

The attitude of various populations toward teaching Creation and evolution in public schools

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Fifty studies were reviewed that surveyed opinions on teaching origins in public schools. The vast majority found about 90 % of the public desired that both creation and evolution or creation only be taught in the public schools. About 90 % of Americans consider themselves creationists of some form, and about half believe that God created humans in their present form within the past 10,000 years. In America, about 15% of high school teachers teach both evolution and creation, and close to 20 % of high school science teachers and about 10,000 scientists (including more than 4,000 life scientists) reject both macroevolution and theistic evolution. Although the vast majority of Americans desire both creation and evolution taught in school, the evolutionary naturalism worldview dominates, revealing a major disparity between the population and the ruling elite.

Introduction

Humans have, since their beginning, sought to understand how life began. Because the subject of origins deals with events that happened in the past, much

speculation is involved, and the question of origins is an emotional issue intimately connected with personal belief structure. As evolution gained acceptance among scientists in the late 1800s, opposition to teaching it in public schools surfaced, and evolution is still not universally taught in American public schools.¹ Relatively few schools taught evolution, and many colleges did not include the subject in their curriculum, until after the 1930s.² Currently, evolutionary naturalism is the most widely taught view of origins in the West, and for the past half-century, evolutionists have strenuously opposed teaching competing theories of origins in public schools.

Creation-evolution surveys show most Americans are creationists

Scores of polls have now been completed by various organizations to assess both the public's opinions regarding creation and evolution and the advisability of teaching both views in the public schools. The first recent national scientific public opinion poll on teaching origins was completed in 1972 by George Gallup, a respected polling corporation with years of experience perfecting its methods. The poll asked a representative sample of 1,518 adults if they agreed with the statement: *'God created Adam and Eve, which was the start of human life.'* Presumably, this question would separate those who conclude Adam and Eve were distinct creations from those who believe that humans evolved from a 'lower' life form by natural selection acting on mutations.

Of the total sample, 91 % were creationists of some form, and 44 % (25 % of them college graduates) agreed with the statement that *'God created man pretty much in his present form ... within the past 10,000 years.'*³ Fully 81 % of those who labelled themselves Evangelicals believed that humans descended from Adam and Eve, compared with 58 % of the non-Evangelical Protestants (Table 1). The lowest percent of agreement was among Roman Catholics (only 47 % agreed). Gallup found that close to 50 % of the population rejected both atheistic and theistic evolution, at least of humans.

Gallup also found that agreement with creationism was inversely related to both education and age — the more educated and the younger the respondent, the *less* likely they were to believe that God created the first humans. The likely reason is that younger persons are better educated and more influenced by new secular ideas in the society around them. Only 33 % of college graduates agreed with

Table 1. *Percent who agreed with: 'God created Adam and Eve, which was the start of human life' grouped by age, education and religion.*

Comparisons by:

Age	38 % (18–29)	51 % (30–49)	58 % (50 and older)	
Education	33 % (college)	55 % (High School)	66 % (Grade School)	
Religion	50 % (General Public)	81 % (Evangelicals)	47 % (Roman Catholic)	58 % (Protestants)

the creation worldview compared with 66 % of grade school graduates. In a 1993 follow-up, Gallup found 82 % believe in some form of creationism, a drop of 10 %, and fully 47 % believe God created man pretty much in his present form within the past 10,000 years.⁴ A similar 1986 University of Texas study found that fully 60 % of students (N = 1,000) believe that *'Adam and Eve were created by God as the first two people.'*⁵

evolution world view, and 19.1 % of all people surveyed stated they believed that God created the cosmos from 5 to 10 thousand years ago (13.2 % of professionals agreed with this position). Also, 44.5 % with a high school education or less believe the Bible is the *Word of God'* and fully 63.3 % of the college graduates believe the Bible is *'the inspired word of God,'* but only 14.8 % who have graduate or professional degrees agreed with this statement.

Secular humanists' poll finds most Americans are creationists

A more focused poll was completed by Research Associates under the direction of Professor Gerald Goldhabar of the State University of New York in Buffalo. Commissioned by the atheistic organization *Council for Secular Humanism*, the poll found 90.7 % of Americans identified with a specific religion. A large majority (83.8 %) was either Protestant (55.2 %) or Catholic (28.6 %). The sampling frame consisted of 1,512 randomly selected U.S. households, and the sampling error was ± 2.3 % at the 95 % confidence level.⁶ Education was found to be influential only at the extremes, i.e., those with a high school education or less were more likely to believe in *'a personal God who can answer prayer'* (93.9 %), but of respondents with a graduate or professional degree, only 80.2 % agreed. Fully 91.2 % of all people expressed a belief in God, and 6.1 % claim they once did *not* believe in God but do so now.

This humanist survey that was designed to assess evolution beliefs found that the creationist position that rejects evolution is the *most* dominant position on origins in America. Fully 46.4 % disagreed with the statement that *'evolution is the best possible explanation of human existence.'* Education was negatively related to belief in creationism — fully 69.4 % of those with high school education or less did not believe that evolution was the best possible explanation for life, as did 46 % of those with graduate or professional degrees. The majority of all persons sampled (52.7 %) disagreed with the theistic

The Creation center surveys

In 1976 the ICR Midwest Center completed a 'random phone survey' in five states and asked which view of origins they preferred taught in public schools.⁷ The same group also contacted a representative sample in two California school districts and found 89 % (N = 1,346) in Del Norte and 84 % (N = 92,000) in Cupertino preferred that *both* creation and evolution be taught in the public schools. A second ICR Midwest Center sample of 989 persons is broken down in Table 2, survey II.

In summary, the surveys completed consistently show that most Americans support the teaching of Creation in the public schools and only a minority accepts Darwinism. Most people — up to 90 % — hold some form of creationism.

Creation surveys of college students and creationism

One longitudinal study indicates that acceptance of creation may be growing among some college students. A survey of Mormon students at Brigham Young University (BYU) found that in 1935 36 % (N = 1159) of the students agreed with the statement *'Man's creation did not involve biological evolution,'* compared with 81 % (N = 1056) in 1973.⁸ In 1935 5 % compared with 27 % in 1973 agreed with the statement, *The world's creation did not take millions of years.'* Students also claimed they became *more* conservative on religion as

Table 2. Results of several surveys on teaching origins.

I want taught?	Midwestern Survey I %	Midwestern Survey II #	Midwestern Survey II %	Portland Survey Cook 1983 ³⁷ %	New Mexico Santillanes 1996 ³⁸ #	New Mexico Santillanes 1996 ³⁸ %	ABC News ³⁶ Associated Press 1981 %
Creation and Evolution	68	719	72.6	70.0	1214	73	76
Creation Only	16	125	12.6	23.0	160	10	10
Evolution Only	5	53	5.0	6.5	128	19	8
No opinion	11	92	9.0	—	96	8	6
Total Creation	84	844	85.3	93.5	1374	83	86
Total	100	989	100.0	100	1598	100	

Table 3. The question: 'God created humanity pretty much in its present form in the last 10,000 years or so.' (N = 90).

	Agree (%)	Disagree (%)	Not sure (%)
Texas Students	28	42	31
California students	19	59	23
Connecticut students	19	56	25
High School biology teachers	25	64	11

Note: Because of rounding off, not all percentages add up to exactly 100%.

they progressed through BYU. Conversely, Hunsberger found little change in religiousness as students progressed through a secular college.⁹ The type and religious orientation of the college is of major importance in how students develop religiously.

Spencer found that 34 % of his sample of 149 Wichita State University students labelled themselves creationists, 61 % theistic evolutionists, and only 3 % atheistic evolutionists.¹⁰ Fully 47 % believed that the Genesis account of Noah, the Ark, and the Great flood is true, and 72 % believed that the Biblical account of Adam and Eve is true (50 % listed it as *certainly true* and 22 % as *probably true*). Spencer also found much inconsistency in the students' answers, indicating many students have not studied the topic or thought about it extensively. In another survey Fuerst administered a questionnaire to 2,387 students in ten different science courses at Ohio State University, Columbus, Ohio. He concluded that Biology students:

*'showed a surprisingly low level of acceptance for the theory of evolution, and by an 80 % to 20 % rate favoured the concept of equal time for competing theories of origins.'*¹¹

Another survey of nearly 2,400 science students at Ohio State University found 47 % did not believe Darwin's theory and fully 80 % felt that if Darwin's theory of evolution is taught in public schools, other views including special creation should also be taught.¹² Also, 58 % did not believe that teaching creationism in school amounted to teaching religion, and 41 % concluded that Darwinism did not have a valid scientific foundation.

These surveys are a few of those completed, all which find that a large percent of college students also hold to the some form of creationism.¹³⁻¹⁵

Surveys of teachers and scientists

It is usually assumed that although the public favours teaching both theories, teachers favour teaching only evolution. Eve and Harold concluded that surveys consistently indicate that *'about one-fifth to one-third of science teachers actually teach creationism in their classes ...'*¹⁶ Zimmerman found that, although 19.1 %

of Ohio science teachers did *not* believe in evolution, fully 87.7 % taught it in their biology classes.¹⁷ This means almost 20 % of Ohio science teachers were creationists but only 15.25 % taught creationism. A replication of this study by Tatina found evolution was a standard topic in 72.7 % of high school biology courses, creation in 16.3 %, and both evolution and creation were frequently part of introductory biology classes.¹⁸

Surveys of scientists found 5 % believe that *'humans were created in their current form less than 10,000 years ago.'*^{19,20} This means 10,000 of the 213,000 scientists working in academic and basic research were creationists, including 4,200 life scientists. A 1988 survey by *Industrial Chemistry* magazine found of 519 respondents, 23 % rejected the belief that humans evolved from simple chemical elements. Consequently, according to this survey almost 50,000 scientists are old or young-age creationists.

A survey by Bland of degreed biology professors, many with years of teaching experience in accredited Bible colleges, found 81 % (N = 38) taught both creation and evolution and only 17 % (N = 8) taught evolution alone.²¹ Of this sample, 44 % (N = 21) taught theistic evolution, 49 % (N = 23) did not, 74 % (N = 35) used creation as an integrating theme in science, and only 24 % (N = 11) used evolution as an integrating theme.

In another survey, Harold and Eve found that fully 25 % of biology teachers believed that God created humans in their present form about 10,000 years ago.²² They also concluded that students in eastern schools were *most* likely to accept evolution, and those in southern schools *least* likely to accept the theory (Table 3).

Troost found 54 % (173 out of 320) of Indiana secondary school biology teachers believed evolution was theory, not fact, and 43 % (N = 163) that evolution should be presented in public schools as one of several alternative theories of origins.²³ Troost found fully 73 % of the teachers were creationists of some sort (many were theistic evolutionists), and 72 % rated themselves as *'very religious'*. The survey also found that, contrary to Troost's expectations, the religious teachers put as much emphasis on evolution as their non-religious colleagues.

In a survey of 125 teachers (56 Christian school teachers and 69 public school teachers in 31 states), Ramsey found that 93 % of Christian school teachers and 29 % of public teachers used the two-model approach; 92 % of Christian school teachers and 18 % of public teachers believe the Bible creation account over evolution; 98 % of Christian school teachers and 18 % public teachers believe humans were specially created; and 74 % of Christian school teachers compared with 17 % of public teachers believe evolution is atheistic.²⁴

About half of all teachers support teaching creationism.

The major concern of teachers is not *if* creation is taught, but *how* it is taught. One survey involving 23 items mailed in 1988 to each of the 200 high schools in South Dakota found that creationism was presented in a favourable light in 9.5 % of the biology courses, and all but one of the teachers who presented it favourably believe that creationism has a scientific basis.²⁵ While 80.6 % of the teachers indicated that textbooks covered evolution satisfactorily, 51.4% stated they were dissatisfied with the textbook coverage of creationism. Over half (59.6 %) felt that teaching creationism in the classroom did *not* mean teaching religion because creationism could be taught from a non-sectarian standpoint. In a measure of the teacher's knowledge about evolution, Tatina found only 7.1 % chose what the question's author believed was the correct evolution answer. Furthermore he found that,

*'teachers who teach only evolution, as well as those who include a unit on creationism, were all equally likely to answer this question correctly as those who did not teach a unit on evolution.'*²⁶

Fully 34.3 % of the teachers felt that creationism was scientifically valid, and ironically, attitudes on the validity of evolution were *'independent of whether evolution or creationism is taught.'*

A 1994 survey by Overman and Deckard of a large group of science teachers randomly selected from the National Association of Science Teachers membership found that, of 313 usable surveys, fully 39 % disagreed with the statement *'evolution is a scientific fact'* and 5 % agreed that the Genesis account about Adam, Noah and the Tower of Babel are historically true.²⁷ A total of 79 % agreed that an eternal creator supernaturally made the physical universe, and fully 43 % reject macroevolution.

Blank and Andersen surveyed 218 persons in a teacher training program in a large Midwestern university (see Table 4).²⁸ Specifically, four classes (one secondary science methods and four elementary science methods classes) were polled during the 1995-1996 academic year. The students surveyed were *all* in pre-service training programs, and for brevity, are here labelled only secondary and elementary teachers. Hodgson and Hodgson surveyed a total of 1,372 students in 10 life science courses at Central Michigan

Percent of teachers who believe that creation should be taught in public schools.

Percent	Year	Place	Survey
30%	1983	Georgia	Eglin ³⁹
32%	1983	Georgia	Bunkner ⁴⁰
39%	1984	South Dakota	Tatina ⁴¹
44%	1985	Kentucky	Ellis ⁴²
45%	1986	USA	Affannato ⁴³
23%	1997	Ft Wayne, IN	Caylor ⁴⁴

University.

In the Blank and Anderson survey, 21 % of the secondary science teachers and 57 % of the elementary teachers stated they did not believe Darwin's theory of evolution was true. Hodgson and Hodgson found 38 % of students at Central Michigan University, and Fuerst found 33 % of students at Ohio State University, did not accept Darwin's theory of evolution. Blank and Anderson found 88 % of the elementary and 60 % of the secondary science teachers felt that non-Darwin views should be given equal time in class. In the Ohio State University sample, 80 % felt other views besides Darwin's should be given equal time in the classroom, and 81 % of the Central Michigan University sample held this position. Further 71 % of the elementary teachers and 47 % of the secondary science teachers did *not* view creationism as religion. Fully 58 % of the Ohio State University sample and 61 % of the Central Michigan University sample did not view creationism as religion. In addition, 64 % of the elementary and 45 % the secondary science teachers felt that the current textbooks should be changed so that they also present creationism. This compares with 62 % of the Ohio State University sample and 60 % of the Central Michigan University sample.^{29,30}

Blank and Anderson argued that many adults accept creationism partly because a large number of teachers accept this worldview. The authors then discussed the ethics of teacher training programs that deliberately try to change students' beliefs by use of more intensive indoctrination programs. This research shows that a surprisingly high percent of teachers hold the creationist world view, and most surveys find about half believe creationism should be taught in the public schools.

The research shows most Americans are creationists

Some of the terms used in these surveys (e.g. atheistic evolution, theistic evolution, and theistic creation trichotomy) may not have been clear to many respondents. Specifically, some respondents may not have understood the difference between the creationist and theistic evolutionist positions. Ideally, more than three categories should be used, including acceptance of micro- (and macro-) evolution. This research raises the important question: Why does so much opposition exist in the US courts and among scientists to teaching both theories of origins when, according to all extant surveys, the majority of not only parents but also often teachers are in favour of the two-model approach? Also, if most parents and teachers support this approach, why does a single model dominate in public schools?

My surveys found that the majority of students were exposed only to evolutionary naturalism in their biology classes, and when creationism was mentioned it was often ridiculed. Evolution dominates partly because it is the only

Table 4. Summary of three studies into beliefs and academic experience of teachers in training. Data given as %.

	Blank/Andersen ⁴⁵		Hodgson/Hodgson	Fuerst Study
	Elementary	Secondary	Central Michigan University ⁴⁶	Ohio State University ⁴⁷
1. Darwinism is not true	57	21	33	30
2. Non-Darwin/creation views should be taught	88	63	81	80
3. Creation should not be excluded from schools	71	47	60	58
4. Textbooks should teach creationism	64	45	60	62
5. Most scientists don't believe modern theory of evolution?	29	12	21	25
6. Evolution does not have a valid science foundation	54	16	40	41
7. Evolution can lead to decay of society	61	12	24	22
8. Had a course in biology in college	30	89	59	N/A
9. Have taken or are now taking geology in college?	31	63	18	N/A
10. Was taught about evolution in high school	70	67	73	73

position discussed in most textbooks. The reason often given is the belief that separation of Church and State requires a one-sided presentation of evolution, yet fully 72 % of the 578 lawyers that returned a survey believed the First Amendment did *not* prohibit the teaching creationism in US public schools.³¹ In the rare instances where creation is mentioned, it is usually to argue against it. A two-model position is much more effective from both an educational and pedagogical standpoint because teaching by contrasts helps to understanding the source of knowledge and aids in comprehending information.³²

The findings of this study support the contention that young people are less religious than the older generation partly because younger people spend more time in school, and education adversely influences both religious values and creation beliefs. This relationship would be expected considering the fact that textbooks, lectures and the secular school social environment are all often biased against theism and religious values.³³ Secular schools are consequently often successful in demolishing or reducing the strength of students' theistic beliefs. Some argue that intelligence and education cause one to reject creationist beliefs because these factors help one to learn the 'truth' about these topics, a questionable conclusion because schools are admittedly indoctrination institutions. This one-sided indoctrination violates the Supreme Court rulings that argue that the schools must not proselytize for religion, but also must not be antagonistic against theism and religious beliefs. The problem was summarized by Reapsome:

'A college education doesn't do much for one's

*religious faith; in fact, Americans with only a grade school education are more consistently religious in belief and practice than those who have been to college. Those who have completed high school fall somewhere in between. This fact places the churches in a critical bind. For many years, Christians were taunted with charges of ignorance and obscurantism. Faith was said to be for the ignorant and pastors were accused of ducking tough intellectual questions. Church kids by the thousands went off to a college and promptly lost whatever faith they had... The country's religion in the future, perhaps even more than in the past, will be determined to a significant extent by what happens in its colleges and universities.*³⁴

This problem is even true of many denominational colleges, most which are now almost totally secularized. In one study of a Methodist college, Hites found acceptance of religious values *declined* as students progressed through college.³⁵ Unfortunately, a great deal of intolerance exists on this emotional issue which is bound up with a person's basic beliefs about life's purpose and questions of right and wrong. Ideally, each view should be accurately and appropriately presented, and other theories such as exobiology theory should at least be discussed. Investigations on indoctrination by secular universities is warranted, because it is inconsistent for the public to be forced to support an institution which openly proselytizes for a belief structure that contravenes their most cherished values. If the secular schools are to be truly neutral, efforts to remove this anti-religious bias should be expended.

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