# THE EVOLUTION CONTROVERSY USE IT OR LOSE IT EVOLUTION PROJECT/WGBH BOSTON June 15, 2001

### The Evolution Controversy:

To promote *Evolution* successfully, we must understand that:

- This project may engender as much controversy now as it did in Charles Darwin's 19th century England
- Evolution assumes the convergence of science, education, and religion
- Only PBS would present Evolution

### And, we must remember that:

- Our mandate is to educate
- We must be respectful of all audiences and view points
- We must be prepared for what's ahead

# Marketing: Goals:

The marketing goals of the project are to:

- Raise awareness of and visibility for *Evolution*
- Present Evolution in ways that make the topic accessible and relevant
- Use *Evolution* to create an understanding of the importance of evolution
- Create opportunities for audiences to participate in *Evolution* and be part of a national dialogue

# **Target Audiences:**

With Evolution, we are speaking to a broad general audience whose mindset it:

- Info seekers
- Undereducated on evolution
- Have a sense of responsibility to themselves and others

### But also to many niche audiences:

- Parents
- Students
- Educators
- Scientists
- Religious leaders
- Government officials

# Key Evolution Marketing

Third-party Endorsement Campaign:

- Project spokespeople
  - Overall project spokesperson
    - Dr. Jane Goodall
  - Science spokespeople
    - Dr. Ken Miller ( author of "Finding Darwin's God")
    - Dr. Stephen Jay Gould (pre-eminent paleontologist and evolutionary biologist)
  - Education spokesperson
    - Dr. Eugenie Scott (Executive Director of the National Center for Science Education)
  - Religious spokespeople
    - Reverend Dr. Arthur Peacocke (2001 Templeton Prize winner)
    - Reverend Dr. Arnold Isidore Thomas (Vermont Conference of the United Church of Christ)
- National Speaker's Bureau
- Electronic and grass roots media tour
- Op-Eds / bylined articles
- National and regional events

Project Outreach (in areas of science, education, and religion):

- Partnership with top educational and scientific organizations
- Platform *Evolution* at key forums
- Co-opt existing local dialogue about teaching evolution in schools
- Station and community events to promote understanding and participation in the natural world

Evolution National Advertising Campaign:

- Consumer campaign (indexes high with social capitalists)
- Television (cable in 16 markets)
- Print (daily newspapers in 16 markets, TV Guide, People)
- Guerrilla/viral marketing

# **Evolution's Positioning:**

The primary marketing challenge for the *Evolution* project is making the topic relevant and accessible. *Evolution's* internal positioning statement is:

Evolution is smart entertainment that helps me discover how the story of life on Earth affects my own life and future

We have translated this positioning statement into an external, consumer-friendly tagline that will appear on materials associated with the project:

Evolution. . . a journey into where we're from and where we're going

# **Project Messaging**

The public is bombarded with more than 2,500 messages a day and it's our goal to make *Evolution* cut through the clutter. Most people need to hear a message eight times before it hits at all. You need to say it 64 times to truly reach people. All that said, with such a complex project, we must distill the many *Evolution* messages down to just a few and reinforce them at every opportunity. Following are the six most important messages we can convey about the *Evolution* project:

• Evolution is a comprehensive PBS project, not just a television series.

Co-produced by WGBH Boston and Clear Blue Sky Productions (CBSP), the Evolution project is a seven-part, eight-hour television series; a content- and feature-rich Web site; a comprehensive educational outreach program for teachers and students; and a HarperCollins companion book penned by acclaimed science writer, Carl Zimmer. Our goal is to reach as many people as possible, so we've developed exciting, accessible information about evolution in multiple platforms.

This groundbreaking project is a signature PBS project, only public television would take it on. Until now, no one has ever embarked on such a comprehensive project on this controversial subject. PBS takes subjects like evolution and develops support resources that reach various audiences through multiple channels. Supporting the project are PBS, WGBH, NOVA, CBSP, and the world's top filmmakers, scientists, educators, historians, and religious leaders. We hope *Evolution* will reach millions of students, parents, teachers, scientists, religious leaders, community groups, and government leaders in an accessible, compelling way.

See Evolution on PBS on September 24-27, 2001 @ 8:00-10:00 PM (check local listings).

• The goal of Evolution is to create a dialogue and promote participation.

The goal of the Evolution project is to heighten public understanding about what evolution is and how it works, and to dispel common misunderstandings about it. We hope to illuminate why evolution is relevant and important in daily life; to improve its teaching; to encourage a national dialogue on the issues currently surrounding this science; and to prompt participation in all aspects of the project.

Participation can occur in many ways: watching the TV series, logging on the Web site, helping with kids' science homework, getting involved in local school boards, cleaning up your local environment, and countless other activities that further science literacy and our understanding of the natural world.

• Evolution is the foundation of biology and its effects are far-reaching.

The simple mechanism of evolution helps determine who lives, who dies, and who gets the opportunity to pass on their traits to the next generation. Darwin's theory of natural selection, which is supported by 150 years of scientific research, underpins all of modern biological thought and its implications affect our health, our food supply, and the vast web of life around us. Understanding the theory of evolution is more crucial than ever, especially in an age when environmental, biotechnology, health, and genomic issues dominate worldwide headlines.

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Evolution is defined in two ways: first, as simple description - things change over time; second, as the mechanism that governs the progress and processes of life on Earth. With the *Evolution* project, we've explored the key themes inherent in understanding the theory - from the role of mass extinction in the survival of the species to the power of sex to drive evolutionary change. We've looked at the sudden emergence of consciousness, the success of humans, and the perceived conflict between science and religion in understanding human life.

Evolution. . . a journey into where we're from and where we're going (tagline)

- Evolution is in our everyday lives.
  - Evolution affects almost every aspect of human life. From medicine to agriculture to a person's choice of mate, evolution touches our daily lives in extraordinary ways. Having a grounding in evolution is key to our understanding of so many issues around us. In medicine, there's the question of whether the antibiotics we take now to cure ourselves will remain effective as new strains of bacteria become resistant to tried-and-true drug treatments. In agriculture, there's the dilemma of farmers' ravaged crops and lessened yields due to pesticide resistant insects. For all of us, there's the issue of bio-diversity. Currently, we're undergoing a mass extinction in which 50% or more of species on Earth will die out. These are just a few stories of evolution in our daily lives.
- We approach the Evolution project from the perspective of science journalism
  Evolution is a scientific concept, and this is a science series. The Evolution project
  presents facts and the accumulated results of scientific inquiry; which means
  understanding the underlying evidence behind claims of fact and proposed theories, and
  reporting on those areas where the science is sound.

We have enlisted the top minds in all of the sciences to help us present the best scientific understanding of the explanation of life on Earth. In keeping with solid science journalism we examine empirically-testable explanations for "what happened," but don't speak to the ultimate cause of "who done it" - the religious realm.

• Science and religion can coexist.

With this project we address the question of how life develops on Earth from the point of view of science, and not from the spiritual realm. Both realms can coexist side by side, but they speak to entirely different questions: one to the How, the other to the Why? Many key people who have spoken out on evolution, from Dr. Jane Goodall and Dr. Ken Miller to Pope John Paul III and Rev. Dr. Arthur Peacocke are helping us reinforce the idea that science and religion are not mutually exclusive.

Belief in evolution does not challenge religious beliefs. Pope John Paulll has declared that evolution is a time-tested scientific theory that does not contradict the tenets of the Roman Catholic Church. Catholicism, conservative and reform Judaism, and many Protestant denominations such as The United Church of Christ and the Episcopal Church acknowledge that evolution is the description of a mechanism that governs the natural processes of life on Earth. *Evolution* does not claim to say anything about the existence of God, or about people's spiritual beliefs.

# **Top Controversial Questions:**

Following are the top anticipated controversial questions:

- Why was Darwin's idea so dangerous? Darwin's idea was dangerous in 19th century England and still is today. His theory threatened society, his family, his standing in the scientific community, and the prevailing views of the Anglican Church. Why? Because, if extrapolated beyond its role as a scientific theory, it seemed to run counter to the notion of man's supremacy and God's hand in the world order. The same fear exists today: The concept of evolution can seem in direct conflict with deeply-held religious belief systems of how life came about on Earth. Our point of view is that the science of evolution focuses on observing and explaining natural phenomena, not supernatural phenomena. As a science, evolution does not address the issue of religion at all
- Why choose such a controversial subject? The topic was not chosen for the sake of controversy. We understand that it is controversial in part because, if it's misunderstood or misapplied, evolution may suggest that the development of life is accidental, or that human behavior is not affected by moral choices. And the dispute with Creationists about the formation and history of the world also makes it a controversial topic.

We chose it for three major reasons:

- Evolution is one of the most important and least understood of all scientific discoveries.
- Evolution forms the core of our understanding of the nature and development of life on earth, and is relevant to every aspect of our world today.
- No one has ever undertaken a comprehensive broadcast and online effort to present and explain the topic.
- Isn't evolution just a "theory " that has not been proven? In science, a theory is a rigorously tested statement of general principles that explains observable and recorded aspects of the world. As an underlying principle of observed phenomena, it must be tested and verified. In science, a theory is a higher level of understanding that ties "facts" together. A scientific theory stands until proven wrong-it is never proven correct. For example, the Copernican theory explains how planets revolve around the sun; no other evidence has proven otherwise. Similarly, the Darwinian theory of evolution has withstood the test of time and thousands of scientific experiments; nothing has disproved it since Darwin first proposed it, though subsequent work has refined it.
- Are there facts that don't support evolution? All known scientific evidence supports evolution. Charles Darwin rolled the dice when he proposed the idea of natural selection. One hundred and fifty years later there's a mountain of evidence to support his theory. It has withstood the rigors of the process of scientific inquiry, which examines evidence to test a theory. New discoveries over the past 150 years have all supported the validity of the theory of evolution, including radioactive decay, an expanded fossil record, DNA and the process of genetic replication, and the evidence in the human genome. Anyone of these could have called into question the inferences of

evolution. Instead, they all confirmed them. Certainly, there are still evolutionary unknowns, as there are with all comprehensive scientific theories, from the theory of gravity to quantum mechanics.

Still, opponents of evolution contend that evolution has not been proved. For example, they point to gaps in the fossil record as "proof' that transitional forms of species don't exist. Hence, evolution can't account for the development of life on Earth. In the 150 years since Darwin, new evidence has closed key gaps in the fossil record to support his theory . Some examples are: dinosaurs as precursors to birds, (a recent find of dinosaurs with feather-like structures was in the news), and the story of whales as land-dwelling mammals moving back into the ocean, which we profiled in Show 2, "Great Transformations."

• Why would you only present this theory and not the theory of Creationism as well? Science is about something happened, not about whodunnit.

The *Evolution* project reports on the issues of evolution from the perspective of science journalism. By any standard, long-standing definition of science, the theory of evolution is the best, most accurate scientific explanation we have for evidence of the past and present variety and nature of life in the world. The theory of evolution continues to be tested, with newly discovered data that support it.

By any standard definition of science, Creationism is not science. It is part of a religious belief system, and therefore, is not presented in this science series or its initiatives.

- How does the Evolution project handle Creationism? Creationism is presented throughout the project as a part of our efforts to further a public dialogue. We devote an entire episode of the broadcast series to the issue of spiritual faith as it relates to evolution. The project's view is that science and spiritual faith are compatible, because science, which focuses on the natural world, draws no conclusions about religious beliefs. In fact, a March 2000 Yankelovich poll shows that 70% of Americans see no incompatibility between a belief in God and evolutionary theory. However, we understand that many people are struggling to reconcile their deep and abiding spiritual beliefs with this science. Program 7, "What About God?" highlights this theme.
- You say that the series is about science journalism, yet you dedicate an hour to God. How do you explain that? While this is a series about the science of evolution, we recognize that the science of evolution has social, cultural, and political implications. And the series would be incomplete if we didn't address them. We therefore have dedicated the last hour to the question "what about God?". In that show, we track the personal stories of students in American classrooms as they struggle to reconcile their religious belief with scientific understanding. We also treat the intersection of evolution and religion in Program 1, "Darwin's Dangerous Idea." In that show, we explore the historical landscape of 19th century England in which Charles Darwin was publishing his controversial theory, and examine the personal story of one scientist who has reconciled evolution with his very traditional religious beliefs.

- How would you address the Intelligent Design movement's efforts to propose scientific evidence that "disproves" Darwinism? As science journalists, we have looked into the assertions of the Intelligent Design critics. In our judgment, they are not valid. It is clear that the accretion of scientific understanding in all areas of science over the past 150 years supports Darwin's simple explanation of the mechanism of evolution variation and natural selection. In our series, we do not address the issue of ultimate cause, because it lies outside of the realm of science. The Intelligent Design movement (along with Creationism) is a belief system, not a field of scientific inquiry. As such, it is inappropriate for a series examining current scientific thinking.
- Why isn't the Intelligent Design perspective included in Program 7, "What About God?" You just include Ken Ham, a young earth Creationist who does not represent the current scientific thinking about the accuracy of Darwin's theory. In this film we're not trying to cover the landscape of different religious belief systems. Rather, we are looking at how belief and scientific inquiry can be in conflict through the lens of the students' personal struggles.

In addition, in the course of our production, we invited several Intelligent Design advocates, including the Discovery Institute and Phillip Johnson, to participate in our project and to deliver their perspective. They declined. But we did include the many points of view of the Wheaton College students and the LaFayette, Indiana high school students as well. There are many forms of Creationism, but they are not science. Our effort was to explore the personal stories of people who were raised with deep religious beliefs as they struggled with the implications of evolutionary science.

• Why are you advocating the teaching of evolution in schools with your educational outreach project? In keeping with PBS's commitment to education, the Evolution project is trying to improve the effectiveness of teaching tools in America's high schools. America's science literacy, which is crucial to its continued economic well-being, is alarmingly low in comparison to other developed nations. So Evolution is providing critically-needed tools to educators about a core tenet of biology. Evolution is taught in the educational standards documents of 75% of all states as recommended by the National Academy of Science, the National Science Teacher's Association, the American Association for the Advancement of Science, the National Association of Biology Teachers, and more.

Teachers are hungry for interesting, interactive, and relevant resources to aid in teaching, and with *Evolution* we're hoping to help educators achieve state and national standards, and help students develop an appropriate understanding of this important theory. There are approximately thirty thousand high school biology teachers in the US, each reaching one million students each year. We expect these tools to have an effective life span of 10 years. Therefore, the potential impact of the educational outreach is ten million students.

- Would you produce a series on any subject if there were a group willing to bankroll the project? What if Sun Yung Moon came to you with money to do a project on Creationism? As science journalists, we would not cover a subject that did not have a legitimate basis in science. Nor would we cover a subject unless the scientific value of the knowledge could be demonstrated. However, in the realm of popular culture, covering the religious aspect of the controversy might be appropriate, if its implications were strong enough. As always, any series produced under the aegis of WGBH, for PBS, would have to be consistent with established editorial and production standards; reflect the current state of knowledge of the discipline it reports on; and not contain an editorial conflict of interest. By public television standards, the potential of just one compromise would render the project infeasible.
- Why did WGBH and CBSP team. up for this project? Clear Blue Sky Productions was interested in doing a film on evolution. WGBH was also looking at doing a series on the subject. When we met to discuss possible science documentary projects, it was clear that the goals of both producers matched. We both wanted the highest possible editorial and production standards for every aspect of the Evolution project. And we both believed that PBS was the most appropriate home for such a project.

The topic of evolution was a natural subject for WGBH, given the documentaries produced by WGBH's Science Unit (which also produces the critically acclaimed NOVA series). And it was a natural follow-up for both WGBH and Clear Blue Sky Productions, which recently joined forces on NOVA's "Cracking the Code of Life." CBSP's 1999 production "Me & Isaac Newton," a feature-length documentary about science and scientists directed by Michael Apted, won the prestigious Earthwatch Institute Film Award.

What began as a mutual desire to do a documentary series on evolution has blossomed into our developing a groundbreaking, multi-faceted project on evolution.

\*\*Any further questions about WGBH, CBSP, editorial control, funding, and Paul Allen should be directed to WGBH.