

Jude P. Dougherty

Western Culture: A Collective Achievement

“A Gothic cathedral is a collective achievement, the outcome of countless craftsmen working across the centuries toward a common goal. It is not the arena for idiosyncratic personal expression.” So wrote Michael J. Lewis in a timely essay.¹ Something similar may be said of an intellectual tradition that was being formed simultaneously with the coming into being of European cathedrals.

Our subject is the formation of Western culture and the intellectual tools and the social conditions that contributed to its being. Stephen Gaukroger provides this insight. Like those great cathedrals, modern science is the outcome of a distinctive culture long in the making, a culture whose history begins in classical antiquity.² Presently and specifically, what needs to be rebuilt in company with the Cathedral Notre Dame is a former Greek confidence in the human intellect, in its ability to reason to truths unseen that acknowledge the immaterial character of human intellection, human nature’s spiritual component.

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¹ “Rebuilding Notre Dame: Not so Fast,” *Wall Street Journal*, May 2, 2019. Available online—see the section *References* for details. The article comments on the aftermath of the 2019 fire of the Notre-Dame Cathedral in Paris, France.

² See *The Emergence of a Scientific Culture: Science and the Shaping of Modernity, 1210–1685* (Oxford: Clarendon Press, 2006).

A metaphysics and a realistic epistemology is required to facilitate such reasoning; but where is one to look to its revival? Given their endless production of brain and neural studies and reviewing contemporary philosophical literature in general, one might conclude that the primary objective of major university presses today is to reduce man to the status of a purely material organism. Other disciplines take their cue from what seems to be the latest biochemical research and take man's wholly material nature for granted. Alternative accounts of human nature are derided as faith-based or theologically derived.

In 1925, the distinguished American philosopher, Alfred North Whitehead, delivered the prestigious Lowell Lectures at Harvard University.³ Those lectures were significant because, for a predominantly American audience, Whitehead challenged the Enlightenment view that only with the repudiation of a religious world view could modern science have emerged from a dark age.⁴

Examining the relation between science and culture, Whitehead put to himself a fundamental question: Why did modern science emerge in the West in the sixteenth and seventeenth centuries when all the conditions required for its birth were seemingly in place in classical antiquity? Whitehead's attempt to answer his own question led him to examine the Medieval and Renaissance background to modernity. Seven hundred years had elapsed between the fall of the Roman Empire and Newtonian physics. Whitehead's investigation led him to the conclusion that the Middle Ages had prepared the way. He wrote,

The Middle Ages formed one long training of the intellect in Western Europe in the sense of order. There may have been some

³ Subsequently published as *Science and the Modern World* (New York: Macmillan, 1925, first edition; New York: The Free Press, 1967, cited hereafter).

⁴ It must be noted that Whitehead was writing a generation before the in-depth studies of Marshall Clagget, A. C. Crombie, and Analeise Maier, and before the monumental work of Pierre Duhem became available in the English-speaking world.

deficiency with respect to practice, but the idea never for a moment lost its grip. It was predominantly an era of orderly thought, rational through and through.⁵

Whitehead attributes the Medieval habit of definite and exact thought to the Greek philosophers, but in this passage quoted he is less interested in the metaphysics that undergirds induction than he is in the reciprocal influence of theory and practice. He writes,

We owe to St. Benedict that the monasteries were the homes of practical agriculturalists as well as saints, artists and men of learning. The alliance of science and technology, by which learning is kept in contact with irreducible and stubborn facts owes much to the practical bent of the early Benedictines.⁶

Whitehead could cite monastic interest in medicine, in the improvement of farm instruments, in the harnessing of wind and water power, in mining, and in the promotion of crafts. A. C. Crombie records that, by the eleventh century, some abbeys were to have as many as five water wheels, each powering a different shop.⁷ Thus Whitehead draws the conclusion: "Modern science derives from Rome [Monte Cassino] as well as from Greece, and this Roman strain explains its gain in an energy of thought kept closely in contact with the world of facts."⁸

A professor of history at the University of California at Los Angeles, Lynn White, Jr., picks up the theme in an essay entitled, "The Virgin and Dynamo Reconsidered."⁹ He offers a slightly different, but compatible, perspective, one that is also part of the present story. "The

⁵ Whitehead, *Science and the Modern World*, 11.

⁶ *Ibid.*, 15.

⁷ See Jude P. Dougherty, *Wretched Aristotle: Using the Past to Rescue the Future* (Lanham, Md.: Lexington Books, 2009), 174.

⁸ Whitehead, *Science and the Modern World*, 15.

⁹ See Lynn White, Jr., "The Virgin and Dynamo Reconsidered," *The American Scholar* 27, no. 2 (1958): 183–194. This is a prelude to his massive study, *Medieval Technology and Social Change* (Oxford: Oxford University Press, 1962).

chief glory of the later Middle Ages,” White says, “was not its cathedrals or its epics or its scholasticism; it was the building for the first time in history a complex civilization which rested not on the backs of sweating slaves and coolies but primarily on non-human power.”¹⁰ White goes on to say of the Benedictines that they were “the first intellectuals in the history of the West to get dirt under their fingernails.”¹¹ In the ancient world of Greece and Rome, manual work was the lot of the slave, whereas Benedict prescribed for his followers both work and prayer. In an agricultural society, that work entailed dirt under the fingernails or something similar. The significance we will attempt to show.

White’s thesis is supported notably by two distinguished historians of science and culture, Pierre-Maxime Schuhl and Benjamin Farrington. Schuhl wrote in the mid-decades of the twentieth century as chairman of the Sorbonne’s philosophy department and as editor of the *Revue Philosophique*. Benjamin Farrington is known for his multiple works on Greek science.

Science, according to Farrington, whatever its ultimate development, has its origins in techniques, in the arts, and crafts, in the various activities by which man keeps life going on. Its source is experience, its aims practical, its only test is that it works. Science derives from contact with things. It is dependent on the evidence of the senses. It requires logic and the elaboration of theory. Finally, to understand science of any society is to be acquainted not only with its degree of material advancement but with its political structure. “There is no such thing as science *in vacuo*,” Farrington insists. “There is only the science of a particular society at a particular place and time.”¹² Farrington goes so

¹⁰ White, “The Virgin and Dynamo Reconsidered,” 187.

¹¹ *Ibid.*

¹² Benjamin Farrington, *Greek Science: Its Meaning for Us (Thales to Aristotle)* (Penguin Books, 1944), 15.

far as to argue that the division of labor in Greek and Roman society retarded its development in the natural sciences.

Both Whitehead and White agree that, from the decline of Roman civilization to the rise of European universities in the twelfth century (a period of 700 years), both as bearers of classical learning and as cultivators in their own right of science and technology, the Benedictine monasteries came to play an important role in the development of a Western science.

The story may begin at Monte Cassino, but one of Benedict's earliest disciples was Cassiodorus, one of the most learned men of his day, who lived from 490 to 585. In advanced age Cassiodorus was to found the monastery of Vivarium on the family estate at Squillace. As a classicist, Cassiodorus saw the need for the preservation of ancient texts from Greece and Rome (texts which formed the minds of Justin Martyr, Athenagoras, and Clement of Alexandria, early Church Fathers, as they employed the texts of Plato, Aristotle and the Stoics in their efforts to elucidate the teachings of the Gospels). With reason, Cassiodorus set his monks copying of those ancient texts. Though Benedict did not intend it, monasteries within his own lifetime had become, and were soon famous for, the *scriptoria* where the classics of antiquity were copied for posterity. By the thirteenth century more than 700 Benedictine monasteries had spread across Europe. Some were to be numbered among the great cultural centers of Europe.

Independent schools emerged in the abbeys, each seeking to out-rival the others by increasing its library, by attracting professors of renown, and by drawing students to its intellectual tournaments. These schools created a legion of remarkable theologians, philosophers, and lawyers, as well as men of science. We need but cite the schools of Cluny, Citeaux, Bec, Aurillac, St. Martin, and St. Omar. A roll call of the leading scholars of the age—from Gregory through Bede, Lafrank,

and Anselm—would name the abbots of many of these monasteries.¹³ The twelfth-century Benedictine Abbot Bernard of Clairvaux became an author almost against his will. His books and monographs grew out of lectures recorded by his fellow monks who circulated them, sometimes without his knowledge, and often without his editorial scrutiny. A Brother Godfrey asked him to write about the virtue of humility and the result is *De gradibus humilitatis et superbiae*. Thus did St. Bernard's works become part of our intellectual and spiritual heritage.¹⁴

By the middle of the twelfth century, the cathedral schools came to replace the monasteries as centers of learning and cultural influence. The introduction of Aristotle into the West in the twelfth and thirteenth centuries had an immediate and profound influence. In a sense, this was a Greek revival; but, more than that, between the Hellenist period and the advent of the medieval universities, the European intellect had undergone a transformation.

If we were to compare the Christian attitude to the pursuit of knowledge as exemplified in the Benedictines with the previous Greek attitude, we would find not opposition, but the Christian building upon the Greek. The conviction that nature is intelligible and directed toward ends is something the Christian shares with his Greek predecessors; but, in addition to that, he believes that God reveals himself in Sacred Scripture as well as in the book of nature.

What makes this relevant is that among the texts preserved in the monastic scriptoria were the *De Anima*, *Metaphysica* and *Physica* of Aristotle, texts that, previously, had not been available in the West. Those texts arrived contemporaneously with the building of the Cathedral of Notre Dame de Paris and had formed the basis of an intellectual

¹³ Dougherty, *Wretched Aristotle*, 42.

¹⁴ Cf. John Kitchen, "Bernard of Clairvaux's *De gradibus humilitatis et superbiae* and the Postmodern Revisioning of Moral Philosophy," in *Virtue and Ethics in the Twelfth Century*, ed. István Bejczy and Richard Newhauser (Leiden: Brill, 2005), 95–117.

tradition that was to serve the West for centuries. We know it as “Scholasticism,” the philosophical method of Plato and Aristotle. In the twelfth century, it produced scholars of the rank of Averroes, Maimonides, Abelard, Anselm, and Hildegard of Bingen. In the thirteenth, Thomas Aquinas, Duns Scotus, Albertus Magnus, Robert Grosseteste, Roger Bacon, Bonaventure, and a host of others.

That was not all that is going on. Historians tell us that around 1100 AD, the economy of Europe increased dramatically, largely due to new techniques in the exploiting of wind and water power and in mining. Richard Lefebvre des Noëttes, a retired French military officer, as a result of extensive study and experimentation, attributes the great jump in part to the invention of the padded horse collar which not only enabled the harnessing of horses in tandem, but rendered a four-fold yield in the work of a properly shod single horse. For the same amount of food necessary to maintain each, the power of a team of horses was increased substantially.

Some have likened the surge in power to that experienced with the arrival of nuclear power in the twentieth century. Paul Gans provides an account in his study, “The Medieval Horse Harness: Revolution or Evolution?”¹⁵

These achievements are difficult to ignore, but no amount of scholarship will dispel the “dark age myth.” It is part of a dogmatic package accepted on faith, sealed by willful ignorance. The world of Copernicus, Galileo, and Kepler knew better, as Alfred North Whitehead was to discover.



¹⁵ *Villard's Legacy*, ed. Marie Thérèse Zenner (Aldershot: Ashgate, 2004), 175–187.

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SUMMARY

By examining selected works by Stephen Gaukroger, Alfred North Whitehead, Lynn White, Jr., Benjamin Farrington, and Paul Gans, the author discusses the formation of Western culture and the intellectual tools and the social conditions that contributed (and still contribute) to its being. He concludes that a metaphysics and a realistic epistemology—based on an ancient Greek confidence in the human intellect, in its ability to reason to truths that acknowledge the immaterial character of human intellection—is required for the West to retain its identity and develop its own culture.

KEYWORDS

Western culture, metaphysics, realistic epistemology, human intellect, scholasticism, modernity, science, religion, Christianity.

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