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Confluence of Science and Spirituality in the Select Works of Umberto Eco

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Abstract

The conflict between religion and science is what naturally occurs to our minds when we think of the subject. Similarly, the study of values falls to the lot of the social sciences, that physical sciences concern themselves with value free matters such as mechanical and chemical changes. So, one finds people urging that the basic trouble is that social scientists have not developed social sciences adequately, that their application of the scientific method as successfully achieved by the physical science, should be brought up to a level somewhat nearer to equilibrium with the latter. The inspiration and motivation for such an unification of seemingly two disparate subjects like science and religion can be derived from the forms of arts like painting, music, dance, literature and the like, by their appeal to human mind and soul, simultaneously. Umberto Eco declared that "there is something artistic in a scientific discovery and there is something scientific in that which the naïve call 'brilliant intuitions of the artist'" (159) in his *The Limits of Interpretation.* No

novelist and thinker in recent years have contributed more to the crossing of disciplinary boundaries than Eco. His works engage with history, philosophy and science. Science, as both object of study and method of inquiry, amalgamated with religion, play an important role in his fiction, particularly in his first two novels, *The Name of the Rose* and *Foucault's Pendulum*, taken for the study of unification of science and religion without discounting the disparities in them.

Keywords

Science; Spirituality; and Umberto Eco.

The conflict between religion and science is what naturally occurs to our minds when we think of the subject. W.N. Whitehead says, "they seem to be set one against the other; the force of religious intuition in one hand and the force of our impulse to accurate observation and logical deduction" (225). Similarly, the study of values falls to the lot of the social sciences, that physical sciences concern themselves with value free matters such as mechanical and chemical changes. So, one finds people urging that the basic trouble is that social scientists have not developed social sciences adequately, that their application of the scientific method as successfully achieved by the physical science, should be brought up to a level somewhat nearer to equilibrium with the latter. According to Everett W.Hall in the very opening page of his book, *Modern Science and Human Values* "It is not simply that scientific method in the area of social sciences should be promoted, it is rather that this promotion should occur in order that we may be more intelligent, be wise in our choice of the ends to which our greatly expanded physical knowledge is devoted" (1). The inspiration and motivation for such an unification of seemingly two disparate subjects like science and religion can be derived from the forms of arts like painting, music, dance, literature and the like, by their appeal to human mind

and soul, simultaneously. Umberto Eco declared that "there is something artistic in a scientific discovery and there is something scientific in that which the naïve call 'brilliant intuitions of the artist'" (159) in his *The Limits of Interpretation.* No novelist and thinker in recent years have contributed more to the crossing of disciplinary boundaries than Eco. His works engage with history, philosophy and science. Science, as both object of study and method of inquiry, amalgamated with religion, play an important role in his fiction, particularly in his first two novels, *The Name of the Rose* and *Foucault's Pendulum*, taken for the study of unification of science and religion without discounting the disparities in them.

In Umberto Eco's first novel *The Name of the Rose,* the protagonist William of Baskerville, the erudite and inquisitive medieval investigator, attempts to solve a series of mysterious deaths by using his scientific acumen to penetrate the abbey's labyrinthine library. In *Foucault's Pendulum,* three editors of a modern Italian publishing house exploit the combinatory prowess of computer technology, in all sort of esoteric doctrines. A similarly creative, but contamination of science with pseudo-science and hermitic doctrine animates the quest of Robert in *The Island of the Day Before* to solve the problem of longitudes. Taken together these novels not only delineate investigative procedure and scientific discovery, they also show how the line between beneficial and detrimental interpretative process can be a very fine one. Indeed it is in this fine line ethics, religion and spirituality props in, and teaches what one can and cannot do.

William of Baskerville, a disciple of Roger Bacon and contemporary of William of Ockham, the two illustrious Franciscans who taught at Oxford University, presents himself as a bona fide man of science as it was practiced in the middle ages from his very entry in to the abbey. He enumerates his disciple Adso, "Roger Bacon whom I venerate as my master, teaches that the divine plan will one day encompass the science of machines, which is natural

and healthy" (17). In the sixth part of chapter two in *Opus Majus* "on Experimental Science" Roger Bacon himself says,

> This experimental science has three prerogatives with respect to other sciences. The first is that it investigates by experiment the noble conclusion of all the sciences. For the other sciences know how to discover their principle by experiments, but their conclusions are reached by arguments based on the discovered principles. But if they must have particular and complete experience of their conclusions, then it is necessary that they have it by the aid of this noble science…which is called experimental" (Crombie 38).

From the very opening chapter of the novel *The Name of the Rose*, William works by this above principle whether it is to trace the path taken by the disappeared horse of the abbot, Brunellus or finding the cause of the gruesome murders of fellow monks in the abbey. Adso, the Benedictine novice in charge of William is amazed by the "wondrous machines" (NR 17) his master carries in a bag and occasionally tinkers with, during their time together at the abbey. In conversations with Adso, William not only extols the virtues of such instruments as the clock, astrolabe and magnet, but also endorses Bacon's faith in "science of machines" (NR 17) and simultaneously on God. This eventually includes several inventions that would in fact come to mark or prophesize the modern era viz. swift ships powered by some source other than sails or oars, self-propelled wagons, flying machines with artificial wings, etc..(NR 17).Roger Bacon did not develop this discussion of the potential usefulness of sciences, but his prophecies about the submarine and motor car in chapter 4 of *Epistola de Secretis Operibus*are an example of practical turn which he gave to scientific study. He says that ,

> Machines for navigation can be made without rowers so that largest ships on rivers or seas will be moved by a single man in

> charge with great velocity than if they were full of men. Also cars can be made so that without animals they will move with unbelievable rapidity…Also flying machines can be constructed so that a man sits in the midst of the machine revolving some engine by which artificial wings are made to beat the air like a flying bird (Crombie 70).

William acknowledges that all the above are possible in future to his protégé Adso in the novel and himself raises more than a few eye brows when he dons a pair of eye glasses in the library. This technological aid, William explains to the abbey's assistant master glazier, is but one of the beneficent outcomes of "holy magic" (NR 86), the scientific impulse, "not only to discover new things but also to rediscover many secrets of nature" (NR 87). The outstanding advance made in the west during Middle Ages was the invention of the spectacles. Roger Bacon has proposed this in 1266-67 in is *Opus Majus*. Leonard Digges in describing his father's works acknowledged roger Bacon as an authority in optics (Crombie 124). From Christendom spectacles spread to Arabs and china. The invention of spectacles was associated with the names of certain north Italian Dominican friars, but it is more probable that the first spectacles were made, shortly after 1286 by Alessandro della Spina of Pisa (Crombie 236).

Both the above views do not go uncontended or without being contradicted by others. In fact, there is a detailed argument between William and a fellow monk, Ubertino of Casale about machines and religion on the very first day of their encounter with each other. Ubertino accuses William that "your masters at Oxford have taught you to idolize reason, drying up the prophetic capacities of your heart" (NR 63). To which, William answers seriously, that "you are mistaken, Ubertino, you know that among my master I venerate Roger Bacon more than any other" (NR 63). One again Ubertino comments bitterly on Roger Bacon as someone "who raved of flying machines"

(NR 63). But, William answers him patiently, how science and technology can help even to fight against the so called Antichrist, touching upon the revolutionary ideas of the Roger Bacon and hailing him as one who,

> Spoke clearly and calmly of the Antichrist and was aware of the import of corruption of the world and the decline of learning. He taught, however, that there is only one way to prepare better the human race. We can prepare to fight the Antichrist by studying the curative properties of herbs, the nature of stones, and even by planning those flying machines that make you smile (NR 63).

There is a similar set of arguments on the same day with another fellow monk called Nicholas, the assistant to the master glazier of the abbey. When William adorns himself with the pair of spectacles, Nicholas exclaims, "What a wonder!"(NR 87) and continues "yet many would speak of witchcraft and diabolical machination" (NR 87). William talks of its usefulness as though there is a "magic in this device" (NR 87) employing the word magic in religious parlance, which is almost synonymous with the word science in medieval period. But William, with his hair splitting knowledge of differentiating things which appear similar goes on to say,

> There are two forms of magic. There is a magic that is the work of the Devil and which aims at man's downfall through artifices of which it is not licit to speak. But there is a magic that is divine that is divine, where God's knowledge is made manifest through knowledge of man, and it serves to transform nature, and one of its ends is to prolong man's very life. And this is holy magic, to which the learned must devote themselves more and more (NR 87).

William's this scientific world view, which distinguishes him from fellow monks, provides him with the tools of discovering how and why monks begin to die from unnatural causes. This in turn has spiritual and religious implications that serve the subject matter of the novel.

The pendulum of Eco's second novel is named after Jean Bernard Leon Foucault, a French physicist who in 1851 demonstrated the rotation of earth by charting the oscillation of a pendulum suspended from the Pantheon in Paris. Within the modern setting of Eco's *Foucault's Pendulum,* as most of its story unfolds in 1970 and 1980s, the pendulum is suspended from a ceiling of the Conservatoire de Arts et Matiers in Paris, still, as in the novel. It is a museum of technology containing a vast and varied collection of machines, devices and instruments, primarily from the age of enlightenment through the early twentieth century. Since, 1855 the pendulum has been housed in a part of the museum that was one the medieval church of Saint-Martin-des Champs. This fact offers Eco, a fertile ground for grafting science and religion from the very opening of the novel that includes an illustration of Sefirot.

The opening scene takes place in the above museum as Casaubon, the first person narrator of the novel awaits the climatic ritual, recounted once again at the end of the novel. Through the eyes of Casaubon, who tries to behave like both a mystic and scientist, one can see how the mystical forces behind the events that have led him to the pendulum, exert their influence and especially on the history of science and technology as they are displayed in the museum. This includes objects such as automobiles, planes, engines, mirrors, laboratory equipment, electrical devices, etc. Casaubon explains the mystical nature of the pendulum as,

> I knew-but anyone could have sensed it in the magic of that serene breathing…the time it took the sphere to swing from end to end was determined by an arcane conspiracy between the most timeless of measures: the singularity of the point of suspension, the duality of the plane's dimensions, the triadic beginning of π, the secret quadratic nature of the root, and the unnumbered perfection of circle itself. (FP 3)

He continues to explicate the spiritual dimensions of the pendulum through its physical nature as, “the pendulum told me that, as everything moved –earth, solar system, nebulae and black holes, all the children of the great cosmic expansion-one single point stood still: pivot…I too, moved with the all, but I could see the One, the Rock, the Guarantee” (FP 5).

Casaubon first learns of this museum and the pendulum during the course of his work on the history of metals. He is hired by a Milanese publishing house to search libraries and archives for illustrations to accompany a book that Signor Garamond, the eccentric owner of the press, who wants the book’s scientific content to “grab the reader by the throat”(FP 241). He does accomplishthis however, return with historical illustrations that show “science and magic go arm in arm “(FP 225), an idea particularly attractive to the notorious publisher.

Casaubon takes notice of this unnatural and unholy alliance between science and magic in the present when he examines the display window and inventory of a Parisian bookshop: “on one side, books on computer and electronics of the future; on the other occult sciences. Add it was same inside: “Apple and Cabala” (FP 255). Not coincidently, cabala and computers join forces enabling Casaubon and his fellow editors at the publishing house, Belbo and Diotellavi to create ‘the plan’, a reinterpretation of history in terms of esoteric and hermetic doctrine in accordance with a presumed secret plot by spiritual descendants of Templars, to rule the world by harnessing the power of natural telluric currents of the earth.

The reinforcing influence of cabala and computers are embedded in the novel’s textual arrangement and presentation of information. Major chapters are titled with ten Sefirots, the cabalistic spirits which, combined with twenty two elemental letters of Hebrew alphabet, constitute the foundation of all creations (Scholem 23). An illustration of the Sefirot appropriately appears even before the title page of the novel in both the original Italian edition and in its

English translation by William Weaver. Likewise, it is astonishing to notice the Monad Hieroglyphic of John Dee, which is considered to concentrate all the spiritual wisdom of the universe resembling the pendulum in the 74th chapter of the novel (FP 347).

Towards the end of the novel the trio, Casaubon is addicted; Diotellavi, physically corrupted and Belbo converted as a result of unhealthy interpretative game (FP 468).The boundary between science and unholy magic become evanescent and the silver line of science and spirituality appears at the climax of the novel. Belbo abducted by diabolicals who believe the plan to be true, is hanged by them so that his dead body becomes the new fixed point of the pendulum. Diotellavi dies the very same night from cancer, which he considers divine justice for his role in the evil plan. As he manipulated combinations of the letters of the Book, so the cells in his body underwent changes in shape and order resulting in the cancer. Casaubon, as he awaits the arrival of the murderous diabolical antagonists, hangs in the balance between life and death.

In *The Limits of Interpretation*, a non-fiction by Umberto Eco, he discusses two models of interpretation, each of which risks degenerating in to a type of fundamentalism: at one extreme "every text speaks of the rational and univocal discourse of God, while in the other direction it speaks of the irrational and ambiguous discourse of Hermes" (20). Both forms of interpretative excess are dramatized in Eco's fiction, but their relative weights vary in them. For example, forces obsessed with the above mentioned discourse of God as in the case of Jorge, the antagonist of *The Name of the Rose* inflict the most of the damages and pose the greatest threat to social and scientific progress. Conversely, the diabolicals and the three plan writers in *Foucault's Pendulum*, bring about ruin by worshipping the irrational Hermetic side. But, ironically Eco observes that "Historiography has shown that it is impossible to separate the Hermetic thread from the scientific one or Paracelsus from

Galileo" (34), in another non-fiction *Interpretation and over Interpretation*. Casaubon in *Foucault's Pendulum* become more deeply involved in Hermetic world of Diabolicals who inhabit the novel and realizes how even the most illustrious "bearers of mathematical and physical enlightenment…had worked one foot in Cabala and other in the laboratory" (FP 360). Incidentally one such person is roger Bacon hailed indeed by William in *The Name of the Rose* who considers science as a" new natural magic" (NR 206) and includes astrology and alchemy within its purview. It is precisely this amalgam of science and Hermeticism that Eco transmutes science in to spirituality within the crucible of his fictional universe, whose focal point is the interrelationship between them.

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