65

RELIGIOUS CONVERSION AND ONOMASTIC CHANGE IN EARLY BYZANTINE EGYPT[1]

The people of Roman Egypt, in the second and third centuries of our era, worshipped a variety of gods whom we lump together as pagan, including the classical Olympian divinities, the millennia-old Egyptian deities, various gods from other countries of the Near East, and such difficult-to-classify gods as Sarapis. The non-pagan population was certainly small. After the virtual extermination of the Jews in the revolt under Trajan,[2] there is a considerable gap before we begin to see traces of the Christian church in the mid-third century.[3] For practical purposes, then, the Egyptian population of the second and third centuries was a pagan one. It is well known, on the other hand, that Egypt was converted to Christianity in the centuries after Diocletian and Constantine. The markedly Christian character of the country has long been noticed; the effect of the "priests and deacons, monasteries, churches, festivals, saints, gospels, and scriptures," is to give a distinctly medieval impression.[4] Certainly some pagan elements survived even in the sixth and seventh centuries, both in Alexandria and in the countryside, as Rémondon has

---

1 This paper was first written for presentation at the Istituto Papirologico "G. Vitelli" of the Università degli Studi di Firenze in May, 1981. I am grateful to Professor Manfredo Manfredi for the invitation which provoked its writing and to the seminar there for comment. I also owe much to my colleague Richard W. Bulliet. It will be evident that this is a preliminary exploration of a new approach to this subject, and I am under no illusions that it will be definitive.

2 Tcherikover, *CPJud.* I, p. 92.

3 C.H. Roberts, *Manuscript, Society, and Belief in Early Christian Egypt* (London 1979) 58ff.

4 H.I. Bell, "The Byzantine Servile State in Egypt," *JEA* 4 (1917) 102-03; R. Rémondon, *BIFAO* 51 (1952) 63.

so eloquently demonstrated; but by and large Egypt in the sixth century was unmistakably a Christian country.

The stages by which the conversion took place, however, are not well known, and have indeed been very differently viewed. There has, to be sure, been a goodly amount of effort devoted to discerning the earliest traces of Christianity in the papyrus documentation, with hotly contested results and little of substance before the middle of the third century.[5] For the fourth century itself, the general course of things has sometimes been understood as Wipszycka has expressed it: criticizing Naldini for including in his corpus of Christian letters all of those from the fourth century, she remarked, "We know that the conversion of Egypt was rapid and that the Christian religion became the dominant religion there in the course of the fourth century. Starting with the middle of the fourth century, the conditions in which the Christians in Egypt lived were completely different from those of the earlier period."[6]

Rémondon, on the other hand, has argued that the pace of conversion was slower and has emphasized the very end of the fourth century and the early fifth. He supposed that "in the period of Constantine, paganism must have retained its numerical superiority. I do not, therefore, think that we are permitted to state that the Christians dominated in Egypt in the fourth century, and that their religion was 'triumphant' there; for it is dangerous to trust oneself to the negative testimony of the papyri for judging the retreat of paganism, in times when discretion was a rule of prudence. It is only at the end of the fourth century that Christianity shows itself very strong.... In 400, we cannot say, with J. Maspero, that the two camps were still 'of approximately equal size.' The pagans no doubt did not have a majority any longer, but they remained organized and capable of offensive action for more than a half-century."[7]

---

5 Roberts, *Manuscript*; cf. his citation, 55 n.1, of M. Naldini's *Cristianesimo in Egitto* (Firenze 1968) and E. Wipszycka's review of it in *JJurPap* 18 (1974) 302-21, for opposite poles of opinion on this point.

6 *JJurPap* 18 (1974) 204-05.

7 *BIFAO* 51 (1952) 68.

These statements are not very precise, and it would no doubt be possible to maintain that they are not in formal contradiction, though they give very different impressions.

The search for more precision than these general statements offer has led editors of papyrus texts to an almost ritual, obligatory examination of the degree to which Christianity can be found in the dossiers they publish. In the introduction to the Abinnaeus papyri, for example, Victor Martin examines the evidence and finds that two of the prefect's correspondents were definitely Christians, and four others very likely were. For Abinnaeus himself, Martin cannot be sure, and in the assessment of his milieu, he remarks, "it would be necessary to know how far Christianity was accepted in the army in the middle of the fourth century."[8] Boak and Youtie point to the barrenness of the Isidoros archive on this point: "[these papyri] tell us nothing of his religious inclinations at a time of extreme crisis in the religious thought of Egypt and the Empire."[9] Such approaches provide some impressionistic help, but they leave us with little in the way of clear idea of the stages by which the Christianization of the population took place.

Now one of the phenomena in which we see the Christianization of Egypt is the naming of children. The proclivity of Christian parents to give specifically Christian names to their offspring was noted already in antiquity[10] and discussed by Harnack.[11] The Egypt of the sixth and seventh centuries was populated, as every reader of Byzantine papyri knows, by people named after Biblical figures, saints, Christian qualities, and the like. This pattern of nomenclature is strikingly different from that in the second and third centuries, when distinctively pagan names were extremely common, and the onomastic change is certainly related to the religious

---

8 *P. Abinn.*, p.33.

9 *P. Cair. Isid.*, p.17.

10 See E.R. Hardy, *Christian Egypt: Church and People* (New York 1952) 30.

11 A. von Harnack, *Mission and Expansion of Christianity in the First Three Centuries*, trans. J. Moffatt (2nd ed. 1908, repr. Harper Torchback ed.) 422-30.

conversion of the country. People in antiquity took much more seriously than we do the religious connotations of the names they gave their children, and we may be sure that the disappearance of Petechonsis, meaning "the one who has given him is Khonsu" (a name not found after the third century), and the appearance and flourishing of Papnouthios, "the (servant) of God," are not accidents of fashion in the sense that the popularity of names tends to be in modern society.

It seems reasonable, therefore, to ask whether one might not be able to gain some insight into the pace of conversion in Egypt by examining shifts in patterns of naming. My attempt to do so takes as a point of departure a recent study by Richard W. Bulliet, in which he examines the rate of conversion to Islam in medieval Iran. Bulliet's method is based on the use of large biographical dictionaries compiled in medieval and early modern times which preserve genealogies for large numbers of prominent men in Islamic countries. Bulliet finds that "a common practice in Iran was for the first Muslim member of an Iranian family to give his children names drawn from the Arabic onomasticon, a practice that was then continued in the following generations." Bulliet proceeds to assign each such case to a chronological slot and assumes that the conversion took place during the lifetime of the last named family member with a non-Arabic (i.e. Persian, in this case) name, but before the birth of the first ancestor in the genealogy with an Arabic name. Distributing these on a graph, he obtains a bell curve for the incidence of Iranian conversion over time and, from this, a cumulative curve showing the percentage of the population which had been converted at any given point.[12] Bulliet goes on to point out that the second curve is virtually identical with what is called by mathematicians the logistic curve, one found to represent such phenomena as population growth by fruit flies in a closed environment and the dissemination of technological innovations in human society.

---

12 R.W. Bulliet, *Conversion to Islam in the Medieval Period* (Cambridge, MA 1979) 16-25 with graphs 2 and 3.

The application of this method to Byzantine Egypt calls forth a host of preliminary justifications and warnings. First, Christianity was in general probably not so insistent as Islam on name-change (either in the person converted, which is not uncommon in Islam but not much attested for ancient Christianity, or in the next generation). Christians frequently named children after saints and martyrs who themselves bore pagan theophoric names, having been born pagans or perhaps in a time when it was not safe to be too obvious about one's Christian faith; and so such pagan names survived in Christian use even to the present day, as in the well-known case of Onnofrio, which is simply the Egyptian *Wn-nfr*, an epithet of Osiris, or the Greek formation Isidorus, commonly used among American Jews in the form Isidore (or Isadore) despite its explicit homage to Isis. Moreover, Roman Egypt possessed numerous names which were not theophoric and therefore could be used by pagan and Christian alike with no particular connotations. They have no religious content, and even if there were a saint bearing the name, it is not impossible that pagans also would continue to use the name.

In a classification of names, therefore, there are three categories: distinctively Christian names, clearly pagan names, and names not assignable with certainty to one or the other. I will say more later of the criteria which I have used in assigning specific names to these categories. The general consequence, however, is to be noted: it is *names* and not people, which will initially be described below as Christian or pagan. The congruity of nomenclature pattern with religious conviction remains to be demonstrated, and will also be argued later. It should always be kept in mind that to the extent that names are evidence for religion, they are evidence for the religion of the parents at the time of children's birth, not of the children. Generally speaking, however, it is not likely that in an environment where a population is increasingly converted to a new religion, there will be much movement in the reverse direction, from the new religion to the old (though there will surely be a few).

The evidence available to us is of a rather different character from that used by Bulliet. We have no ancient or modern biographical dictionary for fourth-century Egypt. Nor do we have a prosopography for Egypt or any part of it for this period on which to rely. Such a prosopography, with all available information on dates, would

provide a much firmer basis for the argument presented below. The newly-published first volume of J.M. Diethart's *Prosopographia Arsinoitica* (MPER n.s. 12, Wien 1980) does not cover the fourth and fifth centuries, but the sixth through eighth. Moreover, the overwhelming bulk of the names in it comes from the material published by Wessely in *SPP* III and VIII, which in most cases lacks any absolute date. The datable texts are a small minority, and a good chronological distribution of nomenclature from the prosopography is therefore elusive. It is, nonetheless, possible to get some general statistics from this prosopography which help to develop our conclusions, and this repertory is examined later on. The Hermopolite prosopography currently being prepared by K.A. Worp should provide a first opportunity for a chronologically stratified investigation of the sort needed. For the moment, the remarks below are a tentative attempt to show that the inquiry is worthwhile and to sketch what I believe its main results are. My basis has been several bodies of material rather closely datable and cohering in time sufficiently for our purposes. There are significant gaps, but the outlines will, I hope, be clear enough.

At the risk of a certain amount of tedium, I must sketch the basis on which names have been classified as Christian, pagan, or undefined. For Christian names, I have defined five categories. These are:

1) Old Testament and New Testament names. Many of these were also in use by Jews, but the drastic decrease in Jewish population in Trajan's suppression of their revolt, plus the fact that all of the documentation I am dealing with comes from the chora and not from Alexandria, leads me to exclude the possibility that these names are those of Jews. If a handful are, the results will not be altered in any substantial way. Among these names are (from the Old Testament) Aaron, Abraham, Daniel, David, Elias, Isaac, Jacob, Joseph, Miriam, Moses, Rebecca, Samuel, Susanna; from the New Testament, Andreas, Apollos, Bartholomew, Johannes, Maria, Martha, Matthew, Paulos, Petros, and Stephanos; and the toponym Sion.

2) Names formed on the Egyptian word *ntr*, Coptic *noute*, "God." Pagan theophoric names in Egyptian used the name or epithet of a specific god or cluster of gods, not the general or abstract word for god. Papnouthios (and its variants) and Pinoution both belong in this class.

3) A few names of Christian emperors are probably to be seen as Christian names after those emperors' lifetimes, notably Constantine and (later) Theodosius, although the latter's name could also be considered in the next category.

4) Christians used some names based on abstract nouns and adjectives of theological content. Such, I think, are Dora, Dorotheos, Eulogios, Martyria, and Sophia.

5) The most difficult category to evaluate is that of names of saints and martyrs. These men and women lived and died at different times, and occurrences of these names prior to the fame of a saint (some names were of course borne by several different saints) are in principle probably not Christian but pagan. I have admitted the following: Anoup, Athanasios, Damianos, Gennadios, Pesynthios, Phib, Phoibammon, Shenoute, Tatianos, Thekla, Theodoros, and Victor. I cannot take the space here to defend the choice of these names, but most of them are familiar names to anyone who knows the history of the church in Egypt. The relative popularity of these names varies greatly from place to place and would make an interesting study in itself.

Just as it is possible that in some cases a name is given not in honor of one of the above, but for other reasons (Apollos, for example, is a good pagan name), so there are no doubt instances of locally prominent saints whom I have missed. But I do not think that the overall combined effect of these mutually-cancelling items will be significant.

Pagan names are defined to include theophoric names of three types: (1) Egyptian formations, e.g. Paesis; (2) Greek formations on Egyptian gods, e.g. Sarapion; and (3) Greek theophoric names, e.g. Diogenes. I must point out that for many Egyptian names I have not been able so far to determine the derivations, and of a considerable number I think the etymology is in fact not yet known.[13] Very many are probably theophoric. The uncertainties produced by the limits of onomastic scholarship and by my own ignorance probably mean that a significant number of pagan names have been categorized under "not

13 The publication of the *Demotische Namenbuch* will ultimately make considerable refinement possible here.

assigned" and vice-versa, and there is thus a certain presumption that if we knew the religion of the "not assigneds" more of them would be pagan than the general proportion of pagans to Christians which would be derived by leaving the "not assigneds" out of account.

These not assigned names include, as well as the names whose origin is not recognizable, a number of traditional Greek non-theophoric names (Timagenes, for instance), as well as most Roman nomina and cognomina (Antoninus, for example).

A few other assumptions should be laid bare before we proceed. I think it is very unlikely that pagans gave their children Christian names; but it is by no means true that the reverse applies. It is not a matter of pagans' being more sincere than Christians or taking names more seriously; but many names were traditionally popular and may well have been held by prominent Christians (of whom we may know nothing) in a local community in the earlier generation of converts. It was no more offensive to name a child after such (or even after a grandparent) than to name one after a saint with a good pagan name, like Phoibammon.

I have assumed in the documentation I have used that homonyms, bearing both the same name and the same patronymic, are identical unless the name index used shows the contrary. They are probably not in some cases. But it is prima facie likely that the rate of error is the same for persons with Christian names as for those with pagan names, and the error is therefore irrelevant for our purposes.

The first item of evidence is *P.Cair.Isid.* 9, a register of villagers and metropolitans who paid wheat and barley taxes in Karanis in A.D. 309. Because the metropolitans constitute only a handful and not a sufficient sample of the population of Ptolemais Euergetis, I have considered only the villagers. Of 122 taxpayers identifiable, 2 have names categorized as Christian, namely Apollos and Paulos. This represents 1.6% of the population. Of the fathers' names, none are Christian. It can be noted, further, that Apollos and Paulos are, of the "Christian" names, among the most likely to be found also in non-Christian contexts, the first of them being, of course, inherently a pagan theophoric name. It should also be pointed out that this Paulos had a son named Isidoros, after his

paternal grandfather.[14]

We must ask, given a population to which we assign a proportion of Christian names of 1.6% in 309, at what date we suppose these taxpayers to have been born. There is no easy answer to this question. It is not a matter of asking what the average age of the population was, but what the age of taxpaying and, in the main, the landowning population was. Bulliet has used a figure of 34 years for the length of a generation, that is, the number of years on average by which a son survived his father and also the age at the midpoint of a man's child-engendering years.[15] This figure compares very closely with the average age of fatherhood computed by Hombert and Préaux on the basis of the census records, 36 years and 9 months.[16] These figures would no doubt be too high for the Theban peasants analyzed in *Death and Taxes* (*O.Ont.Mus.* I), but an average age of 35 for the taxpayers of our lists seems reasonable. At all events, this is the figure I shall apply in this and other such contexts in this paper. Of course, some persons will have been much younger than this and some considerably older; but this is true in Bulliet's data as well, and in a pool of sufficient size the effect is neutralized by the averaging. The taxpayers of A.D. 309 were therefore born on average around 274, and *their* fathers around 239.

It should be remembered, also, that the conditions of certain periods in the third century and the beginning of the fourth, when official persecutions of Christians were carried out, would have discouraged some parents from giving children patently Christian names. It is possible, therefore, that any figures relating to naming before 313 reflect fear and are insufficiently representative of the Christian population. But there is no direct evidence that this is so, and one must suppose that a Christian who was willing to die for the faith would not hesitate to name a child in a patently Christian manner. On the other hand, the majority of any population consists not of martyrs but of ordinary people for whom

---

14 *P. Cair. Isid.* 61.12, 323p.

15 Bulliet, *Conversion*, 21.

16 *Pap. Lugd. Bat.* V, p.167.

social pressure is important.

Our second document is the pair of Hermopolite land registers concerning the residents of the quarter of Phrourion Libos in Hermopolis and those of Antinoopolis owning property in the Hermopolite Nome.[17] There are two such registers, perhaps a few years apart in date but not, in my view, more than about five years apart. The editors assigned them to a date with the outside limits 313-325, preferring 313-318 as the date. I have argued elsewhere[18] that this date is incorrect, and that a date in the 340's is far more likely. Depite Worp's recent attempt to avoid the necessity of a date in the 340's,[19] I remain persuaded that the earlier date is impossible. What follows will, I think, only confirm the later date. For the sake of convenience, we will take the date of 345 for both lists together; the index of names has been used. Only those persons whose name and whose patronymic survive have been included. We suppose that the sons (the landowners listed) were born on the average around 310, their fathers around 275.

	Fathers				
Sons	Chr.	Pagan	?	Total	%
Christian	5	26	7	38	12
Pagan	14	66	74	154	48
Unknown	9	64	58	131	40
Total	28 (9%)	156 (48%)	139 (43%)	323	

The crucial figures are, first, for the fathers: 9 per cent bore Christian names; and secondly, for the sons: 12 percent did. One final figure which I think will prove useful is the sum of those sons with Christian names and those sons who did not themselves bear Christian names but whose fathers did. This figure is 61, or 19 per cent.

The next group analyzed consists of the persons mentioned in the documents belonging to the Abinnaeus archive, most of which

---

17 *P. Herm. Landl.*

18 *BASP* 16 (1979) 159-68.

19 *P. Charite*, p.6.

dates to the period 346-351, though a bit is earlier and a few pieces may be later. I have taken 348 as the average date of the documents. The name index has again been used, and only persons whose own name and that of the father are preserved are used. The population in question is varied, but most of it comes from Arsinoite villages. Abinnaeus himself was stationed at Dionysias, but he may have retired to Philadelphia. The mean date of birth of the sons (and daughters) in the sample is set for our purposes at 313; that of their fathers at 278. These dates are, like the date of the documentation itself, naturally very close to those of the Hermopolite registers.

	Fathers				
Sons	Chr.	Pagan	?	Total	%
Christian	3	3	16	22	12
Pagan	3	19	33	55	30
Unknown	7	42	55	104	57
Total	13 (7%)	64 (35%)	104 (57%)	181	

The figure for sons with Christian names is 12 per cent, the same as in the Hermopolite land registers. The figure for fathers is 7 per cent, slightly lower than in the Hermopolite land registers (9 per cent). For the combination of the sons with Christian names, plus sons of fathers with Christian names, the figure is 32, or 18 per cent, within one point of the 19 per cent of the Hermopolite registers. Considering the limited size of the sample and the geographical differences involved--and also probably the lower average social status of the persons in the Abinnaeus archive--the congruity of the figures is quite remarkable. It suggests, in my view, that the method works (within certain limitations), and secondly, that the date of the 340's proposed for the Hermpolite registers must be approximately correct.

We are, regrettably, lacking in cohesive bodies of material for the period from 350-385 which could help fill in the picture for that generation. The total papyrological documentation is substantially less than in the first half of the century, of course, and only a lucky discovery of a major register is likely to improve

things very much. But eventually the accumulation of prosopographical material may help to solve the problem.

From 388 we have our next body of material, the tax registers preserved in *CPR* V 26.[20] The persons listed are villagers in the Hermopolite hamlet of Skar, of a significantly more rural and lower-class background than the landowners of the 340's or even than most of the people active in the Abinnaeus archive, I suspect. Once again, the name index to the text has been used. The fathers will have been born on average about 318, the sons about 353.

	Fathers				
Sons	Chr.	Pagan	?	Total	%
Christian	42	57	16	115	52
Pagan	20	33	13	66	30
Unknown	12	24	5	41	18
Total	74 (33%)	114 (51%)	34 (15%)	222	

We see that the sons with Christian names amount to 52 per cent, compared to 33 per cent of the fathers. The combined figure for sons with Christian names and sons of fathers with Christian names, however, is 66 per cent.

If we tabulate the information gathered so far, we find the following:

Christian Names as a Percentage of all Names

Birthdate	Sons	Fathers
239		0%
274	1.6%	
275		9%
278		7%
310	12%	
318		33%
353	52%	

20 For the date of this text, see *ZPE* 24 (1977) 111-24, and cf. *Currency and Inflation in Fourth Century Egypt* (forthcoming) for further references.

The figures from the 270's are not quite consistent, although they are all under 10 per cent. It is possible that Karanis was particularly devoid of early Christian converts compared to the other areas tested, but it is also worth pointing out that the documentation used in the other case dates to the 340's. Since evidence for name-change by converts themselves is lacking, however, it seems to me not very likely that the 7 per cent and 9 per cent figures represent renaming in the generation of the fathers in question. The Karanis sample is also the smallest and, perhaps, least typical.

It is very difficult to assess accurately the evidence from the period 310-320. For one thing, it is quite possible that the 12 per cent of Christian names were virtually all given after 313, and that a 25 per cent rate after 313 balanced a 0 per cent rate before that date, or something of that sort. Nonetheless, the enormous leap represented in the genereation of the fathers of the taxpayers of Skar is clear.

Its significance is another matter. Several hypotheses may be formulated: (1) the Christian population before 313 was larger than the name figures would show, but after the end of persecution and the giving of offical sanction for the religion, people felt much freer to give their children obviously Christian names; (2) the actual rate of conversion in the period immediately after 313 was extremely high, resulting from a release perhaps of pent-up desire to convert on the part of those who feared repercussions; (3) the freeing of the church to proselytize increased the rate of conversion. If one of these is true, of course, it does not mean that the others are untrue.

It is worth extending the inquiry to ask how far we can trust these figures. That is, what proportion of the Christian population bore Christian names? Can we determine a factor which would convert these pseudo-percentages of Christians into real percentages? I have examined two bodies of evidence which would help to test the figures used above.

The first of them is the archive from Aphrodito early in the Arab period, published in *P.Lond.* IV. All of these texts, Greek and Coptic alike, seem to date from the quarter-century 698-722. I have made once again several assumptions, all of which I believe to be approximately correct: (1) that all Muslims in the population

bear Arabic names; (2) that all persons who do not bear Muslim names are Christians; that is, that there are no more pagans; and (3) that no Christians bear Arabic names. The second of these assumptions, that paganism was extinct, is perhaps the most difficult. Rémondon affirmed that "paganism was so tenacious a survival that some Egyptians apparently must have become Muslims without having passed by way of Christianity."[21] But this comment was made in the context of a statement that paganism was from Justinian's time no more than a survival, however tenacious. In numerical terms, therefore, I think the assumption is justified for the period in question. The numerical analysis which I have carried out is not so complicated as that for the fourth-century documents but bears only on the names of sons and daughters (persons with no patronymic have been excluded to help keep officials out of consideration and limit the material to manageable size). Of the sons,

799	(68.7%)	have Christian names
91	(7.8%)	have pagan names
273	(23.5%)	have names not assigned,

out of a total of 1,163 persons counted. Taking things in the round, almost 70 per cent of the Christians have Christian names. I have not attempted a count of persons with Arabic names because of the high proportion of persons in official or military positions among them.

The results of this survey would indicate that in order to convert the number of Christian names to the number of Christians, a factor of 1.45 (100 divided by 68.7) must be applied to the number of Christian names found. One caveat about the use of this figure in the fourth century ought to be mentioned: the percentage of pagan names compared to that of names not assigned is much lower in this archive than in the fourth-century texts. It is possible, therefore, that during the time when paganism still survived, we should apply a lower multiple. We will return to this problem from another direction later.

The second body of material is chronologically less cohesive and from a somewhat larger geographical area, namely the Arsinoite

---

21 *BIFAO* 51 (1952) 72.

prosopography for the sixth, seventh, and eighth centuries recently published by J.M. Diethart. In this volume we find all persons attested in Greek papyri of these centuries, a span (aside from a relatively small number of texts after about 725) of some 225 years and from an entire nome. Here, instead of the precise focus offered by the sum of the other evidence, we have one in which temporary fluctuations and local variants within a region should in general be submerged, to allow a broader picture to emerge. In order to increase the comprehensiveness of this check, I have included all persons listed, regardless of whether a patronymic is known. The only classes excluded have been (again and necessarily) Arabic names and names too incomplete to allow analysis. The sample is thus very large, a total of 5,183 persons counted. These break down as follows:

3,457	(66.7%)	have Christian names
343	(6.7%)	have pagan names
1,383	(26.7%)	have names not assigned.

The similarity of these figures to those for eighth-century Aphrodito is utterly remarkable. Considering that they cover a period going back as far as 500, when there still may have been pockets of paganism in the Fayum, the resemblance of the percentages is much closer than could reasonably have been expected in an investigation of this sort.

From these figures, we learn that persons bearing Christian names were about two-thirds or slightly more of a population which we may reasonably consider to have been entirely Christian except for the Muslims, who have been excluded from the sample on the basis of onomastics. It seems reasonable, then, to propose that the true proportion of Christians in an Egyptian population might be found by applying a factor of about 1.5 to the number of persons bearing Christian names. If this principle were applied to the figures obtained above for the fourth century, we would obtain the following results:

Date of Birth	% of Names	x 1.5 = % of Christians
274	1.6	2.4
275	9	13.5
278	7	10.5
310	12	18

313	12	18
318	33	50
353	52	78

It is worthwhile setting against these hypothetical results those reached earlier by adding to the sons with Christian names those whose patronymics were Christian but whose own names were not. We thus get:

Date of Birth	% of Names	x 1.5	Sons + Fathers
274	1.6	2.4	1.6
275	9	13.5	NA
278	7	10.5	NA
310	12	18	19
313	12	18	18
318	33	50	NA
353	52	78	66

Because we do not have the information needed for the fathers of the fathers in three groups of evidence, we do not have an unbroken string of figures. But even what we do have shows that in all three cases there is a considerable correlation between the number of persons in a body of documents having either a Christian name or a Christian patronymic, and the percentage of Christians which one would obtain by multiplying the factor of 1.5 derived from the later material times the number of persons with Christian names in the present generation.

If these results are accepted, we are now able to say with reasonable confidence that we know the basis for taking the pseudo-percentages of Christians and converting these into something close to the real percentage of Christians in the population. Obviously we cannot hope to have uniformly reliable results in all cases, and in particular when dealing with small samples--under 100 persons, let us say--a very large margin for error must be allowed. But even with all these caveats, we can speak with confidence about the course of conversion at certain points in the fourth century.

When these figures are plotted on a graph, we find that the results can be interpreted to correspond roughly to the logistic

curve found in Iran by Bulliet, although we do not have enough points to determine the course of the curve with much precision. Two lines are drawn: the lower is the number of sons with Christian names; and on the top is the number of Christian sons multiplied times 1.5. Obviously these graphs are parallel. They suggest a sharp rise in the period from about 310 to 360, and a slower rise after that time. For what it is worth, the documentation in the papyri of Christians and church institutions grows at something like the same rate, although its major growth comes perhaps 15-20 years after the number of Christian-named persons starts to grow rapidly, i.e. in the 330's and 340's.[22] As the numbers involved are small, however, it would be unwise to push their interpretation any further.

The growth of the Christian element in the population, seen from this perspective, is much earlier and more rapid than Rémondon believed. The pagans evidently lost their majority not at the end of the fourth century but by the end of its first quarter; they were a quarter of the population by not long after mid-century, and a small minority by the end of the century.

The implications of what I have concluded was the pace of conversion in Egypt are manifold, but I must leave for another occasion their further development. One obvious point, however, deserves further comment. Of the various correlations between the curve of conversion and Islamic social history pointed out by Bulliet, one of the most striking is the tendency for Islam to maintain its unity in a particular area until a certain point in the conversion curve. When the percentage of Muslims in the population reaches 50 per cent--or, more accurately, when the curve of conversion reaches 50 per cent, for we cannot estimate accurately the hard-core unconverted minority in most cases--factional rivalry breaks out. This is not to say that there are no factions before that point, but in Iraq, for example, Bulliet points out (p.89), that "this is doubtless because most converts migrated to the large Muslim cities during the period of this rivalry leaving the countryside and the

---

22 See E.A. Judge and S. Pickering, *JbAC* 20 (1977) 47-71.

smaller communities predominantly non-Muslim in character. Factional rivalry only reaches the countryside in a visible manner right around the 50 percent point on the conversion curve." Bulliet points out later (p.130), that "the argument that conflict among Islamic religious factions is in many cases a semiautomatic consequence of social status changes wrought by the conversion process itself implies that analysis of doctrinal development alone will frequently fall short of explaining major religious developments and that completely different doctrinal positions may reflect identical sociological situations in different areas. These implications should not be carried to the point of derogating the study of doctrinal or intellectual history."

A certain amount of this is nothing more than common sense (which is often uncommon in scholarship): when groups are a minority and facing a hostile environment, they are more likely to stick together. When fear of outside forces passes, they are free to break up into quarreling factions. Still, the specific correlation to the conversion curve is interesting, and we may ask if it is a peculiarly Islamic phenomenon or also represented in the Christianization of Egypt. Our extrapolations show a figure of 50 per cent being reached in the generation of the fathers and mothers of the taxpayers of Skar, i.e. men and women whom we are supposing to have been born about 318 on the average. That is, 50 per cent of the child-naming population around that time will have been Christian. There is obviously room for error, and most of that error is likely to have its effect in making our estimate of Christians too large too early: most notably, the 1.5 multiplier might be a bit too high, and the life-spans used may be too long, in which case the average birthdate would be later. But overall the likelihood is that this point of 50 per cent was reached sometime between 318 and 330, and in my judgment a date 320-325 is very probable.

It is not my purpose here to provide even a brief doctrinal history of the Egyptian church. But it does seem that the schisms in the church became matters of public significance--that is, reached the critical point which may be compared to that mentioned in Iraq above--about the time of Constantine's recovery of Egypt from Licinius in late 324. E.R. Hardy has put it thus: "In 324, the defeat of Licinius brought Constantine himself to the East, desirous to see a united Church as the recipient of his bounty and the

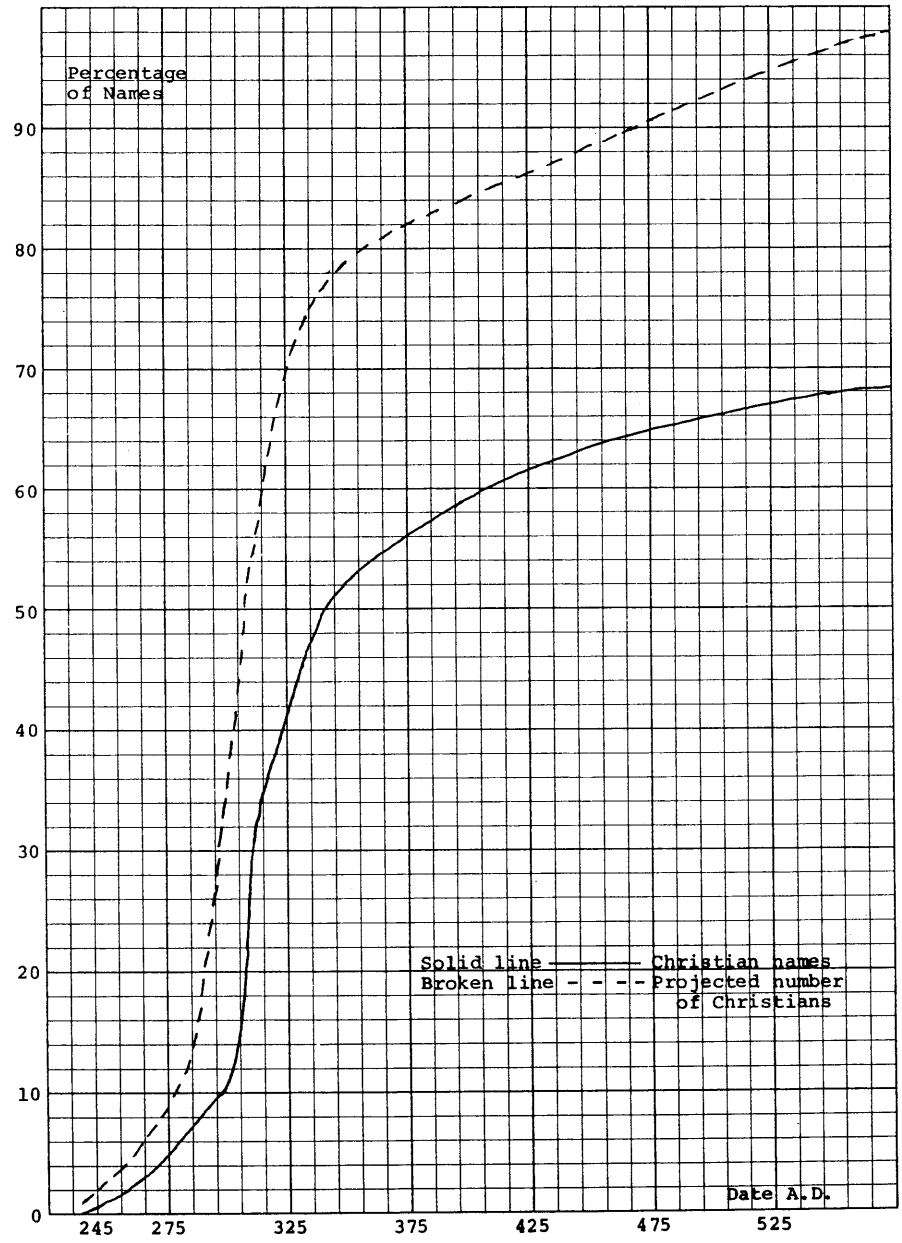
spiritual support of his Empire. To his distress the important Church of Egypt was torn by no less than three schisms."[23] The correlation is fairly exact: it is the early to middle 320's, exactly the point which our investigations point out as the point when 50 per cent was reached in the conversion process, which witnessed the start of the major ecclesiastical controversies which were to become a standing part of the Egyptian scene for many years to come.

Finally, a corrective can be offered to the picture given by Rémondon. It is certainly true that there remained pagan elements in Egypt until at least the sixth century, and his evidence points to the survival of paganism in particular among some of the most cultivated metropolitan elements. These survivals, however, are not really in conflict with the generally accepted picture of Byzantine Egypt as a thoroughly Christian country. Numerically, the Christianization of the population had evidently reached the 80 per cent mark not many years after the middle of the fourth century, and by 400 the figure must have been at least 90 per cent. Paganism was not extinct, to be sure: the curve of conversion becomes asymptotic, and incremental conversion becomes slight after a time. The process in Egypt was very rapid, and the conversion of the last part of the population must have been very slow. But in terms of the overall character of the population, there can be no doubt that the impression of a Christian country given by the papyri, the inscriptions, the hagiographic literature, and the monuments is accurate.

COLUMBIA UNIVERSITY ROGER S. BAGNALL

---

23 Hardy, *Christian Egypt*, 52-53.


Percentage of Names
90
80
70
60
50
40
30
20
10
0
245
275
325
375
425
475
525
Date A.D.
Solid line ——— Christian names
Broken line - - - - Projected number of Christians