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PUBLISHER'S NOTE

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Each article has been given a Roman number in order of appearance, as listed in the Contents. This number is repeated on each page and is quoted in the index entries.

PREFACE

Asked what he did, W.H. Auden was tempted to forestall the obvious enquiries that would follow if he confessed to being a poet by answering 'medieval historian'. Never having had the effrontery to try the converse, I admit when pressed that I am a medievalist and that I study the large and loosely defined historical domain where disease, poverty, poor relief, family history, medicine and healing all intersect. This volume reprints a selection of my published papers reflecting that interest, a selection loosely grouped under two headings.¹ First come those that concentrate on institutions of mutual support, charity, and health care, predominantly hospitals but also confraternities and those collective rituals that can be seen as a form of public health. The second part attempts to relate the usual subject matter of medical history – doctors and their writings – to a much wider spectrum of sources of therapy, domestic, saintly, even musical.

When prefacing collected writings of this kind, it is customary to justify the reprint by recalling that the contents were published over a long period in diverse and now often inaccessible periodicals and proceedings, and by expressing the confidence that, for all the original diversity, the papers exhibit, in retrospect, a consistent, even unitary, point of view. I find the bibliographical argument easier to invoke than the intellectual one. As far as an explicit theoretical stance is concerned I have been, and remain, a sceptical *bricoleur*, finding any single approach to social history uncomfortably reductive, but willing to try out different ones according to the task in hand. It will be evident, however, that I am no partisan of social construction or of the language of site, contestation, and discourse. Within the pertinent historiography, I admire comparativists who apply a historical intelligence – as distinct from a method or a theory – to more than one period and who move between countries and cultures.² Outside

¹ I have excluded a number of papers that feed directly into a forthcoming monograph on 'The First Hospitals'; my several contributions to Horden (ed.), *Music as Medicine: The History of Music Therapy since Antiquity* (Aldershot: Ashgate, 2000); papers connected to another research project on the environmental history of the Mediterranean world; and a foray into the history of psychoanalysis in Horden (ed.), *Freud and the Humanities* (London: Duckworths, 1985).

² Like so many I have been inspired by the writings of Peter Brown and Arnaldo Momigliano, but also, in different ways, by the publications of that Hume and Hegel of early medieval historical scholarship, Michael Wallace-Hadrill and Walter Ullmann.

historiography, my limited interdisciplinarity has normally resolved itself into reading the work of social anthropologists, not only of medicine but of a range of other topics: anthropologists of an older generation, both familiar names and neglected masters.³ It is as a historical anthropology of hospitals, healing and poor relief that I hope what follows may be read.

PEREGRINE HORDEN

*Oxford,
September 2007*

³ Among the many anthropologists who have helped me, either in person or in print, I single out the late Rodney Needham.

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ABBREVIATIONS

An Bol	<i>Analecta Bollandiana</i>
BMGS	<i>Byzantine and Modern Greek Studies</i>
BZ	<i>Byzantinische Zeitschrift</i>
CC	Corpus christianorum
CMG	Corpus medicorum graecorum
CS	P. Horden and N. Purcell, <i>The Corrupting Sea: A Study of Mediterranean History</i> (Oxford: Blackwell, 2000)
CSCO	Corpus scriptorum christianorum orientalium
DACL	<i>Dictionnaire d'archéologie chrétienne et de liturgie</i>
DOP	<i>Dumbarton Oaks Papers</i>
GCS	Die griechischen christlichen Schriftsteller
HE	<i>Historia ecclesiastica</i>
JÖB	<i>Jahrbuch der Österreichischen Byzantinistik</i>
MGH	Monumenta germaniae historica
PG	Patrologia graeca
PO	Patrologia orientalis
PP	<i>Past and Present</i>
REB	<i>Revue des études byzantines</i>
SCH	<i>Studies in Church History</i>
SRM	Scriptores rerum merovingicarum
TU	Texte und Untersuchungen

I

How Medicalised Were Byzantine Hospitals?

Philanthropic social welfare and medical assistance institutions [in Byzantium] [...] were in every respect perfect and nearly similar to present day institutions of this kind. In any case, they were the first fully equipped European hospitals.

So wrote the physician and medical historian G. C. Pournaropoulos¹. Even the most ardent of Byzantine hospitals' more recent admirers might find his verdict somewhat hyperbolic. Yet many scholars would pardon the hyperbole and acknowledge an element of truth within it. Only two monographs have been devoted to Byzantine philanthropic institutions, and neither is wholly opposed to Pournaropoulos in outlook. The first monograph surveys the whole range of hospitals, hospices, orphanages, old-age homes and the like that were founded during the Byzantine millennium. Its author, Demetrios J. Constantelos, takes the space to quote Pournaropoulos's judgement - as an exaggeration, but not, it is implied, as a complete distortion

¹ Pournaropoulos, 1960, p. 378.

- and he lauds one Byzantine hospital as 'a medical center in the modern sense of the term'². The second book, by Timothy S. Miller, announces its narrower scope, and its conviction of the subject's significance, in the title, 'The Birth of the Hospital in the Byzantine Empire': the birth, that is, of the modern hospital³. 'Byzantine xenones [hospitals]', he writes, 'resemble more closely modern hospitals than they do any of the institutions of pagan antiquity or any of the houses of charity in the Latin West during the Middle Ages'⁴. Miller takes the huge medical personnel of one exceptionally documented establishment as broadly indicative of the whole trajectory of Byzantine hospitals, and argues that east Roman hospitals were, quite generally, highly medicalised. They were staffed by doctors whose purpose was cure rather than care. More than that, after the mid-sixth century they were the focus of the entire medical profession: leading physicians concentrated their activities within them. Those activities were regularly supported by facilities for the copying and conservation of medical manuscripts (i.e. scriptoria and libraries) and the education of doctors. In Miller's pages, hospitals become decisive for the character and evolution of the entire medical profession in the Byzantine Empire.

My aim in this paper is not to review or question this bold interpretation in its every aspect. Rather, I want to concentrate on medicalisation, straightforwardly defined as the regular presence of doctors in hospitals in order to tend the sick. I shall ask how frequent their presence was and what it signified. I am thus joining a debate among students of Byzantine hospitals in which the chief division is between the optimists (as I shall call them) such as Timothy Miller and pessimists such as Vivian Nutton, perhaps the most trenchant critic of Miller's work⁵.

For the optimists, Byzantine hospitals were clearly ancestors of modern hospitals in focusing on cure by doctors, and they characteristically functioned at a high level of medical sophistication – approximately the level of the best known and most striking examples. In this they distinguished themselves from contemporary medical hospitals in western Europe, where (with the exception of Italian institutions) doctors were hardly in evidence until the end of the

²Constantelos, 1991, pp. 118, 128.

³Miller, 1997. What follows is written in friendly debate with Professor Miller. I hope that our disagreement obscures neither my debt to his bold and pioneering work nor my admiration for the stimulus that he has given to the whole subject.

⁴Miller, 1997, p. 207.

⁵Nutton, 1986. For the further bibliography of the debate see Miller, 1997, p. xxix.

Middle Ages and the distinctions between curative hospital and caring hospice can scarcely be drawn⁶.

The pessimists, in contrast, discern many fewer signs of precocious modernity in the hospitals of the Middle Ages. They think that the majority of Byzantine establishments were more like a hospice than a hospital, and that the well-documented medicalised ones cannot be taken as any guide to the capabilities of the rest. Byzantine hospitals were thus for the most part not so different from contemporary western ones. *A fortiori* they could not have assumed the role in the development of the medical profession and in the transmission of medical learning that the optimists (chiefly Miller) attribute to them. Not surprisingly there is – so the pessimists contend – very little substantial evidence that that role was ever played⁷.

The easiest way to contribute to any debate in which there are two strongly polarised positions is to suggest that the truth lies in between them. To some extent that is what I shall be proposing below. To leave the matter there, however, would be to accept the terms in which the debate has been conducted. I shall suggest that to do so would be a mistake, and at the end of the paper I want to consider whether the question of the presence or absence of medical personnel in a hospital is an appropriate and worthwhile one to ask.

II

For the moment, though, let us think straightforwardly in terms of personnel and institutions. First, what is uncontroversial in this debate? What would both sides accept? Looking at the common ground may provide a way of gaining a fresh perspective on the whole topic and thereby starting to dissolve some of the implacable confrontations that beset it. Three general statements are, I think, beyond reasonable challenge.

The first is this: from at least the mid-fourth century up to the late twelfth (and to a much lesser extent from the end of the Latin conquest until the fall of Constantinople) a very wide variety of philanthropic institutions were founded in the Byzantine empire by emperors, churchmen, monks, and lay individuals; and many of those institutions must be regarded as basically therapeutic in character. We encounter the *xenodochēion* (house for strangers), the *xenon* (literally meaning much the same), the *nosokomeion* (house for the

⁶ Horden, 1988; Horden, forthcoming; Park and Henderson, 1991.

⁷ Some preliminary remarks along these lines, comparing East and West, Byzantium and Islam, may be found in Horden, 2000, pp. 214-215.

sick), the *ptochotropheion* (poor house), the *orphanotropheion* (orphanage), *gerokomeion* (home for the elderly), and others. This array has especially impressed those optimists who see Byzantium as, by medieval standards, a uniquely charitable society. But the specialised designations may reflect changing fashion, or perhaps the desire of donors to individuate their achievements, rather than the functions actually performed by the institutions in question, either at their inception or as they evolved. A lesson to be learned from the study of western European foundations is that hospitals may have many more functions than their various labels suggest, and that the principal function can change quite rapidly over time. In the case of Byzantium, it is clear that the sick, whether transient or not, might be received in a *xenon* or *xenodocheion*, that the poor in a *ptocheion* or *ptochotropheion* might be impoverished because chronically ill, and so on. *Xenodocheion*, *nosokomeion*, and *xenon* have all, moreover, sensibly been translated as 'hospital'. In short, it is clear that the particular designation in the written evidence is no guide to type of clientele. We may find the sick in a variety of (superficially) different institutions⁸.

The second point to be made about Byzantine charitable institutions is that no scholar, however optimistic, supposes that doctors were available in all of them, or even in all those in which the sick predominated among inmates. The pessimist views this lack as a matter of economics: doctors were too expensive for the smaller or poorer establishments. It is not a question of which foundations were hospitals and which were not. On a minimal definition of the hospital as a more or less independent institution for the overnight relief of the poor and/or sick, of course, most of the philanthropic establishments we know about would qualify. It would follow that – out of poverty or some other reason – there were numerous hospitals without doctors. The optimists naturally view the availability of doctors in a different light. They adopt a more stringent definition of the 'true hospital' as one that focuses exclusively on medical treatment of the sick (whether it is called *nosokomeion* or *xenon* or *ptochotropheion*) rather than just nursing. On this argument, the statement 'all Byzantine hospitals were medicalised' becomes, optimistically speaking, true by definition rather than through historical enquiry. Yet even the optimists are then, like the pessimists, left with other types of foundation, not (on their definition) true hospitals, in which the attendance of doctors

⁸ Constantelos, 1991, part III; Miller, 1997. The latter is now supplemented by Miller, 2003; see also Brown, 2002, p. 33. For the later Middle Ages see for example Orme and Webster, 1995, ch. 3; Rawcliffe, 1999.

was at least unusual. On either account we have to deal only with a portion of the whole range of Byzantine philanthropic foundations for the sick⁹.

The third general statement is that, even on the minimal definition of the hospital (that is, the most inclusive definition), doctors were indeed on a number of occasions explicitly associated with hospitals in Byzantium. This is true of the very beginnings of Christian hospital history in the later-fourth century, as exemplified in the Basileias, the medical-philanthropic complex established outside Caesarea (modern Kayseri, Turkey) by St Basil the Great¹⁰. (The hospital really was, to that extent, 'born' in the Byzantine Empire, as Miller advocates.) It is even true of the later phase of the empire's history – after the end of Latin occupation in 1261 – at least in Constantinople¹¹. We can find traces of doctors (*iatroi*) active in hospitals in late Egyptian papyri, in inscriptions, correspondence and encomia, and, perhaps most vividly, in hagiography¹². As we shall see below, we can also reasonably infer the presence of doctors from the titles and, occasionally, the contents of Byzantine medical manuscripts.

III

The problem is one of how to estimate proportions. Here we are leaving common ground behind and begin to re-enter the arena of controversy. Let us confine discussion to the pre-1204 period because it is the better documented. My very rough count of the number of specific hospitals in which doctors are attested is at the most 23–25. This figure is based on evidence collected by Miller so to an extent reflects the optimistic view¹³. I shall not take the space here to go through the texts one by one, because all I am seeking to establish is an order of magnitude. A precise figure is impossible, given the ambiguous nature of some of the evidence. It is also meaningless, because the absence of evidence of doctors in a given hospital is not, of course, evidence of their absence. (Nor, incidentally, can we be confident about what is meant in all the attestations of doctors by the term *iatros*, a problem to which I return at the end of this paper).

Against what aggregate figure should we set these, at most, 25 'doctored'

⁹ I am indebted here to Nutton, unpublished.

¹⁰ Basil's philanthropic foundations are discussed in Brown, 2002, pp. 38–42; Holman, 2001, pp. 74–75; Miller, 1997, pp. 85–88. For context see also, among recent works, Van Dam, 2002, ch. 2.

¹¹ Miller, 1997, ch. 10, with new evidence presented on pp. xvi–xvii. See also Constantelos, 1992, chs 8–9.

¹² Miller, 1997, pp. 21–23, 81–84, 90–96; Constantelos, 1991, ch. 9; Nutton, 2004, p. 30.

¹³ Miller, 1997.

hospitals? Counting Byzantine hospitals and their like began over three centuries ago when du Cange published his *Constantinopolis Christiana*, listing some 35 charitable institutions¹⁴. Janin's more recent tabulation for the capital – not wholly reliable – finds 28 *xenones*, some 6 hospitals, and 27 old people's homes¹⁵. The most recent general survey for the provinces of the Byzantine empire (excluding the capital), up to the mid-ninth century, gives a total of over 160 charitable facilities of various kinds, of which the most numerous are those called *xenodocheia* (59), *nosokomeia* (49), and *ptocheia* (poor-houses; 22)¹⁶. How many of these actually admitted the sick and included medical facilities is, naturally, unknowable. But on any estimation it is clear that explicitly 'doctored' hospitals were a minority. If we inflate the number of the latter by making allowance for those of which we have only an imprecise record, we must also inflate the total number of institutions. True, medieval hospitals were always going 'out of business'; they were, often, by modern standards, ephemeral creations. So we cannot tell how many known foundations were actually functioning at any given date.

On the other hand there are always likely to have been more hospitals than we know about because of the great scarcity of archaeological evidence and the disappearance of texts. The Egyptian papyri have, of late, markedly increased the number of identifiable hospitals from just one corner of the early Byzantine Empire¹⁷. Yet there is no reason to suppose that Egypt was atypical in its philanthropic provision, which extended to small towns, and even to villages. Close regional studies of charitable activity in later periods nearly always substantially increase the numbers of foundations. One such study, of East Anglia (England) in the fifteenth and sixteenth centuries, expanded the dossier by almost thirty per cent¹⁸. So the hidden foundations probably more than compensate for those known to us that quickly ceased to function.

Of all these institutions, to repeat, we have information about structure and personnel – doctors and others – for only very few. Of the majority, we do not know what went on inside. For the reasons given above, we cannot predict where doctors would have been found. Some references in the texts might be taken to imply that hospital doctors were commonplace. They generalise about them in ways that must have been plausible to the intended

¹⁴ Du Cange, 1680, bk. 4, ch. 9.

¹⁵ Janin, 1969, pp. 552–567.

¹⁶ Mentzou-Meimare, 1982.

¹⁷ Van Minnen, 1995.

¹⁸ Phillips, 2001.

audience, who would have been unreceptive if the therapy had not been described in terms that the audience would recognise. For example, in a letter to a friend a learned cleric, Nilus of Ancyra, deployed the image of the hospital physician examining patients and making individual prescriptions in the service of an analogy between somatic and spiritual medicine. The analogy itself was old, but the hospital setting for it was novel. Remarkably, Nilus used this setting already at the end of the fourth century, when Christian charitable institutions such as hospitals had been known for only a few decades¹⁹. Even such references as this fail, however, to solve the problem of how to judge proportions; fail to shed even indirect light on the mass of small, usually provincial, establishments about which we know nothing beyond the fact of their foundation.

IV

With this sketch of some common ground and this foretaste of controversy in mind, we can turn to considering the optimists' case in more detail. For the optimists of course have a solution to the problem of proportion. They extrapolate from the best hospitals that we know about – measured in terms of recorded medical sophistication – to the more obscure, and postulate that the best documented reveal, if not all the details, then the 'essence' of the more obscure ones. The argument relates only to 'true hospitals', which by definition were concerned with the cure or rehabilitation of the sick, not to the whole spectrum of Byzantine philanthropic foundations. But it makes a strong claim none the less – that houses for the sick mostly had doctors on the staffs and were organized in a highly sophisticated way.

The optimistic case rests above all on one institution, which no study of Byzantine hospitals can ignore and to which we must now devote some attention²⁰. In 1136, the Emperor John II Comnenus and his wife Irene

¹⁹ Nilus of Ancyra, *Letter* III.33, in Migne, 1857-1866, vol. 79, col. 397; see also, in the same vein, *Letter* II.110, in Migne, 1857-1866, vol. 79, col. 248; Miller, 1997, pp. 22-23, 69; Nutton, 1984, pp. 9-10; Temkin, 1991, pp. 176-177; Horden, 2004.

²⁰ For what follows the principal source is Gautier, 1974, with introduction, full references to earlier literature, text, and French translation. The section of concern here, on the hospital, is pp. 82/83-112/113, which is the basis of Miller, 1997, ch. 2 and *passim*. The *typikon* has been translated into English (Thomas and Constantinides Hero, 2000). The *Pantokrator typikon* is no. 28 and the section on the hospital begins at cl. 36. All subsequent references to the *Pantokrator* and other *typika* are to these Dumbarton Oaks translations, by text number and clause. The translation gives details of original-text editions as well as commentary and recent bibliography.

established in Constantinople, jointly, though perhaps on Irene's initiative, the monastery of Christ the Saviour, Pantokrator (Ruler of All). It was built on a prominent hill in the north-central part of the City, overlooking the Golden Horn, and incorporated three already existing churches. Transformed into a mosque after the Ottoman conquest, the three churches still stand, extremely dilapidated, as the Zeyrek Camii. Somewhere in an area of 250 square metres stretching broadly northwards from the churches (now rendered inaccessible to archaeology by the bulldozer and the developer) lay those establishments in which any historian of medieval medicine and charity is bound to take an interest. For information about them we have to turn to the monastery's *typikon* or foundation charter.

The obvious disadvantage of using this extensive text is that it tells us how things were intended to be, not how they were. None the less we must start by looking at the medical aspirations expressed. The Pantokrator was to be not only a monastery but a hospital and philanthropic centre. Its *xenon* was intended to provide for the sick and injured, both men and women; to offer them clean beds, adequate food, round-the-clock nursing, and regular medical attention. There were to be 50 beds in normal use, and these (contrary to what medieval hospital historians would expect) were clearly for only one patient each. The beds were grouped in five *ordinoi*, which I do not think we should necessarily envisage as separate wards (although I would prefer not to commit myself to a definite view of the hospital's layout).

In the first section were 10 beds for men suffering from wounds or fractures: in effect the surgical area, with its own hearth. Three other *ordinoi*, for men, shared a (probably central) hearth. The first had eight beds and dealt with eye or intestinal or other acute disorders. The other two, of ten beds each, were also for men – suffering from presumably chronic diseases. The last of the five *ordinoi* had twelve beds and its own hearth, and it was reserved for women.

Fifty beds in all for fifty patients. But there was to be an extra bed in each *ordinos* in case of unusual demand, whether in terms of numbers or the seriousness of a particular case. Also, there were six beds with mattresses that had a hole in for those who could not move or were taking purgatives.

A grand total, then, of 61 beds. The hospital was not the only welfare institution planned for the Pantokrator complex. There was a *gerokomeion* (old people's home) for 24 men, both the aged and those so debilitated that they could not look after themselves. If one of these became seriously ill, he might be transferred to the hospital for the duration of his illness. The second institution ancillary to the hospital was to be a small one for those afflicted with the *hiera nosos* (sacred disease) – leprosy, rather than epilepsy as has

sometimes been supposed²¹. This was separate from the main complex, partly so that patients in the hospital should not be infected. We are told virtually nothing about its organization, however. The number of lepers that it was to contain is not stipulated. The third ancillary institution was in effect an outpatient clinic or dispensary, and again little can be said other than that anyone could, it seems, call in for advice or treatment; apart from indicating its staff, the *typikon* takes its workings very much for granted.

After a survey of the principal institutions, I turn to their personnel. The sick were, by the standards of any age, to be looked after impressively well – and not only in terms of material comfort. Each of the five sections of the hospital had two *iatroi*. In the sections for men, these *iatroi* were assisted by three *hypourgoi embathmoi* (titular assistants), two *perissoi* (lesser or supernumerary) *hypourgoi* and two *hyperetai* (or servitors). The two physicians of the women's section were aided by a *iatraina* or female physician (who was, incidentally, paid only a half of her male colleagues' salary). And, taking the women's ward overall, we can see that twelve women were to be cared for by twelve medical or nursing functionaries. In sum, fifty patients were to enjoy the direct attention of over sixty doctors and subordinates. But there was also the outpatient clinic, served by four doctors, two of them surgeons, and these four had eight assistants. Among the *iatroi* there was a hierarchy of genuinely Byzantine sophistication, up which it was possible to work one's way.

Two doctors enjoyed the distinctive title of *protomenutes* ('chief physician' or 'leading diagnostician'; not 'first of the month' as it has nonsensically been translated up to now)²². These were not the only physicians involved in the Pantokrator complex. The *typikon* is clear that there were to be two *primmikerioi* (a Byzantine term for various kinds of high-ranking official)²³ who outranked even the *protomenutai*. In alternating month-long shifts, they were to monitor daily the progress and hear the complaints of each inpatient, and they also oversaw the treatment of serious cases in the outpatient clinic. The total numbers just given create a slightly deceptive impression, however. The doctors in each *ordinos* also worked monthly shifts, so that there was only one physician (two in the outpatient section) on duty at any one time. When on duty the doctors were to make their rounds once a day (twice daily from May to September, with the second visit in the evening). The rest of the time, including the night shift, the *hypourgoi* were in charge.

²¹ Philipsborn, 1963.

²² Criscuolo, 1996, p. 114; Gautier, 1974, p. 85, line 945, reads 'protomenites'.

²³ Bury, 1911, p. 122; Oikonomides, 1972.

Beyond all these medical attendants, mention must be allowed to a variety of other staff – a *didaskalos* hired to instruct the ‘children of doctors’ (which just means ‘doctors’²⁴), a surgeon specializing in hernias, four pharmacists, and so on. Add all these and the doctors together and the figure is of the order of 100 – a very high staff-patient ratio indeed.

Altogether the Pantokrator *typikon* is an astonishing document, and the aspect of it that is most astonishing is the number of doctors envisaged as attached to the hospital that it describes. Those doctors are the sticking point of all attempts to interpret this foundation. If there were not so many *iatroi*, we would not, I think, find the other provisions of the imperial couple so striking; we could in effect dismiss the hospital as really a heavily-staffed nursing home. The senior personnel, moreover, are to be no workaday physicians. The founders expect that they might be tempted outside the city to attend members of the ruling elite, and even the emperor’s relatives. ‘In general we forbid any of the doctors to carry out additional work’²⁵. Modern commentators have assumed that this restriction should apply only during the months when the doctors are on duty because their annual stipend from the hospital was scarcely a living wage and would have had to be complemented by the profits of six months’ private practice²⁶. But that is not what the text actually stipulates. So it may be that the emperor was planning to employ only those physicians who had already made their fortunes and could afford to demonstrate their philanthropy in his, or his successors’, service. On either interpretation the leading physicians in attendance on the Pantokrator patients were to be distinguished as well as plentiful.

✓

Why? Before we look, as others have done, to the wider context for answer, it is important for a moment to try to analyse the text on its own terms. To some extent this helps us to understand the founders’ train of thought as they planned their monastic establishment²⁷. For example: fifty monks were to perform the liturgy; fifty clergy were allocated to the Church of the Virgin; fifty sick people were to be sheltered in the hospital; and the core staff for the five wards numbers – slightly unfortunately for the tidy-

²⁴ Kazhdan, 1984, pp. 46, 48.

²⁵ Thomas and Constantinides Hero, 2000, no. 28, cl. 54.

²⁶ Miller, 1997, p. xiii; Thomas and Constantinides Hero, 2000, no. 28, p. 734.

²⁷ Congdon, 1996; Horden, 2005.

mindful historian – forty-nine (although of course not all were on duty at any one time)²⁸. The broad similarity in strength of the monks, clergy, patients, and medical carers reflects their common task as intercessors for the emperor and his family. The *typikon* is, it should be stressed, essentially a liturgical document and its medical provisions should all be read in that light. The sick and leprous are to be looked after so as to encourage them to intercede on the emperor's behalf with all the more fervour. The physicians are at all times to act in the knowledge that they must render account to Christ the Pantokrator for their actions. 'For our Master accepts as his own what is done for each of the least of the brothers [as in Matthew XXV.40] and measures out rewards in proportion to our good deeds'²⁹.

The theological approach to the *typikon* will take us only part of the way towards an explanation of its contents. It would apply to all monastic hospitals of the period. And yet the level of medical provision in the main Pantokrator hospital – two doctors and several attendants per ward – is unparalleled in the explicit documentation now available to us. Admittedly the pool of evidence is not large. The most detailed information usually comes from monastic *typika*, even though hospitals attached to secular churches may have been the more common. So our archive is unbalanced. Still, it is all we have to go on and must be used. There survive some 60 *typika* and similar texts recording monastic foundations. Only thirty or so of these include any reference to charity and health care³⁰. A number of founders planned that their monasteries should offer food and lodging to the poor or to wayfarers. Others looked primarily to the needs of sick monks. Yet, apart from the Pantokrator, only three other documented religious houses were to maintain a public hospital (as a distinct from an infirmary for monks) with designated medical personnel³¹.

None of these is quite comparable to the Pantokrator in scale or staff. The mid-twelfth-century *typikon* of the monastery of the Mother of God *Kosmosoteira*, founded by John II's younger brother Isaac, provides for 36 elderly patients treated by just one doctor³². The charter of San Salvatore in Norman Messina – a royal foundation but inaugurated by Greek monks – refers to both a hospital and a hospice but no mention is made of doctors³³. Only the

²⁸ Thomas and Constantinides Hero, 2000, no. 28, cls 19, 30.

²⁹ Ibid., no. 28, cl. 42.

³⁰ Volk, 1983.

³¹ Kislinger, 1987, n. 44.

³² Thomas and Constantinides Hero, 2000, no. 29, cl. 70.

³³ Ibid., no. 26, cl. 8.

thirteenth-century Lips convent in Constantinople approaches the Pantokrator in intensity of medicalisation. There was to be a twelve-bed hospital for women staffed by three doctors, an assistant, a nurse, a pharmacist, two apothecaries, six attendants, and a bloodletter³⁴. That outperforms the Pantokrator women's ward in staff-patient ratio. But it is an isolated analogue (and imitation?) from a later age. In neither the Lips nor the Pantokrator *typikon* do the founders betray any hint that they are requesting novelty. Yet the very fact that they felt the need to list personnel in detail, while others were content with generalities and presumably left particular arrangements to the abbot or hospital director, might suggest that the levels of staffing envisaged in the two hospitals were unusual enough to require specification. In the case of the Pantokrator there is an additional telling discrepancy: between the precision with which the hospital's staff is recorded and the much briefer and generally less helpful references to the other parts of the philanthropic complex, such as the leprosarium³⁵ and the outpatient facility.

Comparison with other documented hospitals of the period thus only strengthens our intuition that the Pantokrator *typikon* is an extraordinary document for its time. Let us try a different approach to the question of why this hospital was so medicalised: an approach from the history of medicine rather than that of hospitals. One facet of the context within which the *typikon* might become intelligible is that 'lordship over the professional classes' to which Paul Magdalino has referred in his study of the Empire in the twelfth century³⁶. He is discussing the nobility as a whole, but the phenomenon therefore embraces the emperor's lordship as well. And its scope might surely be extended from the imperial bureaucracy, the armed forces, and the Church (all of which Magadalino mentions) to the 'professional class' of doctors. The emperor, we may conjecture, is setting up involvement with the Pantokrator hospital as one major avenue to his continued patronage.

In taking this interest in medicine he was responding to and enhancing the relatively new status and prominence enjoyed by certain doctors in Comnenian court and aristocratic circles. By the beginning of the twelfth century, Alexander Khazdan has suggested³⁷, doctors become quite frequent recipients of the letters of which texts survive (much more so than can be accounted for by positing a change in epistolographic fashion). The doctors

³⁴ *Ibid.*, no. 39, cls. 50, 51.

³⁵ Kislinger, 1992.

³⁶ Magdalino, 1993, p. 220.

³⁷ Khazdan, 1984, pp. 46, 48; see also Timplallexi, 2002.

are very much part of the court's intellectual and social world. One Comnenian emperor, Manuel I, was himself skilled in medicine. A physician is even named in the list of those to be commemorated in the Pantokrator Church: Nicetas 'the first', presumably another leading physician or *protomenutes*. Theodore Prodromus, John II's court poet, satirised the bunglers, including a dentist who broke his aching tooth with an instrument that would have done justice to an elephant. But he also paid tribute to a few men of outstanding skill, among them Nicholas Kallikles, physician to Alexius I. We can thus discern in the 'high profile' achieved by a few doctors at least one reason why they, and some of their colleagues, should have been seen as a necessary adornment of the Pantokrator complex³⁸.

Thus far, intentions. Monastic typika are no more than statements of intent. They do not seem to have had a set form. And that is indicative of their essential quality: unlike a *diatheke* (will) they were not binding; they exerted moral rather than legal force on those whom they favoured³⁹. Even an imperial *typikon* may be evidence more of aspiration than of achievement. Some of the imperial couple's stipulations – not to do with the hospital – were demonstrably being ignored within a few years of the monastery's foundation⁴⁰. The text was drawn up in 1136. John II was away from the city on campaign for almost all his remaining years, until he was killed in a hunting accident in Cilicia in 1143⁴¹. That is presumably why the only evidence we have that describes the Pantokrator's charitable facilities gives much of the credit for them to the Empress Irene. These few texts make it clear that some kind of impressive medical institution (a *iatreion*, so they call it) was actually built⁴². An anonymous poem may even attest a Pantokrator hospital patient – the emperor's daughter-in-law, no less⁴³. But none of this material fully confirms the scale of medical provision foreseen in the *typikon*⁴⁴. It simply adds the Pantokrator to the ranks of 'doctored' hospitals that are attested in general references in texts of the period. Nor is there any evidence that the

³⁸ Kazhdan, 1984.

³⁹ Galatariotou, 1987, pp. 83, 88; Angold, 1993.

⁴⁰ Jeffreys and Jeffreys, 1994.

⁴¹ Angold, 2002, pp. 187–189.

⁴² Volk, 1983, pp. 189–192; Müller, 1997, pp. xix–xxi.

⁴³ Jeffreys and Jeffreys, 1994, p. 198; Müller, 1997, p. xxi.

⁴⁴ Pace Müller, 1997, p. xix, the fact that the Pantokrator hospital was praised in an encomiastic biography of its empress-founder as 'almost' or 'virtually' (*schodon*) the most outstanding hospital of its time and of preceding times, does not prove that other large hospitals were even more highly medicalised. Surely no encomium would have admitted such precisely qualified praise.

hospital or *iatreion* lasted for very long, perhaps because such a large and complex staff proved impossible to sustain. Whereas the monastery as a whole endured as long as the Byzantine Empire itself, there is no evidence that medicine was practised there after about 1150. That is why Ewald Kislinger has described this hospital as 'ein trügerisches Ideal'⁴⁵.

VI

If the Pantokrator was a hospital without much of a future (an assertion which not even the optimists have contested) what of its past? Into what tradition can it be inserted so as to make it more comprehensible? One tradition, which the pessimists prefer, is the Islamic. If the Pantokrator hospital was unique to Byzantium perhaps it reflected Islamic influence. The Islamic hospital, as distinct from the Christian hospital within the 'land of Islam', was a relatively new creation in the time of John II Comnenus. Only ten or eleven hospital foundations are attested before the year 1000 CE. Seven of them were in Baghdad, three in Iran, one (perhaps) in old Cairo. Only from the eleventh century onwards did the Islamic 'hospital idea' spread to Mesopotamia, Syria and westwards around the Mediterranean⁴⁶. These were highly elaborate foundations, staffed by physicians, sometimes associated with medical education, prominent in the medical scholarship of their time – conforming in fact very nicely to the optimistic image of the Byzantine hospital. According to Ibn Jubayr, who undertook the *haji* from Andalusia in the late twelfth century, the Adudi *bimaristan* (house of the sick) in Baghdad was like a large palace and the chief physicians examined the patients twice a week. He was similarly complimentary about the Nuri hospital in Damascus and another one in Cairo that had a separate women's section. He also remarked that he had seen imitations of such hospitals in the Crusader states, through which he travelled on his return journey⁴⁷. Were the Byzantine Greeks just as imitative? Is this a key to understanding the Pantokrator? The lines of cultural communication were certainly open. There was a sizeable Muslim mercantile presence in Constantinople – witness the mosque opened in the early eleventh century and reportedly still crowded with worshippers at the end of the twelfth⁴⁸.

⁴⁵ Kislinger, 1987.

⁴⁶ Conrad, unpublished; Horden 2005a, pp. 369-70.

⁴⁷ Broadhurst, 1952, pp. 43-4, 234-5, 296.

⁴⁸ Note also the doctor Abram 'the Saracen', perhaps active in a Constantinopolitan hospital, referred to below, p. 61. Reinert, 1998; Kazhdan and Wharton Epstein, 1985, p. 175.

The Islamic perspective may be important for understanding the degree of medicalisation that the Pantokrator evinced. But there is no need to seek precedents for other aspects of the foundation outside the Empire. Separate wards, *leprosaria*, *gerokomeia*, the presence of different grades of doctors and surgeons, distributions to the transient poor at the monastery gate, clean bedding, large numbers of beds – all can be documented for Byzantium, many of them in imperial foundations. This is what the ‘optimistic’ case builds on.

[T]he Pantokrator Xenon operated fully within the tradition of Constantinopolitan hospitals [...] In the complex rules governing the Pantokrator Xenon, the typikon does not employ a single novel term or introduce a single new feature of hospital organization. Every term the typikon has selected, every title ascribed to members of the medical staff, and every detail of daily regime can be documented in sources describing earlier Byzantine xenones⁴⁹.

‘Every’ term, detail, or title: that may, perhaps, be asserting a little too much. The ‘pessimist’ should, however, readily concede that there is no shortage of possible precedents for details of the Pantokrator. There had after all been large and lavish philanthropic complexes in Byzantium since the ‘Basileias’ of Caesarea in the later fourth century⁵⁰. One problem is that we seldom find evidence of a sufficient number of them together in any one establishment for us to conclude that the establishment was like the Pantokrator and could have served as a model for it. Another problem is that the evidence of hospitals with some features analogous to those of the Pantokrator is widely scattered across time and space. For example: the hospitals of late antique Hermopolis in Egypt were staffed by *hypourgoi*, as in the Pantokrator⁵¹. Again, according to a seventh-century collection of miracle stories, the Sampson *xenon* in Constantinople had surgical facilities and an eye clinic (much as the Pantokrator would some four centuries later), and the Christodotes hospital was staffed by *archiatroi* and (once more) *hypourgoi*⁵². We shall come back to the *archiatroi* below. Here it can be noted that while, in

⁴⁹ Miller, 1997, p. xxii.

⁵⁰ For more immediate precedents see Magdalino, 1993, pp. 115-117; also Patlagean, 1987; Angold, 1995, pp. 308-310.

⁵¹ Van Minnen, 1995, p. 164.

⁵² Crisafulli and Nesbit, 1997, miracles 21, 22.

Modern Greek, *hypourgos* means ‘cabinet minister’, in ancient and late antique usage it is simply ‘servant’ or ‘assistant’. It had no specifically medical connotations and tells us nothing about hospital organisation. As for those surgical and ophthalmic wards, it has never been contested that a few hospitals (mostly in the capital) were medically specialised and sophisticated. The question that remains is whether these diverse references, and others that we shall encounter below, can be spliced together into a tradition as solid and as relatively unchanging as the optimists would prefer.

If they cannot, then not only this facet of the optimistic argument but a subordinate one must also be called into question. It concerns Byzantine hospitals as centres of medical excellence in a wider sense.

VII

Great claims have been made:

By the eleventh and twelfth centuries they [Byzantine hospitals] had become the *principal theatres of the Byzantine medical profession*, providing both *specialized treatment* to hospital patients and walk-in clinical services to the general population. Moreover, by that time these xenones were also providing *instruction in the theory and practice of medicine to those who wished to become physicians*⁵³. [italics added]

An ‘optimistic’ judgement indeed. Let us first question the ‘specialized treatment’ attributed to these hospitals. Apart from the brief descriptions in *typika* and other texts already considered, we have only the evidence of medical manuscripts. If the claim just quoted has any validity, there ought to be codicological evidence to support it.

David Bennett has recently surveyed the manuscripts and texts relevant to Byzantine hospitals, in an as yet unpublished discussion that supersedes all others in both scope and thoroughness⁵⁴. I am very grateful to him for permission to summarise and disseminate his main findings.

First, the texts in question. There are five or six of these (depending on how one counts a text that has at some point been divided into two by its copyists).

A. ‘Prescriptions and classifications [of fever?] of the great hospitals, of the kind that doctors prescribe from experience for healing, especially for patients in the hospitals.’ Such is the title of one version of a compilation of treatments (parts of which, including the heading, variously appear in at least

⁵³ Miller, 1997, p. xi.

⁵⁴ Bennett, 2003. Cfr. also Miller, 1997, ch. 9.

four other manuscripts). The compilation is divided under sixteen very miscellaneous headings and dates from (very approximately) 1050. It is found in the fourteenth-century Vatican MS. gr. 292. Three other manuscripts (B, D, and E below) also preserve these 'prescriptions and classifications' in varying degrees but sometimes without the titular ascription to hospitals.

B. Vat. gr. 299 is an anthology of medical writings dating from the later fourteenth-century. It contains, within a long concluding medical compilation (c. 180,000 words), five remedies ascribed to three named physicians of the Mangana hospital in Constantinople, founded in the mid-eleventh century⁵⁵, and one other remedy ascribed to a named, but otherwise unknown doctor, for whom no institutional affiliation is given. The named hospital physicians are: (a) Stephanos, *archiatros* and *aktuarios*; (b) Abram 'the Saracen', *aktuarios* and *basilikos archiatros*; and (c) Theodore, *iatros* at the Mangana. (We shall have to come back to the possible significance of the title *archiatros*.) There are six other passages ascribed only to the Mangana hospital (with no physician named). These are dispersed over about a half of the compilation but form only a tiny proportion of the whole. A further six passages in the same remedy collection correspond to parts of the collection in Vat. gr. 292 (A, above) in which they are derived from 'the great hospitals'.

C. The fifteenth-century Paris MS. gr. 2194 includes six remedies ascribed to Michael, *aktuarios* of the otherwise undocumented Mauraganos hospital (perhaps a mirage: Mauraganos could be the man's surname). These six remedies are found in a text headed, in a hand that differs from that of the copyist, 'dynameron xenonikon dia peiras' ('on the potency of hospital prescriptions found by experience'). (That text is succeeded by another similar brief collection entitled, even more simply, 'xenonika'.) Apparently, none of the hospital-related material found here survives in any other manuscript.

D. The Vienna MS. med. gr. 48, from the late thirteenth century, has a text attributed in its title to Romanos, *koubouklesios* of the Great Church (Hagia Sophia) and *protomenutes* of the imperial Myrelaion Hospital (in an anticipation of the Pantokrator to add to those mentioned earlier). Fragments of this text survive in only two other manuscripts. The title *koubouklesios* disappeared after the tenth century; the Myrelaion hospital was re-founded by the Emperor Romanus Lecapenus in the mid-tenth century⁵⁶; Romanos the *koubouklesios* cannot be dated any more precisely.

⁵⁵ Miller, 1997, pp. 149-50; Lemerle, 1977, pp. 273-283.

⁵⁶ Miller, 1997, pp. 113-14.

E. Romanos's text is actually only the first half of a much longer work. Its second half survives separately under a different author's name, as the *Apothepautike* of one Theophilos, in which the material is said to be drawn from hospital books ('*xenonikon biblon*'). (*Apothepautike* is an odd term: its sense is clear enough but its exact translation hard).

Both these two parts – Romanos's and Theophilos's – contain passages similar to those of Vat. gr. 292 (A, above) where the hospital treatments are attributed to the Mangana hospital, but here (in D and E) the hospital ascription is lacking.

F. MS Laur. 7. 19, of the thirteenth to fourteenth centuries, is a collection mainly of theological works. Like nine other manuscripts, it contains a text (mostly but not always the same text) with the title: 'Therapeutic medicines set in order according to the defined procedure of the *xenon*'. This is a short piece of some 2,750 words, which in none of its versions lives up to the orderliness implied in its title. It includes abbreviated versions of remedies recorded in four other manuscripts under the name of an otherwise unknown John *archiatros*, in one other manuscript under that of Galen, and in a sixth, under both names.

Overall, then, five or six texts, known to us from eighteen manuscripts, have hospital connections made explicit in their titles or their contents. To them can be added two manuscripts (Paris gr. 2315 and 2510) that were copied for hospitals, a manuscript (Scorialensis Y. III. 14) dedicated to a hospital by George, its scribe (all three of these from the fourteenth century), and perhaps three or four others that may at some stage have been owned by a hospital, including such luxury products as the 'Niketas codex' and the 'Vienna Dioscorides'⁵⁷.

These figures should set against the estimated aggregate of 2,200 medical manuscripts surviving in European libraries⁵⁸. The numbers of hospital manuscripts could of course be inflated a little. Many that once existed will have succumbed to ordinary wear and tear, let alone the Fourth Crusade or the Ottoman onslaught. As the examples above show, hospital material can survive without its title. And more hospital texts doubtless remain to be discovered, hiding behind misleading or inadequate catalogue entries. Yet there are limits to the number of hypothetical manuscripts that can plausibly be introduced. For, as the above examples also show, material can gain as well as lose its *xenon* ascription in the unpredictable course of copying and re-copying.

⁵⁷ Bennett, 2003, Appendix V, pp. 440-441.

⁵⁸ Touwaide, 1992.

However we exercise the imagination, then, the number of hospital manuscripts that were produced in Byzantium must remain a very small proportion – a fraction of one per cent – of the entirety of medical writing. We are dealing with a tiny and unique corpus, as far as the Byzantine Middle Ages are concerned⁵⁹.

Two points of a more positive kind ought to be made none the less. The first is the sheer longevity of the tradition of hospital writing. What survive are mostly later medieval copies of ninth-to-eleventh-century texts. And some of the *xenon* remedies continued to be copied in the sixteenth century. Given the cost of the materials and the skills required for the making of the least pretentious Greek codex, this longevity is a tribute to the perceived value of *xenon* remedies. (That is especially true of those in Vat. gr. 292, which recur in several other contexts.)

The second point is an amplification of that. It relates to the considerable stature that must have attached to *xenon* remedies and treatments as well as *xenon* doctors (with or without some grandiose title). This is a medical world in which texts mutate with each copying, and bits of them detach themselves and (as it were) wander among the stemmata. A title, if there is one, becomes an assertion of value rather than a certificate of authenticity. Witness the remedies which are now given to a hospital, now to John *archiatros*, now to Galen. What matters in the present context is not which (if any) of those ascriptions is the right one. Nor is it whether a given remedy generally originated, or was used, in a hospital. What is significant, rather, is that, at some stage in the remedy's manuscript career, someone thought that the hospital ascription was an appropriate measure of value. A hospital remedy is as good – so the manuscripts imply – as one supplied by Galen. A *xenon archiatros* is as good an authority as any of the other possible names that might be attached to a treatment. And this is so even in the later medieval period when there were fewer Byzantine hospitals and it is far from clear that even the 'great ones' continued to function after the Latin conquest ended⁶⁰. By the same token, hospital texts – when they are labelled as such – keep very good company in the medical anthologies that have preserved them. They can be found associated with all the 'big names' from Hippocrates to John 'Aktuarios', one of the last of the stellar Byzantine physicians. This is perhaps the strongest part of the optimists' case.

⁵⁹ Bennett, 2003, p. 441.

⁶⁰ Miller, 1997, pp. xvi-xviii; Miller, 1999. Here Miller produces arresting new evidence of doctors active in late Byzantine hospitals in the capital.

On the other hand, in qualification, we should ask what sort of medicine seems to have constituted the tradition. First, there is nothing distinctive about it. There is no generic difference between remedies and treatments ascribed to hospitals in the manuscripts and those which are either anonymous or appear under an illustrious name. That is one reason why a remedy can gain as well as lose the hospital ascription as copies of it multiply.

Hospital medicine is not only indistinguishable from that of 'mainstream' remedy collections. It is, ipso facto, what might be called 'low-level' medicine – at least as it presents itself to us in the texts. This is not medicine underpinned by philosophy. There is virtually no humoral theory, no semiology, little quantification of ingredients. It resembles the written medicine characteristic of the early Middle Ages in Europe: the doctor's experience had to supply the gaps and elisions in the manuscript record. One might be reminded by it of certain treatments or techniques; one could not learn these from scratch simply by reading such unhelpful stuff. There is a stark contrast between this material and the syllabus-based, theoretically articulate, educationally-orientated university medicine of the high and later Middle Ages in Europe⁶¹.

VIII

This contrast must have implications for the optimistic thesis that Byzantine hospitals were centres of medical excellence in the practice and teaching of medicine and in the copying and accumulating of medical texts. Miller has contended (a) that from the sixth century onwards the formerly city-funded *archiatroi* ('public physicians' originally) were transferred to *xenon* service by the Emperor Justinian (or transferred themselves); (b) that from then on hospitals developed as centres of medical training; and (c) accordingly, that scriptoria and libraries were regularly attached to them⁶².

This is surely extreme optimism⁶³. First, it is inherently implausible that civic physicians could be transferred to hospital service and would obediently stay there – for centuries. The administrative and financial arrangements that might have made such reorganisation effective are wholly obscure and probably could never have been implemented. The legislation in question does not survive, most likely because it was never enacted. Moreover there is some specific evidence that no great transformation in the position of *archiatroi* occurred during Justinian's reign. The will of an *archiatros* of Antinoöpolis in

⁶¹ Siraisi, 1990, ch. 3, is a convenient summary.

⁶² Miller, 1997, pp. xxii-v, 48-9; Miller, 1999, pp. 328-330.

⁶³ Bennett, 2003, pp. 66-72.

Egypt datable to 570 shows him as having been in charge of a hospital all his life, like his father (also an *archiatros*) before him. Yet he is still also receiving a sizeable annual salary as a public physician. So not only has this public physician *not* been deprived of his civic livelihood, even after Justinian's death five years previously: his father's association with the hospital takes us some way back into that emperor's reign, perhaps as much as four decades. That does not leave much time for the supposed transfer from civic to hospital duties⁶⁴. Agreed, there was no incompatibility between service as a public physician and involvement with a hospital. Equally, there was no necessary association between the two activities.

The text which has been taken as proxy evidence of the supposed redeployment of the *archiatroi* is drawn from a venomous indictment of Justinian's regime (unpublishable during the emperor's lifetime) by his erstwhile panegyrist Procopius. The details are unverifiable and in any case refer to the withdrawal of public subsidy from teachers and *iatroi*. There is no mention of hospital service⁶⁵. That can be inferred – somewhat boldly – only from the conjunction of *archiatroi* and hospitals in later evidence. But such a conjunction, though frequent, and represented in the texts noted above, does not inevitably imply a 'system'⁶⁶, and it is far from exclusive⁶⁷. Moreover, there are no *archiatroi* mentioned in the Pantokrator *typikon*. The theory that they were at the centre of hospital life thus has to be modified so as to allow their title to be replaced by that of *protomenutes*. But if titles can change in that way, and if other titles in the florid vocabulary of Byzantine officialdom also changed meaning over time, we cannot be sure that *archiatros* in the fourteenth century meant the same as it did in the twelfth or the seventh⁶⁸. The circumstantial evidence – the way it is used in the surviving texts – suggests that the term lost its original civic associations and quickly became an honorific

⁶⁴ Van Minnen, 1995, pp. 164–5.

⁶⁵ Procopius, *Secret History* (*Anecdota*), XXVI.5–8, ed. and trans. Dewing, 1935, pp. 302–303, with Nutton, 1986, p. 219; Bennett, 2003, pp. 67–68. See also Allan, 1990, p. 457.

⁶⁶ Miller, 1990, p. 115, cites an anecdote in the seventh-century (d. circa 701) writer Anastasius of Sinai, about 'a certain *archiatros*' of the late sixth century, who had the oversight of a particular hospital – as if this showed that all hospitals were thus superintended: Anastasius, *Homilia in Sextum Psalmum*, in Migne, 1857–1866, vol. 89, cols 1112–1113.

⁶⁷ Müller, 1997, p. 174, for example recruits the medical writer John 'the Archiatros' (about whose career virtually nothing is known) to the ranks of hospital physicians, first on the circular argument that *archiatroi* are always to be found in hospital settings, and second, on the tenuous ground that some of John's medical writing was later incorporated in a hospital manuscript.

⁶⁸ Nutton, 1977, pp. 210–12.

equivalent of the modern 'consultant': a learned expert but not by any means necessarily a hospital physician.

The evidence for hospital schools, scriptoria and libraries is even more fragile. The only attested hospital medical school is that of the Pantokrator, and we know nothing more about it than that it was proposed in the *typikon*. There is a hitherto unnoticed reference in MS Vat. gr. 299, f. 422v, to instruction in phlebotomy within a hospital⁶⁹. But that is best seen as evidence of exactly the kind of clinical training that we might expect. It is hardly a sign of institutionalised medical education. Finally, John Argyropoulos, one of the great figures of late Byzantine medicine, is depicted in a miniature as giving a lecture in front of a *xenon* and is recorded as having taught somewhere within the monastery to which that *xenon* was attached⁷⁰.

And that is all that can be said. Of the libraries and scriptoria there is no trace beyond the few manuscripts reviewed above, and the latter bespeak only the ascription of remedies to hospitals and the presence of medical texts within them. Again there is no sign of the firm institutional continuity that the optimists discern.

The most telling argument against the optimistic view may, however, be the 'low level' of the contents of these hospital texts. A tradition in which the best doctors taught in hospitals and built up medical libraries surely ought to have generated a literature that was durable enough to survive *with its provenance clear from its texts*, and that resembles the stable, theoretically-informed university texts of high medieval Europe far more than do the disorderly, mutable, a-theoretical materials that have come down to us. These actually have far more of an *early* medieval appearance, so little do they attest a strong educational tradition.

IX

I have sought to assess the degree to which Byzantine hospitals were medicalised by trying to inject a sense of proportion into the continuing debate between the optimists and the pessimists. How many hospitals are known to have had doctors? What is the likely ratio of that figure to the total number of therapeutic institutions documented? How far can we extrapolate from the details of the Pantokrator? What fraction of surviving medical manuscripts can be associated with hospitals? How do we square the paucity of these manuscripts with the status that some of them accord to hospital remedies?

⁶⁹ Bennett, 2003, p. 84.

⁷⁰ Živojinović, 1975.