

EPIDEMICS, NETWORKS, AND THE RISE OF CHRISTIANITY

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ABSTRACT

The early Christian movement achieved unprecedented growth during the second and third centuries A.D. Numerous historical and sociological explanations have been advanced to account for this phenomenon and its role in the eventual "triumph" of Christianity under Constantine. Long overlooked in this endeavor has been the role of several spectacular disasters that hit the empire in this same period. Most notable are two periods of widespread and devastating epidemic that hit especially hard in the eastern provinces in the 160s and again in the 250s. This article suggests that the fabric of Roman society was substantially disrupted and demoralized by these catastrophes, and that this opened the door for Christian ascendancy, both theologically and numerically. To demonstrate this contention the character of the epidemics will be described. Then, three main theses will be advanced and explored. First, the Christians offered a more satisfactory explanation of the catastrophic events. Second, Christian values of love and charity were translated into practices of social service in the times of crisis, thereby creating a network of medical care. Third, with even minimal medical attention, the survival rate among the Christians (and any of their pagan neighbors whom they treated) was substantially higher than that in the general population. Over time, the proportion of Christians in the total population was thereby dramatically increased. When coupled with the network effect of those pagans now disengaged from traditional ties and attracted by Christian benevolence to new attachments, the result was to alter irreversibly the balance of the Roman empire.

Introduction

In 165 A.D., during the reign of Marcus Aurelius, a devastating epidemic swept through the Roman Empire. Some medical historians suspect that it was the first appearance of smallpox in the West (Zinsser, 1960). But, whatever the actual disease, it was lethal. During the 15 year duration of the epidemic, from a quarter to a third of the population of the empire died from it, including Marcus Aurelius himself, in 180 in Vienna (Boak, 1947; Russell, 1958; Gilliam; McNeill). Then, in 251 a new and equally devastating epidemic again swept the empire, hitting the rural areas as hard as the cities (Boak, 1955a, 1955b; Russell, 1958; McNeill). This time it may have been measles. Both smallpox and measles can produce massive mortality rates when they strike a previously unexposed population (Neel, et al.).

Although, as we shall see, these demographic disasters were reported by contemporary writers, the role they likely played in the decline of Rome was ignored by historians until modern times (Zinsser; Boak, 1947). Now, however, historians recognize that acute depopulation was responsible for policies once attributed to moral degeneration. For example, massive resettlement of "barbarians" as landholders within the empire and their induction into the legions did not reflect Roman decadence, but were rational policies by a state with an abundance of vacant estates and lacking manpower (Boak, 1955b). In his now classic and pioneering work on the impact of epidemics on history, Hans Zinsser (99) pointed out that:

... again and again, the forward march of Roman power and world organization was interrupted by the only force against which political genius and military valor were utterly helpless—epidemic disease . . . and when it came, as though carried by storm clouds, all other things gave way, and men crouched in terror, abandoning all their quarrels, undertakings and ambitions, until the tempest had blown over.

But, while historians of Rome have been busy making good the oversights of earlier generations, the same cannot be said of historians of the early Christian era. The words "epidemic," "plague," or "disease" do not even appear in the index of the most respected recent works on the rise of Christianity (Frend; MacMullen, 1984). This is no small omission. Indeed, Cyprian, Dionysius, Eusebius, and other church fathers thought the epidemics made major contributions to the Christian cause. I think so, too. In this essay I suggest that had classical society not been disrupted and demoralized by these catastrophes, Christianity might never have become so dominant a faith. To this end, I shall develop three theses.

The first of these can be found in the writings of Cyprian, bishop of Carthage. The epidemics swamped the explanatory and comforting capacities of paganism and of Hellenic philosophies. In contrast, Christianity offered a much more satisfactory account of why these terrible times had fallen upon humanity and it projected a hopeful, even enthusiastic, portrait of the future.

The second is to be found in an Easter letter by Dionysius, bishop of Alexandria. Christian values of love and charity had, from the beginning, been translated into norms of social service and community solidarity. When disasters struck, the Christians were better able to cope and this resulted in *substantially higher rates of survival*. This meant that in the aftermath of each epidemic, Christians made up a larger percentage of the population even without new converts. Moreover, their noticeably better survival rate would have seemed a "miracle" to Christians and pagans alike and this ought to have influenced conversion.

Let me acknowledge that, as I consulted sources on the historical impact of epidemics, I discovered these two points discussed briefly in William H. McNeill's superb *Plagues and Peoples*, 1976. I cannot recall having read them before. I must have done so, but at a time when I was more interested in the fall of Rome than in the rise of Christianity. In any event, both points have a substantial social scientific pedigree as elements in the analysis of "revitalization movements"—the rise of new religions as a response to social crises (Wallace, 1956, 1966; Carroll; Thornton; Champagne; Stark and Bainbridge, 1985, 1987).

My third proposition is an application of control theories of conformity (Hirschi, 1969; Stark and Bainbridge, 1985, 1987). When an epidemic destroys a substantial proportion of a population, it leaves large numbers of people without the interpersonal attachments which had, in the past, bound them to the conventional moral order. As mortality mounted during each of these epidemics, large numbers of people, especially pagans, would have *lost the bonds* that once might have restrained them from becoming Christians. Meanwhile, the superior rates of survival of Christian social networks would have provided pagans with a much greater probability of replacing their lost attachments with new ones to Christians. In this way, very substantial numbers of pagans would have been shifted from mainly pagan to mainly Christian social networks. In any era, such a shifting of social networks will result in religious conversions (Lofland and Stark, 1965; Stark and Bainbridge, 1985, 1987).

In what follows I will expand each of these arguments and offer evidence that it applies. But first, I must sketch the extent of these two epidemics and their demographic impact.

The Epidemics

The great epidemic of the second century, which is sometimes referred to as the "Plague of Galen," first struck the army of Verus, while campaigning in the East in 165 A.D., and from there spread across the Empire. The mortality was so high in many cities that Marcus Aurelius spoke of caravans of carts and wagons hauling the dead from cities. Hans Zinsser (100) noted that

... so many people died that cities and villages in Italy and in the provinces were abandoned and fell into ruin. Distress and disorganization was so severe that a campaign against the Marcommani was postponed. When, in 169, the war was finally resumed, Haeser records that many of the Germanic warriors—men and women—were found dead on the field without wounds, having died from the epidemic.

We cannot know the actual mortality rate with any certainty, although there is no doubt that it was high. Seeck's estimate, made in 1910, that over half the population of the Empire perished, now seems too high (in Littman and Littman). Conversely, Gilliam's conclusion that only 1 percent died is incompatible even with his own assertion that "a great and destructive epidemic took place under Marcus Aurelius."

The Littmans propose a rate of seven to ten percent, but do so by selecting smallpox epidemics in Minneapolis during 1924-25 and in West Prussia in 1874 as the relevant comparisons, and ignoring the far higher fatalities for smallpox epidemics in less modern societies with populations lacking substantial prior exposure. I am most persuaded by McNeill's estimate that from a quarter to a third of the population perished during this epidemic. Such high mortality is consistent with modern knowledge of epidemiology. It also is consistent with analyses of subsequent manpower shortages (Boak, 1955b).

Almost a century later a second terrible epidemic struck the Roman world. At its height, 5,000 people a day were reported to have died in the city of Rome alone (McNeill). And for this epidemic we have excellent contemporary reports, especially from Christian sources. Thus Cyprian, bishop of Carthage, wrote in 251 that "many of us are dying" from "this plague and pestilence." Several years later Dionysius, bishop of Alexandria, wrote in an Easter message that "out of the blue came this disease, a thing . . . more frightful than any disaster whatever."

These disasters were not limited to the cities. McNeill suggests that the death toll may have been even higher in rural areas. Boak (1955a) has calculated that the small town of Karanis, in Egypt, may have lost more than a third of its population during the first epidemic. Calculations based on Dionysius' account, suggest two-thirds of the population of Alexandria may have perished (Boak, 1947). Such death rates have been documented in many other times and places when a serious infectious disease has struck a population not recently exposed to it. For example, in 1707 smallpox killed more than 30 percent of the population of Iceland (D. R. Hopkins). In any event, my concern here is not epidemiological. It is, rather, with the human experience of such crisis and calamity.

Crisis and Faith

Frequently in human history, crises produced by natural or social disasters have been translated into crises of faith. Typically this occurs because the disaster places demands upon the prevailing religion that it *appears unable to meet*. This inability can occur at two levels. First, the religion may fail to provide a satisfactory explanation of *why* the disaster

occurred. Second, the religion may seem to be *unavailing* against the disaster, which becomes truly critical when all non-religious means also prove inadequate—when the supernatural remains the *only plausible source* of help. In response to these “failures” of their traditional faiths, societies frequently have evolved or adopted new faiths. The classic instance is the series of messianic movements that periodically swept through the Indians of North America in response to their failures to withstand encroachments by European settlers (Mooney, 1896). The prevalence of new religious movements in societies undergoing rapid modernization also illustrates the point. Bryan Wilson has surveyed many such episodes from around the world.

In a now famous essay, Anthony F. C. Wallace argued that *all* religions arise in response to crises. That seems a needlessly extreme view, but there is abundant evidence that faith seldom is “blind,” in the sense that religions frequently *are discarded* and new ones accepted in troubled times. Elsewhere I have attempted to specify the process by which this occurs and explain why the new faith often will retain many elements of the old (Stark and Bainbridge, 1985, 1987). Here my concern is simply to contrast the ability of Christianity to explain the epidemics with that of its competitors in the Graeco-Roman world.

I also will examine the many ways in which Christianity not only seemed to be, but actually was *efficacious*. This too is typical. Indeed, this is why the term “revitalization movement” is applied to new religions that arise during times of crisis—the name indicates the positive contributions such movements often make by “revitalizing” the capacity of a culture to deal with its problems. How do religions “revitalize?” Primarily by effectively mobilizing people to attempt collective actions. Thus the new religious movements among the North American Indians during the eighteenth and nineteenth centuries initially revitalized these societies by greatly reducing drunkenness and despair and then provided an effective framework for joining fragmented bands into an organized political unit capable of concerted action. That these proved unable to withstand white encroachments in the *long run*, must not obscure the obvious early benefits and how these “proved” the validity of the new faith. In this way new ideas or theologies often generate new social arrangements that are better-suited to the new circumstances.

As a sociologist, I was trained to be suspicious of “theological” or “ideological” explanations—those that attribute behavior to ideas. However, as I shall demonstrate in this essay, ideas often are critical factors in determining not only individual behavior but, indeed, the path of history. Put another way, for people in the Graeco-Roman world, to be a Christian or a pagan was not simply a matter of “denominational preference.”

Rather, the *contents* of Christian and pagan beliefs were *different* in ways that greatly determined not only their explanatory capacities, but also their relative capacities to mobilize human resources.

To assess these differences between pagans and Christians, let us imagine ourselves in their places, faced with one of these terrible epidemics.*

Here we are in a city stinking of death. All around us, our family and friends are dropping. We can never be sure if or when we will fall sick too. In the midst of such appalling circumstances, humans are driven to ask: *Why?* Why is this happening? Why them and not me? Will we all die? Why does the world exist, anyway? What's going to happen next? What can we do?

If we are pagans we probably already know that our priests profess ignorance. They don't know why the gods have sent such misery—or if, in fact, the gods are involved or even care (Harnack, 1908). Worse yet, many of our priests have fled the city, as have the highest civil authorities and the wealthiest families, which adds to the disorder and suffering.

Suppose that instead of being pagans we are philosophers. Even if we reject the gods and profess one or another school of Greek philosophy we still have no answers. Natural law is no help in saying *why* suffering abounds, at least not if we seek to find *meaning* in the reasons. To say that survival is a matter of luck makes the life of the individual seem trivial. Cicero expressed the incapacity of classical as well as modern humanism to provide meaning (or perhaps we should say meaningfulness), when he explained that

... it depends on fortune or (as we should say) "conditions" whether we are to experience prosperity or adversity. Certain events are, indeed, due to natural causes beyond human control (in Cochrane, 1957:100).

Moreover, for a science that knows nothing of bacteria the phrase "natural causes" in connection with these great epidemics is simply how philosophers say "who knows?" I am not here disputing that survival *was in fact* substantially random or that the epidemics had natural causes. But I do claim that people will prefer explanations that assert that such events reflect underlying historical intentions, that the larger contours of life are coherent and explicable. Not only were the philosophers of the time unable to provide such meanings, but from the point of view of classical science and philosophy these events were indeed beyond human control, for no useful medical courses of action could be suggested. Indeed, the philosophers of the period could think of nothing more insightful than to anthropomorphize society and blame senility. As Cochrane (1957:155) put it, "while a deadly plague was ravaging the empire . . . the sophists prattled vaguely about the exhaustion of virtue in a world growing old."

But if we are Christians, our faith does claim to have answers. McNeill summed them up this way:

Another advantage Christians enjoyed over pagans was that the teachings of their faith made life meaningful even amid sudden and surprising death . . . even a shattered remnant of survivors who had somehow made it through war or pestilence or both could find warm, immediate and healing consolation in the vision of a heavenly existence for those missing relatives and friends. . . . Christianity was, therefore, a system of thought and feeling thoroughly adapted to a time of troubles in which hardship, disease, and violent death commonly prevailed (108).

Cyprian, bishop of Carthage, seems almost to have welcomed the great epidemic of his time. Writing in 251 he claimed that only non-Christians had anything to fear from the plague. Moreover, he noted that although:

. . . the just are dying with the unjust, it is not for you to think that the destruction is a common one for both the evil and the good. The just are called to refreshment, the unjust are carried off to torture; protection is more quickly given to the faithful; punishment to the faithless. . . . How suitable, how necessary it is that this plague and pestilence, which seems horrible and deadly, searches out the justice of each and every one and examines the minds of the human race; whether the well care for the sick, whether relatives dutifully love their kinsmen as they should, whether masters show compassion for their ailing slaves, whether physicians do not desert the afflicted . . . Although this mortality has contributed nothing else, it has especially accomplished this for Christians and servants of God, that we have begun gladly to seek martyrdom while we are learning not to fear death. These are trying exercises for us, not deaths; they give to the mind the glory of fortitude; by contempt of death they prepare for the crown . . . our brethren who have been freed from the world by the summons of the Lord should not be mourned, since we know that they are not lost but sent before; that in departing they lead the way; that as travellers, as voyagers are wont to be, they should be longed for, not lamented . . . and that no occasion should be given to pagans to censure us deservedly and justly, on the ground that we grieve for those who we say are living with God. . . . (Cyprian, *On the Mortality*, 15–20).

His fellow bishop Dionysius addressed his Alexandrian members in similar tones. "Other people would not think this a time for festival," he wrote, but "far from being a time of distress, it is a time of unimaginable joy" (*Festal Letters*, quoted by Eusebius, *Church History* 7,22). Acknowledging the huge death rate, Dionysius noted that though this terrified the pagans, Christians greeted the epidemic as merely "schooling and testing." Thus, at a time when all other faiths were called to question, Christianity offered explanation and comfort. Even more important, Christian doctrine provided a *prescription for action*. That is, the Christian way appeared to work.

Survival Rates and the Golden Rule

At the height of the second great epidemic, around 260, in the Easter letter already quoted above, Dionysius wrote a lengthy tribute to the heroic nursing efforts of local Christians, many of whom lost their lives while caring for others.

Most of our brother-Christians showed unbounded love and loyalty, never sparing themselves and thinking only of one another. Heedless of danger, they took charge of the sick, attending to their every need and ministering to them in Christ, and with them departed this life serenely happy; for they were infected by others with the disease, drawing on themselves the sickness of their neighbors and cheerfully accepting their pains. Many, in nursing and curing others, transferred their death to themselves and died in their stead. . . . The best of our brothers lost their lives in this manner, a number of presbyters, deacons, and laymen winning high commendation so that death in this form, the result of great piety and strong faith, seems in every way the equal of martyrdom.

Dionysius noted the heavy mortality of the epidemic by saying how much happier had they merely, like the Egyptians in the time of Moses, lost the firstborn from each house. For "there is not a house in which there is not one dead—how I wish it had been only one." But, while the epidemic had not passed over the Christians, he suggests pagans fared much worse: "its full impact fell on the heathen."

Dionysius also offered an explanation of this mortality differential. Having noted at length how the Christian community nursed the sick and dying and even spared nothing in preparing the dead for proper burial, he wrote:

The heathen behaved in the very opposite way. At the first onset of the disease, they pushed the sufferers away and fled from their dearest, throwing them into the roads before they were dead and treated unburied corpses as dirt, hoping thereby to avert the spread and contagion of the fatal disease; but do what they might, they found it difficult to escape.

But, should we believe him? To assess Dionysius' claims, it must be demonstrated that the Christians actually did minister to the sick while the pagans mostly did not. It also must be shown that these different patterns of responses would result in substantial differences in mortality.

Christian and Pagan Responses

It seems highly unlikely that a bishop would write a pastoral letter full of false claims *about things that his parishioners would know from direct observation*. So, if he claims that lots of leading members of the diocese have perished while nursing the sick, it must have happened. Moreover,

there is compelling evidence *from pagan sources* that this was characteristic Christian behavior. Thus, a century later, the Emperor Julian launched a campaign to institute pagan charities in an effort to match the Christians. Julian complained in a letter to the high priest of Galatia in 362 that the pagans needed to equal the virtues of Christians, for recent Christian growth was caused by their "moral character, even if pretended" and by their "benevolence toward strangers and care for the graves of the dead." In a letter to another priest, Julian wrote, "I think that when the poor happened to be neglected and overlooked by the priests, the impious Galileans observed this and devoted themselves to benevolence." And he also wrote, ". . . the impious Galileans support not only their poor, but ours as well, everyone can see that our people lack aid from us" (Johnson, 1976:75; Ayerst and Fisher:179-181).

Clearly, Julian loathed "the Galileans." He even suspected that their benevolence had ulterior motives. But he recognized that his charities and that of organized paganism paled in comparison with Christian efforts which had created "a miniature welfare state in an empire which for the most part lacked social services" (Johnson, 1976:75). By Julian's day in the fourth century it was too late to overtake this colossal result, the seeds for which had been planted in such teachings as "I am my brother's keeper," "Do unto others as you would have them do unto you," and "It is more blessed to give than to receive" (Grant).

Julian's testimony also supports the claim that pagan communities did not match Christian levels of benevolence during the epidemics, since they did not do so even in normal times when the risks entailed by benevolence were much lower. But there is other evidence.

Some of the most detailed reporting on epidemics in the classical world is to be found in Thucydides' *History of the Peloponnesian War* (Book II, 47-55). Thucydides was himself a survivor of a deadly plague that struck Athens in 431 B.C., having contracted the disease in the first days of the epidemic. Modern medical writers praise Thucydides' careful and detailed account of symptoms (Marks and Beatty). At least as much can be said for his account of public responses.

Thucydides began by noting the ineffectiveness of both science and religion:

. . . the doctors were quite incapable of treating the disease because of their ignorance of the right methods. . . . Equally useless were prayers made in the temples, consultation of the oracles, and so forth; indeed, in the end people were so overcome by their sufferings that they paid no further attention to such things (49).

Then he reported that once the contagious nature of the disease was recognized people "were afraid to visit one another." As a result:

... they died with no one to look after them; indeed there were many houses in which all the inhabitants perished through lack of any attention. . . . The bodies of the dying were heaped one on top of the other, and half-dead creatures could be seen staggering about in the streets or flocking around the fountains in their desire for water. The temples in which they took up their quarters were full of the dead bodies of people who had died inside them. For the catastrophe was so overwhelming that men, not knowing what would happen next to them, became indifferent to every rule of religion or of law. . . . No fear of god or law of man had a restraining influence. As for the gods, it seemed to be the same thing whether one worshipped them or not, when one saw the good and the bad dying indiscriminately (51-53).

Although separated by nearly seven centuries, this description of how pagan Athens reacted to a killing epidemic is strikingly similar to Dionysius' account of pagan responses to the epidemic in Alexandria. Thucydides acknowledged that some, who like himself had recovered from the disease and thus were immune, did try to nurse the sick, but their numbers seem to have been few. Moreover, Thucydides accepted that it was only sensible to flee epidemics and to shun contact with the sick.

It also is worth noting that the famous classical physician Galen lived through the first epidemic during the reign of Marcus Aurelius. What did he do? He got out of Rome quickly, retiring to a country estate in Asia Minor until the danger receded. In fact, modern medical historians have noted that Galen's description of the disease "is uncharacteristically incomplete" and suggest this may have been due to his hasty departure (D. Hopkins). Granted that this is but one man's response, albeit a man much admired by later generations as the greatest physician of the age. But, although at least one modern medical historian has felt the need to write an exculpatory essay on Galen's flight, it was not seen as unusual or discreditable at the time (Walsh). It was what any prudent person would have done, had they the means—unless, of course, they were "Galileans."

Here issues of doctrine must be addressed. For something distinctive did come into the world with the development of Christianity—the linking of a highly *social* ethical code with religion. There was nothing new in the idea that the supernatural makes behavioral demands upon humans—the gods have always wanted sacrifices and worship. Nor was there anything new in the notion that the supernatural will respond to offerings—that the gods can be induced to exchange services for sacrifices. What was new was the notion that more than self-interested exchange relations were possible between humans and the supernatural. The Christian teaching that God *loves* those who love Him was alien to pagan beliefs. MacMullen (1981:53) has noted that from the pagan perspective:

What mattered was . . . the service that the deity could provide, since a god (as Aristotle had long taught) could feel no love in response to that offered.

Equally alien to paganism was the notion that because God loves humanity, Christians cannot please God unless they *love one another*. Indeed, as God demonstrates his love through sacrifice, humans must demonstrate their love through sacrifice on behalf of *one another*. Moreover, such responsibilities were to be extended beyond the bonds of family and tribe, indeed to "all those who in every place call on the name of our Lord Jesus Christ" (1 Cor. 1:2). These were revolutionary ideas.

Pagan and Christian writers are unanimous that not only did Christian scripture stress love and charity as the central duties of faith, but that these were sustained in everyday behavior. Lucian wrote of the Christians: "Their original lawgiver taught them that they were all brethren, one of the other." I suggest reading the following passage from Matthew (25:35–40) as if for the very first time, in order to gain insight into the power of this new morality when it was *new*, not centuries later in more cynical and worldly times:

"For I was hungry and you gave me food, I was thirsty and you gave me drink, I was a stranger and you welcomed me, I was naked and you clothed me, I was sick and you visited me, I was in prison and you came to me. . . . Truly, I say to you, as you did it to one of the least of these my brethren, you did it to me."

When the New Testament was *new*, these were the norms of the Christian communities. Tertullian claimed (*Apology*, 39):

It is our care of the helpless, our practice of loving kindness that brands us in the eyes of many of our opponents. "Only look," they say, "look how they love one another!"

Harnack (1908:161) quoted the duties of deacons as outlined in the *Apostolic Constitutions* to show that they were set apart for the support of the sick, infirm, poor and disabled:

They are to be doers of good works, exercising a general supervision day and night, neither scorning the poor nor respecting the person of the rich; they must ascertain who are in distress and not exclude them from a share in church funds, compelling also the well-to-do to put money aside for good works.

Or, let us read what Pontianus reports in his biography of Cyprian about how the bishop instructed his Carthaginian flock:

The people being assembled together, he first of all urges on them the benefits of mercy. . . . Then he proceeds to add that there is nothing remarkable in cherishing merely our own people with the due attentions of love, but that one might become perfect who should *do something more than heathen men or publicans*, one who, overcoming evil with good, and practicing a merciful kindness like that of God, should love his enemies as well. . . . Thus the good

was done to all men, not merely to the household of faith (in Harnack, 1908:172–173).

And, as we have seen, that is precisely what most concerned Julian as he worked to reverse the rise of Christianity and restore paganism. But, for all that he urged pagan priests to match these Christian practices, there was little or no response because *there were no doctrinal bases or traditional practices* for them to build upon. Pagan gods did not punish ethical violations because they imposed no ethical demands—humans offended the gods only through neglect or by violation of ritual standards (MacMullen, 1981:58). Since pagan gods only required propitiation and beyond that left human affairs in human hands, a pagan priest could not preach that those lacking in the spirit of charity risked their salvation. Indeed, the pagan gods offered no salvation. They might be bribed to perform various services, but the gods did not provide an escape from mortality. We must keep that in sight as we compare the reactions of Christians and pagans to the shadow of sudden death. Galen lacked belief in life beyond death. The Christians were certain that this life was but prelude. For Galen to have remained in Rome to treat the afflicted would have required bravery far beyond that needed by Christians to do likewise.

Differential Mortality

But, how much could it have mattered? Not even the best of Graeco-Roman science knew anything to do to *treat* these epidemics other than to avoid all contact with those who had the disease. So, even if the Christians did obey the injunction to minister to the sick, what could they do to help? At the risk of their own lives they could, in fact, save an immense number of lives. McNeill (108) pointed out:

When all normal services break down, quite elementary nursing will greatly reduce mortality. Simple provision of food and water, for instance, will allow persons who are temporarily too weak to cope for themselves to recover instead of perishing miserably.

Some hypothetical numbers may help us grasp just how much impact Christian nursing could have had on mortality rates in these epidemics. Let us begin with a city having 100,000 inhabitants in 160, just before the first epidemic. Let us suppose that 15,000 of these inhabitants are Christians, all of the others pagans. That is a ratio of 1 Christian to 5.7 pagans. Now, let us assume an epidemic generating mortality rates of 30 percent over its course in a population left without nursing. Modern medical experts believe that conscientious nursing *without any medications* could cut

the mortality rate by two-thirds or even more. So, let us assume a Christian mortality rate of 10 percent. Imposing these mortality rates results in 13,500 Christian and 59,500 pagan survivors after the epidemic. Now the ratio of Christians to pagans is 1 to 4.4. To keep things simple, let us suppose that the population of this city is static over the next 90 years, until hit by the second epidemic. Let us assume the same mortality rates of 10 and 30 percent apply again. After this epidemic was over, there would be 12,150 Christian and 41,650 pagan survivors. And this is a ratio of 1 Christian to 3.4 pagans. In fact, of course, the population would not have been static for this period. In the days before modern medicine, epidemics always were especially hard on the young and on pregnant women and those suffering from birth-related infections (Russell, 1958). Hence, in the aftermath of serious epidemics the birth rate declined. With a much lower mortality rate, the Christian birth rate also would have been much less influenced and this too would have increased the ratio of Christians to pagans.

Thus an immense Christian gain would have occurred without their having made a single convert during the period. But, of course, these same trends ought to have resulted in a lot of converts. For one thing, if, during the crisis, Christians fulfilled their ideal of ministering to *everyone*, there would be a lot of pagan survivors who owed their lives to their Christian neighbors. For another, no one could help but notice that Christians not only found the capacity to risk death, but that they were much less likely to die.

As Kee (1983) has so powerfully reminded us, miracle was intrinsic to religious credibility in the Graeco-Roman world. Modern scholars have too long been content to dismiss reports of miracles in the New Testament and in other similar sources as purely literary, not as things that happened. Yet we remain aware that in tabernacles all over modern America, healings are taking place. One need not propose that God is the active agent in these "cures" to recognize their reality both as events and as perceptions. Why then should we not accept that "miracles" were being done in New Testament times too and that people expected them as proof of religious authenticity? Indeed, MacMullen (1981:126) regards it as self-evident that a great deal of conversion was based on a "visible show of divinity at work." He suggests that martyrdom would have been perceived as a miracle, for example. But, accepting the immense weight of testimony by eyewitness, MacMullen (1981:96) stresses the centrality of healing miracles: "*That* is what produced converts. Nothing else is attested."

Against this background, consider that a much superior Christian survival rate hardly could seem other than miraculous. Moreover,

superior survival rates would have produced a much larger proportion of Christians who were *immune*, and who could, therefore, pass among the afflicted with seeming invulnerability. In fact, those Christians most active in nursing the sick were likely to have contracted the disease very early and to have survived it as they, in turn, were cared for. In this way was created a whole force of miracle workers to heal the "dying." And who was to say that it was the soup they so patiently spooned to the helpless that healed them, rather than the *prayers* the Christians offered on their behalf?

Mortality, Flight, and Attachments

It has long been taken for granted that theology plays a primary role in conversion—that people are attracted to a religion because of the way its system of beliefs meets their needs. However, sociologists have found that theology seldom attracts converts, but plays a relatively passive, filtering role in conversion. One of these filters is that people already deeply committed to one set of beliefs do not exchange them for another. A second filtering function is that people who utterly reject the possibility of the supernatural do not embrace a religion. Within these general limits, however, theology often plays the more important role *after* conversion. Part of being socialized into the role of a member of a faith is learning to act in accordance with its doctrines. Moreover, it is typical for people to be taught retrospectively to attribute their conversion to theological appeals, as the culmination of a spiritual search. In fact, however, observation of people *during the process of conversion* has revealed that most were not seeking a new faith at all (Lofland and Stark, 1965; Stark and Bainbridge, 1985, 1987).

People convert because of their social ties to others who already belong. Accepting a new faith is part of conforming to the expectations and examples of one's family and friends. Hence, religious movements can grow in two primary ways. First, they grow as members *form* new relationships with outsiders. Conversion occurs to the extent that these relationships come to outweigh the outsider's ties to other outsiders. A second way movements grow is by spreading through *pre-existing* social networks as members in turn bring in their families and friends. The latter pattern has far greater potential for rapid growth.

The importance of attachments in the conversion process is simply an application of the primary proposition of control theories of conformity and deviance. People tend to conform to the expectations of their friends in order to maintain their respect and affection. That is, our attachments to others give us a stake in conformity. People who lack or lose their

attachments are thereby “free” to deviate. If people lose their attachments to one group and gain attachments in another, their basis for conformity also shifts—it will be to the norms of their new group that they will conform.

What this leads to is, of course, a comparative analysis of the impact of epidemics on the social networks of Christians and pagans and how this would have changed their relative patterns of attachments. In general, I will demonstrate that an epidemic would have caused chaos in pagan social relations leaving large numbers with but few attachments to other pagans and meanwhile greatly increasing the relative probabilities of strong bonds between pagans and Christians.

Let us return to our hypothetical city of 100,000 inhabitants, 15,000 of them Christians and the other 85,000 pagans. Let us focus attention on three varieties of interpersonal attachments: 1) Christian-Christian; 2) Christian-pagan; 3) pagan-pagan. If we apply the differential mortality rates used above (10% for Christians, 30% for pagans) we can calculate the *survival odds* for each variety of *attachment*. That is, our interest here is not in the survival of individuals but of an attachment, hence our measure is the odds that both persons survive the epidemic. The survival rate for Christian-Christian bonds is .81 (or 81%). The survival rate for Christian-pagan bonds is .63. The survival rate for pagan-pagan bonds is .49. Thus not only are attachments among pagans almost twice as likely to perish as attachments among Christians, pagan bonds to Christians also are much more likely to survive.

These attachment survival rates take only differential mortality into account. But attachments also are severed if one person leaves. Since we know that substantial numbers of pagans fled epidemics (while Christians stayed), this too must be considered. Let us suppose that 20 percent of the pagan population fled. Now the survival rate of pagan-pagan attachments is .25 and of Christian-pagan attachments .45, while the Christian-Christian rate remains .81.

These rates assume, of course, that Christian victims of an epidemic received nursing care, while pagans did not. In fact, however, our sources testify that *some pagans* were nursed by Christians. Given the relative sizes of the Christian and pagan populations at the onset of the epidemic, Christians would not have had the resources to nurse all or even most sick pagans. Presumably, proximity and attachments would have determined which pagans would be cared for by Christians. That is, pagans who lived near Christians and/or who had close Christian friends (even relatives) would have been most likely to be nursed. Let us assume that Christian nursing was as effective on pagan survival as on their own. That means that pagans nursed by Christians had noticeably higher survival

rates than other pagans. But it also means that we should recalculate the Christian-pagan attachment survival rate. If we assume that pagans in these relationships had as good a chance of living as did the Christians, then the survival rate for these attachments is .81—more than three times the survival rate of pagan-pagan attachments.

Another way to look at this is to put oneself in the place of a pagan who, before the epidemic, had three very close attachments, two with pagans and one with a Christian. We could express this as a pagan/Christian attachment ratio of 2 to 1. Let us assume that this pagan remains in the city and survives. Subtracting mortality rates results in a pagan/Christian attachment ratio of 1 to .9. What has happened is that where once there were two pagans to one Christian in this pagan's intimate circle, now there is, in effect, one of each—a dramatic equalization.

Not only would pagan survivors have a much higher proportion of their attachments to Christians simply because of the greater survival rate of those relationships, during and after the epidemic the formation of new relationships would be increasingly biased in favor of Christians. One reason is that the nursing function is itself a major opportunity to form new bonds. Another is that it is easier to attach to a social network that is more rather than less intact. To see this let us once again focus on the pagan who, after the epidemic, has one close Christian and one close pagan attachment. Suppose that he or she wishes to replace the lost attachment—a spouse, perhaps. The Christian friend still has many other attachments to connect this pagan to. The pagan friend, however, is very deficient in attachments. For the Christian, there is a 90 percent probability that any one of his or her Christian friends or relatives survived the epidemic and remained in the city. For the pagan, these odds are only 50 percent.

The consequence of all this is that pagan survivors faced greatly increased odds of conversion because of their increased attachments to Christians.

Conclusion

Several modern writers have warned against analyzing the rise of Christianity as though it were inevitable. That is, since we know that indeed the tiny and obscure Jesus movement managed, over the course of several centuries, to dominate Western civilization, our historical perceptions suffer from overconfidence. As a result, scholars more often recount rather than try to *account for*, the Christianization of the West, and in doing so seem to take "the end of paganism for granted," as Peter Brown (1964:109) has noted.

In fact, of course, the rise of Christianity was long and perilous. There were many crisis points when different outcomes easily could have followed. Moreover, in this essay I have argued that had some crises *not occurred* the Christians would have been deprived of major, possibly crucial, opportunities.

MacMullen (1981:134) has warned us that this "enormous thing called paganism, then, did not one day just topple over dead." But neither did it simply wither away as increasing numbers of people came to recognize the "superiority" of Christian teachings. Paganism, after all, was an active, vital part of the rise of the Hellenic and Roman empires and therefore *must have had* the capacity to fulfill basic religious impulses. As an antidote to the tendency to underestimate paganism, one might read the unself-conscious and sincere piety expressed repeatedly by the leading figures in Xenophon's *The Persian Expedition*.

True enough, Christianity brought forth some very appealing doctrinal innovations. But, the classical world had gotten along adequately without them for many centuries. Moreover, as noted above, there is substantial research showing that theological attractions are not the primary basis for conversion and therefore "theological" explanations *by themselves* seem woefully inadequate to account for the rise of Christianity.

Viewed on its own terms in the middle of the second century, paganism was not in its last days. To the contrary, it required some truly devastating blows to bring down this "enormous thing,"—blows far beyond any the Christian movement could have dealt it directly during normal times. In this essay I have argued that the terrific crises produced by two disastrous epidemics may well have tipped the scales. If I am right, then in a sense paganism did "topple over dead," a victim of its relative inability to confront these crises socially or spiritually.

*See also the article by Robinson, pp. 71–72 above. Ed.

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