

# Cathedrals and the birth of freedom

Andrew McIntyre

Enter any one of the great gothic cathedrals of Western Europe and you cannot help but be overwhelmed by their beauty and profound mystery, and also the sheer size, boldness and complexity of their structure.

But because of their ubiquity, and their modern association with travel and tourism, we tend to lose sight of their central historical significance to European history and the events they represent.

One such gothic cathedral, England's Lincoln Cathedral, was completed in 1311 and its original spire soared to 160 metres. Until its construction, no building had equalled the height and scale of the European cathedrals anywhere in the world since the construction of the Cheops Pyramid in 2560 BC, which was, at completion, just over 146 metres, the tallest construction ever built to that date. Why did it take almost another 4000 years for this feat to be surpassed? Although the spire of Lincoln Cathedral collapsed three hundred years after it was built, nothing was to rival the heights achieved by these gothic cathedrals until the late nineteenth century with the 'modern' Eiffel Tower for the Great Universal Exhibition in Paris in 1889.

Quite apart from any consideration of medieval religious belief and symbolism—why were such singular and remarkable edifices built? These buildings, in purely economic terms, were the biggest single financial undertakings in the medieval period.

The expenditure and scale of the structures eclipsed those of defensive castles, parliaments, government buildings and anything else.

Their construction and the political will to build them often extended over several generations from conception and planning to completion. Massive, long scale projects of this nature are completely unknown in the modern

world. The Snowy Mountain Scheme or the Three Gorges Dam are mere bagatelles at their side.

A preliminary report on a study that Anne E.C. McCants from Massachusetts Institute of Technology is undertaking on the economics of cathedral building in the late Middle Ages, has come up with some fascinating cost figures to give us an idea of the economic effort that these cathedrals represented to the society of the time. Many Australians will remember the spiralling costs of the Sydney Opera House, funded, judiciously as it turned out, by a state run lottery. At its completion in 1973, the basic building, before machinery and fittings were installed, blew out to an impressive \$400 million in today's dollars.

McCants quotes from research based on billing techniques relied on by modern quantity surveyors and suggests that in the Paris basin alone between the years 1120 and 1270, the number of ecclesiastical buildings created for this small population was equivalent to constructing three Sydney Opera Houses in each of Sydney's nine local government council areas within a period of one hundred and fifty years. In fact, it has been estimated that in Europe at that time there was a church or chapel for every 200 inhabitants.

And Europe had a poor, overwhelmingly agricultural economy, not a rich modern one like today's Australia. 95 per cent of people then worked and depended directly on agriculture and had a life expectancy of less than 50 years. McCants relies on calculations from Bernard Bachrach's book, *The Cost of Castle Building*, emphasising the puny economic output in those times. Considering the low grain yields—yield ratios of as low as 2:1 and only occasionally as high as 4:1—and the labour intensive nature of agricultural production, the opportunity cost of building at the close of the tenth century required the full time efforts of at least 4 and possibly 5 agricultural workers to sustain the construction workers (and their

dependents) assigned to building. This opportunity cost should be compared to that of military expenditure at the time to underline the perceived social priority for church building. To sustain a mounted warrior and his horse with wheat-equivalent calories amounted to the surplus of almost twelve agricultural workers every year.

Could it be, as McCants wryly observes, that 'there may yet be a case to be made for the power of the afterlife in medieval financial markets?'

Robert A. Scott, in *The Gothic Enterprise*, illustrates just how motivated the protagonists of these constructions of megalomania were. In France, Scott writes, what mattered to competitive cathedral builders was height. Bourges Cathedral reached 37 metres inside the nave under the stone vaulted ceiling. In short order, Reims came along at 38 metres, Amiens at 42 and then Beauvais Cathedral, the tallest, at 48 metres. To give the reader an idea of scale, Beauvais could house a whole modern sixteen story office building inside the nave *under* its ceiling. Over the channel in England, it was length that counted. Salisbury Cathedral reached 138 metres, Canterbury 165 metres, and the biggest, St Paul's in London, later destroyed by fire, reached nearly 183 metres: nearly twice the length of a soccer field.

The physical scale nevertheless directly reflected the cathedral's vital function within each city as a political and administrative power. Education, legal and social services were central to the cloister attached to the cathedral buildings. Religious courts played a role in the legal system, and the traditional role of priestly training metamorphosed in these city based cathedrals into the new universities that were to be critical in developing the new class of professional city dwellers. These would, ironically, lead to secular, independent thought.

The Church was everything. Like God Himself, She was omnipotent. The

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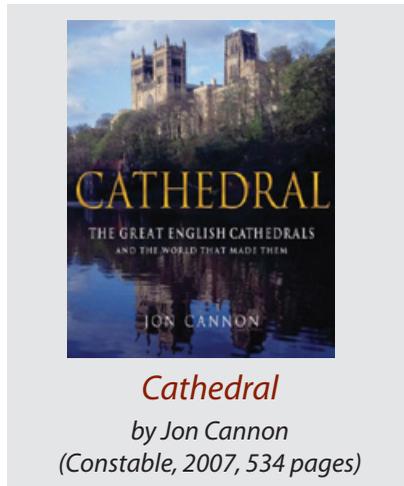
bishops ran it as an economic monopoly: a virtual theocracy. As the French historian George Duby writes:

Established at the pinnacle of the social hierarchy, the bishops and canons possessed the best lands and huge barns that the tithes at each harvest would fill to roof; they controlled the cities, exploited the markets and the town fairs; from land and trade, they profited directly. Other resources came from the rich laity who, concerned for their souls, gave generously.

Indeed, the Church was rich. Jon Cannon, in his new book, *Cathedral*, even gives an estimate for the cost of one medieval bishop's mitre, the ceremonial head-dress. Covered in jewels and gold, it would alone have been as expensive as a small building. Cannon points out that by the twelfth century, the cathedrals with their bishops had become uncontested centres of power, with their own laws and taxes, 'answering only to God and the Pope'.

Because of this aggressive assertiveness, the Church was seen as a threat to established royal power. Between 1076 and 1302 there were two papal bulls asserting superiority of the papacy over the kings. The prosperity of the thirteenth century however helped to settle things down between the Episcopal bureaucracy and the royal administrations and a mutual back scratching of sorts developed. Cannon writes that 'kings, to retain the support of the Church ... became patrons, and gave clerics even stronger control over common people.' Henry III, for instance, spent about ten per cent of the state's annual income over many years on architecture, notably in building Westminster Abbey. This amounted to spending roughly the equivalent of the state's entire annual income for two years. As Cannon points out, 'for the first time, the most influential building in England was a work of a king, rather than an archbishop.'

Similar challenges came from merchants challenging the monopoly that the Church held over economic life. The emergence of market towns, increased trade, urban professionals, and universities—themselves springing from the cathedral—created a more secular,



economically independent middle class. Peter Watson, in his grand 2005 overview *Ideas: A History of Thought and Invention, from Fire to Freud*, reminds us that a good proportion of European peasants owned land. Land ownership was as high as 40 per cent in some areas. Along with the rising mercantile class, 'parliaments and estates evolved to give voice to the new classes and their interests', and could be seen as an aspect of kingly weakness. As Watson puts it, 'in the high middle ages, we see a weakening papacy fighting weakening kings.'

There was much unease caused by an overbearing Church, and often violent struggles between the people and the repressive power of this theocracy. As with all politically repressive regimes, ideology was central to maintaining power. Cannon evokes the power of magic and symbolism that the cathedrals were able to impose on the people. He says,

At a time when the vast majority of people were illiterate, illustrations in the stain glass, sculptures and religious iconography of all sorts filled the cathedral church ... through the rituals performed there each day, God confirmed his contract with humanity. Without the authority of its bishop, man's side of this contract would break down.

There was an increasingly urgent need for the Church to resist heretical statements and utterances as people were exposed to new ideas and developed an intellectual cut and thrust relevant to town people.

Duby reports instances of growing resentment and even assassination of clerics by the bourgeois, as a revolt at the Church's demands and monopoly. He explains the nexus between the power of the Church and its enthusiasm for its own aggrandisement in its massive building programme.

It was, in the end, the art of the gothic cathedrals that became the most effective instrument, perhaps, of catholic repression ... of the heretical movement.

Clearly there was an economic reawakening in Europe. The cathedrals may have represented some sort of 'last fling' of Church power just as it was slowly being undermined by a more assertive, economically independent, and confident middle class. But nevertheless, the cathedrals did signal, if not represent, a new, confident, Europe. Watson sees the emergence of middle class individualism as a vital causal factor leading directly to the development and flowering of science, scholarship, and exactness in secular life. He writes,

The two centuries from 1050-1250AC were pivotal in the emergence of the West from its earlier medieval stupor. It was a time of explosion of new ideas, central to the West's identity and spectacular growth.

To this spectacular growth Watson also counts the discovery of crop rotation and the use of mechanical power which both increased productivity enormously, the widespread adoption of Arabic numerals, and the development of double-entry bookkeeping, amongst others. (We should of course count the contribution of the medieval warming period from around 800 to 1300 AD.)

Whatever the proximate causes, Gothic cathedral building during these pivotal centuries was a very concrete manifestation of a confidence born of increasing economic prosperity that heralds a new dynamic in Europe.

The buildings are such a technical triumph on their own terms that they should be measured on a scale of millennia. They represent a Western awakening that has not yet diminished.

