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# Veracity Claims Assessment by Christian College Students

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# Acknowledgements

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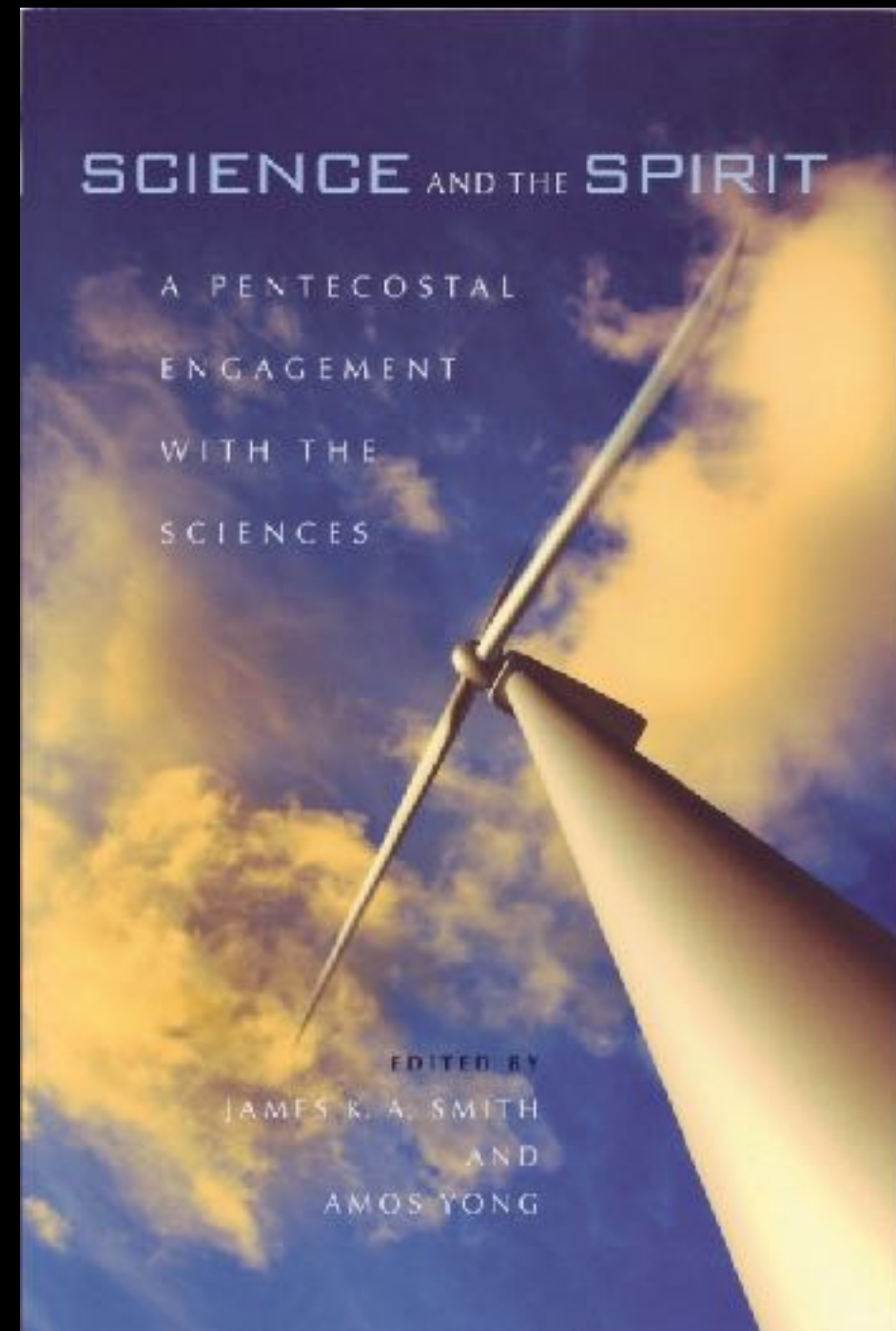
# Acknowledgements

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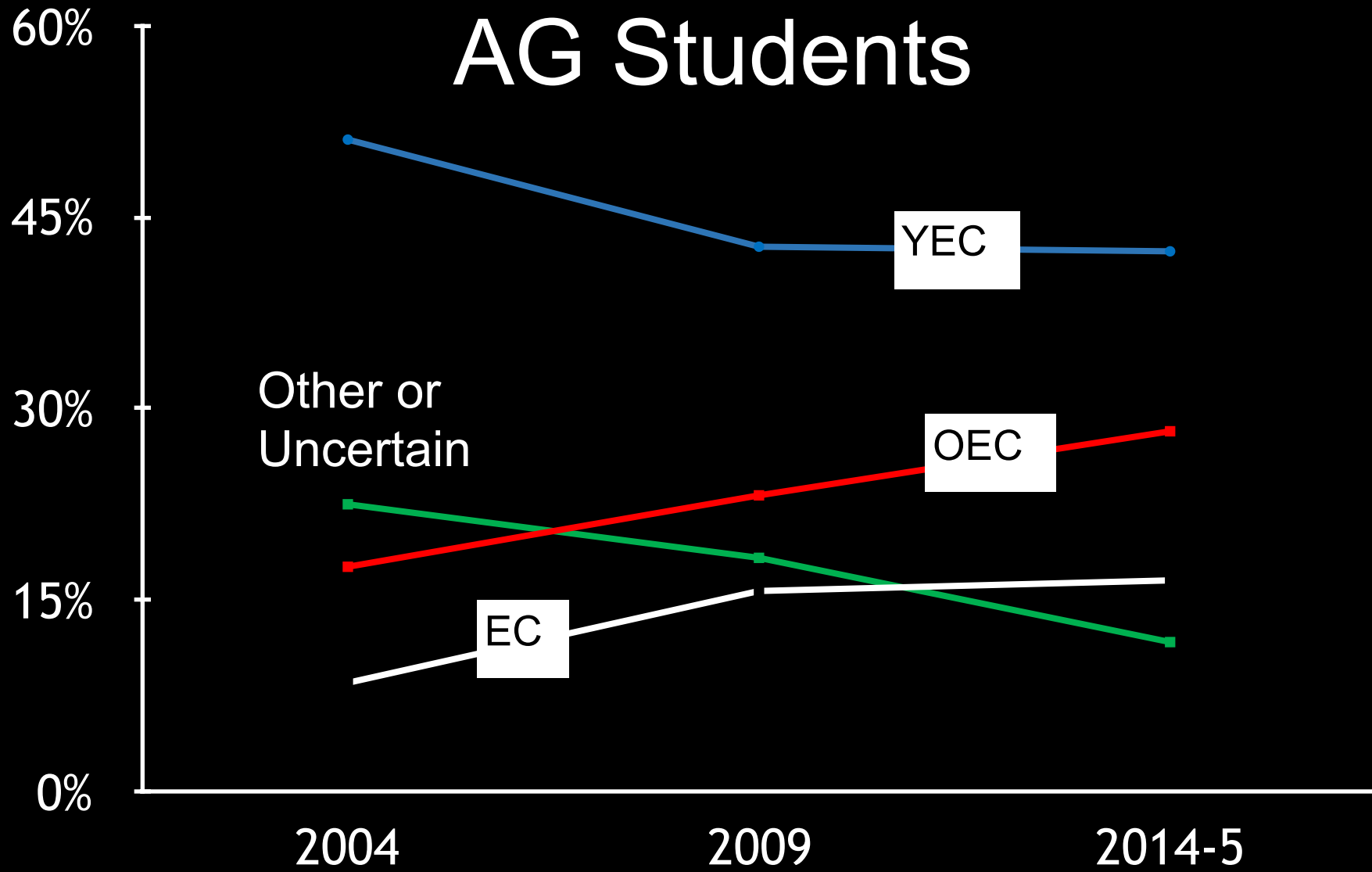


# Background

- How to train students to think critically?
- Origins as a foil.
- Developed instrument to evaluate positions on origins (2010).



# AG Students



# Science Theology Paradigm Scale

- September 2015 PSCF.
- People use different S/T relational approaches.
- But, how do they arrive at a favored approach?
- To examine this, we are developing:
  - Epistemology instrument.
  - Biblical hermeneutics instrument.
  - Methods of science instrument.



Michael Tomczak

## Article

### A New Survey Instrument and Its Findings for Relating Science and Theology

Michael Tomczak, David D. Dundrich, and Matthew Sanford



David Dundrich

We report on the development and application of a survey instrument that examines the patterns of thought used by individuals attempting to relate theology and science. Survey responses of 1,403 people from five populations of science professors, theologians, other educators, students, and church members were collected. We suggest a methodical conceptual framework and terminology in various science and theology relational approaches used by a broad spectrum of academic, education, practice, and student and discuss ways that the survey can be used to promote integrative practices. Research theoretical concerns and empirical analysis are provided to serve Complementarists, Conflict: Science over Theology, Conflict: Theology over Science, Complementarists, and Concordance to describe how people relate theology and science. Overall, the favored approach of all groups we studied was Complementarism. Three groups with strong religious commitment also used Concordance to a great extent. In some populations, a large number of people did not use any science-theology terminology to describe theology and science propositions. Young adults made up the preponderance of Conflict: Theology over Science and Complementarists. Older individuals and religiously neutralists related mostly as Complementarists. We end the article with some recommendations to advance the integration of science and theology.



Matthew Sanford

Can theology and science be integrated in a meaningful way? Scholars have written much about biblical interpretation and methods of science, but too often, too little has been given to the practical integration of the two. This is a challenging undertaking because the interpretation of God's world (scientific method) and God's Word (biblical interpretation) often require different tools and approaches. Consequently, education and research in science-theology paradigms are difficult to achieve, and their practical applications may be even more problematic.

We agree with Alister McGrath when he wrote, "It is increasingly clear that relating Creation faith to the natural sciences is one of the most pressing academic tasks of our day."<sup>1</sup> But if who are involved in the study of relating theology

and science share McGrath's expertise as both a scientist and a theologian, can the prevailing pattern of lay persons' perceptions, expectations, and science in ways that do not do damage to valid scientific and theological methods and procedures? Or, is the venture hopelessly complicated and frustrating because of differing ideologies and scientific presuppositions? Is meaningful integration and application of science and theology practical? We think yes, but it requires theologians to move to knowledgeable of basic scientific principles and scientists to develop their skill in theology, and both groups need to put more attention to the excellent contributions of philosophers to this discussion.

In this article, we present evidence that many scientists, educators, theologians, students, and church attendees make significant effort at such integration.

# STPS Scale Findings

- U.S. scientists (2003 n=312) and Baylor students (2014 n=471) mostly used **Complementarism**.
- AG and other Protestant educators, pastors, and students (2011, 2014, 2015 n=511) favored **Complementarism** and **Concordism**.
- 46.5% of scientists (2003) **did not use any** relational approach.

# Origins Views with Relating Science and Theology

- **YEC**: Complementarism and Conflict: Theology over Science.
- **OEC** and **EC**: Complementarism followed by Concordism.



# Purpose of the *Deciding Truth Scale*

- To determine how people evaluate truth claims.
- Particularly related to theology and science.

# Theories of Truth

- **Correspondence**: A proposition is true if and only if the real world is as the proposition says it is.
- **Coherence**: The veracity of a knowledge claim is affirmed when it fits other beliefs that are known to be true.

Kirkham, R. L. 1992. *Theories of Truth: A Critical Introduction*. Vol. 55. MIT Press.

# Theories of Truth

- **Pragmatic** (two components):
  - **Consensus**: The veracity of a statement should be accepted when it is endorsed unanimously by everyone competent to judge it.
  - **Instrumentalist**. Truth is inferred to a knowledge claim that in the long run will benefit those who believe in it.

Kirkham, R. L. 1992. *Theories of Truth: A Critical Introduction*. Vol. 55. MIT Press.

# Theories of Truth

- **Semantic**: The grammatical structure of a sentence affects its truth-value.
- **Performance**: Performance rather than a statement determine truth.
- **Redundancy**: Stating a proposition is true is superfluous; the statement's existence infers its veracity.


Kirkham, R. L. 1992. *Theories of Truth: A Critical Introduction*. Vol. 55. MIT Press.

# Theories of Truth

- **Appraisal**: Conflates “Truth” and “Good.”
- **Truth-as-justification**: Belief should result when doubts have been removed.

Kirkham, R. L. 1992. *Theories of Truth: A Critical Introduction*. Vol. 55. MIT Press.

# College Student Epistemological Development: William G. Perry

- 
1. **Dualism**: dichotomies and dualisms like right versus wrong, black and white.
  2. **Multiplicity**: acknowledging legitimate uncertainty, diversity, and multiple solutions.
  3. **Contextual Relativism**:
    - World is essentially relativistic and contextual.
    - Few absolutes.
    - Beliefs must be translated into action.
  4. **Commitment within Relativism**:
    - Combine personal experience with outside evidences.
    - Acceptance of some uncertainty.

# Epistemological Development: Jean Piaget

1. **Sensorimotor**: infancy.
2. **Pre-Operational**: toddler, early childhood.
3. **Concrete Operational**: elementary and early adolescence.
4. **Formal Operational**: adolescence and adulthood.

# Egocentric Thinking

- Use of self-centered psychological criteria to determine what is true and false.
- Predominates in the Pre-Operational stage.
- Diminishes during Concrete Operational stage.
- Shows a **resurgence** in in the early Formal Operational stages (adolescence and young adult).



# Egocentric Truth Tests

- **Innate Egocentrism:** What they believe is true even though they may have never questioned the basis for this conclusion.
- **Innate Sociocentrism:** Accepting the dominant beliefs of a group to which the person is associated.

Paul, Richard, and Linda Elder. 2001. *The Miniature Guide to Critical Thinking: Concepts & Tools*. Foundation Critical Thinking.

# Egocentric Truth Tests

- **Innate Wish Fulfillment:** Belief in elements that support other beliefs that:
  - do not require any significant change in thinking,
  - do not require admission of error.
- **Innate Selfishness:** Beliefs that justify the acquisition of power, money, or other personal advantage even when those beliefs are not grounded in logic or evidence.

Paul, Richard, and Linda Elder. 2001. *The Miniature Guide to Critical Thinking: Concepts & Tools*. Foundation Critical Thinking.

# Critical Thinking

- Identify presuppositions.
- Evaluate truth claim validity and accuracy.
- Consider alternate perspectives.
- Then act accordingly.

Brookfield, Stephen D. 2011. *Teaching for Critical Thinking: Tools and Techniques to Help Students Question Their Assumptions*. John Wiley & Sons.

# *Deciding Truth Scale* Development

- Open-ended survey questions based on a literature review.
- Twenty students were interviewed using these prompts.
- Their responses were collated and formed the basis for survey statements.

# Results

- 313 student respondents.
- 260 useable responses.
- Content validity experts judged item content validity.
- Factor analysis evaluated construct validity.
- Reliability analysis assessed survey reliability.

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Criteria for evaluating truth of a statement.	1 Critical thinking.

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No match.	3 Must match religious beliefs, unwavering, and is accurate.



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Is truth absolute, relative, or some combination of both?	No match.

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No match.	4 Faith is paramount, based on experience, biblically based.
Is truth absolute, relative, or some combination of both?	No match.
Level of resistance to new ideas.	No match.
Ways to handle new information when it contradicts beliefs.	No match.

# Demographic factors that did not affect these truth constructs

- Level of religious commitment.
- Major.
- Class level.

# Percentages of respondents utilizing each factor (n=260)

Factors	Percent using this approach (agreement with 80+% of factor statements)
1 Critical thinking.	77.8

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1 Critical thinking.	77.8
2 Important speaker characteristics.	72.8

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Factors	Percent using this approach (agreement with 80+% of factor statements)
1 Critical thinking.	77.8
2 Important speaker characteristics.	72.8
3 Must match religious beliefs, unwavering, and is accurate.	66.7



# Percentages of respondents utilizing each factor (n=260)

Factors	Percent using this approach (agreement with 80+% of factor statements)
1 Critical thinking.	77.8
2 Important speaker characteristics.	72.8
3 Must match religious beliefs, unwavering, and is accurate.	66.7
4 Faith is paramount, based on experience, biblically based.	62.5

# Agreement with Correspondence and Coherence

Truth statement	Percent Strongly Agree or Agree
Truth is something that is accurate.	79.2

# Agreement with Correspondence and Coherence

<b>Truth statement</b>	<b>Percent Strongly Agree or Agree</b>
Truth is something that is accurate.	79.2
I compare new information to what I know to be true.	93.1

# Conclusions

- Deciding Truth Scale instrument is valid and reliable.
- Christian college students use critical thinking approaches to evaluate truth claims.
- They favor speaker characteristics that underscore his/her credibility.

# Conclusions

- Truth claims must align with currently held religious beliefs.
- Beliefs are not readily abandoned.
- Beliefs must appear to be accurate.
- Faith is **paramount**, **experiential**, and **biblically based**.

# Next Steps

- Develop recommendations for teachers.
- Help students to abandon egocentric approaches while embracing critical thinking approaches for veracity assessment.

END