-church or humanitarian organizations according to institutional context

Secular university	90%
Christian Lib. Arts	40%
Bible College	50%

According to the data gathered from the sample population in this study, there is a clear correlation between the period of life in which students made a personal commitment to pursue vocational ministry and the type of institution they chose to attend. The participation form asked students to report when they made a firm commitment to vocational ministry. The variation of responses across differing institutional contexts was stark. Among secular university students, nine of the ten participants reported that they decided to pursue vocational ministry during the middle or late period of their college career. Comparatively, a combined eighty percent of participants from Christian liberal arts universities and Bible colleges reported that they made a commitment to vocational ministry before college or very early in college. This may suggest that students who commit to pursuing vocational ministry prior to college or early in college most often determine that Christian institutions are most ideally suited to offer them the most beneficial college experience and training in light of their career intentions. Table 6 indicates the general time periods in which participants reported making personal commitments to pursue vocational ministry, according to institutional context.

Table 6. General time periods in which students made commitments to vocational ministry according to institutional context

	Before College	*Early College*	*Mid-Late College*
Secular University	10%	0%	90%
Christian Lib. Arts	60%	10%	30%
Bible College	50%	40%	10%

Research Question Synopsis

The analysis of the data was formulated according to the study's research questions. These research questions (RQs) were as follows:

1. What is the relationship, if any, between the type of institution a pre-ministry undergraduate attends and progression through Perry's positions of intellectual and ethical development?
    a. What is the relationship between attendance at a secular college or university and progression through Perry's positions?
    b. What is the relationship between attendance at a confessional Christian college or university and progression through Perry's positions?
    c. What is the relationship between attendance at a Bible college and progression through Perry's positions?

2. What are the distinctions between pre-ministry college seniors and recent graduates from differing institutional contexts regarding how they express their approaches to acquiring and maintaining knowledge?

3. What is the relationship, if any, between differing social-environmental conditions and the development of epistemological maturity among pre-ministry undergraduates?
    a. What is the relationship between personal confrontation and interaction with non-biblical worldviews and the development of epistemological maturity among pre-ministry undergraduates?
    b. What is the relationship between the experience of interfaith dialogue within the academic community and the development of epistemological maturity among pre-ministry undergraduates?
    c. What is the relationship between exposure to interdisciplinary studies and the development of epistemological maturity among pre-ministry undergraduates?

Research Question 1

RQ 1 asked, "What is the relationship, if any, between the type of institution a pre-ministry undergraduate attends and progression through Perry's positions of

intellectual and ethical development?" The researcher's findings and analysis of RQ 1 were informed by the reported scores provided by the CSID. An explanation of the CSID's rating procedure for this research study is included below. The researcher's generalized findings are then presented, followed by a more detailed analysis of participants' epistemological positioning according to institutional context.

CSID Ratings and Reporting

The primary objective and means of the CSID's interview scoring procedure was to judge the epistemological positioning of interviewees by identifying and categorizing relevant statements and reasoning patterns according to the positions set forth in the Perry Scheme. The process of rating the data collected using the interview protocol for this study occurred through the CSID's established system of statement recognition and valuation. This process is essentially identical to the CSID's rating procedure undertaken when scoring data collected using the CSID's essay instrument, the *Measure of Intellectual Development* (*MID*). The CSID's full explanation of its rating procedure is included in Appendix 7. While the rating procedure is consistent for data collected by the *MID* instrument and the Perry interview protocol, interview data yields considerably more raw material. In addition, interview data presents more complexity, given the wider scope of issues that are addressed and the deeper level of probing that occurs with regard to epistemological concepts.

All positional ratings for this research study were assigned by William S. Moore, director of the CSID. Relevant statements and reasoning patterns that were ratable according to the Perry Scheme were recognized through the rater's attention to common respondent cues. The CSID's categorized listing of the most common cues associated with Perry interviews (as well as the *MID*) is presented in Figure A1 in Appendix 8. The primary cues cited among all participants in this study are presented in Figure 5 below, according to positional association. As evidenced in these cited cues, the

rater focused his examination on issues related to classroom learning and college education.

Primary Cues for Position 2	Focus on facts/content—*what* to learn
	"Teacher (Authority) is all"
	Focus on teacher providing structure and clarity for learning
	Use of absolutes and/or dichotomies in language
Primary Cues for Position 3	Concern with process and methods—*how* to learn
	Focus on practicality and relevance
	Learning as a function of teacher/student relationship
	Student responsibility = working hard and/or learning skills
	Focus on challenge; hard work = good grades
Primary Cues for Position 4	Focus on ways of thinking—how to *think*
	Concern with independent thinking, freedom of expression
	"New Truth" rules (absolutes within multiplicity)
	Student more active, taking more responsibility for learning
	Increased self-processing, ownership of ideas
Primary Cues for Position 5	Reflection on one's own thinking ("meta-thought")
	Strong sense of self-as-agent in own learning
	Appreciation for other perspectives (empathy)

Figure 5. Primary cues cited among sample population

The rater's procedure for attributing a position rating for each participant included an initial reading of the individual's interview transcription for purposes of general acclimation. A second reading followed, in which the rater identified position-descriptive statements and passages of text that were relevant to the epistemological positioning of the interviewee. A final reading involved a detailed evaluation and position

rating assignment for each of the identified statements and passages. These statement ratings were attributed with due consideration of the overall context of discussion and general reasoning patterns rendered by each interviewee, according to the discernment of the rater during the initial readings.

Position ratings of interviewees' articulations were applied according to the rater's judgment of the Perry Scheme position that was most accurately represented by the individual statements, within context of the discussion. Position designations of statements were reported either as a single Perry position (e.g., "3") or as representative of a transition between two positions (e.g., "3-4"). The aggregate of position designations within each interview informed the rater's judgment of the participant's overall score according to the Perry Scheme.

Overall position ratings were reported in a manner that allowed for identification of interviewees' dominant epistemological position, as well as the point of transition between positions in which the interviewee was identified–when applicable. Position ratings were represented by a three digit number which reflected the dominant and (when applicable) subdominant rated position. Nine participants received solid position ratings (e.g., "333"), indicating a "stable" position perspective. Twenty-one participants received transitional position ratings (e.g., "334"), indicating a participant's dominant position (middle number) as well as his or her "trailing" or "opening" position. As an example, a 334 rating represents a position described as "Dominant Position 3 opening to Position 4," while a 344 rating represents a position described as "Dominant Position 4 with trailing Position 3." Positions were thus rated along a continuum that progresses according to one-third position increments, i.e., 222, 223, 233, 333, 334, and so on. More broadly, the CSID's reporting nomenclature enabled the researcher to designate pre-ministry students either by their stable position (3, 4, or 5–nine participants) or transition between positions (2-3, 3-4, or 4-5–twenty-one participants).

Generalized Findings

According to the CSID's reported scoring and the researcher's interpretation and analysis, the general finding of this research study with regard to RQ 1 was that progression through Perry's positions of epistemological development among pre-ministry undergraduates at Bible colleges, confessional Christian liberal arts universities, and secular universities was consistent overall. The rater intentionally focused on identifying and scoring the "intellectual" ranges of the Perry Scheme (Positions 2-5), since scores beyond Position 5 are extremely rare among traditionally-aged college student populations. According to the CSID, the majority of traditionally-aged undergraduates finish college in a transitional position, at some point between Position 3 and Position 4.[1] The population sample in this study reflected the typical majority, according to the numerical average of all scores (3.378).[2] Overall, nine participants were rated below the typical expected range, fourteen students were rated within the expected range, and seven students received above-average ratings.[3] In only one individual case did the rater identify the likelihood that a student's epistemological position likely exceeded Position 5.[4] Thus, all but one participant in this study received ratings reflective of the early, mid, or late stages of Multiplicity.

According to the CSID, research has indicated that there is no consistent

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[1]See Appendix 7 for a more thorough explanation of the focus on Positions 2-5, and the typical expectation of epistemological positioning among traditionally-aged undergraduates.

[2]This average of position ratings was computed for the overall population sample as well as each institutional sample grouping, using the numerical conversion as suggested by the CSID. See Appendix 7 for an explanation of the conversion from rating scores to numerical values. See Table A1 in Appendix 9 for a listing of scores and numerical averages categorized by the institutional context represented in this study.

[3]The researcher deemed the three "stable 3" ratings as either below or within the Position 3-4 transition according to how the rater qualified those scores. Stable 3 ratings that were qualified as "early" were considered below average since there was no indication of transition past Position 3. Stable 3 ratings that were qualified as "glimpse 4" indicated transition past Position 3 and were thus considered within the typical range. See Appendix 7 for explanations of qualified ratings, and Table A1 in Appendix 9 for detailed scores.

[4]Since sufficient data did not exist to permit the rater to make a firm conclusion regarding this student's position which likely exceeded Position 5, a rating of "555+" was reported. See the rater's note regarding this rating in Table A1 in Appendix 9.

differentiation according to gender regarding progression along the epistemological continuum described by the Perry Scheme.[5] This study confirmed that finding, as all four women included in this study received ratings that reflected the Position 3-4 transition. Regarding the classification of age, the CSID reports that a "modest but statistically significant effect" has been observed in Perry-related research. This study did observe a potential relationship between epistemological maturity and age, as the three oldest participants all received above-average scores. This issue is addressed below with regard to the Bible college sample grouping.

While findings regarding epistemological development across all three institutional contexts were generally consistent, the *mean of positions and transitions* among the secular university sample grouping was distinguishably lower than the respective means of the other two groupings. The researcher computed the mean of positions and transitions for sample groupings by assigning a whole number to stable ratings (e.g., 3 for a 333 rating), and applying a ".5" numerical value to all transitional ratings (e.g., 3.5 for 334 or 344). Using these values to compute means, the researcher was able compare ratings according to the average position or transition period reflected in each sample grouping. The mean rating among Bible college and liberal arts university participants reflected a point of transition between Position 3 and Position 4, while the mean among secular university participants reflected a point closest to Position 3. This finding did *not* indicate that the numerical average of scores for the secular university grouping scores was exactly three (numerical averages are addressed below). It does indicate, however, that the average positioning of secular university participants was found to be at a point very near (i.e., very slightly above) Position 3. Comparatively, the average positioning of Bible college and liberal arts participants was found to be essentially midway between Positions 3 and 4. Figure 6 illustrates the mean of positions and transitions reflected in each sample grouping.

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[5]See Appendix 7 for the CSID's generalized statements regarding both gender and age.

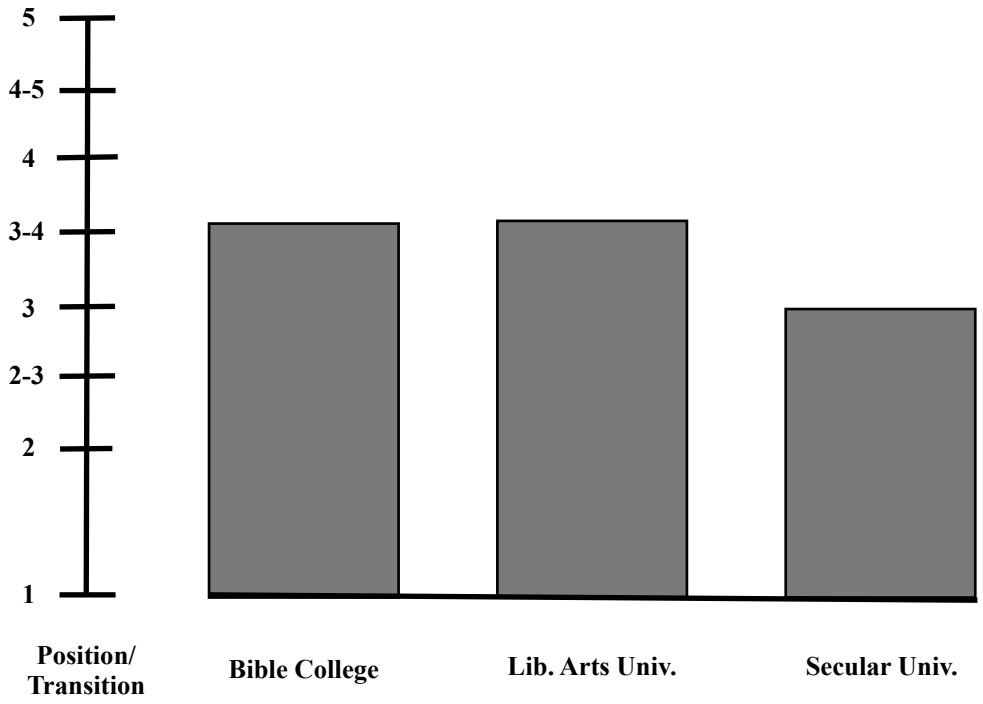

Figure 6. Means of positions and transitions by sample grouping

Findings by Institutional Context

Among the sample population accessed in this study, scored positions of epistemological maturity according to the Perry Scheme were consistent overall. The calculated average of scores among the entire sample was 3.378. The calculated averages of sample groupings of students attending Bible colleges, Christian liberal arts universities, and secular universities were 3.466, 3.534, and 3.135 respectively. Each grouping, therefore, reflected the CSID's stated majority rating for all traditionally-aged college graduates–at a point between Positions 3 and 4. The means of positions and transitions, presented above, thus conformed to these calculated averages, reflecting that the Bible college and liberal arts university groupings were positionally equivalent, while the average positioning reflected by the secular university grouping was earlier by comparison.

Detailed findings and analysis for each sample grouping are presented below, including ranges of scores, distributions of scores, and representative quotations and cues

according to dominant position ratings. Readers should observe and consider findings while keeping in mind the overall consistency of scored positions among participants representing each institutional context included in this study. Figure 7 illustrates the relative proximity of all position ratings by presenting the range of all scores as well as the range of all means (as addressed above). Each sample grouping yielded at least one position rating that reflected the transition between Positions 2 and 3–below-average according to the typical range for traditionally-aged college graduates. Also, each sample grouping yielded either two or three individual position ratings that reflected a score of "Stable Position 4" or higher–above average according to the typical range. As mentioned previously, only one participant from the entire sample was judged by the rater to likely reflect a position higher than Position 5. This participant received a "Stable Position 5" rating since sufficient data was not available to allow the rater to conclusively render a post-Position 5 score.

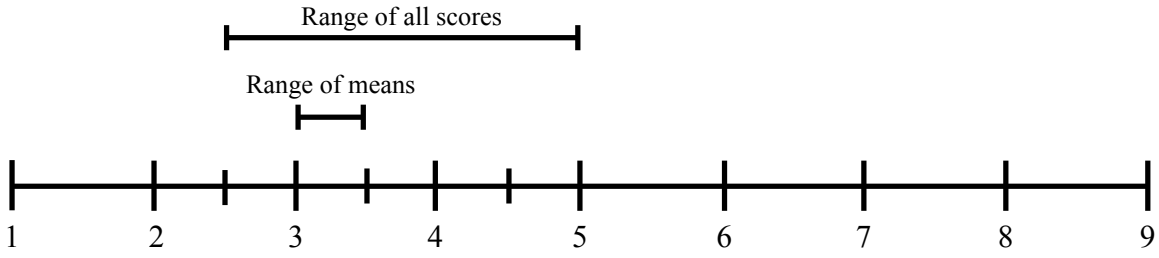

Figure 7. Range of all scores and range of means

Bible college. The sample grouping of Bible college students included in this study was comprised of eight men and two women, all of whom attended Boyce College. As reported above and illustrated in Figure 6, the mean of positions and transitions among Bible college participants reflected a point of transition midway between Positions 3 and 4 according to the Perry Scheme. Figure 8 presents the range of rated positions among Bible college participants, along a continuum representing the one-third

incremental scoring system used by the CSID, from Position 2 to Position 5.

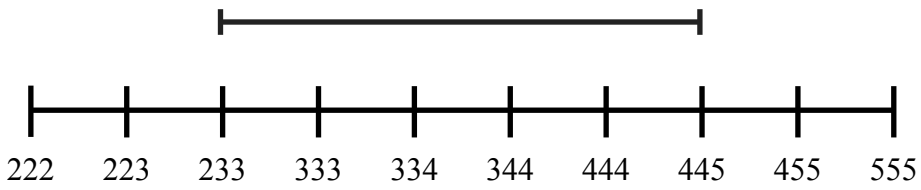

Figure 8. Range of scored positions among Bible college participants

The distribution of ratings among students within the Bible college sample grouping included six students who received a score that could be characterized as Position 3-dominant, and four students who were Position 4-dominant. Only one Bible college participant received a rating that reflected a point of transition between Positions 2 and 3. Likewise, only one student received a rating that reflected a point of transition between Positions 4 and 5. Two students received "Stable Position 4" ratings. Thus, three Bible college students scored above the typical range for traditionally-aged college graduates. The most common rating among Bible college participants was "Dominant Position 3 opening to Position 4." Table 7 presents the distribution of position ratings among Bible college participants as given by the CSID, with descriptions of each rating. Names of participants were changed in order to preserve participants' anonymity.

It is due mention that the three above-average rated Bible college participants–Aaron, Anthony, and David–were the oldest three participants in the population sample. Anthony was twenty-four years old, and Aaron and David were twenty-five. The average age of all other participants was between twenty-one and twenty-two. While within the age parameters defined for this study (ages 20-25)–especially considering the fact that all three of them received above-average scores–these three participants' respective ages and adult experiences may have contributed to their above-average ratings. In addition to their ages, it may have also been significant that all three of these men had experience

Table 7. Distribution of scored positions among Bible college participants

Participant	*Position Rating*	*Position Description*
Justin	233	Dominant Position 3 with trailing Position 2
Chris	333	Stable Position 3
Joseph	333	Stable Position 3
Ashley	334	Dominant Position 3 opening to Position 4
Amanda	334	Dominant Position 3 opening to Position 4
Robert	334	Dominant Position 3 opening to Position 4
Nicholas	344	Dominant Position 4 with trailing Position 3
Aaron	444	Stable Position 4
Anthony	444	Stable Position 4
David	445	Dominant Position 4 opening to Position 5

serving in pastoral ministry positions (not apprenticeship or assistant positions) in local churches. In addition, Anthony attended two other institutions besides Boyce College for half of his undergraduate career, and he also had extensive experience living in international cultures.

The position rating for each participant within the Bible college sample grouping was rendered by the CSID according to its established, systematic rating procedure. The position ratings were informed by an aggregate of ratings for individual statements made by participants, examined by the rater with consideration of the overall context and themes of the interview discussion. Those statements were recognized on the basis of the CSID's organized listing of primary cues for each major position along the intellectual portion of the Perry Scheme continuum (Positions 2-5).[6] Figure 9 presents a

[6]See Figure A1 in Appendix 8 for a listing of primary cues associated with each position, as well as notations of the cues cited in the scored interview data for this study.

summary of representative statements and primary cues among Bible college participants who received a Position 3-dominant rating. Individual statements by these participants were primarily scored along the Perry Scheme from Position 2 to the Position 3-4 transition.

Statements rated Position 2 or 2-3	Joseph: . . . the role of the teacher is a disciple-maker, and pouring their knowledge into students. (2)	Primary cues: • "Teacher (Authority) is all" • Focus on facts/ content–*what* to learn
	Chris: I view my professors as mentors, and try to soak up their knowledge and their wisdom. (2-3)	
	Ashley: If you go into a class saying "I'm going to pick something up from this lecture that I have never learned before," I think that will be beneficial. (2-3)	
Statements rated Position 3	Justin: (Professors) didn't just want to teach information, they really cared about you as well, and wanted you to know God more.	Primary cues: • Learning a function of teacher/student relationships • Focus on challenge; hard work = good grades • Focus on practicality/ relevance • Concern with process/ methods–*how* to learn
	Joseph: My conversations with my professors would be the most helpful and significant part of my training. They just have such insight. . . . They helped me prepare for ministry to come.	
	Robert: I think that a great course is one that is difficult–not just a blow-by course that you don't have to put a lot of effort into.	
	Amanda: The student should be responsible for leaving the class knowing the content that was taught, and that is more likely to happen when they have to know it well enough to apply it and show something for it.	
	Justin: I have learned so much about the Scriptures, how to study the Scriptures, and how to grow and teach other people.	
Statements rated 3-4	Robert: Even though it may not be the most exciting thing for you and you may not be inspired, you can at least be engaged in what others are saying and talking about, and get involved in discussion.	Primary cues: • Student more active, taking more responsibility
	Amanda: I think the true mark of whether you know anything is whether or not you can teach it to someone else.	

Figure 9. Representative statements and cues among Position 3-dominant Bible college participants

As seen in the figure, a diverse collection of primary cues was cited. The most commonly cited cue among Position 3-dominant Bible college participants was the cue regarding students' articulation of learning as a function of the relationship between teacher and student. Two such statements, selected from many occurrences, are included in the figure.

Figure 10 presents a summary of representative statements and primary cues from the four Bible college participants who received a Position 4-dominant rating. Rated statements among these participants were primarily scored according to the Perry continuum from the transition between Positions 3 and 4 and the transition between Positions 4 and 5.

Statements rated 3-4	Aaron: If you were just going to seminary to get a wealth of knowledge and then do nothing with it, you have wasted your money.	Primary cues: • Focus on practicality/ relevance • Increased self-processing, ownership of ideas
	Nicholas: Worldviews and apologetics majors–we really had to learn a lot of the philosophy behind the ideas that these religions have.	
Statements rated Position 4	Aaron: I don't think that college students *think*. . . . They'll just take these men that have done all the work for them and, "because they said it, that's what I believe," and there's no need to think through things.	Primary cues: • Concern with independent thinking, freedom of expression • Focus on ways of thinking–*how* to think
	Anthony: If a teacher doesn't let his students experience the questioning and arriving process at all–if he just tells them, "this is the way that it is," with no questions and no discussion–then he's harming his class.	
	David: That's how I think of a good education: teaching you what it means to be a human. And you can't know what it is to be a human without knowing Jesus; Jesus is the perfect human.	
Statements rated 4-5	Anthony: Certain things became more black and white, and other areas became more gray. I think there was a developing of levels of importance in what we believe–coming to understand that there is primary truth, secondary truth, and tertiary truth, and that not everything is primary truth–not everything is a hill to die on–but some things are. (4-5)	Primary cues: • Reflection on own thinking (meta-thought)
	David: I don't understand everything in the Bible; I don't understand everything in life; I don't understand everything in a lot of ways, but I *trust* Scripture and I'm willing to–on the points where I don't understand–submit to it. (4-5)	

Figure 10. Representative statements and cues among Position 4-dominant Bible college participants

Liberal arts university. In this study, the sample grouping of pre-ministry undergraduates attending confessional Christian liberal arts universities was comprised of nine men and one woman. Three universities were represented including Cedarville University, Liberty University, and Union University. Representing three states, this

sample grouping reflected the most geographically varied selection of students within a single institutional context group in this study.

The mean of positions and transitions among liberal arts university participants reflected a point of transition midway between Positions 3 and 4, as illustrated in Figure 6 above. In Figure 11, the range of rated positions among liberal arts university participants is presented, along a continuum representing the one-third incremental scoring system used by the CSID.

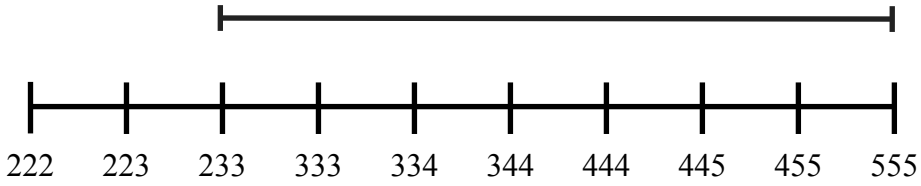

Figure 11. Range of scored positions among liberal arts participants

Multiple analyses of combined ratings all suggested that the liberal arts university participants included in this study received the highest scores overall, though by narrow margins. The numerical calculation of the mean of scores for the liberal arts university sample grouping (3.534) was the highest among all three institutional context groups included in this study. The liberal arts grouping was also distinguished by including five students who received a Position 4-dominant rating or higher–the most of any sample grouping. Among these five participants, one student received a "Stable Position 5" rating–the highest of any participant in the population sample. In addition, compared to the four Bible college students who received above-average ratings, the ages of the highest scoring liberal arts university students were two to three years younger.

The distribution of ratings among the pre-ministry participants within the liberal arts university grouping included five students who were categorized as Position 3-dominant, four students who were Position 4-dominant, and one student who was

Position 5-dominant. Two liberal arts students received ratings that reflected a point of transition between Positions 2 and 3–below the typical range for traditionally-aged college graduates. Likewise, two participants received ratings that were above-average. Six students received ratings within the typical range. The most common scores among liberal arts participants were "Dominant Position 3 opening to Position 4" and "Dominant Position 4 with trailing Position 3." Table 8 presents the complete distribution of position ratings among liberal arts university participants as given by the CSID, with descriptions of each rating. Names of participants were changed in order to preserve participants' anonymity.

Table 8. Distribution of scored positions among liberal arts participants

Participant	*Position Rating*	*Position Description*
Kevin	233	Dominant Position 3 with trailing Position 2
Jacob	233	Dominant Position 3 with trailing Position 2
Sarah	334	Dominant Position 3 opening to Position 4
Tyler	334	Dominant Position 3 opening to Position 4
Thomas	334	Dominant Position 3 opening to Position 4
Brandon	344	Dominant Position 4 with trailing Position 3
Steven	344	Dominant Position 4 with trailing Position 3
Alex	344	Dominant Position 4 with trailing Position 3
William	444	Stable Position 4
Eric	555	Stable Position 5

Upon further examination of the distribution of position ratings, the researcher made two noteworthy observations. First, among the five students who received Position

4-dominant ratings or higher, four were recent graduates of Union University. Second, the two students who were rated as being in the Position 2-3 transition were the youngest students in the entire sample–in the first semester of their senior years in college at the time of the research interview. All other participants were either in their final academic semester before graduation or recent college graduates as of the most recent semester.

The position rating for each participant within the liberal arts university sample grouping was rendered by the CSID according to its systematic scoring procedure, which involved rendering an overall position score drawn from an aggregate of individual statement ratings attributed to specific articulations of participants within the research interviews. Figure 12 presents a summary of representative statements and primary cues among the five liberal arts university participants who received a Position-3 dominant rating. Rated statements by these participants were primarily scored along the Perry Scheme from Position 2 to the Position 3-4 transition.

Figure 13 presents a summary of representative statements and primary cues among the five liberal arts university students who received a Position 4-dominant rating or higher. Rated statements among these participants were primarily scored along the Perry Scheme from the Position 3-4 transition to Position 5. As reflected in the figure, no statements were scored as indicative of the Position 4-5 transition. This is understandable, as no liberal arts participants received an overall rating that reflected the transition between Positions 4 and 5. Also, all statements included in the "Position 5 and higher" categorization reflect articulations made by Eric, who was the only student to receive a "Stable Position 5" rating.

The most notable observation from the researcher's examination of rated statements among Position 4-dominant liberal arts university participants was the preponderance of statements that addressed respondents' epistemological prioritization of focusing on ways of thinking, or *how* to think. The proportion of Position 4-rated statements reflecting this cue was so predominate that the summary figure includes only

Statements rated Position 2 or 2-3	Kevin: A big part of (the teacher's role) is trying to communicate information to students in a way that is understandable, and subsequently making sure that the students are understanding what is being taught. (2)	Primary cues: • "Teacher (Authority) is all" • Focus on facts/ content–*what* to learn
	Jacob: God has placed the professors over us for a reason . . . . we are called to submit to their authority that they have in our lives right now, and do the work that's assigned and do the projects, regardless of how stupid we may think they are. (2-3)	
Statements rated Position 3	Jacob: College should be a place where you learn how to be a learner.	Primary cues: • Concern with process/ methods–*how* to learn • Focus on practicality/ relevance • Focus on challenge; hard work = good grades
	Sarah: Being challenged to figure out what your beliefs are is a huge part of learning in the classroom.	
	Tyler: The things that I learned in class I was able to put into application both in my personal life and in the ministry that I was involved with.	
	Tyler: A good student is one who is willing to learn, who wants to learn, who's willing to put the effort in for it, and the time necessary.	
Statements rated 3-4	Sarah: A good teacher is going to help the student discover their own opinions or beliefs rather than trying to force their beliefs on a student.	Primary cues: • Student more active, taking more responsibility
	Thomas: You take the evidence you have and you compile it and you look at it. You take what, in my opinion, has the most and best evidence.	

Figure 12. Representative statements and cues among Position 3-dominant liberal arts participants

statements related to that identification. This reveals a clear epistemological priority that is common among liberal arts students, and also suggests a thematic distinction regarding the intrinsic educational priorities and values of liberal arts universities in comparison to other institutional types.

Secular university. The sample grouping of secular university participants in this study included the most institutionally varied collection of pre-ministry undergraduates. Nine men and two women represented six different schools from two states. Three schools were represented by multiple participants. Three students from Western Kentucky University were included in the sample grouping, and their scores were evenly distributed among all scores within the grouping. They received ratings that

Statements rated 3-4	Brandon: I would say there's definitely objective truth; I'm just not always going to understand it.	Primary cues: • Increased self-processing, ownership of ideas
	Alex: In my discipline, the teachers try and get you to be able to think and to reason through things from the Scriptures and from other sources that we come across. If I was a teacher that's what I would be trying to do.	
Statements rated Position 4	Steven: Critical thinking is the ability to look at an issue or to look at a statement subjectively–being able to bring in all different viewpoints whether you agree with them or not–and to be able to discern the various pros and cons.	Primary cues: • Focus on ways of thinking–*how* to think
	Steven: The most impactful thing I've ever seen out of a teacher was somebody who showed me how to think, who taught me how to think.	
	William: A good college education will teach students to ask good questions. Whether it's in business, ministry, science, etc., I think everything necessitates the asking of questions.	
Statements rated Position 5 and higher	Eric: There's some sort of give and take between the text and my own interpretation of it. (5)	Primary cues: • Reflection on own thinking (meta-thought) • Appreciation for other perspectives (empathy)
	Eric: I feel like my own interpretation of baptism is still being worked out. And when I decide on it, I'm not going to assert that "this is my interpretation because this is right." (5)	
	Eric: I believe the capital-T truth is there but I can only get at it with the little-t truth. I'm looking at it through my own sensual experience. Through my own interpretation and my own prejudices. (6-7)	

Figure 13. Representative statements and cues among Position 4 and Position 5-dominant liberal arts participants

reflected the Position 2-3, 3-4, and 4-5 transitions respectively.[7] The two students from Austin Peay State University both received ratings that reflected the Position 2-3 transition. The two students from Kentucky State University both received ratings that reflected the Position 3-4 transition. Figure 14 presents the range of rated positions among secular university participants, along a continuum representing the one-third incremental scoring system used by the CSID.

While the numerical average of rated positions for the secular university grouping (3.135) reflected the transition between Positions 3 and 4–and thus overall conformity with the positional range of typical, traditionally-aged college graduates–the

[7]The researcher categorized Richard as reflecting the Position 4-5 transition, since his "Stable Position 4" rating was qualified by the rater as "glimpse 5," indicating evidence of a transition past the benchmark for Position 4. See Appendix 7 for an explanation of "glimpse" ratings, and Table A1 in Appendix 9 for detailed scores that include the rater's specific rating qualifications and notes regarding individual scores.

Figure 14. Range of scored positions among secular university participants

mean of positions and transitions among secular university participants reflected a point closest to Position 3. This indicated that combined scores of participants within the secular university grouping reflected a position above–but very near–Position 3. Thus, the average epistemological position of secular university participants was found to be at a distinguishably lower point along the Perry Scheme continuum compared to the other two sample groupings.

The lower overall rating among secular university participants was confirmed by examining the distribution of positions. The distribution of position ratings among students within the secular university sample grouping included five students who received a rating that reflected that transition between Positions 2 and 3 according to the Perry Scheme. These five students all received a "Dominant Position 3 with trailing Position 2" rating. Thus, half of the participants in this grouping scored below the typical range for traditionally-aged college graduates. Furthermore, the five students who received Position 2-3 transitional ratings represented a majority of the total number of below-average ratings among the entire sample population included in this study.

Three secular university participants received ratings within the typical expected range,[8] and two participants received above-average scores. Overall, seven secular university students received Position 3-dominant ratings, and three students were scored as Position 4-dominant. Table 9 presents the distribution of position ratings among

[8]The researcher categorized Lauren as being within the typical range (Position 3-4 transition) since her "Stable Position 3" score was qualified by the rater as "glimpse 4," indicating evidence of a transition past the benchmark for Position 3. See Appendix 7 for an explanation of "glimpse" ratings, and Table A1 in Appendix 9 for detailed scores that include the rater's specific rating qualifications and notes regarding individual scores.

secular university participants as given by the CSID, with descriptions of each rating. Names of participants have been changed in order to preserve participants' anonymity.

Table 9. Distribution of scored positions among secular university participants

Participant	*Position Rating*	*Position Description*
Mark	233	Dominant Position 3 with trailing Position 2
Timothy	233	Dominant Position 3 with trailing Position 2
Adam	233	Dominant Position 3 with trailing Position 2
Ben	233	Dominant Position 3 with trailing Position 2
Sean	233	Dominant Position 3 with trailing Position 2
Lauren	333	Stable Position 3
Cody	334	Dominant Position 3 opening to Position 4
Patrick	344	Dominant Position 3 with trailing Position 3
Richard	444	Stable Position 4
Jeffrey	444	Stable Position 4

The scores of the three students from Western Kentucky were distributed evenly across the range of scores within the grouping. Since no other institution was represented by more than two participants, no relationship between epistemological positioning and specific institutional attendance was observed within the secular university sample grouping. It is important to note that Richard, one of the highest rated secular university participants, spent half of his undergraduate career at a Christian liberal arts school before transferring to a secular university. The liberal arts university environment and curriculum presumably influenced his overall development during the two years in which he attended that institution. This may have potentially impacted his

epistemological maturation such that his positioning would have been different had he exclusively attended a secular university as an undergraduate.

As with the two other sample groupings, each secular university participant received an overall position rating based on an aggregate of individually rated articulations by participants within the context of his or her research interview discussion. Figure 15 presents a summary of representative statements and primary cues among the seven secular university students who received a Position 3-dominant rating. Individual statements by these participants were primarily scored along the Perry Scheme from Position 2 to the Position 3-4 transition.

As represented in the figure, a diverse collection of primary cues was cited among the Position 3-dominant secular university students. One cue consistently cited among a majority of secular university participants was related to the prioritization of independent thinking and freedom of expression. Interestingly, while this was the most recurring cue among all secular university students, including Position 3-dominant and Position 4-dominant students, it was virtually never cited among participants from the two other sample groupings. This may suggest that a unique relationship exists between epistemological maturation and the epistemic value of "independent thinking" among pre-ministry students attending secular schools.

Figure 16 presents a summary of representative statements and primary cues among the three secular university students who received a Position 4-dominant rating. Rated statements among these participants were primarily scored along the Perry Scheme continuum from the Position 3-4 transition to the Position 4-5 transition. No instances of Position 5 ratings were attributed to any individual articulations made by secular university participants.

Statements rated Position 2 or 2-3	Timothy: Tests, of course (are the most beneficial assignments). They show if you fully understand what the professor is saying. (2)	Primary cues: • "Teacher (Authority) is all" • Focus on facts/ content–*what* to learn
	Ben: The student is responsible for what they do with the information that's being presented in class, and they're responsible for their grades. (2-3)	
Statements rated Position 3	Mark: In college, I definitely learned that a lot of things don't come easily and I will have to work hard.	Primary cues: • Focus on challenge; hard work = good grades • Focus on practicality/ relevance • Concern with process/ methods–*how* to learn
	Timothy: (The role of the student is to) be respectful to the professor or teacher. Give everything you have to that class. Give your time, give your effort, study all you can, work as much as you can toward the class, and you'll succeed.	
	Adam: Having the opportunity to actually try out what it is you think you want to do will help you realize whether you want to do this or not. So interactivity and hands-on approaches definitely help you a lot more than, "Read these PowerPoints and write them down."	
	Cody: You need to apply yourself, and you need to care and be intentional about whatever you're learning.	
Statements rated 3-4	Ben: Being able to go into some of the more liberal classes and being able to think thoroughly on the side of things they're teaching and being able to establish your own positions–that has really helped me to hear the other side of arguments and still stand strong in my faith.	Primary cues: • Student more active, taking more responsibility • Concern with independent thinking, freedom of expression
	Lauren: Open discussions allow a person to verbally express how they're feeling, and it also develops ideas as well.	

Figure 15. Representative statements and cues among Position 3-dominant secular university participants

Research Question 2

RQ 2 asked, "What are the distinctions between pre-ministry college seniors and recent graduates from differing institutional contexts regarding how they express their approaches to acquiring and maintaining knowledge?" The findings for RQ 2 were primarily drawn from the researcher's independent content analysis procedure, which he undertook prior to receiving the scored ratings of interviewees from the CSID. This procedure first involved a systematic examination of the interview data using the researcher's categorical organization of epistemological priorities and competencies (see Figure 4 in the previous chapter). Ten priorities were identified within three categories,

Statements rated 3-4	Patrick: I would like for teachers to ask more questions to the students directly, like "What do you think about this? How do you see this?"	Primary cues: • Concern with independent thinking, freedom of expression
	Jeffrey: Being more responsible on your end for learning yourself and teaching yourself, versus relying on the teacher to spoon-feed it to you–I think you learn a lot of responsibility like that through college.	
Statements rated Position 4	Patrick: For a lot of things, especially in my major, there is no right or wrong answer; you just have to deal with the argument and support that argument, and just go from there.	Primary cues: • Focus on ways of thinking–*how* to think • Student more active, taking more responsibility for learning
	Jeffrey: I don't think there's a problem with a teacher saying their opinion, but I'd say the best place for that is after they've discussed it–after the student has come to their own conclusion on something.	
Statements rated 4-5	Richard: Reason can only take you so far . . . you eventually have to get to a point where you have to have faith. And ultimately, faith undergirds all of reason anyway, because you have to accept on faith certain principles that certain things are true.	Primary cues: • Reflection on own thinking (meta-thought) • Strong sense of self-as-agent in own learning
	Richard: The role of the teacher is to provide and explain the resources for the student to learn and teach himself.	

Figure 16. Representative statements and cues among Position 4-dominant secular university participants

including (1) Biblically-founded presuppositions for knowledge and development, (2) metacognition, critical reflection, and contextualistic orientation, and (3) Personal responsibility for knowledge acquisition and maintenance–within community.

Evaluation of the research interview data according to the researcher's structured framework of epistemological priorities and competencies yielded findings that were consistent *overall* with the findings of RQ 1 regarding the variations of levels of epistemological maturity within the sample population. That is to say, generally speaking, higher positional ratings among participants coincided with more instances of priorities addressed by participants. For instance, Eric, the highest position-rated participant among the sample, addressed six different priorities during the course of his interview, according to the researcher. By contrast, participants whose position ratings reflected a point of transition between Position 2 and 3 addressed an average of one priority. Figure 17 illustrates the average number of priorities that were addressed according to positional groupings, including below-average rated scorers (Position 2-3

transition), average rated scorers (Position 3-4 transition), and above-average rated scorers (Position 4 or higher).

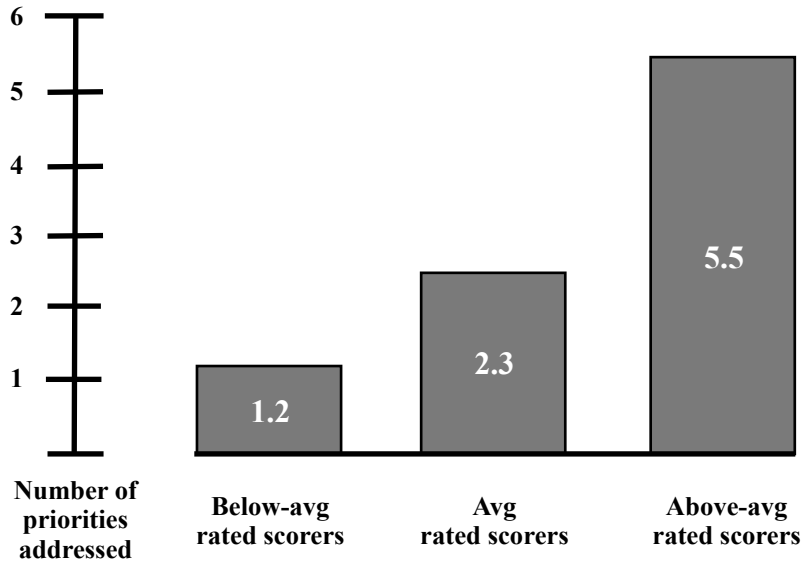

Figure 17: Average numbers of priorities addressed according to positional groupings

While analysis according to the researcher's structured framework yielded findings consistent with the overall positional variations of the entire sample, no differentiating trends were discerned between institutional sample groups. Also, findings for *individual* priorities and competencies were less conclusive than the overall findings. Analyses of some priorities and competencies elicited relatively clear observations and suggestions regarding overall epistemological development, while others provided helpful insights but elicited no discernible observations. Findings for each of the ten epistemological priorities are presented in the first three subheadings of this section. Also, a listing of all sub-categorical priorities that were addressed according to each participant is included in Table A2 in Appendix 10.

In addition to the three-category structured analysis, the researcher identified prominent themes that emerged from interviewees' articulations that were identified by

the researcher as bearing relevance to participants' epistemological positioning and development. These themes were noted based on consistent recurrence among students within or across differing institutional types. Findings revealed numerous conformities as well as distinctions among pre-ministry students from differing institutional contexts with regard to various epistemically relevant issues, including relationality and mentorship, the purpose and impact of college, perspectives on the benefit of seminary, and, among Bible college and liberal arts university students–the nature of immersion in a Christian collegiate environment. These findings are presented below under the final subheading of this section.

The researcher's findings for RQ 2 are presented below, citing representative articulations from the population sample that served to highlight helpful insights and discernible trends among participants according to their respective institutional sample groups. While these findings emerged initially and primarily from the researcher's independent content analysis, they were finally informed and qualified by the CSID's scoring and the researcher's analysis as presented above with regard to RQ 1.

Presuppositions for Knowledge and Development

The first category of epistemological priorities and competencies examined by the researcher addressed "Biblically-founded presuppositions for knowledge and development." Within this category, the researcher examined each participant's interview transcription in order to identify statements that evidenced a personal awareness and prioritization of two particular epistemological values. The researcher identified an evident consistency between instances of clear articulations by participants regarding both sub-categorizations (individual epistemological priorities) and the positional ratings of epistemological maturity according to the Perry Scheme.

God and revelation. The first epistemic priority relating to biblical

presuppositions addressed by the researcher was "a recognition of the God of the Bible as metaphysically ultimate, and of revelation as the source and most basic component for knowledge and development." Overall, nine students provided statements that were reflective of this sub-category. Among these, five were Bible college students, two were liberal arts university students, and two were secular university students. The greater number of Bible college students included in this particular sub-category may have resulted from the focused nature of the Bible college curriculum regarding issues relevant to the topic of biblical-theological presuppositions, including the primacy of Scripture and the progressive nature of biblical sanctification. With only two exceptions (both Bible college students) the participants who provided statements consistent with this epistemic value were Position 4-dominant.

Anthony, a Bible college student who received an above average positional rating, provided this representative expression when asked to elaborate on the meaning of his assertion that believers should "think Christianly" and be "intellectually rigorous":

> Thinking Christianly involves primarily trusting that the Bible is authoritative and sufficient, not only to address the most important things that we need to know, but it becomes as C.S. Lewis compared it to "the lens through which we see everything else." And so just recognizing the fact that typically as Americans we compartmentalize different areas of our life–you have the spiritual areas and you have the secular areas. . . . Being an "intellectually rigorous Christian" means that we are to follow Jesus when he says "Love the Lord your God with all your *mind*." And that means recognizing that in every area of life, Scripture is the lens through which we view it, and Scripture gives us the correct categories and the correct lens through which to view that area. . . . It's acknowledging that Scripture touches every area of life, and understanding that there's compelling reasons–this compelling "gospel logic"–that if we dig into Scripture we can find. We have better reasons to engage in areas than anyone else has. We have better and deeper and more rich motivation than anyone else has when it comes to why we do things.

Another clear statement regarding the primacy of presuppositional dispositions for all people, and of the role of the Holy Spirit in the formation and maintenance of a believer's convictions, came from Richard, a secular university student.

> Ultimately how a person approaches a certain issue–how they first approach it in their worldview–is going to affect how they interpret that issue. Like for us as Christians, we believe that there's a God who came to interact into the world and

> that a world is not a closed system, then we understand the historical evidence for the resurrection of Jesus as a viable belief for us because we believe that the world is an open system, that God exists, that God is directing it, and that God vindicated Jesus through his resurrection. But for a person who doesn't believe that there's a God, who doesn't believe that the universe is an open system, but who says it's a closed system–no matter how much evidence we show about how the best explanation is that Christ resurrected from the dead, they're not going to believe that because of the basis of their own presuppositions and their own worldview. And so a lot of it deals with how they approach the issue. And obviously it's the work of the Holy Spirit on the person's heart and mind for it really to begin to change that worldview. We can bring as much evidence as we want, but until that person's heart is changed, it's not going to change their mind.

Faith and rationality. The second priority relating to biblical presuppositions addressed by the researcher was "a clear articulation of the relationship between faith and rationality." Inclusions noted by the researcher within this categorical subheading were only identified among six participants, including two from each institutional sample grouping)–all of whom received positional ratings that were above the typical range for traditionally-aged undergraduates. Thus, it may be suggested that a relationship exists between epistemological maturity and one's understanding and practical application of the interaction between faith and rationality. The most thorough, reflective articulation of the interactive nature of faith and knowledge–including a recognition of the practical implications of that reality–was provided by Eric, a recent liberal arts university graduate.

> (Eric) I think that knowledge itself is an act of faith in the sense that we don't have exhaustive, objective proof. In terms of becoming familiar with the Christian intellectual tradition, there's information that I have access to that I didn't then (before college). But it's not information that I know to be 100% true apart from my own assertions of confidence.
> (Interviewer) What do you mean there in saying that knowledge is not something you know for sure to be true aside from your personal interaction with it?
> (Eric) I think that's a standard philosophical principle about the way that we interact with knowledge. There's a level of subjectivity to it in the sense that we don't have exhaustive, objective proof for things–even things that we assume. So I could be pretty confident that I know something and that "this is the case"–that reality exists the way that I think it does. But I don't have an exhaustive proof that I can reveal to someone who has never experienced reality in that way, that I could without a doubt convince them of that. The way that we interact with knowledge is so personal. Pascal said, "the heart has reasons to which the mind has no access." I think that knowledge is much more loaded than we always think it is because our own prejudices are already acting in terms of the knowing process.
> (Interviewer) So how does that affect the way that you live your life? Is that a practical concept for you?

> (Eric) Yeah, I think that that's ultimately freeing. . . . Once I come to terms with the fact that I can't exhaustively or scientifically prove the existence of God, it frees me up because I have no option apart from belief. Once I accept that there is no cookie-cutter, objective experience of reality, I don't have to look for it anymore. I don't have to assume that it's out there and I have to get my hands on it. So it's a game changer in the sense that I no longer have to pretend like I have to believe in spite of not knowing. Or, I can come to terms with believing and not knowing because not knowing is to be assumed.

Metacognition, Critical Reflection, and Contextual Orientation

The second category of epistemological priorities and competencies examined by the researcher addressed the primary elements of cognitive maturation as put forth prominently by Perry in his original study and later publications: "Metacognition, critical reflection, and contextualistic orientation." Within this category, the researcher defined four specific priorities for assessment. Overall, evaluation of participants' responses in three of these four sub-categories provided findings that served to affirm and correspond to the CSID's positional ratings.

Forms of thinking. The researcher's first lens of evaluation regarding cognitive maturation among the sample population in this study was "a preference for higher-level forms of thinking according to Bloom's Taxonomy." Bloom's hierarchical formulation is a standard tool for recognizing and classifying the most "important and long-lasting fruits of education" in terms of cognitive complexity.[9] The Taxonomy identifies a progression of cognitive modes, moving from recognition or recall of information to understanding and use of knowledge. The Revised Taxonomy includes six categories: Remember, Understand, Apply, Analyze, Evaluate, and Create. For the purposes of content analysis, the researcher primarily sought instances of participants' preferences regarding the three highest modes.

Findings yielded evidence of higher-level preferences in the cases of fourteen participants, including four Bible college and liberal arts university students, and six

[9]See David R. Krathwohl, "A Revision of Bloom's Taxonomy: An Overview," *Theory into Practice* 41 (2002): 212-18.

secular university students. Eleven of these fourteen participants received Position 4-dominant ratings or higher. Furthermore, each above-average rated participant evidenced a preference for higher-level thinking. All three included participants who received ratings below Position 4-dominant were secular university students. That a majority of secular university students evidenced higher-level thinking preferences may be explained due to the confrontational nature of the secular university environment for evangelical students. This reality is addressed below with regard to RQ 3.

David, a Bible college student, provided an articulation of his preference for analysis-oriented thinking (Bloom level four) as he spoke about how his professors compelled him to think for himself rather than simply to learn material.

> ("Critical learning") is the ability to read a text and see where it fits with other ideas. So with Grudem, for instance, when he's talking about the Spirit–the ability to not just read that and think he's coming with no bias, but to be able to say, "Okay that's a view of the Holy Spirit that would be called 'continuationist.'" So then you think, "Okay he's interacting with Gordon Fee, and Fee is interacting with this guy who's older, and this guy is interacting with this guy who's older." So it's being able to fit people in streams of thought, like: "He's a Calvinist" you know. And not just labeling them so you can dismiss them, but being able to fit people in streams of thought, and knowing what other authors they're engaging with. That way, you're able to not just swallow everything you're reading, but you're able to say, "Okay this is influenced *here* and this is influenced *here*." So it's learning how to categorize thought into various categories and sub-categories in your mind.

Steven, a liberal arts university student, exhibited his preference both for analysis and evaluative levels of thinking (Bloom levels four and five). With regard to the importance and impact of mentoring for establishing methods and applications of "critical thinking," he said,

> Culturally, with my generation, critical thinking is often misunderstood in the sense that it comes across as a challenge–like you're challenging something or simply asking for further clarification. But if I were asked to define it: critical thinking would be the ability to look at an issue or to look at a statement *objectively*–being able to bring in all different viewpoints–whether you agree with them or not, and be able to discern the various pros and cons. . . . Somebody who can critically think is somebody who can look at an issue and say, "based on everything that I've studied through–and I've given everything a chance–this is the path I'm going to go down," or "this is the belief I'm going to hold."

Among the six secular university students who evidenced preferences for higher-level

cognitive functioning, Cody's articulation stood out as a clear example of evaluative reasoning (Bloom level five).

> A lot of the professors at Western would kind of play the role where, if people were sharing their opinions, they would play the role of, "I see what you're saying; that's a good point." And someone would make a point completely contrary to that and the professor would say, "I see what you're saying, and that's a good point too." And it drove me nuts! I appreciate professors who, if you made a good point, they might throw out another challenging question on top of that, and if you said something stupid, they'd say "that makes no sense." You're really sharpening what you believe when someone says, "That doesn't make sense; I don't understand; how can you back that up? Where do you get that idea?"

Wisdom-oriented modes of thinking. Among the sub-categories that addressed the primary elements of cognitive maturation, the researcher's exploration of participants' "prioritization of wisdom-oriented modes of learning and living" did not yield any discernible findings that suggested a consistent correlation with epistemological positioning. This was largely due to the fact that very few statements by interviewees that addressed wisdom-oriented epistemic priorities were recorded. Of the four articulations that were documented by the researcher, the distribution of positional ratings for the respective participants exhibited no observable pattern. Still, inclusions in this sub-category were notable for their clarity, insight and epistemic vitality. One such articulation was provided by Anthony:

> Wisdom could be called "Scripture applied to everyday life." It's not just the knowledge of Scripture–the heady intellectual knowledge of Scripture–it's the ability to take that knowledge and rightly apply it to every area of life. . . . Wisdom is walking according to the logic of God. Wisdom is knowledge from Scripture and knowledge from God being applied to everyday life in such a way that you walk faithfully and thrive in the big scheme of things. So it might not mean temporary success and temporary thriving in this world, but it will mean thriving in the world to come. So (wisdom is) walking in light of eternity, and doing what might seem foolish now–(e.g.) selling your possessions and giving to the poor–knowing that in God's economy that's actually the wise thing to do, because you're "laying up treasure in a world to come," and you're setting your heart on where it should be.

Criteria for assessing beliefs and values. The researcher's third means of exploration regarding participants' intellectual maturity involved identifying instances of

"a reflective criteria of assessing one's own beliefs and values, as well as divergent beliefs and values." Within this sub-category, noted examples of statements that put forth a clear reflective criteria of assessment were attributed to only four sample participants, including one Bible college student, two liberal arts university students, and one secular university student. Three of these four participants received positional ratings that were above the average range for traditionally-aged college graduates. Furthermore, each of the highest position-rated participants in each sample grouping were included. The included liberal arts student who did not receive an above average rating did receive a Position 4-dominant score. Thus, a clear relationship may be suggested between inclusion in this sub-category and overall epistemological maturation.

Eric provided this response when asked by the researcher to elaborate on how he reacts when encountering conflicting ideological or doctrinal views or positions that challenge his own understanding:

> The first thing I'm going to do is to see what is deemed as being in accordance with the truths of Scripture and what is condemned as heresy. So I try and use what I believe and the Spirit guiding the community of faith to faithfully interpret Scripture. At least in broad terms of core orthodox issues, like the triune nature of God or the deity of the Son while upholding the humanity of the Son–in all of these things I try and align myself with the fathers and the church. And if it's something that doesn't come up in the councils and it hasn't been a major historical issue then I'll see if Scripture speaks to it myself. I'll see what my own community of faith has to say about it. I'd like to think that prayer would be a really important issue in discerning my own faith; I may like to *think* that more than I actually *do* that. I will also examine the type of person that the various doctrine will direct or enable me to be, and whether those are practices that are called into question or enabled through this doctrine. And, does that type of lifestyle resemble one that is praised in Scripture or condemned? Those are all of the things that I try to do first.

Social-environmental influences. The final priority and competency that served as a lens of exploration regarding cognitive development was "a recognition of social-environmental influences on one's learning and maturation." Only three articulations were documented as classifiable for this sub-category. These articulations were made by two liberal arts participants, and one Bible college participant. No statements by any secular university students were classified in this sub-category. Of the

three students who were included, their respective positional distributions were generally consistent: all received Position 4-dominant ratings, and two were scored as above-average. Thus, while sufficient data was not collected to suggest a clear correlation between inclusion in this sub-category and pre-ministry undergraduates' overall epistemological maturity, it was observed that all participants who evidenced a clear recognition of the nature of social-environmental influences scored in the higher positional ranges of the overall sample.

Anthony, a Bible college student who had the unique perspective of being immersed in international cultures as a child of missionaries in Asia–and also as missionary himself in Europe for one year–provided the clearest articulation of the nature and impact of social-environmental influences on one's worldview, particularly as it relates to affirming and applying absolute truth. He responded in this way when asked by the researcher about his view regarding the impact of community and culture on one's worldview framework:

> I think it is incredibly, incredibly influential. Now, truth is not relative to a given culture, subculture, or geographic location. There is absolute truth and that's why Scripture as revelation is so important–because it provides that anchor. I would say it (truth) is so important *because* of the context. The context you grow up in is so important for shaping you, that if we didn't have access to immovable absolute truth, we would, to some extent, just go with what's around us. But I felt like for me it was also very important to know other cultures and history; all of that helped me to see that Scripture is my anchor and this is the only anchor in the midst of the swinging pendulum of culture that is going all over the place throughout history and around the world. I guess some people could be tempted to go to another culture and see that they do things differently, and that would undermine their confidence in absolute truth. For me, it just strengthened it. Seeing the variation, it was just like, "Wow, we have to have something solid." Otherwise we're just on waves with the ocean, going up and down with every cultural trend or different culture we live in. So those things really strengthen my understanding of the need for Scripture to be absolute truth, and of course that's what Scripture claims to be.

Personal Responsibility for Knowledge–
Within Community

The third and final category of epistemological priorities and competencies examined by the researcher addressed "Personal responsibility for knowledge acquisition

and maintenance–within community." This category was designed to provide a means of discerning the nature of participants' expressions regarding self-motivation and personal commitment for epistemological growth, as well as their perspectives regarding development within community. The researcher defined four sub-categorical priorities for particular focused analysis. Overall, analysis of each of these four priorities served to provide general insights regarding the nature of participants' epistemological expressions, but no individual sub-category yielded findings that was relatable with the CSID's positional ratings.

Interdependence and reciprocity. The first priority analyzed by the researcher with regard to participants' sense of personal responsibility within community was "a pursuit of personal development that results from mutual interdependence and reciprocity in one's relationships with authority figures and peers." A total of five students provided statements that were included in this categorization. Three of these were liberal arts university students. All five received position ratings reflective of a point of transition between Positions 3 and 4. Distribution of positional scores included two ratings that were Position 3-dominant and three Position 4-dominant ratings. Thus, no observable relationship or pattern was exhibited in relation to participants' overall epistemological positioning. Among the students whose articulations were included in this sub-category was Lauren, a recent graduate of a secular university. She exhibited a clear preference for learning and development via reciprocal relationships when asked to elaborate on her preference for learning environments that are predicated on open discussion.

> Open discussions allow a person to verbally express how they're feeling, and it also develops ideas as well. When I did my senior art show, I had a couple of times there when I would meet people and talk about my art. Every time I talked about it, it changed. But it was better every time! I think that's a good thing. Also, I don't think people are comfortable talking in front of groups anymore; I think that it allows students to be introverted and cut off from everyone else. But when you have that open communication, it allows you to get to know people and to help you develop

the ideas that are already in your mind. You just need that extra push.

Personal responsibility. According to the second priority within the category that addressed personal responsibility within community, the researcher analyzed participants' interview transcriptions for instances of expressions that prioritized "a sense of personal responsibility for gaining, maintaining, and progressing in knowledge." Responses that were included within this sub-categorization were attributed to fourteen participants, including six Bible college students and four students each from liberal arts universities and secular universities. Scores among included participants were distributed with relative equivalence across all levels of positional ratings. Thus, no relationship between overall epistemological positioning and inclusion in this sub-category could be inferred based on the findings of this research. Such does not suggest, however, that a sense of personal responsibility for one's own knowledge and development is not a vital element of epistemological maturity. Numerous statements on the part of interviewees provided helpful insights regarding the connection between personal responsibility and epistemic growth. Justin, a Bible college student, expressed his realization of the essential link between being personally invested in one's own learning while remaining intentionally sensitive to the revelation of God that is available through multiple outlets.

> It took me a while to learn that I can't teach other people unless I know it myself and I'm reflecting on it myself. So I gradually became more aware. Schaeffer is my favorite author, and something he said in his journals is, "There are some things I knew in theory and I believed in theory that eventually became reality to me, and I didn't realize there was a difference until it happened." And so, there were things like God's sovereignty and God's providence that I believed in theory, but I didn't realize what that meant until God brought me through certain situations where I realized, "Okay, that's what it means for me to live in that reality, personally." Through that, I learned that God is always active and always teaching and always revealing through our professors and through the church and through the community. So I need to be attentive to that and listen for wisdom and how to apply those in my life.

Active and engaged learning. The third sub-category by which the researcher assessed participants' expressions regarding personal responsibility within community

was “a preference for active involvement in the teaching and learning process.” More than half of all participants in the sample population made statements that reflected this preference. This suggested that a preference for active learning is a common epistemological priority possessed by undergraduates. Representative expressions for this sub-category were attributed to multiple participants from each sample grouping, and distributions of position scores among included participants ranged across all rating levels. Thus, a specific relationship between the this study’s findings of epistemological positioning and inclusion in this sub-category could not be suggested. The priority of active engagement in one’s educational community, however, is undoubtedly a positive attribute with regard to undergraduates’ epistemological development. Several interviewees provided clear articulations of the benefit of having a personally-engaged attitude in the teaching and learning process. Among those was Sarah, a liberal arts university student who gave this response regarding her view of the role of college teachers:

> I think it’s important for a teacher to be a facilitator rather than a dominator of the conversation. I think you have to be actively engaged in the class to get anything out of it. I think the best professors are the ones who facilitate learning, who aren’t just teaching material so that you can pass a test; they really want you to grasp what they’re trying to teach you, and they present the material in such a way that you’re going to be involved, and they’re going to help you learn it and apply it to your life in whatever way that takes form.

Convictional commitment. The final epistemological priority by which the researcher assessed participants’ expressions regarding personal responsibility within community was “a convictional commitment to one’s own worldview–maintained with critical awareness of personal contexts, ways of thinking, and challenges brought to bear by alternative worldviews–through testing and discernment.” Articulations that were noted as reflective of this sub-category were made by three liberal arts university students, and two secular university students. No expressions by Bible college students were noted. Among the participants who exhibited this priority and competency, scored

positions were equally distributed across all position rating levels. Thus, no conclusive relationship between inclusion in this sub-category and epistemological positioning was suggested. It was observed, however, that each of the noted expressions of convictional commitment put forth by interviewees represented remarkable examples of responsible judgment and critical awareness. Ben, a secular university student, provided one of the clearest articulations of reflective commitment in the context of his experience as a religious studies major:

> I came into religious studies, not necessarily expecting to grow in my faith as a direct result. I knew that at a public school it was going to be taught in a more academic sense which is different than a devotional or a sermon or anything like that. What really helped me, though, was coming into it without ever having the notion of questioning my faith. I sort of knew what I believed already. And I think one of the keys of that is knowing what you're not willing to compromise on, *but* at the same time being willing to–I think it's Aristotle who said something like "The mark of an educated man is to be able to entertain an idea without accepting it." I think that's true–being able to think through the idea of "well, what *if* this was true?" and then reflecting back on what you personally believe and working through the two of them together.

Recurring Themes

In addition to the structured analysis presented above, as the researcher analyzed the content of each research interview he noted various identifiable common themes that emerged from interviewees' articulations. These themes were judged by the researcher to bear relevance to participants' developmental (generally) and epistemological (specifically) perspectives.

Unlike the findings based on the structured analysis, differentiations between the epistemological expressions of participants from varying institutional types *were* apparent with regard to these prominent themes. Different themes emerged both within and across institutional context groups. Even among themes that were identifiable in participants of multiple contexts, clear distinctions were often evident according to students' attendance at one of the three varying institutional types included in this study. Each of these prominent themes are introduced below, along with analysis of distinctive

perspectives and attitudes evidenced among sample groupings.

The primacy of relationships. The most prominent common theme that voluntarily emerged among participants in this study was the primacy of relationships as the most significant single, formative aspect of their overall college experiences. Among multiple instances of coordination, this finding most specifically harmonizes with one of the most prominent and definitive works in higher education literature–Astin's *What Matters in College? Four Critical Years Revisited*. Astin's extensive, longitudinal study suggests two key realities regarding the influence and impact of relationships during college: the nature of faculty-student relationships strongly affects both the quality of higher education and students' satisfaction and appreciation of their college experience; and, "The student's peer group is the single most potent source of influence on growth and development during the undergraduate years."[10] Both of these findings were clearly reflected in this study, though with different emphases according to institutional affiliation.

Following Perry, the researcher began each interview with the general question, "Thinking back through your college experience overall, what would you say most stands out to you? What was most significant to you?" In response to this question, nearly three-fourths of responses were predicated on the primacy of relationships, including eight Bible college students, seven liberal arts university students, and seven secular university students. Figure 18 illustrates the striking majorities of students from each institutional context who stated that their college experience was most significantly defined by their relational connections and experiences.

While a majority of all participants cited the primacy of relationships as the most definitive element of their overall college experiences, differentiations were

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[10]Alexander W. Astin, *What Matters in College?* San Francisco: Jossey-Bass (1993), 383-98. See also Astin's helpful and succinct summary of the study: Astin, "What Matters in College?" *Liberal Education* 79 (1993), *Academic Search Premier*, EBSCO*host* (accessed November 6, 2012).

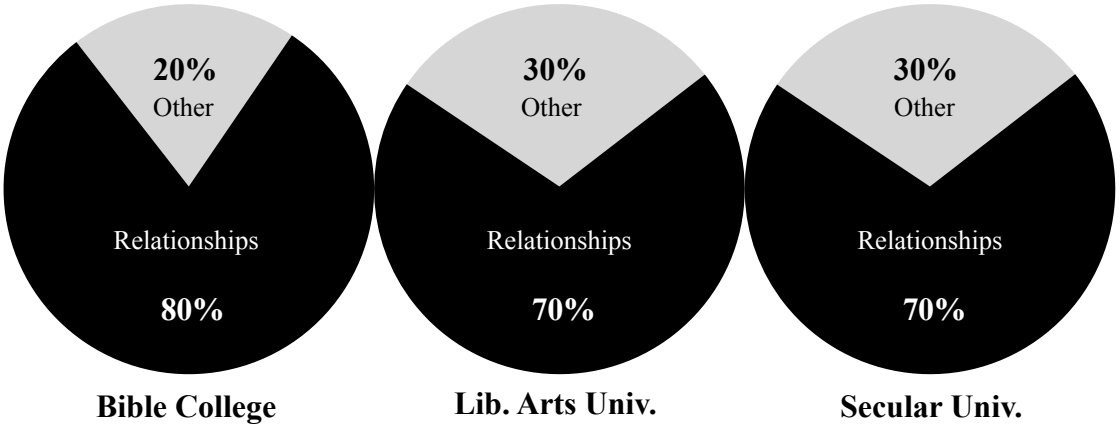

Figure 18. Initial Responses to "What most stands out to you about your college experience?"

apparent among sample groupings. Of the seven Bible college students who referred to their relationships as most significant, all but one of them spoke specifically of their relationships with professors. Ashley was a recent Bible college graduate who compared the benefit of the relational connections between students and teachers at Boyce College versus a lack of connection at other schools with which she was familiar or had personal experience.

> Just being able to come to a college where the professors are investing daily in their students and wanting to genuinely help them through college. Any other college I had been to, it was just like you come, you go, and the professors don't really care unless you come to them. It was just really nice to have that relationship with the professors at Boyce, and know that they aren't just there to teach, but they want to see you grow in your walk with the Lord and in every aspect of the ministry that you're going into.

Of the seven liberal arts university students who cited relationships as the most significant aspect of college for them, a wide range of variation was evident. Students spoke about several different avenues of relational connection, including relationships with professors, mentors, peers or close friends, church, campus life connections, and dating relationships. Jacob commented on the link between the genuine peer relationships he had through his college's residential community and the solidification of his own calling, as well as identification with the body of Christ. He responded in this way when

asked by the researcher about how his residential community experiences impacted his life such that he would not have been the same otherwise:

> A big part of it is just realizing different approaches on the Christian life. If I would've stayed at home I would've been around a lot of the same people I grew up with. Being able to come here to college and being thrown into an atmosphere where not only do people have different backgrounds as far as denominations go, but also the fact that I'm a Bible major and a lot of my friends are engineers and science majors. I've always enjoyed science, but how they view and live out their Christian life, what they hope to do and accomplish in life as an engineer or as a business man–it's just a different view that I might have, considering I'm going into full-time ministry. And I think it's really challenged me to step back and reconsider, "Why am I going into full-time ministry? How can I use business and other contexts that I have to best glorify and best help the Kingdom, working together as a community of believers. Just being able to talk about differing subjects and even conflicts that we may have, but realizing that we're still the body of Christ and working through it to really understand each other better and understand the issue better.

Responses from secular university students who emphasized the defining significance of relationships in their college experiences all centered on the nature of belonging and developing within authentic Christian community. Some of these responses emphasized relationships with campus ministry leaders in particular, but each focused more broadly on the significance of maintaining a bond of Christian community within the secular university context. Adam spoke about how his active involvement in the Baptist Collegiate Ministry (BCM) at his school facilitated his spiritual awakening, development, and discipleship mentality, coming from a non-Christian background.

> The people there (BCM Bible study group) realized where I was coming from, and I told them about my spiritual background, so they held me accountable. They kept me in check in making sure that I was doing fine. They constantly asked me if I was doing okay–wanting to help me out with anything I was having trouble with. And I opened up to them, which is something that I never did with anybody, even in my own family. . . . Since then, I've become a lot more of an outgoing person. I used to be really shy. . . . As I went along in my college career, I started to turn my attention more towards the people around me and how they were developing.

Mentors. Another prominent theme that was intentionally addressed in almost every research interview was the influence and importance of mentors. The researcher asked interviewees whether or not they had a mentor relationship during college, and all

but four respondents confirmed that they did. Most commonly in each sample grouping, students' mentors were pastors or ministry leaders. Five Bible college students and five liberal arts university students reported that their mentors were pastors or ministry leaders in their local churches. In contrast, mentors for each the six secular university students who reported having pastoral-type mentors were campus ministry leaders.

Alex was a liberal arts university student whose primary mentoring relationship was with his pastor, but he also reported having mentor-type relationships with as some of his peers and teachers. He said this when asked about the sum impact of his mentoring relationships:

> There is just absolutely no way to quantify the impact. There's things that I think and do that I might not ever know why I did them, but it very well could be because of what I've been taught by those guys, and how I've seen them live their lives. So I think it's just kind of impossible to quantify the sum impact, but I will say that those guys and the relationships that I've been in have *forever* changed my life. Ask me in 45-50 years if I'm still kicking, and I'll still probably tell you something similar.

Joseph, a Bible college student, also spoke about the overall value and impact of having a mentor during college.

> You can learn so much from a book; you can learn great philosophy from a book; but if you really want to learn practical things, and if you really want to learn real things that can genuinely, directly help you, you really need a mentor to guide you through it. Their wisdom and guidance are invaluable, because they've been through ministry; they've done years of this, so nothing really surprises them. They've gone through it and they've come out the other side. And they know *you* as well, which is something that a lecture or a book really can't help. They personally know you, your situation, and they know the best way that you could handle something. . . . They can really custom-fit and speak truth into your life.

Jeffrey, a secular university student, emphasized the impact of his mentoring relationship on his holistic development–particularly how the relationship engendered a manner of thinking that is predicated on God's special revelation.

> (Jeffrey) He was my campus minister at the BCM. I can't remember who actually first introduced this idea–the idea of a three-stranded cord of Paul, Timothy, and Barnabas. You have a Paul figure–a guy that invests in you and pours into you, and a Barnabas figure who is right by your side like your best friend, and your Timothy is the person that you pour into and you see a flow or movement of discipleship through that model. And he was really the first Paul figure that I've had in my life–a guy that challenged me. He talked through some tough passages with me, he led me through a lot of things, and he never forced me to think about anything–he let me

> think more for myself. That was really huge.
> (Interviewer) In what ways did you start thinking more for yourself? What do you mean by that?
> (Jeffrey) Like, trusting in the fact that the same Holy Spirit that is in him and that's in theologians is in me, and I can trust in the Holy Spirit as I *should* trust in the Holy Spirit to speak to me about Scripture, and let God's Word speak for itself and devote myself to that study.

Some participants reported that their mentors were their college teachers. Among these were four Bible college students and three liberal arts university students. No secular university students reported having mentors who were also their college teachers. One secular university student reported that his primary mentor was one of his peers. Notably, no participants reported that they had mentoring relationships with one or both of their parents.

Relationship with teachers. The nature of participants' relationships with their college professors was a theme that provided clear distinctives between students from different institutional contexts. Overall, Bible college and liberal arts university students reported having relationships with one or more of their teachers that were personal, substantive, and dynamic. By contrast, no secular university students reported having a significant personal relationship with their professors. Among Bible college and liberal arts university students, teachers were often referenced as either pastoral influences or personal friends, and sometimes in both respects. Amanda, a Bible college student, said this regarding the pastoral nature of Boyce College professors:

> You learn a lot about living life in the ministry and growing in your relationship with Christ and walking with Christ from the professors at Boyce, because they show it and they talk about it and they lead in that way. I feel like it was very beneficial and influential for my personal walk to be under people who were showing us and teaching us how to walk with Christ. . . . Most of them were very pastoral in nature towards us, and it was really neat to see all the stuff that we were learning working out in the immediate life of a minister, and to know that we weren't just learning something from a book; we were learning stuff that really was being effective in the local church.

Eric expressed his perspective on how having personal friendships with his professors affected his educational experience and personal development.

> At Union there's an underlying, often unspoken, sometimes spoken principle that Christian education is really about more than preparing you to enter into the work force; it's about training you as an individual and directing you to a certain end. And I feel like I got another level of that training because the same people whose job it was to train me in those aspects–when you enter into a friendship-type relationship in addition to the teacher-student one, the same goals are still there, but it is all the more practical and available in the sense that we spend that much more time together, and we talk about whatever comes up in regular activity. I think just the time and the availability make those goals of education happen all the more. There are that many more opportunities to direct the student to those ends.

Purpose of college. Another clear differentiation emerged among participants from varying institutional contexts with regard to their perspectives on the essential purpose of college. The researcher discerned three categories of perspectives that corresponded to participants' attendance at their respective types of schools.

Students who attended confessional Christian liberal arts universities, by a proportion of 70% of respondents, expressed that the primary purpose of college is thus: to shape one's identity as a person, holistically–to establish a mature, authentic *lifestyle* and manner of thinking. One Bible college student and no secular university students provided this type of response. Numerous expressions on the part of liberal arts university students articulated this priority. When asked about "how students should change as a result of going through college," Tyler responded in this way: "Their worldviews, their way of thinking, their way of executing their work, their way of studying, their way of handling difficult situations, their way of dealing with people and interacting with people–just all those different aspects of life should've changed for the better. The way they view society, the way they view how they act with their friends." Emphasizing the intellectual-lifestyle objective of college, Jacob said, "college should be a place where you learn how to be a learner." Kevin summed up the "proper" holistic-developmental priority of undergraduate education by referring to his own experience:

> I think one thing college has taught me–particularly a liberal arts college like Union–is *learning how to live well*, which sounds like a really vague statement. But I've learned the importance of making sure that I'm a well-rounded person, appreciating things like music and art, and engaging myself in different cultural mediums–not just combining myself and my learning into one career or into one specific task, but just growing intellectually in the same way that I'm striving to

> grow spiritually. So one thing that I would hope that students would learn from college is just to have the proper view of education. Unfortunately, I don't know that all colleges give that.

A secondary related theme that emerged among liberal arts university students was that a college education should serve as a means of increasing in knowledge in order to construct a coherent worldview. In recommendation of this prioritization, Thomas said, "A student coming out of high school going into college should end up with a concrete worldview, and should have a consistent philosophy and ideology across the board. What I mean by that is: *not* pick and choose when to believe certain things; not pick and choose to believe the Bible at times and not at other times."

Bible college students expressed a different priority regarding the purpose of college. According to 70% of participants within this grouping, the primary purpose of college is thus: to gain knowledge that is *applicable*, in order to prepare for one's vocation. One secular university student and no liberal arts students expressed this view.

Among the typical expressions that articulated this view was a statement made by Chris, that the purpose of college "is to prepare you for work in the real world of ministry." Also, Joseph stressed that college students should maintain involvement in local church ministry and seek out opportunities to learn from mentors. He articulated the purpose of one's college education in terms of broad, vocation-oriented learning: "Ministry has so many different aspects and so many different elements . . . so you need to learn and take classes and have a working knowledge of every aspect of church and ministry, so you can at least be equipped and it won't be a surprise to you." Anthony, a recent Bible college graduate who also had the experience of attending a liberal arts university, provided a perspective that clearly focused on vocationally applicable learning while also integrating the majority liberal arts view of education:

> I do feel like an ideal college education involves knowledge being imparted–so yes, intellectual growth. Those categories of knowledge need to be created if they're not there, they need to be broadened if they're already there. They need to be challenged and sharpened. But it has to go beyond that. Life-on-life mentoring with professors and mentors is where that knowledge really–where the rubber meets the road and

> that knowledge can be applied as wisdom. So I would say: transferring of knowledge, life-on-life application of that knowledge such that wisdom is modeled, and then opportunities to apply that knowledge in wise ways oneself. So definitely hands-on ministry–getting messy in the local church. I feel like that is so important for college students to realize. As they're learning these categories, they need to hit the harsh realities of everyday life. And they need to be sharpened and softened–or hardened–with the reality of messy ministry in the local church.

A clear and unique perspective regarding the purpose of college also emerged among secular university participants. Among this sample grouping, 70% of respondents expressed that the primary purpose of college is thus: to "grow up" or mature in personal (self-identity) and practical (self-responsibility) ways; to increasingly exhibit a sense of personal responsibility regarding education and life. While this view represented more than half of secular university participants, no Bible college or liberal arts university students made any expression related to this priority.

Students from five of the six represented secular universities provided statements that reflected the sample grouping majority. Adam, a participant who became a Christian and committed to vocational ministry during his time at Kentucky State University, said that "a complete, full satisfying college education is one where you find yourself. College is where you split off from everything that you're used to. . . . You can become *you* in college." Similarly, Lauren said, "My college experience has allowed me to get to know myself. I thought I knew myself before coming to college, but I didn't. I didn't know a lot about myself, and everyday I find out something new, and I'm just blown away!" In his articulation regarding the primary purpose of college education, Cody summarized the connections between personal responsibility, hard work, devotion to the task of learning in general, and appreciation for the educational process. He said,

> A student should gain an *appreciation* for education. I feel like often middle school or high school students think really dutifully of homework and studying and reading. Because in high school you have homework every night, practically, and you have classes every day for seven hours a day. And in college, usually you get a syllabus that has when your four papers are due and when your four tests are. And you can look at it in a dutiful way, or you can treat it as a job and understand that this is beneficial to you, and you need to read and you need to study and you need to do well. So just having an appreciation for education–I would say that's as important as whatever degree you get. . . . You need to learn to apply yourself, and

you need to care and be intentional about whatever you're learning.

Impact of college. The researcher was able to discern multiple common sub-themes among participants across and within differing institutional contexts with regard to the overall personal impact of the college experience. While multiple issues and findings explicated in this research coordinated with the results of Pacarella and Terenzini's comprehensive examination of the effect of the college experience on students, similarities and echoes were most notable in light of these sub-themes. In the most recent volume of *How College Affects Students*, the authors report that throughout college, "Students not only made statistically significant gains in factual knowledge and in a range of general cognitive and intellectual skills but also changed significantly on a broad spectrum of value, attitudinal, psychosocial, and moral dimensions."[11] Broadly speaking, the self-reports of the pre-ministry students included in this research indicated that the college experience facilitated a period of personal growth and change that was fundamental, holistic, and permanent. It should be noted that in many respects, the nature of the impact of college on students has been documented to be generally consistent over the past half-century. Pascarella and Terenzini summarize the highlights of this abiding impact for all college students–including (albeit with some inversely-oriented orientations of growth) the participants in this study:

> Students learn to think in more abstract, critical, complex, and reflective ways; there is a general liberalization of values and attitudes combined with an increase in cultural and artistic interests and activities; progress is made toward the development of personal identities and more positive self-concepts; and there is an expansion and extension of interpersonal horizons, intellectual interests, individual autonomy, and general psychological maturity and well-being.[12]

In this research, the most general and common sub-theme–articulated by nearly half of all participants–was the recognition that from the beginning of college to the end, he or she became "a completely different person." This expression was provided by

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[11]Ernest T. Pascarella and Patrick T. Terenzini, *How College Affects Students: A Third Decade of Research*, 2nd ed. (San Francisco: Jossey-Bass, 2005), 572.

[12]Ibid., 577.

fourteen participants, including seven Bible college students, four liberal arts university students, and three secular university students. Among them was Joseph, a Bible college student who made a clear statement about the fundamental change that he underwent regarding vocational direction, personal maturity, and practical responsibility.

> Oh me, I'm a completely different person! As a freshman, I was really unfocused. Ministry was far-off. I was very immature. I knew I wanted to do ministry, but it was far-off, and I just wanted to enjoy college. . . . When I was 18, it was a great blessing that I was able to go to school for free. I could go full-time, I didn't have to work, so I could just focus on school. I didn't really have to worry about financing. . . . Now I'm working in a bi-vocational position at a church. The church covers about 60% of what I need, and I work another part-time job about 30 hours a week. I'm a lot more focused, I would say. That would be the key difference: I'm a lot more focused; I'm a lot more mature. In regards to, "This is exactly what I want to do"–I wouldn't do anything else. This is my passion. This is my desire. I'm a lot more responsible, a lot more mature, and a lot more focused.

Mark, a secular university student who committed to vocational ministry during college, framed his metamorphosis in terms of a shifting view of himself with regard to his sense of overarching purpose and personal motivation.

> I feel like I'm a completely different person, almost entirely. My mindset was completely different as a freshman. It was just like, "How can I look the coolest? How can I have the most friends and be in the in-crowd? What can I do to advance myself socially?" And now at the end of college, my heart and my mind are more focused on God and what he wants for my life and how I can serve him. So I think it's really a huge difference from "how can I serve myself?" to "how can I serve God?"

The most common sub-theme that was directly relatable to participants' epistemological attitudes and development was evident in multiple students' expressions that the college experience served to confront him or her with what (or how much) he or she *did not know*. This expression was identified in more than one-third of all research interviews, including five liberal arts university students, four Bible college students, and two secular university students. While a correlation between this expression and epistemological maturity could not be suggested based on the data acquired in this study, it was observed that most students who provided statements that reflected this perspective received positional ratings in the higher ranges of the sample population. Furthermore, these expressions often provided prime examples of Perry's concept of "metathought," or

the ability to think about thinking. When asked to elaborate on what he meant by saying that learning was a process of finding out how much he did not know, Robert, a recent Bible college graduate, spoke from his own experience and articulated an implication that addressed the doctrine of progressive sanctification.

> From high school to college you realize, "I was really dumb in high school." That's your first thought. Then you think, "well, maybe I'm dumb now and I just don't realize it." Then sure enough as time goes on you begin to realize that you really do have a lot to learn. So I don't think I have any of this completely figured out at all. So when I say that "the more I learn, the more I realize I don't know," I just mean that I think it's going to be a long walk and a long process for me to get to where I need to go, and it won't end until perfection in the New Creation. I just think that I should be learning to be faithful where I'm at, and trusting that I don't have all the answers. That's been a big lesson for me to learn throughout my college career.

Richard, a recent secular university graduate who also attended a liberal arts university for two years, provided the clearest articulation of this view. He explained how the recognition of his own lack of complete understanding yielded a spirit of humility that enabled him to apply a new perspective and attitude to his interactions with other believers as well as non-believers.

> From my freshman year to my senior year, I really learned how I knew a lot less. When I was a freshman, I was more arrogant–I thought I knew everything, so I didn't need all this. But as a senior I realized how much I didn't know. And so I guess I really learned a lot more humility . . . . Through my years of college, God really showed me how much I didn't know, how much I needed to change my own life, and my own personal character flaws that I needed to address. So as a freshman, I was quick to argue, slow to listen, quick to answer, and always all about myself and what I thought was correct. So I was always quick to jump on people if I thought they were wrong on something, because of how much I thought I knew on everything. And now as a senior I really realize how much I didn't know and how much I don't know, and I have just learned to be a lot more humble in my interactions with people, and also in just being more gracious in discussions with people with whom I disagree.

A third clear sub-theme that emerged among liberal arts and secular university students regarding was that a decisive impact of the college experience involved the process of gaining more independence and responsibility in practical matters or personal discipline–i.e., gaining a more mature perspective with regard to entering adulthood and the professional world. Half of respondents within the liberal arts and secular university

sample groupings provided expressions that reflected this perspective. Notably, no Bible college students put forth this type of articulation. A typical statement representative of this sub-theme was made by Jacob, a first-semester senior at Cedarville University.

> I would say the biggest point of responsibility I've seen myself grow in is just managing time and relationships. . . . I've realized that the things that I'm going to devote my time to need to be things that matter in retrospect to God's Kingdom and the work that he would have us do as Christians. . . . I think that's probably the biggest thing–being able to step back and look and see which things in life I should keep pursuing, and which things that, although not necessarily wrong, are just taking up time that could be better used elsewhere.

The fourth sub-theme relating to the overall impact of the college experience emerged among an equal number of students from each of the three institutional context groups in this study was the expression of development from a more legalistic or personalistic perspective to a more authentic, personally-committed, and selfless perspective regarding one's faith, worldview and lifestyle. Three students from each sample grouping provided statements that reflected this transition. One of the clearest articulations that represented this sub-theme came from Mark, a pre-ministry student who experienced a faith-transformation while attending the University of Louisville:

> I had a general understanding of the gospel, of who Jesus was–that he died for my sins, that he rose again–but I don't think that there was a relationship there. Because it's not just "I recognize that Jesus exists," it's having that relationship with God. I think that I lacked that relationship. I believed that Jesus was the son of God and all those things, but there was no fruit in my life. There was no proof of a changed heart. Being a Christian for me was just like being a good person; like, "If I don't do this, don't do that–Jesus tells me not to do those things, so if I don't do those things I'm a Christian; I don't drink or smoke like all my friends in high school, so I must be okay." That was the mentality I had about Christianity. It was very legalistic. Coming into college changed this idea of legalism to the idea of freedom in Christ, and grace, and a relationship with Christ.

One final sub-theme that also emerged among an equal number of participants from each sample grouping was expressed as a transition from a faith and worldview that was accepted or *received* from one's parents, church, peers, etc., to a faith and worldview that was personally-invested–i.e., maintaining one's convictions in a responsible manner. Three participants from each category provided statements that represented this

perspective. Among them was Sarah, a liberal arts university student, who related her own self-confrontational experience:

> I had to make a decision: if being a Christian was just something I'd grown up with and something my parents had taught me, or if it was something that I truly and completely believed in. I had to make that decision for myself without anybody there to hold my hand and take me to church, to Bible study, to the BCM where I was going to grow. I had to make the decision to do those things.

Perspective regarding seminary. One theme that was intentionally engaged by the researcher in almost every interview was participants' perspectives regarding seminary. All responses were assignable to one of two positions, with the exception of one response by a liberal arts university students who articulated a hybrid-view, incorporating both positions.

A clear majority of all participants were classified as having an "idealistic" perspective regarding seminary–the view that seminary is primarily necessary or beneficial for the knowledge and skills that are to be gained there, in preparation for vocational ministry. Every secular university student maintained this perspective, as well as eight of the ten liberal arts university students, and six of the ten Bible college students. Cody, a secular university student, expressed his personal view that seminary would serve as a necessary completion of his ministry preparation on a formal level, after being trained on an experiential level in college. He said,

> It's necessary for me to go to seminary for knowledge. There's too many pastors who don't know why they do what they do. And even me, I'm still figuring it out. As a pastor–as someone who is going to teach the Word of God and who is going to serve in the church the way that God has designed Christians to interact here on earth–you need to know the history of the church and you need to know the Scriptures and how the church should be set up–the polity. You need to be able to counsel people. You need to be wise in the decisions that you make and how you lead the church. I feel like I got plenty of ministry experience serving at Campus Crusade and serving at my church through college, but those are things you have to investigate on your own and what you have to be taught and read.

Alex articulated his idealistic view by expressing his hope that his seminary education would share priorities that are in concert with his idea of a liberal arts education–focusing

on "expanding horizons" and interacting with ideas in an effort to arrive at a more informed, reflective set of convictions.

> I hope to be challenged. In the same way as Union–I want my horizons expanded. I want to not necessarily arrive at different conclusions, but be exposed to a whole lot of different perspectives along the way to those conclusions. So maybe I go into Southern (seminary) thinking *this* way about the atonement. I may leave Southern thinking the exact same way about the atonement, but on the other side of Southern, I hope to have been exposed to a lot of different perspectives.

In contrast to the idealistic view, a second categorization of participants' perspectives regarding seminary was the "practical-utilitarian" view–that seminary is primarily necessary because it is a prerequisite for obtaining employment in a career-type ministry position. Among respondents who expressed the practical-utilitarian view, four were Bible college students and one was a liberal arts university student. Most notably, Aaron expressed his disappointment and frustration because of the virtual "requirement" of a seminary degree in order to be considered as a qualified candidate for employment at most local churches.

> *I don't think* it's necessary (to go to seminary), but it *is* necessary. It's necessary because churches have such a skewed idea, that you look at almost any requirement, and they require a piece of paper before they think you're qualified to be a pastor. . . . I'll be honest with you, . . . I don't think that seminary, in any way, shape, or form, is going to be very beneficial for me. I would see more of a hindrance than a benefit, in the sense that it's going to steal more time away from the church I'm already serving at. It's going to be rehashing all the exact same things we studied at Boyce. . . . I'm very much aware that not many people will hire me without a degree. So I think our society has made seminary necessary. I think biblically and in reality, it's not, but you're going to be hard-pressed to find a job in ministry without a degree, because it's what everyone wants.

"The bubble." One final recurring theme that emerged among a significant number of Bible college and liberal arts university participants was identified as the perspective at the root of a common terminological reference–"the bubble." Nearly half of all Bible college and liberal arts university students included in this study voluntarily used this term in the course of the research interview when discussing the nature of their institutional context. Ashley, a Bible college student who transferred to Boyce college after attending a secular university, referenced the term while acknowledging the danger

of losing a real-world perspective within the confines of a strictly evangelical environment. She said,

> They warned us when we came into Boyce about the "Boyce bubble." They said, "You're going to form this bubble and not want to get out into the real world and be around real people." And I've seen that. If I go home for a weekend and I'm around unbelievers it's hard to adjust to that, because you're daily surrounded by believers (at school). So when you're among unbelievers it's hard to adjust. It's almost like culture shock. It's always hard for me, because when I was in a secular college it wasn't that it didn't bother me, but it was nothing to hear girls on my basketball team cuss and swear. And now when I hear those things, it throws me off. In that aspect, I think it's a drawback–if you get so surrounded by believers everyday and it gives you a culture shock when you go into the real world. I think there should be a balance there. Yes, it's okay to be around believers but don't isolate yourself either.

As a liberal arts university senior, Kevin reflected on both the benefits and the costs of his educational environment. He provided this response when asked if he would choose to attend the same type of school again, rather than choosing to experience a institutional context that included a greater diversity of worldviews and confrontational cultural norms.

> Absolutely I would. There's no question about that. For better or worse, Union is the way that it is, and you do miss out on some of those interactions. But at the same time, I'm just extremely grateful for the way that Union approaches learning in general and how it views the intellectual life as something that comes under the authority of Christ. The philosophy that Union has is that learning is something that is ultimately supposed to prepare us to meet God face to face. So that's something that's not going to be the focus at secular universities, where you have more learning to equip you for some type of career or task. I don't think that focus is what it should be. Not to mention, the opposition from professors that you would face, who are skeptical of Christianity, the opposition from other students in the student body, and just the general degenerative environment that unfortunately pervades a lot of secular campuses, where you have a lot of temptations and a lot of immorality going on.

Research Question 3

RQ3 asked, "What is the relationship, if any, between differing social-environmental conditions and the development of epistemological maturity among pre-ministry undergraduates?" This RQ was raised in order to explore the impact and effects of differing social-academic cultures on pre-ministry undergraduates' progression toward epistemological maturity. Three particular conditions were explored: personal

confrontation and interaction with non-biblical worldviews, experience of interfaith dialogue within the academic community, and exposure to interdisciplinary studies. While no significant difference regarding epistemological positioning was observed among participants from differing institutional sample groups, this research did uncover some distinctive contextual realities and perspectives directly related to students' collegiate environments. For pre-ministry undergraduates, these distinctions are likely to impact the nature of personal development in general, and the course of epistemological maturation in particular. Thus, given the relative consistency of epistemological positioning among participants across institutional contexts, the findings put forth in this section primarily focus on highlighting the distinct variances of differing social-academic conditions as reported by participants during the research interviews.

Challenges to Personal Beliefs and Values

The first social-environmental condition explored by the researcher with regard to participants' experiences within their respective institutional contexts was the nature and impact of personal confrontations with worldviews that served to challenge one's own beliefs and values. The division between categorical perspectives with regard to students' experiences was understandably stark. 100% of secular university students experienced interactions within their educational environments that directly challenged and conflicted with their core, fundamental beliefs. By contrast, no Bible college or liberal arts university students reported such interactions. 60% of participants from both of these sample groupings did report experiencing interactions within their educational environments that posed challenges to their non-fundamental beliefs.

Core, fundamental beliefs. While all secular university students expressed that they had the experience of confronting direct challenges to their core beliefs and values as a result of immersion in their respective institutional contexts, it is important to

note that no students reported that they doubted their core convictions as a result. Many did, however, state that engaging with conflicting worldviews served as a means of helping them mature in their own formation and application of the biblical worldview. Adam addressed his appreciation for these confrontational experiences in this way:

> I definitely value them now, although at the time it was hard to value them. Looking back and thinking about it, it's like, "If not for those things that challenged me, I wouldn't be as confident in what I believe." So because of these controversial things that came up, I was able to realize and fully develop my own opinion on the matters so that I can be more confident in them. I definitely value them, although they challenged me at the time.

More specifically, numerous students described the connection between their interactions with non-Christian worldviews and cultural norms during college, and the emergence of a missional perspective according to which they began to view their ministry calling. Richard, a recent graduate from Western Kentucky University, articulated such an attitude as he spoke about how challenges to his core beliefs and values led to a more self-invested and responsible personal faith and missional attitude toward doubters and skeptics.

> Being exposed to a lot of anti-Christian philosophical arguments, it makes you have to *think*. It really challenged me in a lot of what I believed. So there was never a point of outright disbelief, like "I'm not entirely sure what I think," or "I'm not entirely sure what I believe." But I had to really rely on God and sort things out: What do I believe *myself*?–not "How was I raised to think?" or "What did everyone else tell me about how I was supposed to believe?" but "What exactly do *I* see in Scripture and who is the God that I see that exists, and how does he reveal himself?" So it was really that first year at Western, three years ago, when I went through a time of skepticism. And through that time, God really showed me a lot about how I needed to handle people, and he also showed me a lot about *what to say* to other people that were dealing with a lot of the same things that I dealt with. It was like God led me through that valley to show and teach me a lot, so that now when I deal with people who are at that place like I was, I know what to say, I know much more how to handle what they're going through.

Non-fundamental beliefs. Among Bible college and liberal arts university students, 60% of respondents reported experiencing challenges to non-fundamental beliefs, but not core beliefs. Among these was William, a recent liberal arts university graduate. He provided a very thoughtful and reflective articulation regarding the

experience and benefit of interacting with varying theological and philosophical perspectives while maintaining an openness to having his own perspective revised–within the bounds of orthodoxy.

> There are a lot of incorporations of philosophy that the church throws out very often, even some postmodern ideas, or post-structuralistic or whatever you want to call it. And for me, the requirement to engage with those ideas was really good because it made me think about how I have been taught or asked to swallow the pill of just holistically rejecting those ideas. And I think the reality is that there's a lot of good knowledge there, and some ideas that line up with biblical thinking. And I think that that is what some of us might call "common grace." We should not holistically *embrace* those ideas but dissect them, or, to borrow a term from the times–"deconstruct" them–and realize that conservative ideas hold a lot of good truth, but neither are they holistically true. That led me to think about some maybe academically leftist ideas and pick apart where they might line up with some biblical truths, but also identify where they're dangerous and where they don't.

Interaction with Ideological Diversity

The second social-environmental condition intentionally explored by the researcher was the nature and impact of participants' interaction with interfaith dialogue across varying institutional types. More broadly, this condition addressed the extent to which pre-ministry students' were exposed to ideological diversity and the level at which they interacted with competing ideologies, according to their respective college environments. Findings regarding this condition were essentially identical to the previous condition.

Oppositional worldviews. Without exception, every secular university student reported that his or her primary interaction with ideological diversity involved engaging people within the college environment who held oppositional worldviews. Among Bible college and liberal arts university students, one student from each context reported that his primary experience with diverse ideologies during college involved engaging people with non-Christian ideologies. In both of these cases, however, the student's medium of interaction was completely removed from any campus-based context.

Similar to the findings related to the first condition, a common refrain of

secular university students with regard to their encounters with diverse ideologies was that those experiences enabled them to establish and apply a missional perspective. One such expression was provided by Cody, who spoke about how his interactions with diverse worldviews served to frame his perspective about his ministerial calling. Regarding the impact of those interactions, he said,

> I would say that the biggest impact it has is that I would have classes with twenty or thirty people, and there might be one other person I know who's a Christian, but there are eighteen others who aren't. And you get to have group discussions–especially in the Religious Studies program, where every class is discussion based. You get to have lots of discussions and peer-editing papers, and lots of just going and grabbing lunch with people after class and hanging out and inviting guys to come over and watch a movie–all kinds of different stuff. It just gives you a heart for a broken world. It is living in a environment where you have to be missional minded, because 90% of the people around you don't believe in the gospel.

Later in the same interview, speaking of how his default perspective toward non-Christians fundamentally changed, Cody said,

> Before college I had this view of non-Christians–like they had this disease, and I would have to act differently around them and talk differently around them. And it was the same early in college, like I had to have my guard up to lots of friends that I made that were not believers . . . Kind of this leprosy thing. It took a while to be exposed to it enough to realize I have the same leprosy that they do–the same sickness–to not be scared of the fact that they are an unrepentant sinner, but to really embrace the fact that *I* also was that. There's kind of a level ground there, that I had to almost walk up to, or I guess walk *down* to–where I thought too highly of myself and I thought that these people were weird and I didn't want to be friends with them; I didn't want to let them into my life; I didn't want to know them. And so being at a secular university really exposes that.

Differing doctrine or ecclesiology. A majority of Bible college and liberal arts university students reported that their primary interaction with ideological diversity in college involved engaging other evangelical Christians with differing doctrinal or ecclesiological positions. 80% liberal arts students responded in this way, as well as 60% of Bible college students. A typical response among participants from these two sample groupings to the researcher's question, "Did you encounter ideas during college that challenged your own beliefs and values?" was Steven's. He said,

> Yeah, I had a roommate for 3 years that grew up in the Assemblies of God church. I

> was raised Independent Southern Baptist. So obviously meeting my roommate, we had tons of theological discussions about different ideas. So yeah, I did come into contact with a lot of different beliefs. I even found, after spending some time at some different churches and spending time around the pastors on staff there, a lot people who *believe* the same thing but *emphasize* different things. So I always thought that was interesting too. I did get a lot of different beliefs, but nothing that I would've ever broken fellowship over. I would say there was definitely more people that I met that believed similarly to me but placed emphasis on different things.

Exposure to Multiple Disciplines

The final condition explored by the researcher addressed exposure to multiple disciplines. This condition was not applicable to Bible college students, since their curricula did not include multi-disciplinary requirements. The researcher specifically asked participants from liberal arts and secular universities about the value and perceived benefit of exposure to multiple disciplines. This was in an effort to potentially discern an identifiable relationship between exposure to interdisciplinary studies and pre-ministry students' epistemological maturity. Analysis, however, did not reveal any relationship between encountering or valuing interdisciplinary studies and participants' epistemological positioning. Overall, half of participants from each sample grouping expressed that they felt their experience with multiple disciplines was significant and helpful.

Evaluation of the Research Design

This study employed a fully qualitative design by which the researcher addressed the nature and differentiations of epistemological maturity in pre-ministry undergraduates. Data was collected primarily through semi-structured interviews, according to a customized adaptation of the Perry Interview Protocol, facilitated by the researcher. The qualitative research design was most appropriate for the research purpose, which was to explore the variance of epistemological development in pre-ministry undergraduates across differing institutional contexts, using the Perry Scheme as a theoretical lens.

The strength of this study's research design was its capability to elicit information about individuals' personal perspectives with unique richness, depth, and accuracy. The qualitative interviews enabled the researcher to understand and assess the epistemic positions and values of members of the population sample from the participants' own contexts and personal perspectives. The nature of the semi-structured interview enabled direct communication between the researcher and sample participants, which allowed for intentional customizability, probing of unique expressions, and the inclusion of unique supplemental or relevant contextual issues that emerged within the parameters of the research purpose and interview protocol structure. Also, immediate clarifications of the interviewer's questions and interviewees' responses were available when needed.

The personal-interactive element of the research design facilitated a rapport between the interviewer and interviewees, which provided a personable, relaxing environment, conducive to open discussion and sharing. In addition to the actual research interviews that were recorded and transcribed, the researcher utilized email correspondence and initiated a brief, pre-interview telephone conversation with each interviewee. This established a basis of personal connection from the beginning of each participant's involvement in the study. Also, prior to each research interview discussion, the researcher clearly explained the context for the interview with regard to the general research purpose, as well as the straightforward expectation that interviewees would share openly about various aspects of their college experiences. The medium of speaking via telephone also proved helpful, in that it provided a non-imposing and non-confrontational environment for participants. In this way, the research interviews included a casualness that encouraged freedom of expression and sharing on the part of interviewees. Also, conducting interviews via telephone made it possible to schedule each interview at the most convenient possible time for both parties.

Two weaknesses of the research design became apparent with regard to the

sample population inclusion criteria. First, approximately 20% of participants reported that they attended an institution other than the school from which they graduated–or from which they were soon to graduate. This was expected and accounted for by the researcher, as noted in the Dissertation Study Participation Form. A couple of these participants, however, spent as much as half of their college careers in institutional contexts that varied significantly from their final school. In these cases, it is conceivable that students' prolonged experiences in differing educational contexts and cultural environments had some bearing on their overall development–and perhaps more specifically on their epistemological development. Thus, an added criteria for this study, that each participant must have attended his or her final school for at least 75% of his or her college career, may have been helpful. Second, while all participants in this study fit within the determined age criteria–between twenty and twenty-five years old–three Bible college students were between two and three years older than the average age of all other participants. These students clearly drew from more varied life experiences and broader perspectives on post-collegiate life and vocational identity. Since these factors are likely to directly impact epistemological maturity, a more ideal age criteria may have been to limit participants to only those who were no more than five years removed from high school graduation.

The procedures of content analysis which were employed for this study were well-suited with regard to the research purpose and the nature of the data collected through the research interview process. Following the completion of the interview transcriptions, the CSID's systematized positional rating process was conducted. Simultaneously, the researcher performed an independent content analysis that included evaluation according to a structured framework of epistemological priorities and competencies, as well as an intentional identification of relevant recurring themes. These two content analysis procedures were carried out independently, and later analyzed in concert with one another by the researcher. This method strengthened the overall design

of the study, while clarifying and diversifying the analysis of findings by facilitating an integrated evaluation of the research data.

Overall, the qualitative design employed in this study was most appropriate considering the research purpose, and proved to be effective. The clarity and depth of responses collected from the population sample through the research interview process provided the researcher with data that was rich and pertinent to the epistemological positioning and maturation of pre-ministry undergraduates. The procedures of content analysis were then applied in a manner that enabled a unique, multi-faceted assessment of the data. The researcher's execution of his own independent content analysis served to confirm and augment the CSID's positional ratings. Findings were thus yielded that directly engaged the research questions, while also identifying significant supplemental issues and realities that became apparent with regard to pre-ministry undergraduates' varying contexts.

CHAPTER 5

CONCLUSIONS

This study explored the nature, extent, and distinctive processes of epistemological development in pre-ministry undergraduates according to attendance and immersion in differing collegiate environments. As such, this study represented the inclusion of previously unexamined population with regard to the study of undergraduate intellectual and ethical development. Prior to conducting the study, the researcher thoroughly reviewed the precedent literature relevant to the topic, including biblical and theological foundations for knowledge and maturation, theoretical foundations related to the Perry Scheme, and an interactive framework for engaging developmental theories and ideologies while maintaining biblical fidelity. The conclusions that were drawn in light of the analysis of findings are presented below, including research implications, applications, and limitations, as well as some suggestions for further research.

Research Purpose and Questions

The intent of this study was to explore the variance of epistemological development in pre-ministry undergraduates across different institutional contexts, using the Perry Scheme as a theoretical lens. This purpose was engaged on the basis of three guiding research questions. They were as follows:

1. What is the relationship, if any, between the type of institution a pre-ministry undergraduate attends and progression through Perry's positions of intellectual and ethical development?
    a. What is the relationship between attendance at a secular college or university and progression through Perry's positions?
    b. What is the relationship between attendance at a confessional Christian college or university and progression through Perry's positions?
    c. What is the relationship between attendance at a Bible college and progression through Perry's positions?

2. What are the distinctions between pre-ministry college seniors and recent graduates from differing institutional contexts regarding how they express their approaches to acquiring and maintaining knowledge?

3. What is the relationship, if any, between differing social-environmental conditions and the development of epistemological maturity among pre-ministry undergraduates?
    a. What is the relationship between personal confrontation and interaction with non-biblical worldviews and the development of epistemological maturity among pre-ministry undergraduates?
    b. What is the relationship between the experience of interfaith dialogue within the academic community and the development of epistemological maturity among pre-ministry undergraduates?
    c. What is the relationship between exposure to interdisciplinary studies and the development of epistemological maturity among pre-ministry undergraduates?

Research Implications

This section discusses the findings and implications of this research in relation to the three research questions addressed in this study. The following list is a summary of the implications derived from the researcher's evaluation of the analysis of findings:

1. Pre-ministry students entering seminary from secular university contexts differ significantly from other incoming seminarians with regard to the nature and level of their respective formal-theological awarenesses and competencies.

2. The age at which an individual makes the commitment to pursue vocational ministry has a direct influence on the type of college or university he or she attends.

3. Epistemological positioning and maturation, according to the Perry Scheme, is generally consistent among pre-ministry undergraduates from varying institutional contexts–reflecting a range of positions within the mid to late stages of Multiplicity.

4. Secular university pre-ministry seniors or recent graduates reflect an earlier epistemological position than their counterparts at liberal arts universities or Bible colleges.

5. A relationship likely exists between pre-ministry undergraduates' ages and epistemological maturity.

6. Notable distinctions regarding the nature of epistemological development among pre-ministry undergraduates from differing institutional contexts are evident with regard to the most common epistemological cues addressed by respondents within respective institutional groupings.

7. Among pre-ministry undergraduates included in this study who were five years or less removed from high school, liberal arts university students reflected a distinguishably higher collective position rating than the two other groupings.

8. The structured organization of epistemological priorities and competencies that was presented and applied in this research provided an analytical framework that yielded findings which accurately reflected and corresponded with the positional ratings

given by the CSID.

9. Among pre-ministry undergraduates, a relationship may exist between epistemological maturity and one's understanding and practical application of the relationship between faith and rationality.

10. Among pre-ministry undergraduates, preferences for higher levels of cognitive functioning according to Bloom's Taxonomy are generally indicative of higher epistemological positionings within the range of the sample population.

11. Among pre-ministry undergraduates, a relationship likely exists between epistemological maturity and a student's possession of a reflective criteria for assessing beliefs and values.

12. One of the most common epistemological priorities possessed by pre-ministry undergraduates involves being actively engaged in the educational environment.

13. For a majority of pre-ministry undergraduates, relational connections define the most significant aspect of the college experience.

14. The most formational single relationship most commonly addressed by pre-ministry undergraduates is the relationship with a personal mentor.

15. One of the most distinguishing elements of differentiation regarding participants' college experiences according to institutional affiliation is the nature of the teacher-student relationship.

16. Clear distinctions among students from differing institutional types are evident with regard to how students perceive the primary purpose of college.

17. Among all pre-ministry undergraduates, a common epistemically-relevant refrain regarding the overall impact of college is "finding out how much I did not know."

18. Pre-ministry undergraduates attending Bible colleges and liberal arts universities commonly perceive and refer to their respective educational environments as "a bubble."

19. The social-academic conditions that are inherent in college environments are significant and impactful for pre-ministry undergraduates, but differentiations in such conditions represented in varying institutional types do not necessarily influence epistemological positioning.

20. Common outcomes resulting from pre-ministry undergraduates' immersion in secular college environments include solidification of one's biblical worldview via confrontations with oppositional beliefs and values, and development of a missional perspective via interactions with ideological diversity.

Implications from Form Data

Pre-ministry students entering seminary from secular university contexts differ significantly from other incoming seminarians with regard to the nature and level of their

respective formal-theological awarenesses and competencies. Pre-ministry students attending secular universities are much more likely to obtain undergraduate degrees in disciplines other than Christian or religion-based studies than liberal arts university or Bible college students. Participation form data revealed that three secular university students earned (or were earning) bachelor degrees in Religious Studies. Those degrees entailed two or three courses in biblical or Christian studies–treated in the context of the secular worldview. All other represented degrees among secular university participants reflected disciplines devoid of any theological emphasis. The corollary implication is that almost all pre-ministry undergraduates who attend liberal arts universities or Bible colleges encounter curricula in which they are heavily exposed to formal biblical-theological learning, as well as courses that emphasize ministerial-vocational preparation. Such was the case for 95% of liberal arts and Bible college students included in this study.

The age at which an individual makes the commitment to pursue vocational ministry has a direct influence on the type of college or university he or she attends. According to the participation form data, the variation of responses among participants from differing institutional contexts regarding the period of life in which they committed to vocational ministry was stark. Nine of ten secular university students reported that they decided to pursue vocational ministry during the middle or late periods of their college careers. By comparison, eight of ten participants from liberal arts universities and Bible colleges reported that they made commitments to ministry before college or during the first year of college. This may suggest that students who commit to pursuing vocational ministry prior to college or early in college most often determine that confessional Christian institutions are most ideally suited to offer them the most beneficial college experience and training in light of their career intentions.

Research Question 1 Implications

Epistemological positioning and maturation, according to the Perry Scheme, is generally consistent among pre-ministry undergraduates from varying institutional contexts–reflecting a range of positions within the mid to late stages of Multiplicity. According to the CSID, traditionally-aged undergraduates usually finish college in a transitional position within the "intellectual" range of the Perry continuum (Positions 2-5), and more specifically–at some point between Positions 3 and 4. According to the CSID's scoring for participants included in this study, one lone participant was rated as likely reflecting a post-Position 5 (or "contextual-relativistic") perspective. The generalized findings of this research indicated that while some discernible differences regarding positioning were apparent across sample groupings, the average rating for each grouping reflected a point along the Perry continuum within the Position 3-4 transition. The calculated averages of scores among the entire sample was 3.378. The calculated average scores of sample groupings of students attending Bible colleges, confessional Christian liberal arts universities, and secular universities were 3.466, 3.534, and 3.135 respectively. Each grouping, therefore, collectively reflected the CSID's stated majority range of positioning for traditionally-aged undergraduates–in the mid to later stages of Multiplicity. Figure 7 illustrates the relative proximity of all scores and means.

Secular university pre-ministry seniors or recent graduates reflect an earlier epistemological position than their counterparts at liberal arts universities or Bible colleges. While findings regarding epistemological development across all three institutional contexts were generally consistent, the *mean of positions and transitions* among the secular university sample grouping was distinguishably lower than the respective positional means of the other two groupings. This mean–which was confirmed the the numerically calculated positional averages–was computed by the researcher to discern the collective positioning of sample groupings according to half-position intervals along the Perry continuum. This enabled the researcher to assign ratings across sample

groupings according to the nearest reflected position or transition period. The mean rating among Bible college and liberal arts university participants reflected a point of transition between Position 3 and Position 4, while the mean among secular university participants reflected a point nearest to Position 3. This finding indicated that the collective positioning of secular university participants was at a point very near (i.e., very slightly above) Position 3. Comparatively, the average positioning of Bible college and liberal arts participants reflected a point midway between Positions 3 and 4. The comparison of positional means according to institutional type is illustrated in Figure 6.

A relationship likely exists between pre-ministry undergraduates' ages and epistemological maturity. Among the entire sample population included in this study, seven participants received above-average positional ratings. The distribution of these ratings included two liberal arts university students, two secular university students, and three Bible college students. All three of these Bible college students, however, were significantly older than the other participants within their own sample grouping, as well as the other two groupings. In fact, they were the oldest participants in the entire population sample by approximately three years. Anthony was twenty-four years old, and Aaron and David were twenty-five. The average age of all other participants was between twenty-one and twenty-two. While within the age parameters defined for this study (ages 20-25)–especially considering the fact that all three of them received above-average scores, and that they were the only above-average rated Bible college students–these three participants' respective ages and adult experiences likely contributed to their above-average ratings. In addition to their ages, it may have also been significant that all three of these men had experience serving in pastoral ministry positions (not apprenticeships or assistant positions) in local churches. In further support of this implication regarding the significance of the factor of age, it is notable that the two *youngest* participants in the sample (both twenty years old, representing two liberal arts universities) were the only two liberal arts university participants that received below-average ratings–reflecting a

point of transition between Positions 2 and 3. Every other liberal arts participant was rated within the average or above-average range.

Notable distinctions regarding the nature of epistemological development among pre-ministry undergraduates from differing institutional contexts are evident with regard to the most common epistemological cues addressed by respondents within respective institutional groupings. In the course of the CSID's rating process, it identified the most common primary "cues" addressed by all interviewees. These cues were notated according to participants' various emphases and perspectives in their statements about epistemological-developmental issues. The CSID's listing of all primary cues, along with notations of the most commonly cited cues among the sample in this study, is presented in Appendix 8. In light of the CSID's general report of commonly cited cues, the researcher discerned the most common cues among participants within the three institutional context groups included in this study. Most commonly cited among Bible college students was the Position 3 cue regarding students' articulation of learning as a function of the relationship between teacher and student. Most commonly cited among liberal arts university participants was the Position 4 cue regarding students' focused prioritization on ways of thinking, or *how* to think. Most commonly cited among secular university students was the Position 4 cue regarding the prioritization of independent thinking and freedom of expression. Interestingly, while this was the most recurring cue among secular university students, it was virtually never cited among participants from the two other sample groupings. In sum, these notable variations of primary cues cited by students from differing institutional contexts–and the consistency of cues cited within sample groupings–confirm some specific differentiations in the nature of epistemological development according to varying environmental conditions.

Among pre-ministry undergraduates included in this study who were five years or less removed from high school, liberal arts university students reflected a distinguishably higher collective position rating than the two other groupings. As

mentioned, the respective means of positions and transitions of participants from Bible colleges and liberal arts universities were positionally equivalent, while the positional mean among secular university participants reflected an earlier position–within the Position 3-4 transition, but at a point very near Position 3. Recognizing the likely significant factor of age as noted above, however, the researcher assessed the collective positioning of the sample groupings by excluding those students who were more than five years removed from high school. With this filter in place, the calculated average of scores for the Bible college grouping was reduced to 3.214–closest in proximity to the secular university grouping average of scores (3.135), and reflecting distinguishably lower position than that which was represented by the average of scores among liberal arts participants (3.534). This implication is further supported by the fact that the liberal arts grouping included the most participants who received Position 4-dominant ratings (five).

Research Question 2 Implications

The structured organization of epistemological priorities and competencies that was presented and applied in this research provided an analytical framework that yielded findings which accurately reflected and corresponded with the positional ratings given by the CSID. Prior to receiving the positional ratings from the CSID, the researcher undertook his own independent content analysis in which he designed a three-category evaluative framework, including ten sub-categorical epistemological priorities and competencies. The scope and structure of the framework is presented in Figure 4. This framework was devised by the researcher according to his own synthesis of epistemic values and priorities which emerged from the primary biblical-theological and theoretical sources presented in the precedent literature. Evaluation of the research interview data according to the researcher's structured framework of epistemological priorities and competencies yielded findings that were consistent *overall* with the findings of RQ 1 regarding the variations of levels of epistemological positioning within the sample

population. That is, higher positional ratings among participants coincided with more instances of priorities addressed by participants. Participants whose position ratings reflected a point of transition between Position 2 and 3 addressed an average of one sub-categorical priority, while above-average rated participants addressed more than five priorities on average. Figure 16 illustrates the average number of priorities that were addressed according to positional groupings. Also, a listing of all instances of sub-categorical priorities that were addressed according to each participant is included in Table A2 in Appendix 10.

Among pre-ministry undergraduates, a relationship may exist between epistemological maturity and one's understanding and practical application of the relationship between faith and rationality. Participants who provided statements that reflected the first category of epistemological priorities and competencies were primarily Position 4 dominant. More specifically though, the second sub-categorical priority–a clear articulation of the relationship between faith and rationality–was addressed by only six participants. Two participants from each sample grouping provided expressions consistent with this priority. Most notable with regard to the trend of epistemological maturation, however, was the observation that each of these six students received above-average positional ratings. Thus, all but one above-average rated interviewee across the entire sample expressed a clear articulation that reflected a conceptual understanding and practical application of the relationship between personal faith and rationality.

Among pre-ministry undergraduates, preferences for higher levels of cognitive functioning according to Bloom's Taxonomy are generally indicative of higher epistemological positionings within the range of the sample population. Within the second category of epistemological priorities and competencies, the first sub-category for evaluation was "a preference for higher-level forms of thinking according to Bloom's Taxonomy." In particular, the researcher sought to identify expressions by interviewees that reflected the cognitive modes identified as "Analyze," "Evaluate," or "Create."

Findings yielded evidence of higher-level preferences in the cases of fourteen participants, eleven of whom received Position 4-dominant ratings or higher. Furthermore, each above-average rated participant within all sample groupings evidenced a preference for one or more higher-level modes of thinking. Notably, all three participants who exhibited these higher-level modes but did not received Position 4-dominant ratings were secular university students. This finding may be explained due to the confrontational nature of the secular university environment for evangelical students.

Among pre-ministry undergraduates, a relationship likely exists between epistemological maturity and a student's possession of a reflective criteria for assessing beliefs and values. The researcher's third sub-categorical priority for evaluating the nature of participants' epistemological perspectives and maturity was "a reflective criteria of assessing one's own beliefs and values, as well as divergent beliefs and values." Only four individuals provided expressions that were attributed to this priority. Among these, three students received above-average scores, and the other student received a Position 4-dominant rating. Also, each of the highest-rated participants from every institutional context group were included in this sub-category.

One of the most common epistemological priorities possessed by pre-ministry undergraduates involves being actively engaged in the educational environment. The only sub-categorical priority to be reflected in the responses of more than half of all interviewees was "a preference for active involvement in the teaching and learning process." Expressions reflecting this priority were attributed to multiple participants from each sample grouping, and distributions of position scores among included participants ranged across all rating levels. Thus, a specific relationship between this study's findings of epistemological positioning and inclusion in this sub-category could not be suggested. The priority of active engagement in one's educational community, however, is undoubtedly a positive attribute with regard to undergraduates' epistemological development.

For a majority of pre-ministry undergraduates, relational connections define the most significant aspect of the college experience. The most prominent common theme that voluntarily emerged among participants in this study was the primacy of relationships as the most consequential element of their overall college experiences. Nearly three-fourths of responses to the question, "What most stands out to you about your college experience?," were predicated on the primacy of relationships. This included clear majorities in each institutional context group, as illustrated in Figure 17. Within this broad similarity, however, distinctions were presented among sample groupings. The definitive relational-connection cited by most Bible college students was the relationship between student and their professor(s). Liberal arts university students provided examples of multiple types of essential relationships, including relationships with professors, mentors, peers, church, campus life connections, and dating relationships. Among secular university students who cited the defining impact of relationships, *every* response centered on the nature of belonging and developing in authentic Christian community within the secular university environment.

The most formational single relationship most commonly addressed by pre-ministry undergraduates is the relationship with a personal mentor. All but four respondents confirmed that they had the benefit of a personal mentoring relationship during college. In most of these cases, the mentoring relationship represented the single most formative relational connection maintained by students with regard to their personal discipleship, holistic growth, and vocational preparation. At least half of all pre-ministry students in each sample grouping reported that their mentors were pastors or ministry leaders.

One of the most distinguishing elements of differentiation regarding participants' college experiences according to institutional affiliation is the nature of the teacher-student relationship. Overall, Bible college and liberal arts university students reported having relationships with one or more of their teachers that were personal,

substantive, and dynamic. By contrast, no secular university students reported having a significant personal relationship with their professors. Among Bible college and liberal arts university students, teachers were often referenced as either pastoral influences or personal friends, and sometimes in both respects.

Clear distinctions among students from differing institutional types are evident with regard to how students perceive the primary purpose of college. The researcher discerned three categories of perspectives that corresponded to participants' attendance at their respective types of schools. Students who attended confessional Christian liberal arts universities, by a proportion of 70% of respondents, expressed that the primary purpose of college is to shape one's identity as a person, holistically–to establish a mature, authentic *lifestyle* and manner of thinking. According to 70% of participants within the Bible college grouping, the primary purpose of college is to gain knowledge that is *applicable*, in order to prepare for one's vocation. Within the secular university grouping, 70% of respondents expressed that the primary purpose of college is to "grow up" or mature in personal (self-identity) and practical (self-responsibility) ways; to increasingly exhibit a sense of personal responsibility regarding education and life. Interestingly, no Bible college or liberal arts university students made any expression related to this priority.

For pre-ministry undergraduates across all sample groupings, a common epistemically-relevant refrain regarding the overall impact of college is "finding out how much I did not know." Such was the most common voluntary sub-theme (regarding the impact of college) that was directly relatable to participants' epistemological attitudes and development. This expression was identified in more than one-third of all research interviews, including five liberal arts university students, four Bible college students, and two secular university students. While a correlation between this expression and overall epistemological maturity could not be suggested based on the data acquired in this study, it was observed that a most students who provided statements that reflected this

perspective received positional ratings in the higher ranges of the sample population–Position 4-dominant or higher. In addition, these expressions often provided prime examples of Perry's concept of "metathought," or the ability to think about thinking.

Pre-ministry undergraduates attending Bible colleges and liberal arts universities commonly perceive and refer to their respective educational environments as "a bubble." Nearly half of all Bible college and liberal arts university students included in this study voluntarily used this term in the course of the research interview when discussing the nature of their institutional context. Most of these students recognized that the relatively monolithic composition of their respective campus populations facilitated a less-than-ideal lack of exposure to "real-world" cultural contexts–including interaction with non-Christians. Notwithstanding this limitation, however, no Bible college or liberal arts university students expressed serious regret or a lack of overall satisfaction with regard to their respective collegiate environments. Neither, it should be noted, did any secular university students express regret or a lack of overall satisfaction with regard to *their* collegiate environments.

Research Question 3 Implications

The social-academic conditions that are inherent in college environments are significant and impactful for pre-ministry undergraduates, but differentiations in such conditions represented in varying institutional types do not necessarily influence epistemological positioning. Among the many distinctive environmental traits inherent in varying institutional contexts, three were addressed specifically in this study: personal confrontation and interaction with non-biblical worldviews, experience of interfaith dialogue within the academic community, and exposure to interdisciplinary studies. No significant differences or trends regarding epistemological positioning was observed among participants from differing institutional types according to these conditions. This research did, however, uncover some distinctive contextual realities and perspectives

directly related to students' collegiate environment, particularly with respect to students' encounters with challenges to their personal beliefs and values, and students' interaction with ideological diversity.

Common outcomes resulting from pre-ministry undergraduates' immersion in secular college environments include solidification of one's biblical worldview via confrontations with oppositional beliefs and values, and development of a missional perspective via interactions with ideological diversity. 100% of secular university students experienced interactions within their educational environments that directly challenged and conflicted with their core, fundamental beliefs. By contrast, no Bible college or liberal arts university students reported such interactions. Also, without exception, every secular university student reported that his or her primary interaction with ideological diversity involved engaging people within the college environment who held oppositional worldviews. Most secular university students reported that the challenges they experienced with regard to their core, fundamental beliefs provided them with unique opportunities to mature in their own processes of biblical worldview formation and application. More specifically, numerous students described the connection between their personal interactions with oppositional worldviews and cultural norms during college, and the emergence of a missional perspective according to which they began to view their ministry calling.

Research Applications

This study explored the variance of epistemological development in pre-ministry undergraduates according to institutional affiliation. In the course of applying the research design, findings were yielded that addressed the epistemological positioning of participants within their respective sample groupings. In addition, findings revealed numerous observations pertaining to the influence of various environmental conditions– inherent within the cultures of Bible colleges, liberal arts universities, and secular

universities–on pre-ministry students' respective patterns of maturation. In consideration of the above implications that were drawn from this research, four broad applications are apparent.

This research directly applies to current or forthcoming college students who have made commitments to pursue vocational ministry. This study offers a unique aggregate of perspectives–delivered by the first-person viewpoints of thirty pre-ministry undergraduates from multiple schools across differing contexts–regarding the nature of distinctive collegiate environments as it is related to the experiences of evangelical students in general, and pre-ministry students in particular. Students may utilize this research as a tool for introspection, evaluation of their own current college experiences, and diagnosis of their own trends of maturation. Considering the implications presented above regarding the environmental distinctions between contexts, current or forthcoming pre-ministry students may gain an awareness of ways in which they should seek to capitalize on the opportunities provided within their own contexts, as well as ways in which they may seek to expand their personal growth and preparedness for ministry by engaging outside contexts. For example, pre-ministry students in secular college environments may intentionally seek opportunities and methods by which to enrich their knowledge, understanding, and application of biblical presuppositions and key theological concepts and issues–*while also* taking advantage of the extraordinary organic opportunities for personal-relational interaction and missional engagement with non-Christians.

In the same way that this research applies to current or forthcoming pre-ministry undergraduates, it also applies to those who advise them and mentor them. Thus, parents, mentors, local church pastors and ministry leaders, campus-based ministry directors, and any others entrusted with influence in the lives of future vocational ministers may utilize this research to inform the wisdom of their counsel.

This research also applies to college teachers, administrators, and student

service professionals at higher educational institutions that train future ministers. Teachers may utilize this research to evaluate their effectiveness in facilitating students' intellectual development and overall maturity, as well as their relational connections with students. Such was clearly demonstrated in this study to be key element of pre-ministry undergraduates' college experiences. Student service professionals and administrators at evangelical colleges may utilize this research to review their diagnostic methods of evaluating students' Christian formation, as well as to inform their priorities and practices with regard to encouraging students' personal maturation. Also for higher education personnel, this research may be utilized as an evaluative tool with regard to the formational efficacy of the institution's curriculum design and implementation.

Finally, this research applies to seminary faculty and administrators at institutions that receive graduates from varying collegiate environmental backgrounds. This study provides significant insights regarding the variation of epistemic positions and attitudinal perspectives on the part of current and incoming seminarians according to their respective, divergent collegiate experiences–academically, socially, and culturally. Particularly, these insights may be used to inform seminaries' methods and processes of assimilating and advising prospective and incoming students, as well as new and current students.

Research Limitations

In addition to the limits of generalization addressed in chapter 3, the findings and conclusions presented in this research study should be considered in light of the followed limitations:

1. While this study enlisted participants representing numerous institutions within two of the three sample groupings, no conclusive observations may be adduced regarding the positional or attitudinal variations of epistemological development among pre-ministry attendees of different schools *within* institutional context groups.

2. This study provides evidence of numerous developmental trends among pre-ministry undergraduates across differing institutional types. The sample population included in this study only provides a reflection of the particular students and respective

institutions that were included in this research. This study does not, therefore, reflect *all* pre-ministry undergraduates–especially considering this study's small sample size, localized geographical representation of included institutions and participants, and the non-inclusion of some institutional contexts with which some pre-ministry students are affiliated (e.g., non-confessional Christian liberal arts colleges or universities).

3. Though this study observed consistent positional ratings among participants with respect to the factor of gender, it should be noted that females comprised less than 15% of the sample population. This study does not, therefore, offer any conclusive assessment of the variability of epistemological maturity among pre-ministry undergraduates according to gender.

4. Numerous participants who were included in this study had the experience of attending one or more institutions besides the school from which they graduated (or would soon graduate). This findings of this research do not warrant any analyses or observations regarding the effect of attendance at multiple institutions on personal formation in general, or epistemological development in particular.

5. The conclusions revealed in this research study were warranted primarily on the basis of the content analysis procedures performed by William S. Moore and the researcher. The subjectivity of Moore and (to a greater extent) the researcher may have influenced the reported findings of this study. Additional research could expose the nature and extent of this influence, if it existed.

Further Research

This study represents the first known major research endeavor that addressed epistemological maturity among pre-ministry undergraduates. In light of the findings, conclusions, and limitations associated with this research, numerous recommendations for further enquiry into the area of pre-ministry undergraduate development are apparent. These include opportunities for major research studies, as well as minor supplemental research inquiries. The following list includes possible avenues of research that may serve to deepen, extend, or augment this research study. Specific elements that distinguish these prospective studies from this research are indicated with italicized text.

1. Using a similar design and method as exemplified in this research, three separate studies may be undertaken to explore the variance of epistemological development among pre-ministry undergraduates at multiple institutions *within* the institutional types addressed in this research. Numerous particular variables could be assessed within contexts, such as geographical region, denominational affiliation, size of undergraduate population, and teacher-student ratio.

2. Using a similar design and method as exemplified in this research, a study may be undertaken to explore the comparative differentiations regarding personal formation and epistemological development among pre-ministry students attending confessional

Christian liberal arts universities and those attending *non-confessional* Christian liberal arts universities.

3. Using a similar design and method as exemplified in this research, a study may be undertaken to perform a *cross-section analysis* in which pre-ministry students representing each *academic year* (freshman–senior) are grouped within institutional contexts. This type of study would specifically explore the process of maturation as it occurs *during* the college experience, and may identify the point(s) at which the most decisive changes occur regarding evangelical students' personal formation and epistemological development.

4. Using a similar design and method as exemplified in this research, a study may be performed in which interviews are conducted with *current vocational ministers* who graduated from different types of institutions, in which they reflect on the impact of their college experience as it relates to their preparation and effectiveness in undertaking the ministerial vocation. This study may be designed to distinguish sample groupings within institutional contexts according to longevity of ministry experience (e.g., less than five years, 6-10 years, 11-20 years, more than twenty years).

5. Using a similar design and method as exemplified in this research, a *longitudinal study* may be undertaken–similar to Perry's original study at Harvard and Radcliffe and Baxter Magolda's study at the University of Miami (Ohio)–in which one or more cohorts of pre-ministry students from differing institutional contexts are interviewed at regular intervals throughout their college careers.

6. A study may be designed to assess the *impact of mentoring* on pre-ministry undergraduates' epistemological maturity.

7. A study may be designed to assess the *impact of personal relationships between teachers and students* on pre-ministry undergraduates' epistemological maturity.

8. A study may be designed to explore the *relationship between relative levels of deference to authority* within the academic environment and pre-ministry undergraduates' epistemological development.

9. A study may be designed to explore the *impact of experience in multiple institutional contexts* on pre-ministry undergraduates' epistemological maturity.

10. A study may be designed to explore the *impact of seminary education* on epistemological development. This study could engage in a comparative analysis of ministers of similar ages and ministerial experience, grouped according to whether or not they attended seminary.

11. A study may be designed to explore of the *relationship between pre-ministry undergraduates' educational motivations, priorities, and perceived benefits* and epistemological maturity.

12. Extending from the structured analytical framework of epistemological priorities and competencies introduced in this research, a study may be undertaken in order to *develop a biblically-based alternative to Perry's scheme of epistemological development* which may be put forth for testing and utilization in empirical research studies that engage evangelical sample populations.

13. Extending from the procedures and findings of this research study, and according to a biblically-based scheme of epistemological maturity (suggested), a study could be undertaken to *refine and test a standardized interview protocol for evangelical respondents*. This instrument could be designed to be conducive to assessing differing environmental variables such as those addressed in this research, such as the nature of encounters and interactions with ideological diversity and exposure to interdisciplinary studies.

14. Extending from the findings of this research study, a biblically-based scheme of epistemological development (suggested), and findings from studies utilizing a standardized interview protocol for evangelical respondents (suggested), a study could be undertaken to *design and test an essay-based instrument*, comparable to the CSID's *Measure of Intellectual Development*, which elicits expressions that reveal respondents' epistemological positioning. This instrument could be ideal for empirical studies that engage sample populations larger and more diversified than the sample included this research study.

15. Extending from the findings of this research study, a biblically-based scheme of epistemological development (suggested), and findings from studies utilizing a standardized interview protocol for evangelical respondents (suggested), a study may be undertaken to *design and test a forced-response survey instrument*, comparable to the CSID's *Learning Environment Preferences*, which elicits responses that identify participants' epistemological positioning. This instrument could be ideal for empirical studies and ongoing evaluations by student services departments at evangelical colleges which engage large sample groups, including large segments of student body populations.

APPENDIX 1

"JOURNEY TOWARD A BIBLICAL BASIS FOR LIFESPAN DEVELOPMENT"

By Timothy Paul Jones[1]

We believe that God created humanity and the human context in such a way that certain orderly patterns of behavior and relationships are present in our world.

We believe that—although all of nature, humanity and earth alike, has been mangled and distorted by the Fall—orderly patterns may still be observed in our world, reflecting the original nature of the created order. However, because creation is fallen, the original orderliness of creation is, at times, perverted into patterns of persistent fallenness and sin.

We recognize that the methods and terminology of social-scientific research may be useful in summarizing and describing these patterns.

We humbly confess, however, that—because of the fallenness within us and around us—our capacity to describe the human situation correctly is radically limited; as such, social-scientific methods and terminology can never provide the decisive description of any human behavior or relationship.

We recognize the most appropriate function of social-scientific research as the quantitative or qualitative description of certain observable patterns that characterize God's creation, humanity's fallenness, and humanity's redemption.

We joyfully profess that the sole sufficient and decisive Word not only in the context of Christian formation but also in the context of human development, relationships, and behaviors is found in Jesus Christ, as he is testified to us in Holy Scripture.

We believe that—because the true goal of human development is complete conformity to the character and identity of Jesus Christ—social-scientific research can never be accurately or adequately understood apart from the Word of God, which bears inerrant witness to God's consummate self-revelation in Jesus Christ.

Therefore, social-scientific research—while valuable as a descriptive tool—must never become a determinative focal point of any curriculum; the sole sufficient and determinative foundation by which we understand not only Christian formation but also human development, human relationships, and human behaviors is and must remain the Word of God. It is with Scripture that our understanding of human development begins, and it is by Scripture that our understanding of human development must constantly be tested.

REALITY CAN NEVER BE RIGHTLY INTERPRETED
APART FROM JESUS CHRIST.
JESUS CHRIST is RIGHTLY perceived only through
HOLY SCRIPTURE.

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[1]This unpublished document is included with the author's permission.

APPENDIX 2

DISSERTATION STUDY PARTICIPATION FORM

Instructions[1]:
• In Section 1, read the "Agreement to Participate" statement and confirm your willingness to participate in this study by checking the appropriate box and entering the requested information.
• In Section 2, provide responses to each of the prompts and questions by entering your information in the shaded boxes. Please enter responses for every box, even if "not applicable" is most appropriate. [Note: Since most participants have already graduated from college, most of the prompts and questions below are in past tense. If you have not yet graduated, simply consider the prompts and questions in present (or, in some cases, future) tense.]

[Section 1]

Agreement to Participate
The research in which you are about to participate is designed to explore the impact of the college experience at different types of schools on the personal development of pre-ministry undergraduates. This research is being conducted by John David Trentham for purposes of dissertation research. In this research you will complete the form below and participate in a personal interview by telephone. Any information you provide will be held *strictly confidential*, and at no time will your name be reported, or your name identified with your responses. *Participation in this study is totally voluntary and you are free to withdraw from the study at any time*.

By your completion of this form and the subsequent personal interview, and by checking the appropriate box below and entering the requested information, you are giving informed consent for the use of your responses in this research.

___ I agree to participate
___ I do not agree to participate

Name:
E-mail:
Date:

[Section 2]

Preferred name:

[1]The version of this form that was completed by participants was an electronic document with fillable fields for each prompt and question.

Year of birth:

Gender:

Name and location of the college from which you graduated:

Did you attend another college or university other than the school you graduated from? ___ If so, please give the name the school(s) and the year(s) attended:

Month/year of graduation:

Degree(s) awarded (e.g., BA/BS, major(s), minor(s)):

Do you plan to attend seminary (even if not immediately after graduation)?

At which church did you maintain active membership or involvement during college (name and location)?

What are some particular areas of ministry or service in which you were personally involved at your home church during college (e.g., youth ministry, social ministries, etc.)?

What other church, para-church or humanitarian ministries (if any) were you involved in during college (e.g., BCM, Campus Crusade, Habitat for Humanity, etc.)?

When did you decide to pursue vocational ministry? (Before or during college? During which year of college?)

APPENDIX 3

STANDARDIZED PERRY INTERVIEW PROTOCOL

1. What is your view of an ideal college education? How, if at all, should a student change as a result of that educational experience?

2. Have you encountered any significant differences in beliefs and values in your peers in college or other people you've met in your experiences here? What is your reaction to this diversity; how do you account for these differences? How do you go about evaluating the conflicting views or beliefs you encounter? How, if at all, do you interact with people who have views different from your own?

[Note: The focus here is on the process of evaluating and/or interacting, not on specific beliefs or reactions per se]

3. Facing an uncertain situation in which you don't have as much information as you'd like and/or the information is not clearcut, how do you go about making a decision about what you believe? Is your decision in that situation the right decision? Why or why not? If so, how do you know?

[Note: Try to get the student to describe the process of coming to a judgment in that kind of situation, which in many cases will involve generating a concrete example of some personal relevance but not too emotionally-charged–preferably an academic-related context, related if possible to their major field.]

4. How would you define "knowledge"? How is knowledge related to what we discussed earlier in terms of a college education? What is the relationship between knowledge and your idea of truth? What are the standards you use for evaluating the truth of your beliefs or values? Do your personal beliefs/values apply to other people–in other words, are you willing to apply your standards to their behavior? Why or why not?

Possible follow-up probes in each area:

1. How have you arrived at this particular view of these issues? Can you remember a time when you didn't think this way and recall how your view changed over time?
2. To what extent do you think the view you have expressed is a logical and coherent perspective you've defined for yourself? What, if any, alternative perspectives have you considered?
3. How likely is it that your view will change in the future? If you think it's likely to change, what kind of experiences or situations might produce such change?

APPENDIX 4

ALTERNATE PERRY INTERVIEW PROTOCOL

(This protocol is particularly useful for probing for post-position 5 reasoning.)

1. Looking Backward (College Learning Experience)

We're interested in learning how you view your overall educational experience in college. Later I'll ask you some specific questions, but for now, I'd just like you to tell me what seems important to you as you think about it--what stands out to you as you think about your experience here?

Alternatives: What about your college experience has influenced you the most--what stands out in your mind that has really made an impression on you and influenced you? or What overall sense do you make of your educational experience in college?

Probes (request examples, tie together threads of narrative, relate to earlier experiences):

Who has been important to you in your learning? (peers, faculty/administrators, family, others)

How have you changed in the way you approach learning since you've been in college?

How would you describe yourself–in general, and specifically as a learner?

Are there any ways in which you are different than before as a result of your experience in college? [Possible followup: If you could have your way, what kinds of changes in yourself would you have hoped to see as a result of your educational experience in college?]

2. Clarifying Convictions

Does it seem to you that usually there is only one opinion, idea or answer that is really right or true, or do you think there can usually be more than one? Explain.

Follow-up Probes (variable, depending on what seems appropriate with student):

What makes an opinion right? Are all opinions right? Can you say some opinions are better than others? How do you know? In terms of what makes an opinion "right," what role do you think experts and authorities need to play?

Is it important to obtain support for your opinions? What kind of support?

Do you think your outlook on this diversity of opinions has changed in recent years? What/who led to this change?

It seems that with all the various ways of looking at things and all of the different opinions that exist, there's a very confusing variety of choices to make. Do you have any strong convictions to help guide you in these choices? Could you describe an example? [If necessary, define "conviction" as a point of view that one develops about an issue or subject over time, not an unexamined belief one has grown up with or inherited from one's parents or upbringing]

Follow-up Probes:

How did you come to hold this point of view? Can you describe how your thinking developed? What alternatives did you consider in this process, and why did you discard them?

Do you feel or have you ever felt that you would like to convince others of your ideas?

What do you think when others have strong convictions and try to convince you?

If someone attacks your belief [about opinions], how do you defend yourself?

Optional questions:

React to each of these statements, describing how and to what extent they apply to you:

"I never take anything someone says for granted. I just tend to see the contrary. I like to play the devil's advocate, arguing the opposite of what someone is saying, thinking of exceptions, or thinking of a different train of logic."

"When I have an idea about something, and it differs from the way another person is thinking about it, I'll usually try to look at it from that person's point of view, see how they could say that, why they think that they are right, why it makes sense to them."

3. Looking Forward (Goals for future and career)

What are your educational or career goals at this point? How have your educational or career goals changed since you started--for instance, do you have any goals now that you didn't have before, or do some you started with seem less worthwhile or realistic?

In what ways has the college specifically contributed to the achievement of your goals up to this point?

How do you think your experiences or accomplishments in college will connect or relate to what you do after college?

*In each question set, explore for:

Synthesis/integration–pulling threads of narrative together

Connection-making–between ideas, between discipline and personal experience, etc.

Self-reflection–e.g., understanding of self-as-learner, as person considering career choices, etc.

Meta-thinking–analysis of own thinking over time (i.e., how it's changed/evolved)

APPENDIX 5

TRENTHAM INTERVIEW PROTOCOL

Questions regarding overall development through the college experience (RQs 1, 2)
Thinking back through your college experience overall (to this point), what would you say most stands out to you?

How would you compare yourself as a college freshman with yourself now? (Probes: ...with regard to knowledge? learning? convictions? personal maturity? personal faith? relationships?, etc. Also: Do you feel like you've "grown up" as a result of being in college? How so?)

In what ways, if any, has your college experience prepared you for life after college? (Probes: How has your specific major prepared you for the future?)

Have you had someone who has been a personal mentor to you during college (e.g., a teacher, advisor, older adult, or minister)? (If yes…) What was the impact or benefit of that relationship for you? (Probe: Do you think those types of relationships are important for college students?)

Questions regarding perspectives on knowledge and learning (RQ2)
What is your view of an ideal college education? How, if at all, should a student change through the college experience?

What is your idea of a great college course? (Probes: What do you gain from it? What is the role of the teacher? What is the role of the students? What type of assignments are most beneficial?)

- Related (if necessary): What do you most value about the education you received in college? (Probes: What do you *least* value? What would you change if you could?)
- Related (if necessary): Did you get to know many of your professors through college? How would you describe your relationship with the teacher(s) you got to know best? (Probe: What would you say are the top attributes of the best college teachers? What sort of relationship would you most like to have with your professors in seminary?)

Why do you feel it's necessary for you to go to seminary? (Probes: How did/will you choose the school? What's your purpose in obtaining a seminary degree? What do you hope to gain?)

Questions regarding the impact of encounters with diversity (RQ3)
Through college (in your classes, especially), did you encounter ideas which challenged your (Christian) beliefs and values? How did you (and how *do* you now) react to that sort of challenge? Is this something you value, looking back? Why? (Probes: Do you feel these types of challenging encounters are important? How so? How do you go about evaluating diverse and conflicting views when you encounter them?)

Through college, did you commonly interact with people who held different faiths or worldviews than your own? Did this sort of interaction occur in your classes? What impact did these types of interactions have on you, personally?

In your coursework, were you exposed to multiple disciplines of study (sciences, social sciences, humanities, etc.)? Do you feel this was a benefit to you, personally, and also in preparation for the future? How so?

Questions regarding personal commitment (RQs 1, 2)
When you face a situation where you have to make a decision about an uncertain or difficult issue, and you don't have as much information as you'd like or the information is not clearcut, how do you go about making a decision about what to believe or choose?

- Related (if necessary): How do you go about arriving at your own positions on core issues and secondary issues, especially when it's hard or impossible to find definitive answers? (Probe: How do you decide on important-but-debatable issues when there are multiple opinions that seem equally valid (e.g., in matters of theology, practices in the church, etc.?))
- Probe here about the relation of "proof" to personal knowledge/beliefs/faith.

Thinking about your Christian faith...were there times through college that you felt like you needed to "examine what you believe"? (Probes: Even core beliefs? What prompted that? Was this ultimately a positive or negative experience for you?)

Tell me about your "calling to ministry." (Probes: How did you make the decision to commit to vocational ministry? Did you ever consider a different career path? Were there times through college when you questioned or doubted your decision or your ministerial calling in general? How did you deal with that? Do you think about your commitment to ministry differently now than you did at first?)

Final question
To wrap this up, I've asked you questions about several different experiences and issues...but is there anything I haven't asked you about that you would say has been really significant or life changing through your time as a college student?

APPENDIX 6

WILLIAM S. MOORE AND THE CENTER FOR THE STUDY OF INTELLECTUAL DEVELOPMENT

Dr. William S. Moore

Areas of Expertise:
- Teaching/learning issues[1]
- Assessment of student learning
- Intellectual development
- Educational reform/policy issues
- Faculty/professional development
- Institutional effectiveness

Recent Work History:
- Policy Associate, Assessment, Teaching and Learning, *Washington State Board for Community and Technical Colleges*, Olympia, WA, 1990-present.
- Coordinator, *Center for the Study of Intellectual Development*, Olympia, WA, 1982-present.
- Visiting Professor, *University of Georgia*, Athens, GA, 1988-1989.
- Student Development Educator, *Longwood College*, Farmville, VA, 1983-1988.
- Coordinator, Career Planning Course, Career Development Center, *University of Maryland*, College Park, MD, 1981-1983.

Education:
- Ph.D. (December 1987) in College Student Personnel Administration (Emphasis: student development)
  - -University of Maryland
  - -Major Advisor: Dr. L. Lee Knefelkamp
  - -Topic: "The Learning Environment Preferences: Establishing Preliminary Reliability and Validity for an Objective Measure of the Perry Scheme."
- M.A. (August 1976) in Counseling Psychology
  - -University of Texas at Austin
  - -Master's Report Topic: "Effects of Career Counseling on Locus of Control and Vocational Maturity"
- B.A., Special Honors (May 1973)
  - -Plan II Honors program (concentrations in English and psychology)

Research/Publications
- (2006). "The Washington Transition Mathematics Project: Building Consensus and Capacity by Supporting Standards & Teachers." *Curriculum in Context*, journal of the Washington State Association for Supervision and Curriculum Development.

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[1]This information is taken from William S. Moore's curriculum vita, provided to the researcher by Moore.

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Center for the Study of Intellectual Development

The Center for Applications of Developmental Instruction (CADI) was established by L. Lee Knefelkamp and William S. Moore in 1982 at the University of Maryland as an informal organization for education, research, and services related to the Perry Scheme of Intellectual and Ethical Development.[2] In June, 1988, the Center merged with the Perry Network, previously operated by the Institute for the Study of Education in Mathematics (ISEM) in St. Paul, Minnesota, and was renamed the Center for the Study of Intellectual Development (CSID) to reflect more accurately its broad mission in facilitating quality research on the Perry scheme.

The Center's primary focus has been on the assessment of the Perry Scheme. Assessment approaches available from the Center cover a range of existing formats in developmental instrumentation: a structured interview, a recognition-style preference task–the Learning Environment Preferences (LEP), and a production-style essay–the Measure of Intellectual Development (MID). Each approach has particular uses and its own strengths and weaknesses, depending on the nature of the research/assessment being conducted. The instruments are complementary and can thus be used simultaneously if appropriate for a given project. MID essays have been used extensively in assessing student learning and evaluating educational experiences at a wide variety of institutions--community colleges to research universities--all over the country, and to a limited extent internationally (primarily England and Australia). The MID has proven to be a particularly useful general indicator of the learning goals reflected in collaborative learning environments, and has been used widely in evaluating learning communities nationally.

The CSID has facilitated many research projects using all three forms of instrumentation. Recent major projects utilizing structured interviews have been undertaken with the following institutions: Pennsylvania State University, Colorado School of Mines, Western Washington University, The Evergreen State College, University of the Pacific, and Cerritos College.

[2] This background and historical information was provided to the researcher by the CSID.

APPENDIX 7

CSID INTERVIEW SCORING PROCEDURE
AND REPORTING EXPLANATION

Interpreting MID Ratings

The **MID**[1] is scored by raters who have trained extensively in the general Perry scheme and the specific rating process developed over the years by Knefelkamp (1978) and CSID (Knefelkamp et al, 1982). Because the instrument is designed to assess the part of the Perry scheme that we believe to be primarily cognitive/intellectual in focus, **MID** ratings range along a theoretical continuum from position one through position five. In practice, position one perspectives are not found (it was a hypothetical and conceptual extension of the model even in the original study), and thus the actual **MID** ratings will range from positions two through five.

The Rating System

Individual ratings on the **MID** are represented by a 3-digit number which reflects the dominant and (if necessary) the subdominant position/s rated in the essay. This system extends the Perry scheme continuum from 4 steps--that is, positions 2, 3, 4, and 5--to 10 steps: 222, 223, 233, 333, 334, 344, 444, 445, 455, & 555. Solid ratings (like 333) reflect a "stable position" perspective; the two steps between each stable position indicate transitional essays. As examples, 223 represents "dominant position 2 opening to position 3," while 233 indicates "dominant position 3 with trailing position 2." The ratings thus reflect an assessment of the cognitive complexity displayed by the essay with respect to classroom learning along a linear, simple stage model continuum (see Rest, 1979, Judging Moral Issues, for a thorough discussion of simple vs. complex cognitive stage model assumptions).

Data Reporting

For reporting purposes, the MID ratings can be treated in either (or both) of two ways, as categorical data or as continuous data. Some statistical purists--often found on doctoral dissertation committees--insist that a measurement scale like the MID can only be treated as categorical data. Other experts, however, including respected psychometricians like Jum Nunnally (Psychometric Theory, McGraw-Hill, 1967), argue that such a strict interpretation is too rigid and not meaningful in practical terms for psychological scales. (For a more in-depth discussion of this topic, see the MID instrument manual.) Depending on the purpose and the audience of the research, the scores can be effectively used either way, and often are reported both ways for comparison purposes.

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[1]"*MID*" refers to the *Measure of Intellectual Development*, a research instrument that obtains data from participants using essay prompts. The CSID's scoring procedure and method of classifying participants' epistemological positions according to the Perry Scheme is essentially identical for data collected using the Perry interview protocol and data collected using the *MID*. The information presented here includes relevant portions of a document that was provided to the researcher by the CSID.

1) Grouping categories:

222 & 222(3) = Position 2
223 & 233 = Transition 2/3
333 & 333(4) = Position 3
334 & 344 = Transition 3/4
444 & 444(5) = Position 4
445 & 455 = Transition 4/5
555 = Position 5

Report the frequencies and percentages of students in each of the categories. These figures can then be converted to a histogram if desired, and in a longitudinal project, "profile shifts" to the right on this kind of chart indicates upward movement. For a good example of this kind of analysis, see Kirk Thompson's 1990 paper, available from the Perry Network, on Evergreen State College data.

2) Continuous data:

Convert the rating scores to numbers as follows:

222 & 222(3) = 2.0
223 = 2.33
233 = 2.67
333 & 333(4) = 3.0
334 = 3.33
344 = 3.67
444 & 444(5) = 4.0
445 = 4.33
455 = 4.67
555 = 5.0

Once the ratings are converted to these numerical scores, they can then be manipulated statistically however you choose (mean, standard deviation, etc.)

*"Glimpse" ratings (e.g., 333(4); see the rating notes on the following page for more details) can be treated numerically as a separate sub-stage. In the case of 333(4), for instance, it could be scored as a "3.17" (half of 1/3 a position, in effect). Conceptually, I would argue that these essays <u>are</u> different from 333 essays and the latter approach is preferable; practically, unless your sample has a lot of these ratings, it probably doesn't make much difference.

*In general, traditionally-aged students enter college in the position 2-position 3 transition and exit college 4 (or so!) years later in the position 3-position 4 transition. There is a modest but statistically significant effect by classification and by age, with the former seeming to be a stronger factor (with a great deal depending on the nature of the curricular interventions and learning experiences occurring in those intervening years). There seems to be no consistent difference by gender. Demographic data on ethnicity has been collected inconsistently over the years, and has become increasingly problematic in terms of data quality and interpretation, so at the present no comparative data are provided for that dimension.

<u>Rating Summary Sheet Notes</u>

Below is a general overview of the kinds of "rater shorthand" notes and comments you might see on the summary sheet of your data.

* **BP**: "Ball Park" rating; there is insufficient data, or insufficiently clear data, for us to provide a full research rating with confidence--but enough for us to approximate, or "ballpark," a rating. People use such ratings in different ways; with formal research (and an adequate sample!), you might want to exclude them from the analysis. For most informal research purposes, however, it is reasonable to include BP ratings. In converting these ratings to continuous data, treat them as a half-stage; a "BP 2/3," for example, would convert to a "2.5" score.

* **Glimpse**: rater's notation that accompanies ratings like 333(4). Such a rating indicates that while the essay is seen as reflecting stable position 3, there is a hint, or "glimpse," of the next

position (in this example, position 4) that is noted but not given sufficient weight to warrant a +1/3 position increment. We believe these essays are distinct from 334 or 333 essays, but you may prefer to simply consider them as 333 essays. You may also see 222(3) or 444(5), but these are less common.

* **Unr**: Unrateable; we do not think the data sample is adequate to provide any kind of rating. The reasons vary; sometimes students don't write the essay, sometimes they are simply too brief, and sometimes they either don't take the task seriously or they tangent in ways which make rating impossible. The percentage of Unrateables in samples is usually only 1-5% at most.

* **Flooded**: there seems to be a strong emotional tone taken in the essay--usually in glowing positive terms (a professor, most often, who obviously had a powerful personal influence on the person), but sometimes harsh and negative as well. Such emotional "flooding" tends to obscure the cognitive rating, so we note its occurrence as a possible caution in reviewing the rating. Flooding does not make the data automatically unrateable, but it can make the essay rate as less complex than it might otherwise be.

* **Early**: essentially the same notion as "Glimpse," but on the "other side" of the position; that is, a 333 (Early) means that the essay is seen as borderline between a 233 rating and a full 333 rating. As with the “glimpse” notation, this reference is mainly useful for our rating and criteria research, and we do believe this is a distinct set of essays—but it’s probably preferable to include them as 333 essays rather than a separate category.

* **2/4** or **3/5** : indicates that one or both of the raters noted this essay is an example of a rating split problem--a problematic essay that can be interpreted, for example, in the case of a **"2/4"** split, as being on either the position 2 or position 4 side of position 3. Conceptually, these splits result from the fact that there are close parallels between positions 2 and 4 and between positions 3 and 5 in the Perry scheme; practically, they give raters headaches! These essays are noted to allow us to go back to do closer analyses on these essays to help refine our rating criteria and decisions.

* **Q** : simply means that we think the essay in question is quotable, unusual, or for some other reason worth noting. You can use these signs to pull out the best essays for writing a section on the richness of the essay data or for presenting quotes to faculty; we use them primarily for rater training efforts and our ongoing rating criteria refinements.

* **+** or **-** : found beside individual ratings (as opposed to the final reconciled ratings), these signs are simply a rater's indication that s/he sees an argument for more than one rating: the one noted and the next 1/3 position step above (+) or below (-) it. These notes help facilitate the reconciliation process, but should be ignored when computing inter-rater agreement percentages.

APPENDIX 8

PRIMARY CUES CITED AMONG SAMPLE

MEASURE OF INTELLECTUAL DEVELOPMENT **SAMPLE SUMMARY**
PRIMARY CUES CITED

SOURCE: John David Trentham *DATE COLLECTED*: fall 2012 *Essay Form*: interviews

CUES FOR POSITION 2	**CUES FOR POSITION 3**
_x_ focus on facts/content—What to learn ___ learning as information exchange _x_"Teacher (Authority) is all" (T-centered) ___ emphasis on 1-to-1 relationship with teacher ___ peers noted primarily as "friends in class," "fun" ___ rule structures _x_ focus on teacher providing structure/clarity for learning ___ simple comfort in classroom/physical environment ___ emphasis on clearcut/straightforward grading ("no tricks") _x_ use of absolutes and/or dichotomies in language ___ simplistic; focus on "fun," little on learning ___ Other cues and/or Quotes:	_x_ concern w/ process/methods—How to learn ___ opening to multiplicity (multiple perspectives) _x_ focus on practicality/relevance _x_ learning a function of teacher/student relationships _x_ student responsibility = working hard and/or learning skills ___ discussion endorsed (peers provide diversity of opinions) ___"safe" and/or relaxed atmosphere ___ quantity/qualifiers; lots of details _x_ focus on challenge/ hard work = good grades ___ emphasis on evaluation issues (especially fairness) ___ listing (simple, unelaborated); multiples w/ little connection ___ Other cues and/or Quotes:
CUES FOR POSITION 4	**CUES FOR POSITION 5**
_x_ focus on ways of thinking—How to think _x_ concern w/ independent thinking, freedom of expression ___"anything goes" perspective ("Do Your Own Thing") _x_"New Truth" rules (absolutes within multiplicity) ___ teacher a facilitator/guide (source of way/s to think) ___ peers noted as sources of learning (but unelaborated) _x_ student more active, taking more responsibility for learning _x_ increased self-processing, ownership of ideas ___ endorses loosely-structured format ___ rejects grading and/or memorizing ("regurgitation") ___ comfort w/ multiplicity, connections across disciplines ___ Other cues and/or Quotes:	___ focus on qualitative evidence—How to judge in context _x_ reflection on own thinking ("meta-thought") ___ understanding of different frames of reference ___ greater tentativeness, openness in language ___ teacher as learning partner, source of expertise ___ peers seen as full partners in learning process _x_ strong sense of self-as-agent in own learning ___ emphasis on synthesis of ideas and themes ___ endorses seminar, argument, discussion of ideas ___ acknowledges role of critique/evaluation in learning _x_ appreciation for other perspectives (empathy) ___ Other cues and/or Quotes:
GENERAL COMMENTS: • Tried to focus ratings largely on issues related classroom learning and college education even though text highlighted and in some cases cited as cues drawn from across the interviews • Perspectives about faith and religious belief at times incongruous with epistemological perspectives, reflecting perhaps a compartmentalization of beliefs that at least some respondents seemed to struggle with	

Center for the Study of Intellectual Development
Form rev. 6/99

Figure A1. CSID categorization of primary cues

APPENDIX 9

SCORED POSITIONS AND RATER NOTES

Table A1. Scored positions and rating notes

Bible College [age]	**Position**	**Description**	**Numerical**	**Position**	**Rater notes**
JUSTIN	233-	dominant 3 with trailing 2	2.67	2–3	
CHRIS	333-	stable 3	3	3	(early)
JOSEPH	333 (4)	stable 3	3	3	glimpse 4
ASHLEY	334	dominant 3 opening to 4	3.33	3–4	
AMANDA	334	dominant 3 opening to 4	3.33	3–4	
ROBERT	334+	dominant 3 opening to 4	3.33	3–4	
NICHOLAS	344	dominant 4 with trailing 3	3.67	3–4	
AARON [25]	444-	stable 4	4	4	
ANTHONY [24]	444+	stable 4	4	4	
DAVID [25]	445	dominant 4 opening to 5	4.33	4–5	
	MODE: 334	**Average:**	**3.466**	MEAN: 3-4	
Christian Lib. Arts	**Position**	**Description**	**Numerical**	**Position**	**Rater notes**
KEVIN	233-	dominant 3 with trailing 2	2.67	2–3	
JACOB	233	dominant 3 with trailing 2	2.67	2–3	
SARAH	334	dominant 3 opening to 4	3.33	3–4	
TYLER	334	dominant 3 opening to 4	3.33	3–4	2/4 split
THOMAS	334	dominant 3 opening to 4	3.33	3–4	
BRANDON	344	dominant 4 with trailing 3	3.67	3–4	
STEVEN	344	dominant 4 with trailing 3	3.67	3–4	
ALEX	344	dominant 4 with trailing 3	3.67	3–4	
WILLIAM	444	stable 4	4	4	
ERIC	555+	stable 5	5	5	some indicators of fairly clear understanding of Commitment, so likely to be a 6/7, but insufficient data to assign a full rating
	MODE: 334, 344	**Average:**	**3.534**	MEAN: 3-4	
Secular Univ.	**Position**	**Description**	**Numerical**	**Position**	**Rater notes**
MARK	233-	dominant 3 with trailing 2	2.67	2–3	
TIMOTHY	233-	dominant 3 with trailing 2	2.67	2–3	2/4 split
ADAM	233	dominant 3 with trailing 2	2.67	2–3	some indications of 2/4 split
BEN	233	dominant 3 with trailing 2	2.67	2–3	2/4 split
SEAN	233	dominant 3 with trailing 2	2.67	2–3	2/4 split; some elements of New Truth, but not clear how open to multiplicity respondent is
LAUREN	333 (4)	stable 3	3	3	glimpse 4
CODY	334	dominant 3 opening to 4	3.33	3–4	
PATRICK	344	dominant 4 with trailing 3	3.67	3–4	New Truth, 2/4 split
RICHARD	444 (5)	stable 4	4	4	glimpse 5
JEFFREY	444 (5)	stable 4	4	4	glimpse 5
	MODE: 233	**Average:**	**3.135**	MEAN: 3	
		Average of all scores:	**3.378**		

APPENDIX 10

CATEGORIES OF EPISTEMOLOGICAL PRIORITIES AND COMPETENCIES ADDRESSED

Table A2. Epistemological priorities and competencies addressed according to participant

Bible College [age]	**Categories addressed**	**Perry Position Rating**
JUSTIN	1a, 2b, 3c	233-
CHRIS	3c	333-
JOSEPH	3b	333(4)
ASHLEY	3b, 3c	334
AMANDA	1a, 3c	334
ROBERT	3a, 3c	334+
NICHOLAS	1a, 2a, 3b, 3c	344
AARON [25]	2a, 3b, 3c	444-
ANTHONY [24]	1a, 1b, 2a, 2b, 2d, 3b, 3c	444+
DAVID [25]	1a, 1b, 2a, 2c, 3b, 3c	445
Christian Lib Arts	**Occurences**	**Perry Position Rating**
KEVIN	none	233-
JACOB	3b	233
SARAH	3b, 3c	334
TYLER	3b	334
THOMAS	3c	334
BRANDON	2c, 2d, 3a, 3d	344
STEVEN	2a, 3b, 3c	344
ALEX	2a, 2b, 3a	344
WILLIAM	1a, 1b, 2a, 2d, 3c, 3d	444
ERIC	1a, 1b, 2a, 2c, 3a, 3d	555+
Secular Univ	**Occurences**	**Perry Position Rating**
MARK	3b, 3c	233-
TIMOTHY	none	233-
ADAM	3c	233
BEN	2a, 3c, 3d	233
SEAN	none	233
LAUREN	2a, 3a	333 (4)
CODY	2a, 3c, 3d	334
PATRICK	2a, 3b, 3c	344
RICHARD	1a, 1b, 2a, 2c, 3b	444
JEFFREY	1a, 1b, 2a, 2b, 3b, 3c	444

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ABSTRACT

EPISTEMOLOGICAL DEVELOPMENT IN
PRE-MINISTRY UNDERGRADUATES:
A CROSS-INSTITUTIONAL APPLICATION
OF THE PERRY SCHEME

John David Trentham, Ph.D.
The Southern Baptist Theological Seminary, 2012
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The intent of this study was to explore the variance of epistemological development in pre-ministry undergraduates across different institutional contexts, using the Perry Scheme as a theoretical lens. Semi-structured interviews were employed in order to elicit information from participants that revealed their personal perspectives regarding their approaches to acquiring, maintaining, and implementing knowledge. Students from three institutional contexts were included in this study: secular university, confessional Christian liberal arts university, and Bible college.

A review of the precedent literature for this research presented foundational biblical-theological and theoretical sources that defined and elucidated the context of this study. The biblical-theological analysis first identified the nature of human knowledge and development within the context of the redemptive-historical metanarrative. Then, two prominent biblical themes that relate specifically to epistemological development were treated: the knowledge of God and biblical wisdom. A thorough review of the Perry Scheme was then provided, including theoretical and philosophical underpinnings, the model itself, and major extensions and elaborations of Perry's model. A final section introduced the "principle of inverse consistency" as a paradigm for interacting with Perry and other developmental theories, from a biblical worldview.

The qualitative research design consisted of five steps. First, the researcher

contacted and enlisted students and obtained a Dissertation Study Participation Form from each participant. Second, a customized interview protocol was designed according to the Perry Interview Protocol, in conjunction with the Center for the Study of Intellectual Development (CSID). Third, a pilot study was undertaken. Fourth, one interview was conducted with each participant, and the interviews were transcribed and submitted to the CSID for scoring. Fifth, in addition to the scoring analysis performed by the CSID, the researcher designed and implemented an independent content analysis procedure, including a structured analytical framework of epistemological priorities and competencies. Finally, the scored data and content analysis results were evaluated together, and interpreted by the researcher to yield findings and implications.

Overall, this research observed that epistemological positioning was generally consistent among pre-ministry students from differing institutional contexts. The CSID's stated majority rating for typical college graduates was reflected in each sample grouping–a point of transition between Positions 3 and 4, defined in the Perry Scheme as mid to late "Multiplicity." By certain measures, however, scores among context groups were distinguishable. For example, average scores for secular university students reflected a point very near, but slightly above Position 3, while average ratings among Bible college and liberal arts university students reflected a point essentially midway between Positions 3 and 4. Also, when a filter was applied that eliminated the results of the oldest and youngest sample participants, the liberal arts university grouping reflected a distinguishably higher epistemological position than other groupings.

Evaluation of the research interview data according to the researcher's structured framework of epistemological priorities and competencies yielded findings that were consistent overall with the variations of levels of epistemological positioning as reported by the CSID. In addition, numerous prominent themes emerged from analysis of interviewees' articulations that were identified as bearing relevance to participants' epistemological maturation. Finally, the impact of effects of differing social-academic

cultures on pre-ministry undergraduates' epistemological perspectives and maturation were examined. Evaluation of these themes and environmental conditions served to highlight numerous conformities as well as significant distinctions among pre-ministry students from differing institutional contexts.

KEYWORDS: Bible college, biblical wisdom, biblical worldview, Center for the Study of Intellectual Development (CSID), Christian formation, Christian liberal arts, cognitive development, college student development, comprehensive-internal (COMPIN), contextual relativism, critical thinking, decentering, dualism, educational psychology, epistemological development, epistemological maturity, faith and rationality, higher education, institutional context, institutional type, intellectual development, inverse consistency, metathought, multiplicity, Perry Scheme, Perry Scheme of Intellectual and Ethical Development, personalism, pre-ministry, pre-ministry undergraduates, progressive sanctification, recursive development, reflective judgment, Reformed Epistemology, secular university, undergraduate development, vital-external (VITEX), vocational ministry, William G. Perry, Jr.

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