

# Quoting God

How Media Shape Ideas about  
Religion and Culture

edited by

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## Chapter 10

# Reporting Complexity: Science and Religion

Jame Schaefer

When covering issues that intersect religious and scientific thinking, media professionals face the difficult task of producing reports that are fair and comprehensive. An initial approach may be to include conflicting views by representatives of religion and science. However, religion-science issues are usually more complex than news stories indicate. Polls generally show that American adults do not think that religion and science conflict,<sup>1</sup> though a minority maintains that position.<sup>2</sup> One in-depth poll conducted in the wake of the recent controversy in Kansas about teaching the theory of evolution in public schools indicates that approximately 16 percent prefer to have biblical creationism taught in science class instead of evolution, while 13 percent want creationism taught along with evolution in science class.<sup>3</sup> Another poll shows that 44 percent believe that God created the human “pretty much” in the present form sometime within the last 10,000 years, 39 percent believe that God guided the evolutionary process out of which the human developed over millions of years from less advanced forms of life, and 10 percent believe that the human species developed over millions of years from less advanced forms through a process in which God had no part.<sup>4</sup> Other polls indicate that 70 percent of American adults don’t see any conflict between

religion and science, but instead think that the quality of religious beliefs or spiritual practices is important to guide and inspire science and technology.<sup>5</sup> These surveys point to the need for reporters to consider several diverse views when covering religion-science issues.

The purpose of this essay is to facilitate the management of many views on religion-science issues so that reports on them can meet the high standards of the profession. In the first part, some examples of statements frequently quoted in the media are delineated, and assumptions behind them are explored from an historical to contemporary perspective. Basic characteristics of the natural sciences are identified subsequently. Six categories for thinking about the religion-science relationship are outlined to enable the recognition of other views that should be sought. In the final part, groups and other sources of readily available information are identified.

### ASSUMPTIONS PAST AND PRESENT

Recall if you have encountered any of the following statements when reading, listening to, or watching media coverage on a natural disaster, a patient's healing, or the special creation of the human: It was God's will. Thank God for sparing our neighborhood. God cured his cancer. God must have had a reason for allowing this to happen. I will never go to church again because God did not answer my prayers. God created humans in their present form within the last 10,000 years.

Inherent in these statements are beliefs that God directly wills natural acts, that God uses natural processes to reward some and punish others, and that God's way of acting in and on the world is by interfering with its natural functioning. Similar statements can be found from ancient times, long before the advent of scientific methodology, when little was known about the physical world other than what could be experienced or observed directly. Attributing natural phenomena to God's direct activity, some ancients speculated on God's purposes, often to their own benefit or to the detriment of others. Some refused to be presumptuous about knowing God's purposes (for example, see the biblical Book of Job). Polytheistic cultures treated the forces of nature as deities who took their wrath out on people for failure to worship or act appropriately.<sup>6</sup> As Greek philosophical traditions developed, the orderly operations of the world were described apart from divinities through qualitative observations and mathematical computations.

Christian theologians from the patristic through the medieval periods reflected variously on the world as designed and sustained in existence by God. In the thirteenth century, Thomas Aquinas provided the most thorough and systematic treatment in which he described the cosmos as a hierarchically ordered unity of diverse beings created and empowered by God to function in relation to one another according to divinely established natural

laws.<sup>7</sup> Muslim natural philosophers considered the world an integral whole willed into existence by God, totally contingent upon God for its continued existence, revelatory of God, and held in trust by humans.<sup>8</sup>

Aquinas, his teacher Albertus Magnus, and other medievalists distinguished between natural philosophy, through which knowledge about the world was obtained by human reasoning, and theology, which attends to knowledge revealed by God. However, they perceived a unity of knowledge and lauded their God-given gifts of rationality that distinguished them from other creatures. William of Ockham and John Duns Scotus advanced the separation of religious faith and reason by questioning the ability of human reason to prove their beliefs with any certainty.<sup>9</sup> Though astronomers Galileo Galilei and Johannes Kepler, biologist John Ray, and other prominent scientists explained their religious motivation for studying God's world at the dawn of the scientific revolution, this practice ebbed as scientific inquiry became increasingly specialized and reason was touted as the only means for establishing truth.<sup>10</sup> As the eighteenth century drew to a close, Immanuel Kant provided the rationale for maintaining separate realms for science to attend to natural phenomena, and religion to attend to the moral life in relation to ultimate reality.<sup>11</sup>

During the early scientific age, cosmologist Isaac Newton thought about the laws of nature as expressions of God's will.<sup>12</sup> Unfortunately, he invoked God's intervention to explain phenomena that couldn't be explained through these laws. For example, Newton asserted that God occasionally adjusted the motions of the planets to keep them in parallel orbits and somehow prevented the stars from collapsing together under gravitational attraction.<sup>13</sup> When scientists were eventually able to account for planetary motion and other phenomena through more accurate observations and calculations, God's role was reduced to the initial design of the world machine that operated with mechanical regularity. Chemist Robert Boyle thought that "a God who could create a mechanical universe . . . was far more to be admired and worshiped than a God who created a universe without scientific law."<sup>14</sup>

Scientists' use of the mechanics and other design features of the world as the basis for thinking about God proved perilous. Newton's influential argument that universal mechanics supply the foundations of both geometry and Christianity loomed large in the elimination of theological concerns from the scientific quest. As Michael Buckley explains in the use of scientific foundations for theological reflection spurred the onset of modern atheism, since "religion was implicitly confessing its own intrinsic lack of warrant, confessing that it did not possess the proper resources to deal with the existence of God" from within its own data.<sup>15</sup>

Other concerns surface when God's activity is invoked to account for gaps in scientific knowledge, a practice that eventually was dubbed "God of the gaps." Believing that God intervenes in the universe's functioning assumes

that God created a world that needs adjusting and that God didn't know what God was doing when creating the world. Traditional beliefs about God as all-wise, all-knowing, and all-powerful, as professed within the Abrahamic religions, are difficult to reconcile with a god who has to adjust the world in order to make it function properly.

Thinking that God tinkers with the laws of the universe or intervenes in its internal functioning also poses a problem for science. The reliability of data and verifiability of theories cannot be tested with any degree of confidence. Though quantum physics qualified the Newtonian confidence in the predictability of phenomena,<sup>16</sup> any degree of predictability would be impossible when professing faith in a tinkering God.

Attributing to God actions that privilege some but not others is also problematic for religion. Though a sense of gratefulness and utter relief can be expressed for having been "saved" from a natural phenomenon or a disease, an explanation for why another has not been saved indicates belief in a deity who acts arbitrarily—a god who is fickle, unreliable, not trustworthy. An arbitrary, fickle, and unreliable god contrasts with the radically trustworthy God of the Psalms, the Gospel of John, and the *Qur'an*.

When interviewing people who talk about God's activity in relation to the world, reporters need to be alert to the basic assumptions about religion and science behind their statements and to discern problems inherent in their assumptions. Having a firm grasp of the characteristics of religion and science facilitates this task.

## DEFINING RELIGION

Religion may be defined broadly as an organized way of knowing and orienting our lives to ultimate concerns. Some religions are loosely organized, while others are highly institutionalized. Some are more local, while several qualify today as "world" religions according to their number of adherents and shared commonalities, including historical heritage, doctrines, and practices. Among the most prominent are the three monotheistic religions that trace their heritage to Abraham—Judaism, Christianity, and Islam. When studying the relationship between religion and science from their perspectives, the appropriate working definition for religion is *an organized way of knowing and orienting our lives to the mystery of God in thought, word and deed*. Theology is the discipline dedicated to thinking critically about how a religious community expresses its faith in God. Each of the Abrahamic religions has specific data, methods, and purviews from which theologians reflect.

The primary data of Judaism include the experiences of the ancient Israelites with God, the stories they told about their experiences of God as recounted in the Hebrew Bible (*Ta'anach*), and the rituals they developed and practice today. The Torah, the first five books of the Hebrew Bible, are



considered the most inspired of all Judaic texts because they recount the ancient Israelites' direct communication with God. The historical books of Joshua, Judges, Samuel, and Kings are deemed less inspired, while Prophets, Psalms, Proverbs, Job, Daniel, Ezra, Nehemiah, and Chronicles are believed to have been written by humans who were inspired by God. Other important data include the *Mishnah*, a digest of all the Jewish laws and practices compiled in 200 C.E.; the *Talmud*, which records the teachers' discussions on the *Mishnah*; and *Midrash* which are interpretations of the Judaic scriptures by eminent rabbis on legal, moral, and spiritual issues.<sup>17</sup> Rituals associated with the weekly Sabbath identify the Jews as God's partners in making the world a better place who rest from their weekday endeavors and leave the running of the universe solely to God. On Rosh Hashanah, Jews make resolutions to lead better lives in the year ahead and proceed for ten successive days to examine their lives, to resolve to undo any harm done, and to joyfully accept new responsibilities. Yom Kippur follows as the most sacred day of the year for a majority of Jews, when they atone for their sins through concrete acts, fasting, and prayer.<sup>18</sup>

The primary written data for Christianity are the thirty-nine books of the Hebrew Bible and the stories about the first Christians' experiences of Jesus the Christ that appear in the twenty-seven books of the New Testament. Roman Catholics and some Eastern Orthodox Christians accept seven additional books beyond the Hebrew Bible that altogether constitute their Old Testament. They consider post-biblical teachings by leaders, councils, and eminent theologians of the Catholic Church as part of the "tradition" upon which to base the formulation of doctrines and moral norms. Writings by founding theologians of Christian denominations established during the Reformation period are highly valued within those denominations. Among the rituals practiced by Christians are: the celebration of the Eucharist in commemoration of the gift of Jesus' body and blood for the salvation of all; the triduum recalling the passion, death, and resurrection of Jesus during Holy Week, which culminates in Easter Sunday; and a varied number of "sacraments" selected by each denomination according to its established criteria.

Islam's most important written datum is the Koran (*Qur'an*), which Muslims believe Mohammad, the prophet of Islam, recorded from an angel's dictation of God's words. When Muslims pray the verses (*ayat*) of the *Qur'an* in mosques, they are chanting God's words and thereby giving glory to God. Next in importance for Muslims is the *Hadith*, a vast and diverse collection of reports about the teachings and actions of the prophet and his companions. The codes of conduct and laws in the *Hadith* are considered legally binding. Among the rituals are the five pillars of Islam: praying to God five times a day using God's words; fasting during the month of Ramadan; paying a purifying tax (*zakat*), which is distributed to the poor and needy; and making once in one's lifetime a *hegira*, a pilgrimage from Mecca to Medina to commemorate the prophet's flight from persecution. That flight occurred

during the year 632 C.E., which is cited in scholarly works as the date that Islam was officially established.

Theologians use various scholarly methods when reflecting on the Abrahamic religions. Since theology is a discipline dedicated to thinking critically about a particular religion as expressed by its religious community, theologians use many skills to explore a tradition from its data. The religious community's cherished texts, rituals, doctrines, codes of conduct, and reflections by eminent theologians over time provide the bases for theological examination. Anselm's description of theology in the twelfth century as "faith seeking understanding" broadly encompasses the theological quest. Highly honed tools of analysis, logic, and synthesis are required in all fields of theology—biblical, historical, systematics, and ethics.

Theologians strive to meet at least four criteria for reflections on data and statements of faith professed by a religious community: (1) agreement with the community's most significant data; (2) coherence with other data in the tradition, allowing room for reinterpretation and reformulation; (3) consistency with broad scientific findings as well as other sources of knowledge and aspects of personal and social life; and (4) capacity to effect personal transformation and inspire a positive way of living.<sup>19</sup>

In theological discourse and practices, the language used about God is metaphorical. Words are inadequate to describe God and God's activity. Metaphorical models are constructed imaginatively to try to talk more cogently about God in relation to the physical world of more-than-human constituents. Scholars have identified historical shifts in modeling God in relation to the world. For example, Barbour describes the model of God as the ruler of the world kingdom that was prevalent in theological reflections from the patristic to medieval periods.<sup>20</sup> As the scientific revolution was underway, a shift occurred to modeling God as the designer of a law-abiding world who remains distant from its machine-like operations while remaining engaged with human persons. These shifts demonstrate the contextual nature of religious language and the role that knowledge about the world plays when attempting to talk about God in relevant and meaningful ways.

Biblical scholars apply special methods when trying to determine the meaning of ancient texts when they were written. Scholars begin with the texts as recorded in ancient languages. They examine and compare various manuscripts of a text to find the most complete and reliable ones to translate. Recently discovered manuscripts like the Dead Sea scrolls provide new opportunities to check the accuracy of translations and their meaning. Among the methods used to discover the meaning of the texts are the historical-critical method of identifying the context and circumstances of the time in which they were written, the source or sources, the genre or literary type of the text, if and how a text was edited to convey meaning, and the narrative flow of the story.

Islamic scholars study the *Qur'an* as God's sacred words communicated to Muhammad. While a minority of scholars in the Islamic tradition apply historical-critical methods to the *Qur'an*, they do so from the devout faith perspective that they are studying God's exact words, not human words inspired by God, as scholars of the Hebrew and Christian scriptures contend.<sup>21</sup> However, various methods of scriptural criticism are applied to the Hadith, which scholars subjected to an extensive process of authentication and translation into legally binding codes of conduct and laws.<sup>22</sup> Nasr ranks the Hadith equivalent to the Bible, leaving the *Qur'an* in a classification of its own.<sup>23</sup>

Some groups do not ascribe to scholarly criticism of the primary texts of their religious community. For example, Louis Jacobs points to the majority of Orthodox Jews, who reject all biblical criticism, especially of the Pentateuch, as "destructive of faith." They wonder where questioning of the traditional view of a text will end if one begins.<sup>24</sup> Christian and Islamic "fundamentalists" adhere to the belief that their revered texts are God's exact words that are inerrant and must therefore be taken literally as scientific and historical fact. Scripture scholars and theologians view the inspired texts in more dynamic terms as God's self-communication that is received and responded to by the faithful in their quest for God over long periods of time.

Overall, the purview of religion is to provide a vision and pattern for living in the world. As Barbour explains:

"[Religion] encourages ethical attitudes and behavior. It evokes feelings and emotions. Its typical forms are worship and meditation. Above all, its goal is to effect personal transformation and reorientation (salvation, fulfillment, liberation, or enlightenment)."<sup>25</sup>

Religion also provides a larger framework of meaning and purpose for living. Religion addresses questions of ultimate concern: Who am I? Why am I here? Why does the universe exist? Why am I motivated to act morally? What is my destiny?

## DEFINING SCIENCE

The natural sciences are disciplines dedicated to describing the physical world and its phenomena from publicly observable and reproducible data that are obtained by humans from the world in which they live. Physics, chemistry, biology, and the other natural sciences are particular ways of knowing about the world. John Haught characterizes science as "a modest but fruitful attempt to grasp empirically . . . some small part of the totality of reality."<sup>26</sup>

The data of the sciences consists of observed or experienced natural phenomena collected to test the accuracy of a theory. These data are *partial* descriptions of physical reality. They are publicly observable, collected, and

organized in natural categories through human interpretations. They are also reproducible.<sup>27</sup>

Theories underlie all steps of the scientific method—the selection of the phenomena to study, the choice of the variables to measure, the type and form of the questions asked, assumptions about the mode of testing, the operation of the testing equipment, and the process of observation.<sup>28</sup> The observation process is particularly problematic when investigating ecological systems and the quantum world, since scientists are not detached observers, but rather, are part of the interacting phenomena. When the observer is part of the process observed, purely objective findings and unquestionable predictions are not possible.

Scientists use their creative imaginations when developing theories. They construct metaphorical models for thinking about phenomena that cannot be observed directly. The Bohr model of the atom, the wave and particle models used in quantum physics, and the billiard ball model for thinking about gas diffusion are examples of models that generate promising theories to test by four criteria that roughly parallel those used by theologians to assess religious beliefs. The most important criterion for scientists is the extent to which the theory agrees with the data and successfully makes predictions. Consistency with other theories acceptable to the scientific community, applicability to a wide range of other relevant variables, and ability to facilitate future research are the other major criteria.

Scientists develop and test theories through the scientific method. Over time, the scientific enterprise has become increasingly reductive when aiming to reach the lowest possible denominator of empirical phenomena. The ongoing genome research in microbiology and fundamental particles in quantum mechanics exemplifies the methodological reductionism that prevails in scientific circles.

The realm of physical reality is science's purview. Scientists address primarily "how" and "limited why" questions about sensed phenomena, their functioning internally and relationally, and other aspects of the physical world. Answers to "how" and "limited why" questions are based on the reproduction of prior tests and measurements from similar data. Through these endeavors, scientists can understand the world better with some degree of accuracy. Scientific findings are open to revision when new data and more probing theories are imagined and tested.

While science provides answers to questions about physical reality, it does not address why the universe exists, its ultimate purpose, or its meaning from a metaphysical perspective. Nor does science provide knowledge about the ultimate purpose or meaning of humanity. These and other "ultimate why" questions belong to religion.

When scientists claim that the scientific method is the *only* route to knowledge about reality, they have moved beyond their disciplines to the realm of metaphysics. Metaphysical reductionism constitutes a belief system

that is popularly referred to as *scientism*. Scientism is not science in the sense of the bona fide discipline that is dedicated to studying the physical world.

## RELIGION IN RELATION TO SCIENCE

Barbour, Haught, Bube, and Peters have identified some of the principal ways in which people think about the relationship between religion and science.<sup>29</sup> Six categories appear most helpful to guide media professionals in their quest to cover issues comprehensively: conflict, conflation, contrast, conversation, combination, and confirmation.

### Conflict

The image of conflict between science and religion is conventional in the media today. Coverage of a story is more dramatic when extreme views are highlighted while more subtle positions go unreported. When journalists write about religion and science in conflict on issues, the “experts” they interview are usually partial to one side or the other. Those who think that the scientific method is the *only* reliable path to knowledge about the world paint science positively as objective, rational, public, and based on solid observational evidence that is tested by experimentation. They describe religion negatively as subjective, emotional, based on traditions or authorities that contradict one another, and founded on a priori assumptions that are untestable by experimentation and exempt from public scrutiny. Those who are hostile to science and technology but value religion consider science a spiritually corrosive force in the modern world and believe that technology has lamentably diminished the value of the human person and caused widespread ecological destruction. As Haught contends, these antitheses add up to an insuperable hostility between science and religion.<sup>30</sup>

Because the Intelligent Design movement argues against the facts and theories of evolution, it seems to fall within the conflict category of the relationship between religion and science.<sup>31</sup> Either one accepts that the process of natural selection results in the formation of new species or, the Intelligent Design advocates argue, one believes that there are some irreducibly complex entities that would not otherwise occur unless they were intelligently designed. Though proponents of Intelligent Design avoid equating the subject of their theory with the God worshiped by Christians, Jews, and Muslims, reaching that conclusion is compelling.

### Conflation

Another slant on the relationship of religion and science is their conflation to the point that they cannot be distinguished as distinct human endeavors.

Religion and science are confused in this way of thinking about the disciplines. Falling into the conflation category are “scientific” materialists, creation “scientists,” and “God of the gaps” advocates.

Those who subscribe to the scientific method as the only route to reliable knowledge about the world have moved beyond science to epistemology, the philosophy of knowing. Their fundamental belief is in science. Unlike scientific research, however, the epistemological assertion of scientism cannot be tested.

Usually accompanying scientism is the belief that matter and energy constitute the fundamental reality of the universe,<sup>32</sup> and that only science will disclose this reality. Proponents of this view have moved beyond science to metaphysics, the philosophy concerned with the nature of reality. Accompanying this metaphysical position are various forms of reductionism, one of which claims that all sciences are reducible to the laws of physics and chemistry, while another claims that all phenomena will eventually be explained in terms of their material components. These metaphysical reductionists also move beyond science due to philosophical assertions that cannot be tested.

Biblical literalism and creation science are examples of the conflation of religion and science.<sup>33</sup> Going against Roman Catholic and most mainline Protestant denominations, which hold that the scriptures are human works inspired by God, biblical literalists contend that the Bible is God’s word and is therefore without error. The Bible contains scientific and historical facts that must be believed. Creation scientists contend that there is scientific evidence for the creation of the world within the last six thousand years and that humans were created in their current state within that span of time and did not evolve from lower primates. Much of this purported scientific evidence was considered dubious by the U.S. District Court, which in 1982 overturned an Arkansas law that allowed the same amount of time for teaching the creationist theory as allotted for evolution.<sup>34</sup>

Another example of the conflation of religion and science is the practice of attributing to God’s activity natural phenomena that cannot be explained scientifically. Newton demonstrated “God of the gaps” thinking when claiming that God adjusted the solar system, since the actions of the planets did not follow planetary laws identified during his time. Of course, this approach is very risky for religion. If belief in God is limited to God’s miraculous interventions, faith in God diminishes when science fills the gaps. “God of the gaps” mentality is also a risky practice for science, which requires reliable data and reproducible testing of theories based on data.

Prompted by a human craving for a unified understanding of the world, conflationists confuse religion and science. Unfortunately, conflation and conflict proponents are too often the spokespersons for religion and science in print, audio, and visual media.

## Contrast

One way to avoid conflict and conflation of religion and science is to view them as totally independent and autonomous ways of knowing. Each is valid only within its clearly defined sphere of inquiry. Each should be judged by its own standards and not by the other's because they are radically different in the questions they ask, the languages they use, the tasks they tackle, and the authorities they follow.<sup>35</sup> As Haught explains, advocates of this approach emphasize that science examines the natural world empirically, while religion addresses the ultimate reality that transcends the empirically known world:

Science is concerned with *how* things happen in nature, religion with *why* there is anything at all rather than nothing. Science is about *causes*, religion about *meaning*. Science deals with solvable *problems*, religion with unsolvable *mystery*. Science answers specific questions about the *workings* of nature, whereas religion expresses concern about the ultimate *ground* of nature.<sup>36</sup>

When this approach is followed, however, the human craving for coherence is unsatisfied because the realms of knowing are so disparate, disconnected, departmentalized, and cut off from one another.

When in the contrast mode, the primary data of a religious tradition are taken seriously, but not literally. The Bible is understood as a fallible human record that gives witness to the ancient Israelites' and earliest Christians' experiences of God. The locus of God's activity is in the lives of persons and communities who experienced and responded to God's self-communication, and not the dictation of a text as literalists contend. The scriptures are accepted as diverse interpretations of God's self-communication, and responses by believers in the contexts of their times. Scholarly methods of biblical exegesis are applied to determine the meaning of the texts when they were written.

## Conversation

As the rapid growth of religion-science literature over the past twenty years and the plethora of courses now offered on campuses throughout the world indicate, many theologians and scientists recognize that they cannot compartmentalize their ways of knowing. They realize that they have something to say to one another on issues at the boundaries of their disciplines (e.g., origins and nature of the universe, of life, of the human being, of consciousness) that can provide a more complete understanding. They yearn to unify their diverse ways of knowing, as Pope John Paul II encourages.<sup>37</sup>

Following theologians who reflected on topics informed by knowledge about the world that was current during their times, contemporary theologians are discovering that their discourse can be more comprehensive, relevant, and meaningful when informed by scientific findings of our time.

Scientists who profess religious faith are also discovering that they can move from their scientific endeavors to a deeper meaning of their faith, that they can reflect on their purposes as scientists in the world, and that they can draw from their faith's tenets to guide their ethical behavior.

Media professionals will recognize that theologians and scientists avoid conflating and confusing their disciplines when they are in conversation with one another. Their contact proceeds from a commitment to their disciplines' data, methods, and purviews. They recognize the limitations of their disciplines. They acknowledge where their expertise ends, and they move beyond their disciplines. They appreciate the contributions each of the disciplines makes to richer and deeper ways of understanding issues. They welcome the assistance of philosophy to bridge their conversation so their terminology is clearly understood, concepts are analyzed, and possible syntheses are explored systematically. They realize that their constructs are tentative as they explore plausible approaches to issues at their disciplinary boundaries.

### Combination

When theologians move beyond conversation to reformulate religious beliefs informed by contemporary scientific findings, they have entered the mode of integrating religion and science. This does not mean that they have confused or conflated the disciplines, however. When in the combination mode, theologians begin with a particular doctrine that has been developed from a particular religion based on its privileged data, and they reconstruct the doctrine in light of scientific knowledge.

For example, theologians start with the doctrine of creation, which stipulates that God willfully created and sustains the universe in existence and that it would not exist if God had not willed its existence and continuance. Theologians consider the context of the times and understanding of the world when the doctrine was established and embellished. They proceed to consider the doctrine today in light of cosmological findings about the early universe and its development over billions of years. They rework the doctrine so that it is meaningful and relevant for the believers. The reformulated doctrine expresses faith in God who willed the universe into existence, empowered its self-development over the vastness of time and expanding space without interference, and self-communicated to beings who emerged out of the cosmological-evolutionary process with the capacity to hear and respond. This expression of the doctrine of creation is regarded as tentative and open to revision as new substantive findings become available. Nevertheless, the basic meaning remains intact—the world is radically contingent upon God for its existence and continuation.

Barbour discusses other modes of combining religion and science. They include a systematic synthesis of the two endeavors within a comprehensive metaphysics of process philosophy. He cautions, however, that care must be



taken to avoid too much reliance on philosophy and science so the religiosity of the combination remains prominent.<sup>38</sup>

### Confirmation

In this final mode of relating religion and science, religion is understood as fueling the *quest* for scientific knowledge and as guiding the moral behavior of scientists in their quest. Haught used the term “confirmation” to describe the religious vision of reality that fortifies the drive to explore the physical world in its micro- to macrocosmic dimensions. Reality is “a finite, coherent, rational, ordered totality” of diverse entities grounded in the ultimate love of God with a “promise” of a future yet to unfold. The trustworthy God of the Abrahamic traditions upholds this totality. Faith in the orderly totality of the world grounded by God’s love and promise for the unfolding world provides the incentive to pursue knowledge through scientific exploration. Faith in God’s love and promise also guides scientists toward acting in morally responsible ways as the world unfolds, for which they are accountable ultimately to God.

The confirmation approach was demonstrated in part by some of the most prominent scientists who launched the scientific age in the seventeenth century. As mentioned in the first section of this essay, Galileo, Kepler, and Ray, along with Francis Bacon, the “father of the scientific method,” and renowned others explained that they were engaging in the exploration of God’s book of nature. Bacon and Kepler insisted that their scientific studies of physical phenomena gave glory to God.<sup>39</sup> In *Mysterium Cosmographicum*, Kepler explained that the task of a Christian is to acquire a “greater awareness of creation and its grandeur” which is “our magnificent temple of God.”<sup>40</sup> Ray described in *The Wisdom of God Manifested in the Works of the Creation* his faith-filled incentive to pursue the study of biology.<sup>41</sup>

This confirmation approach to relating religion and science also resonates with the Islamic tradition. Throughout the *Qur’an* and Hadith are found references to the physical creation as God’s self-disclosure, which should be read and understood. Nasr points to a sacred saying in the Hadith in which God speaks through the prophet: “I was a hidden treasure; I wanted to be known.” The study of God’s *ayat* as displayed in the cosmos is the Muslim’s obligation and privilege. Knowledge about God’s cosmic book leads to knowledge of God and some of God’s immediate purposes. As Nasr cautions, Muslims are not presumptuous enough to think that they should search for, or could begin to know, God’s ultimate purpose for the universe, since God’s purpose is known only to God.<sup>42</sup>

Media professionals are wise to avoid thinking that this mode of relating religion and science confirms scientific *findings*. That is not the role of religion or the discipline of theology. Religion does not confirm scientific findings, nor does religion embrace any particular scientific theories. In the

confirmation way of thinking about the religion-science relationship, religious faith fortifies the quest for scientific knowledge about the world. Theologians and scientists value this way of relating their purviews as an affirmation of the scientific quest and how scientists should function responsibly when pursuing knowledge about physical reality.<sup>43</sup>

## CONCLUSION

Covering issues that intersect religion and science is a complicated and difficult task. Having a firm grasp of the definitions, data, methods, and boundaries of religion and science will help media professionals deconstruct assumptions, postures, and positions in statements people make when they are being interviewed. Discerning how people generally view the relationship between religion and science as conflict, conflation, contrast, conversation, combination, or confirmation will aid the journalist in identifying other views that should be sought. Seeking readily available sources of information will facilitate more in-depth reporting.

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## 10: VIEW FROM THE NEWS DESK

# Fairness and Pressure Advocacy in Controversial Science

Joe Williams

If a dog bites a man, it's not a story.

If a man bites a dog, it could be a story, but only if you've got a picture, or "art" to go along with it.

But if a man bites a dog and you can find quotes expressing outrage from the dog's lawyer and the National Association of Canines, you're probably sitting on a front pager.

These days, it seems that every good news story is supposed to have conflict—Democrats vs. Republicans; labor vs. management; Britney Spears vs. Justin Timberlake, Creationists vs. Evolutionists, Religious Right vs. stem cell researchers, and so forth. The controversy phenomenon—the need to frame news within conflict—drives coverage to an extent unknown to most of the American public. Conflict reported by working journalists spills over to radio and television talk shows on the airwaves twenty-four hours a day.

One of the oldest conflicts in the history of journalism—if not the history of the world—is the theoretical battle between religion and science. Former Cornell University president Andrew White in 1896 described as "warfare" the clash between the two forces and argued that scientific progress was being held back by theology. Such tension continues to play out today. This

commentary will address how the mainstream press covers that conflict in front-page issues like cloning, stem cells, and creationism.

My purpose here is not to focus on any one particular reporter, editor, or news outlet, but to point to the culture that has inhabited newsrooms for years. Sometimes significant pressure comes from religious groups or the scientific community over how an issue is covered in a newspaper. By pressure, I mean everything from writing angry letters to the editor to flooding newspaper phone banks with calls (usually in response to something on a talk radio program or Internet chat room). Sometimes the pressure takes the form of boycotts of publication or intimidating advertisers. It's my experience that outside pressure has a more profound impact on smaller newspapers in smaller cities, but all newspapers feel the heat from time to time—a natural form of publishing accountability.

While journalists should always strive to be fair in overall coverage, controversial topics are often approached from an overly defensive perspective. By that I mean that too much of the consideration is placed on how to avoid offending the warring parties involved rather than on advancing stories to provide new information. That kind of “fairness,” if it dulls what is included in news coverage on controversial issues, is ultimately unfair to readers looking to arm themselves with information they can use to form their own opinions.

From a practical perspective, any journalist would want to limit the number of complaint calls from organized groups. Understandably, it is possible to spend more time dealing with the aftermath of stories than in gathering data, checking sources, and writing and editing the articles in the first place. It can be a frustrating use of time, and the thought of how easy it could be if only the hard questions had never been raised can be appealing. The idea of fairness should extend beyond those whose views are covered to include what is fair for independent readers who are hungry for information on a particular topic.

For working journalists, the conflict that arises between religious beliefs and scientific research plays a tremendous role in what reporters and editors consider “newsworthy.” Candidly, the conflict gives life to an otherwise data-intensive, complex, or difficult story and gets it into the newspaper and before the eyes of readers.

The same conflicts that get stories headline play in newspapers and lead story in broadcasts around America also let journalists off the hook far too easily by allowing them to produce stories that often don't provide enough of the kinds of information that readers can use to draw solid conclusions.

I refer to the way general news reporters cover topics involving science and religion. Science beat reporters are theoretically better acquainted with the academic and research issues on which they report. Given the economics of newspapers, though, the real difficulty may be too few specialized reporters trained in science: my experience at several newspapers of varying

sizes is that few modern newsrooms even have science as a regular beat anymore.

The phenomenon of the disappearing science beat reporters is itself a problem that has been and will continue to be addressed within the journalism community, so I won't suggest our profession is unaware of the need. One could argue that the problem is compounded by the belief that many news outlets prosperous enough to have specialty beats like science or medicine appear to be asking them to produce fluffier "news you can use" type stories about health and fitness, as opposed to regular analytical reporting on hot-button issues. The shrinking "news hole" for hard news is a real issue, for many news reporters find they have less and less space to present sometimes complicated stories to readers. I do not refer to a weekly science section or feature, of course, because it is the front-page stories in newspapers across the nation every day that tend to dominate discussion of current events in the public square and that may in turn influence the shape of science public policy.

By devoting so much space to "conflict as news," journalists too often do too little to help readers and viewers reach solid conclusions about which side of the conflict is actually right. Perhaps even worse, journalists and editors sometimes define "fair and balanced" in a way that sheepishly steers clear of taking a stab at any sort of informed conclusion. Too often, newspaper reporters and editors base fairness on whether equal time was offered to each side. In this quest for fairness, completeness is sometimes sacrificed, particularly when it comes to stories involving complicated subject matters.

Imagine, for example, how the modern press might cover the outrageous political and ideological battles between Galileo and Pope Urban VIII in the seventeenth century. The debate was whether the Earth was the center of the universe, a notion the Catholic Church treated as fact until more recently, or whether the sun was the center of the universe, a theory advanced by the Polish astronomer Copernicus in 1514.

An Italian philosopher, physicist, and astronomer, Galileo thought there was some scientific merit to the Copernican theory, and at a time when the Roman Catholic Church was the controlling political machine, his writings exploring the topic were considered blasphemy. In 1633, Galileo was interrogated by church officials for 18 days and imprisoned. He later apologized to the pope, but he remained under house arrest until his death in 1642.

How might the modern press have handled this story? Here's one pessimistic guess:

#### *Pope to Galileo: Drop Dead*

ROME—Extremist astronomer Galileo Galilei was imprisoned yesterday for continuing to suggest that the sun might be the center of the universe, Catholic Church officials said.

“This guy is so far out there we intend to give him extensive drug testing when he is in lock-up,” said one church law-enforcement official, speaking on condition of anonymity.

A spokesman for Galilei, simply called “Galileo” by his followers, said sound scientific evidence suggests that Earth revolves around the sun and not the other way around.

“It may take the Church 350 years to come to terms with basic scientific reasoning, but Galileo is not the crazy one here,” said the spokesman, who declined to give his name out of fear that church officials would throw him in the slammer too.

Pope Urban VIII issued an official statement blasting Galilei for “merely trying to sell books” with his foolish arguments against “what everyone understands to be fact, namely that the Earth is the center of everything created by God.”

“This isn’t just the church talking,” the pope’s statement said. “This so-called Father of Modern Philosophy thinks he knows more than Ptolemy and Aristotle as well as all of the other educated and God-fearing Catholics across the land. I think common sense speaks for itself.”

Prominent scientists in Rome, all of whom run think tanks that are heavily subsidized by the church, either declined to comment or expressed support for the pope.

“If the pope says the Earth is the center of the universe, that’s good enough for me,” one researcher said.

The “story” on the Galileo imprisonment—which I admit is on the hyperbolic side—quoted people on both sides of the issue but generally accepted the establishment church’s starting point and ultimately did nothing to try to take an independent stab at whether this “conventional wisdom” was accurate or not.

Unfortunately, my wild example is often not far from reality when modern-day journalists take up issues of scientific/religious conflict. More often than not, by the time these issues hit the newspapers, they have been reduced to political stories that don’t ultimately encourage or empower readers to take a side.

While remaining nonpartisan is often admirable for news outlets covering politics, the fact that so many news stories about hot-button issues like human cloning end up as political stories and not science stories means readers are being robbed of any perspective that tries to scratch at the truth of the matter.

Imagine the job a free press could have done in the 1600s if it could have independently attempted to determine whether it was the Earth or the sun that was the center of the universe. It is the press’s role to prepare and examine evidence that the public could use to come to more accurate conclusions on its own.

Society will (and ultimately did in the case of the Copernican theory) decide for itself once a critical mass of information sways a majority of indi-

viduals to conclude that a theory is correct. The press can and should play a pivotal role in creating that critical mass of information.

In the case of Galileo, even the Catholic Church eventually had to respond to the critical mass of verified information. Pope John Paul II in 1979, for example, actually appointed a commission to review Galileo's condemnation, and in 1992 declared it an error resulting from "tragic mutual incomprehension."<sup>1</sup>

Yet sometimes these scientific and religious clashes are covered as political issues because they are, in fact, political issues. My critique is not that these issues of politics are covered this way, but that oftentimes much of the coverage that makes the front page of the newspaper involves the politics and not the substance of the issues.

A typical example of the "conflict as a political story" can be found in a November 6, 2003, Associated Press story on a vote by the United Nations to delay any treaty that would ban human cloning. Written by AP's UN reporter, Edith Lederer, the story describes in typical political style the details surrounding the controversial vote. It quotes spokespeople on both sides of the issue and clearly defines terms like *cloning* (an exact copy made up of biological material like DNA segments) and *stem cells*. It also includes this boilerplate explanation for the religious/scientific conflict over the matter, paragraphs that appear in similar fashion in most political accounts on the issue:

"Scientists who support cloning to produce human embryos for medical purposes say they hope to use stem cells from the embryos to find cures for Alzheimer's, Parkinson's and other debilitating diseases."

"Stem cells can divide and turn into any kind of cell in the body—raising the possibility of 'growing' replacement organs for sick people."

"The Roman Catholic Church and anti-abortion groups say stem cell research is tantamount to murder because it starts with the destruction of a human embryo to recover the cells."<sup>2</sup>

The political and philosophical debate on stem cells and human cloning figures to be a contentious issue in our modern society for the foreseeable future, and as such, it will continue to produce deservedly good news stories. The role of the press should be to arm the public with as much information as possible so as to enable more thoughtful discussion in the public square, rather than merely making sure both sides of an issue are contacted for comment.

Another hot-button issue that has dazzled reporters, editors, lawyers, and the public at large for much of the last century is the controversy over whether creationism should be taught in public schools.

In 1925, long before the days of 24-hour cable television news shows, a media circus took over Dayton, Tennessee, for the John Thomas Scopes "monkey trial." Scopes, a teacher who challenged a state law banning the

teaching of evolution, would likely have been a modern-day media darling, appearing on all the big, news talk-shows, pitted against a fundamentalist minister type. This is the exactly the kind of conflict the media loves.

Nearly a century later—and four decades after the U.S. Supreme Court ruled that the teaching of creationism in public schools is a violation of the separation of church and state—heated battles continue to break out over whether textbooks and school curriculums should include theories about evolution and/or creationism.

In the fall of 2003, the state of Texas played host to a dramatic political battle in the state board of education over whether to officially approve its list of permissible science textbooks. Religious conservatives argued strenuously that many textbooks on the list treated theories of evolution as a clear-cut fact rather than as a working theory to be considered along with others like creationism. Despite intense lobbying and politicking, the Texas Board of Education voted in early November to keep the books on the list, a move that was seen as rebuke of the far right.

Much of the local coverage of the vote fell into the “conflict as a political story” genre, and predictably it treated the subject as a political issue, making good-faith efforts to quote experts and critics on both sides. Because textbooks selected by Texas tend to dictate what is used in many other parts of the country (Texas is second only to California in terms of the number of textbooks ordered in a given year), the story was covered by media outlets outside of Texas.

One account of the textbook vote, in particular, shows that it is possible to take a political story and provide heavy doses of background and analysis for readers. *Los Angeles Times* reporter Scott Gold, chief of the California paper’s Houston bureau, wrote: “The vote, like the differences between evangelicals and evolutionists, was marked by tension, passion and drama.”<sup>3</sup>

Writing for a newspaper that was far away from the action, Gold shows in his account of the vote what can be done when reporters are free from the kinds of local pressure that come from the parties involved in a big story. While the story’s lead deals with the politics of the vote, the body of the story goes into great detail about the positions of each side of the battle, but doesn’t read like a mere he-said, she-said account.

The story clearly differentiates the varying opinions of different religious leaders, rather than lumping all religious groups into one amorphous group; it quotes a statement from a group of scientists who argue that theories of evolution have been tested and verified, and provides analysis, not just of the politics behind the vote, but of the issues themselves.

Gold clearly defines, for example, a biological theory known as the “Cambrian explosion,” a period about 500 million years ago in which existing species appeared to change too quickly to support all of the theories of evolution. He also describes, again in clear language, the “Intelligent Design”



theory that says biological mechanisms are too complex to be attributed to evolution alone.

Most readers of Gold's story would consider it fair to the parties involved, but unlike many stories of its kind, he goes further by clearly providing some meat on the issue itself upon which readers can chew.

In a different story that previewed the vote, Gold profiled William Dembski, a scientific researcher at Baylor University who also happens to be an evangelical Christian. Going back to this essay's original contention that conflict and news are inseparable, Dembski is the personification of that conflict.<sup>4</sup>

Describing Dembski as a supporter of the Intelligent Design theory, which argues that some sort of divine or intelligent force had to have played some role in the evolution of man, Gold is able to branch out to again describe the politics and the substance in a way that journalists, myself included, should be shooting for on a regular basis.

It has been said that the best way to ruin a good party is to steer the conversation toward politics or religion. Conflicting theories in these areas can get messy. But news outlets love these kinds of issues, for obvious reasons. They get people's pulses going and generate a buzz in the community.

As technology and science continue to move forward at warp speed, and as theology and religion remain vibrant forces among the public, conflicts between science and religion will continue to play out in newspapers and newscasts around the country. That much is certain. The only question that remains is whether news outlets will rise to the challenge and regularly attempt to provide good, solid, and thoughtful information to help readers come to their own conclusions over time.