



---

The Cultural Context of Western Technology: Early Christian Attitudes toward Manual Labor

Author(s): George Ovitt, Jr.

Source: *Technology and Culture*, Vol. 27, No. 3 (Jul., 1986), pp. 477-500

Published by: [The Johns Hopkins University Press](http://www.jhu.edu/) on behalf of the [Society for the History of Technology](http://www.shot-journal.org/)

Stable URL: <http://www.jstor.org/stable/3105382>

Accessed: 13/08/2011 10:05

---

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



The Johns Hopkins University Press and Society for the History of Technology are collaborating with JSTOR to digitize, preserve and extend access to *Technology and Culture*.

# *The Cultural Context of Western Technology: Early Christian Attitudes toward Manual Labor*

GEORGE OVITT, JR.

## *Modern Views of Medieval Technology*

In seeking to understand why the West has been so receptive to the initiation and adaptation of technological change, the historian needs to consider the effects of the first great period of technological innovation—the Middle Ages. That the Middle Ages is the place to begin to search for the causes of this receptivity has not always been acknowledged. Beginning in the late 17th century, writers took an interest in the history of progress in the mechanical arts and the sciences. Yet they did not associate the first advances with what they saw as the sterile Aristotelianism of the Scholastics but rather with the prodigious scientific advances of their own age. Thus, when Thomas Sprat wrote his *History of the Royal Society* (1667), he noted that the period of domination by the Roman Catholic Church saw a “quiet as the dark of the night” descend on learning and the useful arts and saw the “sorry” philosophy of the “shole-men” take their place.<sup>1</sup> William Wotton wrote in 1694 that the “moderns” had outstripped the ancients in all fields of useful learning, and he wondered why the human race had been at a “full stop for 1500 years” in all areas of human enterprise except ethics.<sup>2</sup> In the 18th century, scholars were capable of forming a more balanced view of the Middle Ages, but the typical view was expressed by Turgot in his “Philosophical Review of the Successive Advances of the Human Mind” (1750). Turgot argued that from the coming of the barbarians to the cultural crescendo of the “Century of

DR. OVITT is assistant professor in the Department of Humanities and Communications at Drexel University. He wishes to express his gratitude to the *Technology and Culture* referees for their constructive advice. The article was prepared with the assistance of a Drexel University Research Grant.

<sup>1</sup>Thomas Sprat, *History of the Royal Society* (London, 1667), pp. 11–14.

<sup>2</sup>William Wotton, *Reflections upon Ancient and Modern Learning* (London, 1694), pp. xiv–xvii, 1–3.

Louis, century of great men” a slow, painful progress had been made in the arts and sciences but that the Middle Ages saw human achievement all but cease.<sup>3</sup> Similar critiques of the intellectual and creative barrenness of the Middle Ages may be found in Condorcet, and, in the 19th century, in Jules Michelet, William Whewell, John Tyndall, and many others.<sup>4</sup>

The idea that the Middle Ages gave rise to the impetus that was to generate Western technological dynamism has been substantiated only in recent decades, in the writings of scholars such as Lynn Thorndike, Marc Bloch, Bertrand Gille, Lynn White, jr., Guy Beaujouan, Jacques Le Goff, and Friedrich Klemm.<sup>5</sup> What these scholars have demonstrated is that beginning as early as the 10th century a series of original inventions, as well as an even greater number of imported and adapted technologies, began to transform the economic, social, and intellectual life of Europe. By 1400, this list of innovations and adaptations was long and impressive: water mills, projectile artillery, power saws, stirrups, eyeglasses, the spinning wheel, iron casting, the wheelbarrow,

<sup>3</sup>Turgot, *On Progress, Sociology, and Economics*, ed. and trans. Ronald L. Meek (Cambridge, 1973), pp. 41–45, 55.

<sup>4</sup>Examples of this attitude toward medieval technology and its relationship to the history of science may be found in Condorcet, *Esquisse d'un tableau historique des progrès de l'esprit humain* (Paris, 1795), pp. 65–67; in William Whewell, *The History of the Inductive Sciences*, 2 vols. (London, 1849), 1:175–82; in John Tyndall, *Advancement of Science* (New York, 1874), pp. 28–35; and described in Jacques Le Goff, “The Several Middle Ages of Jules Michelet,” in *Time, Work, and Culture in the Middle Ages* (Chicago, 1980), p. 15. For the 20th-century history of the “dark Middle Ages,” see J. B. Bury, *The Idea of Progress* (London, 1924), pp. 20–21, which provides a typical formulation of the early 20th-century approach to the question of scientific and technological progress during the Middle Ages: “The idea of the universe which prevailed throughout the Middle Ages, and the general orientation of men’s thoughts were incompatible with some of the fundamental assumptions which are required by the idea of Progress.” While he takes more seriously the contributions of medieval artisans to the history of technology and science, Edgar Zilsel (“The Genesis of the Concept of Scientific Progress,” in *Journal of the History of Ideas* 6 [1945]: 325–49) persists in denying to the Middle Ages any inclination to develop a consistent and progressive theory of scientific achievement.

<sup>5</sup>I have found the following works particularly useful: Lynn Thorndike, *A History of Magic and Experimental Science*, 8 vols. (New York, 1923–58); Marc Bloch, *Land and Work in Medieval Europe*, trans. J. E. Anderson (Berkeley and Los Angeles, 1967); Lynn White, jr., *Medieval Technology and Social Change* (Oxford, 1962) and *Medieval Religion and Technology* (Berkeley, Calif., 1978); Bertrand Gille, in *Histoire générale des techniques*, ed. Maurice Daumas, vol. 1 (Paris, 1962), pp. 429–598, and vol. 2 (Paris, 1965), pp. 2–139; Guy Beaujouan, “L’Interdépendance entre la science scolastique et les techniques utilitaires (XII<sup>e</sup>, XIII<sup>e</sup>, et XIV<sup>e</sup> siècles),” in *Les Conférences du Palais de la Découverte*, série D, no. 46 (Paris, 1947); Jacques Le Goff, *Time, Work, and Culture in the Middle Ages*, trans. Arthur Goldhammer (Chicago, 1980); and Friedrich Klemm, *Der Beitrag des Mittelalters zur Entwicklung der abendländischen Technik* (Wiesbaden, 1961).

and many other objects and processes were in use and were contributing to the expansion of economic, political, and social life in Europe.<sup>6</sup> Equally impressive were the agricultural and demographic changes that catalyzed and then gradually helped to sustain these technological innovations. For example, changes in planting and crop cultivation, including the movement toward a system of three-field rotation and the substitution of the horse for the ox as the primary draft animal, allowed for a steady increase in crop yields between the 9th and the 11th centuries, and these increases made it possible for Europe to undergo a population increase of roughly 100 percent between about A.D. 1000 and A.D. 1300.<sup>7</sup>

It is important, however, to avoid the suggestion of technological determinism implied by these remarks. While changes in agricultural techniques did help to alter the rhythm and organization of medieval life, they did not do so in a linear or progressive fashion. The history of Europe from the 9th to the 14th century is certainly not a history of the uninterrupted enhancement of material well-being, population growth, and technological innovation; for one thing, such a simple evolutionary model cannot account for the frequent and often quite severe periods of economic contraction that occurred throughout the period.<sup>8</sup> Nor, as I hope to suggest in the course of this essay, is it possible to discover a connection between technological and economic changes without taking into account a number of social and cultural variables.<sup>9</sup> And, finally, it is far from clear that the idea of progress—as it was formulated in the 17th century and reified in the 19th—has any real value in measuring the achievements of other times and other cultures.<sup>10</sup>

<sup>6</sup>I have named just a few significant innovations and ignored their chronology. For a systematic survey of inventions, see Lynn White, jr., "Technology and Invention in the Middle Ages," in *Speculum* 15 (1940): 141–59 (rep. in *Medieval Religion and Technology*, pp. 1–22) and Gille (n. 5 above).

<sup>7</sup>Carlo Cipolla, *Before the Industrial Revolution*, 2d ed. (New York, 1980), p. 150; and J. C. Russell, "Population in Europe 500–1500," in Carlo Cipolla, ed., *The Fontana Economic History of Europe*, vol. 1, *The Middle Ages* (Sussex, 1976), p. 36, table 1. Russell's estimate is that population increased from 27.5 million in A.D. 500 to 50 million in 1500.

<sup>8</sup>See, for example, Ian Dershaw, "The Great Famine and Agrarian Crisis in England, 1315–1322," in *Past and Present* 59 (1973): 3–50; also, J. M. W. Bean, "Plague, Population, and Economic Decline in the Late Middle Ages," in *The Economic History Review*, ser. 2, 15 (1963): 423–37.

<sup>9</sup>See Lynn White, jr., "Cultural Climates and Technological Advance in the Middle Ages," *Viator* 2 (1971): 171–201 (rep. in *Medieval Religion and Technology*, pp. 217–53).

<sup>10</sup>Provocative questions about the meaning of "progress" are raised by Arnold Pacey, *The Culture of Technology* (Cambridge, Mass., 1983), pp. 13–34; and by Eric Wolf, *Europe and the People without History* (Berkeley, Calif., 1982), p. 5 and passim. Though his

Nevertheless, once these necessary qualifications are entered, it is possible to state that technological innovations, expanded agricultural productivity, and the creation of new economic structures did alter significantly the quality of European life.<sup>11</sup> At the same time, there is some truth in the observation that equivalent technological and economic shifts either did not occur elsewhere (as was the case in the Byzantine Empire) or were not sustained (as was the case in China).<sup>12</sup> Given the supposition that the material conditions under which technological advance occurred could have been duplicated elsewhere, the question naturally arises as to which additional variables made the West particularly receptive to innovations in technology.

In searching for the features of medieval Western culture that enabled the initiation and perpetuation of technological change, a look eastward, toward the world of China, can be especially instructive. By the 14th century, Chinese inventiveness and energy had produced a technical, scientific, and material culture of extensive range and scope. Nearly every important technological innovation of the West in the realm of labor-saving devices, power transmission, and even domestic amenities was anticipated by the Chinese by anywhere from 100 to 700 years.<sup>13</sup> But during the long reign of the Ming dynasty (A.D. 1368–1644)—a period that saw Western Europe's consolidation and expansion of technical gains made during the Middle Ages—Chinese society partially lost its economic and technological dynamism and fell into what Mark Elvin has called a "high-level equilibrium trap."<sup>14</sup> In Elvin's

---

examples are modern, David F. Noble's *Forces of Production: A Social History of Industrial Automation* (New York, 1984) includes a discussion of progress which I have found invaluable.

<sup>11</sup>For an overview of these changes, see *The Cambridge Economic History of Europe*, ed. M. Postan and H. J. Habakkuk (Cambridge, 1952–), 2:119 ff.; for a more specialized study of changes in agriculture, see D. Herlihy, "The Agrarian Revolution in Southern France and Italy, 801–1150," *Speculum* 33 (1958): 23–41.

<sup>12</sup>For Byzantine technology, see *The Cambridge Medieval History*, 2d ed. (Cambridge, 1966–67), 4:299 ff.; for China, see Joseph Needham, Wang Ling, et al., *Science and Civilisation in China*, 6 vols. + (Cambridge, 1954–), esp. vol. 4, pts. 2 and 3, and vol. 5, pts. 3 and 4. For Africa, where technology in some areas advanced considerably during the European Middle Ages, see Jack Goody, *Technology, Tradition, and the State in Africa* (Cambridge, 1971), pp. 21–38; for the interrelations created by "trade diasporas," see Philip D. Curtin, *Cross-Cultural Trade in World History* (Cambridge, 1984). I hope that the emphasis on European technology here does not obscure the profound influences exercised on this culture by the rest of the world during the whole course of the Middle Ages.

<sup>13</sup>For the influence of Chinese invention on Western technology, with analysis of the modes of transmission and the "lag" between Western and Chinese technological innovation, see Needham et al., *Science and Civilisation in China*, 1:93–112.

<sup>14</sup>For this discussion of China's economic and technological history I am indebted to

view, both the shrinking of markets due to the closure of China to the West and the reliance on cheap labor to solve problems of production tended to eliminate the opportunities for inventiveness that had previously existed within Chinese society. Without the need for innovation, technological development came to a standstill, and when it did the conditions that had forced this stagnation worsened.<sup>15</sup>

Apart from this view of the economic source of technological stagnation in 14th-century China, Elvin has noted another kind of change within Chinese society that also had a great deal to do with the “qualitative standstill” of the Ming period. Beginning in the 14th century, a philosophical reorientation occurred that had a profound effect on the course of Chinese social and economic history. The practical neo-Confucianism of the Sung dynasty gave way to a metaphysical and solipsistic system that denied the significance of the material world and undercut intellectual attempts to understand and to control the forces of nature.<sup>16</sup> In China, alterations in the representation of nature within the traditions of painting, poetry, and philosophy reflected—and helped to cause—changes in the perception of the human role in controlling and shaping the forces of the natural world.

Although Elvin’s analysis has been the subject of considerable discussion among sinologists, his approach is provocative, for it suggests that we must look deep within a culture in order to understand fully the causes of economic or technological change. Like the cessation of technological growth in Ming China, the economic growth in medieval Europe must be analyzed from a cultural as well as from an economic perspective. It is within the context of the theological, artistic, and literary preconceptions that formed the mental landscape of the Middle Ages that one would hope to locate those factors that supported—or resisted—technological change.

One of the most provocative analyses of these cultural variables and their impact on the initiation of technological change in the West has been provided by the theologian Ernst Benz.<sup>17</sup> Benz argues (as Max Weber had before him) that there is a connection between Western

---

Mark Elvin, *The Pattern of the Chinese Past* (Stanford, Calif., 1973), esp. pp. 203–34; for China’s “high-level equilibrium trap,” see pp. 314–15. I must note that opinion is divided on Elvin’s thesis; for a thorough critique of Elvin’s views, see the essay review by Nathan Sivin, “Imperial China: Has Its Present Past a Future?” in the *Harvard Journal of Asiatic Studies* 38 (1978): 440–80.

<sup>15</sup>Elvin, pp. 199, 285 ff.

<sup>16</sup>Elvin discusses these changes on pp. 225–34.

<sup>17</sup>Ernst Benz, “I fondamenti cristiani della tecnica occidentale,” in E. Castelli, ed., *Tecnica e casistica* (Rome, 1964), pp. 241–63.

technological achievement and “the specifically Christian premises of our Western culture.”<sup>18</sup> According to Benz, the medieval image of the deity stressed God’s role as artificer and demonstrated that in his act of fashioning human beings from matter God sanctified not only the product he produced, namely Adam and Eve, but also the process by which he did so. Isaiah 45:9–12 presents the image of God as a potter and of human beings as vessels shaped from the clay of the earth; these creatures may use the earth God has provided in order to continue to supply their needs. Likewise, the very notion of a personal, communicative Creator-God lends substance to the Western conviction that the fashioning of objects is blessed. Benz points out that other great religions, such as Buddhism, in lacking this idea of a personal creator also lack a basis on which to sanctify technology. In the West, as technology gradually grew more sophisticated and as the kinds of objects created by workmen shifted, so too did the iconography of the Creator-God shift form. According to Benz, God the potter gradually became God the master builder, and the clay used to shape human beings was replaced by the compasses used in shaping the human environment. In any case, there persisted a theological basis of support for human creativity, for human labor and technology.<sup>19</sup>

The characterization of God as Creator and Architect of the universe provides Benz with the first part of an explanation for Western technological success. The second part entails the identification of human beings with God and assumes that human domination of the creation has been divinely ordained. Benz cites Gen. 1:27 and 9:6 in support of his contention that “compared to all other creatures, [human beings are] understood to be the ‘image of God.’” The notion of human domination over the rest of the creation has often been cited as being a key factor in the history of Western technological mastery; indeed, the assumption of this domination has also been cited as being a factor in understanding Western technological disasters. Lynn White, jr., has

<sup>18</sup>See Benz, “I fondamenti,” p. 242; also, Ernst Benz, “The Christian Expectation of the End of Time and the Idea of Technical Progress,” in *Evolution and Christian Hope: Man’s Concept of the Future from the Early Fathers to Teilhard de Chardin* (Garden City, N.Y., 1966), p. 121; Lynn White, jr., discusses Benz’s thesis in “Cultural Climates and Technological Advance,” in *Medieval Religion and Technology* (n. 5 above), pp. 236–38—and, while I have disagreed with his conclusions, I am deeply indebted to White’s discussion. Max Weber considered some of the same ideas in his *Wirtschaftsgeschichte* (New York, 1927), trans. as *General Economic History* by Frank H. Knight (New Brunswick, N.J., 1981), and in *The Protestant Ethic and the Spirit of Capitalism*, trans. Talcott Parsons (New York, 1958), esp. pp. 118–19.

<sup>19</sup>Benz, “I fondamenti” (n. 17 above), pp. 248–52; and “The Christian Expectation” (n. 18 above), pp. 122–24.

argued that the medieval Christian notion of human domination of the material world has provided the intellectual and moral background against which our current ecological problems must be understood.<sup>20</sup> “Man shares, in great measure,” White has written, “God’s transcendence of nature. Christianity, in absolute contrast to ancient paganism and Asia’s religions (except, perhaps, Zoroastrianism), not only established a dualism of man and nature but also insisted that it is God’s will that man exploit nature for his proper ends.”<sup>21</sup>

As persuasive as this argument might at first seem—and White is characteristically adept in drawing on a large body of material in order to suggest the historical inferences that must be drawn from these assumptions—there are other scholars who resist its inherent technological determinism and who find in Christianity just as much support for a benign, custodial view of the natural world as for an exploitative one. John Passmore, for example, has cited numerous biblical texts in support of the contention that Christianity advocated a view of nature that stressed responsibility and partnership rather than domination.<sup>22</sup> William Coleman argues that “the perennial Christian doctrine has been to accord man a modest livelihood in this world, not to promote his wealth or temporal power,” and he suggests that the real contribution of Christianity was to apply “a new apologetic” for economic individualism during the 17th century.<sup>23</sup> Robin Attfield has recently reviewed this literature and provided a compelling argument for the view that Christian theology has consistently supported the belief that human beings are morally responsible for their stewardship of nature.<sup>24</sup>

To these discussions, all of which are in part responses to Lynn White’s views, I would add an additional cautionary note on the use to which “paganism” and “animism” are put in discussions that find in Christianity a unique support for technological progress. Although one may find Greco-Roman texts that undervalue technological innovations and dismiss the work of laborers and craftsmen with contempt, there are equally good reasons to see these views as exceptional. One needs to look both at the actual technological achievements of the ancient world and at the compelling body of literary evidence that

<sup>20</sup>Lynn White, jr., “The Historical Roots of Our Ecological Crisis,” in *Science*, March 10, 1967 (rep. in *Dynamo and Virgin Reconsidered* [Cambridge, Mass., 1968], pp. 75–94).

<sup>21</sup>White, “The Historical Roots of Our Ecological Crisis,” p. 86.

<sup>22</sup>John Passmore, *Man’s Responsibility for Nature* (London, 1974), pp. 3–40.

<sup>23</sup>William Coleman, “Providence, Capitalism, and Environmental Degradation,” in *Journal of the History of Ideas* 37 (1976): 41.

<sup>24</sup>Robin Attfield, “Christian Attitudes to Nature,” in *Journal of the History of Ideas* 44 (1983): 369–71.



clearly favored the human aspiration to shape the physical world according to human ends.<sup>25</sup>

The third point made by Benz involves the contribution to Western technological progress deriving from the Christian conception of time.<sup>26</sup> Indeed, the very use of the word “progress” implies the existence of a linear conception of time, the sense that history is “going somewhere” and that events are unique and connected to one another through chains of cause and effect. Add to this the Christian expectation of a proximate eschatological event—an end to time and a consummation of all that has been achieved within the end points of creation and judgment—and a theory of meaningful action and of technological progress begins to seem compelling. “We must work . . . while it is day,” writes Saint John, and we must do so in order to “redeem the time.” Benz himself anticipates the obvious objection to an argument for technological progress based on the anticipation of an end of time: for, one must surely ask, would not the “work” done to prepare for the dissolution of the world be spiritual rather than material? The answer proposed by Benz is that, for the Christian of the Middle Ages, a sharp distinction between spiritual and material labor was not maintained. Labor was a form of worship, and the material and technological products of labor were manifestations of a devotion that did, indeed, prepare the Christian for the coming dissolution of time. Thus, the incentive to shape the physical world after human ideas was reinforced both by the sense of urgency that accompanies the idea of finite time and by the sense that work itself may be offered to God as a prayer.<sup>27</sup>

<sup>25</sup>See Rodolfo Mondolfo, “The Greek Attitude to Manual Labor,” in *Past and Present* 6 (1954–55): 1–5; also Albert Rehm, “Zur Rolle der Technik in der griechisch-römischen Antike,” in *Archiv für Kulturgeschichte* 28 (1938): 135–62; Mme de Romilly, “Thucydide et l'idée de progrès,” in *Annali di Pisa* (1966), pp. 183–85; Alison Burford, *Craftsmen in Greek and Roman Society* (Ithaca, N.Y., 1972). For the role that slavery played in determining dismissive attitudes toward labor (such as one finds in Xenophon, *Deconomia*, 4:203), see M. I. Findlay, “Technical Innovation and Economic Progress in the Ancient World,” in *Economic History Review*, 2d ser., 18 (1965): 43–45. A Roman view of the edifying nature of agricultural labor may be found in Columella, *De re rustica*, bk. 1, preface; and a forceful statement of human power over the natural world is in Cicero, *De natura deorum*, bk. 2, sec. 151–54. And also note Virgil's well-known tag “Labor omnia vicit/Improbis et duris urgens in rebus egestas,” which provided not only a defense of labor but a rationale for its value as well.

<sup>26</sup>Benz, “The Christian Expectation of the End of Time” (n. 18 above), pp. 126–27. For an overview of the Christian view of time, see Oscar Cullman, *Christ und die Zeit* (Zollikon-Zurich, 1946); and Jacques Le Goff, “Merchant's Time and Church's Time in the Middle Ages,” in *Time, Work, and Culture* (n. 5 above), pp. 29–42.

<sup>27</sup>Aside from works already cited, see Lynn White, jr., “What Accelerated Technological Progress in the Western Middle Ages?” in *Scientific Change*, ed. A. C. Crombie

Though the arguments of Benz can by no means be accepted without reservation—we know, for example, that a theologian as influential as Augustine denied the God-as-artisan analogy—it does seem that Benz's analysis provides an appealing and persuasive explanation for the missing variable needed to account for the material successes of the Latin West during the Middle Ages. Indeed, in the hands of Lynn White, jr., this argument has often seemed not only persuasive but predictive as well. White has argued that the Christian attitude toward work and material progress fostered a "cultural climate" favorable to technological advance, and he has also argued that traces of this formative attitude can be discovered in the art, literature, and theology of the period.<sup>28</sup> Yet, as White himself acknowledges, the attitudes that Benz postulates in support of technology were not universal. Some individuals resisted material change for spiritual reasons, and some rejected economic changes that implied social realignments, while others, we may assume, suffered from the generalized "technophobia" that seems to be a counterpart of technological change in every age. Indeed, M. D. Chenu has demonstrated in a compelling fashion that resistance to both material and theological "progress" was deeply ingrained in 12th-century thought, precisely at the time when (if Benz's views are correct) one would expect to see the clearest alignment of theory with technical and social change.<sup>29</sup>

Jacques Le Goff provides an alternative account of the role played by Christianity in supporting technological change, an account that sees theology altering in response to the changing material conditions of Europe rather than creating the conditions under which such change occurred. Le Goff argues that the medieval church, at least until the 12th century, viewed manual labor and craftsmanship as necessary

---

(New York, 1963), pp. 284–88. White notes that Benz's views do not take into account the fact that Byzantium shared a Christian culture with the West and yet did not develop a comparable technology; one should also note the incorporation of the imagery of Genesis into the Qur'an (sura 2, vv. 29–39) and the similar lack of a "progressive" Islamic technology—again, as a means of tempering the kind of technological determinism that seems to grow out of Benz's arguments. Saint Augustine undercuts the God-as-artisan analogy in *The City of God*, bk. 12, chap. 24: "For we must not imagine this operation [the creation of Adam] in the physical terms of our experience, where we see artisans working up material from the earth into the shape of human limbs, with the ability of skilled craftsmanship" (trans. David Knowles, *The City of God* [Baltimore, 1972]).

<sup>28</sup>See White's essay "Natural Science and Naturalistic Art in the Middle Ages," in *American Historical Review* 52 (1947): 421–35, rep. in *Medieval Religion and Technology* (n. 5 above), pp. 23–41.

<sup>29</sup>M. D. Chenu, "Tradition and Progress," in *Nature, Man, and Society in the Twelfth Century*, ed. and trans. Jerome Taylor and Lester K. Little (Chicago, 1968), pp. 310–30.

physical burdens, as penances that could be offered as prayer.<sup>30</sup> As such, labor was not primarily a means of subduing the physical world but rather another discipline capable of subduing the physical self. When, in the 12th century, the pressure of economic and social change became too great to ignore, the church developed a new theory of labor—indeed, a whole new theory of culture—that recognized the role of labor to be the subjugation of the physical world to the human will; this labor was only incidentally penitential and had as its object the material world rather than the spiritual self.<sup>31</sup>

Taken together, the discussions of Benz, White, Le Goff, and others point to a variety of theological convictions that seem to ratify those human activities we call “technology.” Yet, in my view, what is most compelling in a variety of genres of early Christian literature is not the sanction of manual labor or craftsmanship in the interest of dominating the physical world but rather the consistent view of the centrality of labor as a means of developing the spiritual self. Although there is good reason to agree with Benz about the characterization of God as a master craftsman, there is less reason to agree that this characterization convinced early medieval writers that their Christian duty entailed the subjugation of the physical world through labor. At the same time, Le Goff’s view of the penitential purposes of labor needs to be balanced by the notion, found in many medieval sources, that labor served as a means of creating the conditions under which spiritual life—which included charity as well as penance—was made possible. Indeed, I would argue that the view of manual labor presented in early Christian writers was dominated by an emphasis on the spiritual utility of work, and I would suggest that a plausible theory of how medieval Christian theology influenced medieval technology must account for the secularization of this emphasis. I would like to turn now to a discussion of some medieval texts that illustrate my point and that suggest the direction in which the analysis of the cultural context of medieval technology might proceed.

<sup>30</sup>Jacques Le Goff, “Trades and Professions as Represented in Confessors’ Manuals,” in *Time, Work, and Culture* (n. 5 above), pp. 114 and 121.

<sup>31</sup>Jacques Le Goff, “Trades and Professions,” p. 115; see also Le Goff’s essay “Labor, Techniques, and Craftsmen in the Value Systems of the Early Middle Ages (Fifth to Tenth Centuries),” also in *Time, Work, and Culture*, p. 86, where the date of the revaluation of agricultural labor is pushed back to the 8th century: “There can be little doubt that this valuation [of labor] was also the result of worker pressure on medieval ideology and mentality.” See also M. David, “Les *Laboratores* jusqu’au renouveau économique des XI<sup>e</sup>–XII<sup>e</sup> siècles,” in *Études d’histoire du droit privé offertes à P. Petot* (Paris, 1959), pp. 107–20.

*The Cultural Context of Medieval Labor and Technology*

The attitudes toward manual labor expressed by writers during the Middle Ages were undoubtedly shaped by the social and economic conditions of the period; I would argue, however, that these views were also shaped by a textual tradition, specifically by the traditions of biblical commentary and by the programs for establishing normative communal rules for the governance of Christian society. The creation of these attitudes was largely undertaken *ex nihilo* because Greco-Roman models for the integration of manual labor into social life were either inappropriate or uninfluential.<sup>32</sup> Certainly Greek and Roman society had made significant technological advances. Indeed, in the areas of agricultural practice and in some craft traditions Greco-Roman models were integrated into Christian communities.<sup>33</sup> Yet, even though there was a great deal of intellectual continuity between the Greco-Roman and Christian worlds, theoretical support for labor and craftsmanship was re-created during the early Christian centuries in much the same way that a Christian theory of progress was constructed out of a revised view of the nature of history.<sup>34</sup>

Central to the bookish (if largely illiterate) culture of the early Middle Ages were religious texts, especially the book of Genesis and the Pauline epistles. Looking first at Genesis for the content of Christian attitudes toward manual labor, one notes that some commentators on the creation story did see, as Benz thought, a sanctification of human labor based on the model of God's artisanship. Saint Basil, Gregory of Nazianus, Saint Ambrose, and Bede all remind their readers that the world as the work of God brings the Worker intimately before the faithful and blesses the idea of labor itself.<sup>35</sup> Saint Augustine writes in *De genesi ad litteram* that the Creator blesses as "good" both that

<sup>32</sup>See Arthur T. Geoghegan, *The Attitude towards Labor in Early Christianity and Ancient Culture* (Washington, D. C., 1945) for a well-documented account of the differences in attitude between Greco-Roman and Judeo-Christian accounts of the role of manual labor in social life.

<sup>33</sup>For a few of the points of contact between ancient and medieval technology, see Charles Singer et al., eds., *A History of Technology* (Oxford, 1956), 2: 382–96, 423–26 and *passim*.

<sup>34</sup>See Gerhart B. Ladner, *The Idea of Reform*, rev. ed. (New York, 1967), pp. 1–5, 39ff.

<sup>35</sup>See *Hexaemeron* in *Sancti Ambrosii opera*, ed. C. Schenkl, in *Corpus scriptorum ecclesiasticorum latinorum* (hereafter CSEL), vol. 32 (Vienna, 1896), bk. 1, chap. 5; Ambrose was responsible for bringing Basil's views to the West. For Bede, see *Hexaemeron* in *Patrologiae cursus completus, series latina* (hereafter PL), 221 vols., ed. J.-P. Migne (Paris, 1844–64), vol. 91, cols. 29–30. For general accounts of the role played by manual labor in the Bible, see F. Gryglewicz, "La Valeur morale du travail manuel dans la terminologie grecque de la bible," *Biblica* 37 (1956): 314–37.

which he created and the work of creation itself.<sup>36</sup> Similar assurances are to be found in Origen's homilies on Genesis.<sup>37</sup>

On the other hand, nearly every commentator also noted that the most immediate consequence of the primordial sin was the condemnation of Adam and his progeny to manual labor—a labor conceived of both rhetorically and iconographically as agricultural and onerous.<sup>38</sup> Thus, Clement of Alexandria contrasts the innocent play of Adam before the Fall with the toil of his labor afterward.<sup>39</sup> Lactantius writes, in the *Divina institutiones*, that before Adam was overcome by his appetites he had only to praise God and to live freely.<sup>40</sup> Saint Ambrose contrasts the ease with which the earth bore fruit and supported Adam before the Fall with the pain of toil that followed it; however, Ambrose also asserts that even now, in a postlapsarian world, the earth is benign and fruitful.<sup>41</sup>

These observations on the relationship between sinfulness and labor must be understood within the proper context. In the hexaemeral literature, the distinction is not simply between blessed idleness and cursed labor; for one thing, commentary on the creation story (Gen. 2:5 ff.) described a nonburdensome form of prelapsarian labor. Augustine makes this point clearly in his “literal” commentary on Genesis (*De genesi ad litteram*) when he writes that, before the Fall, Adam did agricultural labor of his own free will and that in this “pleasant” labor Adam merely took advantage of another blessing created by God. Likewise, in working with his hands Adam praised God and fulfilled that part of human nature that desires the rational pleasure of work.<sup>42</sup> Indeed, the real consequence of Adam's sin was seen, by Augustine,

<sup>36</sup>*De genesi ad litteram*, ed. J. Zycha, in *CSEL* 28, pt. 1 (Leipzig, 1894), bk. 4, chap. 13.

<sup>37</sup>Origen, *In genesim homiliae*, ed. W. Baehrens, in *Origenes Werke: Homilien zum Hexateuch in Rufins Übersetzung*, pt. 1, vol. 29 of *Die griechischen christlichen Schriftsteller der ersten drei Jahrhunderte* (Leipzig, 1920), homily 1, sec. 12.

<sup>38</sup>For representations of the consequences of the Fall and discussion of its iconography, see Paul Brandt, *Schaffende Arbeit und bildende Kunst* (Leipzig, 1927), pp. 226–34.

<sup>39</sup>Clement of Alexandria, *Cohortatio ad gentes*, cited in George Boas, *Essays on Primitivism and Related Ideas in the Middle Ages* (Baltimore, 1948), p. 24.

<sup>40</sup>Lactantius, *Divinae institutiones*, in *PL* 6, cols. 517–18.

<sup>41</sup>Ambrose, *Hexameron* (n. 35 above), bk. 3, chap. 10.

<sup>42</sup>“Did God wish the first man to perform agricultural labor? Would it be believable that God would condemn man to labor before the first sin? We would think so, until we saw some do agricultural labor freely [*cum tanta voluptate animi*] and who would consider it a punishment to be called to other labor. Thus the pleasures of agriculture were much greater when nothing adverse occurred, either from the earth or heaven. It was not, therefore, the affliction of labor, but the exhilaration of the will [*sed exhilaratio voluntatis*] when those things which God has created grew with the aid of human labor; thus God should be praised more fully, who gave to the soul in an animal body the ability to reason

Ambrose, and others, not as the necessity of toil but as the estrangement from a benign natural world. Ironically, the domination and exploitation of nature is only necessary *after* the primordial sin, precisely when Adam has revealed his incapacity in a merely custodial role.

What is really described in Genesis—and what comes through most clearly in the commentaries on it—is the process of estrangement that has divided human beings from their own nature and from their function as rulers over the created world. “Man . . . who holds the principate over every living thing,” is how Ambrose describes human nature; but pride has forced this natural sovereignty to become less a cooperative partnership, a benign symbiosis, and more a relationship of power and exploitation—the Golden Age becomes the Age of Iron. The hexaemeral commentaries of Basil and Ambrose in particular demonstrate the extent to which the natural world was created not for exploitation but for cooperative physical and moral sustenance. Plants and animals, which have a clear emblematic function, provide Adam with lessons in loyalty, industry, and chastity.<sup>43</sup> Adam’s sin makes work necessary because his natural power over the world is compromised; his sin also makes the organization of labor necessary, for, as Gen. 4:17–22 indicates, the purely agrarian world—in which nature yields up its fruits freely—is transformed by Adam’s sin to include a “technological” component, the domestication of cattle, the initiation of metallurgical techniques, the establishment of cities (the first was called Henoah, after Cain’s son), and the institution of the arts (“[Jubal] was the father of all who play the harp and organ”). Saint Basil suggested that God has given human beings craftsmanship in order to replace the natural powers that have been lost through sin.<sup>44</sup> Finally, in the ultimate image of domination, God gives Noah, the second Adam, the right to kill and consume those animals with whom he once shared a peaceful, vegetarian existence. The violation of Adam’s natural authority over nature removes from labor—and from human life generally—its pastoral and playful qualities and makes it instead a matter of life and death.

Apart from the theological arguments centering around the text of

---

and the faculty to labor insofar as was enough for the willing soul and not so much for the need of the body [*non quantum invitum indigentia corporis cogeret*]” (Augustine, *De genesi ad litteram* [n. 36 above], bk. 8, chap. 8).

<sup>43</sup>Ambrose, *Hexaameron* (n. 35 above), bk. 6, chap. 4: “Wild animals know what things are good for them, whereas you, man, have no idea of what is good for you.” Ambrose expands the discussion of Basil, *In Hexaameron homiliae*, in *Patrologiae cursus completus, series graeca*, ed. J.-P. Migne, 162 vols., with Latin trans. (Paris, 1857–66) (hereafter *PG*.) For this text see *PG* 29, homily 8, chap. 4.

<sup>44</sup>Basil, *In Hexaameron homiliae*, in *PG* 29, col. 1053.

Genesis, numerous other biblical texts and theological commentaries suggest that manual labor was esteemed by early Christians as a source of both material and spiritual sustenance. The facts of their social lives—their marginal position in society during the first centuries of their existence as a sect, their heterogeneous background in terms of social and educational experience—tended to generate among Christians a toleration of labor and laborers not found in the Greco-Roman world. Tertullian expressed this toleration in *De testimonio animae* when he praised the “simple, and unmannered, and uncultivated, and uneducated.” Similar sentiments, as well as detailed defenses of labor, may be found in Lactantius, in Origen, and in Minucius Felix.<sup>45</sup> Since the Christian must work in order to live—and the text most frequently cited in support of this fact is by Saint Paul (“If any man will not work, neither let him eat”; 2 Thess. 3:10)—he or she may offer up this labor as a form of praise, as a concession to social equality, as a means of social support, and as a reminder of how the labor of salvation also requires a continuous effort. Thus Cyprian writes of the risks of spiritual laziness and counsels the habit of continual labor, while the 3d-century *Constitutiones apostolorum* warns the “idlers” (of Prov. 6:6) to learn industry from the ant because God hates the sluggard.<sup>46</sup>

Christianity, in fact, is seen by many of its earliest apologists as a faith that requires equal amounts of God-given illumination and human hard work. Thus, Saint Basil notes, labor is a gift from God, a means of attaining grace, and a source of praise: “. . . work itself should be a prayer of praise and thanksgiving reverently rendered to God who has bestowed on man the faculties of work and the means of exercising these faculties.”<sup>47</sup> Using similar language, Gregory of Nazianus proclaims labor to be intrinsically valuable, materially productive, and spiritually enriching.<sup>48</sup> Latin writers express similar attitudes. In a letter exhorting a young novice to devotion, Jerome cites the proverb that “everyone who is idle is prey to vain desires” and reminds the young man that work is necessary not only for the support of the body

<sup>45</sup>Tertullian, *De testimonia animae*, in *CSEL* 20, ed. G. Wissowa (Vienna, 1890), pp. 135–36: “Therefore it is clear that the Church is for everyone who works with his hands. . . .” For the social history of the early Christian church, see Wayne A. Meeks, *The First Urban Christians: The Social World of the Apostle Paul* (New Haven, Conn., 1983). Minucius Felix, *Octavius*, ed. H. A. Holden (Cambridge, 1853), pp. 54–56.

<sup>46</sup>“You must labor all of the time; the lazy are forever disgraced. . . . Thus the sluggards are hateful to God for they are not able to be faithful.” *Didascalia et constitutiones apostolarum*, ed. F. X. Funk (Paderborn, 1905), 1: 90.

<sup>47</sup>Basil, *Regulae fusius tractatae*, in *PG* 31, col. 1013.

<sup>48</sup>Gregory of Nazianus, *Orationes*, in *PG* 35, cols. 936, 957; see also Rosemary Radford Ruether, *Gregory of Nazianus* (Oxford, 1969), pp. 141–42.

but for the support of the soul as well. Hilary of Poitiers, writing midway through the 4th century, notes that bodily infirmity—that is, the need to eat, drink, and sleep—naturally prevents a religious person from practicing continual devotion but that every act, if piously performed, may be seen as a prayer.<sup>49</sup> This point becomes important in future discussions of the spiritual role of manual labor, especially in the context of establishing monastic ideals and rules; Hilary's assertion that ordinary life and the satisfaction of ordinary needs could be sanctified indicates the main direction that Western thought on the role of manual labor in religious life would take.

Thus in his *Institutes*, John Cassian, who had traveled to the Egyptian desert to observe the holy men living there late in the 4th century, counseled all of those committed to the religious life to engage in manual labor as a protection against the risks of sloth. Furthermore, Cassian saw in manual labor a value that lay outside the bounds of penance: "for practicing equally the virtues of the body and of the soul, a balance is struck between what the outer man needs and what the inner man finds satisfying."<sup>50</sup> Later on in the *Institutes* Cassian developed this theme further by showing that Saint Paul set an example by laboring with his hands and that this labor "cures many faults" of both a physical and a spiritual nature.<sup>51</sup> Cassian, like Jerome, cited the assiduous labor of the Egyptian and Syrian monks as an example for all Christians, and he noted that the "fruits of one's hands" constitute a true sacrifice to God. However, it must be noted that by the "labor of the hands" Cassian meant not only agricultural labor but also intellectual labor, manuscript copying, and, in the purely penitential vein, redundant physical tasks whose only product was discomfort and the subjugation of the flesh.<sup>52</sup>

Among the earliest Christian writers, Saint Augustine's influence proved to be most influential, and his views on the role of labor and its products are therefore of particular interest. Augustine's insistence on the omnipotence of God and the dependency of man on God's grace for illumination and salvation led him to insist on the individual's responsibility for correctly evaluating the relative spiritual merit of

<sup>49</sup>For Jerome, see *Epistulae*, in *CSEL* 56, ed. I. Hilberg (Vienna, 1918), epistle 125, p. 130; also epistle 130, p. 195. For Hilary of Poitiers, see *Tractatus super psalmos*, in *PL* 9, col. 246.

<sup>50</sup>Cassian, *De institutis coenobiorum*, ed. Michael Petschenig, *CSEL* 17 (Vienna, 1888), bk. 2, chap. 14; also bk. 10, chap. 21.

<sup>51</sup>Cassian, *ibid.*, bk. 2, chap. 14; see also bk. 10, chap. 23 for the consequences to the West of not having a materially productive monasticism.

<sup>52</sup>On Cassian's notion of what constituted manual labor, see Owen Chadwick, *John Cassian* (Cambridge, 1950), p. 62; also *De institutis* (n. 50 above), bk. 10, chaps. 8–14.



various worldly pursuits. In *De doctrina christiana*, Augustine provides this index of relative utility: “Some things are to be enjoyed, others are to be used, and there are others which are to be enjoyed and used. Those things which are to be enjoyed make us blessed. Those things which are to be used help, and as it were, sustain us as we move toward blessedness in order that we might gain and cling to those things which make us blessed.”<sup>53</sup> As is clear from *De opere monachorum* (On the work of monks)—a text composed in response to a group of monks who claimed that the exhortation to “live as freely as the birds” and not worry about physical sustenance was more binding than the Pauline injunction to labor—the things that can move a Christian toward blessedness include manual labor. Echoing a point made by Basil and John Cassian, Augustine writes that only those who labor and produce an excess of goods can be in a position to practice charity rather than to receive it.<sup>54</sup>

Despite his commitment to Christian asceticism, Augustine praised both the products of labor and craftsmanship and the process of labor that produced them; in a famous passage in *The City of God*, Augustine cites human material progress as evidence for the beneficent providence of God.<sup>55</sup>

This seeming paradox is part of the intellectual and spiritual outlook of many medieval writers. From Augustine and Gregory the Great to Hugh of Saint Victor and Thomas Aquinas, one finds the concurrent dismissal and affirmation of those worldly actions that produce the objects and structures that constitute Christian civilization. Indeed, it is not too much to say that the conflict that Augustine set out to resolve in *De opere monachorum* persisted throughout the Middle Ages and beyond: if the world is fallen, then actions in the world merely serve to sustain an imperfection. But with the loss of the millennial hope, the world became again the theater of action for the Christian seeking salvation. The millennial hope became part of a theory of progress, and the time of waiting became a time in which to work and prepare for

<sup>53</sup>Augustine, *De doctrina christiana*, in *Corpus christianorum, series latina* (hereafter *CCSL*) 32 (Turnhout, Belgium, 1962), bk. 1, chap. 3.

<sup>54</sup>Augustine, *De opere monachorum*, in *PL* 40, cols. 549–50.

<sup>55</sup>Augustine, *De civitate dei*, bk. 22, chap. 24: “Who can adequately describe, or even imagine, the work of the Almighty? And besides this [the virtues given to mankind] there are all the important arts discovered and developed by human genius, some for necessary uses, others simply for pleasure. . . . Think of man’s progress in agriculture and navigation; of the variety, in conception and accomplishment, man has shown in pottery, in sculpture, in painting . . . all his ingenious devices for the capturing, killing, or taming of wild animals . . . the weapons against his fellow man . . . all the medical resources for preserving health . . .” (trans. David Knowles [n. 27 above], p. 1072).

the delayed—but inevitable—end of time.<sup>56</sup> Thus labor is sanctioned, and, as the *The City of God* attests, the material products of this labor were thought by Augustine to have an extrinsic value defined by their testimony to human power over nature and to human progress toward the perfection of this world—a promise thought from at least the time of Eusebius to lie at the heart of Christianity.<sup>57</sup>

Though Augustine avoids creating a hierarchy of labors, it seems clear that the “labor” of praise, of meditation, and of spreading the Gospel is inherently superior to the manual labor that is the duty of all those not directly involved in such spiritual occupations. In *De doctrina christiana*, he writes that “Among other arts, some are concerned with the manufacture of a product which is the result of the labor of the artificer, like a house, a bench, a dish, or something of that kind. Others exhibit a kind of assistance to the works of God, like medicine, agriculture, and navigation . . . a knowledge of these arts is to be acquired casually and superficially in the ordinary course of life unless a particular office demands a more particular knowledge.”<sup>58</sup> Work of all kinds is of personal value to the monk, nun, or layman, for it chastens the flesh and may be offered up to God as a form of devotion; work that is productive is of value to the community of believers because it fills the intervening time of waiting and gives glory to the ingenuity of human beings. In essence, Augustine’s view defines the status quo of the 4th through the 12th centuries: some work, some pray, and some fight; all these necessary social functions glorify God and maintain the order that the early church first threatened, then rejuvenated.<sup>59</sup>

Augustine’s recognition of the importance of manual labor—and his insistence on placing labor within a soteriological rather than a purely economic framework—reflected attitudes common to other early writers. Saint Ambrose, for example, argued that it was the desire for pleasure that led humanity into original sin and that the enhancement of the material conditions of life merely deepens one’s immersion into the corruptions of this world.<sup>60</sup> Gregory of Nyssa counseled his readers to withdraw from “anxious toil upon the land” as part of a program to return to the prelapsarian conditions of Eden.<sup>61</sup> A few centuries later,

<sup>56</sup>Ladner (n. 34 above), pp. 27–33, 63–82, 153ff.

<sup>57</sup>A survey of medieval Christian attitudes toward nature may be found in Clarence J. Glacken, *Traces on the Rhodian Shore: Nature and Culture in Western Thought* (Berkeley, Calif., 1967), pp. 176–253.

<sup>58</sup>Augustine, *De doctrina christiana*, in *PL* 40, bk. 1, chap. 30.

<sup>59</sup>For the “three orders” and their interlocking social functions, see Georges Duby, *Les Trois ordres ou l’imaginaire du féodalisme* (Paris, 1978).

<sup>60</sup>Ambrose, *Epistolae*, in *PL* 16, col. 1244 (epistle 63).

<sup>61</sup>Gregory of Nyssa, *De virginitate*, in *PG* 46, col. 369.

in commenting on Gen. 3:17–18, Bede raised similar points: labor is the consequence of sin, a testimony to the fault of being overly concerned with the things of this world, and a means of perpetuating this concern.<sup>62</sup> In this recognition of the distracting nature of labor and in the insistence on the primacy of the *opus dei* over the *opus manuum*, Eastern and Western Christianity were united. Both Saint Basil and Saint Benedict, the two preeminent regulators of Christian communal life, insisted that labor must not intrude on the devotional aspects of the life devoted to God.<sup>63</sup> In the matter of monastic attitudes, in fact, the notion that the West was more “practical” than the East—or that Eastern devotional forms excluded labor while Western forms encouraged its practice—does not hold up. A survey of the textual background against which medieval monastic labor was practiced may perhaps help to clarify the role played by manual labor in the Christian communities established during the 4th and 5th centuries.

In 4th-century Egypt, Saint Anthony was acknowledged to have been the perfect model of the anchoritic (solitary) life, whereas Pachomius, founder of a community of monks at Tabennesi in A.D. 320, was taken to be the model of the cenobitic (communal) life.<sup>64</sup> At Tabennesi the monks raised their own food and worked to supply the community with all its material necessities. Crafts were practiced, trade was conducted with secular communities, and charitable functions were performed for men and women in surrounding communities.<sup>65</sup> Though it

<sup>62</sup>Bede, *Opera exegetica, libri quator in principium genesis*, ed. C. W. Jones, in *CCSL* 118 (Turnhout, Belgium, 1960), p. 68.

<sup>63</sup>For Saint Basil, see Rufinus's translation of the *Asceticon parvum*, in *PL* 103, cols. 491–92; for Saint Benedict's views, see Adalbert de Vogüé, ed. and comm., *La Règle de saint Benoît*, 7 vols., in *Sources chrétiennes*, 181–86 (Paris, 1971–72), chap. 48 (“Otiositas inimica est animae . . .”) for the balancing of manual labor, divine reading, and prayer. For the place of manual labor in the various monastic rules generally, see E. Delaruelle, “Le Travail dans les règles monastiques occidentales du IV<sup>e</sup> au IX<sup>e</sup> siècle,” in *Journal de psychologie normale et pathologique* 41 (1948): 51–62; Émile Levasseur, “Le Travail des moines dans les monastères,” *Séances et travaux de l'Académie des sciences morales et politiques* 154, n.s. 60 (1900): 449–70.

<sup>64</sup>For Saint Anthony, see the *Vita Antonii*, in *PG* 26, col. 835; a Latin translation (by Rufinus?) is in *PL* 73, col. 127ff. For the life of Pachomius, see F. Halkin, *Sancti Pachomii vitae graecae* (Brussels, 1932) trans. as *The Life of Pachomius* by A. N. Athanassakis (Missoula, Mont., 1975). For the roles of both in the early history of monasticism, see H. Bacht, “Antonius und Pachomius: von der Anachorese zum Cönobitentum,” in *Antonius Magnus, eremita (356–1956)*, *Studia Anselmiana* 38 (Rome, 1956). A recent treatment of the early history of monasticism is in the introduction to *RB—1980: The Rule of St. Benedict*, ed. Timothy Fry (Collegeville, Minn., 1981), pp. 3–64.

<sup>65</sup>For manual labor at Tabennesi, see Saint Jerome's preface to the Pachomian rule, in A. Boon, ed. *Pachomina Latina, bibliothèque de la revue d'histoire ecclésiastique* 7 (1932): 3–5;

was not at all unusual for a religious hermit to perform manual labor—there are numerous examples recorded in the *Sayings of the Fathers*—the contribution made to the history of monasticism by Pachomius was the organization of communal labor in order to create an economic basis for the religious life.<sup>66</sup>

The four monastic rules known collectively as the *Regulae patrum*, composed during the 5th century and collected by Benedict of Aniane in the *Codex regularum* during the 9th century, offer some valuable insights into the consequences of this organization of manual labor during the earliest centuries of Western monasticism.<sup>67</sup> The first of these texts, the so-called *Rule of the Four Fathers*, discusses labor in its tenth and eleventh chapters. In chapter 10 the rule prescribes devotion to God during the first to the third hours of the day. “But,” the text continues, “from the third hour to the ninth, whatever has been commanded must be done without murmuring.”<sup>68</sup> The *Rule of the Four Fathers* next legislates that the “work of the hands” prescribed in 2 Thess. 3:10 (quoted above) nonetheless must not harm any monk overcome by weakness of the body and that the monk who is weak in spirit should work even harder in order to “restore the body to subjection.” This labor was ascetic rather than productive: “Therefore, this [practice of labor] must be observed so that in nothing will the brother do his own will.” Manual labor is seen here as a means of subduing the individual will by forcing the monk into a cooperative contribution to the monastery; whatever class distinctions might have existed among the monks were also extinguished through the universalizing of work usually associated with a particular social class. Indeed, a number of other regulations in other rules were included as a means of eliminating those distinctions between monks that were based on the possession of property.<sup>69</sup>

The *Rule of Macarius*, written late in the 5th century, adds two points

---

D. J. Chitty, *The Desert a City* (Oxford, 1966), p. 40, n. 45, provides additional texts on manual labor in the early monastic establishments.

<sup>66</sup>I have considered the relationship between manual labor and the eremitical and cenobitic traditions in “Manual Labor in Early Monastic Rules,” forthcoming in *Viator* 17 (1986).

<sup>67</sup>For the relations of these early rules—collected by Benedict of Aniane during the 9th century—see Adalbert de Vogüé, “The Cenobitic Rules of the West,” *Cistercian Studies* 12 (1977): 177–83. The rules of the *Codex regularum* are collected in *PL* 103; note of critical editions is made below.

<sup>68</sup>Critical text is in Jean Neufville, “Règle des IV pères et seconde règle des pères,” *Revue bénédictine* 77 (1967): 47–95; for this passage, see pp. 83, 85 (recension ‘E’).

<sup>69</sup>See, for example, chap. 59, “The Offering of Sons by Nobles or the Poor,” in the *Rule of St. Benedict*, ed. de Vogüé (n. 63 above).

to the discussion of manual labor in the *Rule of the Four Fathers*. First of all, chapter 8 of this rule warns the monk not to hate manual labor and to avoid the dangers of idleness.<sup>70</sup> Second, in the last chapter of this rule, craftsmen are addressed directly: "Inside the monastery no [monk] may practice a craft, except for him whose faith is proven, and who does his work for the utility and necessity of the monastery."<sup>71</sup> The appearance of this regulation within the context of a set of warnings against monastic misconduct suggests that the practice of a craft, as opposed to the practice of agricultural labor, constituted a nonessential diversion from the perceived business of a monk. Although there can be little doubt that the skills of a fuller, a smith, or a carpenter would be necessary to the monastery, they were not necessary enough to compromise the commitment of the community as a whole to the work of worship; those weak in faith must first strengthen their souls before they may contribute their manual skills to the community.

The same attitude may be found in the *Rule of the Master*, composed sometime during the 6th century. In this rule manual labor is described as a cure for the spiritual risks of idleness—the busy eye and mind are not flooded by desires. Moreover, Saint Paul's text (2 Thess. 3:10) is cited in order to confirm the fact that there must be physical as well as spiritual labor included in the monastic schedule.<sup>72</sup> However, the *Rule of the Master* defines "physical labor" broadly enough to include reading (during the winter months and until the vernal equinox) and the study of Latin. Handicrafts, when practiced in silence and under supervision, are also allowed. During the summer months manual labor in the fields is to be performed, but with restrictions:

Field work and missions requiring travel should be considered the province of those brothers who are not skilled in the arts and have neither the desire nor the ability to learn them. The skilled craftsmen, however, are to stay at their respective crafts every day, having their daily quota of work assigned and checked. . . . Delicate and weak brothers should be assigned such work as will nourish them for the service of God, not kill them. As to the hard of heart, as also the simple brothers and those who have neither the desire

<sup>70</sup>Edited in Adalbert de Vogüé, *Les Règles des saintes pères*, 2 vols. (Paris, 1982), 1:374. Additional material in Helga Styblo, "Die Regula Macharii," in *Wiener Studien* 76 (1963): 124–60.

<sup>71</sup>*Les Règles des saintes pères*, 1:389: "Illud etiam addendum fuit, ut intra monasterium artificium non faciat ullus, nisi ille cuius fides probata fuerit, quid ad utilitatem et necessitatem monasterii faciat, quid poterit facere."

<sup>72</sup>Adalbert de Vogüé, ed., *Le Règle du Maître*, in *Sources chrétiennes*, no. 106 (Paris, 1964–65), chap. 86, pp. 351–54.

nor the ability to learn letters, let them be tied down by rough labor, but in a measure consonant with justice, lest they be the only ones continually oppressed by various kinds of work.<sup>73</sup>

Thus, in the formulation of the *Regula magistri*, manual labor is interchangeable with intellectual labor during the inclement seasons. It includes the practice of crafts without specification of what kinds of products may be produced; it is fitted to the physical and intellectual constitutions of individual monks; and it is an introverted activity that both sustains the community and feeds the spiritual life of the individual monk. The degree of organization of manual labor appears to be far greater under this rule than under any earlier rule—the idea of daily quotas assigned and checked by superiors is not to be found in any other rules except for those that came out of the early Pachomian communities.<sup>74</sup> At the same time, one also notes that the “Master” explicitly warns against valuing the “profits of the flesh” too highly, and later in his text he recommends that “secular workmen” be charged with the oversight of the monastery’s agricultural productivity so that “[the monks] do not let [their] thoughts wander off to worldly things.”

It is thus important to note that even in this highly organized community of laboring monks, the spiritual mission of the individual and of the community was neither lost sight of nor compromised in the interests of enhanced productivity. This fact is not surprising, but it is worth stressing the ways in which the labors of the hands were consciously shaped by the labors of the soul so that one might avoid forming the impression that monastic life held inviolable the ideal of a productive social community. From its beginnings in the deserts and wadis of the Middle East, monasticism used labor to purify the individual, to sustain a community of believers, and to open up avenues of charity. The later history of medieval monasticism demonstrates that physical needs did not take precedence over the personal spiritual needs of the individual monk, and one must not lose sight of the fact that labor and productivity created a social context for the practice of religion, rather than religion creating a structure supportive of labor.<sup>75</sup>

This last point is particularly clear when one examines the *Rule* composed by Saint Benedict in the mid-6th century, a text now known

<sup>73</sup>Ibid., chap. 50, pp. 229–30.

<sup>74</sup>See F. Prinz, *Frühes Mönchtum im Frankenreich* (Munich and Vienna, 1965), pp. 532–40.

<sup>75</sup>Later medieval commentaries on earlier monastic rules, like Benedict’s, tended to qualify the injunction to daily labor and to recognize varying functions for individual religious duties; see, for example, the 12th-century *Libellus de diversis ordinibus et professionibus qui sunt in ecclesia*, ed. and trans. Giles Constable and B. Smith (Oxford, 1972), pp. 95–97.

to have been influenced by the *Rule of the Master*.<sup>76</sup> Benedict, first of all, saw manual labor as a necessary part of monastic life because it protects the brothers from the potentially harmful effects of leisure: "Leisure (*otiositas*) is the enemy of the soul, and for this reason the brothers must spend a certain amount of time in doing manual work (*in labore manuum*) as well as the time spent in divine reading (*lectione divina*)."<sup>77</sup> Manual labor supplements the true work of reading, prayer, and meditation; it assists the monks in their attempts to live "as our fathers and apostles did," and it is specifically designed so that those who are weak are not overwhelmed or driven away: "Let those who are not strong have help so that they may serve [meals] without distress . . . ." For Benedict, the very essence of monastic life entails manual labor, and, as de Vogüé has shown, the Benedictine *Rule* assumes that matters such as diet will be determined, in part, by the labor performed by a particular member of the monastic community.<sup>78</sup> Indeed, Benedict's discussion of manual labor occurs in a chapter of the *Rule* that outlines the basic structure of the monastic day. As Benedict says, "the labor of obedience will bring you back to him from whom you have strayed through disobedience," and the monastery is pictured as the workshop in which the monk labors to perfect his soul and to know his God.<sup>79</sup>

A different approach to labor and to the organization of monastic life is to be found in the *Rule of Saint Columban* (ca. 543–615), a rule reflecting the harsher, more ascetic world of Irish monasticism, where labor was primarily a tool for the mortification of the flesh ("the main purpose of monastic rules is mortification . . .").<sup>80</sup> The Irish monks labored in the fields and practiced simple crafts, but "All training, according to the Apostle, for the present seems to be a matter not of joy but of sorrow; nevertheless, it yields a pleasant fruit and a peaceful

<sup>76</sup>See B. Jaspert, "*Regula magistri, Regula Benedicti: Bibliographie ihrer Historisch-Kritischen Erforschung 1938–1970*," in *Studia Monastica* 13 (1971):129–71.

<sup>77</sup>de Vogüé (n. 63 above), chap. 48.

<sup>78</sup>See Adalbert de Vogüé, "Travail et alimentation dans les règles de saint Benoît et du Maître," *Revue bénédictine* 74 (1964): 242–51.

<sup>79</sup>de Vogüé (n. 63 above), chap. 4, "Quae sunt instrumenta bonorum operum," which concludes: "Ecce haec [the monastic virtues] sunt instrumenta artis spiritualis. Quae cum fuerint a nobis die noctuque incessabiliter adimpleta et in die iudicii reconsignata, illa merces nobis a Domino recompensabitur quam ipse promisit [cites 1 Cor. 2:9]. Officina vero ubi haec omnia diligenter operemur claustra sunt monasterii et stabilitas in congregatione." ("These, then, are the tools of the spiritual craft. When we have used them ceaselessly day and night and on the day of judgment returned them, we shall receive the reward God has promised. . . . The workshop where we labor at all these tasks is the enclosure of the monastery and the stability of the community of believers.")

<sup>80</sup>*Sancti Columbani opera*, ed. G. S. M. Walker, in *Scriptores Latini Hiberniae*, vol. 2 (Dublin, 1957), chap. 9, p. 138.

increase of reward . . . for indeed what is to be learnt here without sorrow and toil . . . ? How much grief lies in the craftsman's trades? How much toil? How much labor awaits those who ply a craft and even build?"<sup>81</sup> In the rule of Columban, one encounters the ideal of labor as penance, and one sees the extent to which the eremitical ideal persisted within the structure of Western monasticism even as the Benedictines established a monastic ethic that would, by the 12th century, accept productivity and wealth as natural by-products of cooperative labor.

### *Conclusion*

The tension between the communal (cenobitic) and the solitary (eremitical) ideals in monastic rules and monastic practice was never really resolved, and manual labor, as a principal source of wealth, was always difficult to reconcile with the spiritual goals of monastic life. Labor and craftsmanship were a part of monastic devotions, and in every rule but Columban's some allowances were made for the inclinations and abilities of individual monks or nuns. It is not clear from the rules alone, except for Columban's, that manual labor was viewed as being merely gratuitous or even primarily penitential; in Augustine, Basil, the "Master," and Benedict of Nursia, work was functional, a part of the Christian life lived after apostolic models, and a means of controlling rather than of punishing the flesh.

The purpose of labor—as described not only in early monastic rules but also in a wide range of apologetic and exegetical writings—was the creation of both a physical and spiritual context within which God could be more fully worshiped. Then, too, the dignity of labor in the early Christian tradition was, as Benz surmised, bound up with the creativity of God; in addition, the dignity of labor was tied by writers like Basil, Ambrose, and Augustine to the human obligation of caring for—and utilizing—the physical world.

Although Lynn White is correct in seeing human needs as central in the Christian conception of nature, the textual tradition suggests that this centrality mandated a cooperative and custodial rather than an exploitative relationship. Indeed, the realization that the "fullness of time" and the end of the world were to be delayed created a motive for the sanctification of those labors that sustained the individual Christian and the community of believers. What the monastic tradition did was to make normative what was already the case, namely, the practice of labor and craftsmanship in the interest of creating a viable community

<sup>81</sup>Ibid., pp. 78–80, instructio 4; see also Delaruelle, "Le Travail dans les règles monastiques" (n. 63 above), p. 61.



whose purpose was spiritual, whose “profit” was otherworldly, and whose interest in time was shaped by a concern for its ending rather than for its potential for sustaining progress.

In evaluating the contributions of early medieval Christianity to the subsequent history of technology, then, what emerges as most significant is the positive evaluation of labor and craftsmanship and the location of these activities within the framework of personal and communal life. Until there is a cultural consensus supporting notions of productivity and efficiency for their own sake, there is no incentive within a social system—any social system—to concentrate on developing techniques for the elimination of the tedium of labor. Early medieval Europe spiritualized daily life, including daily labor, but until a clear-cut distinction could be drawn between acts performed for spiritual ends and acts performed for secular ends (such as profit), there could be no rationale for technological advancement.

The role played by manual labor in the medieval texts that I have summarized here suggests that the difficulty and tedium of work were not objectionable because there resided within this difficulty the potential for significant spiritual benefits. This view seems neither to support a work ethic nor to be a catalyst of technological invention; in fact, it raises the possibility that although Christianity supplied attitudes that, when joined with other economic and social factors, helped create a receptivity to technological change, Christianity was not itself responsible for creating the conditions under which such change occurred. As a religion characterized above all by adaptability, Christianity should perhaps be seen as having adjusted itself to a world being altered by technology rather than as being the decisive force behind such alteration.