

SCIENCE, TECHNOLOGY, AND FAITH—THE NOVEMBER 1998 SURVEY

The Presbyterian Panel consists of three nationally-representative samples of groups affiliated with the Presbyterian Church (U.S.A.): members, elders (lay leaders), and ordained ministers (for analysis, split into two groups based on current call: *pastors*, serving in a congregation, and *specialized clergy*, serving elsewhere). New samples are drawn every three years. These pages summarize major findings from the ninth survey completed by the 1997-1999 Panel.

GOD AND THE CREATED ORDER

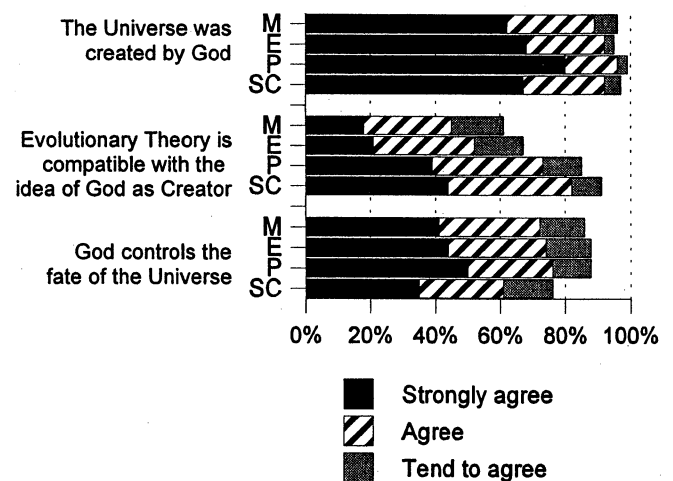
Creation and the Universe

- ✓ Large majorities agree both that “the Universe was created by God” and that “God controls the fate of the Universe” (see Figure 1).
- ✓ Few panelists (15% of members, elders, and pastors, and 25% of specialized clergy) believe that “the world runs pretty much by itself,” but the majority who give God at least some power in the running of the world differ in the amount of control they think God has:
 - around a third think “the world is controlled by God” (range: specialized clergy, 27%; elders, 39%)
 - another fifth think “most of the things that happen are controlled by God”
 - another fifth think about “half of the things that happen are controlled by God”
- ✓ Majorities believe it is possible for “God [to] suspend the laws of the Universe to intervene in human affairs” (59% of members, 62% of elders, 72% of pastors, and 58% of specialized clergy).
- ✓ Majorities of members (63%), elders (61%), and pastors (54%) would seem to oppose any attempts to clone a human being, believing that “humans usurp God’s role as Creator when we try to clone a human being.” Specialized clergy are evenly divided.
- ✓ The belief that humans have a soul, distinct from their biological nature, is widely held. In fact, 93% of members, 94% of elders, 86% of specialized clergy, and 83% of specialized clergy *agree* that “each human being has an eternal soul created by God.” Similarly large percentages *disagree* that “our minds can be understood entirely through . . . science, without reference to a soul.”

Life, Evolution, and God

- ✓ Large majorities (78% or larger) agree that life “is so complex that it has to be the deliberate outcome of an intelligent design.”
- ✓ Most panelists agree that “evolutionary theory is compatible with the idea of God as Creator,” including 61% of members, 67% of elders, 85% of pastors, and 91% of specialized clergy.

Figure 1
Belief in God’s Ultimate Authority



M = Members E = Elders P = Pastors SC = Specialized Clergy

EVALUATING SCIENCE

Science: Good or Bad?

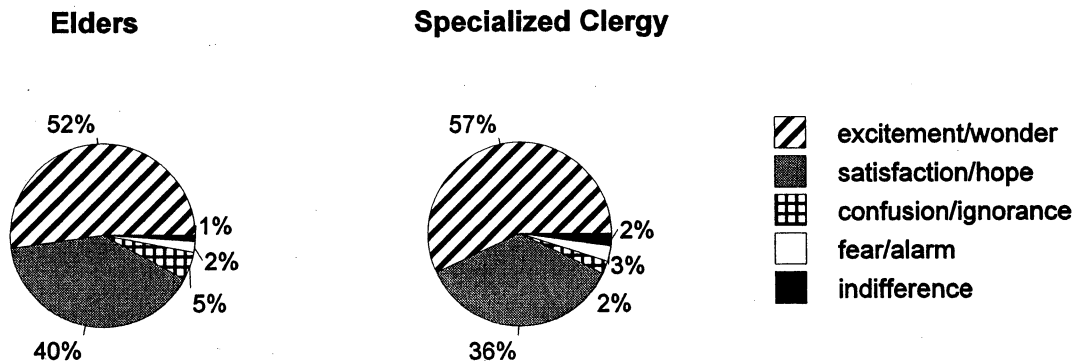
- ✓ Most panelists use terms like *excitement* and *wonder* (members, 50%; pastors, 60%) or *satisfaction* and *hope* (members, 39%; pastors, 35%) to describe their “general reaction to science and technology” (see Figure 2). Very few (members, 3%; pastors, 1%) react with *fear* or *alarm*.
- ✓ A majority of panelists in every sample (specialized clergy the exception, at 46%) “believe that science and technology have changed human life for the better.” Even more (members, 74%; pastors, 79%) believe that “science and technology do more good than harm.”
- ✓ Only a handful of panelists (2% or less in every sample) believe that science and technology “have changed human life for the worse” or that science and technology “do more harm than good.”
- ✓ Majorities, ranging from 66% of elders to 54% of pastors, believe that “science and technology will eventually solve” some, but not most, of the problems that humans face (e.g., pollution, disease, drug abuse, crime). Only a few panelists (members, 3%; pastors, 8%) are complete pessimists on the ability of science to solve any such problems.

- ✓ In every sample, majorities *disagree* or *strongly disagree* that “one of the effects of science is that it breaks down people’s ideas of right and wrong.” Only about one in seven in each sample *agree* or *strongly agree* with this statement.

Regulating Science

- ✓ More panelists want “the degree of control that society has over science and technology” *increased* (members, 28%; pastors, 38%) than *decreased* (members, 6%; pastors, 6%), but even more want it to *remain as it is* (members, 53%; pastors, 47%).
- ✓ When asked, “when science and technology cause problems, who is most at fault?” few panelists (less than 10% in every sample) blame scientists or engineers themselves. Instead, responsibility is directed toward the government (elders, 28%; specialized clergy, 11%), business and industry (elders, 21%; specialized clergy, 39%), and a variety of other groups (elders, 16%; specialized clergy, 20%).
- ✓ More panelists believe that science and technology change things *too fast* (members, 28%; pastors, 37%) than *too slowly* (members, 5%; pastors, 4%), but even more in every sample think the pace of scientifically-generated change is *about right* (members, 54%; pastors, 43%).

Figure 2
General Reactions to Science and Technology



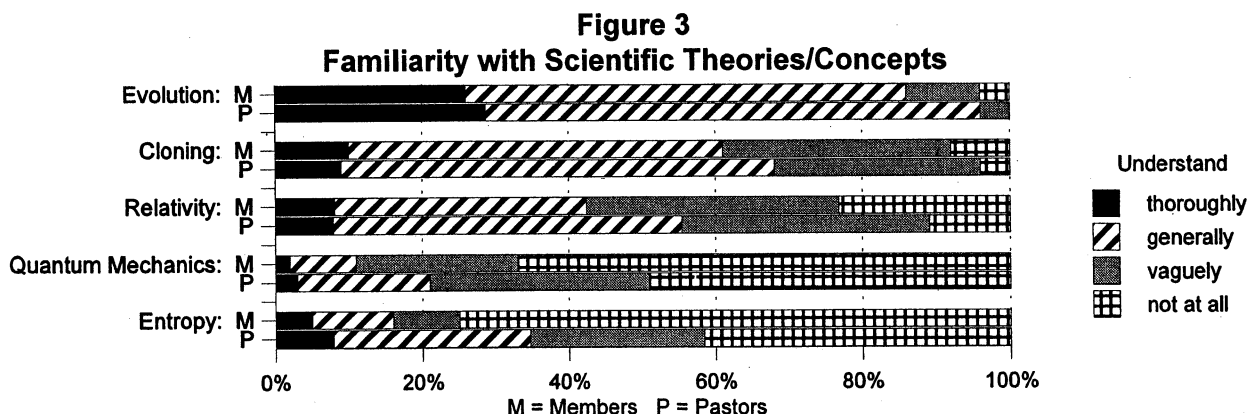
Knowledge of Facts

- ✓ Most panelists give scientifically-correct responses when asked whether certain generalizations were *true* or *false*. Large majorities in all samples correctly indicate that the following statements are *true*:
 - the center of the earth is very hot (96% of elders and 96% of pastors responded *true*)
 - the oxygen we breathe comes from plants (85% and 90%, respectively)
 - it is the father's chromosome [that] decides whether a baby is a boy or a girl (87% and 90%)
 - electrons are smaller than atoms (76% and 88%)
 - the continents on which we live have been moving their location for millions of years and will continue to move in the future (91% and 95%)
 - cigarette smoking causes lung cancer (96% and 96%)
- ✓ ... and large majorities in all samples correctly indicate that the following statements are *false*:
 - all radioactivity is man-made (96% of elders and 97% of pastors responded *false*)
 - lasers work by focusing sound waves (74% and 84%)
 - antibiotics kill viruses as well as bacteria (80% and 84%)
 - the earliest humans lived at the same time as dinosaurs (73% and 80%)
- ✓ Relatively few panelists in any sample (members, 9%; pastors, 28%) estimate the age of the Universe within the scientifically-accepted range of 10-20 billion years. A much more frequent response to this open-ended question is "don't know" or its equivalent (e.g., "no idea," "God only knows").

- ✓ Creationists are fairly scarce among Presbyterians. Only 5% of members, 4% of elders, 3% of pastors, and 2% of specialized clergy estimated the age of the Universe to be 10,000 or fewer years.
- ✓ When asked to define "DNA," only around 10% of members and elders, and 16% of pastors and specialized clergy, respond with a thorough "textbook" definition. Many more in each sample give partially accurate but incomplete responses, including 52% of members, 46% of elders, 50% of pastors, and 48% of specialized clergy.

Knowledge of Theories & Concepts

- ✓ A majority of panelists in every sample are at least *generally* familiar with the following scientific theories and concepts: evolution, natural selection, cloning, and the big bang theory (see Figure 3).
- ✓ Few panelists in any sample, however, report that they *thoroughly understand* any particular scientific theory or concept, including the four just listed. The highest percentages are found for "evolution," understood thoroughly by 26% of members, 26% of elders, 29% of pastors, and 30% of specialized clergy. The related concept of "natural selection" is understood thoroughly by around one in five lay panelists and one in four clerical ones.
- ✓ The *least-known* concept of the 11 listed on the survey is "The Anthropic Principle." Majorities in every sample *have never heard of it*, and about one-half of the rest *have heard of it but don't understand it*. In fact, only 1% of members and elders, 2% of pastors, and 3% of specialized clergy claim to *understand it thoroughly*.



OTHER ISSUES

Comparing Theology and Science

- ✓ In all samples, majorities agree (combined responses of *strongly agree*, *agree*, and *tend to agree*) that:
 - theology and science address fundamentally different types of knowledge
 - theology and science use fundamentally different methods and languages
 - theology and science use similar methods but focus on different objects
 - theology and science influence one another constructively
 - theology and science can be integrated to form a single unified system of understanding
- ✓ . . . and majorities disagree that “theology and science are inevitably in conflict with one another.”
- ✓ In three of four samples, majorities *agree* (specialized clergy the exception, at 49%) that “science provides support for specific theological doctrines.”
- ✓ Majorities of members and elders *agree*, but majorities of pastors and other clergy *disagree*, that:
 - theology and science address fundamentally different realms
 - theology and science have fundamentally different objects of concern

Encounters with Science and Faith

- ✓ Relatively few panelists in any sample—8% of members, 12% of elders, 19% of pastors, and 20% of specialized clergy—report reading any books in the last year on “science and religion.”
- ✓ Almost one-half of pastors indicate that, in the last year, there was at least one sermon, discussion, or presentation at their church on “the effect of science on religious belief” or on “the effect of science on society.”
- ✓ Most panelists agree that “my personal faith in God has been strengthened by some of the discoveries of science,” (i.e., 71% of members, 80% of elders, 87% of specialized clergy, and 91% of pastors).
- ✓ Majorities in all samples agree that “to be a faithful Christian, I need to keep up with recent developments in science and technology,” and that “to be a faithful Christian I need to actively engage in theological discussion and reflection on developments in science and technology.”
- ✓ One in six members and one in five elders have a bachelor’s degree in science, compared to less than one in ten pastors and other clergy.

	Members	Elders	Ordained Ministers*
Number of surveys mailed	1,202	1,243	1,805
Number returned	565	673	1,122
Response rate	47%	55%	62%

* Of the 1,122 returned surveys, 753 were from pastors and 369 were from specialized clergy.

This survey was initially mailed in November 1998, and returns were accepted until mid-January 1999. Results are subject to sampling and other errors. Small differences should be interpreted cautiously. As a general rule, differences of less than 6% between samples are not statistically meaningful.

For more numbers and interpretation of the November 1998 Presbyterian Panel results, a longer report with additional charts and graphs is available for \$5. Contact PDS (call 1-800-524-2612) and order PDS # 65100-98258. Included is a data appendix that presents the percentage responses to each survey question separately for members, elders, pastors, and specialized clergy.

For more information on science and faith, including the Presbyterian Association on Science, Technology, and the Christian Faith, contact Charles A. Wiley, Theology and Worship Office, 502-569-5734.

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