

**THE TRIUMPH OF CHRISTIANITY IN THE ROMAN EMPIRE:  
AN ECONOMIC INTERPRETATION**

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**ABSTRACT.** This paper offers an economic interpretation of Christianity's takeover of the Roman empire. It first points out paganism's apparent inability to provide individual security in times of distress, such as the third century A.D., as a reason for the increasing demand for monotheism. It then reviews Christianity's monotheistic competitors and points out the reasons why they lost out. Next, it formally addresses the Christian church's dilemma between exclusive membership and open access to all applicants on the day of its triumph, and shows that open access and universal membership was a superior policy if coupled with doctrinal radicalization. Finally, it analyzes the theological controversies of the fourth and fifth centuries by means of a Hotelling-type linear spatial model of doctrinal strictness ranging from paganism to Judaism, and traces the theological choices that were made back to the church's need to distance itself from its potential competitors.

## 1. Introduction

Sometime around the middle of the first century A.D. a small dissident Jewish sect broke away from Judaism and set out to proselytize in the Gentile world at large. By the beginning of the fourth century this sect, called Christianity, had grown into the single most widespread religion of the Roman empire, endorsed and protected by its emperors. By the end of that century it had been raised to the position of official religion of the Roman state and its predecessor in that position, paganism, was henceforth to be banned and actively suppressed.

The fact that, in the space of three centuries, a movement from below, completely alien and inimical to the religion and culture of the ancient world, was able to take on and conquer the greatest power of its age is an extraordinary feat, whose explanation has engaged generations of historians, religious scholars, theologians, and sociologists. This paper makes a start toward producing an economic interpretation of that epoch-making event. It does so by casting some of the established knowledge and understanding of the rise and triumph of Christianity into a framework that is familiar enough to economists. To the age-old question, how could the Christian revolution in the Roman empire lastingly succeed, this paper offers a two-word answer: competition and monopoly. It argues that a string of innovative entrepreneurs grasped the potential for a universal religion that was embryonically contained in the early Christian faith; that competition for religious allegiance in the Graeco-Roman world was stiff and increasing; that to ward off and outbid its competitors Christianity gradually took on certain distinctive features in its organization and teaching; that the pursuit and achievement of political monopoly on the wake of popular success was not a mechanical necessity but a fateful choice; and that the choice of monopoly forced upon the church a development in doctrine and policy that was to leave a permanent imprint on the subsequent history of Christianity and on the divergent evolution of Eastern and Western Christianities.

Specifically, the grand question of why Christianity triumphed can be broken down into a chain of smaller, somewhat more manageable questions. First, the age-old system of paganism collapsed in a relatively short time and without ever coming back to life. What explains its peculiar brittleness at that particular time? Second, among the very many groups and sects that were competing to win converts over from paganism by advertising a message of man's salvation, why was it the Christians that finally won the contest? Third, around the turn of the fourth century the church changed from an exclusive sect, carefully guarding and rationing admission to membership, to an inclusive church granting admission to all

applicants. Why was this fundamental change made and with what consequences? Fourth, the move to an inclusive, universal religion was accompanied and followed, between the fourth and the fifth century, by an unprecedented hardening of doctrinal teaching, excommunicating views and practices that had previously held wide currency within the church. Why should a triumphant church become conspicuously more dogmatic in its theology and thereby breed division and conflict within its ranks?

Popular accounts of religious history that focus on the evolution of doctrinal beliefs and debates in isolation, without paying any attention to the self-interest of the religious organization that makes the decisions and to its environment, simply bypass these questions. For example, Armstrong (1993, p. 115) approvingly quotes and rephrases the following comment by the Church Father, Gregory of Nyssa: “around 320 the churches of Egypt, Syria and Asia Minor were overtaken by a great religious passion (. . . .) People argued over such abstruse issues with the same passion as people today argue over football”. Such an approach turns the problem on its head. Why is it that the theological passion was discovered exactly at that point in time, not before or after? We will try to show that the timing of events can be understood as far more than sheer coincidence, and that the selection of the views that were banned as heretic was far from random but followed a rational logic.

Addressing these questions from a rational choice perspective requires breaking new ground, as we can find little assistance in the existing economics of religion (see the survey in Iannaccone, 1998). The latter typically avoids addressing questions of theology, which are left in the unexplained background of “religious commodities”. We will have no choice but make this awkward step. On the other hand, those approaches that view the medieval church and the Protestant Reformation as a contest for the monopoly supply of “salvation” (Ekelund et al., 2002) deal with a church whose doctrine and practices were long since well-established, something that took shape many centuries after the period we are concerned with. We will, however, borrow from a spatial model of church strictness (Barros and Garoupa, 2002) when appropriate.

The rational choice approach to religious history is not, however, limited to economics. Rodney Stark’s (1996) sociological reappraisal of the “grand question” is a pathbreaking contribution. It shows how one can go beyond the circumstantial, case-specific accounts of historians and explain the rise of Christianity in terms of rigorous propositions grounded in the comparative sociology of religion. Unlike the economists, Stark does address the issue of theology, but his focus is essentially on the strengths and weaknesses of Christianity itself and its established opponent, paganism, while Christianity’s outside

competitors and inside dissent are only occasionally touched upon, and the evolution of the church immediately after 313 is not addressed at all. We will therefore best leave the main confrontation between paganism and Christianity where Stark left it, that is, we will not address the first of the questions listed above – why paganism lost out. We will simply start from the established facts that, in the early centuries of the common era, paganism left some substantial religious demands unsatisfied and thereby left the door open to the spread of a variety of monotheistic, salvation cults, and that this crisis of confidence was heightened by the chaos and disorder of the third century. This may be due to the fact that paganism itself was in long-term decline, as Stark suggests, or simply to the fact that never before an effective challenger of polytheism had arisen in the Mediterranean world<sup>1</sup>. However that may be, we will concentrate on the remaining three questions listed above: why Christianity prevailed over its competitors, rather than over paganism, why the choice of universal inclusion was made, and why the latter went hand in hand with doctrinal radicalization.

The paper is organized as follows. Section 2 sketches out the backstage on which the Christian mission unfolded: the crisis of Graeco-Roman paganism in the early centuries of the common era. Section 3 examines Christianity's starting point in Judaism, the competitors and challengers from within and without it encountered along the way, and the why and how it finally managed to drive them all out. Section 4 addresses the dilemma between exclusive membership and open access that the church faced on the day of its triumph, and explains why the second option required doctrinal radicalization. These sections are descriptive and pave the way for the formal modelling of the following sections. Section 5 offers an economic model of the church's choice between exclusive membership and free access cum exclusive doctrine. Section 6 looks into the theological controversies that rent the Christian empire apart and suggests that the evolution of the dogma was a response to the re-emergence of the church's historical enemies, paganism and Judaism, within its own ranks. This is done by means of a spatial model of doctrinal competition. It also suggests why this response was different in the East and West, foreshadowing the parting of the ways between Eastern and Western churches that was to come to a head several centuries later. Section 7 concludes.

## **2. Background: the crisis of paganism**

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<sup>1</sup> Nock (1933, pp. 41-44, 268-269) makes the intriguing suggestion that Zoroastrianism might have been just such an effective challenger before Christianity, had it moved into the Mediterranean world in its original form. This was, however, prevented by the fact that not until after Alexander the Great could an Oriental cult travel to the Mediterranean, and by the time the Persian religion arrived in the Roman empire it was in the late, corrupt form of Mithraism, a fusion product that will be discussed below in the paper.

The great, unique strength of Graeco-Roman paganism, often noted by scholars, was its seemingly unlimited capacity to accommodate new and foreign cults of every description, which would be lined up alongside the others for the believers to worship as they pleased. Unlimited religious tolerance was the hallmark of the system. Some cults might in time decline and die out while others might rise and spread, following worshippers' demand, but if one turned to a new cult there was no requirement that one should forsake or forswear previous allegiances. The very notion of "conversion", i.e., subscribing to a new cult to the exclusion of all others, had no meaning in this world (Nock, 1933). Judaism, of course, was strikingly different in its requirement of belief in the one and only God, and so were the Christians. But as long as loyalty to the Roman state was not called into question, the baffling reply of the Roman officials and the literate elite to both groups was the same: do follow your own cult as you wish, let everyone else do the same, and be content with your place in the sun in this universal tolerance of diversity.

This quality of unlimited openness apparently made the system very resilient and capable of adapting to changing demand and supply without ever breaking apart. So the question has exercised generations of scholars, how could such a flexible system be finally displaced? What was there in the Christian sect that the pagan system could not swallow and digest, the Christians' claims to uniqueness notwithstanding?

The negative side of the answer – the fatal flaws of paganism as it confronted Christianity, rather than the strengths of Christianity in particular – was provided by the first-ever economist of religion, the emperor Julian (361-363), who went down in history as Julian the Apostate. A "hero of a lost cause" (Frend, 1984), he tried against all odds to engineer a revival of paganism fifty years after the Constantinian revolution and started from an analysis of the factors that explained Christianity's success (Nock, 1933, pp. 157-159; Frend, 1984, pp. 600-606). Julian made four points: (1) the Christians had books to read out during their services, the pagans didn't have anything, indeed no services at all were held in their temples beyond the performance of sacrifices; (2) the Christians provided extensive social protection to the members of their communities, caring for the widow, the orphan, the sick and the needy, whereas pagan temples had long since forsaken provision of such services; (3) Christian priests were required to be exemplars of moral behavior and righteous conduct, as true shepherds who point the way to their flocks, whereas the pagan priesthood was never supposed or required to possess moral qualities; in turn this was possible because (4) the Christian clergy was hierarchically organized, ensuring unity of purpose and policy, whereas

the pagan priesthood was a disparate collection of caretakers of local temples. In a frenzied effort to remedy these flaws, Julian called on his provincial supporters to draw up compilations of hymns and prayers that could be read out before the believers at temple services; instructed local authorities and priests to set up temple storehouses for the support of the needy among a temple's faithful; and made steps to organize in each province a high priesthood, endowed with oversight over temple operations and authority over appointment and demotion of local priests on grounds of proper conduct.

Julian's attempt was terminated at its inception by his untimely death in battle at the hands of the Persians, and was in all likelihood foredoomed anyway, but his diagnosis of the causes of the breakdown of paganism was deep enough to be essentially supported by modern historical research. This research (Harnack, 1908; Nock, 1933; Bardy, 1949; Latourette, 1954; MacMullen, 1984) has shown that the Christian message made converts because it promised individual spiritual salvation, made this promise credible by a unity of doctrine and organization founded on books embodying God's revelation to humankind, and backed this long-term promise with a short-term network of mutual protection and charity that paid tangible benefits to members. So Christianity asked of its converts a complete renunciation of all other cults and "insurances" against misfortune and an uncompromising break with the religious traditions that had seemingly made the Roman state the greatest power to date. Against these heavy costs, however, were to be set the benefits of spiritual salvation and material within-group security. These benefits would become especially valuable when the old order appeared to be incapable of further guaranteeing the security and prosperity it had prided itself of for centuries, as happened in the third century.

The extent and depth of the disruption and insecurity that was visited on the Roman empire in the third century can hardly be overstated (Brown, 1971). In the fifty years between 235 (death of the last emperor of the Severan dynasty) and 284 (accession of emperor Diocletian to power), the outward frontiers of the empire collapsed on all sides and barbarian invaders of every description treaded deep on Roman territory for the first time in many centuries; one tribe even managed to get as far inside as Athens and sack it. Whole provinces periodically seceded, with local generals fighting for succession to the throne in a creeping sequence of civil wars. The emperors' average tenure shortened to just a few years, with most of them dying either in battle with the barbarians or in internecine warfare. Trade across the Mediterranean was disrupted, price inflation got out of control, administrative corruption deepened and taxation became extortionary, adding to the misery wrought by epidemics and population decline. In a word, the environment of peace, law and order, that had allowed

centuries of relative security and prosperity, seemed to be gone for good. It is no coincidence that in an effort to restore public loyalty to, and confidence in, the Roman state, two emperors (Decius in 250 and Valerian in 257-259) launched the first two centrally mandated, empire-wide persecutions of Christians, subjecting them to the test of sacrificing to the Roman gods. Similarly, after Diocletian restored order and unity, he thought of buttressing it by ordering the so-called Great Persecution, the third and last one, in the early years of the 4<sup>th</sup> century. It is hardly surprising that precisely in the third century, and especially in the forty years of de facto toleration between the second and the third persecution, Christianity seems to have undergone unprecedented growth in numbers and diffusion. However, for the very same reasons, the crisis of the third century also boosted the following of other monotheistic or quasi-monotheistic cults; in other words, it increased the demand for monotheistic alternatives to traditional paganism in general. For, Christianity was not alone in offering relief and shelter: we must now turn to its competitors.

### **3. Competition for monotheism**

Christianity was born as a dissident sect within Judaism, and continued to wrestle with its Jewish heritage for centuries. The true founder of the Christian enterprise was Paul, who first perceived that the coming of Jesus of Nazareth held the prospect for monotheism to break away from the Jewish fold and become a universal religion: Jesus's promise of salvation was not limited to a chosen people as part of a unique covenant with God but was addressed to all of mankind. As a consequence, Paul maintained, a Christian was not bound by Jewish Law and Gentile proselytes should not be subjected to observance of the Sabbath, circumcision, dietary restrictions, and the rest of orthodox Jewish behavioral requirements: all that was required of a Christian was faith – faith in the second coming of the Lord, the salvation of the soul, and the resurrection of the dead. In retrospect, however, it is easy to see why Paul's recipe for expansion and consolidation of the Christian mission was not, and could not have been, an equilibrium solution. As the millennial expectations of the beginnings faded and the church had to adjust to a prolonged, difficult coexistence and struggle with the pagan world surrounding it, it became clear that the Christians had to settle for a set of regular practices centered around the distinctive feature of their faith – the celebration of the Eucharist. Even so, the church had to wage a continuing struggle to find a distinctive terrain that could validate the Christians' claim to be a "third race" between Jews

and Gentiles – in other words, to unmistakably distinguish its religious “product” from the competitors’.

These were many, both inside and outside the church, and continued to evolve and to respond to the swelling demands that the increasing insecurity of life and fortune in the third century brought with it. It is useful to classify the competitors in two groups: those which, from the standpoint of the orthodox church, stood on the “pagan” side, and those which stood on the “Jewish” side<sup>2</sup>. Beginning with the first group, in the second century there arose Marcionism, an important splinter movement inside Christianity which held that the God of the Christians was not that of the Jews and that the New Testament was not the continuation and perfection of the Old Testament. Outside the church, but overlapping with many Christian communities, were the Gnostics, a syncretistic movement drawing from mystery cults, sundry Oriental religions, and Neoplatonism; it promised man’s salvation by initiation to esoteric knowledge, and put Jesus on top of this line of revelation of hidden truths. Both Marcionites and Gnostics downplayed or allegorized the historical figure of Jesus the man. Significantly, the Gnostics often reproached orthodox Christians with being “Jews” (Frend, 1984, p. 210). In the third century there was the spread of Mithraism, a modified form of Zoroastrianism preaching faith in one Sun god and an unending struggle between good and evil in the universe. Then there came Manicheism, a religion manufactured by Mani as a deliberate fusion of Christian and Persian elements and centered around a cosmic dualism of Light and Darkness. All these salvation cults were versions of monotheism that drew on the same pool of potential believers as Christianity too was targeting, and which enjoyed much success well into the fourth century.

On the other side of orthodox Christianity, there continued to exist and thrive so-called Jewish-Christian sects which remained within, or close to, the fold of Judaism. One particularly aggressive and successful sect, based on apocalyptic prophecy and militant asceticism, was Montanism, which sprang up in the second half of the second century. To appreciate the importance of this type of competition, one must bear in mind that in that period, unlike in later centuries, Judaism was engaged in a very active and successful proselytizing mission, so that a large part of the substantial numbers of Jews in the Dispersion (i.e., outside of Palestine) must be accounted for by conversion, not demographic growth (Harnack, 1908, pp. 1-12). In the period to the mid-second century, aptly called the period of

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<sup>2</sup> Frend (1984) provides detailed accounts on the movements listed in the text: Marcionism (pp. 212-218), Gnosticism (pp. 195-212 and 279-281), Mithraism (pp. 276-279), Manicheism (pp. 314-318), Montanism (pp. 253-256). See also Harnack (1908, pp. 543-545) on Mithraism. Latourette (1954, ch. 6) provides an illuminating concise account of Gnosticism, Marcionism and Montanism, and strongly emphasizes the element of competition in this doctrinal struggle, in broad agreement with the interpretation advanced in this paper.

the “Christian synagogue” (Frend, 1984), the Christians relied on the network of Jewish communities across the Mediterranean world as a vehicle for their proselytizing work, despite their differences with the Jews. To distance themselves from the Jewish competition the Christians had to break free of the synagogue but, by so doing, they faced the threat of becoming just another among the many salvation cults, such as those reviewed above, that fed on the apparent and growing inadequacy of the pagan polytheistic system.

This brings us to the theological dilemma that confronted the church. As we have seen, the uniqueness of Christianity lay in the figure of Christ, his incarnation, death and resurrection, and was epitomized by the central liturgy of the Eucharist. But this ritual could be interpreted in many ways, as could the historical narrative of the Gospels that it was meant to celebrate. The riddle was in the doctrines of the Incarnation and the Trinity, or the mystery of Jesus, God and man at one and the same time. This doctrine was indeed unique, if only the christological paradoxes could be expounded in a way that would prevent confusion, or fusion, with either of the opposite contestants, Judaism and paganism. If Jesus was essentially a man, however inspired, anointed, and sent forth by God, then (as the Prophet Muhammad was to claim centuries later) he was yet another Jewish prophet, perhaps the ultimate one, or the Messiah of Jewish eschatology, and we were back in Judaism, however universalistic in outlook and practice. By contrast, if Jesus was essentially God who came down in human garb to redeem mankind, then the incarnation, death and resurrection was yet another theophany, of which there was no dearth in pagan mythology and the various movements reviewed above were the latter-day instances. Put otherwise, only in the duality *and* unity of Christ as man *and* God could Christianity find its own exclusive territory and breeding ground. Without that, there already was pure monotheism, but only for a chosen people, and there already was salvation for all, but this in itself could not possibly justify the injunction to forsake and disclaim all other cults as untrue that was the hallmark of the church. Looking at the dilemma from the point of view of the credibility of the Christian promise, if Jesus is just God, then he cannot easily be held up as a model for believers to imitate, whereas if he is just a man, then there is no assurance of final redemption of men.

As long as Christianity remained a confessors’ church, in opposition to the existing order and subject to discrimination and persecution, its struggle was mainly to distance itself from outside competitors. Internal dissent there was (Marcion is one early example), and it was cast aside as heretic by what came to be known as the “Catholic” church. But overall the theology remained soft and broadly defined, and only the most blatant concessions to either paganism or Judaism were anathematized. But after A.D. 313, outside competition receded

and the triumphant church had to face the same dilemmas inside. It could have continued to be broadly tolerant of alternative interpretations of the theology; on the contrary, it chose to harden its doctrinal contours and brook no further dissent toward the Catholic mainline. We will try to account for this momentous development in the next two sections.

To summarize on the outcome of the religious competition in the pre-Constantinian era, Constantine's endorsement of Christianity in preference to the competing new cults is itself evidence that the church was outbidding them. How did it manage to prevail? Conversion to an exclusive cult involving rejection of all alternatives was, as one would expect, initiated in the same way as any new cult had always attracted converts in the ancient world: not by doctrinal persuasion – that was only for the educated few – but mainly by showing, in stark contrast with Judaism, a superior capacity to work miracles, healings, and other benefits believed to be of a supernatural quality (MacMullen, 1984, chs. 4, 11). This initial attraction was reinforced, as Julian understood, by the benefits of mutual assistance and solidarity that the churches – much like the Jewish synagogues but unlike the pagan salvation cults – provided to their members. The superior command of supernatural powers and the promise of salvation were in turn backed and made credible by the capacity to point to a historical figure, Jesus, as the bringer of salvation – Mithraism and the other mystery cults had no such asset. In the same vein, as Julian also understood, there was no “book of Mithras” (Frend, 1984, p. 279) nor “book of Mani” that could stand up to the Jewish and Christian revelations, while the Gnostics often borrowed Christian or Jewish texts. Finally, but crucially, the Christian message was not only, unlike Judaism, entirely stripped of ethnicity (Stark, 1996): it was in principle addressed to the ordinary people. It required neither esoteric initiation into an elite of the perfect, as did the Gnostics and the Manichees, nor the acceptance of extreme asceticism and estrangement from the world, as with the Marcionites, and it was not limited to men as was Mithraism – on the contrary, Christianity relied on women as a major social base. Thus, a pairwise comparison between Christianity and each of its competitors shows Christianity's clear superiority on one or another dimension of the monotheistic package<sup>3</sup>.

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<sup>3</sup> Contrary to a long-standing claim by Christian apologists, that “the blood of the martyrs was the seed of new Christians”, it is not clear that martyrdom and persecutions actually were a factor in bringing new converts to the church (MacMullen, 1984, ch. 4). Rather than convincing pagans that the Christian faith was superior, the importance of martyrdom for Christian growth lies in its role in reinforcing the commitment and dedication of members, and hence the effectiveness of the organization's proselytizing efforts (Stark, 1996). For a rational interpretation of martyrdom, Christian or otherwise, as a contract, see Ferrero (2004).

The potentially universalistic mission of Christianity remained, however, embryonic until religious toleration was achieved in A.D. 313. To an explanation of this epoch-making change we must now turn.

#### **4. Universal religion at work**

Before toleration, even though the Christian church's doctrinal platform was fairly inclusive, its membership policy was exclusive (MacMullen, 1984; Latourette, 1954, ch. 7). It made converts by "door to door" propaganda, often through a house's women, but there is no evidence of public missionary activity after the apostolic age. Its main preoccupation was to keep at a distance from the secular world around it, which in itself required of the candidate member a costly sacrifice of alternative opportunities and social relations and thus worked as a screening device<sup>4</sup>. Admission was carefully controlled and full membership was awarded as a privilege after a long and demanding probationary period (catechumenate). Re-admission to the church for those who had apostatized under the imperial persecutions was awarded only after an ordeal of penance and tests. It was not clear that "deadly" sins could be remitted at all (perhaps at most one in a lifetime, in the view of some eminent theologians), so people were advised to take baptism only when they were adults, or even on their deathbed (as emperor Constantine himself did).

Toleration confronted the church with a dilemma. It had emerged triumphantly from the last and greatest persecution, ordered by emperor Diocletian and his associates, and the many militants who had stood their ground and risked their lives now were claiming a right to leadership in the church. They wanted to continue an exclusive, selective church, run by "saints" and antagonistic to the secular order (Frend, 1965). On the other hand, church leaders perceived an unprecedented opportunity for expansion and influence. Crowds of possibly opportunistic candidates, along with genuine believers, were demanding admission. Taking them all in would have entailed a spectacular rise in the status, privileges, and power of the leadership – the bishops. But it would have taxed the organizational capacity of the church to the limit, especially in view of its chronic shortage of educated leaders and clergymen.

<sup>4</sup> The sectarian outlook of early Christianity was obvious to contemporary observers. One of the best informed and most reliable witnesses, the pagan polemist Celsus, wrote around 170: "If all men wanted to be Christians, the Christians would no longer want them" (quoted in Frend, 1984, p. 179).

What restrained the growth of the church, particularly as it faced the option of universal inclusion, was a serious shortage of talented, literate men: for the strongholds of resistance to Christianity and loyalty to the traditional religion were on the one hand the illiterate masses of the countryside, and on the other the literate, wealthy aristocracies of many provincial cities and especially of Rome (MacMullen, 1984, ch. 9; Frend, 1984, pp 600-601). These two groups together (including the aristocracy's slaves) easily made up a majority of the population of the empire even to the end of the fourth century, but as emperor Julian sadly found out, there was no possible ground or means to unite these opposite extremes of the social spectrum: seen as a political actor, Christianity won because it took the middle ground – it targeted the “median” citizen, the urban working classes and middle classes, especially the women. Now it was precisely these literate aristocracies that the church badly needed as officials, while they were the last to join in and the most repelled by the church's rejection of classic Greek and Roman intellectual legacy. This is almost a textbook case of adverse selection: by lowering admission standards – the “price” of membership – to take in all applicants, the average quality of the membership deteriorates. And as with insurance the standard second-best solution to the adverse selection problem is to prevent the good risks from drifting away by making subscription compulsory, so here the leadership shortage could be improved by making membership in the church compulsory, i.e. by prohibiting paganism. This, however, involved accepting universal inclusion and at the same time enlisting the strong arm of the state to the enforcement of the church's monopoly.

On the other hand, if the church was to become the majority religion of the empire and its hierarchy was to be enhanced and strengthened, it was no longer possible to allow for pluralism and diversity of doctrinal beliefs within its ranks – for those educated enough to appreciate theological subtleties. If anyone could join in and undertake an ecclesiastical career simply by subscribing to a broad, vague set of unconstraining and undemanding principles, then the benefits of monopoly accruing to the professional clergy and especially its leadership would be diluted away by excessive entry. Peter Brown has noted the connection between the theological controversies of the 4<sup>th</sup> and 5<sup>th</sup> centuries and the reorganization of power and hierarchy: in “the Christian church, the spiritual dominance of the few was made ever firmer and more explicit by a denial of ease of access to the supernatural that would have put ‘heavenly’ power in the hands of the average sinful believer” (Brown, 1978, p. 99). The “few” comprised two groups: the bishops and the “holy men”, i.e. ascetics and monks; the

latter had become a powerful force by the early 4<sup>th</sup> century, especially in Egypt and Syria<sup>5</sup>. So, while universal admission lowered the price of membership, doctrinal radicalization raised it, protecting the hierarchy's rents.

Concomitantly, public recognition and imperial endorsement not only provided an incentive to doctrinal radicalization, it also supplied the means to implement it for the first time. Even if some degree of theological hardening and conformity might have been desirable in the previous period, the loose, scattered organization of the militant church without legal recognition made enforcement of decisions next to impossible. Working in broad daylight and with government favor now made centralization possible.

So the church turned from an exclusive to an inclusive organization, basically permitting free access on demand. The alternative of continued exclusivity, selectivity, and "confession" of the faith under hardship as a screening mechanism was rejected, though at the cost of two very serious schisms, one of the Donatists in North Africa and another of the Meletians in Egypt. Standards for admission were relaxed, ways were in time found for apostasy to be forgiven and for "deadly" sins to be remitted, the period of catechumenate was shortened, and the church was swamped by huge numbers of new members. Church leaders of the time, from Augustine to Ambrose to Gregory of Nyssa, openly recognized that a great many of these newcomers were only "half-genuine", if not disguised pagans, but took the position that the church could not but be as imperfect as the world it lived in and that Christians' belief and behavior could be improved after admission (MacMullen, 1984, ch. 6).

At the same time, the ideological cleanup began in earnest<sup>6</sup>. As early as A.D. 325, the general council of Nicaea, summoned and presided over by emperor Constantine in person, marks the sharp beginning of doctrinal purification. In a century and a quarter, through the council of Ephesus I in 431 to that of Chalcedon in 451, as well as a score of sectional or regional councils, the trinitarian and christological doctrines were sharpened and made precise so as to weed out and brand as heresies all manners of "Jewish" and "pagan" conceptions from within the church<sup>7</sup>. The "Jewish" heresies (so labeled by the Church

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<sup>5</sup> On the role of monasticism see Brown (1971, ch. 8, 1978, ch. 4, 1992, ch. 3), Frend (1984, pp. 422-424, 567-569, 574-579), Latourette (1954, ch. 8).

<sup>6</sup> Frend (1984) provides detailed accounts: Arius and the council of Nicaea (pp. 492-500), Pelagius and Augustine (pp. 673-680), Nestorius and the council of Ephesus I (752-761), the council of Chalcedon (770-773), the Monophysite church and its mission in the 6<sup>th</sup> century (837-848). The concise, sharp discussion by Latourette (1954, ch. 6) is an excellent guide to these intricate matters.

<sup>7</sup> A telling indication of the doctrinal upheaval involved is the fact that the doctrines of Origen, one of the greatest minds of the early church, whose teaching had inspired generations of churchmen, were declared heretic at Ephesus. Brown's (1978, p. 98) comment is worth quoting: "The tranquil ease of access to the supernatural that had given such confidence to Origen and that underlay his heady perfectionism now seemed to belong to a

Fathers themselves) either denied the full divinity of the Son (Arianism, anathematized at Nicaea), or the divine nature of Jesus (Nestorianism, excommunicated at Ephesus), or the necessity of Christ's incarnation for the human soul to be saved (Pelagianism, defeated by Augustine in the early fifth century). The "pagan" heresies denied the human nature of Jesus (the Monophysites, originating from the Alexandrian school of theology defeated at Chalcedon). The defeated factions in most cases gave birth to "nonorthodox" churches which survived and grew outside the borders of the Roman, and then Byzantine empire, that is, beyond the reach of the secular arm of the church-state. The latter, from emperor Theodosius onward, took it as its mission to enforce orthodoxy and actively suppress not only the remnants of paganism but also the Christian heretics. At the same time, persecution of paganism and of heresies gave a field for action to the militants, and especially the monks, who were no longer allowed to fight against laxity of church standards and membership but could nevertheless signal themselves in the church's active service.

Finally, first imperial favor and subsidization of the church, then disestablishment and financial starving of pagan cults, and lastly the lifting of Christianity to the rank of official religion of the state under Theodosius in the 390's, with the accompanying proscription of all nonchristian cults, solved the church's problem of adverse selection in recruitment. By disrupting the traditional public cults of the literate upper classes and thereby lowering their opportunity cost of joining in, the church was able to sustain its huge organizational growth.

The choice problem faced and solved by the church can be formalized by a model that views the church as a cooperative organization that, quite naturally, maximizes per capita benefits of its members. Its size is constrained by a fixed factor, leadership, which makes per capita benefits peak at some definite membership level. Initially, the church sets admission standards and thereby controls membership levels. At some point however – at the beginning of the fourth century – the church acquires the additional power of defining and enforcing doctrinal standards, or the degree of "strictness" of its teaching and practice. If a turn to doctrinal radicalization and conformity expands the limiting factor and otherwise increases per capita benefits at all levels of membership, and if this increase is sufficiently strong, while at the same time the radicalization makes ecclesiastical careers more costly (in an expected utility sense) and therefore turns away potential candidates, then the church finds it profitable to give up on rationing admission, open access to everybody, and indirectly regulate access through doctrinal hardening. The church's position is thus analogous to that of many

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distant, more turbulent age of equal spiritual opportunities", and the same applies to Origen's Western equivalent, Pelagius.

revolutionary movements that found it difficult or impossible to directly keep out applicants on the wake of successful takeover of the state; instead they resorted to political extremism to thin out excessive numbers by inducing “voluntary” exit, as modelled in my previous work (Ferrero, 2002, 2004). The next section sets forth the model.

## 5. The choice of free access and doctrinal exclusion: a formal model

Despite the New Testament canon, it is reasonable to assume that the Christian movement could never credibly precommit to a fixed doctrine or theology, if only because the books require interpretation. Within broad limits, therefore, the theology was determined by the church itself to the extent allowed by institutional arrangements.

We assume that doctrinal strictness affects benefits of church members in two ways. First, it invariably makes church work harder, riskier, and more exacting, and therefore decreases membership supply to the church for a given benefit level. Higher benefits are required to compensate for the higher disutility of a stricter doctrine. An increase in strictness then helps to solve the cooperative’s excess membership problem posed by free access by “voluntarily” driving members away. Second, strictness enters the technology of religious production as an input with an ambiguous sign: up to some point increased strictness increases expected benefits because of the increased power of the clergy and monks, as explained above ; beyond some point, however, strictness turns counterproductive and begins to lower benefits.

Formally, let per capita benefits of the members of the religious cooperative,  $y$ , be a function of the number of members,  $M$ , and the degree of doctrinal strictness,  $E$ :

$$y=y(M,E) \quad \text{with } \frac{\partial y}{\partial M}, \frac{\partial y}{\partial E} \text{ first } >0 \text{ then } <0 ; \frac{\partial^2 y}{\partial M^2}, \frac{\partial^2 y}{\partial E^2} <0; y(0,E) =0;$$

$$\frac{\partial^2 y}{\partial M \partial E} = \frac{\partial^2 y}{\partial E \partial M} >0 \quad (1)$$

This specification captures the assumptions that both membership and doctrinal strictness initially have a positive effect on per capita benefits, which then turns negative beyond some level of input use. Marginal per capita returns to membership change sign because of a fixed factor (leadership), as well as possibly because of the onset of free riding beyond a certain size (Iannaccone, 1992). The signs of the second-order own partials denote

diminishing returns to each factor, as usual. The sign of the second-order cross partials ensures that when due to a change in E, the function  $y(M)$  shifts upward, the benefit-maximizing level of M will be larger than before, and the same for the other factor.

The cooperative faces an inverse membership supply curve in which the supply price of members,  $w$ , is an increasing and convex function of both the number of members and the level of doctrinal strictness, as follows:

$$w = w(M, E) \quad \text{with} \quad \frac{\partial w}{\partial M}, \frac{\partial w}{\partial E} > 0; \quad \frac{\partial^2 w}{\partial M^2}, \frac{\partial^2 w}{\partial E^2} \geq 0; \quad \frac{\partial^2 w}{\partial M \partial E} = \frac{\partial^2 w}{\partial E \partial M} \geq 0 \quad (2)$$

The supply price is assumed to increase in doctrinal strictness because of the increasing disutility of effort, or the increasing expected cost of an ecclesiastical career (for example, because a stricter doctrine increases the risk of one's being branded as unorthodox). This formulation, together with the restriction under (1) that no production is possible without members, implies that doctrinal strictness is a production factor which cannot be separately purchased in the market. It can be regarded as a characteristic of the effort demanded of members whose marginal cost to the organization is indirectly measured by the induced increase in the supply price of members (2). The sign of the second-order cross partials ensures that when, due to a change in E, the function  $w(M)$  shifts upward it does not become flatter, and the same for the other factor.

The cooperative always seeks to maximize per capita benefits  $y$ , described by (1), but may be constrained in different ways by the institutional environment, giving rise to different equilibria.

The first-best option for the coop is the unconstrained maximization of (1) in M and E, which implies (assuming that it is not rationed by insufficient supply of members) the following first-order conditions:

$$\frac{\partial y}{\partial M} = 0 \quad (3a)$$

$$\frac{\partial y}{\partial E} = 0 \quad (3b)$$

Here the coop is free to ignore the supply of members and leave them out, and is free to set both admissions and doctrinal standards at the levels required by benefit maximization.

This solution, however, was never an option for the Christian church. Before toleration, the church's decentralized, community-based structure prevented its effective

control of doctrine,  $E$ , which was therefore in fact exogenously given at a relatively low level. Its only option, given  $E$ , was the control of membership,  $M$ . After toleration, on the other hand, the church acquired the power of doctrinal centralization and control, but could no longer ignore an excess supply of applicants: it was now required to take in everybody, that is, for each level of  $E$ , its membership level was in fact exogenously set by the supply of applicants. Its only option then, given this market-clearing constraint, was to indirectly regulate supply, and hence membership, via the control of  $E$ . Thus the epoch-making move from exclusive sect to inclusive church involved a shift from one second-best equilibrium to another. We will now examine the conditions under which such a shift could be rewarding for the Christian movement.

In the pre-toleration era, the church solves the following problem:

$$\max_M y(M, E) \quad \text{s.t. } E = E^\circ \quad \text{with } \frac{\partial y}{\partial E^\circ} > 0 \quad (4)$$

whose first-order conditions are

$$\frac{\partial y}{\partial M} = 0 \quad (\text{at } E = E^\circ) \quad (5a)$$

$$E = E^\circ \quad (5b)$$

Here the church is constrained by an exogenously fixed level of doctrinal strictness,  $E^\circ$ , and sets membership levels so as to maximize per-capita benefits subject to this constraint. At this equilibrium, benefits could be further increased by increasing strictness ( $\frac{\partial y}{\partial E^\circ} > 0$ ), but the institutional environment does not allow such an option.

In the post-toleration era, the militant confessors would like to keep the church at the previous controlled-membership equilibrium forever. Now, however, the church is allowed control of  $E$  if it chooses to become a universal church, but at the cost of losing control of admissions,  $M$ . Choosing this option implies solving the following problem:

$$\max_{M, E} y(M, E) \quad \text{s.t. } y(M, E) = w(M, E) \quad (6)$$

whose first-order conditions are:

$$\frac{\frac{\partial y}{\partial M}}{\frac{\partial y}{\partial E}} = \frac{\frac{\partial w}{\partial M}}{\frac{\partial w}{\partial E}} \quad (7a)$$

$$y(M, E) = w(M, E) \quad (7b)$$

Here, because for any given doctrinal platform the organization is stuck with the level of membership set by market supply, it uses changes in doctrinal strictness to induce changes in members supply so as to maximize per capita benefits. Equation (7b) is the market-clearing, or free-access, condition. Condition (7a) says that the factors' marginal supply prices ratio equals their marginal per capita productivities ratio. It also shows that  $\frac{\partial y}{\partial M}$  and  $\frac{\partial y}{\partial E}$  must have the same sign at the equilibrium: this sign will be positive if, given its productivity, the cooperative is constrained by a tight members supply so that positive marginal returns to both membership and doctrinal strictness cannot be fully exploited, and viceversa for a negative sign. If the cooperative could break free of free access, it would always set M and E at the per-capita benefit-maximizing levels, as in the first-best solution (3a) and (3b), and never enter the region of negative returns to factors. It is only the impossibility of exclusion, that is, the condition of de facto open access (like in a common property resource), that may force the coop to over-use both inputs beyond their benefit-maximizing levels.

The choice between continuing exclusion and embracing universal inclusion after 313 involves a comparison of the maximized benefits levels under the two constrained equilibria (5a), (5b) and (7a), (7b). If, taking into account the technical specifications of production and membership supply functions listed under (1) and (2), the latter equilibrium can be expected to make the average member better off, it is rational for the church to opt for free access and concentrate on doctrinal purity to indirectly control membership. We now show that in the post-313 environment, as described in the previous section, this was likely to be the case.

The move from the pre-toleration to the post-toleration equilibrium can usefully be decomposed into two steps: first, the church sets E at the optimal level together with M, unconstrained by market clearing, as in (3a), (3b). Secondly, from there the church moves on to the free-access equilibrium. As explained, the intermediate, fully optimal solution could never be practiced, but it is helpful for purposes of illustration. The three equilibria are shown in Figure 1, which in section (a) depicts benefits and supply price curves s, y and w, as a function of the number of members M, given E, while in section (b) these curves are a function of doctrinal strictness E, given M. The inverted-U shape of the y(M) curves reflects

the fixed factor of leadership and the other organizational factors that constrain church size, while the shape of the  $y(E)$  curves is due to the fact that increasing strictness becomes counter-productive beyond some point.

(Figure 1 about here)

Point A is the pre-toleration equilibrium described by equations (5a), (5b). Here the level of M is set to maximize benefits subject to the exogenous level of E,  $E^o$ , while this latter level lies on the upward-sloping portion of the  $y(E)$  curve, implying that there are unexploited gains from potential increases in strictness (up to point C). The position of the supply curves  $w(E)$  and  $w(M)$  would allow increases in both E and M, implying an excess supply of applicants, but this is ignored. If the church were to swing its door open and allow free access without any change in E, neither curve  $w(M)$  nor  $y(M)$  would move and the equilibrium would drop from A to these curves' intersection F, leaving the average member unambiguously worse off.

Point B is the fully optimal equilibrium of the unconstrained, benefit-maximizing cooperative, described by equations (3a), (3b). It lies on the top of a pair of  $y'$  curves which is above and to the right of the original  $y(M)$ ,  $y(E)$  curves: as the church increases E, which was too low at A,  $y(M)$  shifts upward, and as the maximized level of  $y(M)$  is higher than at A,  $y(E)$  shifts upward as well. At the same time, since the new  $y'$  curves peak to the right of the initial ones, both  $w(M)$  and  $w(E)$  shift upward and to the left to  $w'$  because both E and M are increased. Thus the increase in both membership and strictness reduces the excess supply somewhat, but this does not affect the equilibrium as the coop still retains control of admissions.

Point D is the free-access equilibrium, described by equations (7a), (7b). It lies on the downward-sloping portion of a pair of  $y''$  curves which are below and to the left of the  $y'$  curves. This is because, starting from point B where there is excess supply of both M and E, allowing free access implies sliding down the  $y'$  curves towards the crossing with the  $w'$  curves; as increasing E now decreases y,  $y(M)$  shifts down, and as increasing M now decreases y,  $y(E)$  shifts down. At the same time, the increase in M and E shifts the  $w'$  curves upward and to the left to  $w''$ , reducing supply and thereby limiting the fall in benefits. Equilibrium point D is at the crossing of the  $y''$ ,  $w''$  curves: at D the per capita rewards to both membership and strictness equal their supply prices, so that the membership market is cleared.

Furthermore, at D,  $\frac{\partial y}{\partial M}$  and  $\frac{\partial y}{\partial E}$  are both negative (see (7a)), as must be the case since we started from an unrationed level of M at A and moved toward free access.

Summing up, the initial increase in M and E, from A to B, increases benefits, while their further increase from B to D decreases benefits. In both steps the increases in M and E reduce membership supply, thereby limiting the fall in benefits caused by free access. As a result, while the free-access equilibrium D is unambiguously worse than that at B, it may in general be either better or worse than the initial equilibrium at A, depending on the starting point and on the relative elasticities of y and w with respect to E and M. If, as in Figure 1, the initial upward shift of the y curves is substantial enough while their subsequent downward shift is relatively small and is further dampened by a substantial upward shift of the w curves, equilibrium D will be superior to equilibrium A. If this is the case, it is rational for the church to opt for the free-access regime in the post-toleration era.

Our survey of historical developments in the previous section lends strong support to this conjecture. After 313, doctrinal radicalization makes working for the church substantially harder, riskier and more distasteful than before, while it allows the church to recruit better qualified personnel and to make the militant monks happy, and above all, centralized conformity permits church hierarchy to take on a central, indispensable role as the guarantor of orthodoxy. Strictness of admission standards, no longer feasible in an environment of universal religion and religious monopoly, has thus been replaced by strictness of doctrinal standards as a policy instrument to maximize per capita benefits.

## 6. A model of competition on the doctrinal line

The previous section has argued that the choice of universal, inclusive membership in the 4<sup>th</sup> century rationally drove the church toward doctrinal radicalization and the hardening of dogma, but this by itself says nothing about the direction dogmatic development should take. As suggested above, doctrinal development throughout the evolution of Christianity was essentially dictated by the need for the church to distance itself from its competitors on all sides – and this extends to the radicalization of the Constantinian era as well. To an economist, such a description is intuitively reminiscent of a setting of monopolistic competition with product differentiation. The intuition can be made precise by a Hotelling-type model of spatial competition. The latter has been introduced to the economics of religion

by Barros and Garoupa (2002), who constructed a model of church “strictness” to analyze the doctrinal choices of competing churches and sects. Their model is unnecessarily complicated for our purposes, so we drastically simplify it and tailor its interpretation to suit our case study. Our novel twist to an otherwise standard model of spatial competition is the introduction of an informational constraint that any denomination must satisfy to be able to survive in the market.

Suppose that religious denominations freely choose their location on a continuous line of length one. Individuals are arranged along this line according to their preferred degree of “strictness”, i.e., their willingness to submit to different intensities of demands on their behavior and belief. To make sense of this, it is not necessary to follow Barros and Garoupa (2002) and postulate the odd notion that people have a “preference for strictness” as such. All that is necessary to assume is that given the benefits that membership in a religious group confers, individuals have different opportunity costs of joining in. Thus, for example, the opportunity costs for the peasantry on the one hand, and for the literate upper classes on the other would be high, whereas for tradesmen, free urban workers, and women of all classes – the people who were excluded from power and prominent public functions in ancient society, but who had much to gain from membership in a tight communal group – those costs would be low. Assume further, for simplicity, that these per capita benefits, gross of “transportation” costs, are constant in each group, and that they are equal across groups. In this setup, the natural objective of each religious organization is simply to maximize the number of members, as in the original Hotelling model in which vendors maximize the volume of sales (assuming that each person consumes only one unit of the good, this is tantamount to maximizing the number of customers). Assume finally that no overlapping membership is permitted<sup>8</sup>, and that individuals are uniformly distributed along the line and “walk” to the denomination closest to their preferences.

We borrow from Barros and Garoupa (2002) the useful idea of a “non-church”: a denomination located at one end of the line, whose degree of strictness is strictly zero, and which is an attractor, i.e., it bids nearby customers away from the other churches. Whereas the authors use this fixed position to capture the choice of not subscribing to any religion, we use it to identify paganism: a religious system that makes no demands whatsoever on the individual’s beliefs, ethics, and behavior. At the opposite extreme of the strictness continuum, we introduce another fixed-location religion: Judaism, which makes maximal

<sup>8</sup> Strictly speaking, this restriction is valid only for Jews and Christians of various brands, whereas the “pagan” competitors discussed in section 3 above did not require exclusive membership. The restriction is harmless, however, as exclusiveness by one party forces the other party to de facto exclusive membership as well.

demands on, and asks maximal sacrifice of, its members, and which is also an attractor. Recall that in Roman times Judaism was a proselytizing religion.

In the environment of the ancient world, entry into the religious market was virtually costless, so we assume free entry. This would in the limit yield one denomination for each individual. However, there was a crucial factor that set a limit to the number of active denominations on the market: bounded rationality, i.e., the inability for ordinary people to appreciate doctrinal subtleties and behavioral differences beyond some point. This informational limit implies that people could not tell the difference between any two denominations located too close to each other: these would be mistaken as identical. It follows that no denomination could lastingly establish itself unless it kept a minimum critical distance from its neighbors on each side of the line.

Consider a strictness line with a fixed denomination, paganism (P), located at zero, and another fixed denomination, Judaism (J), located at one. Entry is sequential. As a Stackelberg leader, the Christian church (C) chooses its location first, knowing that one or more sects (S) might enter, in response to its choice, to either its left or its right, that J and P are already there, and that its own location must satisfy the minimal distance constraint. For purposes of illustration, suppose that this minimal distance is 0.25, one-fourth of the line, symmetrically on each side. Clearly, with these numbers, the maximum number of denominations that could be supported in a free-entry equilibrium, in addition to J and P, is 3: one at  $1/4$ , one at  $1/2$ , and one at  $3/4$ , all of the same size ( $1/4$  of the line each, leaving  $1/8$  each to J and P). Incidentally, this would be the efficient allocation that minimizes total transportation costs. But by moving first, the Christian church can do better and reduce the number of competitors to one sect, although it cannot completely foreclose entry. This yields two possible equilibria, each of which is the mirror image of the other. They are depicted in Figures 2 and 3.

(Figures 2 and 3 about here)

To maximize the number of its members, the church locates at a point that is just sufficient to prevent entry on one side; if it moved closer to the nearest extreme, the sect on the other side would follow its steps, so that the church would at each step lose one member to the sect and gain half a member from the fixed denomination at the extreme. Thus, in Figure 2, C locates slightly above  $1/2$ , leaving no room for entry to its right, but allowing entry of S at slightly above  $1/4$ . C covers ca.  $1/4 + 1/8 = 3/8$  of the line, S covers ca.  $1/8 + 1/8$

=  $2/8$ , leaving J with ca.  $2/8$  and P with ca.  $1/8$ . Here S is a “pagan” competitor to the church. In Figure 3, C locates slightly below  $1/2$ , leaving no room for entry to its left, but allowing entry of a “Jewish” competitor, S, at slightly below  $3/4$ . C and S have the same size as in Figure 2, but P covers  $2/8$  and J  $1/8$  of the line. (By comparison, simultaneous entry and Nash behavior would yield locations at  $3/8$ ,  $5/8$  and equal size for the two denominations – i.e., the “median voter” result modified by the minimum distance constraint.)

The broad pattern of doctrinal evolution of Christianity can be illustrated with the help of this model. In the course of its long march away from Judaism, during the 2<sup>nd</sup> and 3<sup>rd</sup> centuries, the church targeted the “pagan” sects (Marcionism, Gnosticism, Mithraism, Manicheism) as its main enemies and, starting from ca.  $3/4$ , moved leftward towards the equilibrium of Figure 2. This shift expanded the church’s coverage at the expense of the sects, while it did not have to fear any substantial challenge from its right – from the “Jews”. By the early 4<sup>th</sup> century, the church had crossed to the left of center and the pagan sects were out. Momentarily, the church had no competitors left and enjoyed maximum coverage – covering all those not served by paganism or Judaism proper. It was high time for the epoch-making move to universal membership and free admission, as discussed in the previous section. But a vacuum had thereby opened to the right of center, and the “Jewish” heresies within the church itself rushed in: Arianism first, then Nestorianism and Pelagianism. We have thus the equilibrium of Figure 3: by overstretching itself to the left to squeeze the pagans out of the market, the church had made itself vulnerable to challenge on its right flank – the “Jewish” or monotheistic side.

From the council of Nicaea (325) to that of Ephesus I (431), the church then moved once again to the right of center to displace and squeeze out the “Jews”: this is the doctrinal radicalization discussed in the previous section. Its left flank was temporarily protected from competitive entry by the newly acquired state monopoly, which as mentioned above, was effective not just against non-Christians but against Christian heretics of every description as well.

After Ephesus, however, the secular parting of the ways between Eastern and Western churches began. Somewhat more conjecturally, our model may be able to accommodate this development as well. The Western empire was rapidly heading toward disintegration, and many of the invading barbarian tribes were Arian Christians – a “Jewish” heresy. By contrast, the “pagan” threat inside the Western church was comparatively negligible. Therefore the Western church remained at the theologically radical Ephesus equilibrium thereafter. The Eastern church, on the other hand, at the council of Chalcedon

(451) and later, shifted again to the left of center and softened the contours of christological dogma to displace the Alexandrian school of theology, which was in time to become the Monophysite church – a “pagan” heresy. So the Eastern church was responding to a situation like that of Figure 2, even though the doctrinal concessions made at Chalcedon did not prove sufficiently eventually to stem the rise of Monophysism. The Eastern church could afford the leftward, “liberal” move because in the East the “Jewish” threat was virtually extinguished: the ban on Nestorianism after Ephesus had been effectively enforced by the imperial authorities and Arianism had long since faded away. The burgeoning cult of Mary the “God-bearer” and the expansion and political influence of monasticism were added forces that ruled out any possibility of a “Jewish” renaissance within the Eastern church. Understandably, the Western church, which remained about the only functioning institution that survived the collapse of the Roman order, had neither the means nor the interest to follow the Easterners along the road to and beyond Chalcedon, the lip service paid to the council’s deliberations notwithstanding. The rift thus opened up that after many centuries was to lead to the Eastern Schism.

## **7. Conclusion**

This paper has sought to look at the momentous changes that transformed the early Christian sect into a universal church as rational choices made by the Christian movement at a critical historical juncture. We have seen that in the course of the second and third centuries of the common era Christianity moved away from its original Judaism to displace the competing, pagan conceptions of monotheism; hence, while its membership policy was sectarian and exclusive, its theology remained inclusive, soft and tolerant of alternative views. At the beginning of the fourth century, toleration offered the church the novel option of embracing free access and universal inclusion, ultimately resulting in state-enforced religious monopoly, and concomitantly, the unprecedented organizational possibility of centralization and conformity of doctrine. By means of a cooperative model of the church, we have shown that accepting universal membership accompanied by theological radicalization was a superior policy at that juncture. Thus the simultaneous occurrence of universal inclusion and doctrinal infighting turns out to have been neither a coincidence nor an inevitable necessity, but the outcome of a rational choice. This choice implied a complete reversal of centuries of theological tolerance within the church. By means of a spatial model of doctrinal

competition, we have shown that, as the lessening of doctrinal strictness in the earlier period was driven by the confrontation with the “pagan” sects, so the hardening of strictness in the later period – the theological radicalization after 313 – was driven by the challenge posed by the “Jewish” heresies within the church itself.

The general lesson that can be learned from this exercise in economic modelling is that an approach to the Christian church as a benefit-maximizing cooperative subject to free access and able to control its doctrinal platform is a promising way of modelling the working of a universal religion, provided that the competitive and informational environments are accurately specified. Applying the model to later periods and different situations of the history of the Christian religion – and perhaps of other universal religions as well – is an engaging task for further research.

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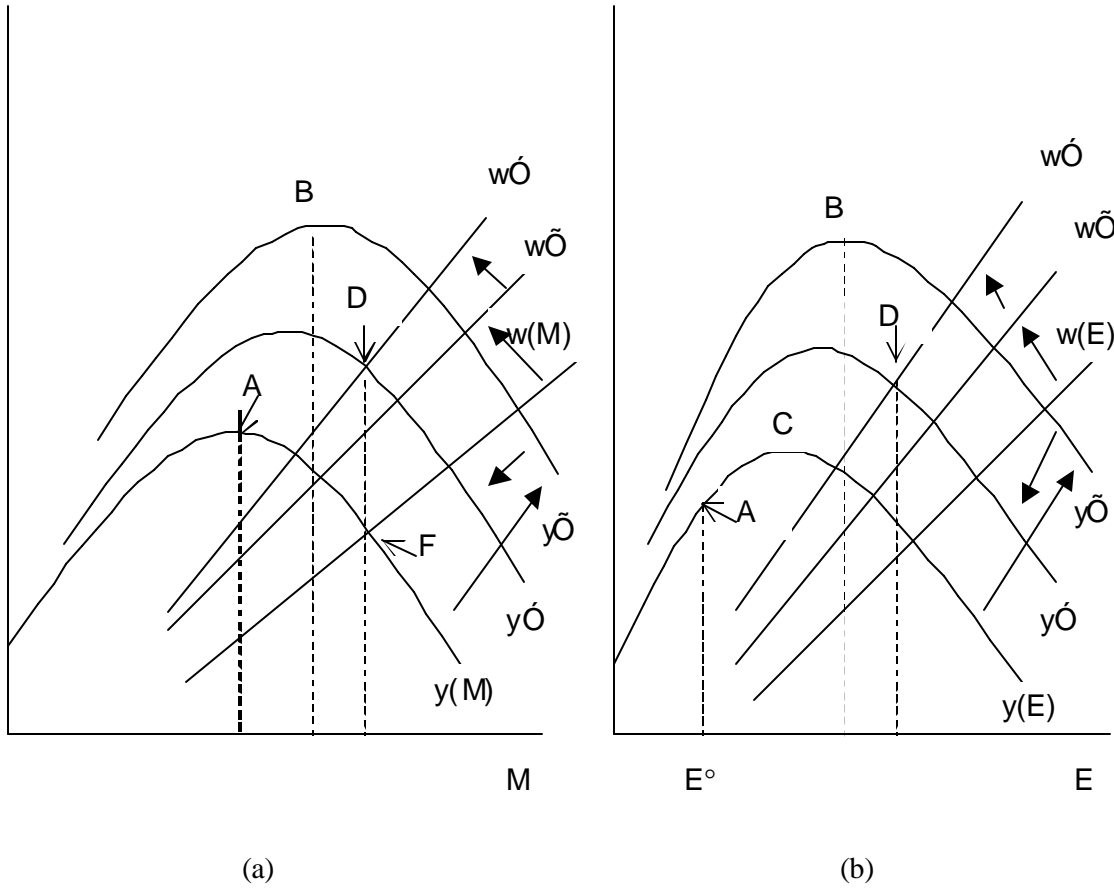


Figure 1

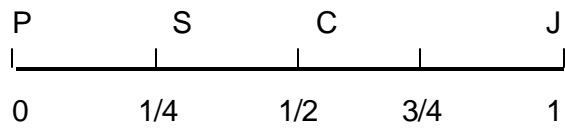


Figure 2

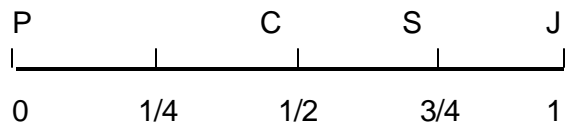


Figure 3