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# Monastic Asceticism and the Rationalization of Beer-Making in the Middle Ages

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*Lord, bless this creature, beer, which by your kindness and power has been produced from kernels of grain, and let it be a healthful drink for mankind. Grant that whoever drinks it with thanksgiving to your holy name may find it a help in body and in soul; through Christ our Lord.*

## Introduction

This is the official “Blessing of Beer,” which comes from the *Rituale Romanum* (XI.8), one of the official collections of ritual works of the Roman Catholic Church. Here, one can find a series of blessings of “things designated for ordinary usage” such as oil, seed, fishing boats, and — listed fifth among them — beer. It serves to highlight a unique, but by no means exclusive, historical linkage between the Catholic Church and beer. As is well known, the production of fermented, malted grain beverages is as old as civilization itself, dating back thousands of years. Different cultures have produced different concoctions of this type of beverage — modern beer being one of them — depending on local climate and ingredients. For example, the Bavarian Purity Law of 1516, also known as the *Reinheitsgebot*, stipulated that only barley, hops, and water could be used in the production of beer. The role of yeast had yet to be discovered and would be added to this law centuries later.

Nonetheless, what appears to be unique about the relationship between the Church and beer is both the scale and skill that were applied to its production by monks in the Middle Ages. As Unger (2004, 26) reports, the first large-scale production of beer in medieval Europe took place in the monasteries of the eighth and ninth centuries: “Large monasteries were institutions typical of the Carolingian Empire, and they were nearly always centers of brewing.” Likewise, Horn and Born (1979, Vol. II, 261) surmise that “[b]efore the twelfth and thirteenth centuries when brewing first emerged as a commercial venture, the monastery was probably the only institution where beer was manufactured on anything like a commercial scale.” Their famous study of the ideal Benedictine community in the Plan of St. Gall strongly suggests that monks of this era not only produced beer on a large scale but seem to have done so with considerable technique and organizational skill.

One immediate explanation for the success of monastic brewing could be that the Church and its associated institutions were prominent land owners, which enabled the production of cereal grains such as barley, a key ingredient, in large quantities. But, as Toussaint-Samat indicates, the key issue here is not just the availability of abundant resources

but, in addition, the proficiency and progressive enhancement that monks applied to their work:

Food-growing in the Middle Ages, it should be remembered, owed almost everything to the monasteries, which were large enough landowners to employ the rotation of crops necessary to constant cereal production, and were alone in farming their lands in a profitable and intelligent way, unlike the secular lords, whose interests were not in agriculture. The monks therefore tried to improve the quality and quantity of their ale, just as they did with cheese, wine and liqueurs. (Toussaint-Samat 2009, 165)

Indeed, the monks applied this proficiency to a variety of agricultural endeavors, not just brewing beer. But this begs an important question: what was it about monastic communities that promoted this budding entrepreneurialism? Put another way, why would a monk, living an ascetic lifestyle in a monastic enclave, be especially good at making and distributing beer (or cheese, wine, or liqueurs) for that matter? While the Church’s considerable landholdings were certainly a plus, this merely ensured a larger, perhaps more constant, supply of grain, not necessarily a drive for productive enhancement.

Prominent historical sociologist Max Weber offers helpful clues to this mystery, particularly with his concept of “ascetic rationalism” that he used to explain the transformation of economic behavior during the Reformation and the rise of modern capitalism. Following the lead of contemporary Weberian scholars (Adair-Toteff 2010; Collins 1986a, 1986b, 1997; Kaelber 1996), a similar transformation was fostered by monastic communities centuries before the Reformation and can help explain why monks displayed a kind of mastery over productive endeavors like beer brewing.

## *Ascetic Rationalism and the Rise of Modern Capitalism*

### WEBER’S PROTESTANT ETHIC THESIS

One of the central legacies of The Protestant Ethic is the challenge it posed to classical, liberal economists and utilitarian social thinkers in the nineteenth century who assumed that profit maximization was a universal human motive (Marshall 1982). This assumption, commonly dubbed *homo economicus*, was indebted to the work of Adam Smith who famously argued in *The Wealth of Nations* (1776) that there is an inherent tendency in human nature “to truck, barter, and exchange one thing for another” in order to improve one’s

material condition (Heilbroner 1986, 168). Weber believed that the origins of this claim needed to be explained historically not inherently and viewed the Protestant Reformation as a critical turning point that transformed the meaning of economic behavior in the sixteenth-century. This emphasis on religious history remains one of the most intriguing and controversial aspects of the Protestant Ethic Thesis. Controversies aside, Weber's analysis provides an important sociological mechanism for exploring the unusual brewing proficiency of the monastic orders: the religious activation of ascetic rationalism. While Weber never precisely defined these terms, they appear throughout his work on the sociology of religion and tend to refer to an extremely disciplined and methodical organization of life-conduct that seeks to tame and sublimate spontaneous human desires (the status naturae) based on a set of values (Weber 2009, 116–117).<sup>1</sup> The ascetic rationalism of medieval monks was less consequential in Weber's scheme since it was confined to the monastery and directed towards "other-worldly" pursuits (prayer, salvation), whereas Protestant asceticism was profoundly "this-worldly" and had wide-ranging implications for social organization in the West, including the development of modern capitalism.

As Weber explained, the Reformation did not invent capitalism; it existed in many societies throughout ancient and medieval history. But, the transformation of capitalism that began in the sixteenth century became a radically different enterprise. "Traditional" capitalism, according to Weber, was oriented toward achieving a comfortable aristocratic lifestyle; making money was a means to acquiring social position. Therefore, capitalist enterprises generally took the form of long-distance trade in luxury items (spices, silk, gold, wine) or politico-military expeditions in hopes of gaining windfall profits. Indeed, it was not befitting of a nobleman or aristocrat to be bogged down in a daily struggle to make money. "Rational" capitalism, on the other hand, was oriented toward a frugal and disciplined lifestyle rather than an aristocratic one, mass production and steady profits rather than one-shot windfall gains, and continual reinvestment of those steady profits. Thus, the nature of the modern capitalist enterprise was distinctly different from traditional ones. Weber links these changes to the dramatic reforms of the Christian faith during the Reformation. Ultimately, various Protestant reforms had the effect of setting loose an extreme form of ascetic rationalism that became intimately bound up with business practices. The result was a new "spirit" of capitalism that fundamentally altered the proper methods of both economic production and accumulation.

### *MEDIEVAL MONKS AS CAPITALIST ENTREPRENEURS*

Randall Collins (1986a, 1986b, 1997) has extended Weber's thesis in ways that are directly applicable to the phenomenon of monastic brewing. In general, Collins draws from Weber's later works on the sociology of religion (1920, 1946), writ-

ten after *The Protestant Ethic and the Spirit of Capitalism*, which explored the cultural influence of the Judeo-Christian tradition in general and identified "institutional preconditions" that were crucial for the rise of modern capitalism such as bureaucracy, a rationalized legal system, and citizenship rights. Here, Weber also specified attributes of modern capitalism in greater detail. In addition to ascetic behavior, other unique attributes include the existence of mass markets, rationalized technology, a free labor force, and the entrepreneurial organization of capital. In Collins' view, *The Protestant Ethic* represented the second wave of rational capitalism initiated by – and dependent upon – the institutional structure of the Church and the economic activity of monasteries in particular. The key difference was that the Reformation unleashed this ascetic form of rational capitalism society-wide: "Without monasteries, henceforth every Protestant Christian had to live the disciplined life of a monk, but applied now to the daily activities of the ordinary world" (Collins 1998, xiii).

Building on these insights, Collins argues that all of Weber's institutional preconditions can be found in the medieval Church. The Papacy, for example, was the first bureaucratic state in modern times (cf. Strayer 1970). It operated under formal laws and rules that defined administrative qualifications and control, and was able to recruit from an "expert" labor force (the clergy) that was educated and literate (Grant 1996; Morris 1972). What is more, due to the practice of clerical celibacy, there was no hereditary appropriation of offices. The Papal Court, meanwhile, was a pioneer in record keeping and legal activity (Lynch 1992). Through the articulation of canon law, the court provided a regularized and objective legal tradition that governed many aspects of personal life and functioned like a trans-national tribunal when settling property disputes (Kingdon 1981; Ullmann 1976). And, while the Church did not grant citizenship rights per se, the clergy did have some legal privileges. More importantly, since it was a highly expansive and diffuse organization whose presence was felt throughout Western Europe, there was a tradition of collective responsibility within the medieval Church to bring "the way, the truth, and the life," despite its hierarchical and autocratic elements (Meyer *et al.* 1987).

These institutional preconditions helped facilitate an initial take-off of rational capitalism during the High Middle Ages that, according to Collins, was centered in monastic communities like the Cistercians, who re-dedicated themselves to asceticism and hard work and enjoyed considerable material success. In Weberian terms, they employed rationalized technology such as mills and forges that were efficient and labor-saving for the day (Gimpel 1976; Lucas 2006; White 1962). They were also agricultural entrepreneurs who were well known (and envied) for acquiring marginal areas and turning them into productive lands. In some ways, the Cistercian Order functioned like a firm (Ekelund *et al.* 1996, 2011). Without the possibility of familial inheritance, any income made by the monks went back into buying up more land and consolidating their estates. In other words, profit

was accumulated and reinvested by the corporate unit, not by individuals or families. And, as Collins reminds us, monks exhibited a kind of rational cost accounting found in modern franchises: abbeys that were successful were built up while struggling ones were cut loose. Like the Church itself, monastic orders were the only international organizations in Europe at the time and recruited freely from all social ranks. This approximates a free labor force that was organized into a managerial class of fully ordained monks and a lower class of full-time laborers (the *conversi* or lay brothers). Finally, Church decrees like The Peace and Truce of God fostered some long-distance trade in Europe by attempting to curb violence, Collins contends, but this was carried out mainly through the movement of bulk commodities.

### *Monastic Brewing in the Middle Ages*

The historical sociologies of Collins and Weber offer a useful framework for understanding why medieval monks appeared to display such an unusual proficiency for making and distributing beer. A central component of Weber's theory of capitalism is the role of rational asceticism in promoting an unusually disciplined form of economic activity and success. While Weber originally highlighted the influence of Protestant Reforms for advancing this new spirit of capitalism, Collins points to the role of the Cistercians in fostering an earlier capitalist boom in Western Europe during the High Middle Ages. Following Collins' lead in recognizing the role of monasteries in this process, it is possible that Benedictine monasteries had a formative role here as well, which can be observed through their brewing prowess. As noted above, the monasteries of the Carolingian era were the first to produce beer on a large scale in medieval Europe and had brewing operations that were advanced well beyond their domestic counterparts: "In those institutions the first signs of a new level of beer making included using more and better equipment and the best of techniques, as well as having artisans who developed special skills to produce beer ... Carolingian monastic records indicate that certainly by the ninth century, possibly earlier, northern Europeans had mastered brewing on a large scale" (Unger 2004, 26–27).

Until the late eleventh century, many monasteries followed the Rule of St. Benedict. They did not think of themselves as "Benedictine" *per se*; they were relatively autonomous and did not constitute families of monasteries like the Cistercians or other, subsequent reforming monastic orders (Aston 2001). Nonetheless, the diffusion of Benedict's precepts provided a common cultural framework that defined, quite specifically, how monks should ideally organize their lives. In addition, the Rule promoted a "this-worldly" form of religious asceticism that paved the way for other reform movements to come, from the Cistercians to the Calvinists. Indeed, the Rule of St. Benedict was *the* foundational document of Western monasticism that encouraged monks to

move away from a life dedicated solely to contemplation, prayer, and solitary devotion (the *vita contemplativa*) and to emphasize work as well (the *vita activa*) (Adair-Toteff 2010, 14). Work was highly valued in Benedict's opinion, not for personal satisfaction but for the glory of God (ch. XLVIII). Therefore, any remuneration for it should be lower than that offered in the outside world (ch. LVII). Benedict's Rule also specified that monks should live together within their own communities, be self-sufficient through their own labor, and offer hospitality to travelers. This emphasis on a more active life of work and engagement connected monks to the world, rather than fleeing from it (Adair-Toteff 2010, 115–16). And, while it did not foster the same kind of ascetic mindset Weber observed after the Reformation that openly pursued material success, the Benedictine reform movement was a crucial precursor by institutionalizing (through monastic communities) a daily moral drive for discipline, proficiency, and progressive enhancement in both their laboring and spiritual activities.

The role of monasteries in Western Europe received a significant boost during the Carolingian dynasty. Before its disintegration in the later ninth century, the Carolingians initiated a widespread reform movement in an attempt to solidify the hierarchical ordering of society that was viewed as the remedy for social instability. These efforts also targeted the Church, promoting a greater emphasis on the prestige and authority of the papacy, a clearer distinction between the clergy and the laity, and a Benedictinization of monasticism (Lynch 1992, 83). With the imperial favor of Charlemagne and his successors, monasteries based on the Rule of St. Benedict spread far and wide as organizations that could provide formal religious sanction as well as more reliable economic and administrative control over the lands of great lords and kings (Miccoli 1990, 49–50): "Veritable 'holy cities' arose, and near the monasteries sizable agglomerations that could almost be called urban sprang up, organized into wards and defended by their own small army of milites" (50). Not all monasteries were connected to expansive communities of this size, of course, but their elevation as cultural centers would have given the monks a free labor force of varying sizes to employ in the production of beer, depending on location.

This promotion in status for Benedictine asceticism, which emphasized a disciplined lifestyle of communal work, self-sufficiency, and hospitality, was reflected in the famous Plan of St. Gall, a blueprint for the construction of a monastery in ninth-century Switzerland. As Horn and Born (1979) and others<sup>2</sup> have concluded, this Plan depicted the ideal or paradigmatic monastery rather than a one-off construction. Indeed, there is no evidence that a monastic community with these precise specifications was ever built on the designated grounds at St. Gall. Ultimately, the Plan of St. Gall was more than just an architectural blueprint; "the Plan might be fairly characterized as a two-dimensional meditation on the ideal early medieval monastic community, an 'objective correlative' of the Rule of St. Benedict, created at a time when monasticism was one of the dominant forms of political, economic,

and cultural power in Europe” (“St. Gall Monastery Plan.” 2012). It is likely that the Plan was inspired by the activity of two church synods in Aachen in 816 and 817 which sought to promote a single universal rule for all European monasteries (Price 1982, ix).<sup>3</sup>

As shown in Figure 1, the Plan of St. Gall reflected a community that was rationally planned and intended to be very orderly and self-sufficient. There are roughly forty structures including an elaborate church complex (#1, middle left), a garden and gardeners quarters (#20, top right), medical facilities (#15, #16, top left), a school (#12, middle left), animal shelters (#35–40, bottom right), and “numerous buildings associated with the specialized economic operations of a complex community of over 110 monks and some 150 servants and workers” (“St. Gall Monastery Plan.” 2012).

The Plan also includes provisions for three separate brew-houses (see Figure 2, encircled) — one to produce beer for noble guests (#10, left circle), one for pilgrims and the poor (#32, middle circle), and one for the monks themselves (#9, right circle). With a hypothetical community of this size, dedicated to self-sufficiency as well as hospitality, mass markets for the production of beer were built into the operations of the monastery itself. With three brewing facilities and demand from monks, servants, and visitors alike, an average of 350 to 400 liters of beer (700 U.S. pints) per day would need to be produced (Unger 2004, 29; Price 1982, 57). Given that monasteries were the only institutions in Europe at this time with large quantities of surplus grain, no other social units had enough resources to produce beer in these quantities (Unger 2004, 27).

Figure 3 shows a close up of the monks’ brewery and bakery complex and exemplifies further the rationalized layout of the Plan. Here, notice that servant bedrooms, presumably for specialists in beer and bread making, (A in 9) are located

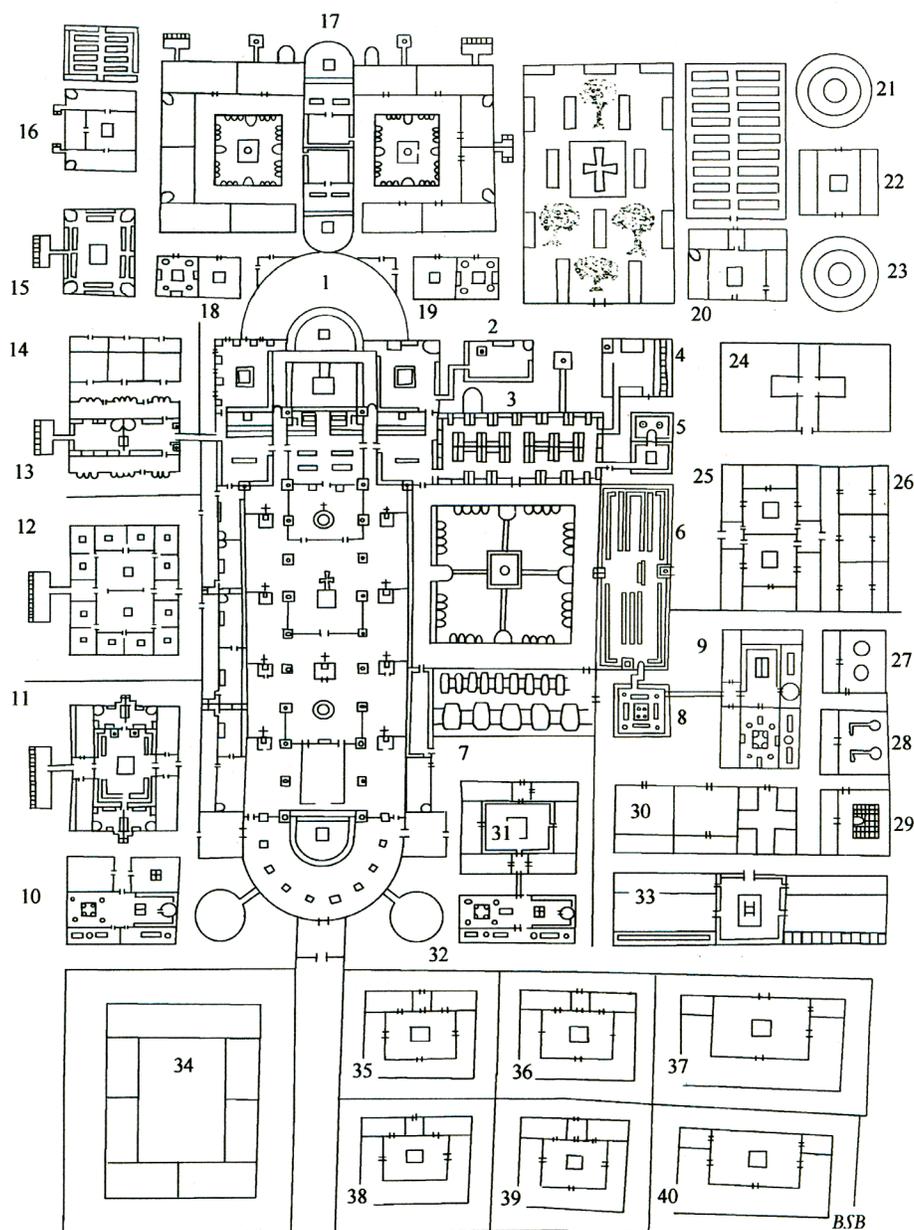


Figure 1: The Plan of St. Gall. Drawn from plan by B.S. Bowers. Image editing by James Krehbiel. Used by permission.

on-site while houses for the processing and storing of grain are situated immediately around the complex: the granary for storing threshed grain (#30), the kiln for drying or roasting the grain (#29), the mortar for crushing the grain to be used for beer (#28), and the mill for grinding the grain into flour to be used for bread (#27). The synod at Aachen in 816 required greater specialization and a stricter division of labor in the monasteries. Previously, monks changed tasks between the bakery and brewery on a weekly basis, but they were now required to work in one or the other for an entire year (van Vilsteren 1996, 42). The description of this layout by Horn

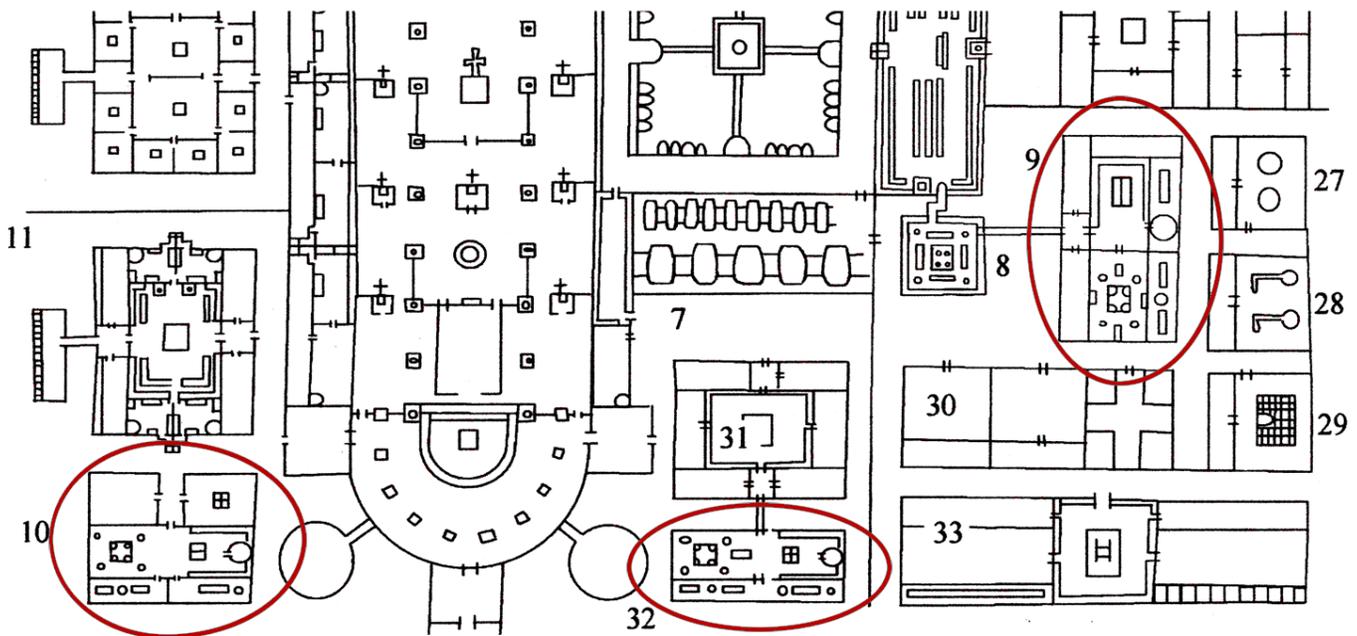


Figure 2: Cross-section of brewing complexes in the Plan of St. Gall. Drawn from plan by B.S. Bowers. Image editing by James Krehbiel. Used by permission.

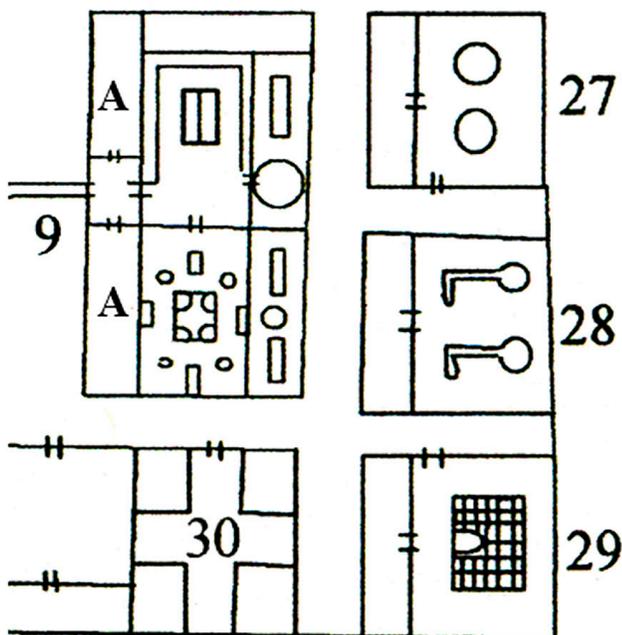


Figure 3: Close up of the monks' brewery and bakery complex. Drawn from plan by B.S. Bowers. Image editing by James Krehbiel. Used by permission.

and Born (1979, Vol II, 254) perfectly summarizes the systematic planning of the Benedictines:

The efficiency internal to the Plan of St. Gall is nowhere better demonstrated than in the relationships among the brewers' granary, mortars, mills, drying kiln, and monks' bake- and brewhouse. The traffic patterns demonstrate with what economy of movement raw material, grain – bulky and heavy even after threshing – could be moved from the Brewer's Granary to facilities where it was further refined, and finally into the Brewhouse where the end product, beer, was produced.

Other monastic innovations suggested in the Plan include the potential use of water power for the processing of grain. "Alignment of mills and mortars on the Plan indicates that given a source and the correct land gradient, water power could have driven both ... [I]n the 5th through 8th [centuries], water-powered mills were recorded in Frankish monastic communities. The impetus to apply water power may have spread in the West with Benedictine monastic life" (Price 1982, 57, 60). Horn and Born (1979 Vol. I, 352) also discuss improvements to the technique of storing and transporting beer via wooden casks, which were "large and ingeniously constructed" to withstand the internal pressure of fermentation as well as transportation over long distances. Monastic records in 822 also mention the use of hops (Unger 2004, 54), which eventually became a standard ingredient since they impart a bitterness that balances the sweetness of the malted sugars, and, perhaps more importantly, act as an effective preservative agent. Later, there is also evidence that monasteries engaged in the sale of surplus beer, some of it in commercial establishments like taverns. According to Unger (2004, 34–35), this practice was well-known in Germany and

Poland in the twelfth-century, but less common in the Low Countries. In Wales, Williams (2001, 244, 262–63) notes that Basingwerk Abbey sold beer in Holywell in 1347, and the abbeys at Margan and Neath sold beer in Glamorgan in 1450 and 1468 respectively. Llantarnam Abbey was known for operating a tavern-house, and Strata Florida Abbey also had an ale-house within its precincts. Future research could explore how the practice of “church-ales” may have afforded another opportunity for monasteries to sell surplus beer. The precise origin of church-ales is unknown, but, in general, they combined elements of Germanic drinking customs, charitable feasts in the Christian tradition, and peasant customs of self-help (Bennett 1992, 24). Specifically, they involved the sale of beer in the churchyard after services to raise money for parish projects and expenses as well as to provide relief for the poor. But, the church ale could also involve feasting and entertainment (Bennett 1992, 26–27; Holt 2006, 36).

To summarize, the organization of monastic brewing reflects a notably systematic and rationalized orientation to the craft. This orientation is rooted in the Rule of St. Benedict that directed the ascetic behavior of monks towards an active life of work. While the original Rule never mentioned the making of beer, per se, the rationalization of this activity connected them to the mundane world of economic affairs. The official sanction and promotion of Christianity by the Carolingian empire solidified the Catholic Church as a major political player in Western Europe and provided a relatively stable political environment within which monasteries could grow and flourish. Meanwhile, the articulation of common rules and standards at Church councils and synods attempted to provide a regularized understanding of the Catholic faith and sought to standardize daily life in the monasteries and other religious houses. The layout of St. Gall, while idealized, highlights the impressive scale and advanced technique that resulted from the institutionalization of Benedictine asceticism. Their commitment to hospitality as well as self-sufficiency meant that mass markets for beer were built into the very nature of monastic communities. And, given their expansion within the empire and their ability to draw freely from all social ranks, Benedictine monasteries enjoyed access to a free labor force like no other organization in Europe at this time. These factors, combined with various innovations in brewing equipment and methods as well as the sale of surplus beer, highlight a nascent capitalist spirit emerging from the monasteries much earlier than prior research has acknowledged.

An important extension for future research on the broader, societal impact of monastic brewing would be to ascertain the degree to which the particular practices and techniques of the monks served as a model for urban brewing industries that followed. Unger (2004) speculates that the monasteries may have provided an effective model for large-scale brewing operations in surrounding communities, especially as they grew in size and expanded throughout Europe. Once established, they all tended to have breweries. This appeared to be the case at St. Trond Monastery in Belgium, for example, which grew

in prominence after the eleventh century: “By the end of the thirteenth century, Saint Trond was the most important center for the production of beer in the entire region. By 1250, the town and surrounding area boasted about thirty brewers” (Unger 2004, 34). Nordland (1969, 57–60) also describes how the Benedictine monastery of St. Alban, established at Selje, Norway, shortly after 1100, likely disseminated the use of the filter-vat (rostekar) and the practice of boiling the mash to surrounding areas. Indirect evidence of the stature and influence of monastic brewers may also be seen in the form of competitive backlash by urban brewers who periodically took legal action against the monks as they caught up in the late thirteenth-century (Unger 2004, 36). Scholarly attention to these and other issues will give greater insight into the widespread influence of monasteries throughout medieval Europe, not only as brewers but economic entrepreneurs in general.

## Conclusion

From a sociological perspective, the phenomenon of monastic brewing is an important empirical example for exploring the economic capabilities of ascetic communities in medieval Europe and their relation to the growth of modern capitalism. Weber’s sociology of religion and subsequent extensions of his work provide a preliminary framework for explaining the unusual proficiency and success of monastic brewers from the Early Middle Ages onward.

## Notes

1. See Adair-Toteff (2010) for a more thorough exegesis of Weber’s notion of asceticism.
2. See St. Gall Monastery Plan ([www.stgallplan.org](http://www.stgallplan.org)) for a summary of historical research.
3. I am indebted to an anonymous reviewer for suggesting this historical relationship.

## Works Cited

- Adair-Toteff, C. 2010. “Max Weber’s Notion of Asceticism.” *Journal of Classical Sociology* 10(2): 109–122.
- Aston, M. 2001. “The Expansion of the Monastic and Religious Orders in Europe from the Eleventh Century.” In *Monastic Archaeology: Papers on the study of medieval monasteries*, edited by G. Keevil, M. Aston, and T. Hall, 9–36. Oxford: Oxbow.
- Bennett, J.M. 1992. “Conviviality and Charity in Medieval and Early Modern England.” *Past & Present* 134: 19–41.
- Bond, J. 2001. “Production and Consumption of Food and Drink in the Medieval Monastery.” In *Monastic Archaeology: Papers on the study of medieval monasteries*, edited by G. Keevil, M. Aston, and T. Hall, 54–87. Oxford: Oxbow.

- Collins, R. 1998. "Introduction." In *The Protestant Ethic and the Spirit of Capitalism*, by Max Weber, vii–xli. Los Angeles: Roxbury.
- \_\_\_\_\_. 1986a. "Weber's Last Theory of Capitalism." In *Weberian Sociological Theory*, by Randall Collins, 19–44. Cambridge: Cambridge University Press.
- \_\_\_\_\_. 1986b. "The Weberian Revolution of the High Middle Ages." In *Weberian Sociological Theory*, by Randall Collins, 45–76. Cambridge: Cambridge University Press.
- \_\_\_\_\_. 1997. "An Asian Route to Capitalism: Religious Economy and the Origins of Self-Transforming Growth in Japan." *American Sociological Review* 62(6): 843–865.
- Ekelund, R.B., Jr., R.F. Hebert, and R.D. Tollison. 2011. "The Political Economy of the Medieval Church." In *The Oxford Handbook of the Economics of Religion*, edited by R.M. McCleary, 305–321. New York: Oxford University Press.
- Ekelund, R.B., Jr., R.F. Hebert, R.D. Tollison, G.M. Anderson, and A.B. Davidson. 1996. *Sacred Trust: The medieval church as an economic firm*. New York: Oxford University Press.
- Gimpel, J. 1976. *The Medieval Machine*. New York: Penguin.
- Grant, E. 1996. *The Foundations of Modern Science in the Middle Ages: Their religious, institutional and intellectual contexts*. Cambridge: Cambridge University Press.
- Heilbroner, R., ed. 1986. *The Essential Adam Smith*. New York: W.W. Norton.
- Holt, M.P. 2006. "Europe Divided: Wine, beer, and the Reformation in sixteenth-century Europe." In *Alcohol: A social and cultural history*, edited by M.P. Holt, 25–40. Oxford: Berg.
- Horn, W. and E. Born. 1979. *The Plan of St. Gall: A study of the architecture and economy of, and life in a paradigmatic Carolingian monastery* (3 Vols.). Berkeley: University of California Press.
- Kaelber, L. 1996. "Weber's Lacuna: Medieval Religion and the Roots of Rationalization." *Journal of the History of Ideas* 57(3): 465–485.
- Kingdon, R.M. 1981. "The Church: Ideology or institution." *Church History* 50: 81–97.
- Lucas, A. 2006. *Wind, Water, Work: Ancient and Medieval Milling Technology*. Leiden: Brill.
- Lynch, J.H. 1992. *The Medieval Church: A Brief History*. London: Longman.
- Meyer, J.W., J. Boli, and G.M. Thomas. 1987. "Ontology and Rationalization in the Western Cultural Account." In *Institutional Structure: Constituting state, society, and the individual*, edited by G.M. Thomas, J.W. Meyer, F.O. Ramirez, and J. Boli, 12–37. Beverly Hills, CA: Sage Publications.
- Miccoli, G. 1990. "Monks." In *Medieval Callings*, edited by J. Le Goff, 36–73. Chicago: University of Chicago Press.
- Morris, C. 1972. *The Discovery of the Individual 1050–1200*. London: Society for the Promoting Christian Knowledge.
- Nordland, O. 1969. *Brewing and Beer Traditions in Norway: The social anthropological background of the brewing industry*. Oslo: Universitetsforlaget.
- Price, L. 1982. *The Plan of St. Gall in Brief*. Berkeley: University of California Press.
- Rituale Romanum*. 1964. Translated by Fr. Philip T. Weller, STD. "St. Gall Monastery Plan." 2012. Accessed 2 February 2012. <http://www.stgallplan.org>.
- Strayer, J.R. 1970. *On the Medieval Origins of the Modern State*. Princeton, NJ: Princeton University Press.
- Toussaint-Samat, M. 2009. *A History of Food*. West Sussex: Wiley-Blackwell.
- Ullmann, W. 1976. *The Papacy and Political Ideas in the Middle Ages*, Collected studies, CS44. London: Variorum Reprints.
- Unger, R.W. 2004. *Beer in the Middle Ages and the Renaissance*. Philadelphia PA: University of Pennsylvania Press.
- van Vilsteren, V.T. 1996. "From Herbs to Hops: Outlines of the brewing process in medieval Europe." *de Halve Maen* 69(3): 41–46.
- Weber, M. 2009. *The Protestant Ethic and the Spirit of Capitalism with Other Writings on the Rise of the West*. Oxford: Oxford University Press.
- \_\_\_\_\_. 1946. "The Social Psychology of the World Religions." In *From Max Weber*, edited by H. Gerth and C.W. Mills, 267–301. New York: Oxford University Press.
- \_\_\_\_\_. [1920] 1978. "The Sociology of Religion." In *Economy and Society*, Vol. I, edited by G. Roth and C. Wittich, 399–634. Berkeley: University of California Press.
- White, L., Jr. 1962. *Medieval Technology and Social Change*. New York: Oxford University Press.
- Williams, D.H. 2001. *The Welsh Cistercians*. Herefordshire: Gracewing.

