MESSAGE FROM THE PRESIDENT
by Charles Stegeman

It is with great pleasure that I introduce AVISTA FORUM's new Editorial Board: Michael T. Davis, Editor-in-Chief; Article Review Editors Pamela O. Long (technology and science) and Carl F. Barnes, Jr. (art and architecture); George Ovitt, Notes and Queries Editor; Carol L. Neuman de Vegvar, News, Papers, and Activities Editor. We look forward to their inspired and capable leadership of AVISTA FORUM.

I would also like to use this opportunity to thank Pamela Long on behalf of the entire membership for her superb work in editing the first four issues by herself. In spite of the gargantuan proportions of the task Pam was able to guide this newsletter from its fledgling first issue to the mature level of content we have grown to value. Pam has fortunately overseen this present issue to ensure continuity and to give Michael Davis an interim period for defining his aspirations for the newsletter in a harmonious manner.

We need to do one more thing besides wish the Editorial Board well. We must participate in Avista's Forum. The numerous messages of appreciation for the newsletter's quality, and the interest that its rubrics and contributions have stirred in our readers, speak clearly to its perceived vitality. But we need more members to participate actively by contributing to the newsletter. Remember that AVISTA FORUM is an informal forum. It would accept but does not expect finished articles. Sometimes a paragraph is enough to stir interest and provoke a response. Only if the majority of our membership is active in this manner will we have fulfilled our promise.

There is no doubt in my mind that this goal is eminently attainable, as there is no doubt in my mind that it is eminently desirable to attain this goal. If we all contribute something regularly albeit not in every issue, we will, besides living up to our potential, be assisting our Editorial Board in their pursuit of excellence. So

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Call For Papers

AVISTA Sessions at Kalamazoo, 3–6 May 1990

Transportation as Depicted in Medieval Art and Literature

25th International Congress on Medieval Studies
The Medieval Institute,
Western Michigan University,
Kalamazoo, Michigan

Barbara M. Kreutz, Chair

Possible sub-topics:
1) The credibility of artistic depictions
2) Transport-logistics in military and naval campaigns: the interpretation of chronicle evidence
3) Frequent flyers: miraculous journeys or the translatio of holy relics
4) Travel on the pilgrimage routes
5) Delivering the goods: merchants & merchandise

Talks are limited to 20 minutes. Send one-page abstracts, indicating your audio-visual needs, by September 15, 1989, to Dr. Barbara M. Kreutz, 238 North Ithan Avenue, Villanova, PA 19085 (USA). Tel. (215) 527-2564.

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MESSAGE FROM THE PRESIDENT

continued from page 1

please send brief reviews of articles which caught your attention to either Pamela Long or to Carl Barnes; send Notes to published queries or send a query of your own to George Ovitt; send a news item from your specialized field to Carol Neuman de Vegvar if you feel that it may be of interest to a wider public. In this way AVISTA FORUM will certainly grow as a vital and cross-disciplinary instrument in our constant search for broader insights.

A final request: we still need more members to offset the steadily increasing costs of publishing AVISTA FORUM. Without asking you to invest much time in a recruiting effort, it might be a minor effort for you to ask the library of your institution to subscribe. I suspect that a request to the acquisition librarian when you are next in the library would suffice. Keep it in mind. It will make a big difference at this end.

May I end by thanking the Editorial Board members for having accepted to serve and by thanking you, the members, for contributing to AVISTA FORUM. AVISTA has survived its beginnings well. We are entering a period of growth towards a rich maturity.

Program, AVISTA Sessions, Kalamazoo, 4–7 May, 1989

Villard de Honnecourt: the Artist and His Drawings
24th International Congress on Medieval Studies
The Medieval Institute, Western Michigan University, Kalamazoo, Michigan

Carl F. Barnes, Jr., Chairman

Session I

Roland Bechmann
(Architect and Historian, Paris, France)
Interprétation des figures de 'li ars de iometrie' du manuscrit de Villard de Honnecourt

Mark H. Infusino
(School of Medicine, U.C.L.A., California)
Plastic and Scientific Anatomy in the Portfolio of Villard de Honnecourt

George Szabo
(Director, Place des Antiquaires, New York, NY)
Villard de Honnecourt and Medieval Bronzes

Session II

Rebecca Price-Wilkin
(U. of Michigan, Ann Arbor, Michigan)
Villard de Honnecourt's Use of Templates in his Drawings

Thomas J. Primeau
(U. of Michigan, Ann Arbor, Michigan)
Undressing Villard: Costumes in the Drawings of Villard de Honnecourt as a Means of Understanding his Iconography

Comments on Papers

Michael Davis,
Editor of AVISTA FORUM, Department of Art, Mount Holyoke College, South Hadley, Massachusetts

Abstracts will be printed in the Spring ’89 issue (Vol.3, No. 2).
Notes and Queries

This section is designed to encourage the exchange of information and ideas among readers of AVISTA FORUM. Each query is assigned a number keyed to an issue of the FORUM. The notes printed here are replies to specific queries and are numbered accordingly. Of course, many queries could be answered by more than one respondent; therefore, we welcome responses to queries in any issue, as well as on-going correspondence regarding issues raised in these pages. Please forward your notes and queries to George Ovitt, Dept. of Humanities, Drexel University, Philadelphia, PA 19104.

QUERIES

Q-1 (3.1): Francis A. Reilly of Morrisville, Pennsylvania is currently conducting research into the construction and heraldic decoration of the medieval knight's shield. Any direction a reader might be able to provide would be greatly appreciated.

NOTES

Note to Q-1 (1.2): From Barbara M. Kreutz: I would like to raise a further question in connection with medieval kings riding or not riding in wheeled vehicles [Marjorie Boyer, AVISTA FORUM 1.2, et seq.]. Since, as we always say, “it is not my field,” my question may seem shockingly naive to art historians. Yet surely AVISTA must allow for naive questions, if we are all to venture into the interdisciplinary waters!

So—is it permissible today to speculate that medieval Biblical depictions (stained glass, capitals, etc.) often reflected Biblical scenes as presented in medieval mystery plays and/or the processions which formed part of them? This was the theory of Oskar Hagen, one of the eminent emigre art historians of the generation before World War II; in the early 1950s, Hagen was still expounding this theory, brilliantly and persuasively, in an annual course on medieval art and stage design.

Obviously the Hagen theory would suggest that medieval depictions of kings riding in wheeled vehicles indicated neither everyday reality nor perspicacious historicity but rather—simply—familiarity with chariot or pageant-wagon-borne player-kings—very likely the only kings most artist-craftsmen would have seen.

Comments, please, from art historians.

Note to the above: One objection to the Hagen theory is that the plays of the vernacular mystery cycles—the Corpus Christi plays—date from the fourteenth century, and this makes it unlikely that they were an important influence on either the subject matter or style of medieval art. Indeed, the opposite thesis has been argued: that the plays were influenced by the visual arts. A more likely supposition is that both the figurative arts and the Corpus Christi plays used subject matter and modes of treatment that drew upon a common exegetical tradition. Hence the striking similarity of subject matter and, what is more significant, of treatment in the visual arts, vernacular and Latin drama, sermons, and non-dramatic literature (e.g. the Northern Passion). Of course, this comment does not address Professor Kreutz's specific question about kings in carts. —Ed.

Note to Q-1 (2.2): Elizabeth Bennett of Pottstown, Pennsylvania writes: I think that the book for which Maurice J. Merrick is looking is probably Lost Country Life, by Dorothy Hartley (New York: Pantheon Books, 1979), which I have most often found useful as a guide to the agricultural activities in late medieval calendar miniatures. While Ms. Hartley writes for a popular audience, her work is well grounded in a careful study of both texts and illuminations. (She is also the editor of a multi-volume series of books, intended for classroom use, on everyday life in the middle ages, and of a book on medieval costume.) Whether or not Lost Country Life is the book Mr. Merrick remembers, it is entertaining and informative, especially to those of us who do not keep sheep and raise grain for a living.

Reviews of Articles

The purpose of this section is to encourage comment and create active dialogue on essays and articles. Hundreds of scholarly journals review books. Few, if any, review articles. These reviews will bring significant shorter studies from various disciplines to the attention of AVISTA FORUM readers. The editors urge
readers to contribute reviews of articles published in periodic literature and in collective works. Readers, including authors of reviewed works, are encouraged to comment on the reviews.

Wheels in History
by Marjorie N. Boyer, Emerita, York College - CUNY


McNeill is a generalist in an age of specialists. In The Eccentricity of Wheels he is trying to correct the myopia of those historians who concentrate on a particular region or period in the hope of achieving unimpeachable accuracy. Here he reminds us that our contemporary view of the pre-eminence of wheels developed over the centuries in Europe and denigrates the historical importance of pack animals and of waterborne traffic. In the steppe and desert lands of central Asia and North Africa, caravans were still the predominant form of transportation into the nineteenth century. This is the more remarkable because wheeled vehicles in Mesopotamia go back to about 3000 B.C., and towards the beginning of the second millennium there were notable technological improvements in wheeled vehicles—the invention of the spoked wheel and the use of horses for traction. By about 1800 B.C. the new chariot was the latest word in technology and militarily irresistible. The use of wheeled vehicles over long distances and on a large scale, both for travel and transport, was introduced by the Romans. Their roads are still famous. However, in North Africa and the Near East they became obsolete by about 300 A.D. Camels do not need roads. Improvement in camel saddles and breeding meant that caravans were a cheaper form of transportation than carts or wagons—always provided that the drivers had access to free grazing and free caravanserais for rest and lodging. These last requirements meant that caravans were unsuited to areas of intensive farming, and in any case they could not compete with ocean-going ships.

If specialists tend to distort history by failing to see the whole picture, generalists have their own problems, such as specifying to what regions and areas their sweeping statements apply. McNeill has not entirely escaped the pitfalls awaiting generalists. For example, in attempting to account for the superiority of European vessels and seamanship in the sixteenth century he states that “northwestern Europe abutted on one of the stormiest and most tide-beset seascapes of the earth, so that navigators who had mastered the art of sailing on the North Atlantic and its adjacent waters had little to fear elsewhere.” (p.1112) This remark does not seem to account for the prominence of Italians, e.g. Columbus, in exploration to the West or of the Portuguese to the East.

Similarly, McNeill has exaggerated the importance of the location of the rivers of Europe without considering their individual characteristics. Due to limitations of space I should prefer to concentrate on the rivers of France, a topic I have investigated in some detail. (See my Roads and Rivers; Their Use and Disuse in Late Medieval France, Medievalia et Humanistica 13 (1960): 68–80.) Twenty centuries ago Strabo, writing of Gaul, mentioned “the harmonious arrangement of the country with reference, not only to the rivers but also to the sea....[and] the fact that the necessities of life are with ease interchanged by every one with every one else.” Perhaps Strabo was looking at a map. He (like McNeill) had insufficiently considered the problems in individual cases of an adequate flow of water, the rapidity of the current, the maintenance of towpaths, or the presence of obstructions. For example, the Garonne suffered from catastrophic floods which altered the banks and washed out towpaths. The Rhone was so difficult of ascent that Strabo admitted that some carriers preferred to avoid the river, “since it is easier to go by land.” The Loire had the unique advantage that its current was so slow that boats could ascend it under sail, something they were still doing in the nineteenth century. However, the flow was extremely variable. In the summer at Orleans in the fifteenth century boatmen were unemployed due to a dearth of water in the river. The Aude and the Rhone were unsuited to navigation at their mouths due to silting up of the channel. The Seine had a steady flow of water, and ocean-going vessels were still sufficiently small in the sixteenth century so that Rouen was a port city. What drove goods off the Seine near Paris in the late Middle Ages was the monopoly of the Hanse. In the late Middle Ages one of the most important causes for the preference for moving goods by land rather than by water was tolls. Vehicular traffic was cheaper. If transportation at this time mostly moved by land, travelers almost never took boats, unless the trip was between points on the Loire.
or downstream from Lyons to Avignon. Partly this seems to have been that itineraries rarely coincided with the course of rivers and partly a question of logistics, that is, if a party were already supplied with horses and baggage wagons or carts, it would have been an extra expense to have rented boats also. It may be pointed out, too, that many a French town in the Middle Ages was prosperous because located at a road junction, and of the four towns in which the fairs of Champagne were held only one was located on a navigable river and that was suitable only for small boats.

In this thought-provoking essay McNeill has brought to our attention the varied history of transportation over the regions of the globe and down through the centuries, and if he has not had space or perhaps inclination to explore fully the infinite variety available, he has nevertheless performed a valuable service and broadened our views.

*Medieval Misogyny*

by Constance H. Berman, History Department, University of Iowa


For those of us teaching courses on medieval women or attempting to incorporate women into our medieval courses, the distinction between historical reality and literature is crucial. Obviously, one does not incorporate real women into a course on history by having students read *The Wife of Bath’s Tale*, although until recently I have heard that strategy advocated.

Except in the vaguest general sense, Chaucer is a more apt witness to man’s or a specific man’s attitude about women (or even to misogyny) than is he a witness to real women’s lives. Except for the actual women writers of the middle ages and those women whose biographers despite being male, were really faithful to their subjects, women are better seen through the indirect evidence of their activities, in accounts, in foundation charters for their convents, in their wills and by their seals. Even in these cases they are often seen not directly, but through a veil. In medieval literature perhaps the thickest veil through which one attempts to see women is that of the literary topic and as R. Howard Bloch points out in his article *Medieval Misogyny*, in *Representations* 20, a special issue on Misogyny, Misandry, and Misanthropy, edited by R. Howard Bloch and Frances Ferguson, the literary topic of misogyny is a particularly opaque veil.

In *Medieval Misogyny* although Bloch has paid lip-service to avoidance of the primary pitfall of regarding misogyny as representative of the actual world, his treatment is nonetheless disappointing because he has not here given us a road map of misogynist ideas which would help us to sort out misogynous from genuinely descriptive elements in medieval works. Historians will find his lack of chronological rigor, geographical delineation, and all-inclusiveness somewhat muddling, for he jumps from Jean de Meung, to Genesis, to Tertullian and company, and back to Andreas Capellanus and Walter Map. Although he goes on tantalizing excursions by listing the questions that need to be asked about the relationship between male and female writers and their respective male and female subjects, I find that Bloch is having his cake and eating it too: he has taken on a trendy women’s studies topic without really having to do the hard work of teasing out the history of women from sources biased against that study, and without really placing writing about them in its historical context.

Misogyny is presented as a topic so pervasive and unchanging in medieval and all literature as to defy any chronological approach, and although mentioning the problem, he doesn’t go far towards resolving the difficulty of how to talk about misogyny without believing what it says. He concludes by suggesting that the woman portrayed by the misogynist writer is analogous to the elusiveness of text or writer of text, but what is hard to discern here is where Bloch’s own notions end and those of medieval writers begin—indeed, he has himself presented a paper as inconstant, as inconsistent, as confusing, and as ephemeral as what he contends is, the medieval misogynist’s woman. Is that elusiveness of his text unintentional? Although one gets a good taste of medieval misogyny here, one can hope that a larger study will be more clear.

*Islamic Mathematics and Science: A Comment on Two Recent Articles*

by George Saliba, Department of Middle East Languages and Cultures, Columbia University


To review these articles properly, one would have to devote considerable space and expend great effort. One would have to go back to the basics to make some of the points that ought to be made in a proper review to the extent that I don’t think a journal review would suffice.

Instead, I thought it might be interesting to share with *AVISTA* readers some of the concerns and reflections generated by such articles. The questions that came to my mind while reading these articles are mainly methodological, and in general deal with the status of Islamic science, as part of (?) the general enterprise of history of science. Why is it so easy to become an “expert” in Islamic science, as the authors of these articles must surely think of themselves? Why do these authors undertake to write these articles? Do they think that the people whose works they plan to review, or whose works they plan to synthesize, reinterpret, put in “social context” or the like, are so lazy that they don’t do it themselves, and thus need someone to do it for them? Or do they think that there is a whole group of historians of Islamic science who do not care about the social setting of their science, so that they spend their lives studying the texts, while they intentionally leave the interpretation, the synthesis, the determination of trends, and the placement in social setting to someone else?

As I read these articles, I kept thinking of the old adage that ignorance is bliss. In this case, I must say that a little knowledge is much more dangerous than ignorance, for it apparently emboldens someone to undertake the writing of such an article without any fear of consequences or retribution. This situation does not usually arise in a well established field, where the perimeters of the field are understood, and where the difficulties of the problems in the field are commonly appreciated by those working in the field itself as well as by those working in allied fields. Such articles, to my mind, are a reflection of the hazardous status of Islamic science. They simply mean that there are editors out there who accept such articles for publication, but would not, for example, do so in regard to Renaissance science, or to Greek science. Such a state of affairs means that the field of Islamic science has not yet been taken seriously, and has not yet been integrated into the general history of science. It also means that we are doing very poorly in the field of Medieval and Renaissance science if we still think that we can go on with these disciplines without having to take Islamic science into account.

When I recruit students for Islamic science, I normally expect the students to have had a good grounding in some scientific discipline—for my area mathematics is the inevitable discipline—and a firm knowledge of Arabic—usually at the native level. The choice of Arabic is simply dictated by the extraordinarily large number of medieval Islamic scientific texts written in Arabic. If students can also acquire other Islamic languages such as Persian, Turkish, Urdu, etc., all the better; otherwise a native knowledge of Arabic is the bare minimum. I say the bare minimum, simply because medieval scientific Arabic requires even native Arabs to exert an effort to specialize in it, and they cannot assume that their knowledge of Classical Arabic or Modern Standard Arabic is in general sufficient. Knowing that, you can imagine my reaction to someone such as Høyrup who honestly admits that he is “not a specialist in Islamic mathematics,” that his “knowledge of Arabic is restricted to some elements of basic grammar and the ability to use a dictionary...,” and that “the only Semitic language [he knows] is the simple Babylonian of mathematical texts,” and yet claims to draw a “synthetic picture as it suggests itself to a neighbor looking into the garden of Islam.” The beauty of the metaphor notwithstanding, the analogy does not always work. In this instance, I dare say that the garden of Islamic science is well beyond the reach of those who are still tangled in the rose bush at the fence.

The second problem that came to mind as I was reading these articles has to do with the sincere desire of editors to offer their readership some information about the status of a field, which I have a sneaky suspicion, they take to be slightly exotic, and thus worthy of only cursory attention. Otherwise, I cannot explain the need to publish “synthetic” review articles similar to the two mentioned here, or similar to the more serious ones mentioned by Savage-Smith. Is the intention of publishing such articles simply to shortcut the painful process of acquisition of serious information about Islamic science, or the need to share exotica with readers, or simply to quench the thirst for more information about a crucially important field by reducing the information about it to second and third tier references, not to say simplistic generalizations and
cliches? I do not think that these are the motivations of the editors, but I suspect that some truth lies in that direction. The attitude, I am afraid, is not too different from the one implied in the question often heard at the end of each public lecture on Islamic science: “Why did Islamic science decline?” The terminology of such a question already implies a scale of success, implies an outsider’s view, and conceals a desire to affirm that it did decline. For those working inside the field, the problem of rise and decline, development and sources, is as difficult to answer as it is for their colleagues working in Medieval or Renaissance science who still cannot answer “Why in Europe.” The difference is that editors and the public audience do not ask the second question, simply because they know better, and they know the level of difficulties involved in the answer. But in the case of Islamic science, the attempt is to approach it as one approaches a tree that had roots—hence the emphasis on the sources—which grew for a while, and then unexplainably withered away.

The whole issue of roots and sources is really an outsider’s issue. It is only raised when one looks at the history of science as a series of Olympic runners relaying a torch from Mount Olympus to the final destination of the game. Had we thought of early Arab scientists as researchers who needed, for their own research purposes, some information available only in the Greek sources—and thus caused the information to be made available to them in their native language—we would not have thought of that exercise as anything unusual requiring an archaeological approach to the problem of sources. When we undertake similar activities by requesting Russian scientific texts to be translated into English, we do not then call these texts “the sources” of English or western science. From the scanty information we can gather from the translators of early Islam, we can equally tell that most translations were done by and for professional scientists working in the field, thus performing functions similar to those of their modern counterparts.

My gripe is not that Islamic science has not been taken seriously by students of Medieval or Renaissance science; I am not blaming them for considering Islamic science as a subsidiary of ancient Western science. Rather, the problem is that those who do Medieval and Renaissance science without a firm knowledge of Arabic science are not doing serious Medieval and Renaissance science. Islamic science is not to be studied only for its own sake, but it should be studied in order to better understand Medieval and

Military Acculturation: A Comment
by Bert S. Hall, Institute for History and Philosophy of Science and Technology, University of Toronto


There can be few areas of history in which technology is thought to play a more deterministic role than in military history. We normally view armed conflict between states as a Darwinian process in
which technological change plays a role similar to 
"adaptive mutations" in nature, conferring a "selective 
advantage" onto whichever side is quickest to 
adopting the change. But just as old-fashioned Dar- 
winism has given way to new modes of thought about 
evolution, so too have our views of military history 
begun to broaden. In particular, it is important to break 
away from this grimly necessitarian view of 
technology's role; we need to find room in our inter-
pretive schemata for the role cultural choices play in 
the adoption and adaptation of military techniques.

In August 1985 the University of Copenhagen held 
a conference on War and Peace in the Middle Ages, 
the papers from which have now been published under 
the editorship of Brian Patrick McGuire. One of these, 
Stephen Christensen's European-Ottoman Military 
Acculturation in the Late Middle Ages, takes some 
preliminary steps towards these goals. Christensen's 
term, "acculturation," is meant to comprehend the 
process whereby Christian and Turk learned from each 
other in their long and deadly struggle. He looks at the 
Ottoman-Christian boundary in the 14th-16th centu-
ries as a permeable membrane through which weap-
ons, organizational patterns, and tactics could diffuse 
in both directions. Christensen looks specifically at 1) 
European Gunrunners and the Diffusion of Western 
Artillery; 2) Ottoman Assimilation of Western Artil-
ley; and 3) "Turkish" soldiers and Ottoman Military 
Principles among Christians.

Christensen's first two categories can be examined 
as one. It has long been known that the Ottomans 
became acquainted with artillery from Western 
sources sometime in the fourteenth century. As Mus-
lims, the Ottomans lacked one key element in the 
background of gun-founding, i.e. long experience in 
casting large bells. Thus they were assumed to be 
unusually dependent on foreign experts to manufac-
ture first-rate artillery. Christensen analyzes several 
categories of such experts (gunrunners, captives, 
Christian subjects of the sultan, and Jews, especially 
Marranos expelled from Spain in 1492). To this list he 
ought to have added the Moriscos, one of whom, Ra'is 
Ibrahim b. Ahmed al-Andalus, wrote an artillery 
manual (see David James in Bulletin of the School of 
Christensen concludes that the role of foreigners has 
probably been over-estimated in the growth of Otto-
man artillery capabilities.

Ottoman artillery has been a concern of several 
scholars. Christensen's historiographic treatment of 
the literature summarizes an argument that began with 
David Ayalon's Gunpowder and Firearms in the 
Mamluk Kingdom in the 1950s, advanced through 
Carlo Cipolla's Guns, Sails and Empires in the 
1960s, and was substantially modified by J.F. 
Guilmartin's Gunpowder and Galleys in the 1970s. 
The Ottomans were once considered to have failed to 
keep pace with the best of Western practice in artillery, 
largely because they persisted in casting large-bore 
cannon designed to hurl stone projectiles, a trend 
which caused Cipolla to accuse them of an irrational 
obssession with leviathan weapons. Christensen draws 
on Guilmartin's study to show that, although they did 
retain the seemingly old-fashioned type of large-bore 
pedrero, the Ottomans were also able to produce 
European style cannons and culverins, and that they 
used these in an effective siege train.

Christensen's third category concentrates on the 
stradiots, irregular light cavalry that came to be 
employed by Western European armies in the late 
fifteenth and sixteenth centuries. Originally from Alba-
nia, these troops fought with equipment and tactics that 
were practically indistinguishable from Turkish light 
cavalry. What flaws Christensen's analysis here is his 
failure to recognize how poorly the stradiots (or 
Croatians as they are sometimes called) were inte-
grated into Western European military practice. They 
remained auxiliary troops, useful for scouting and 
skirmishes, but rarely employed at the centre of fight-
ing. When Westerners themselves began to develop 
light cavalry—beginning with the German Reiters in 
the mid-sixteenth century—this was a response to 
battlefield conditions that involved greatly increased 
infantry troop concentrations and the proliferation of 
small arms. The Western light cavalry were equipped 
differently and fought differently than the stradiots.

If it was a canard to accuse the Ottomans of tech-
ological backwardness regarding siege artillery, there 
was nevertheless an essential problem for the Ottoman 
Empire in the adoption of gunpowder: its failure to 
evolve effective combined unit (infantry and cavalry) 
tactics that would stand the test against Christian 
(usually Habsburg) forces in the field. There was a 
general reluctance regarding firearms characteristic of 
all Ottoman timarli (feudatories), whatever their rank 
or method of fighting. The several types of Ottoman 
cavalry were reluctant to adopt any weapons that 
would restrict the horseman's traditional mobility. 
Although the Turks were able to occupy Hungary in 
1526, in 1529 the Ottoman advance stalled before the
walls of Vienna. This failure was attributed by Turkish contemporaries to Western superiority in firearms, especially small arms. It provoked, in 1531 under Sultan Süleyman I, a reorganization designed to increase the numbers of Janissaries skilled in the use of the tüfeng or Turkish arquebus and to enhance the production of such weapons. The Sipahi (Ottoman cavalry), crack units, as well as the less well-trained battalions, were unmoved by such reformism, and the failure to adapt cavalry to a battlefield dominated by firearms constitutes, in the view of an acute student of the subject, one of the principal reasons for the persistent “decline” of the Ottoman Empire. Indeed, the pressures to recruit soldiers competent in small arms (tüfeng-endaz) were so strong that Istanbul began to employ a system of military contractors (bölük basi) not unlike the condotierri of Renaissance Italy to raise companies of small arms specialists. These sekban were sometimes foot, sometimes horse soldiers (the latter using a special short-barreled wheel-lock arquebus called the tezaruolo), but they were of different social origins than the customary Ottoman provincial troops, the “feudal” timarlı, and they proved difficult to control when not actually on campaign. The tension between Istanbul’s reliance on these new troops for its military needs and its desire to suppress their disorderly tendencies is reminiscent of the problems European monarchs faced during the fifteenth century, and it proved a source of recurrent rebellions in the Ottoman realm in the seventeenth century.

What is significant, by contrast, is how Western cavalry was able to adapt to firearms. We usually refer to this process by such romantic terms as “the decline of chivalry” or “the end of knighthood,” but it was in fact a successful transition from heavy cavalry using the lance as its principal weapon to lighter cavalry using the pistol and sabre. The Ottoman case throws into sharp relief just how significant the West’s “military acculturation” proved to be. Conservative aristocrats might grumble about the shift from lance to sabre and pistol, but in the end, the West made the transition through a new technology into new tactics without experiencing fatal strains in the internal political order. The Ottomans were not so felicitous. The different historical fates that awaited the Ottoman Empire and the Absolutist nation-states of Europe is in part the result of this difference in acculturation.

This article elaborates in great detail the social and political context of early modern Bolognese anatomy. In Bologna, public anatomy lessons were held at carnival time. Their function, Ferrari argues, was neither a theoretical anatomy lesson, nor dissections performed by a teacher for his students’ instruction, but was instead a complex ceremony with political and social functions. The lessons were public, attended by the most eminent public and ecclesiastical officials as well as masked carnival participants, ordinary commoners, and students. The body was systematically discussed and demonstrated in 16–30 lessons while masses were said in a nearby chapel for the souls of those dissected.

Ferrari suggests that at the beginning of the seventeenth century anatomy changed, and at that point “it seemed to compensate the scholars in symbolic terms for their real loss of power.” She distinguishes the final period of Bolognese anatomy in which it played the most prominent civic and university role, as beginning with the construction of the anatomy theater. The Gabella (committee in charge of university building) made explicit that the theater was built “in the interests of the splendour, the decoration and the honorific needs of the public schools and the whole city.” (p. 75) The design of the anatomy theater itself, as Ferrari elaborates, was closely tied to the demands of spectators to be impressed rather than of students to be taught. The overall purpose was to enhance the reputation of a city and studium that actually were experiencing decline. Anatomy lessons were “ritualized ceremonies,” closer to theater than to pedagogical lecture. The architecture of the theater itself was thought to have parallels in the architecture of the human body. The professors of anatomy were expected to distinguish themselves in debate and discourse in a manner more reminiscent of the theater than of teaching. Ferrari concludes with a Bahktanian analysis of carnival and the way in which public dissections with their focus on the body fit into the ritualized “world turned upside down” atmosphere of the carnival.
This is a lengthy, detailed, and richly suggestive article which turns our attention to the public, social, and political dimensions of a particular science in the early modern period. Its suggestivity brings forth many questions and seems to call for a sustained chronological and comparative study of late medieval European anatomy which includes a consideration of social and political functions. I was not convinced that the Bolognese anatomies were as distinct from those of the other cities and states as Ferrari suggests. I also question whether earlier fourteenth-century anatomies had only pedagogical functions. The fact that anatomy with dissection did not occur simultaneously with the rise of the medieval university; the deep medieval symbolism associated with the executed and dissected body (which Ferrari points out); the circumstance that anatomy “laboratories” were called “theaters” long before the seventeenth century; the moralizing functions of anatomies; and the presence of witnesses other than students in earlier dissections, all point to the possibility that from its beginnings in the fourteenth century, dissection may have had important political, social, and symbolic functions. The chronological and geographical differences that Ferrari points out as a way of illuminating the Bolognese situation call for a more sustained comparative analysis.

Another issue concerns the problem of influence. Ferrari indicates that learned humanists were among the spectators and that anatomy theaters influenced the design of other types of theater structures. Ancient examples and mutual local influences must have been important in the development of the architecture. Beyond architecture, one wonders to what extent humanist perceptions of Hellenistic and Galenic dissections influenced late medieval dissections.

Finally, if anatomy theaters were as fundamentally a part of popular, social, and political culture as this article convincingly suggests, how did that circumstance affect the scientific analysis that must on some level at all times have existed within any particular dissection? How did the fact of the disputes affect their contents concerning particular organs as they pertained to biology and medicine? To my mind, studies which illuminate the social and political aspects of science have greater value when they also show how such analysis in turn affects the substance of science.

The many questions raised by this article point to its richness. Ferrari in some sense does put forth a comparative point of view in that she brings in examples from other times and localities to illuminate the Bolognese situation. Yet her own comparisons raise in my mind as many questions as they answer. Some of the best short studies open up arenas for further research rather than close them off. This is surely a description of this paper.

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**Papers on Medieval/Early Modern Technology**

**Given at the Meeting of the Society for the History of Technology, Hagley Museum and Library, Wilmington, Delaware, 20–23 October 1988**

The following are abstracts for these recently presented papers on medieval/early modern technology, society, and culture. Abstracts are printed with permission of the authors.

**John Muendel**

(Lakeland College)

Mansus, Machinery, and Coproprietorship: The Tuscan Contribution to Medieval Associations of Industry

Certain jointly-owned mills in the territory of medieval Florence were truly corporations controlled by a board of directors whose chief official was the gastaldo. Their development began as early as 726, but their growth became more involved as the population increased dramatically following the tenth century. Investments by a larger number of people responding to greater economic opportunities stimulated the need for more efficient organization. The records show that some of these corporately-owned mills were still in the throes of change even as late as the fifteenth century. Others, however, were distinct, well-regulated associations. They represent, not an Italian, but a European phenomenon. Moreover, these organizations, forerunners of the joint-stock company, find their institutional framework, not in Roman law, but in the circumstances which accompanied the breakup of the European mansus, or family farm, beginning as early as the ninth century.
The work of Lynn White has done much to spark interest in the study of medieval technology. However, many historians—particularly in England—have had serious reservations concerning White’s theme of the paramount importance of technological development to medieval society, and hostility to this idea has tended at times to set back serious research into the subject. Recently, however, a number of researchers have begun to investigate the impact of technology upon medieval English society, using a variety of new approaches.

This paper investigates milling technology during the reign of Edward II (1307-27) by producing a ‘snapshot’ of mills derived from a particularly wide-ranging and detailed source, inquisitions post mortem. Altogether the inquisitions yielded information on the 1585 mills during the reign, thus providing a country-wide sample of about 10 per cent of all the mills in England at the time. The sample reveals several things. First of all, since their introduction in the late twelfth century, windmills had increased significantly in number, comprising 30 per cent of all the mills in the sample. They were, however, found mostly in the east of the country, where rivers and streams powerful enough to drive water-mills were in short supply. Otherwise the water-mill was preferred whenever possible, a fact reflected in the average value of these mills, which was twice that for windmills. A curious feature of the sample is the relative lack of industrial mills. Only fulling mills were found and in less than 5 per cent of cases. Part of this is due to the under-recording of such mills, but it is also clear that industrial mills were found at a level very much less than that indicated by Lynn White and Jean Gimpel. Again, the values of these mills, being very much less than those for corn mills, indicates that they were not a popular choice among mill investors. Finally, the analysis of mill values clearly shows two zones for milling in England, one in the north where mill values were very high and where apparently lords guarded such things as suit of mill very jealously, and the other in the south and east, where mill values were significantly lower, reflecting a situation where competition between mills was much more active and suit of mill had less effect.

This somewhat complicated pattern may alter our perception of the mechanisms by which mills—and other new technologies—were introduced to medieval society.

Bert S. Hall
(Institute for History and Philosophy of Science and Technology, University of Toronto)
Small Arms and the Tactical Revolution of the Sixteenth Century: A Re-Evaluation

The dramatic alterations in patterns of warfare visible during the Italian Wars (1494-1529) rested on the increased numbers and tactical importance of infantry troops. At one time, the revival of infantry was attributed to the emergence of small arms (arquebus and musket), which were thought to have driven heavy cavalry off the field of battle. No serious scholar today would argue that tactical changes were technologically determined, but the role of small arms in sixteenth-century warfare is still quite vague. This paper will establish that there were no technological grounds for the emergence of the arquebus when and where it did, but that economic and social factors account for the shift in armaments. Spanish preferences for firearms over other missile weapons led to tactical and organizational innovations which compensated to some extent for the inherent weakness of arquebuses. Once this context had been established, the Spanish were able to develop the musket as a weapon which had some deleterious effects on heavy cavalry. Still, the pressures of firearms-bearing infantry were not sufficient to force the abandonment of traditional cavalry, only to modify its tactical role. The final demise of the knight took place later in the century at the hands of light cavalry equipped with pistols, the so-called Reiter. Understanding the nature and the timing of strains on older forms of military organization helps to explain why the sixteenth-century’s tactical revolutions were accepted by the “feudal” aristocrats whose status and purpose were most heavily imperiled as a result.

Pamela O. Long
(Washington, D.C.)
Openness versus Secrecy: A Conflict of Values in Sixteenth Century Mining and Metallurgical Literature
In this paper I will first discuss the genesis and intended audience for certain types of sixteenth-century mining and metallurgical writings such as the Bergbüchlein of Rülein von Calw, the Proberbüchlein, the Pirotechnia of Biringuccio, the Bermanatus and De re metallica of Georg Agricola, and the writings of Lazarus Ercker. I will argue that although this literature incorporates traditional recipes and books of "secrets" written primarily by and for practitioners, it developed in a new situation, that of the capitalist expansion of mining. It was written for a new audience of patrons and investors. Whether the authors of this literature came from a background of artisan practice or were university educated, their personal backgrounds and careers engendered an appreciation for practical empirical knowledge. Most were explicit advocates of increased investment in mining and urged practical experience on investors as a way of increasing the productivity of their mines and thus their profits. Their belief that technical knowledge should be written down and published was intrinsic to the context in which they wrote. Practical knowledge about mining, assaying and processing ores could no longer be left under the purview of local, craft sources to be communicated for the most part orally. Technical authorship was thus necessary. Technical authors wrote for patrons and investors as well as artisans. They revealed craft secrets, condemned secrecy of the crafts and of alchemy, and argued that authorship should be properly credited.

I will next discuss the contrasting values of alchemical literature which were indebted to some of the same practical traditions and materials that informed the tradition referred to above. I will address the question of the social and economic background of the authors of alchemical books and their prospective audience. In contrast to the above tradition, they believed in secrecy, in an oral, apprenticeship method of transmission, and in the obfuscation rather than identification of authorship. My question will be how do these values fit into the social and economic context in which they were writing. I will stress that the alchemical values of secrecy flourished in the sixteenth century under the growing influence of hermetic and neoplatonic traditions. The value of secrecy was endorsed with renewed enthusiasm precisely when values of openness and credit to authorship were also being elaborated.

It is one of the complicating aspects of the methodology of seventeenth-century scientific thought that it was heir to both of these traditions. The implications of such a contradictory heritage for the new experimental science will be suggested.

Daryl M. Hafter
(Eastern Michigan University)
Thwarting the Royal Will: Invention to Keep the Silk Guild in 18th Century Lyon

Students of the history of technology are accustomed to thinking of invention as one of the motive forces leading "inevitably" to industrialization and to the modernization of institutions. Our histories of technology frequently illustrate the course of development by indicating particular inventions along the way, implicitly giving the message that each major improvement in significant manufactures is another stepping stone toward the Industrial Revolution. This paper will approach a particular industry, the weaving of silk in 18th century Lyon, from a revisionist viewpoint. It will show that there were two lines of pressure influencing the development of the drawloom toward automation. One might fit into our notion of modernization: the series of automatic pattern devices designed to make weaving of intricate designs more accurate, faster, and cheaper. The other, had the express purpose of eliminating the function of hand-workers in the traditional drawlooms, the drawgirls, with whom the royal government was trying to "break" the guild. For the royal officials were pressing for the entrance of drawgirls into the monopolistic silk Grande Fabrique. This political and economic struggle pitted the central government's modernizing policy to suppress the guild against the guild's efforts to maintain itself. The use of inventions, which the central government was ideologically committed to, provided an ironic instrument for the guild's campaign.

Ronald Edward Zupko
(Marquette University)
Revolution in Measurement: Economic and Societal Repercussions of Metric Adoption in Europe and the United States

One of the longest and fiercest struggles in the early modern world was the battle between contemporary systems of weights and measures and the
The Building Technology and Civil Engineering Interest Group of the Society for the History of Technology announces its own formation, (contingent upon "official" approval from SHOT), and the publication of its newsletter, *The Flying Buttress*. Among the stated purposes of the group are "to promote the study of construction and its relationship to design, structural behavior, and methods, (including machinery and labor); [and] to place the study of these subjects in their technological, social, economic and cultural contexts, [and] in the context of wider issues in the history of technology." A group directory is being compiled, and a sponsored session and a group meeting are planned for the 1988 SHOT meeting, to be held October 20 at the Hagley Museum and Library, Wilmington, Delaware. For further information about the group, the newsletter, or the meeting, contact Jane Morley, Dept. of History and Sociology of Science, 215 S. 34th St., Univ. of Pennsylvania, Philadelphia, PA 19104.

The International Institute of Islamic Science and Technology was founded in February, 1988. The goals of IIIST include the study and development of an Islamic history, philosophy and sociology of science and technology. For information on purposes and proposed activities, write: S. Waqar Ahmed Husaini, Director, IIIST, 1512 S. Sterling Rd., Cupertino, CA 95014 or J.M. al-Barzinji, 555 Grove St., Herndon, VA 22707.

The London Centre for the History of Science, Medicine and Technology will open in the academic year 1988-89 under the joint sponsorship of Imperial College and University College, London, the Wellcome Institute for the History of Medicine, and the Science Museum. The Centre will offer an MSc course which will be more varied in scope than previously available programs. Contact: N.A.F. Smith, History of Science and Technology Group, Sherfield Building, Imperial College, London SW7 2AZ, England.

An interdisciplinary faculty for the History and Preservation of the Built Environment is being formed at Texas A&M University, with an eye to a symposium in the future on methods of recording and documenting the built environment. For further information, contact Vivian Paul, Dept. of Architecture, Texas A&M University, College Station, TX 77834.

The Centre d'archéologie médiévale des établissements religieux has been formed to gather and classify research on all aspects of the archaeology of religious institutions from the 5th to the 16th century, and, for the region north of the Loire, from the 16th to the 18th century. It will advise scholars in these areas and hold conferences. For further information, contact: Philippe Racinet, Université de Paris XIII, UER d'Histoire, ave. J.B. Clément, 93430 Villetaneuse, France.

The Sigurður Nordal Institute has been established in memory of Prof. Dr. Sigurður Nordal on the one hundredth anniversary of his birth, with the purpose of advancing knowledge and study of Icelandic culture and to further contact between Icelandic and foreign scholars in this field. For more information, write to the Sigurður Nordal Institute, Dingholtstraeti 29, Pósthol 1220, 121 Reykjavik, Iceland.
Europe-Research, a Paris-based firm, does research in European libraries and archives, and translations, for researchers abroad; specializing in art history. Languages: Dutch (mother tongue), French, German, English. Contact: Anne van der Jagt, 36 ave. Fr. Roosevelt, 94300 Vincennes, France.

The editors of the Index of Charms, a computerized search and indexing process of Old English, Middle English, Latin, German and French charms, request help in locating charms in small German and French libraries and private collections. Contact: Suzanne Parnell, 307 West Central Ave., Bentonville, AR 72712; or call (501) 273-5777.


Habitat International, an international journal devoted to the study of human settlements, from time to time publishes historical articles on the construction of any aspect of the manmade environment. Send manuscripts to: Steven Groak, Bartlett School of Architecture and Planning, University College London, 22 Gordon St., London WC1H 0QB, England.

Contributions are being sought for a projected volume entitled Interdisciplinary Approaches to Anglo-Saxon Culture: Studies in Methodology. Within the general fields of literature, art history, archaeology and history, papers may consider issues in folklore, oral-formulaic theory, manuscript studies, numismatics, etc. Submissions should not exceed 40 pages in length. Contact James Hala, Department of English, Drew Univ., Madison, NJ 07940.

The Juanelo Turriano Foundation was founded in 1987 in Madrid by Spanish scholars to promote and publish books and monographs primarily in the history of technology and the sciences in any period. Inquiries should be addressed to the president of the foundation, J.A. García-Diego, Fundación Juanelo Turriano, Prim 5-28004, Madrid, Spain.

Commissioned by The Rusyn Research Society of America, AVISTA member Ervin Bonkalo has published a translation of The Rusyns, a small book written in Hungarian in 1940 about the intellectual history of a small nationality with a distinct culture which lived within the borders of Hungary for 700 years. The work includes information on medieval defense systems specific to east-Europe.

The Textile Museum, 2320 S Street, NW, Washington, D.C., 20008, “is the preeminent museum in the Western Hemisphere focusing exclusively on the collection, study, preservation and exhibition of historic and handmade textiles and carpets. A private, non-profit institution, the Textile Museum celebrates mankind’s achievements in the textile arts ... Scholarship in the textile arts is an important component of the museum’s mission and is pursued through research, exhibitions and a publications program. The Arthur D. Jenkins Library, containing more than 10,000 books and periodicals, is a significant resource for scholars, collectors, designers and the public at large” (from The Textile Museum, information brochure). Among exhibits of interest at the Textile Museum in the past year were Spain’s Carpet Heritage (Feb. 2 through Oct. 1988), and Interlacing: The Elemental Fabric (Mar. 25–Aug. 14, 1988). Catalogues of selected parts of the collection and of particular exhibits are available from the Museum Shop.

The Tenth International Art History Book Fair will be held at the British Museum, London, on 7–8 April 1989. Inquiries to: Pamela Courteney, Director of Publicity, Association of Art Historians, Albert House, Monnington-on-Wye, Herts. HR4 7NL England.

Recent and Forthcoming Papers

This column will list papers read or to be read at professional meetings (whether or not meant for publication), papers complete but not yet published, and papers recently published. Its purpose is to inform readers of work being done in a variety of disciplines. The News Editor has selected papers of interest to AVISTA members and welcomes additions.

Stephen Christensen is editing a forthcoming book, on Violence in Late Medieval and Early Modern Europe, to include papers from a conference he chaired at the U. of Copenhagen, on April 24, 1987. The book will consist of the following articles: Stephen Christensen (Center for Research in the Humanities, Copenhagen): The Janissaries and Organized Violence; Victor G. Kiernan (U. of Edinburgh): The Functions of War in Early Modern Europe; Karen Schousboe (Center for Research in the Humanities, Copenhagen): Vold og værn: Violence and Defense in Medieval Denmark; Robert Muchembled (U. de Paris XIII): The Anthropology of Violence in Early Modern France.


Figueira Valverde (Museo de Pontevedra): *El Pórtico de la Gloria en sus evocaciones literarias*. Also speaking were J.M. de Azcárate y Risori (U. Complutense), I. Bango Torviso (U. Autónoma, Madrid), and M.L. Real (Arquivo Histórico, Porto).


**The Codex Calixtinus and the Shrine of St. James,** a Symposium sponsored by the Department of Fine Arts of the University of Pittsburgh and the Frick Foundation will meet at the University of Pittsburgh on November 3–5, 1988. Speakers include: M.C. Díaz y Díaz (U. de Santiago): The *Codex Calixtinus*: By Whom, For Whom?; A. Stones (U. of Pittsburgh): Codicology, Paleography and the Art of the Codex; M. Huglo (South Carolina): Les pièces notées du *Codex Calixtinus*; H. Van der Werf (Rochester): The relationship between the Monophonic and the Polyphonic Music; K. Herbers (Tübingen): The Miracles of St. James; E.A.R. Brown (CUNY): Saint-Disen and the Turpin Legend; R. Plötz (Kevelaer): *Peregrinatio ad limina beati Jacobi*; T. Hauschild (Lisbon): Archaeology and the Tomb of St. James; S. Moralejo (U. de Santiago): The *Codex Calixtinus* as Art-Historical Source; J.D’Emilio (U. of South Florida-Tampa): The Building and the Pilgrim’s Guide. Discussants: W. Cahn (Yale); P. Gerson (New York); R.P.J. López Calo (Santiago de Compostela); A.M. Deschamps (Paris); J. Dodds (Columbia); M.F. Hearn (U. of Pittsburgh); T. Lyman (Emory); A. Shaver-Crandell (CUNY); M. Ward (New York City).

The Annual Meeting of the History of Science Society will meet at the Westin Hotel in Cincinnati, OH, December 27–30, 1988. Sessions of interest will include:


New Periodicals

Favonius, devoted to the Classics and the Classical Tradition (ed. Robert W. Cape, Jr., U.C.L.A.), publishes original research articles by graduate students and recent graduates in the field of classics.

Archaeomaterials, a semi-annual journal, publishes studies on a broad range of pre-industrial materials and processes. Topics include all materials altered by man in the past and the ways in which they were manipulated, placing the technology in a cultural context. Interested readers and potential contributors should contact Tamara Stech, Editor, Department of Materials Science and Engineering, U. of Pennsylvania, Philadelphia, PA 19104.

Miniatura, sponsored by the Società di Storia della Miniatura, is devoted to the study of book illustration and decoration. For subscriptions, write Fratelli Alinari Editrice, Largo Fratelli Alinari 15, 50123 Firenze, Italy.

Activities … Past, Present, Future

This column reports activities relevant to the interdisciplinary interests of AVISTA members. The list is selective, rather than comprehensive, and will not replace reports of activities published by professional societies of the various disciplines represented by AVISTA members. Neither will it always constitute due notice of an activity, because of AVISTA FORUM’s semi-annual publication schedule. On the other hand, scholars may be informed of activities that their own professional groups do not report. The purpose of this column is to facilitate the exchange of information and
ideas across the boundaries of various disciplines. Please send reports of activities to the News Editor. All dates are 1988 unless otherwise specified.

April 8–9: *Ideas of Order in the Middle Ages* met at SUNY-Albany. See Recent and Forthcoming Papers in this issue.


September 27–30: *International Gesellschaft zur Erforschung der materiellen Kultur des Mittelalters; Medium Aevum Quotidianum* met in Krems, Austria. See the published papers listed under Bibliography of the Avista Library-Periodicals.

September 29–October 1: *The Southeastern Medieval Association* (SEMA) met at the University of Richmond. For information about SEMA, contact Susan Clark, Dept. of German and Russian, Rice Univ., P.O. Box 1892, Houston, TX 77251.


October 3–8: *The Pórtico de la Gloria and the Art of its Epoch*, an international symposium, was held at Santiago de Compostela. See Recent and Forthcoming Papers in this issue.


October 7–8: *Medieval and Renaissance Manuscripts* met at the Beinecke Rare Book and Manuscript Library at Yale, in conjunction with an exhibit from the library’s holdings. Speakers included: A. de la Mare, J.J.G. Alexander, F. Newton, J. John, J. Marrow, J. Hamburger, R. Weick, D. Ganz, K. Scott, A. Derolez and A. Edwards.


October 7–9: *Giornate Internazionale sulla Scuola Medica Salernitana*, a conference on the medieval history of the medical school, met at Salerno. Speakers included G. Onofrio and V. Pace. Contact: Soprintendenza per I BAAAS di Salerno e Avellino, Via Mauri, 99, Salerno 84100, Italy.
October 8: The Medieval Association of the Midwest held its annual conference, *The Middle Ages and the West*, at Cleveland State U. For information on MAM, contact: Earl Anderson, Associate Dean, Graduate School, Cleveland State U., Cleveland, OH 44115.

October 8: *The Emergence of Clarity: Cathedrals Illustrated 1650–1850*, a symposium (and exhibit: Oct. 1–Nov. 5) met at the Bayley Art Museum, U. of Virginia. See RECENT AND FORTHCOMING PAPERS in this issue.

Through October 16: *Holy Images, Holy Space: Icons and Frescoes from Greece*, an exhibit, was held at the Walters Art Gallery, Baltimore. The exhibit includes over 80 works from museums and churches in Greece, organized by the Byzantine Museum of Athens, the Greek Ministry of Culture, the Trust for Museum Exhibitions and the Walters Art Gallery. The icons range in date from the 10th to the 17th century. The exhibit will travel to Miami, Ft. Worth, San Francisco, Cleveland and Detroit.

October 14–15: *The Fifteenth Annual St. Louis Conference on Manuscript Studies* was held at St. Louis U. For further information, write to the Conference Committee, Vatican Film Library, Pius XII Memorial Library, 3650 Lindell Blvd., St. Louis, MO 63108.

October 20–21: *The Society for the History of Technology* annual meeting, Hagley Museum and Library, Wilmington, DE. Sessions included: *The Art of the Builder: Craftsman, Engineer and Architect*, and *New Work in Medieval and Renaissance Technology*. See abstracts of papers from the latter session in this issue. For information about SHOT membership and the annual meeting, contact: Alex Roland, Secretary, SHOT, Dept. of History, Duke Univ., Durham, NC 27706. For information regarding *The Building Technology and Civil Engineering Interest Group of SHOT*, see NEWS AND ANNOUNCEMENTS in this issue.

October 21–22: *The Early University: Methods and Influences* was sponsored by the Center for Medieval Studies at Cal. State U.-Northridge. For information, contact Nancy van Deusen, Dept. of Music, Cal. State U., Northridge, CA 91330.

October 21–22: *Nineteenth Annual Interdisciplinary Conference* was sponsored by the Ball State U. Committee for the Advancement of Early Studies, on "any phase of Medieval/Renaissance Studies." For information about this and future conferences, contact: John E. Weakland, Dept. of History, Ball State U., Muncie, IN 47306.

October 21–22: *Oral Tradition in the Middle Ages* was sponsored by the Center for Medieval and Renaissance Studies, SUNY-Binghampton. Major speakers include: John Miles Foley (U. of Missouri), Carol Lindahl (Univ. of Houston), Albert B. Lord (Harvard), and Joseph F. Nagy (U.C.L.A.). Send inquiries to: Professor W.F.H. Nicolaelsen, Dept. of English, SUNY-Binghamton, Binghamton, NY 13901.

October 21–22: *Medieval Art in the Last Half Century*, a major symposium was held at the Metropolitan Museum, New York. See RECENT AND FORTHCOMING PAPERS in this issue.


October 24–26: *Science et philosophie médiévales: Gersonide et son temps (1288–1344)*, sponsored by the Equipe de Recherche 208 ("Nouvelle Gallia Judaica") of the C.N.R.S. and the Centre d'études juives of the Université de Paris IV (Sorbonne), will be held at Avignon on the occasion of the 700th birthday of Gersonides. For further information, write to E.R. 208 du C.N.R.S., École Pratique des Hautes Études (Section des sciences religieuses), 45, rue des Écoles, 75005 Paris.


October 28–29: *The Codex Calixtinus and the Shrine of St. James* symposium was held at the U. of Pittsburgh in conjunction with an exhibit, *The Codex Calixtinus and European Illumination* at the Frick Fine Arts Gallery. See RECENT AND FORTHCOMING PAPERS in this issue.

November 3–5: *The Codex Calixtinus and the Shrine of St. James* symposium was held at the U. of Pittsburgh in conjunction with an exhibit, *The Codex Calixtinus and European Illumination* at the Frick Fine Arts Gallery. See RECENT AND FORTHCOMING PAPERS in this issue.

November 10–13: The Fourteenth Annual U.S. Byzantine Studies Conference will meet at the Menil Collection and the U. of St. Thomas, Houston, TX. For information, contact: Prof. Thalia Gouma-Peterson, Art Dept., The Coll. of Wooster, Wooster, OH 44691.

November 11–13: The Charles Homer Haskins Society will hold its annual conference at the U. of Houston. Keynote addresses will be delivered by J. Campbell (Oxford), R.V. Turner (Florida State U.), and W.L. Warren (Queen’s U., Belfast). For information, write: S.N. Vaughn, Dept. of History, U. of Texas, University Park, Houston, TX 77004.

November 12: Literacy and Orality: Word, Text and Image in Medieval and Renaissance Culture, the 10th Annual Barnard Medieval and Renaissance Conference, will be held at Barnard College. For further information, contact: A. Berthelot, Dept. of French, Barnard Coll., 3009 Broadway, New York, NY 10027.

November 18–19: Texts and Their Fortunes: Writer, Public and Reception in the Middle Ages will be held at the U. of Virginia. Speakers will include A.C. Spearling, R. Kellogg, J. Snow and D. Hult. For further information, contact Robert Cook or Julian Weiss at (804) 924-7157.

December 2–3: The Center for Research in the Humanities, U. of Copenhagen, will sponsor a workshop on Writing World History. Participants include: Peter Burke, Keith Nield, and Niels Steensgaard. For information, contact Stephen Christensen, Center for Research in the Humanities, U. of Copenhagen, Nalsgade 80, 2300 Copenhagen N, Denmark.

December 8–10: Documents and Interpretations in the History of Science, sponsored by the Library of the American Philosophical Society, in cooperation with the Commision on Documentation of the International Union of the History and Philosophy of Science, in Philadelphia. The conference will examine the relationship between documentation and research styles in the history of science, technology and medicine. Contact: D. Rhees, American Philosophical Society Library, 105 South St., Philadelphia, PA 19106.

December 27–30: The History of Science Society Annual Meeting, in conjunction with the Annual Meeting of the American Historical Association; see Recent and Forthcoming Papers in this issue.

February 10–11, 1989: Medieval Visions of Antiquity, a symposium, will be sponsored by the Center for Medieval Studies at California State U.-Northridge. For more information, contact N. van Deusen, Dept. of Music, California State U.-Northridge, CA 91330.

February 10–11, 1989: Learning in the Age of Charlemagne, the 20th annual conference of the Center for Medieval and Renaissance Studies, will be held at Ohio State U. For additional information contact: S. Ulmer, CMRS/Ohio SU, 322 Dulles Hall, 230 W. 17th Ave., Columbus, OH 43210.

March 3–4, 1989: The Medieval Association of Mid-America (MAMA) will meet at the U. of Kansas. Those interested in presenting papers or organizing sessions should write to: R. Kay, Dept. of History, 3001 Wescoe Hall, U. of Kansas, Lawrence, KS 66045.

March 9–10, 1989: Thirty-second Annual Missouri Valley History Conference will be held in Omaha. Abstracts should be submitted by November 15 to J.L. Simmons, Dept. of History, U. of Nebraska, Omaha, NE 68182.

March 17–18, 1989: Europe in the Age of the Hundred Years War, an interdisciplinary conference, will be held on the Fordham U. Lincoln Center campus, Manhattan. One- or two-page abstracts should be submitted by November 1 to T.S. Fenster, Medieval Studies Center, Keating 107, Fordham U., Bronx, NY 10458.

March 30–April 1, 1989: The South-Central Renaissance Conference will meet at Lamar U. Papers are invited on: Holy Week in art and literature, masquerades and festivals in the arts, metaphors of art in drama/metaphors of drama in art, iconography, literature and medicine, and Christian humanists and their chief competitors. Papers should be submitted by December 31 to P. Spinrad, Dept. of English, Ohio State U., Columbus, OH 43210.
March 31–April 1, 1989: The Joint Atlantic Seminar in the History of Biology will meet at Yale U. Send abstracts (due February 1) to F.L. Holmes, History of Medicine, Yale U., P.O. Box 3333 Yale Station, New Haven, CT 06510.


April 14–15, 1989: The Tenth Medieval Forum will be held at Plymouth State Coll., New Hampshire. Special themes will be highlighted: Adversity and Compromise: Church and State Relations, and The Grand Tradition: Epics, Sagas, and Story Cycles. In addition, proposals for papers, workshops, panels or sessions on any aspect of the Middle Ages will be considered. Send brief proposals or abstracts by December 9 to M. Marquez-Sterling, Director, Medieval Studies Council, Plymouth State Coll., USNH, Plymouth, NH 03264.

April 14–15, 1989: Law in Mediaeval Life and Thought, the 16th Annual Sewanee Mediaeval Colloquium, will be held at the U. of the South. Two copies of papers written specifically for this colloquium and related to the theme, not exceeding ten double-spaced pages and in the exact form to be read, along with a brief vita, should be submitted by interested participants by January 10 to: Sewanee Mediaeval Colloquium, The U. of the South, Sewanee, TE 37375.

April 21–22, 1989: Celtic Connections (16th Annual ACTA Conference) will be held at the State U. Coll., Buffalo. Papers dealing with any field of medieval studies are invited. Papers should not exceed twenty minutes in length. Send proposals to: D. Lampe, Dept. of English, SUC-Buffalo, Buffalo, NY 14214.

April 27–30, 1989: The 1989 Annual Meeting of the American Association for the History of Medicine will meet in Birmingham, Alabama. For information, contact: J.W. Leavitt, Dept. of History of Medicine, 1415 Medical Science Center, U. of Wisconsin, 1300 University Ave., Madison, WI 53706.


May 12–13, 1989: A conference on Imagining New Worlds: Factual and Figural Discovery During the Middle Ages will be held at Lehmann Coll.-CUNY. Among topics to be addressed is the representation of the Earth and the cosmos by cartographers, manuscript illuminators, painters and sculptors. Interested participants should send a 500-word abstract along with a short bibliography and brief vita, by December 1, to S.D. Westrem, Dept. of English, Lehmann Coll.-CUNY, Bronx, NY 10468.

June 1–4, 1989: The International Society for the Comparative Study of Civilizations will meet at the U. of Cal.-Berkeley. Special themes include East-West Relationships. The Society advocates a "comparative civilizational perspective," making use of methods from both the humanities and the social sciences. Send abstracts for papers (due November 15) to C. Gilb, Program Chair, ISCSC, 1988, 111 El Camino Real, Berkeley, CA 94705.

June 9–13, 1989: The 28th International Geological Congress, to be held in Washington, D.C., will include a session on The Idea of Time: Changing Concepts of the Antiquity of Man and the Earth. Send for the meeting's Second Circular, available from P.O. Box 727, Tulsa, OK 74101.

June 13–August 12, 1989: The American Numismatic Society will hold its 37th Seminar in Numismatics, open to graduate students and junior faculty in the U.S. and Canada. Application deadline: March 1. Applications may be obtained from the Society, Broadway at 155th St., New York, NY 10032.

June 21–25, 1989: The 1989 Summer Conference on History, Philosophy and Social Studies of Biology, will meet at the U. of Western Ontario. The conference is international and it is intended to foster informal interdisciplinary cooperation. Contact: J. Griesemer, Dept. of Philosophy, U. of California, Davis, CA 95616.

July 5 to August 11, 1989: The Newberry Library Center for Renaissance Studies will offer a summer
in Spanish/Hispanic-American archival sciences. For further information, contact the Center for Renaissance Studies, Newberry Library, 60 W. Walton St., Chicago, IL 60610.


Summer, 1989: The Intellectual World of Columbus, a five-week NEH Institute is planned by the Medieval Renaissance Center of U.C.L.A., in conjunction with the Quincentenary Programs (1992) celebrating Columbus’ discovery of America. The Institute will explore Italian humanistic and scientific thought, Iberian culture and society, and earlier Portuguese and Spanish explorations. For further information contact: Fredi Chiappelli, Director, Medieval Renaissance Center and U.C.L.A. Quincentenary Programs, U.C.L.A., Los Angeles, CA 90024.

August 1–9, 1989: Science and Political Order / Wissenschaft und Staat, the XVIIth International Congress on the History of Science, will be held in Hamburg and Munich. Abstracts are welcome, and competitive travel grants are available to participants. For information, contact M. Kranzberg, School of Social Sciences, Georgia Inst. of Technology, Atlanta, GA 30332, or C. Pursell, Dept. of History, Case Western Reserve U., Cleveland, OH 44106.

September 13–16, 1989: The International Association for History and Computing will hold its 4th annual international conference in Bordeaux. The conference will focus on three chief themes: I. History and Computing: Quantitative Methodologies; II. Bibliographical Computerised Data-Bases in History; III. The Teaching of History and Computing. Send proposals for papers and demonstrations by January 15, 1989 to: IVe Conférence Internationale d’Histoire et Informatique, Maison des Pays Ibériques, Université de Bordeaux III, Domaine Universitaire, F 33405 Talence Cedex (France). Proposals must be accompanied by an abstract of no more than two pages, written either in French or in English. It is expected to publish proposals bearing on themes I and II, but proposals bearing on other subjects will be accepted after examination by the Program Committee, though they will not necessarily be published. Proposals for demonstrations must be accompanied by a precise description of the necessary hardware.

May 3–6, 1990: AVISTA's Fifth Annual Conference, on Transportation as Depicted in Medieval Art and Literature. See CALL FOR PAPERS in this issue.

July 2–7, 1990: The next International Congress on the Fifteenth Century will be held at the U. of Perpignan. Suggested session topics include Art; Schools and Universities; Oral and Written Literature; The Self and the Individual; Daily Life; Court and Culture; The Seven Deadly Sins in Art and Literature; Feasts, Festivals and the Theater; Voyages and Discoveries; Animals in Science, Art and Literature; and Open Sessions. Interested participants should send one-page, double-spaced abstracts in English, French or German to Edelgard E. DuBruck, Dept. of Modern Languages, Marygrove Coll., Detroit, MI 48221. Abstracts should give name and affiliation or current address at top of page and include requests for A-V materials. Presentations will be limited strictly to 20 minutes. Acceptance letters will be sent by September 1, 1989. ACLS travel grant applications will be due March 1, 1990. Accepted papers may be submitted for consideration for publication in Fifteenth Century Studies.

Events at the Folger Institute:
Evening Colloquium: Medieval and Early Modern Religion and Popular Culture, discussion group coordinated by J.B. Collins and J.A.H. Moran (Georgetown U.).
Spring 1989 Seminar: Technologia: Language and Technical Knowledge from the Renaissance to the Enlightenment, directed by O. Hannaway (Johns Hopkins).

For further information contact:
Bibliography of the AVISTA Library

The AVISTA Library contains books, articles, and unpublished materials contributed by AVISTA members and others. Housed in Magill Library, Haverford College, Haverford, Pennsylvania, all published items and some unpublished material may be obtained through inter-library loan. Remaining unpublished material may be consulted in Magill library. For a complete listing of the collection, consult the previous issues of AVISTA FORUM. Members are encouraged to make use of the collection and to contribute their published works. Direct material to the attention of Charles Stegeman, 2 College Circle, Haverford, PA 19041 (USA).

PERIODICALS

AVISTA FORUM: 2.2 (Spring 1988)

Medium Aevum Quotidianum: Gesellschaft zur Erforschung der materiellen Kultur des Mittelalters, Krems, Austria, Vol.14 (1988). Contents include abstracts of papers delivered during a congress, Mensch und Objekt im Mittelalter und in der frühen Neuzeit Leben—Alltag—Kultur. The congress, held from 27–30 September 1988, was sponsored by Medium Aevum Quotidianum and the Institut für mittelalterliche Realienkunde Österreichs. Papers and discussions from the congress will be published in full towards mid-1990 in the Veröffentlichungen des Instituts für mittelalterliche Realienkunde Österreichs. Abstracts published in the present journal are as follows:


PESEZ, Jean Marie (Lyon). L’histoire de la culture matérielle du Moyen Age. Théorie—méthodes—bilan des recherches, 10–1.


KLANICZAY, Gábor (Budapest). Daily life and the Elites in the Later Middle Ages—the Civilized and the Barbarians, 16–7.


SCRIBNER, Robert (Cambridge). The Impact of the Reformation on Daily Life in Germany, 23.


SOSSON, Jean-Pierre (Bruxelles). Les images et la culture matérielle au bas Moyen Age, 30–1.

PIPONNIER, Françoise (Paris). Le costume et la mode au Moyen Age, 32.


Two abstracts by Ulf DIRLMEIER (Siegen) and Robert DELORT (Paris/Genf) were not included. Vol. 14 also contains two reviews of potential interest to AVISTA FORUM readers:


ARTICLES AND ESSAYS


BONKALO, Ervin. Architecture: Oh, Those Hospitals... City Magazine (Winnipeg, Manitoba, Canada) 9.3 (Fall 1987): 33–4.


**BOOKS**


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**Annual Business Meeting of AVISTA**

**Summary of Minutes**

6 May 1988, Kalamazoo, Michigan

The third annual meeting of the General Assembly and the fourth annual meeting of the Board of Directors were held consecutively on May 6, 1988, commencing at 5:15 P.M., at the 23rd International Congress of the Medieval Institute of Western Michigan University, Kalamazoo, Michigan. Charles Stegeman, President, presided over the meetings, and Marie-Thérèse Zenner, Secretary, recorded the minutes.

The President explained that the first order of business was to elect four officers and two directors for a three year term. One director’s position had been left vacant by the deeply regretted death of Lynn White, Jr., on 30 March 1987. As Charles M. Radding, Chairman of the Nominating Committee, was not present, the election could not be held, and the President announced that this election would be handled at a future time.

The President called for a volunteer to serve as the 1989 Chairman of the Nominating Committee, as five board positions and the terms of two officers will expire in May, 1989. Vivian Paul motioned that William W. Clark be nominated in absentia. The President seconded the motion.

The President announced that Carl F. Barnes, Jr., had offered to organize and chair two sessions on Villard de Honnecourt at Kalamazoo in 1989. The Secretary agreed to submit this request to the Medieval Institute and to advertise a call for papers in the appropriate journals. The President called for suggestions of topics for Kalamazoo in May, 1990. Vivian Paul suggested the following additional topics to be considered for the future: materials and methods; the making of stained glass; daily life; confrontations, contacts, and exchanges with East and West; banking (“gold & silver” or “of gold and greed,” which would include alchemy).

The President announced that an editorial board would be formed over the summer to assume the work
It was suggested that the editorial board could advertise requests for Notes & Queries in journals of societies such as The Society for Architectural Historians, American Oriental Association, American Institute of Archaeology, and in journals such as *Speculum* and *Gesta*.

Vivian Paul suggested that AVISTA members be surveyed in order to circulate a general list of photographs in the private collection of members, which could be of use to others, thereby aiding in reducing the extraordinary cost involved in obtaining photographs from outside sources for the purpose of illustrating scholarly articles. It was also suggested that members with access to non-English bodies of literature contribute summaries or reviews of work being done abroad. For example, Gerhard Jaritz was asked to write about articles written in Czech, etc., and Serim Denel offered to contact members of the Technical Institute in Istanbul, regarding AVISTA.

Vivian Paul suggested that future business meetings be held at an earlier time, preferably during the lunch hour. There being no further business, the President adjourned the meeting at 6:30 P.M.

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The deadline for the Spring 1989 issue is March 1, 1989.
Please send your contributions to the appropriate editors, or to the Editor-in-Chief.

**Editor-in-Chief**

**Michael T. Davis**, 233 Mosier Street South, Hadley, MA 01075

**Article Reviews**

(Science & Technology) **Pamela O. Long**, 3100 Connecticut Avenue NW, Apt. 137, Washington, DC 20008

(Art & Architecture) **Carl F. Barnes, Jr.**, Center for the Arts, 231 Varner Hall, Oakland University, Rochester, MI 48063

**Notes & Queries**

**George Ovitt**, Department of Humanities, Drexel University, Philadelphia, PA 19104

**News, Papers, Activities**

**Carol L. Neuman de Vegvar**, Fine Arts Department, Ohio Wesleyan University Delaware, OH 43015

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