

## Healing the Breach of Faith Toward Everything That Is:

### Integration in Academia

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[...] an attitude of doubt, however, which in the West was first clearly stated by Descartes, involves a breach of faith toward everything that is. This breach entails the hostility of all against all and against all things. Nothing can be sure and immediately certain any more except one thing, the doubting ego. If this were not there, who would be capable of doubting at all, of thinking, of having insights? *Cogito ergo sum*. However, in order really to secure this one single certainty and to make it powerful, Western thinkers since then have been increasingly driven to acquire mastery over the phenomena that aggressively confronts the ego...

[Indian thinkers] have not seen beings as things to be represented in the consciousness of an ego-centered human subject in the forms of inner-psychic pictures, but as things revealing themselves directly to the human existence. This approach cannot be a mere astonishment and amazement at the fact that something is – and how it is. Nor can it be a doubting of the reality of the world. Only a human being who is deeply moved by awe and who remains in a state of reverence does not fall prey to the will-to-explore-and-dominate that which shows itself to him, but remains all ears and eyes for the summons of the awe-inspiring phenomena...

[Right thinking] consists in a perfect orientation of everyday life in the direction of non-violence, non-attachment, honesty and purity. This is followed by true meditation, in which he who meditates becomes one with the ultimate truth... A millennial experience has led [India's best thinkers] to the insight that unmediated and liberating knowledge of the deepest ground-nature of all phenomena is bestowed on him who meditates in a spirit of awe and reverence...

Gopinath Kaviraj, philosopher saint of the 20<sup>th</sup> century, quoted in Medard Boss *A Psychiatrist Discovers India*, 1965:108, 120-121. <sup>1</sup>

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<sup>1</sup> Medard Boss never names his interlocutor, referring to him simply as “the master” or “the sage”. His identity was revealed to me by the late Dr. Giri Deshingkar of the Center for the Study of Developing Societies in Delhi. He told me that Gopinath Kaviraj’s identity in this book is well known in India.

## **Introduction**

The modern paradigm of knowledge, formulated in the 17<sup>th</sup> century, was explicitly described by both Francis Bacon and René Descartes as one that would deliver mastery and control of the world: knowledge as power. A knowledge well suited to the emergence around that time of an ever expanding market economy and to the beginnings of conquest and colonization. A knowledge, as James Scott has argued in his book *Seeing Like a State*<sup>2</sup> also functional to the then emerging centralized Nation-State, with its need to survey the nation from a centralized vantage point. This way of knowing did lead to the conquest of the world, both human and more-than-human. But this breach of faith towards everything that is has also led to deep alienation, meaninglessness and despair. The manifestation of these in the United States takes ever more frightening forms. The most disturbing are the bursts of deadly violence in schools, the steadily lowering age of suicide with children as young as five being reported, the epidemic proportion of addictive behavior of all kinds and the global environmental crisis. What is happening to people and to the rest of the world is of a piece, although such a perspective is not commonly taken. The more-than-human world, along with a good part of the human world, are sick. It is only in a worldview in which there is a “breach of faith towards everything that is” that this correlation becomes obscured.

The crisis that at present is most visible and uppermost in people’s mind in this country is that of the threat of exterior terrorism. One important aspect of that crisis

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<sup>2</sup> James C. Scott *Seeing Like a State: How certain schemes to improve the human condition have failed* ; Yale University Press, 1998.

seems to be the failure of a genuinely pluralistic worldview and ways of knowing. The fundamentalist terrorists mirror the modernist claim to certainty that is the legacy of the scientific revolution. The claim to certainty is not made in a religious idiom since one of its core characteristics is precisely that it lies outside the domain of religion. It is just this separation which eventually made possible a pluralistic legislation protecting the freedom of religious expression. However, the fact that freedom of religious expression is protected in the United States does not at all mean that there exists a pluralism in the domain of knowledge. The two domains – that of knowledge and that of religion - are seen as “non overlapping magisteria” (NOMA) to use Stephen Jay Gould’s memorable phrase. But to the terrorists, this distinction seems to vanish.

From the secular domain of knowledge has emerged ways of doing, thinking, and being that are overrunning the world in the name of “progress”. Progress grows out of the applications of scientific discoveries and are thus understood, by definition, as not cultural or religious and thus good for everyone. However, this “progress” does in fact deeply affect people’s view of what life is about, their view of morality, faith, and reality.

<sup>3</sup> And thus, inevitably, everyone does not agree to the supposedly self-evident goodness of this progress that is overtaking the world. Furthermore, as Gopinath Kaviraj’s excerpt indicates, not everyone has the same view of what knowledge consists of. In particular, no society except the modern Western one, seems to have separated knowledge from

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<sup>3</sup> A group of us have argued this point over several books that emerged from a trans-disciplinary international collaboration over a period of several years. See F Apffel-Marglin & S.A. Marglin eds. *Dominating Knowledge: Culture, Development and Resistance* OUP Clarendon, 1990. Tariq Banuri & F. Apffel-Marglin *Who Will Save the Forests? Knowledge, Development and the Environmental Crisis*. Zed Books, 1993. F. Apffel-Marglin & S.A. Marglin eds. *Decolonizing Knowledge: From Development to Dialogue*, OUP Clarendon, 1996. F. Apffel-Marglin with PRATEC *The Spirit of Regeneration: Andean culture confronting Western notions of development* Zed Books, 1998.

morality, culture, and spirituality, in other words, to have separated knowledge from wisdom. The Indian example chosen for the epigraph is in this sense rather representative of non Western attitudes towards knowledge.

The Chinese understanding of knowledge is also very different from the modern Western one. The object of knowledge for the Chinese was to find out the Tao of Heaven in order to be able to go along with it, to live according to the Tao.<sup>4</sup> In other words the Chinese, like the Indians, did not have our “breach of faith towards everything that is” and did not separate morality and spirituality from the pursuit of knowledge. What they were after is wisdom rather than purely intellectual knowledge for its own sake.

According to Jatinder Bajaj, who reviews Joseph Needham’s argument as to why the Chinese did not have a scientific revolution, even though the Chinese were more advanced technologically in the 15<sup>th</sup> and 16<sup>th</sup> century than Europe, is because they never developed a NOMA type of arrangement. They also never invented a breach of faith towards everything that is.

The issue goes deeper than the fact that spreading “progress” to ever wider groups of people affects their ways of life and their sense of morality. “Progress”, those benefits from the application of scientific discoveries, is not in itself a neutral vehicle. Or rather the knowledge itself, in spite of the ideology of neutrality and freedom from values attached to it, in fact carries within itself a particular ethic. Terrorists and other critics of modern Western hegemony seem to react to the felt impact of this implicit ethic even if

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<sup>4</sup> Jatinder K. Bajaj “Francis Bacon, the First Philosopher of Modern Science: A Non-Western View” in Ashis Nandy ed. *Science, Hegemony, and Violence: A Requiem for Modernity*, OUP, Delhi, Bombay, Calcutta, Madras 1988:57-58.

they do not typically articulate it. This supposedly objective, value-free and secular knowledge ends up being, despite claims to the contrary, an ethic.

As Parker Palmer has argued, “the images of the knower, the known, and their relationship are formative in the way an educated person not only thinks but acts... the relation of the knower to the known becomes the relation of the living self to the larger world... our epistemology is quietly transformed into our ethic.” The ontological gulf between the knower and the known, this breach of faith between the two, leads to a way of life in which the known is controlled, mastered, used for one’s benefit. In the following quote, Palmer seems to echo some of Gopinath Kaviraj’s sentiments. This is what Palmer says about the word “objective”:

The Latin root of “objective” means to ‘put against, to oppose’. In German its literal translation is ‘standing-over-against-ness’. This image uncovers another quality of modern knowledge: it puts us in an adversary relationship with each other and our world. We seek knowledge in order to resist chaos, to rearrange reality, or to alter the constructions others have made. We value knowledge that enables us to coerce the world into meeting our needs – no matter how much violence we must do. Thus our knowledge of the atom has brought us into opposition to the ecology of the earth, to the welfare of society, to the survival of the human species itself. Objective knowledge has unwittingly fulfilled its root meaning: it has made us adversaries of ourselves.<sup>5</sup>

Our government’s response to the exterior terrorists is in keeping with this ethic: more coercion, more violence in order to bring about the desired result. It seems incapable of seeing with the eyes of those who are on the receiving end of this adversarial and violent epistemology-cum-ethics that has come to pervade the culture of modernity.

Faced with the extremism of both the internal terrorism of kids using guns to kill their comrades and teachers in schools and with exterior terrorism, one senses an extreme

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<sup>5</sup> Parker Palmer *To Know as we are Known: Education as a Spiritual Journey* Harper & Collins Paperback Edition 1993:23.

helplessness and frustration on the part of both these groups. Because of asymmetries of power and voice in both situations, the fact that what is offered to one as positive, neutral and to be emulated is instead experienced as violent, dominating and alienating does not become audible and visible. However, conversation and dialogue are forestalled not only by asymmetries of power but also, we would argue, by the claim to certainty, a certainty constitutively separated from values and aesthetics. In other words, the implicit ethic of aggression and violence embedded in modern epistemology is denied and thus cannot be addressed. Terrorism, both interior and exterior, is of course the limiting and exceptional case. The vast majority of people react with a variety of self-destructive behaviors. This is particularly evident on college campuses where an epidemic of eating and other addictive disorders has been going on.

Fortunately, violence toward others or toward oneself has not been the only response. These crisis times have also given rise to a great burst of creative responses of all kinds. A growing number of people are turning to a great variety of spiritual practices such as meditation, yoga, or other forms of centering and integrating. These are far from being included in campuses' curricula, but they are emerging here and there. These practices are still overwhelmingly conceived of as outside the knowledge domain. They are generally understood as means toward a greater psychological and physical health. They are definitely that. We would argue, however, that such practices need to become an integral and necessary part of the pursuit of a new understanding of knowledge, one that seeks wisdom rather than certain knowledge.

The new knowledge created in the 17<sup>th</sup> century has delivered enormous technological, intellectual, economic, and political power to the modern West. We seem to be collectively drunk on or addicted to such power. But, as we argued above, this power comes at a terrible price in terms of individual, social and environmental balance. Literally, we, and the world are falling apart. We need to overcome the view that these deleterious consequences are side effects that can be taken care of by more of the same medicine. We need to overcome the too quick response of the “technological fix”. We need to go to the root of the issue. Nothing short of this will enable us to make visible the built-in nature of these consequences.

Such an endeavor needs to be undertaken in several different forms. We will highlight only three of these. **Part 1.** A new look at the history of the search for and creation of non-religious certainty in 16<sup>th</sup> and 17<sup>th</sup> centuries Western Europe. This will enable us to see that the separation between values and facts, knower and known, was a successful answer to very real dilemmas of the time. At the time the problem of certainty was also a political problem of stability. This in turn will make clear that the exigencies of our times are radically different and require a radically different approach to knowledge, one that seeks wisdom rather than knowledge.<sup>6</sup> One that heals the breach of faith toward everything that is. One that integrates the heart, the mind and the spirit. **Part 2.** A new look at the bracketing of the self in inquiry, required by objectivity and the breach of faith. Healing this breach means that the self is implicated in inquiry and cannot be bracketed or erased. The recovery of the self in inquiry requires the cultivation of a

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<sup>6</sup> On this need see Nicholas Maxwell *From Knowledge to Wisdom: A Revolution in the Aims and Methods of Science*, Oxford: Basil Blackwell; 1984.

certain type of self: the non-violent, non-attached, honest, integrated self. Such cultivation requires a discipline of praxis, such as meditation. It cannot be attained through purely intellectual means since it is not essentially a thinking but a being and a doing. Only thus can knowledge be transformed into wisdom.

**Part 3.** An attempt to sketch the contours of a new epistemology-cum-ontology-cum-ethics through drawing out the philosophical and spiritual implications of the most recent developments in physics.

**Part I: Science as a cultural construct; a historical overview.**

Modern science emerged in its final form in the latter half of the 17<sup>th</sup> century in Western Europe as the most convincing response to the loss of certainty brought about by the explosion of new spiritual-cum-epistemological movements in the Renaissance as well as by the event of the Reformation and its aftermath. The response was at once epistemological and political and it was successful. The politico-religious events of the period of the Renaissance and Reformation gave rise to a new cultural map, the cultural map of modernity.

The Renaissance saw the influx of ancient Greek, Latin, Arabic and Jewish texts. It was a time of increased long distance trade and of the dissolution of the feudal manorial system. It gave rise to a burst of new ideas and new movements and most importantly to the Reformation. As long as these ideas were restricted to small elite groups, it did not create major social dislocations. This changed with the Reformation and the echo it found among the powerful as well as other classes. The sixteenth century



saw no less than eight bloody civil wars in France between the protestant Huguenots and the Catholics as well as major religious conflicts in England.<sup>7</sup> The voice of the Renaissance Humanists as well as that of the more pluralistically inclined occult philosophers was drowned by the fury of both Protestants and Catholics as well as the raging fires of the witch-hunts. As historian Mack Holt has argued, Huguenots were seen as a cancer and a rot in society and they had to be not only exterminated but humiliated and their spaces purified by fire and water. Holt quotes a doctor from the Sorbonne, Jean de la Vacquerie on religion and schism writing in 1560:

Religion is the primary and principal foundation of all order, and the bourgeois and citizens are more bound together and united by it than by their trade in merchandise, the communication of laws, or anything else in a civil society...and that there is never more trouble or a greater tempest in a commonwealth than when there is some schism or dissension concerning the issue of religion there...The Huguenots have always been the mortal enemies of kings and great nobles...and by their false doctrines they have often incited their subjects to rebel against them, and to forsake the obedience, the recognition, and even the respect they owe to their masters and seigneurs.<sup>8</sup>

The St Batholomew's massacres of 1572 saw the populace in Paris and later in many provincial towns respond to the court's assassination of the Huguenot entourage of Henri of Navarre at his wedding by savagely falling upon Huguenot men, women and children, mutilating their bodies and burning their houses. This massacre is perhaps the most well known, but unfortunately not the only one. Lethal fury was shared on both sides, each considering the other heretic. In this series of civil wars, both sides sought and received

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<sup>7</sup> I will restrict myself here principally to the French case since I am more familiar with it. F.A.M.

<sup>8</sup> Jean de la Vacquerie *Catholique remonstrance aux Roys et princes Chrestiens, a tous magistrats & Gouverneurs de républiques* (Paris: Claude Fremy, 1560:23,30) quoted in Mack P. Holt *The French Wars of Religion, 1562-1629*. CUP 1995:44.

support internationally. Eventually, this conflict and similar ones in other parts of Europe, erupted into a full scale international conflict, the thirty years war from 1618 to 1648.

Huguenots questioned publicly the right of an unjust king to rule, arguing that the people ultimately were the source of the king's power and not God and the Church. The king's coronation, the *sacre*, was a ritual that transformed him into a God-King and a priest and made his person inviolate and able to perform miracles such as curing through touch. The oil used for the *sacre* was in the bishop of Rheims' custody. Thus French Kingship was intimately tied to the Church even though it had won a measure of autonomy in its powers to appoint bishops, archbishops and other church figures, resulting in what is known as Gallican kingship. The Huguenots were thus accused of *lese majesté*, a crime of enormous proportions, at once political and religious.

What the quote from Jean de la Vacquerie underlines is that polity and religion were one. For the polity to be unified, the religion had to also be. This had been the case in France and other European countries for centuries. The Church furthermore had had a monopoly on knowledge all along, the Cathedral Schools of the 12<sup>th</sup> and 13<sup>th</sup> century and the Universities that followed them, all being Church establishments.<sup>9</sup>

The culture that eventually gave rise to modern science grew in the fertile, albeit unstable, soil of Renaissance Europe. The natural philosophers (the term science only appeared in late 17<sup>th</sup>, early 18<sup>th</sup> century) drew principally from two major intellectual strands: the newly (re)discovered classical Greek philosophers who were being translated mostly by Arabs and the many occult philosophies that emerged in Europe then. The

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<sup>9</sup> On the Church's monopoly on knowledge, see especially David Noble *A World Without Women: The Christian Clerical Culture of Western Science*, OUP, 1992.

writings of Aristotle, as translated and commented upon by Ibn Rushd (Averroes), were particularly influential, opening a whole area of *natural* explanation for phenomena, utilizing reason. Averroes' works were declared heretical by the Pope in 1277, indicating that the rise of a mode of inquiry independent from Church control was threatening to the Church. This led the great synthesizer of Christian theology and Aristotle, St. Thomas Aquinas, to lay down his pen at the age of 40 and recant his writings. Averroes, however, continued to be taught in the more independent Italian principalities such as Padua and Bologna. Both Copernicus and Galileo studied at Padua.

Later, with the Renaissance proper, other texts appeared in Europe due to both the fall of Constantinople to the Turks in 1453 and the expulsion of the Jews from Spain in 1492. Many Greek scholars left Constantinople for Europe after 1453. The writings of a mythical ancient Egyptian magician/sage, Hermes Trismegistus became widely circulated and influential in certain circles at that time. So did the introduction of a Jewish mystical system, Kabbalah, which was taken over by Pico della Mirandola, Ficino, Agrippa, Giorgi and Reuchlin in late 15<sup>th</sup> and early 16<sup>th</sup> century, and given a thin Christian veneer.

<sup>10</sup> Christian Cabala, Hermeticism, the works of Arab physicians and Alchemy, Neoplatonism, as well as the practical knowledge of many popular wise women and men, were the main ingredients in various Renaissance trends referred to as “occult philosophy”. Magic, that is the effecting of transformations in this world through

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<sup>10</sup> Frances Yates, in her book *The Occult Philosophy in the Elizabethan Age*, Routledge, 1979, points out that the first Christian Cabala was written in Spain in the 13<sup>th</sup> century, that is contemporarily with the flowering of Jewish Kabbalah, by Ramon Lull in 1274. Lull wrote in Arabic and did not use the Jewish letters so important in Jewish Kabbalah. Pico and Ficino, though, used Jewish letters and the mysticism of their number (*gematria*). Lull was the first to argue that the Tetragrammaton, using Cabalistic method, revealed the name of Jesus, thus proving that it was the name of the Messiah through ancient Jewish texts. Pico and Ficino followed in this path.

incantations and the manipulation of certain objects, was an important part of this movement. In England the leader of Elizabethan Renaissance was the Christian cabalist John Dee, (1527-1608).

This body of thought claimed to be built on the common ground of all the traditions known to that world, namely Christianity, Judaism, Islam and Gentile (or pagan). The first Christian cabalist, Ramon Lull, writes at the same time that Moses de Leon is writing the greatest Jewish Kabbalist text, the Zohar, around 1274.<sup>11</sup> Lull's work is a direct influence on the later 15<sup>th</sup> century occult philosophers. In this work, the then universally believed theory of the four elements, earth, water, air, and fire with their corresponding qualities of cold, moist, dry and hot is expounded. These elements and qualities pervade the terrestrial plane as well as the astral plane. The planets and the twelve signs of the zodiac had predominantly cold, moist, dry or hot influences, thus linking the human, natural and celestial spheres in a single and continuous domain.

This non-dualist cosmology characterized occult philosophy throughout its history. It soon, however, incurred the condemnation of the Church. It was associated with magic since it involved the manipulation of elements of the world along with incantations and other acts to effect transformations in the world and in the philosopher himself.<sup>12</sup> This was particularly true of alchemy. Christian doctrine recognized two kinds of efficient causes of events: one through natural causes and the other through signs or

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<sup>11</sup> On the Zohar and Jewish Kabbalah see especially Gershom Scholem *Major Trends in Jewish Mysticism* New York, Schocken Books, 1955 (1946) and Lawrence Fine ed. *Essential Papers on Kabbalah* New York University Press, 1995.

Frances Yates remarks that through Kabbalah, Jewish mysticism had a profound influence on the occult philosophy of the Renaissance.

<sup>12</sup> All the known occult philosophers were men; this does not mean that women did not participate but they have disappeared from the record. Women, however, were predominant in popular magic and healing.

symbols. However, only church designated signs were effective. Other signs, according to Aquinas, were superstitious although he did recognize that formally nothing could differentiate them.<sup>13</sup> Europe was (and to some extent still is) full of objects and places that were firmly believed to be efficacious in the cure of a variety of disorders and complaints. These were mostly places and objects sacralized by the power of the saints or relics. One important such object was the oil in the *ampolla* in the custody of the archbishop of Rheims in France with which the king was anointed and transformed into a god-King. Thus for Catholics, the differentiation between an efficacious Christian symbol and an inefficacious superstitious and always potentially satanic one was crucial.

The occult philosophers' use of magic opened them to the allegation that they were practicing black magic; that they were dangerous persons. They did not restrict themselves only to those places and objects authorized by the Church as being efficacious. From the point of view of the Church, they were thus engaged in superstitious and potentially satanic practices, that is in magic. This associated them with the witches whom the Pope had declared heretics in 1484.<sup>14</sup>

This corresponded to the time when Pico della Mirandola, Ficino and Giorgi were writing their Christian cabalistic and hermetic texts and making them known in Rome. The association of the occult philosophers with the witches led to their demise, swept in the craze of the witch hunts of the 16<sup>th</sup> and 17<sup>th</sup> century. Like popular magic, occult philosophy and magic did not restrict the efficacy of signs to those authorized by the

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<sup>13</sup> See Nicole Belmont "Superstition and popular religion in Western societies" in M. Izard and P. Smith eds. *Between Belief and Transgression: Structuralist essays in religion, history, and myth*. Chicago University Press, 1982:9-23.

<sup>14</sup> See David Noble *A World Without Women: The Christian Clerical Culture of Western Science*, Oxford University Press, 1992.

Church, but rather saw the whole of nature as alive, infused with spirits, angels and demons. The same elements with their corresponding qualities pervaded the world, both terrestrial and astral, as well as humans, both in their bodies and their psyches.<sup>15</sup>

The ‘breach of faith towards everything that is’ of modern science was prefigured in the works of certain reformers, particularly that of Huldricht Zwingli. Zwingly postulated two radically separate aspects of reality, namely what is intrinsically so or the literal and what is symbolically true, which refers to the invisible deity.<sup>16</sup> In this Protestant worldview, God and humans could only be united in the mind through belief and faith, whereas God and the external world became radically estranged.

For both Protestants and Catholics, the witches and the occult philosophers became heretics. Both Protestants and Catholics unleashed their respective inquisitions against those two groups.<sup>17</sup> For Protestants, the Catholics were lumped with the practitioners of magic. It attacked not only the cult of relics and other sacred objects with magical properties, and the buying of indulgences, but labeled the core sacrament of the Eucharist as superstitious and pure magic. Protestants insisted on the metaphorical nature of transubstantiation, where the wafer and the wine recalled Christ’s sacrifice. The Protestants rejected the Catholic doctrine of an actual transformation into the body and

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<sup>15</sup> This aspect of Renaissance occult philosophy and popular magic has been stressed Carolyn Merchant in her book *The Death of Nature: Women, Ecology and the Scientific Revolution*, Harper & Row, 1980.

<sup>16</sup> On this see Jit Singh Uberoi *Science and Culture*, Delhi, Oxford University Press, 1978. See also P. Burke “Historians, anthropologists, and symbols” in E. Ohnuki-Tierney ed. *Culture Through Time* Stanford University Press, 1990.

<sup>17</sup> Francois Bayrou in his book *Ils portaient l’écharpe blanche: l’aventure des premiers réformés, des guerres de religions a l’édit de Nantes, de la Révocation a la Révolution* (Patis: Berbard Grasset 1998) gives evidence for the existence of both Protestant and Catholic Inquisitions.

blood of Christ. And of course for the Catholics, the Protestants were heretics to be exterminated and purified, if they could not be converted.

The 16<sup>th</sup> and 17<sup>th</sup> century were thus marked by the violence of the witch-hunts and of the wars of religion. With the assassination of Henri IV, formerly Henri de Navarre, in 1610, France's efforts to restore stability by protecting some limited rights for the Huguenots, had failed. Henri IV's Edit de Nantes signed in 1598 began to be dismantled and this paved the way for the later persecution of the Huguenots by Louis XIV and their eventual expulsion from France at the end of the 17<sup>th</sup> century. And as Holt argues persuasively, the Edit de Nantes did not represent an early attempt at a pluralistic state. This was never Henri IV's intention. He only was buying the time it would take to bring the Huguenots back to the true faith and reunify his kingdom. Henri IV could not imagine a kingdom divided religiously. According to Holt, his conversion to Catholicism was genuine and not motivated solely by political concerns. Henri IV, along with the great majority of his countrymen believed in "one faith, one law, one king" (*une foi, une loi, un roi*).

### **A new non-religious certainty.**

The Catholic priest Marin Mersenne, close associate of Descartes and co-founder of the French Académie, paved the way for Descartes' dualist and mechanical philosophy by publishing in Paris his *Quaestiones in Genesim* in 1623. In this work he devoted particular attention to the attack on Giordano Bruno's occult philosophy as well as on that of the

English occult philosopher Fludd and his Rosicrucian movement, both profoundly influenced by Christian Cabala. As Frances Yates articulates it:

By eliminating Giorgi and all that he stood for in Renaissance tradition, Mersenne banished the astral linkings of universal harmony, cutting off at the roots the connections of the psyche with the cosmos. This appeased the witch-hunters and made the world safe for Descartes, which was what Mersenne was nervously trying to do.<sup>18</sup>

This corresponded to the early phase of the thirty years war and to the height of the witch- hunts.

Stephen Toulmin in his book *Cosmopolis* gives us the context of Descartes' life.<sup>19</sup> Toulmin focuses only on the conflict between Protestants and Catholics and in particular on Henri IV's assassination and the thirty years war, both of which touched Descartes' life directly. It is, however, vital to include also the attack on occult Renaissance philosophy and its successful erasure through the witch-hunts as part of that context. Descartes' dualistic and mechanical philosophy was the antithesis of that of the occult philosophers. It was clear by this time that a non-dualistic, vitalistic philosophy was doomed, as the occult philosophers were being doomed along with the witches. With the defeat of occult philosophy, there only remained the two Christian churches with their intractable insistence on possessing the one truth, locked in an irresolvable political and epistemological deadlock.

Descartes built his philosophy on the epistemological terrain the two warring Protestant and Catholic factions had in common. That common terrain was the realm of natural causes that could be explained by the use of reason. This terrain was separate

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<sup>18</sup> Yates, Op. Cit:174.

<sup>19</sup> Stephen Toulmin *Cosmopolis: The Hidden Agenda of Modernity*, The Free Press, 1990.



from the world of signs for both Catholics and Protestants, albeit in different ways. For the Catholics, the world of signs was one in which the power of the saints resided in certain object or places, that is in the world itself, but unlike occult philosophy, not in the rest of the world and especially not in places not authorized by the Church. For the Protestants, the world of signs referred only to human linguistic metaphors, products of the mind, and could not inhere in the world itself.

The success of the new mechanistic dualistic philosophy was in great part due to the fact that, unlike occult philosophy, this philosophy did not challenge either Protestant or Catholic doctrines. It rather established itself in the epistemological space that they shared. According to the Finnish philosopher Georg von Wright (who succeeded Wittgenstein at Cambridge), with this move “[t]he new science [became] a welcome ally in fighting heresies and exorcising the inferior ghosts, leaving the one superghost, the Christian Trinitarian God, sovereign ruler of the universe.”<sup>20</sup>

In the maelstrom of early 17<sup>th</sup> century, escaping the wrath of the inquisition and escaping from the deadlock between the two warring factions of Christianity, were not only epistemological moves, but survival tactics. These moves were eminently political, and as argued by Toulmin, consciously undertaken to restore the fractured certainty and unity without which Europe could not imagine itself.

It remained for Robert Boyle to operationalize and institutionalize this philosophy. Boyle had to clearly and decisively distance himself from his alchemical past. This he did through several moves. One was to make the laboratory a public space

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<sup>20</sup> Georg H. von Wright “Images of Science and Forms of Rationality” in S.J. Doorman ed. *Images of Science: Scientific Practice and the Public*, Aldershot Brookfield, Hong Kong, Singapore, Sydney: Gower; 1991:17.

whereas for occult philosophers it had been a secret, private space. In this public space he devised the method of public witnessing, inspired by courtroom procedures, in order to establish through consensus what had happened in the experiment. This was the foundation upon which he would build his method: the *matter of fact*. In this manner, both the suspicion of occultism and the skepticism of reliance on the fallible senses were addressed. The witnessing by several reliable persons resolved the limitations of the fallible senses. Boyle's modest witness had to be a gentleman of good reputation, which meant he could not be suspected of occult leanings.<sup>21</sup> The modest witness could not be a woman since her modesty was of the body and not of the mind.<sup>22</sup> Furthermore, women had been so closely associated with the so-called enthusiast movements in Interregnum England, that any association with women risked tainting the enterprise. Furthermore, according to David Noble, the association between women and heresy dated back to the earlier association of women and the Cathars whom the Church exterminated in the 13<sup>th</sup> century. Such an association had resurfaced with the witches and the enthusiast movements where women were highly visible. Thus, the men of science's flight from heresy was also a flight from women.<sup>23</sup> The first woman to gain entrance into the Royal Society did so only in 1940!

The use of instruments to question nature had been advocated already by Francis Bacon, an alchemist and natural philosopher. By taking the instrument out of the study of the alchemist and into Boyle's public laboratory, Boyle simultaneously took the

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<sup>21</sup> On Boyle's method see Steven Shapin and Simon Schaffer *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life*. Princeton University Press; 1985.

<sup>22</sup> On this see especially Donna Haraway *Modest\_Witness@Second\_Millennium. FemaleMan\_Meets\_OncoMouseTM*, Routledge, 1997:23-45.

<sup>23</sup> On this see David Noble Op. Cit. 206, 211.

experimenter out of the equation. No longer was the manipulation of matter to be also a refinement of the philosopher's soul. The breach of faith towards everything that is was operationalized. The modesty of the witness meant his self-effacing manner and his restraint. In the laboratory, talk of religion and politics was strictly out of bounds as were *ad hominen* criticisms. The aim was to eliminate human bias, whether due to politics, religion or the senses. All of the three 'technologies' employed by Boyle,<sup>24</sup> the material one, namely the use of a machine, the air-pump, to produce facts; the social one, namely who the modest witnesses were to be; and the literary one to make known the findings to non witnesses, namely the style of writing which today we call the 'objective' style. All three had as their goal to hear nature herself speak directly. To establish a method that would be a perfect 'mirror of nature'. Through this method, certain knowledge could be established in a manner that totally separated it from the religious and political sphere where conflicts raged.

Boyle also refined what he meant by the material world when he declared that his use of the word "vacuum" left out all metaphysical considerations. He defined it as referring to the glass sphere of his air-pump when all the air had been evacuated. What else there could be inside it, he declared to be a *metaphysical* issue, outside of the domain of experimental science.

The aim here again was to avoid irresolvable conflict such as the one that raged at the time among experimenters between vacuists and plenists. With this new epistemological boundary, Boyle not only separated out his science from religion and

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<sup>24</sup> The terminology is Shapin and Schaffer's, Op. Cit. Chapter 2.

politics but also from philosophy. Here again he operationalized the extreme dualism and materialism of Descartes. This method was exceptionally fruitful and was thus imitated by those who inquired into human affairs. They called themselves eventually the “social sciences”, highlighting their template. The arts and humanities were separated out since the three technologies did not apply in that realm. Thus was created the fragmentation of fields of knowledge and the pursuit of knowledge for knowledge’s sake. This new method gave birth to the sundering of life and knowledge.

The shift to the pursuit of wisdom need not jettison the rigor, precision and clarity that the scientific method has given us. The pursuit of wisdom will require the same rigor, precision and clarity to the refining of the self. Integration of self and world, and self and other, of mind, heart and spirit, need not mean the jettisoning of these hallmarks of modern science. They will rather build in ethical and aesthetic considerations that will transform knowledge into wisdom. And as Nicholas Maxwell has argued in a recent paper, this integration will always be local since life’s conditions are experienced differently in different places (and times).<sup>25</sup> A move from knowledge to wisdom means also a move from certainty to pluralism.

## **Part II: The Integration of the Self.**

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<sup>25</sup> Nicholas Maxwell “From Knowledge to Wisdom: The Need for an Academic Revolution” nd.

[Mirabai, I thought that this would be your part]

**Part III. The Promise of the New Physics.**

[Arthur, I thought that this could be your part. I also thought you might like to read and mention a recent column in the Wall Street Journal by its science reporter, Sharon Begley (Friday Dec 13, 2002 B1) entitled “Can Hermeneutics and Quantum Theory Shape your Reality?” in which she remarks that at a recent physicists’ meeting, she felt that the effect of Alan Sokal’s hoax in Social Text had waned and physicists were speaking like those Sokal had made fun of. If the WSJ begins to take seriously what is happening in the new physics, can the rest of society be far behind? ]