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Detail of Gunzo's dream of Cluny

AVISTA NEWS

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AVISTA SESSIONS AT KALAMAZOO 2000

JEAN GIMPEL: FIVE DECADES OF MEDIEVAL TECHNOLOGY, SCIENCE AND ART
Thirty-fifth International Congress on Medieval Studies
Western Michigan University
4-7 May 2000

Please note: times are tentative pending approval

MEDIEVAL TECHNOLOGY
Friday, 5 May: 1:30-3:00 p.m.
Sponsor: *AVISTA*
Organizer and Presider: Kelly DeVries (Loyola College)

Charles Stegeman (Haverford College),
Gimpel and the Legacy of Medieval Technology

Bert Hall (University of Toronto), *The Gunpowder Cookbook: Reconstructing the History of Gunpowder from Recipe Texts*

Alan M. Stahl (American Numismatic Society), *Technological Innovation and Control at the Medieval Venetian Mint*

Paul J. Gans (New York University),
The Medieval Horse Harness: Revolution or Evolution? A Case Study in Technological Change

MEDIEVAL SCIENCE
Friday, 5 May: 3:30-5:00 p.m.
Sponsor: *AVISTA*
Organizers: Charles Stegeman (Haverford College) and Marie-Thérèse Zenner (CNRS—Poitiers)
Presider: Marie-Thérèse Zenner

John D. North (University of Groningen, *emeritus*),
Diagram and Thought in Medieval Science

Stephen McCluskey (West Virginia University),
The Uses of Astronomy in the Early Middle Ages

Wesley M. Stevens (University of Winnipeg), *Euclid or Not?*
Assessing Geometry in 32 Latin Manuscripts

PRACTICAL GEOMETRY OF PLATE TRACERY
Friday, 5 May: 5:15-6:00 p.m.
A hands-on demonstration Bob Greenberg, architect (Ryerson University)

PRACTICAL GEOMETRY FROM THE SEVENTH TO THE FIFTEENTH CENTURY
Saturday, 6 May: 10-11:30 a.m.
Sponsor: *AVISTA*
Organizer and Presider: Marie-Thérèse Zenner
(CNRS–Poitiers)

Robert D. Stevick (University of Washington),
The Art of Radically Coherent Geometry

Renaud Beffeyte (ARMEDIEVAL), *A Platonic Dialogue on the Villard Portfolio* – special session by an artisan trained in the same oral tradition of *compagnonnage* as Villard

Richard J. Betts (Univ. of Illinois at Urbana-Champaign), *'No art is perfect without mathematics': Geometry and Design in the Treatises of Francesco di Giorgio (1439-1501)*

PORTFOLIO OF VILLARD DE HONNECOURT
Saturday, 6 May: 1:30-3:00 p.m.
Sponsor: *AVISTA*
Organizer and Presider: Carl F. Barnes, Jr. (Oakland University)

William W. Clark (Queens College and Graduate Center–CUNY), *Reims Cathedral in the Portfolio of Villard de Honnecourt*

Jennifer S. Alexander (University of Nottingham), *Masons' Marks in the Portfolio of Villard de Honnecourt*

Roland Bechmann (Atelier d'Aménagement et d'Architecture, Paris), *The 'Saracen's Tomb': A New Interpretation of Folio 6r in the Villard Manuscript*

Janet Snyder (West Virginia University), *Costumes in the Portfolio of Villard de Honnecourt*

GOTHIC ARCHITECTURE
Saturday, 6 May: 3:30-5:00 p.m.
Sponsor: *AVISTA*
Organizer and Presider: Stephen Murray (Columbia Univ.)

Malcom Thurlby (York University), *Aspects of Gothic Vault Construction in England 1175-1330*

William B. Folkestad (Central Washington University),
Gothic Windows at Saint-Denis

Meredith Cohen (Columbia University), *The Sainte-Chapelle of Paris: Locus Sanctus or Locus Regius?*

Robert Bork (University of Iowa), *Rock, Spires, Paper: Some Technical Aspects of Gothic Spire Construction*

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ARTICLES

WARRIOR KINGS AND SAVVY ABBOTS: THE SACRED, THE SECULAR, AND THE DEPICTION OF CONTEMPORARY COSTUME ON THE CROSS OF THE SCRIPTURES, CLONMACNOIS[1]

Margaret M. Williams
Columbia University

To Distinguish the Honour of Each by his Raiment

The **Annals of the Four Masters** tell us that, in "the Age of the World, 3664" (c. 1530 B.C.E.), Eochaidh Eadghadhach devised a grammar of Irish garments:

> "He was called Eochaidh Eadghadhach (Eochaidh the clothes designer) because it was by him the variety of color was first put on clothes in Ireland, to distinguish the honour of each by his raiment, from the lowest to the highest. Thus was the distinction made between them: one colour in the clothes of slaves; two in the clothes of soldiers; three in the clothes of goodly heroes, or young lords of territories; six in the clothes of ollavs (chief professors); seven in the clothes of kings and queens."[2]

Although it is unlikely that Eochaidh's exacting system was meticulously adhered to over the course of centuries, it is clear that the color, design, and quality of a person's attire were unmistakable visual indicators of gender, rank, and occupation in ancient and medieval Ireland. Not only did the language of dress determine the character of social interaction, but the depiction of familiar costumes in the visual arts also participated in a subtle cultural dialogue.[3] This paper offers a new perspective on the depiction of four figures in elegant costumes on the Cross of the Scriptures at Clonmacnois. These images have frequently been cited as empirical evidence for the appearance of elite Irish dress prior to the twelfth-century Anglo-Norman invasions.[4] While both written and archaeological evidence support this claim, the carvings are not simply direct translations of Irish fashions into stone. As I will demonstrate, the figures' elaborate costumes both reflected and reinforced the communicative role of dress in early medieval Irish culture.

The figures in question appear in two of the reliefs that adorn the cross's east face (Fig. 1). In the lowermost panel, an individual in a long, richly ornamented tunic and cloak turns to face a bearded man with a shorter garment and a large, Danish-type sword[5] (Fig. 2). A slender cylindrical object that appears to be a staff or vine divides the scene. Both men grasp the central object and step towards it in a gesture of collaboration. In the panel directly above, two bearded figures wear long, close-fitting tunics and cloaks fastened with prominent ring brooches (Fig. 3). Large swords hang from their belts and they appear to be passing an oblong object between them, a gesture of cooperation similar to the one in the image below.

Despite the precise articulation of these figures' costumes, the scenes' iconography has proved challenging to identify. Scholars have argued that they illustrate episodes from the
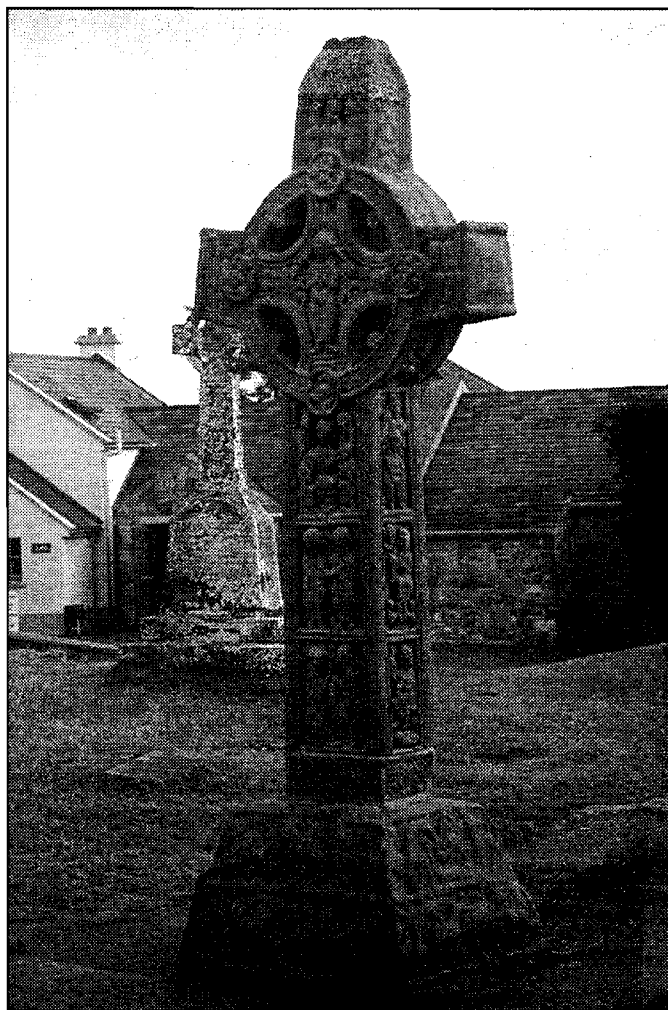
Fig. 1: Clonmacnois, Cross of the Scriptures, east face (photo: M. Williams)

Joseph story, hagiographical anecdotes from the Life of Saint Ciarán, and depictions of contemporary historical individuals.[6] I will show that these two carvings, like many medieval images, resonate on a number of levels, incorporating references to the Bible, the lives of the saints, and contemporary politics. In fact, the figures' costumes trigger a range of associations that enrich the cross's significance by linking the monastic brethren with the Irish nobility.

As in many areas of early medieval Europe, the boundaries between political and religious institutions in pre-Norman Ireland were highly permeable. Much has been made of the violent encounters between monastic communities, Irish kings, and Viking invaders, but in reality such interactions were subtly nuanced, resulting in alliances that were not consistently destructive but often beneficial.[7] On numerous occasions, regional kings interacted with ecclesiastical leaders on both an ideological and a practical level, engaging in an ongoing dialogue about basic social structure, the hierarchy of status, and the characteristics of appropriate rulership.[8] The most powerful members of Irish society orchestrated an equal exchange of access to their respective domains: the monks received land, financial support, and military protection, while the nobles obtained spiritual guidance, the promise of salvation, and the assistance of the clergy as mediators in political disputes.[9]

In each of the two reliefs on the Cross of the Scriptures, the composition evokes an instance of collaboration, and the figures' decorated cloaks, prominent weapons, and conspicuous jewelry identify them as high-ranking individuals. Rather than emphasizing the subjects' particular identities, the sculptors have defined their relationship to one another, highlighting both the inextricable links between the ecclesiastical and lay arenas and the powerful bonds between secular noblemen. These are wealthy and sophisticated men whose ability to cooperate with one another provided the stable social scaffold that insured peace and security for the ecclesiastical community and its dependents. The depiction of fine clothing on the Cross of the Scriptures at Clonmacnois acts as a kind of visual analogue of the interactions between lay society and the ecclesiastical world.

The Cross of the Scriptures at Clonmacnois

The Cross of the Scriptures, *Cros na Screaptra* in Old Irish, stands amid the ruins of the early Christian monastery of Clonmacnois, once a bustling center of activity[10] (Fig. 1). Although *Cluain moccu Nóis* (the meadow-land of the descendants of Nós) was initially founded as a small ascetic colony of nine, the settlement quickly grew to be a large, diverse community. By the time the Cross of the Scriptures was erected in the early tenth century, Clonmacnois was a prominent and wealthy proto-town with a population of nearly five hundred souls. Those in orders lived at the center of the site, closest to the relics of the founding saint, where they fostered noble children in the monastic school and welcomed the abandoned, the destitute, and the famine-stricken into their ranks. Recent archaeological excavations have shown that the sacred core of the monastery was abutted by a village of lay tenants who performed most of the agricultural labor that supported the monks in exchange for spiritual guidance and land.[11]

The cross, one of several surviving monuments on the site, is a magnificent monolithic structure made from a single block of sandstone millstone grit, a type of stone found at the foot of Slieve Bernagh mountain some thirty-five miles to the southwest of Clonmacnois. The completed sculpture takes the form of a massive Latin cross with a prominent ring encircling the intersection of its shaft and arms, and it measures almost four meters in height. Every surface is adorned with relief carvings including figural scenes and panels of intricate geometric designs. Depictions of Christ in the Tomb, Christ's Arrest, and The Rending of Christ's Garments occupy the west face (Fig. 4), while the *Traditio Clavium* appears above the two scenes under consideration on the east (Fig. 1). The narrow north and south sides of the cross include a variety of themes, among them David Playing his Lyre, Saint Michael Slaying the Dragon, and A Cleric Plaiting or Cutting Another's Hair. The cross's head is decorated with a Crucifixion on the west side and a Last Judgment on the east, and the base is carved with scenes of chariots and animals.[12]

An inscription has been used to date the monument and has often been cited as confirmation of some of the figures' identities (Fig. 2). Beginning on the west face and continuing on the east, the inscription has been reconstructed as:

ORDORIGFL.IND MMA
N
ROITDORIGHERENNOR

Pray for Fland, son of Maelsechnaill,
prayer for the king of Ireland; prayer...

DOCOLMANDORRO
ANCROSSAAR
RIGFL.ND
...for Colman, who made this cross for King Fland[13]

King Flann or Fland Sinna was a member of the Clann Cholmáin branch of the powerful Uí Néill family, and he defeated Cormac Mac Cuilennáin at the Battle of Belach Mugna in 908. With his victory, Fland solidified his family's hold on the high kingship of Ireland, and he ruled the country from 877 to 914 C.E. Fland's triumph was a significant accomplishment, as there were approximately one hundred and fifty regional kings in early medieval Ireland, all vying for positions within the power hierarchy.[14] Fland Sinna's patronage of the Cross of the Scriptures at Clonmacnois was undoubtedly a public statement of his achievement as well as a permanent prayer of thanks for his success. While the inscription clearly designates Fland as the person to whom the cross is dedicated, Colman's role is less certain: he may have been a co-patron, designer, or perhaps even sculptor.[15] He has been identified as Abbot Colman Conaillech (died c.921), a contemporary of King Fland, a discovery that provides an early tenth-century date for the Cross of the Scriptures.[16] The construction of the monument certainly must have incurred great expense for the transportation of megaliths and the employment of designers and craftsmen, and the inscription suggests that Fland was

Fig. 2: Clonmacnois, Cross of the Scriptures, east face, figures of a cleric and a warrior (photo: M. Williams)

largely responsible for the costs. Fland's generosity and connection to Clonmacnois are commemorated eternally in the Cross of the Scriptures, and his patronage also extended to the erection of a new stone church in the same period. According to the **Annals of Clonmacnois**, this architectural project also involved Abbot Colman in some capacity, confirming that the two men pooled their resources on more than one occasion.[17]

The *Léine* and *Brat*:

Each of the four figures on the Cross of the Scriptures is wearing a variation on a type of noble costume known as the *léine* and *brat*. The *léine* was a sleeveless smock-like garment of variable length that was sometimes hooded. It could be made of unbleached or white linen—or silk on rare occasions—and sometimes had a decorated hem.[18] This light undergarment was covered by a *brat*, a brightly-colored, four-cornered shawl made of wool that could be wrapped around the body and fastened with a brooch.[19] Several scholars have recognized and described these costumes in the Clonmacnois reliefs, but none has addressed the significance of the images in their social settings. Although the figures' precise identities are virtually irretrievable, their elaborate clothing reveals their elevated status, and their gestures of cooperation represent their symbiotic relationships.

Literary sources such as the epic tale **Táin Bó Cuaílnge (The Cattle Raid of Cooley)** describe elaborately decorated examples of the *léine* and *brat*. In the **Táin**, the fiercest Irish warriors battle one another for the possession of the Brown Bull of Cuaílnge, believed to be the finest animal in the country. Cattle were a valuable commodity in early medieval Ireland and raids on others' herds were a common occurrence. Several passages in the **Táin** are devoted to describing the noblest Irish warriors arrayed in their most terrifying and impressive garb.20 While the text does not define a strict one-to-one correlation between costume and rank, it certainly suggests that the *léine* and *brat* denote an individual's nobility and military prowess. On the night before the final conflict of the tale, twenty noble warriors in elegant costumes lead companies of some three thousand men each onto the battlefield. A scout describes their leader, Conchobor, king of the province of Ulster:

> "Finest of the princes of the world was he among his troops, in fearsomeness and horror, in battle and in contention. Fair yellow hair he had, curled, well-arranged, ringletted, cut short. His countenance was comely and clear crimson. An eager grey eye in his head, fierce and awe-inspiring. A forked beard, yellow and curly, on his chin. A purple mantle fringed, five-folded, about him *(fúan corcra corrtharach caeicdiabuil imbi)* and a golden brooch in the mantle over his breast. A pure white, hooded shirt with insertion of red gold he wore next to his white skin *(Léine glégel chulpatach ba dergintluid do dergór fria gelchness)*. He carried a white shield ornamented with animal designs in red gold. In one hand he had

a gold-hilted, ornamented sword, in the other a broad, grey spear. That warrior took up position at the top of the hill and everyone came to him and his company took their places around him."[21]

In the **Táin**, this type of costume is ascribed to Bronze Age warrior-kings; however, most scholars agree that the story was recited orally long before being transcribed in the eighth or ninth century, and the text only survives in manuscripts of twelfth-century date.[22] Consequently, although the content of the narrative is believed to be primarily pre-Christian, certain details such as costume may resonate with an early medieval sensibility as much as with Bronze Age tastes.[23] Similarly, the **Annals of the Four Masters**—which describe Eochaidh Eadghadhach's early attempt to regulate fashion—is a seventeenth-century compilation of sources that range in date from the eighth to the seventeenth centuries. Both texts illustrate that the *léine* and *brat* was a fashion that survived for thousands of years, becoming increasingly venerable with age. By the ninth or tenth centuries, when the Cross of the Scriptures was carved, the *léine* and *brat* were firmly established as the traditional dress of the ancient Irish warrior-kings.[24]

Even though the *léine* and *brat* were not exclusively Irish fashions—in fact, they closely resembled the Roman *tunica* and *sagum*—they certainly differed from the early tenth-century norm.[25] Around the time that the Cross of the Scriptures was erected, most northern Europeans, including the Scandinavians who had become a permanent fixture in Irish society, wore a type of costume that consisted of a short tunic and breeches.[26] Such attire allowed freedom of movement and provided warmth in colder climes, and it may have been worn by the lower classes in Ireland. By contrast, the *léine* and *brat* provided less protection from the cool, humid Irish weather.

The colorful details of such fine costumes may have originally been painted onto the carvings on the Cross of the Scriptures, although no traces of polychromy survive.[27] Both written and archaeological evidence confirm that Irish clothing

Fig. 3: Clonmacnois, Cross of the Scriptures, east face, two warriors (photo: M. Williams)

could be dyed many different colors, the most common shades being a dark-brownish yellow, purple or crimson, and green. Mention is also made of black, grey, brown, variegated, and striped costumes.[28] In the seventh- or eighth-century Old Irish law-tract, **Senchus Mór**, a statute appears that recalls Eochaidh Eadghadhach's early sumptuary law:

> "According to the rank of each man, from the humblest man to the king, is the clothing of his son. Blay-colored, and yellow, and black, and white clothes are to be worn by the sons of inferior grades; red, and green, and brown clothes by the sons of chieftains; purple and blue clothes by the sons of kings."[29]

The author of this text points out that this system was not always legally monitored, but was nonetheless customary:

> "No book mentions a difference of raiment, or that there should be any difference in their clothes at all. But the custom now is as follows: Satin and scarlet are for the son of the king of Erin, and silver on his scabbards, and brass rings upon his hurling sticks, and tin upon the scabbards of the sons of chieftains of lower rank, and brass rings upon their hurling-sticks..."[30]

The splendor of a nobleman's *léine* and *brat* could be further enhanced through the addition of embroidered details. The exquisite quality of Irish embroidery and the high regard for its makers were well known in this period, as demonstrated by a reference to their value in the Brehon Laws:

> "For ornamental work, there is paid to the amount of value of an ounce of silver, for every woman who is an embroideress deserves more profit than even queens."[31]

Jewelry was also a badge of status and wealth. In the center panel on the Cross of the Scriptures, each man's *brat* is held in place by a large (pen)annular brooch on the right shoulder.[32] Many examples of this type of extravagant golden and jeweled Irish brooch have survived, such as the Tara Brooch of c. 750 C.E., and written and archaeological evidence suggest that the size and intricacy of a person's brooch was commensurate with his rank. **The Senchus Mór** associates:

> "...brooches of gold, having crystal inserted in them, with the sons of the king of Erin, and of the king of a province, and brooches of silver with the sons of the king of a territory, or a great territory; or the son of each king is to have a similar brooch, as to material; but that the ornamentation of all these should appear in that brooch."[33]

Such fine brooches, when used to hold a *brat* in place, were sufficient to indicate elevated status, but written sources like **Senchus Mór**, the **Annals of the Four Masters**, and **Táin Bó Cuaílnge** diverge on the precise identification of particular ranks. Indeed, it is unlikely that any sumptuary legislation would have been observed consistently from the Bronze Age through the early Middle Ages, and it is reasonable to assume that custom was often victorious over law. The depictions of fine jewelry and elaborately decorated costumes on the Cross of the Scriptures demonstrate that an elegant *léine* and *brat* clasped with a prominent ring brooch was sufficient to announce an early tenth-century individual's nobility. What is more, the appearance of such wealthy gentlemen on the cross
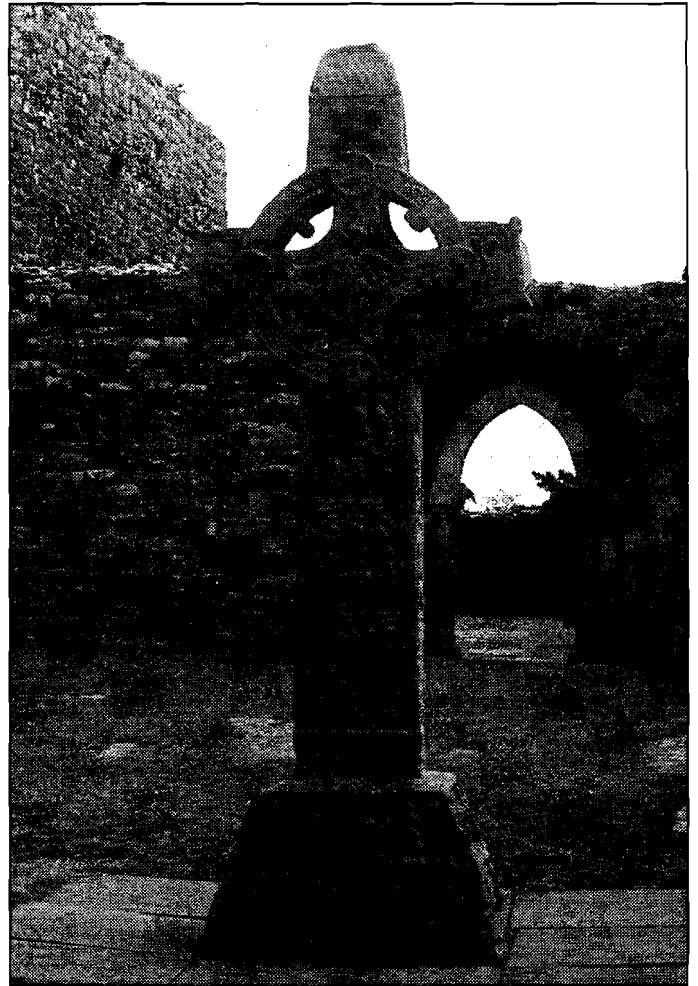
Fig. 4: Clonmacnois, Cross of the Scriptures, west face (photo: M. Williams)

indicates their intimate involvement with the ecclesiastical community at Clonmacnois.

Let, O Warrior, Thy Hand Be Over My Hand

In the lowermost panel on the cross's east face, two figures dressed in strikingly different costumes approach a central vertical object (Fig. 2). The figure on the left wears a richly adorned *léine* and *brat* carved with incised designs representing some combination of needlework decoration and applied gems or cabochons. Although these splendid garments imply that he is of an elevated status, his lack of a weapon and the small pouch draped over his back contrast sharply with the costume of the figure on the right side of the panel, whose shorter tunic, abundant beard, and prominent sword suggest that he is a warrior. This figure may have gathered up his *léine* and belted it, a common style for noblemen engaged in active pursuits.[34]

Most scholars have identified these two personages as a cleric and a warrior.[35] The left-hand figure's hooded *léine* might be a *caputiis (cochal)*, a hooded, cowl-like garment described by Gerald of Wales in 1188 C.E.[36] Gerald's two visits to Ireland centered on religious houses; consequently, the garments he describes were probably worn mainly by men of the church. In addition, the small bag that the figure carries resembles a book satchel similar to the fifteenth-century example that is now

associated with the Book of Armagh.[37] And, finally, his cropped hair and clean-shaven face may be the attributes of a cleric. Not only were appropriate methods of tonsure the topic of heated debates in early medieval Ireland, but a panel on the north side of the cross also depicts a cleric either cutting or braiding an abbot's or bishop's hair.[38]

The juxtaposition of a heavily armed soldier and a finely dressed churchman in this scene may initially seem incongruous; however, their gesture of cooperation sends a clear message. Both men grasp the central staff in a collaborative act whose significance is articulated through the alternating pattern of their hands. Whatever the iconography of this image, it functions as a powerful reference to the shared responsibilities of a warrior king and an ecclesiastical leader in sponsoring and maintaining the community at Clonmacnois.

Some scholars have suggested that this relief represents King Fland and Abbot Colman erecting the new stone church in the early tenth century. Although both figures grasp the central vertical object and lean towards it in an apparent effort to thrust it into the ground below, it does not resemble any familiar component of a stone structure. Not only does the object appear to be excessively tall and thin, but a strange serpent-like thread also winds around it, possibly lending credence to those who argue for a biblical interpretation of the scene. Roger Stalley has proposed that the spiraling form represents the Brazen Serpent, while Peter Harbison argues that the scene and its companion in the panel above are episodes from the Joseph story.[39]

As several writers have pointed out, the central object resembles a wooden post, a key element in another instance of reciprocity between a Clonmacnois supervisor and a lay ruler. According to the **Life of Saint Ciarán**, a future high-king named Diarmait Mac Cerbaill (died 565) helped the saint to erect the first post of his wooden church in the sixth century. At the time, Diarmait, a distant ancestor of Fland Sinna, was a fugitive from the reigning high king, Tuathal Maelgarb. Diarmait provided his services in the form of physical labor–or perhaps financial assistance, represented metaphorically as brute work–and he was rewarded by being appointed Tuathal's successor. Saint Ciarán declared his intention to reciprocate by saying, "Let, O Warrior, thy hand be over my hand, and thou shalt be in sovranty over the men of Ireland."[40] Whether or not Ciarán had any tangible effect on the outcome of the political situation, the implication is that Diarmait's generosity toward the saint was ultimately responsible for his success: each man summoned his most valuable resources to aid the other, and the result was an alliance that benefited both parties.

The dual impact of Ciarán's and Diarmait's agreement is analogous to the multivalence of the image itself. Both the appearance of the central post and the hand-over-hand gesture recall their sixth-century pact. At the same time, the juxtaposition of the panel with the inscription that names Abbot Colman suggests a direct relationship between word and image, linking the scene with contemporary events. Diarmait's genealogical link to Fland Sinna confirms the typological connection between the two episodes. In addition, the serpentine form that winds its way around the post contributes a biblical dimension to the carving. In fact, all of these tales and associations are encoded in the image and revealed through the figures' elaborate attire: the scene recalls Old Testament types and familiar legends, while simultaneously depicting the symbiotic relationship between contemporary noblemen and high-ranking ecclesiastics.

The central panel on the east face of the shaft has proved equally challenging to identify (Fig. 3). In this image, two figures pass an unidentified object between them, a gesture that has been interpreted as representative of sealing a pact.[41] Some scholars have suggested that these two figures are Ciarán and Diarmait formulating their agreement, while others have proposed that they are King Fland and his former enemy Cathal Mac Conchobair, King of Connacht, who negotiated a peace treaty around 900 C.E.[42] The **Annals of the Four Masters** report: "A meeting at Ath-Luain (Athlone, near Clonmacnois) between Fland, son of Maelseachlainn, and Cathal, son of Conchobhar; and Cathal came into the house of Fland under the protection of the clergy of Ciarán, so that he was afterwards obedient to the king."[43]

As in the image below, the precise identification of these two warrior kings is subordinated to their gesture of friendship. Their static, frontal poses suggest that they are not currently fulfilling their duties as warriors, despite their readiness for battle. They are wise and ethical leaders who seem to be involved in the business of political decision-making, but they keep their weapons close at hand in order to demonstrate their potential for military prowess. They may be formulating a peace pact, such as that reached between Fland Sinna and Cathal Mac Conchobair, and their gesture of exchange may symbolize the accord. What is more, their treaty may have been achieved with the assistance of an ecclesiastical negotiator, as was the case with Fland and Cathal. If so, this image recalls the constant presence of the Church in lay affairs, even if her representatives are not visible.

Although this relief cannot be conclusively identified as a portrait of specific patrons, it may be a generalizing depiction of members of the same rank or kin group. Their ornate brooches declare their nobility, and their long moustaches, plaited and forked beards, and prominent weapons are the attributes of secular individuals. The image certainly serves to pay homage to the wealthy and powerful laymen who protected and financed the monastery, whose family members might be in orders or in fosterage there, and who were probably also responsible for funding the cross itself.

The location of these two panels on the cross's shaft is also significant. A third panel depicting the *Traditio Clavium* appears immediately above them, and the Last Judgment is carved on the head (Fig. 1). The *Traditio Clavium*, in which Christ passes the keys to Peter on his right and the law to Paul on his left, evokes the related themes of the delegation of authority and the collective duties of leadership. As Christ hands the key to Peter, he consecrates the saint as the head of the church, and the implied transfer of authority resonates with the power negotiations in the two images below. Just as Christ had to rely on his earthly servants to maintain his Church, so the supervisors at Clonmacnois must turn to their neighbors in the secular realm to assist in the government and support of the ecclesiastical community.

On the head of the cross, atop all three reliefs, is an image of the Last Judgment. The alignment of this carving with the other three suggests that the laity's positive relationship with Clonmacnois will continue to bear fruit even in the afterlife.[44]

In the Last Judgment image, Christ appears holding a Latin cross and a tau-shaped staff against his chest. As Peter Harbison has perceptively noted, the staff or scepter could be a judicial attribute, but it could also refer to Christ's eternal priesthood.[45] The savior stands erect, with his head raised, as the dove of the holy spirit hovers above; he is victorious over death as confirmed by the cross he holds, a symbol of his Resurrection. This impressive personage passes judgment on the tiny figures who march along the cross's arms to his left and his right: those to his left are being herded along by a gruesomely deformed demon, while those to his right are being ushered towards him by a trumpeting angel. The absence of Michael weighing the souls in this depiction of the Judgment Day emphasizes Christ's sole responsibility for making the ultimate decision about the destiny of the individual's soul.[46]

The association of the Judgment scene with images of living noblemen and an ecclesiastic emphasizes the practical role of the Scriptures in the lives of earthly men. King Fland Sinna and his contemporaries are the individuals who will be judged and, like Christ who is depicted ascending into Heaven on the capstone, they will ultimately be saved and welcomed into the celestial community. The carvings on the Cross of the Scriptures visually include the laity in Christian history, welcome them into the Clonmacnois community, and proclaim the importance of the mutually beneficial alliances between the sacred and secular realms.

The Sacred, the Secular, and the Depiction of Contemporary Costume

Despite centuries of exposure to wind, rain, and encrustations of lichens, the stone carvings that adorn the surfaces of the Cross of the Scriptures at Clonmacnois remain discernible. In fact, in some cases, the decorative details of particular garments can still be seen clearly, indicating that the original sculpture must have been rendered with extraordinary precision. As I have shown, the meticulous portrayal of the *léine* and *brat* on the Cross of the Scriptures is not simply an illustration of the artists' interest in representing the visual world and the types of clothing that contemporary individuals wore. Rather, the sculpted garments provide visual clues to the figures' identities, ranks, and occupations as well as the scenes' significance. What is more, the profound signifying potential of fashion in ancient and early medieval Ireland is echoed in these relief carvings, where the figures' garments trigger a whole series of associations, from the biblical to the hagiographical to the contemporary.

In both of the panels that I have discussed, figures wearing elaborately decorated costumes interact with one another, coming together in acts of co-operation. Although conflicts undoubtedly arose from time to time, Clonmacnois' financial and political success was predicated upon her ability to maintain a level of congeniality in her dealings with lay neighbors. The relief carvings on the Cross of the Scriptures illustrate ideal examples of ecclesiastical-lay collaboration in a permanent, public forum.

The use of the vernacular in the cross's commemorative inscriptions constitutes the ultimate proclamation of the indispensable bonds between the Church and the world. The native language of the laity is literally inscribed on these immutable, public monuments, where Latin, the formal language of the

Church, would seem a more likely choice. The juxtaposition of fundamentally Christian imagery with depictions of secular costume parallels the interlacing of ecclesiastical and lay culture in this period, and the inclusion of vernacular inscriptions emphasizes the essential interconnectedness of the two realms. Just as actual sacred and secular leaders were interacting in socio-political circles, their carved likenesses were encountering one another on the surfaces of the high crosses. Indeed, the scenes simultaneously echo real-life reciprocities and promote the value of such alliances: they constitute a celebration of Clonmacnois' success—and especially Fland's and Colman's contributions—as well as a reminder that such relationships must remain under constant surveillance lest they, like the cross itself, begin to erode.

NOTES:

1. I would like to thank Michael Davis, Jackie Jung, Stephen Murray, and Gale Owen-Crocker for their valuable comments on the early drafts of this paper.

2. J. O'Donovan, ed., **Annala Rioghachta Eireann, Annals of the Kingdom of Ireland by the Four Masters** (hereafter, **AFM**), 6 vols. (Dublin, 1856):1, 42-45.

3. On dress as a system of non-verbal communication see R. Barthes, *The Garment System*, in **Elements of Semiology**, A. Lavers and C. Smith, trans. (New York, 1968): 25-28; J. B. Eicher, ed., **Dress and Ethnicity** (Oxford, 1995).

4. M. Dunlevy, **Dress in Ireland** (New York, 1989); M. Fitzgerald, *Insular dress in early medieval Ireland*, in **Anglo-Saxon Texts and Contexts**, ed. G.R. Owen-Crocker, **Bulletin of the John Rylands University Library of Manchester** 79/3 (1997): 251-61; H. F. Mc Clintock, **Old Irish and Highland Dress** (Dundalk, 1943); J. C. Walker, **An Historical Essay on the Dress of the Ancient and Modern Irish** (Dublin, 1818).

5. Viking swords were larger and stronger than Irish weapons, and the Irish adopted Viking arms from an early date in order to combat the invaders more effectively. See J. Graham-Campbell and D. Kidd, **The Vikings** (London: British Museum, 1980): 113-114; L. and M. De Paor, **Early Christian Ireland** (London, 1958): 105.

6. The lowermost scene has been identified as Joseph Interpreting the Dream of Pharaoh's Butler, Moses and the Brazen Serpent, Adam and Eve, King Fland Sinna and Abbot Colman Conaillech building a new stone church in the early tenth century, or Diarmait Mac Cerbaill and Saint Ciarán founding the monastery in the sixth century. The two standing figures in the center panel have been identified as the Chief Butler giving the Cup into Pharaoh's Hand, Dermot and Mael-Mor, Saint Ciarán and Diarmait Mac Cerbaill founding the monastery, and King Fland and Cathal Mac Conchobair or unknown noblemen or chieftains forging an alliance. For a complete description of these interpretations, see P. Harbison, **The High Crosses of Ireland: An Iconographical and Photographic Survey**, 3 vols. (Bonn, 1992): 49.

7. C. Doherty, *Exchange and Trade in Early Medieval Ireland,* **Journal of the Royal Society of Antiquaries of Ireland** 110 (1980): 67-89; P. Holm, *Between Apathy and Antipathy: The Vikings in Irish and Scandinavian History,* **Peritia: Journal of the Medieval Academy of Ireland** 8 (1994): 151-169; K. Hughes, *The Church and the World in early Christian Ireland,* in **Church and Society in Ireland, AD 400-1200**, ed. D. Dumville (London, 1987).

8. In a recent dissertation, Catherine Herbert argues for the significance of David imagery on the Irish high crosses as one component in "a dialogue on rulership between ecclesiastical authorities and their secular patrons." She also points to the similarities in the descriptions of an ideal secular ruler and an ideal abbot as recorded in the eighth-century *Collectio Canonum Hibernensis,* and a mid-seventh-century tract, *De duodeim abusivis saeculi* (On the twelve abuses of the world) by the Pseudo-Cyprian. C. Herbert, *Psalms in Stone: Royalty and Spirituality on Irish High Crosses* (Doctoral Dissertation, University of Delaware, 1997): 273, 287.

9. L. M. Bitel, **Isle of the Saints: Monastic Settlement and Christian Community in Early Ireland** (Ithaca, NY, 1990): 115-128, 149-150.

10. The Cross of the Scriptures takes its name from the annals. See D. Murphy, ed., **The Annals of Clonmacnois, being the Annals of Ireland from the earliest period to A.D. 1408** (hereafter **AClon**) (Dublin, 1896), 1060 C.E.: 178; **AFM** 1060 C.E.: 2, 879.

11. Bitel (as in n.9): 115-128; C. Doherty, *The Monastic Town in Early Medieval Ireland,* in **The Comparative History of Urban Origins in Non-Roman Europe: Ireland, Wales, Denmark, Germany, Poland and Russia from the ninth to the thirteenth century**, ed. H.B. Clark and A. Simms, British Archaeological Reports International Series (Oxford, 1985): 45-69; M. Herity, *The Building and Layout of Early Christian Monasteries before the Year 1000,* **Monastic Studies** 14 (1983): 247-284; H. King, *Burials and High Crosses at Clonmacnoise (Ireland),* paper presented at **Death and Burial in Medieval Europe: Papers of the 'Medieval Europe Brugge 1997' Conference**, (Zellik, 1997):127-131.

12. Harbison, **High Crosses** (as in n.6): 48-53.

13. Harbison, **High Crosses**: 356-357; idem, *The Inscriptions on the Cross of the Scriptures at Clonmacnois, County Offaly,* **Proceedings of the Royal Irish Academy** 79: C, no. 7 (1979): 177-188.

14. F.J. Byrne, **Irish Kings and High Kings** (New York, 1973): 266.

15. D. Mac Lean, *The Status of the Sculptor in Old-Irish Law and the Evidence of the Crosses,* **Peritia** 9 (1995): 125-155.

16. For a dissenting opinion, see Harbison, *Inscriptions* (as in n.13).

17. **AClon** (as in n.10), 901 C.E.:144. The **Annals of the Four Masters** confirm the church's construction under the year 904, and the building is explicitly described as a *diamhliag,* or stone church. **AFM** (as in n.2): 2, 904 C.E., 571.

18. The term *léine* appears quite frequently in the literary sources and the adjective *gel,* meaning bright, is often used to describe it. See C. O'Rahilly, ed. and trans., **Táin Bó Cúalnge from the Book of Leinster**, vol. 49, Irish Texts Society (Dublin, 1967). It appears to be a native word and may derive from a root meaning linen. See Dunlevy (as in n.4): 15-26; F. Shaw, s.j., *Irish Dress in Pre-Norman Times,* in **Old Irish and Highland Dress**, 2nd edition, ed. H. F. Mc Clintock (Dundalk, 1950): 12-13.

19. *Brat* also seems to be a native word, although it is of uncertain derivation. Several synonyms for this type of garment appear in the literature including *fuan, lend,* and *lumman.* A *corrthar*–a border or fringe that was woven separately–was sometimes attached to the *brat.* See Shaw (as in n.18): 12-13.

20. Once a warrior entered into the fray, he was likely to at least adjust, if not remove, his finery for the duration of the battle. There are references in the **Táin** to soldiers rushing naked into battle, and also to warriors' "battle-harnesses" which apparently consisted of leather protective gear. See T. Kinsella, ed. and trans., **The Táin: From the Irish Epic Táin Bó Cuailnge** (Oxford, 1969): 243. Classical authors also described the Celts fighting in the nude. In the first century B.C.E., Diodorus Siculus wrote, "Some of them have iron cuirasses, chain-wrought, but others are satisfied with the armour which Nature has given them and go into battle naked." See C.H. Oldfather, trans., **The Library of History of Diodorus of Sicily**, ed. E.H. Warmington, Loeb Classical Library (Cambridge, MA: Harvard University Press, 1970 (1939)): 3, 177.

21. O'Rahilly, **Táin Bó Cúalnge** (as in n.18): 119, 254.

22. Kinsella, **The Táin** (as in n.20): ix-xvi.

23. In particular, the frequent references to silk *léinte* (pl.) suggest an early medieval inflection because silk was probably not readily available in Ireland until the ninth or tenth century. Excavations in Dublin revealed imported compound silks, silk tabbies, and gold braids dating to the tenth century. See P. Wallace, *The Archaeology of Viking Dublin,* in **The Comparative History of Urban Origins** (as in n.11): 103-145 at 135.

24. On the notion of creating traditions, see E. Hobsbawm and T. Ranger, eds. **The Invention of Tradition** (London, 1983).

25. The *léine* and *brat* may have also gained popularity as an imitation of the Roman *sagum* and *tunica.* When writing in Latin, Irish authors often used the word *tunica* to describe a *léine*-like garment. See Shaw (as in n.18): 11-18.

26. Among scholars of Irish art, this style has come to be called the jacket and *truibhas* or *trius,* a word that appears to derive

from the Old French *trebus* which is also the origin of the English word trousers. Walker used the term cota to describe a shirt that fell to the loins, probably the so-called "jacket." See Walker (as in n.4): 9. Figures wearing a similar costume also appear in the Book of Kells on folios 200r and 130r, and on the Aghadoe Crozier, but the written sources do not refer to this costume as frequently as they do to the léine and brat, presumably because it was worn primarily by the lower classes. See also M.M.Williams, *"And they Clothed Him in Purple": Dressing the Church in Kingly Robes at Monasterboice, County Louth*, (forthcoming).

27. Traces of polychromy survive on continental sculptures, and it is reasonable to assume that Irish sculpture could also have been painted in this period, particularly considering the role of color in determining a person's rank and identity. Ireland's damp climate might be responsible for the erosion of any traces of paint.

28. O'Rahilly, **Táin Bó Cúalnge** (as in n.18). Yellow seems to have been a very popular color, which the Irish may have achieved by using a local plant called *buidh mor* (great yellow) rather than imported saffron. See Walker (as in n.4): 262. Purple dye also seems to have been made in Ireland. See F. Henry, *A Wooden Hut on Inishkea North, Co. Mayo*, **Journal of the Royal Society of Antiquaries of Ireland** 52/2 (1952): 163-178. Additional evidence for brightly-colored costumes comes from the illuminated manuscripts of the period, particularly the Book of Kells, Dublin, and also from the archaeological textiles found at Lagore crannog, which might have been dyed red. See L. Start, *Textiles*, in *Lagore crannog: an Irish royal residence of the seventh to the ninth centuries*, H. O'Neill Hencken, **Proceedings of the Royal Irish Academy**, 53C (1950-1): 1-247 at 214.

29. W.N. Hancock and T. O'Mahony, eds., **Ancient Laws of Ireland**, 6 vols. (Dublin, 1865-1901): 2, 147-149.

30. *Ibid.*

31. *Ibid.*: 5, 383.

32. The condition of the carving makes it difficult to determine whether these are annular or penannular brooches. Both types are circular, but the penannular variety has a gap in the ring. See S. Youngs, ed., **The Work of Angels: Masterpieces of Celtic Metalwork, 6th-9th Centuries AD** (Austin, TX, 1989): 214-215.

33. Hancock and O'Mahony (as in n.29): 2, 147-149.

34. According to the late twelfth-century parody of the popular vision-tale genre *Aislinge Meic Conglinne (The Vision of Mac Conglinne)*, Aniér Mac Conglinne, a famous scholar, pulled his long *léine* up over his belt in order to prepare for his walk from Roscommon to Cork. K. Meyer, ed. and trans., **Aislinge Meic Conglinne: The Vision of Mac Conglinne** (London, 1892). This could also be a depiction of a shorter tunic called a *léinte* or *leinidh*, but the extreme variation in Old Irish orthography suggests that all three words are simply alternate spellings for the same garment. See Mc Clintock (as in n.4): 121.

35. Harbison (as in n.6): 49.

36. J. O'Meara, trans., **Gerald of Wales: The History and Topography of Ireland** [London, 1982 (1951)]:101. On the *cochal*, see Walker (as in n.4): 12-13. This figure might also be wearing a type of footwear called "soleless stockings." See J. W. Barber, *Some Observations on Early Christian Footwear*, **Journal of the County Kildare Archaeological Society** 86, no.243 (1981): 103-106; A. T. Lucas, *Footwear in Ireland*, **The Journal of the County Louth Archaeological Society**, 13, no. 4 (1956): 309-394.

37. Although the satchel has been associated with the Book of Armagh, it probably originally held a larger object. See M Ryan, ed., **Treasures of Ireland: Irish Art 3000 B.C.-1500 A.D.** (Dublin, 1983): 178-179.

38. M. Walsh and D. O'Croinin, eds., **Cummian's Letter De Controuersia Paschali and the De Ratione Conputandi**, vol. 86, **Studies and Texts** (Toronto, 1988).

39. Harbison (as in n.6): 202-204; R. Stalley, *European Art and the Irish High Crosses*, in **Ireland and Europe in the Middle Ages: Selected Essays on Architecture and Sculpture** (London, 1994): 261-284.

40. W. Stokes, ed. and trans., **Lives of the Saints from the Book of Lismore** [New York, 1989 (1890)]: 276.

41. C. Neuman de Vegvar has recently suggested that the object could be a drinking horn, *Drinking Horns and Social Discourse in Early Medieval Britain and Ireland*, (New York: Columbia University's Medieval Seminar, 1997).

42. Harbison (as in n.6): 49.

43. **AFM** (as in n.2): 1, 900 C.E., 554.

44. For more on the inclusion of the nobility in the Clonmacnois community, particularly with respect to burial practices, see my dissertation *The Sign of the Cross: Irish High Crosses as Cultural Emblems*, Columbia University, forthcoming.

45. Harbison (as in n.6): 297-300.

46. On the depiction of the Last Judgment and its variations in the Irish High Crosses, see K. Veelenturf, **Dia Brátha: Eschatological Theophanies and Irish High Crosses** (Amsterdam, 1997).

A CRITICAL ACCOUNT OF THE STATE OF SOME QUESTIONS CONCERNING SUGER'S ARCHITECTURE AT SAINT-DENIS

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"We can pinpoint the origin of no previous style as exactly as that of Gothic. It was born between 1137 and 1144 in the rebuilding, by Abbot Suger, of the royal Abbey church of St.-Denis just outside the city of Paris." So says Horst Waldemar Janson in his ever-popular **History of Art** (fifth ed., 1995: 330). It is an assertion found in most of the literature on Gothic architecture, and most of the works under review here, however nuanced their interpretations of the building or of Suger, are still essentially in Janson's camp. Compare Christopher Wilson in 1990 where he describes "the Saint-Denis choir as one of the most innovatory of medieval buildings" (38), or Eric Fernie in 1995: "The twelfth-century abbey church of Saint-Denis is one of the most innovative buildings in the history of architecture" (85). More recently still (1998), Lindy Grant christens Suger's Saint-Denis "the crucible of Gothic" (262). The same evaluation can be found in the various works of William Clark, particularly **Medieval Architecture, Medieval Learning,** or in the discussions of Stephen Gardner or Peter Kidson, who speaks of Suger's "architect of genius" (11).

It seems rather extraordinary, given the current climate of canon- and genius-bashing, that no one has attempted a fundamental criticism of this notion of the enlightened patron and/or (an awkward conjunction too appropriate to avoid here) his genius architect single-handedly changing the course of art history. In spite of this apparent consensus concerning the building's importance for the architecture of Europe, the evaluations of Suger's Saint-Denis in the works cited here are in fact full of controversy and contradiction. In what follows, I would like to review some of these views. My criticisms will hardly constitute a full-scale barrage against the entrenched positions deployed above; they will at best provide some pesky enfilading fire. I am here concerned only with the architecture and not with the sculpture, glass, or other artworks with which Suger bedecked his new work, nor am I concerned with those aspects of Suger's life that do not bear on the architecture.

There has clearly been something about the architecture of twelfth-century Saint-Denis, and in particular of its chevet, that has fixed the attention and admiration of many sensitive viewers over the last two centuries. One wonders, however, if their gazes would have been quite so enraptured had they not had the words of Suger to accompany their visual perusals. The survival of Suger's texts describing his reconstruction and embellishment of Saint-Denis have been like water in the desert to medieval architectural historians parched from the general aridity of contemporary building documentation. A powerful ecclesiastical and political figure of a tumultuous and innovative century has left us an account of his revolutionary rebuilding-- what a happy circumstance in our consuming desire to link artistic change and discernible personality! Yet what if Suger's writings had not survived (they were written for local monastic consumption after all, and survived in only a few copies), but we had instead a long account by Archbishop Henri Sanglier

concerning his rebuilding of Sens Cathedral? Would Saint-Denis still occupy so lofty a position in the canon? What ifs are, of course, seductive dead ends, but it is important, I believe, to keep in mind how unusual it is to have an account like Suger's and to be aware of how much attention it has focused on a building that is, after all, only partially preserved.

Although I want to concentrate on the architecture rather than on Suger, the two are so closely linked in both reality and scholarship that it seems best to begin with a discussion of the abbot as patron, and particularly with the question of the degree to which Suger can be considered the designer or programmer of his new church. Scholars' answers have followed an interesting curve in the postwar period, by first attributing a high level of responsibility to Suger, then tacitly dropping him in favor of his mason(s), and now raising him high again, although for different reasons than those supporting his initial eminence.

In the immediate postwar period, Erwin Panofsky and Otto von Simson both considered Suger an extremely important figure for the design of Saint-Denis and the beginnings of Gothic art and architecture because both interpreted artistic change as part of a larger package of intellectual, religious, or political transformations. Both Panofsky and von Simson thought they could see in Suger's writings and life a novelty in these areas that must necessarily have influenced, or even inspired, his artistic patronage. It was Panofsky, of course, who set this tone in the introduction to his translations of Suger's writings, where he argued that Suger countered Bernard's criticism of monkish artistic hubris with the neo-Platonic light mysticism of the Pseudo-Dionysius whom he believed to be his house's patron saint. Panofsky laid out this thesis with such skill that it could still be accepted as a brilliant and uncontested piece of analysis by Norman Cantor in 1992 (in **The Invention of the Middle Ages**), a perfect example of Panofsky's ability to find the great Idea behind any significant artistic change. Panofsky was too clever and subtle to commit himself to Suger's literal authorship of the new work, although he came close: "To what extent he was responsible...for the very design of his structures is for others to decide. But it would seem that very little was done without at least his active participation" (36). Panofsky, the intellectual art historian par excellence, had here an exemplary case where patron, text, and artifact could mesh smoothly in a characteristically elegant formulation. Von Simson, who added a vast political sophistication to Suger's motivations in rebuilding Saint-Denis, was more concerned than Panofsky with the architecture itself. Although he would probably have liked to have named Suger architect of Saint-Denis, von Simson, writing as he did during the heyday of the modernist worship of structural progress, had to query "Had the service of an architect of genius become available to [Suger]? ...Suger by this time had at his side a man capable of realizing every one of his wishes" (101).

Panofsky was careful not to call Suger a thinker on the order of Abelard or Bernard, but his assumption that Suger could harness the obscurities of **The Celestial Hierarchies** to his artistic ends assumed an intellect that was, well, Panofskian. While few would doubt the force of Panofsky's intellect, doubters of Suger's talents did appear. Conrad Rudolph offered the most sophisticated rebuttal of the views of Panofsky and von Simson in his book of 1990, where he delin-

eated a less radical, but still complex view of Suger's justifications for his artistic endeavors. Rudolph continued to regard Suger (or his supposed intellectual amanuensis, Hugh of Saint-Victor) as essential to the artistic program, although Rudolph was more concerned with image-iconography than with the architecture itself. The sharpest attack on the Panofskian view of Suger's responsibility and its "dubious shade of the Pseudo-Dionysus" (Grant's phrase) came from Peter Kidson in 1987. Kidson noted acerbically how little of the Pseudo-Dionysius there really was in Suger's writings and how secondary the role Suger was likely to have played in the design of the building anyway, medieval church design for Kidson being primarily a matter of geometrical manipulation that would have been beyond all but a trained master mason. While Rudolph was equally critical of Suger's supposed interest in neo-Platonic light mysticism, he did not dismiss Suger's role so completely.

The gap of three decades between the Panofsky/von Simson thesis and its rebuttal by Rudolph and Kidson is indicative of the trough in the curve of scholarly regard for Suger's degree of responsibility for the invention of Gothic architecture. The prevalence of modernist assumptions that bound von Simson to provide Suger a structural engineer led, in more serious architectural historians, to Suger's virtual disappearance in the formulation of the new style. In Jean Bony's various studies treating Saint-Denis and in the work of the next generation of scholars, such as Stephen Gardner, John James, and William Clark (in the earlier two works cited here), Gothic appeared because masons made specific structural and stylistic decisions in specific situations. For Bony, Gothic really was in some sense "accidental" rather than willed in the spirit of Teutonic *zeitgeist*. Bony identified more possible "sources" for the new work at Saint-Denis than anyone else, and showed how the new rib vaults coming down the Seine from Normandy had to be reconciled with an archaic tradition of thin-walled construction. Reconciliation became invention. The inventors were masons.

I will discuss the views of Gardner, James, and Clark in more detail below, but I want first to complete my sketch of Sugerian historiography. For some recent writers on Saint-Denis, Suger's star as patron-with-a-vision seems on the ascendent once again, but for reasons very different than those that motivated Panofsky and von Simson. Where the earlier authors emphasized the novel, even progressive aspect of Suger's motivations, current authors now cast him as a conservative, backward-looking man. Their tendency is to see Suger's work at Saint-Denis as a retrospective endeavor in which architectural and sculptural forms are chosen because they emphasized the building's long and glorious history as a repository of the relics of one of the apostles of Christianity in France. Eric Fernie was one of the first to make the case for Suger's essential conservatism, and Grant's recent biography lays out the evidence in the most complete and convincing form. Similar views can be found also, in varying degrees, in the works by Wilson, John Onians, and Dieter Kimpel/Robert Suckale. In his most recent work, Clark has also returned to Suger's role in the building's program, emphasizing particularly the political importance to the Capetian dynasty of the revival of Merovingian forms. In all of these accounts, the appearance of a new style of architecture is seen, to a certain degree, as coincidental to Suger's expressed desire "for the concordance and

harmony of the ancient and the new work." Although most of these scholars would probably not approve of being simplistically labeled "postmodern," it is striking how their themes of retrospection, historical appropriation, and even irony– the creation of a radical new style through the agency of a conservative churchman looking backwards– fit so well the tenor of the late twentieth century.

Any critique of these views must wait on a discussion of the building itself, to which I now turn. Of all the many problems surrounding Suger's architecture at Saint-Denis (including the problem that much of it is no longer there) I believe the most important, and difficult, is to explain why the several parts of a church built in less than a decade look(ed) so different from one another. What explains the architectural diversity of Suger's Saint-Denis?

Architectural historians have long considered Suger's work at Saint-Denis to divide into two distinct, even opposing, styles. Suger's west block, with its massive piers, heavy rib and arch moldings, and relative darkness, has long sat uncomfortably with its virtually contemporary east end, full of light and lightness, with its large windows framed by en délit shafts and its thin monolithic columns supporting ribs of single rolls (Figs. 1, 2). The west block has been seen as an example of massive Romanesque structure, supporting itself (and its towers) through the deployment of thick masses of masonry; the

Fig. 1: Saint-Denis, west block interior, south wall of central vessel (photo: M.T. Davis)
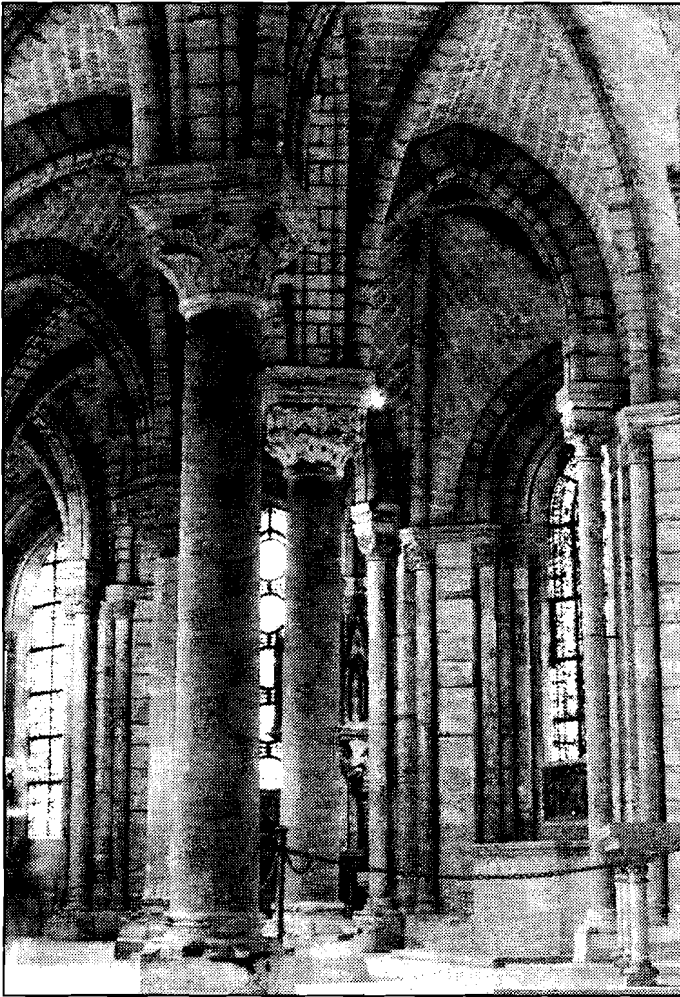
*Fig. 2: Saint-Denis, choir ambulatory and chapels
(photo: M.T. Davis)*

east end adumbrates the new Gothic system of "point support" where structural forces are concentrated at a few carefully calculated points set as far as possible on the periphery of the masonry envelope. Clark's view, set forth in **Medieval Architecture, Medieval Learning**, that the chevet shows a radically new way of holistic architectural thinking, seems to me overblown and does a serious disservice to the sophistication of Romanesque architectural planning and design.

According to the positivist way of thinking that has characterized most medieval architectural scholarship since its inception in the mid-nineteenth century, any change in formal vocabulary or construction, particularly one as radical as this, must imply the presence of two different builders. While scholars had long divided Suger's work at Saint-Denis between a western and eastern master, it was Stephen Gardner's accomplishment to qualify this division by pointing out that the man responsible for designing Suger's chevet must have first appeared on the scene while the western block was still under construction. Through a rigorous examination of the masonry and detailing in that block, Gardner was able to argue that the second master had come on the scene when only the lower west bays and a few courses of their upper chapels had been completed. This new master, the "inventor of Gothic," then completed those chapels and most of the eastern portions, on both levels, of Suger's west block before moving on to the eastern

work in 1140. Gardner's analysis has been accepted by most, though not all, scholars.

Here we must pause to pose a few questions about the implications of Gardner's thesis on Suger's involvement in the reconstruction of his church. For Gardner, as for Kidson and John James, architectural design seems entirely the province of masons--they carry their styles about with them as they do their tools and templates (for James these latter are almost synonymous with style) and take them away again when they leave, retire, or die. What was Suger's role in the change Gardner proposes? Did he fire the first master because he was unsatisfied with his work or because he thought that, although it might be acceptable for the west block, it wasn't what he wanted for the east end? Or did the first master leave (or die) of his own volition, whereupon Suger was forced to hire someone else, who just happened to be the genius who invented Gothic? Gardner himself thought that Suger referred to this change in *De Consecratione*, but the wording and sequence of events is ambiguous in the abbot's writing, and even if Gardner were right, we still do not know why Suger changed masons. Before proceeding further into the dense thicket of Suger's engagement with his masons and their designs, let us examine two other problems with Gardner's thesis.

The first problem is perhaps the most serious. As Gardner himself pointed out, the break between his two masters in the west block comes after several courses of the upper chapels had already been laid (and Grant has questioned whether this break is as clear as Gardner implied it was). These thus included the plain offsets articulating the chapels' outer corners–offsets far different from the complex responds of the ground floor, full of all variety of shafts and orders. While Gardner rightly points out that we will never know what details the first master might have chosen had he completed the upper chapels, and that the thin shafts articulating the windows and the single-roll ribs are entirely the work of the new master, it seems clear that the first master–or his employer–had decided to make the upper chapels simpler and more austere than the units supporting them. Because the thin window shafts and simple rib rolls provide the links with the east end, this observation does not fatally weaken Gardner's assertion that the second master of the west block also designed the chevet. However, it does reveal that our view of the first master is seriously distorted and has significant implications for Gardner's methodology (and not only his) as a whole. The first master, it seems, was capable of working in two styles. Either he or Suger decided that the upper chapels should differ considerably in their architecture from the entry bays below. Stylistic change seems consciously chosen, not the result of ineluctable art historical evolution. So we cannot explain the change in style in the west block as simply the result of the arrival of a new master mason, as Gardner's article implies.

The second objection is really an amplification of the first. Gardner virtually ignores Suger's additions to the early medieval crypt (he mentions the crypt in a footnote, but limits himself to comments on a few details he sees as diagnostic of the second master). To have considered the crypt seriously would have thrown too much cold water on his neat sequence. For the Saint-Denis crypt is in yet a third style: it is austere in comparison with the lower west block, but it is austere in a very different way than the upper west chapels, much less the choir

it supports. There are none of the thin shafts or ribs of the upper west chapels or ambulatory proper; instead we find planar groin vaults, chamfered responds and arches, and stocky round piers. Heavy acanthus capitals form a strong horizontal band. This unique and possibly archaistic architectural ensemble was, according to Gardner's sequence, designed by the second master chronologically between the upper west chapels and upper level east end. The second master, the inventor of Gothic, could also work in two styles.

If both of Gardner's masters could then work in two styles how do we know there actually were two masters instead of one or four or more, as John James would have it? James (*Multiple Contracting...*) has suggested four masters for the choir alone, on the basis of perceived stylistic differences. James's methodology, as a radical extension of Gardner's, is still less able to accommodate masters able to work in separate styles on demand, yet that is what the evidence at Saint-Denis actually suggests. There seems to be no inherent reason why, *pace* James's contention that masons had constantly to be traveling to stay employed while mortar dried, that a single master couldn't have remained on site with his work partially finished while a new quarry was opened or developed that produced differently sized stones (or while he designed new templates). Gervase's account of Canterbury a few decades later indicates that masters did indeed stay on site season after season until the work was finished. Gardner's theory of two masters (or James's of more), then, is a problematic one in spite of his careful archaeological analysis of the fabric.

The one author to come out clearly against Gardner's theory is Lindy Grant, in her splendid new biography of Suger. She states that "the west block, the crypt, and the upper shrine-choir were clearly intended to look very different" (254). If the differences were intentional, what fueled them? Grant herself offers a plausible explanation: "the west block is military and forbidding...the crypt has an archaic air, and retains the secrecy of the *confessio* it encapsulates. The upper choir...and...the four new nave bays, were designed to harmonize with the ancient nave to which they were attached" (254). In a book that is a biography of Suger rather than a history of the building, she has space only to develop the last part of this theory, because Suger himself states several times how concerned he was to have his new work blend with the old.

Grant is not the first to suggest that an innate conservatism in Suger's makeup led him to demand backward-looking features in his new building. Suger believed that the building he was replacing, or "completing," had been built in the seventh century by King Dagobert, the Merovingian founder of the monastery, and that the building had been miraculously consecrated by Christ himself. The most complete discussions of the archaic features incorporated in Suger's new work can be found in Fernie, Grant, and Clark (*Continuity and Contextuality...*), although other authors allude to them as well. These include everything from proportions, the raised choir, and the basic form of the west block to specific motifs such as the north tympanum mosaic, bronze doors, columnar piers, and the foliage arrangements of certain capitals. Clark points out how actual shafts and capitals of the older church were inserted into Suger's new work, especially his east end. Such architectural continuities were less a matter of aesthetics than a matter of meaning and symbolism: the antiquity and institutional history of Saint-Denis could be made visible through its physical fabric.

One of these archaisms in particular had important consequences for the architecture as a whole: this was the was the use of monolithic columns for the support of the building's elevations. The Carolingian church employed such columns and Suger thus wanted them for his church as well. He planned originally to bring columns from Rome, that mother-lode of *spolia*, but in the end found a local source for them. Suger's new columns would have included those still dividing the two ambulatory aisles, those in the now-reconstructed hemicycle, the three sets he added to the Carolingian nave to link it with his new west block and eventually those, twice as high, that would have graced his new nave, had he lived to complete it. Thin monolithic columns were antithetical to the heavily articulated style of most western European Romanesque architecture, and their appearance at Saint-Denis can only be the result of Suger's fiat. Although Suger seems to have demanded such columns for his new choir, he does not seem to have demanded wood roofs, and the result was that his mason had to figure out how to combine the newly fashionable rib vault with these spindly supports. The result was a thinned and "linear" elevation with, presumably, thin groups of vault shafts and an unusual sense of spatial openness in the double ambulatory. Here, many would say, was Gothic.

Wilson lays out this argument most convincingly, but John Onians offers it in its most radical form. For Onians, the column is always a "bearer of meaning" and the Saint-Denis columns were thus intentional departures from (equally symbolic) Romanesque piers. "The need for symbolic columns and the need for symbolic light were two decisive influences on the emergence of Gothic" (87). In this view, Gothic architecture, recently characterized by Marvin Trachtenberg as a "modernist" style in medieval eyes (in *Gothic/Italian 'Gothic': Toward a Redefinition*, **Journal of the Society of Architectural Historians** 50 (1991): 22-37), seems actually to have been invented to accommodate an archaistic feature.

Onians' second influence, the need for symbolic light, is one of the more common and accepted tropes of Saint-Denis interpretation. The long band of chapel windows was made possible by the new ambulatory plan with contiguous chapels and was made visible by the thinness of the columnar supports. Such windows were clearly high on Suger's list of architectural desiderata—he talks admiringly of them in his writings, and his frequent iterations about light are of course one of the reasons Panofsky made Suger into a neo-Platonic light mystic. Rudolph, although downgrading Suger to a more conventional user of light symbolism, nevertheless argues persuasively that ample windows were one of the things Suger would have cared most about. Grant is the first to point out, however, that Suger's lust for colored windows is also part of his desire to recreate the past, colored windows having characterized the Carolingian Saint-Denis, and color in general being abundant in the Roman churches, old or new imitating old, that Suger knew and admired from his sojourns in the papal city. Suger's role in determining the architecture of the choir might then be summed up in this imaginary order to his master mason: "Give me lots of easily visible windows for my stained glass and make the supports columns like those in the old nave." His master did as commanded, and the first Gothic building was the result. But

what did Suger's chevet actually look like?

One of the biggest problems for those who want Saint-Denis to stand at the head of all Gothic architecture is that the main elevation of Suger's choir was torn down less than a century later when Abbot Eudes Clément decided, finally, to replace the Carolingian nave and transept. It is telling that Eudes and his mason decided that Suger's choir had to go, even though they sedulously preserved his ambulatory, which meant supporting its vaults while new hemicyle piers were inserted to take the weight of the new, much higher, elevation. So far had French architectural fashion changed, or, better, risen in those decades, that Suger's once-innovatory elevation could no longer be adapted to a nave in the vertiginous style of the thirteenth century. It is possible that Suger's work was in structural difficulty, although the textual evidence is ambiguous. In spite of its loss, a relative consensus seems to exist concerning how we should envision Suger's choir elevation, although not concerning how it stayed up.

Crosby, Clark, Wilson, and Grant all see a three-story elevation similar to those at Saint-Germain-des-Prés or Vézelay, with an arcade on cylindrical piers, a false gallery with subdivided openings, and a clerestory with two windows per straight bay and one per hemicycle bay. Wilson give the clearest justification for this elevation, basing his reasoning on the east bay of the west block, on the thinness of the surviving supports in the ambulatory, and on other surviving buildings such as the two mentioned above. Wilson points out that the heights of the stories in the west block and new choir were clearly meant to match, and that a remodeled or rebuilt nave would have linked them. This circumstance weighs heavily against Fernie, who proposes a two-story elevation that would have copied the old nave more literally. Although it differs in some minor details (such as the articulation of the middle story), the Clark/Crosby reconstruction is in basic agreement with Wilson's.

Except for one hot-wired exception– Wilson adds flying buttresses to his reconstruction and spends ample space defending them in his text. Clark called Wilson's reconstruction "without foundation," certainly a damning criticism for flying buttresses, but in fact Wilson's argument is based precisely on foundations, or rather the surviving buttresses between the ambulatory chapels that would have provided the foundations for any putative flyers. In addition to arguing that in a building with such thin supports, flyers were structurally essential, Wilson points out that the deep projection and excessive height of these buttresses belies any contention that they were present only to buttress the chapel and ambulatory vaults. One possible argument against Wilson's advocacy of flying buttresses for Suger's choir (in addition to the radically early date that makes defenders of the traditional c.1180 date for their appearance see red) is the misalignment of some of the surviving chapel buttresses with the transverse arches of the ambulatory and thus, presumably, with the ribs of the original high vault (see p. 113, fig. 7, in Clark, *Suger's Church...*). Problems in the laying out of the ambulatory chapels around the old church and monastic buildings probably account for this irregularity, but it is one that may have made Wilson's flyers somewhat precarious. Misalignments are a fact of most medieval buildings, however, (there is a spectacular example of just this kind of misalignment of flyer and culée on the east side of the southwest transept at Lincoln Minster), and one might even surmise that such twists may have been the reason for structural problems appearing by the 1230s (although one could equally argue that the absence of any flying buttresses would have led to structural problems). We will probably never know for sure, but flying buttresses do seem to be creeping ever earlier into the twelfth century, and Wilson deserves credit for a bold and well-argued thesis.

John James (*Could Suger...*) has recently argued that Suger's chevet never had an elevation since the stated time Suger claims it took to build the east end--four years--would only have allowed for the crypt and ambulatory to have been constructed, given the time necessary for the drying of medieval mortar. While James argues his case with seeming plausibility, it seems inherently unlikely that the monks of as prestigious a house as Saint-Denis would have worshiped for almost a century facing a dark and single-storied space with a temporary wooden roof that nevertheless contained Suger's opulent new shrine for the bones of the apostle of northern France. It may be, in spite of Suger's words, that construction continued a bit beyond the consecration date; more importantly, we simply do not know enough about medieval construction methods to be able to recreate working conditions or materials with the precision that James would like.

Whereas the elevation of Suger's choir has been the subject of deserved speculation by many of the writers under consideration here, there are other lost parts of Suger's work that have not been treated, and I would like here to draw attention to them, because I think their absence skews our perceptions of the twelfth-century building. I begin with a relatively minor, but not unimportant example: the first piers of Suger's choir, following the eastern crossing piers of Fulrad's church, were compound, not cylindrical. Only a fragment on the northern one survives, discovered and reconstructed by Formigé in the 1950's. As Crosby says, this pier no doubt helped negotiate the change in floor level at this point between crossing and sanctuary and he illustrates it (or half of it) in his reconstruction of the choir elevation (264). The presence of this pair of compound piers compromises Suger's well-known comment about the number of columns and apostles being the same, for they need to be included to make the necessary twelve. Krautheimer has taught us, of course, that medieval writers could be fairly free and imprecise in their discussions of architectural iconography, but the situation at Saint-Denis makes it likely that Suger's use of column symbolism is a *post-facto* recognition rather than a motivating factor in the design as Onians, for example, would have it.

How, exactly, did Suger's choir join the earlier Carolingian crossing? In Clark's plan of the building, the Carolingian crossing remains intact, although the intermediate arcade is continued to the eastern line of the Carolingian transepts (*Continuity and Contextuality...*, 295). In Wilson's plan, on the other hand, the eastern piers of the Carolingian crossing have been rebuilt as well, which would seem more likely, given the pressure that a high vault would exert toward the west (55). Of course, temporary buttressing expedients may have been inserted to keep the vaults from pushing westward. However, because this important building functioned for four score years or more in this "unfinished" state, some sort of smooth junction must have been contrived, given that the monks' choir remained in the old nave and crossing, while the new shrine rose splendidly in the new.

Complicating the situation further were the beginnings of Suger's new transept and nave, but before considering these, it is necessary to picture another awkward transition. We know that after Suger had the west end of the Carolingian church destroyed, he built four transitional bays to link the old nave with his new west block. The link bays had columns and a wood roof, and must have reflected the old elevation very closely. This continuity is in line with what Suger tells us about his desire for architectural harmony– but what of the junction between these link bays and the new west block? The ground floor of the west block is in as antithetical a style imaginable to the link bays/old nave, and yet, according to Crosby, the lower story of the west block was designed to mirror the height of the old nave– the two spaces must have been continuous one to the other. Yet what a clash as one stepped past the massive compound piers and heavy rib vaults into a structure of thin columns, flat walls and an open timber roof! For all the talk about blending old and new, both in Suger's writings and in modern scholarship, no one has really considered how strange and violent a transition this must have been– new versus new. Meditating on this clash should make us think a bit more about the west block itself, to which I shall return.

The other lost part of Suger's work was not really lost, but never completed. Crosby found the beginnings of the outer walls for a new nave, probably with double aisles, that would have replaced the old (and its Sugerian link bays) to complete the rebuilding of the church. One of the features of these walls seldom noticed, though well described by Crosby, is the divergence of the shapes of their responds' plinths: on the south these exhibit a standard stepped pattern, whereas on the north they display a large chamfered profile. It is possible that the actual shaft groups set atop these plinths were identical north and south, but it seems more likely to assume there was some difference in their shape. Crosby was nonplussed by this discrepancy; he thought perhaps two separate teams of masons were responsible. Whatever the explanation, it is clear that some variety was at least tolerated and possibly encouraged in Suger's nave. That is not to say that it looked like, say, the nave of Lincoln, but it does caution us that our endless generalizations about Saint-Denis are based on an incomplete picture.

The main arcades of this new nave would have followed the intercolumniations of the old, as the placement of the aisle wall responds shows, but the drop in floor level east to west would have meant these columns would have been twice as high as they had been in the Carolingian church. The result would have been decidedly bizarre by even the flexible standards of early French Gothic, a point clearly made by Bony, who illustrated a reconstruction (**French Gothic Architecture**, 95). It wasn't built but had it been, would we still see Saint-Denis as the font of later Gothic? If we had the whole of Suger's Saint-Denis to compare to the whole we have of Sens, Senlis or Saint-Germain-des-Prés, would we still consider it so formative a building? An unfair question, to be sure, in that early Gothic patrons and masons didn't have it to look at either, although Bony muses that it may have influenced the unusual design of the Arras choir.

Adding in these lost or unbuilt parts of Suger's enterprise results in a building where architectural variety seems evermore pronounced, and I would like to conclude this essay with some further speculations on this central problem of Suger's Saint-

Denis. I have already cited Grant's characterizations of the various parts of Suger's building, but I would like now to turn to the more detailed arguments of William Clark (in *Continuity and Contextuality...*). Whereas Grant and Fernie cast Suger's desire for recreating a golden age of Early Christian architecture purely in terms of a religious conservatism allied to a well-developed love of opulence, Clark sees the archaisms of Suger's Saint-Denis in specifically political terms. For Clark, it is the struggling Capetian dynasty that will benefit from the use of Merovingian forms or *spolia* at twelfth-century Saint-Denis; association with their early medieval predecessors serves to strengthen their present power (and the power of Paris as a site of royal dominion). Clark calls a walk through Suger's Saint-Denis "a royal procession back in time" (98). The royal associations of the west front include the crenellated parapet (although Grant muses this may have had a practical as well as symbolic use, given the unruliness of the neighboring Vexin to which Saint-Denis laid temporal claim), the crowned statues that formerly flanked the west front portals, and the triple portal scheme itself, with its suggestion of a Roman triumphal arch or city gate, although these interpretations fit as well with Grant's church militant as with any royal reading (Fig. 3). Further, the twin-towered facade resonates against William the Conqueror's
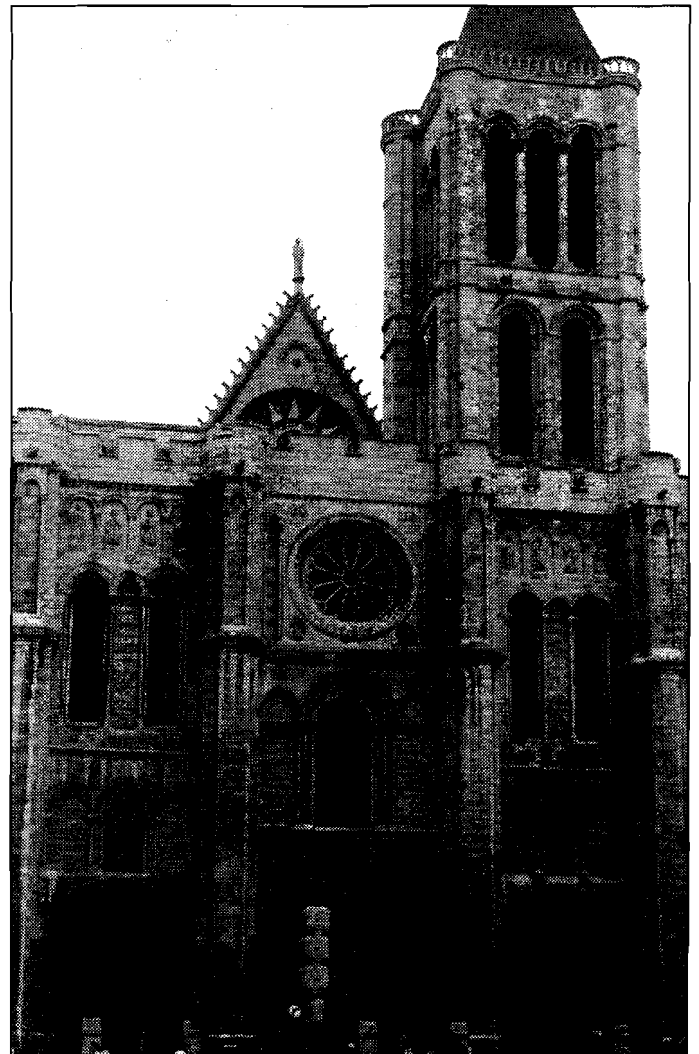

Fig. 3: Saint-Denis, west block exterior (photo: M.T. Davis)

burial church, Saint-Etienne at Caen, a reference all seem to agree is quite conscious. Clark, however, also claims that the octagonal space formed by the great lozenge piers in the west central bay of the narthex was meant to reflect the half-octagonal porch Charlemagne had built in front of the old church to shelter the tomb of his father Pepin. This association would have been reinforced by the capitals supporting the diagonal ribs, capitals set prominently in front of their piers at a 45-degree angle, whose foliage, according to Clark, copies Merovingian capitals from Dagobert's building.

What audience, however, would have recognized such references? Who, in particular, could have distinguished foliage capital types so expertly? (I certainly can't!) No one, I suspect, without being told by some abbey guide. This is not to say that such symbolism would not have been thought effective or appropriate by Suger or his advisors– just as the dimensions or proportions of older buildings, though invisible to the viewer, might be incorporated into new ones (Old St. Peter's seems to have contributed dimensions to several medieval churches of this period, and one could also cite the incorporation of some of Old Sarum's proportions in the new cathedral at Salisbury). In such cases one might argue for some spiritual efficacy in which human recognition was unnecessary. Clark, however, asserts royal, political meaning, and it is hard to see many hardened medieval politicians being impressed by four foliate capitals far above their heads, or a space hardly dissimilar to many crossings, determined as it is by typically lozenge-shaped compound piers large enough to support towers.

The presence of reused Merovingian shafts and capitals in both levels of Suger's east end is undisputed, but interpreting these as politically motivated also seems a stretch. To be fair, Clark emphasizes as well the monastic significance of these architectural relics, "intended to evoke religious historical memory," although in the next paragraph he returns to the theme of the building which recalls a "continuous line of royal history, from Merovingians to Capetians" (98-99). In addition to the question of audience, there are two other general objections to Clark's theory, both centered on the fact that Suger himself would have to be the source of any such intended symbolism. Suger is curiously absent from much of Clark's narrative, as though the retrospective nature of twelfth-century Saint-Denis was somehow a communal effort of monks, abbot and king(s). Yet we know that Suger was a demanding, interfering patron; surely any such program would have been his idea. Suger tells us much about his love for Saint-Denis, both saint and institution, and of his desire to glorify both with work that is respectful of their past. He says nothing, however, of his desire to glorify present kings with such work. Surely such a program would have sparked some allusion or reference in Suger's voluminous writings. In her new biography, moreover, Grant argues convincingly that Suger's role as royal propagandist has been much exaggerated, and that his view of kings was decidedly pragmatic and often disapproving. He was not the sort of man, in other words, to make himself or his beloved abbey the vehicle of royal aggrandizement, however much he might demand that kings respect the right of Saint-Denis to their regalia or corpses.

There are less ideological possibilities for explaining the strange architectural variety at Saint-Denis. Let us begin with the two levels of the west block, so important for Gardner's thesis of two masters. Perhaps the upper chapels were considered too far out of public or even monastic use to warrant the kind of lavish articulation and sculptural decoration appropriate for the entrance bays below. Perhaps, to suggest a more positive explanation, the upper chapels were cast in a lighter architectural language because they were literally higher, closer to heaven, or because their greater seclusion and possibly more selective clientele saw their more refined forms as preferable to the heavy architectural breathing below. None of these explanations is provable, although it is worth pointing out, as Dethard von Winterfeld and Kimpel and Suckale have done, that there is a similar vertical procession in the east from the "Romanesque" crypt to the "Gothic" choir, and that this can be read quite clearly on the exterior, in the change from the unarticulated round-arched windows of the lower story to the shafted, pointed arches of the upper.

I agree with Grant and Clark that the archaism and austerity of Suger's crypt was meant to reflect the ancient architectural and sepulchral remains that the crypt surrounds, whereas the bright and sparkling space above was meant to evoke the Heavenly Jerusalem, Saint-Denis' real home reflected in the home of his earthly remains. I agree also that Suger's respect for the past had a major influence on the design of the building he erected. There remains, however, one significant loose end, and that is the architecture of the lower west block, which has nothing retrospective about it, aside from its being part of a westwork (Fig. 1). How are we meant to think about those piers, complex beyond precedent, these vaults full of varied rib profiles and contrasting articulations? Von Winterfeld has well emphasized the self-conscious quest for variety in these spaces, while Wilson has pointed out their proto-Gothic proportioning and verticality, but for most writers they remain a convenient foil for the glories of the east end. They are heavy and conservative and "Romanesque;" their designer a competent local man who thankfully, for the sake of Western architecture, disappeared from the scene before he could build much else. I would like to conclude by differing.

One Sunday afternoon in the early 1990s, after several weeks of looking at the smaller twelfth-century church architecture of the Ile-de-France, I drove into Saint-Denis and strolled into the church. When I entered the narthex, a wave of recognition swept over me. This is what I had been seeing over and over in smaller churches of the region: bundles of shafts set in endlessly inventive ways, contrasting rib profiles in adjoining spaces, contrasting modes of articulating those richly profiled ribs. From Gaillon to Marolles-sur-Ourcq to Morienval to Saint-Pierre-de-Montmartre to Château Landon, I had encountered similar architectural ambitions, although none of these could, of course, match the complexity and grandeur at Saint-Denis. The west block is a virtuoso statement of the local architectural style, a style that combines the Romanesque love of articulation with the new rib vaults in ways that are best left unlabeled by our anachronistic rubrics "Romanesque" or "Gothic." It would have been a familiar and comfortable space to any visitors from the area in the mid-twelfth century, although it would have also trumped any local version they knew. It would have proclaimed the Abbey's sympathy with and dominance of its immediate region. Such a contemporary prodigality would have made the step into the

old nave via Suger's link bays that much more shocking. Truly, as Suger intended, one had now entered the living past, hallowed and awe-inspiring in its simplicity. This transition, however, was not meant thereby to eclipse the west block in the viewer's memory or perception. Rather, it was meant emphasize that construction's virtuoso demonstration of architectural contemporaneity, familiar and staggeringly grand at the same time. It set the stage and measure for all that followed. How far our perception of Suger's shrine-choir as a work of architectural genius was shared by contemporaries is unclear. There can be no doubt that the eventual direction that Gothic took in France has led to its exaltation as prescient forerunner and to the denigration or dismissal of the contrasting west block. In terms of the mid-twelfth century, I would suggest that this perception is flawed, and that we need to recognize that the architecture of the west block was as important and impressive as that of the chevet. It is interesting that the thirteenth-century builders, although they destroyed Suger's choir elevation, did not touch most of his west block. No doubt the reasons had more to do with economy than appreciation, but it is not impossible, given their reversion to compound piers and elegant articulation, that they recognized the achievement of the west block and valued it as a foyer to their own work, a role it continues to play today.

There is no question that Saint-Denis was an extraordinarily innovative building, or that parts of it, particularly the west front and the plan and columns of the east end, were very influential. Lindy Grant gives the best account of the building's role as model. Nevertheless, one cannot help wondering if the multiplicity of parts and styles were not bewildering to many contemporaries, even if they understood the justifications for such diversity in ways we no longer can. Certain features of Saint-Denis impressed twelfth-century viewers as being worthy of emulation, but the whole found no imitators. Indeed, by the thirteenth-century French Gothic became a style in which uniformity was deemed the greatest virtue. Suger's Saint-Denis has very little in common with that attitude. Defining Suger's work at Saint-Denis as the first Gothic building may be justified, if we are careful to specify this or that part or feature, but it is difficult to sustain if we take his work as a whole, which he no doubt would have wanted us to do. By ironing out or ignoring the complex and conscious contrasts in Suger's work at Saint-Denis, we not only oversimplify the "origins of Gothic" – we also miss the building's real, but never repeated, originality.

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MAKING SENSE OF √2

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In four of the last six issues of *AVISTA* **Forum Journal** reference has been made to architectural proportioning by the side and diagonal of the square, as 1 : √2, yet there still appears to be no reason offered for its use other than being a simple draughting expedient.[1] Vitruvius, on the other hand, reminds us that,

> ...especially in architecture are these two things found; that which signifies and that which is signified.[2]

If this was true late in antiquity, even more so do we know this to have been the case in the Middle Ages. It seems worthwhile therefore to re-examine the evidence for √2 proportioning and attempt to distinguish between its possible use and undoubted presence in medieval architectural design.

Since medieval masons used geometry as a practical procedure and their work did involve the geometry of the square, nothing could be more convenient than to proportion their work according to the square and the side and diagonal of the square. This argument is supported by a reference to the ratio in Vitruvius; by the existence of tables of numerical approximations to √2; by the masons' procedure of inscribing and rotating squares within each other known as quadrature; and finally by the evidence of building analysis, which shows close approximations to various √2 permutations. This has led to the 1 : √2 rectangle being hailed as "the true measure" that was preferred in medieval design, "the standard Gothic rectangle", "overwhelmingly more popular" than other proportions because it "arises naturally in the design process",[3] such that it is now stated as historical fact that medieval architects actually used √2 to generate the design of their buildings.[4]

On examining the documentary evidence, the reference to Vitruvius concerns the planning of a house, in which the side and diagonal of a square is prescribed for its atrium.[5] Two other proportions are advanced, namely 3 : 5 and 2 : 3, yet he does not explain why these ratios are preferred, or why one should be chosen instead of the others. Given no more justification than this, it would be difficult to understand why large numbers of medieval abbey and cathedral plans should have been based on the atrium of a Roman house and why upon √2 and not the other two proportions. Numerical tables of √2 approximations could have enabled architects to convert an otherwise incommensurable ratio into dimensions.[6] Such a table, occurring in a second-century treatise by Theon of Smyrna, includes the ratio 12 : 17. Thus,

1 : √2 :: 1 : 1.414...   12 : 17 :: 1 : 1.416...

Similar sources have also been cited,[7] yet any such use of tables surely needs to address the question as to why a ratio, the use of which is advanced as a simple draughting expedient, should be important enough to be produced instead by an arithmetical process? If it were to arrive at numerical ratios which could be translated into dimensions that reproduced this proportion, what was special about this proportion in the first place?

The use of such tables is not in any case essential to the argument, given the numerical ratios Vitruvius specifies for his houses and for temples and fora too.[8] The *Portfolio* of Villard de Honnecourt also provides evidence for the use of ratios, with diagrams for cutting and setting stone and determining the splay of a window reveal calibrated into certain numbers of parts.[9] The use of ratios, therefore, is not only well attested, it opens up the possibility of an infinite range of proportions.

The practice of quadrature is also firmly established and in this the √2 ratio is inherent because the sides of each rotated square equal half the diagonal of the larger square. The principle underlies Vitruvius's paraphrase of Plato's method for doubling a square and appears again on Fol. 20 of Villard's *Portfolio* in the illustration of the technique for dividing a stone into two equal squares (Fig. 1).[10] Above it, an architectural application is shown in the design of a cloister whose garden area is equal to that of the enclosing walks. Stated another way, the inner square in the cloister drawing contains half the area of its enclosing square. Whether or not this is evidence that the square root of two, or even an understanding of square roots, existed in the mason's mind is debatable, particularly when medieval masons appear to have possessed scant mathematical theory. Since it is generally accepted that theirs was an empirical tradition, the manipulation of squares involved here could more easily have resolved itself into a matter of counting similar triangles. Vitruvius says as much:

> ... let a diagonal line be drawn from angle to angle in the [lesser] square... so that two triangles of equal magnitude... are described. On the length of the diagonal let a square be described with equal sides. Therefore two triangles... will be drawn upon the diagonal in the lesser square; four triangles of the same magnitude... will be described in the larger square...[11]

The corresponding drawing in Villard's *Portfolio* for dividing the stone also illustrates the principle as if by counting triangles, while the marks on the cloister drawing clearly suggest that all its draughtsman needed to know was that the side of the inner square is half the diagonal of the outer square. Neither required knowledge of root numbers.

Villard's plan of a tower at Laon, on the other hand, could actually be based on quadrature and this would place it alongside the handbooks of Mathes Roriczer and Hanns Schmuttermayer which also used quadrature as a method for extrapolating the elevation of a pinnacle or finial from its plan. Again, theory is nowhere in sight when Roriczer writes that his *Büchlein von der Fialen Gerechtigkeit* seeks:

> "to explain the beginning of drawn-out stonework– how and in what measure it arises out of the fundamentals of geometry through manipulation of the dividers..."[12]

Following these, Lechler uses the same procedure to generate other constructional details for templates (Fig. 2).[13] Fol. 42v shows how to derive the profiles of two mullions from one module, in this case the thickness of a wall. However, in associating quadrature with claims for √2 proportioning, a difficulty needs to be faced in that the figures which quadrature produces are other squares, not 1 : √2 rectangles.
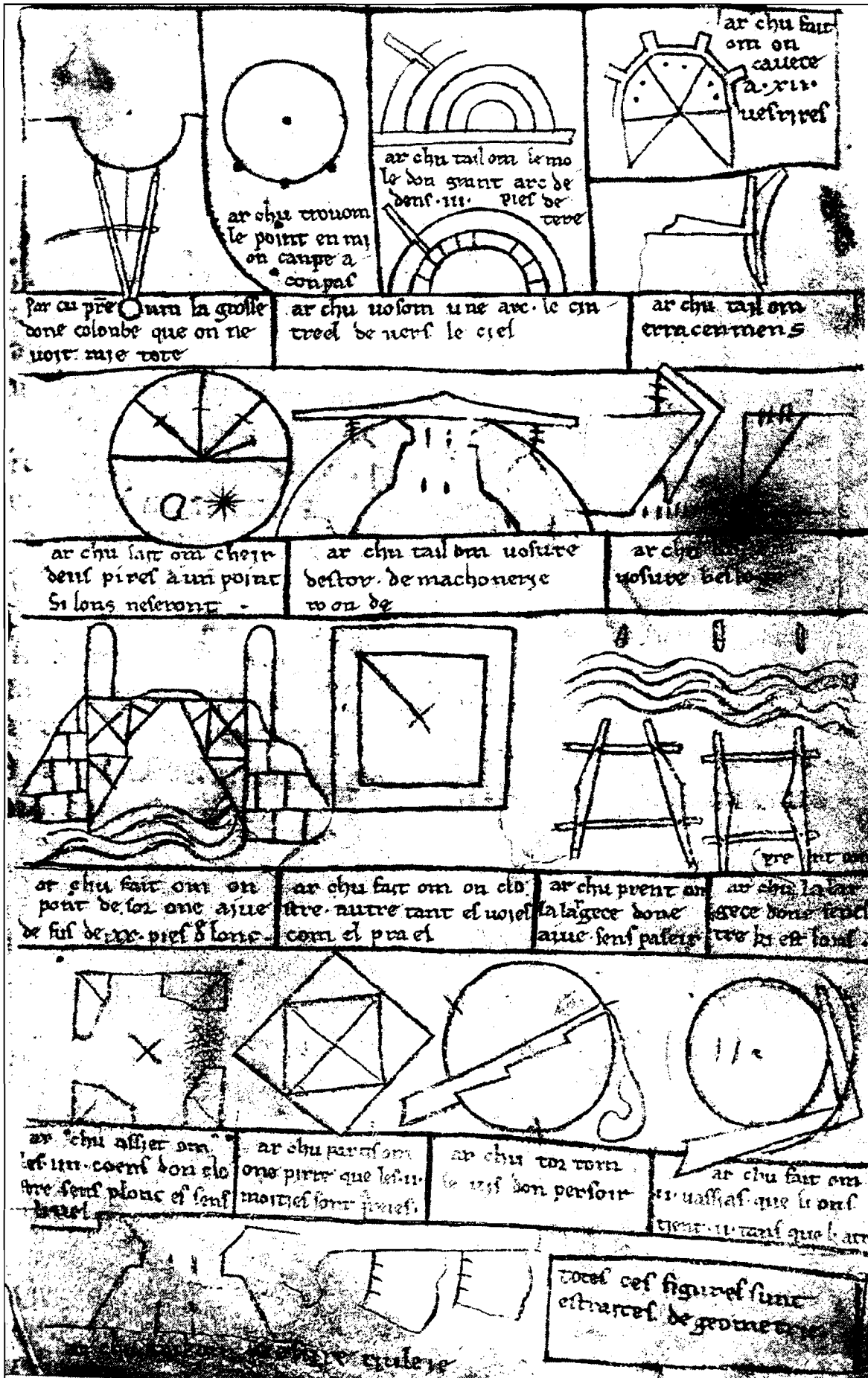
Fig. 1. Cloister plan and quadrature, Sketchbook of Villard de Honnecourt fol. 20, (Paris, Bibliothèque nationale, MS fr. 19093)
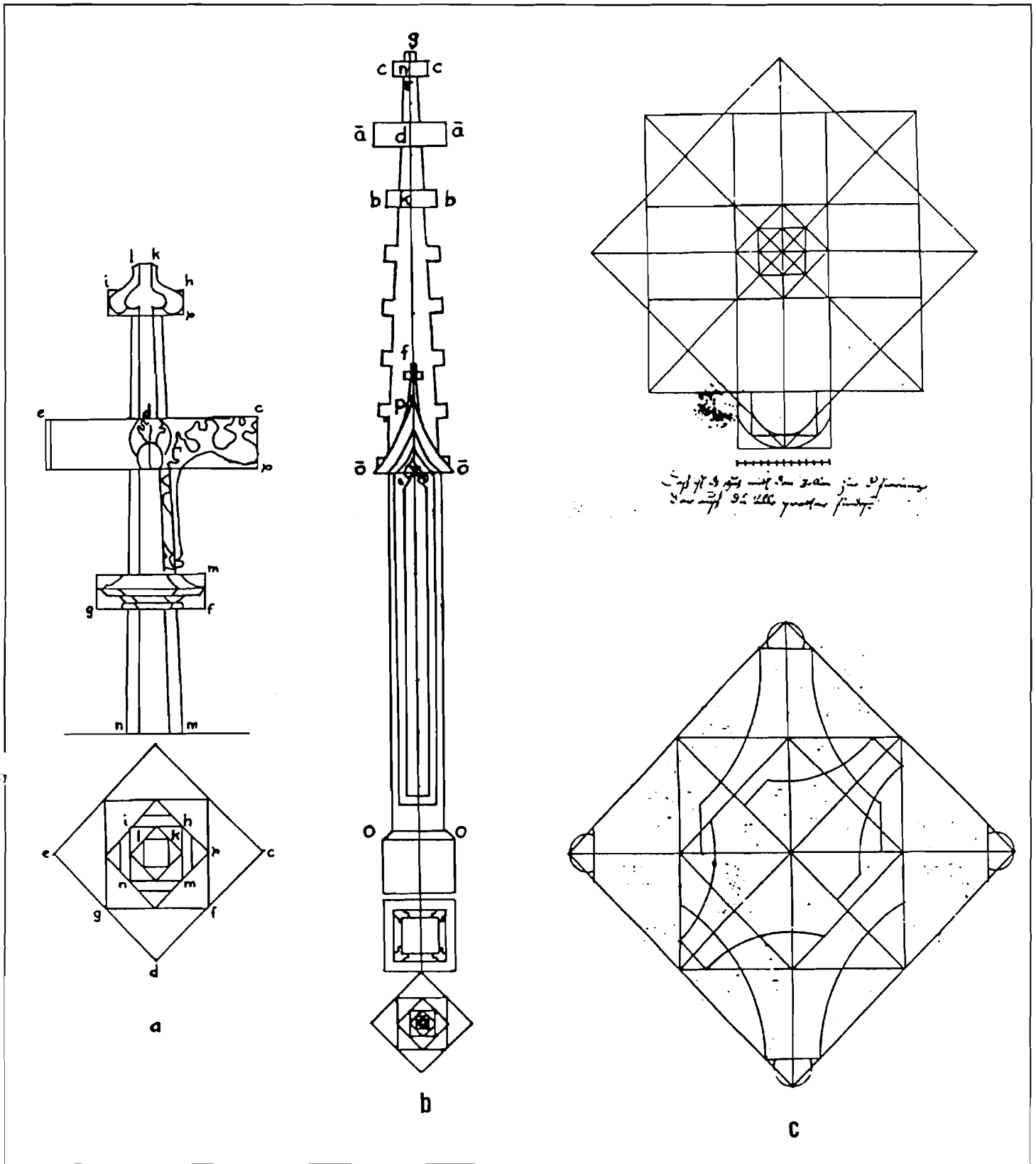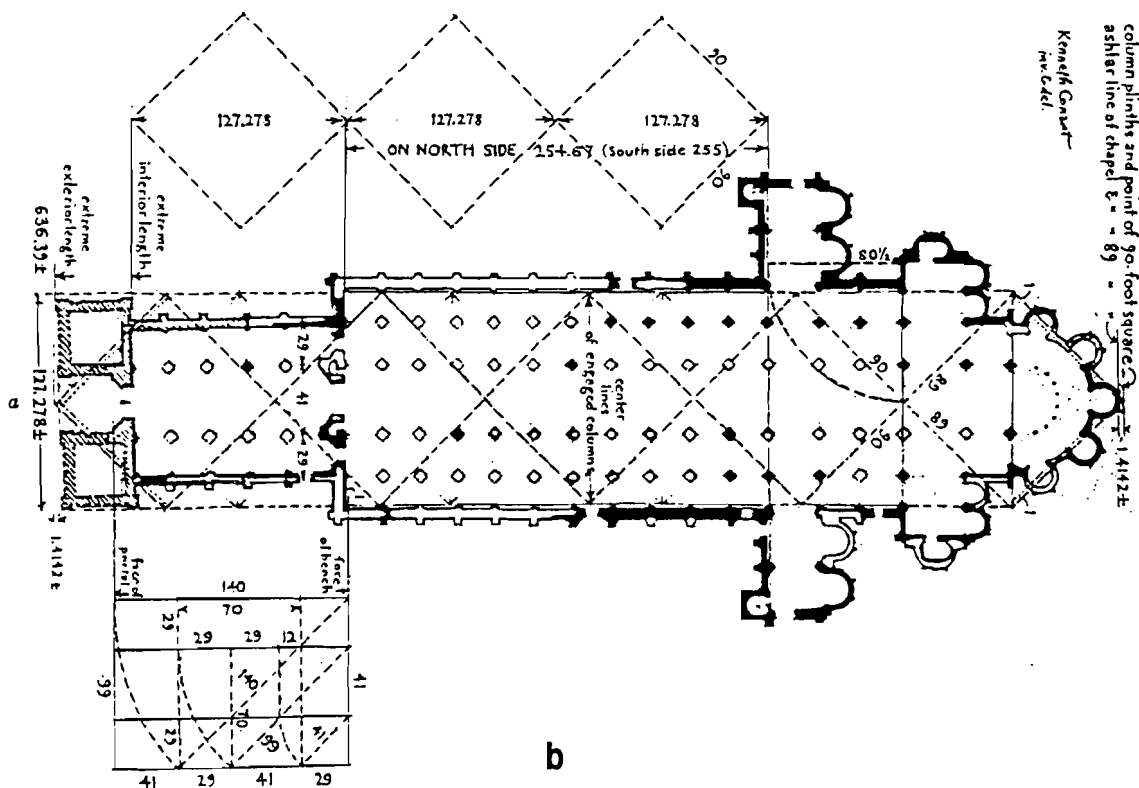
Fig. 2. Quadrature: *(a) M. Roriczer,* **Wimpergbüchlein** *(Regensburg, c.1488): fol. 2v; (b) H. Schmuttermayer,* **Fialenbüchlein** *(Nürnberg, c.1488): fol. 2v [L. Shelby,* **Gothic Design Techniques** *(Carbondale, 1977): 111 figs 22, 23; 129 fig. 36]; (c) L. Lechler,* **Unterweisung** *(1516): fol. 42v [L. Shelby,* **Mediaeval Masons' Templates,** **JSAH** *30 (1971): 148 figs 8, 9]*

Fig. 3. (a) Gunzo's dream and (b) proposed scheme for Cluny III [*K.J. Conant, Medieval Academy Excavations at Cluny, IX: Systematic Dimensions in the Buildings,* **Speculum** *38.1 (1963): 29, 31*]

The connection claimed for √2, through quadrature, to plan design also rests partly on the twelfth-century portrayal of Gunzo's dream of Cluny (Fig. 3)[14] and partly on the cloister plan in Villard's *Portfolio*. Since the dream reportedly led to the construction of Cluny III, the proportions of its plan have been explained in terms of a line of squares rotated on their diagonal, which elsewhere is described as "the generator of the dynamic and directional system underlying Gothic designs."[15] Yet the scheme put forward only fits the plan if the width is taken to the centers of internal wall-shafts, the length to external column plinths and the two end squares are reduced by one foot. It also needs to be borne in mind that extending rotated squares in a line does not in itself produce 1 : √2 rectangles either and that the ropes in Gunzo's dream could actually be defining diagonals of rectangles.

One possible problem concerning quadrature is that the documentary evidence points to its use in generating architectural elements and details, such as a tower or a cloister, a pinnacle or a mullion, and not the whole layouts of buildings. Undue reliance may therefore be placed on the cloister in Villard's *Portfolio* in assuming a connection between quadrature and general plan design. As already observed, the sketch simply indicates an understanding that the side of the inner square equals half the diagonal of the outer square, while the demonstration of quadrature below it simply shows that its inner square is half the area of the enclosing square because it consists of half the number of similar triangles. None of this leads necessarily to a conclusion that quadrature was used in general plan design. Furthermore, cloisters can be square, oblong, out of square and have varying positions in relation to their churches, either to the south, the north, abutting an aisle or distanced from it. In no sense are they integral to the plan of the church in the way that a crossing is, but are variable and subordinate. As such, they may be seen as secondary elements, albeit large, and subject to the same design process of quadrature as other elements.

As it happens, there is evidence that plan design may actually have been distinct from the process of detailed design that employed quadrature. To return to Lechler, he states his purpose thus:

> For I wish to... [declare] the... art which is useful for a stonemason and workman to know... to show how you can [obtain] correct proportions... with many structures *if you have their groundplan and dimensions*.[16]

This surely indicates that the stonemason worked from a pre-existing "groundplan and dimensions" produced presumably by the architect. Lechler then shows how the mason worked out the details for the building given no more than the wall thickness and the technique of quadrature. In other words, he need have no knowledge whatsoever of any other part of the design process by which the architect produced the general plan, since quadrature guaranteed "correct proportions." This suggests that plan design and detailed design were distinct phases of a design process that was, not surprisingly, sequential.

Turning to the architectural evidence, numerous building studies have succeeded in showing close approximations to √2 proportioning, yet certain problems have sometimes appeared in the way evidence is accumulated and permutations are added to the basic √2 ratio. It has been common for claims for √2 propor-

tioning to include various permutations of the basic ratio, some of them decidedly complex. In perhaps the seminal work on the subject, instances of up to eight different permutations are cited.[17] However, since such claims are generally admitted to be close approximations to the measured building, it can be shown that some are also close approximations to rectangles defined by the angles of other geometric figures, for example 60° for the equilateral triangle and 36° and 54° for the pentagon. Thus the values for √2 and 1 ÷ √2 both come to within 2.6% of tangent 54° and 36° for the pentagon, just as 1 + (1÷√2) comes to within 1.4% of √3 for the 60° triangle. The ratio of the side of a square plus half its diagonal, or 1 + (√2 ÷2), which has been put forward for St Gall and more recently for Amiens Cathedral, also comes to within 1.4% of √3.[18] In other words, any approximation to these √2 ratios falling between 1.3 – 2.6% and 0.7 – 1.4% would be closer to proportions produced by the angles of the equilateral triangle and pentagon.

This is not to suggest that simple variants of the side and diagonal of a square should be ruled out. The side and half-diagonal cited here for Amiens is part of a construction for an octagon from a square which could have been known to medieval masons. Nevertheless, the complexity of other permutations does seem to confound the original justification for √2 as a simple geometric procedure. Instead, the proposition has seemed in danger of becoming elaborated into one so versatile as to account for proportions that can equally be explained by other geometric figures.

The presence of so many different proportions in buildings as complex as medieval abbeys and cathedrals is in any case hardly surprising. A recent study of Salisbury Cathedral has found not only simple √2 relations in its dimensions almost exactly, but also the golden mean, √3 and √5, along with three different grids and two units of measure.[19] Which of these, if any, may actually have been used in the design cannot easily be determined, for it would take the systematic demonstration of a complete design method to suggest a solution. Surprisingly, this is rarely, if ever, put forward for √2 relations.

Such questions, however, do not remove those instances where 1 : √2 proportions have clearly been shown to exist in buildings and they are numerous. In a recent study of Norwich Cathedral, several instances of the 1 : √2 ratio have been demonstrated to virtual exactitude (Fig. 4). According to measurements advanced in the study, the diagonal of the cloister equals the length of the nave. If this length becomes the side of a larger square, its diagonal approximates to the internal length up to the chord of the apse, but only if an addition is made for the thickness of the west transept wall. In a separate operation, by dividing the nave aisles into their fourteen bays and assuming them to be square, the diagonal of its square equals the width of the aisle plus the thickness of the arcade wall, while the width of the nave between the arcades is twice the width of the aisles.[20] In other words, the cloister can provide a major module for lengths but not widths, aisle bays provide a minor module for widths but not lengths and longitudinal subdivision is achieved empirically. It would be interesting to see therefore if a connection can be advanced linking these three procedures into a single design method.

Complementing this, another recent study of Norwich has shown how a planning grid can be generated by the angles of the equilateral triangle and pentagon as well as the diagonal of
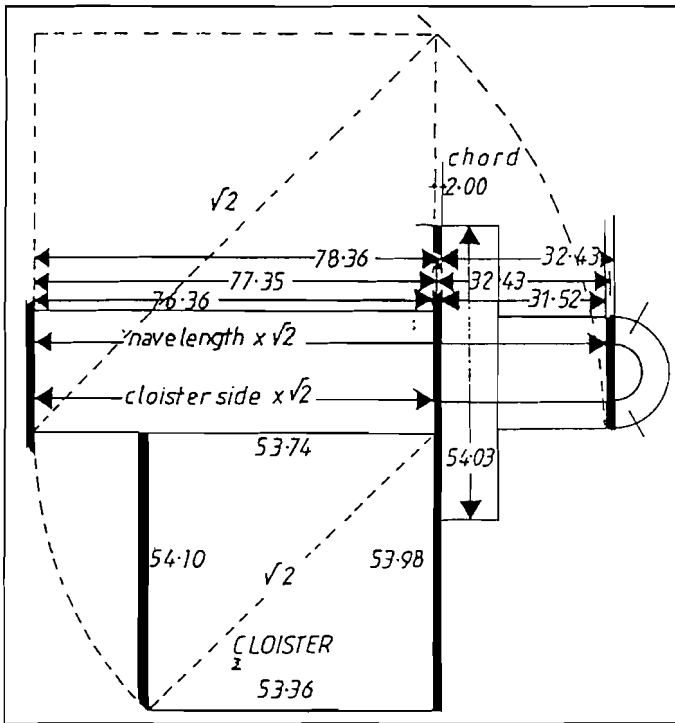
Fig. 4. √2 relations at Norwich Cathedral [after E. Fernie, An Architectural History of Norwich Cathedral (Oxford, 1993): 92 fig. 25]

the square, thus completing all three figures of Platonic geometry (Fig. 5).[21] The system appears to be coherent both in itself and in relation to other buildings historically connected and generically related to it, including not only the cathedrals of Ely and Winchester but the abbeys of Jumièges and Bernay as well. Significantly perhaps, while the √2 system was found in dimensions taken between walls, the Platonic method produced a grid of axial lines, suggesting the intriguing possibility that the two systems need not be mutually exclusive. For instance, once a grid was laid out on site, a method of conversion would have been needed for extrapolating the building plan. This could have been accomplished by using pegs and cords and by swinging arcs, perhaps over the shorter distances of aisle bays, to establish wall thicknesses and bay sizes. This in turn might explain the compartmentation into squares, double squares and side-and-diagonal ratios that is often evident in dimensions when taken between walls.

A study of Ely Cathedral appears to support this by showing that if its arcade wall thickness is taken as one unit, then the clear width of the aisle is three units and the nave six.[22] Making the main wall thickness the basic module, as indicated by Lechler, could hardly be simpler, especially since the architect had to know how thick to make his wall for a given height, a task which was to be listed in the *Regensburg Ordinances* of 1514. Possible confirmation may again be offered by Vitruvius when he states:

The architect's greatest care must be that his buildings should have their design determined by the proportions of a fixed unit. When therefore account has been taken of the symmetries of the design and the dimensions have been worked out by calculation, it is then the business of his skill... to produce a proper balance by adjustment, adding or

subtracting from the symmetry of the design...[23]

The "fixed unit" might either be the length of a bay to which other lengths are related by proportion, or the thickness of a wall, used as a module, as in Lechler. Either way, it is important to bear in mind the particular meaning of symmetria as an agreement of measures when considering its relationship to dimension and that,

...the difficult problems of symmetry are solved by geometrical rules and methods. [Also]... dimension is the taking of modules from the parts of the work; and the suitable effect of the whole work arising from the several subdivisions of the parts.[24]

Once the module is taken, it provides the geometric key for the architectural details as well.

Symmetry also is the appropriate harmony arising out of the details of the work itself; the correspondence of each given detail among the separate details to the form of the design as a whole.[25]

Although Vitruvius does not identify a particular method for achieving this "appropriate harmony," in the Middle Ages it would have been quadrature and possibly the related procedures suggested above. Once the architect had produced his schematic design, by whatever method was the custom, and had assigned a dimension as the module, these "geometric rules and methods" would have enabled the masons to convert a planning grid into a building plan and to derive the elevation and the details as well, thereby ensuring that all the parts were related to each other and to the whole. In other words, with the schematic design carrying whatever signification may have been intended, any occurrence of √2 relations might either be the result of chance, along with the presence of other proportions, or it might be a function of converting a schematic design into building construction. This would explain why √2, when considered in isolation, lacks apparent meaning and rarely provides a complete design method.

Such a proposition does not account for √2 relations when found between grid-lines rather than wall-faces and it does depend on a particular reading of Vitruvius. However, it is offered as a working hypothesis since it might enable us to clarify the distinction between schematic design and constructional design, to see √2 in a more complete light, and to restore the importance of signification to the debate about medieval plan design.[26]

NOTES

1. *AVISTA* **Forum Journal**: S. Murray, *Return to Beauvais: The Design of the Gothic Choir*, 8/2 (1994-1995): 9; M.T. Davis, *Scenes from a Design: The Plan of Saint-Urbain, Troyes*, 10/1 (1996-1997): 15-21, fig. 1ff; S. Murray, *The Architectural Envelope of the Sainte-Chapelle, Form and Meaning*, 10/1 (1996-1997): 23 fig. 5; R. Ousterhout, *Medieval Masons at Work: Report on a Symposium*, 10/2-11/1:5-7; N. Wu, *Hugues Libergier and his Instruments*, 11.2 (1998-1999): 7-13.

***Fig. 5. Platonic geometry at Norwich Cathedral, steps 14–17** [N. Hiscock, Platonic Geometry in Medieval Plans: Crossings and Arcades, paper given at International Congress on Medieval Studies, Western Michigan University (1998)]*

2. Vitruvius, **De architectura** tr. F. Granger (London, 1931): I.I.3.

3. O. von Simson, **The Gothic Cathedral: Origins of Gothic Architecture and the Medieval Concept of Order** (London, 1962): 49; F. Bucher, *Design in Gothic Architecture – A Preliminary Assessment*, **Journal of the Society of Architectural Historians** 27 (1968): 50-51; E. Fernie, *A Beginner's Guide to the Study of Architectural Proportions and Systems of Length*: in P. Crossley and E. Fernie, eds., **Medieval Architecture and its Intellectual Context: Studies in Honour of Peter Kidson** (London, 1990): 230; C. Wilson, **The Gothic Cathedral: The Architecture of the Great Church 1130–1530** (London, 1990): 172.

4. N. Coldstream, **Medieval Craftsmen: Masons and Sculptors** (London, 1991): 37–38; Wilson (as in n.3): 172–3; T. Cocke and P. Kidson, **Salisbury Cathedral: Perspectives on the Architectural History** (London, 1993): 62ff.

5. Vitruvius (as in n.2): VI.3.3.

6. P. Kidson, *A Metrological Investigation*, **Journal of Warburg and Courtauld Institutes** 53 (1990); Coldstream (as in n.4): 38; Cocke and Kidson (as in n. 4): 92–93.

7. Heron, **Metrica**, Isidore, **Etymologiae, Pauca de mensuris**, in P. Kidson, *Systems of Measurement and Proportion in Early Medieval Architecture*, PhD, University of London (1956): 112–125; idem (as in n. 6): 1990, 75–78.

8. Vitruvius (as in n.2): III.IV.3, IV.IV.1, V.I.2.

9. Villard de Honnecourt, *Portfolio* (Paris, Bibliothèque nationale, ms. fr. 19093): fols 20r, 20v. Consult **Carnet Villard de Honnecourt**, A. Erlande-Brandenburg et al. (Paris, 1986): pl. 39-40. For an explanation of the album's drawings, refer to the classic study by H. Hahnloser, **Kritische Gesamtausgabe des Bauhüttenbuches MS fr. 19093 der Pariser Nationalibibliothek** (Vienna, 1935, repr. Graz, 1972); and more recently the technical insights offered by R. Bechmann, **Villard de Honnecourt: la pensée technique au XIIIe siècle et sa communication** (Paris, 1991). C.F. Barnes, Jr., **Villard de Honnecourt, the Artist and his Drawing: A Critical Bibliography** (Boston, 1981): gathers the accumulated literature on Villard to 1981.

10. Vitruvius (as in n. 2): IX. Pref. 4, 5; Plato, *Meno*, in **The Works of Plato**, B. Jowett, trans., (New York, 1936): 3: 28-31.

11. Vitruvius (as in n.2): IX.pref.5.

12. **Gothic Design Techniques. The Fifteenth-Century Design Booklets of Mathes Roriczer and Hanns Schmuttermayer**, L.R. Shelby, ed. (Carbondale, IL, 1977): 82-83.

13. Villard fol. 9v for the Laon tower plan. See Shelby, **Design Techniques** (as in n. 12): 111 figs 22, 23 and 129 fig. 36 for examples of quadrature used by M. Roriczer, *Wimpergbüchlein* (Regensburg, c.1488): fol. 2v; and H. Schmuttermayer, *Fialenbüchlein* (Nürnberg, c.1488): fol. 2v; also L. Shelby,

Mediaeval Masons' Templates, **Journal of the Society of Architectural Historians** 30 (1971): 148 figs 8, 9, for L. Lechler, *Unterweisung* (1516): fol. 42v.

14. Gunzo's Dream is depicted in Paris, Bibliothèque nationale MS lat. 17716 (*Miscellany of the Abbey of Cluny*), fol. 43r.

15. K.J. Conant, *Medieval Academy Excavations at Cluny, IX: Systematic Dimensions in the Buildings*, **Speculum** 38 (1963): 7, 31; F. Bucher, *Medieval Architectural Design Methods 800–1560*, **Gesta** 11 (1972): 37, 43.

16. Lechler fol. 43. For a discussion of Lechler's "Instructions," consult, L. Shelby and R. Mark, *Late Gothic Structural Design in the "Instructions" of Lorenz Lechler*, **Architectura** 9 (1979): 113-131.

17. Kidson 1956 (as in n.7), 1.265–6, 2.60–170, 202.

18. E. Fernie, *The Proportions of the St. Gall Plan*, **Art Bulletin** 60 (1978): 584; S. Murray and J. Addiss, *Plan and Space at Amiens Cathedral: With a New Plan Drawn by James Addiss*, **Journal of the Society of Architectural Historians** 49 (1990): 64 fig. 24.

$$\sqrt{2} = 1.414...$$
$$\tan 54° = 1.376... \text{ i.e. } \sqrt{2} - 0.038, \text{ or } -2.6\%$$

$$1 \div \sqrt{2} = 0.707...$$
$$\tan 36° = 0.726... \text{ i.e. } (1 \div \sqrt{2}) + 0.019, \text{ or } +2.6\%$$

$$1 + (1 \div \sqrt{2}) = 1.707...$$
$$\sqrt{3} = 1.732... \text{ i.e. } 1 + (1 \div \sqrt{2}) + 0.025, \text{ or } +1.4\%$$

$$1 + (\sqrt{2} \div 2) = 1.707...$$
$$\sqrt{3} = 1.732... \text{ i.e. } 1 + (\sqrt{2} \div 2) + 0.025, \text{ or } +1.4\%$$

19. Cocke and Kidson (as in n.4): 62–78.

20. E. Fernie, **An Architectural History of Norwich Cathedral** (Oxford, 1993): 94–100, 138–140, 206.

21. N. Hiscock, *Platonic Geometry in Medieval Plans: Crossings and Arcades*, paper given at International Congress of Medieval Studies, Western Michigan University 1998; idem, *Platonic Geometry in Medieval Abbeys and Cathedrals*, Oxford University Architectural History Seminar, 1998.

22. E. Fernie, *Observations on the Norman Plan of Ely Cathedral*, **Medieval Art and Architecture at Ely Cathedral**, **British Archaeological Association** (1979): 2–4.

23. Vitruvius (as in n.2): VI.II.1.

24. Vitruvius (as in n. 2): I.I.4; I.II.2.

25. Vitruvius (as in n.2): I.II.4.

26. This material has been drawn partly from N. Hiscock, **The Wise Master Builder** (forthcoming, 2000).❖

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An application form and instructions may be downloaded from the Richard III and Yorkist History Server at http://www.r3.org/edu3.html. The link includes an application form with minimal html markup that can be opened by most word processing programs. The web page also includes a link to a list of past grant recipients and their topics. Deadline for applications is **28 February 2000** for the following fall semester of the academic year. Winners are announced on 1 June. For more information contact: Nancy Northcott, 1915 Euclid Ave., Charlotte, NC 28203-4707; e-mail: R3award@aol.com

CONFERENCES 2000

Fall 1999-Spring 2000: **UCLA Center for Medieval and Renaissance Studies** offers a rich program of lectures, symposia, and music concerts. This year's calendar will feature a lecture by architect Richard Meier on his design of the Church of the Year 2000 in Rome, a Shakespeare Symposium on *Romeo and Juliet* to be held on 28 January 2000, and a lecture by B. Bedos-Rezek (Univ. of Maryland), *To Be or to Be Alike: The Medieval Culture of the Replica* on 29 February 2000. For a complete listing of events and information, contact: UCLA Center for Medieval and Renaissance Studies, 302 Royce Hall, Box 951485, Los Angeles, CA 90095-1485; tel: 310-825-1880; fax: 310-825-0655; e-mail: cmrs@humnet.ucla.edu; internet home page: http://www.humnet.ucla.edu/humnet/cmrs

Spring 2000: **Star Messenger: Galileo at the Millenium** will be the focus of a series of events sponsored by the Kahn Institute at Smith College. An accompanying exhibit of Galileo objects in the Rare Book Room of Neilson Library will open on 25 February, and a symposium, **Star Messenger II: Science and Culture at the Millenium** is scheduled for mid-April. For further information, contact the Kahn Institute at Neilson Library, Smith College, Northampton, MA 01063; tel: 413-585-3721; fax: 413-585-4294; e-mail: kahninst@smith.edu; and on the web: http://www.smith.edu/kahninstitute

6-9 January: **114th Annual Meeting of the American Historical Association** will be held in Chicago, IL. Among the sessions of interest to *AVISTA* members are: *Medieval Liturgy and the Social Sciences*, chaired by R. Gyug (Fordham Univ.); *A Home of Our Own–Late Antiquity and the Study of Ancient History*, chaired by E. Digeser (McGill Univ.), *Visions of the Virgin: Interdisciplinary Perspectives on Marian Devotion in Early Modern Germany*, chaired by R. Fulton (Univ. of Chicago); *Researching Medieval Landscapes: Approaches to an Elusive Subject*, chaired by W. TeBrake (Univ. of Maine at Orono); *Eunuchs in the Late Antique and Medieval Mediterranean World: Perception and Social Construction*, chaired by W.D. Phillips (Univ. of Minnesota at Minneapolis); *Justice and Authority in Medieval Catalonia*, chaired by A.J. Kosto (Columbia Univ.); *A City for the People: Teaching History through Architecture*, chaired by B. Kamin (Chicago Tribune); *(Un)Lawful Text: Memory, Forgery, and Law in Medieval England and France*, chaired by B. O'Brien (Mary Washington Coll.); *The State of the Art in Military History*, chaired by G. Parker (Ohio State Univ.); *Mamluks in World Historical Context*, chaired by G.C. Kozlowski (DePaul Univ.). For further information contact: American Historical Association, 400 A St. SE, Washington, DC 20003; tel: 202-544-2422; fax: 202-544-8307; e-mail: aha@theaha.org; webpage: http://www.theaha.org

17-19 February: **Sixth Annual ACMRS Interdisciplinary Conference** will focus on **Fear and Its Representations in the Middle Ages and the Renaissance.** The plenary speaker will be R. I. Moore (Univ. of Newcastle), The conference will also host **The Medieval Book: A Workshop in Codicological Practice**. This pre-conference, half-day workshop led by Richard Clement (Univ. of Kansas) will focus on the making of the medieval codex. Participants will discuss the production of parchment, paper, pens, and ink, and then will make several quires in preparation for writing. Note: This workshop does not cover scripts and is not calligraphic. For more information, contact: T. Scott Clapp, M.P.A., Program Coordinator, Arizona Center for Medieval and Renaissance Studies, Arizona State University, P.O. Box 872301, Tempe, AZ 85287-2301; tel: 480-965-5900; fax: 480-965-1681; ACMRS Home Page: http:/www.asu.edu/clas/acmrs

18-19 February: **Crafting History for the Present: Uses of the Past in the Middle Ages**. Seventeenth Annual Meeting of the Illinois Medieval Association, co-sponsored by the Medieval Workshop of the University of Chicago and the Medieval Studies Committee of Loyola University Chicago. Contact: Allan J. Frantzen, Dept. of English, Loyola Univ. Chicago, 6525 N. Sheridan Rd., Chicago, IL 60626; tel: 773-508-2683; fax: 773-508-8696; e-mail: afrantz@luc.edu; website: http://www.anglo-saxon.net/ima.html

23-26 February: **The Eighty-Eighth Annual Conference of the College Art Association of America** will be held in New York. Contact: College Art Association, 275 7th Ave., New York, NY 10001; tel: 212-691-1051; fax: 212-627-381; e-mail: nyoffice@collegeart.org; website: http://sap.mit.edu/edu/caa/

25-26 February: **Postcolonial Moves** is the theme of the Ninth Annual Symposium for Medieval, Renaissance, and Baroque Studies at the University of Miami. Contact: Michelle Warren, Dept. of Foreign Languages and Literatures, Univ. of Miami, PO Box 248093, Coral Gables, FL 33124-4650; tel: 305-284-4858, ext. 7255; e-mail: mrw@miami.edu or Patricia Clare Ingham, Dept. of English, Lehigh Univ., Bethlehem, PA 18042; tel: 610-758-4385; e-mail: pci2@lehigh.edu

26 February: **The Twenty-Fourth Annual Meeting of the Mid-America Medieval Association** will be held at Oklahoma State University/Tulsa.Call for papers deadline **3 December 1999**. Papers on any aspect of medieval history and culture are welcome. Send one-page abstract to Randi Eldevik, Dept. of English, Oklahoma State Univ., Stillwater, OK 74078; tel: 405-744-9474; fax: 405-744-5400; e-mail: nordic_osu@osu.net

3 March: **Marking Time, Mapping Space: A Millenial Conference**, sponsored by the Medieval Club of New York, will be held at the Graduate Center, City University of New York. For further information, contact: Diane R. Marks, English Dept., Brooklyn Coll., 2900 Bedford Ave., Brooklyn, NY 11210; e-mail: dmarks@brooklyn.cuny.edu

9-11 March: **Twelfth Biennial New College Conference on Medieval-Renaissance Studies** will be held in Sarasota, Florida. Call for papers deadline is **1 December 1999**. Papers and sessions on all apsects of Europe and the Mediterranean before 1630 are welcome, but papers and sessions on the Jubilee, Netherlandish studies, Italian studies, art history, humanism, and courtly culture are especially encouraged. Send one-page abstract or session proposal to: Lee D. Snyder, Program in Medieval-Renaissance Studies, New College of the Univ. of South Florida, 5700 N. Tamiami Trail, Sarasota, FL 34243-2197; tel: 941-359-4380; fax: 941-359-4475; e-mail: lsnyder@sar.usf.edu; website: http://www.newcollege.sfu.edu/Conferences/MedievalStudies

24-25 March: **Education in the Middle Ages** is the theme of the Twentieth Annual Medieval Studies Conference at Fordham University. For more information, contact: Maryanne Kowaleski, Center for Medieval Studies, Fordham Univ., Bronx, NY 10458; tel: 718-817-4655; fax: 718-817-3987; e-mail: medievals@murray.fordham.edu

24-25 March: **Frankish Culture at the End of the Crusades: France and the Holy Land, 1250-1291** will be the focus of a symposium jointly sponsored by Johns Hopkins University and Hood College and held at Johns Hopkins. Contact: Daniel Weiss, tel: 410-516-7120; e-mail: dweiss@jhu.edu or Anne Derbes, tel: 301-585-7154; e-mail: derbes@hood.edu

7 April: **The Ritual of Religious Observance in Europe and the Americas** will be held in conjunction with the exhibition *Images in Procession: Testimonies to Spanish Faith*. Papers are invited on any aspect of Christian religious ritual from the Middle Ages to the present, or theoretical inquiries into the socio-cultural importance and and symbolism of ritual. Deadline for 2-3 page abstracts, **22 December 1999**. Contact: Ena Heller, Director, The Gallery at the American Bible Society, 1865 Broadway, New York, NY 10023; tel: 212-408-1236; e-mail: eheller@americanbible.org

13-15 April: **Annual Meeting of the Medieval Academy of America** will be held in Austin, TX and hosted by the University of Texas. Contact: Medieval Academy of America, 1430 Massachusetts Ave., Cambridge, MA 02138; tel: 617-491-1622; website: http://www.georgetown.edu/MedievalAcademy/news/

Sessions will include: *Literary Borders and Encounters*, organized by M. J. Bailey (Univ. of Texas); *On the Borders of Gender and Sexuality*, organized by M. Jordan (Medieval Institute, Univ. of Notre-Dame); *Marginalized People*, organized by W.C. Jordan (Princeton Univ.); *Frontier Architecture*, organized by S.L. Ward (Rhode Island School of Design); *Removing Boundaries between the Arts*, organized by J.A. Holladay (Univ. of Texas) and R.A. Baltzer (Univ. of Texas); *Muslims, Jews, and Christians in Contact*, organized by M. Signer (Univ. of Notre-Dame); *Periodization in Language History*, organized by M. Blockley (Univ. of Texas); *Circulation across Frontiers*, organized by Program Committee; *Medieval Continuities in the New World*, organized by A.W. Carr (Southern Methodist Univ.); *Defining the Middle Ages as an Object of Study*, organized by G.M. Spiegel (Johns Hopkins Univ.); *Race*, organized by E. Scala (Univ. of Texas) and D. Nirenberg (Rice Univ.); *Millenia and Millenarianism*, organized by Program Committee; *New Perspectives on Marginal Images*, organized by M.H. Caviness (Tufts Univ.)

14-15 April: **Twenty-first Medieval Forum** will be held at Plymouth State College, Plymouth, NH. The theme of the conference will be **Millenium Studies**. Scholars, teachers, students, and aficionados are invited to participate. Proposals for papers, complete panels of papers, and wishes to attend the forum should be submitted by application which may be obtained by contacting: Prof. Eleanor A. Congdon, Director, Medieval Studies Council, Plymouth State College, MSC #39, Plymouth, NH 03264; tel: 603-535-2425; e-mail: econgdon@mail.plymouth.edu or Elizabeth Kurz, Assistant to Director, Medieval Forum, Plymouth State College, MSC #39, Plymouth, NH 03264; tel: 603-535-2542; e-mail: ekurz@mail.plymouth.edu.

Deadline for paper and panel proposals is **15 December 1999**. Priority will be given to papers addressing the theme of the Forum, although papers on all aspects of medieval studies will be considered. Papers will be limited to 20 minutes.

16-19 April: **Museums and the Web 2000** will be held in Minneapolis, MN. You are invited to participate in Museums and the Web 2000! Deliver a paper, host an on-line activity, make a demonstration, or present a workshop that highlights your work with cultural heritage online at this annual conference. Proposals for papers were due **15 November 1999**. Proposed activities, papers and workshops must address web-related issues for museums, archives, libraries and other cultural heritage institutions or their audiences. Proposals for demonstrations (showing features of a site without an explicit thesis) will be accepted until **15 February 2000**.

Submit your proposal using our online form at http://www.archimuse.com/mw2000/; by email, to mw2000@archimuse.com. If you must send hardcopy, fax to Archives and Museum Informatics at 412-422 8594. All submissions will be available online. Many of the papers (and all the

abstracts) from Museums and the Web 1997- 1999 are available online, linked from http://www.archimuse.com/mw.html.

14-18 June: **53rd Annual Meeting of the Society of Architectural Historians** will be held in Coral Gables (Miami), Florida. Sessions of interest to members of *AVISTA* include: *The Architectural Profession without "Architects"*, chaired by V. Jansen (Univ. of California, Santa Cruz); *Before the Beaux Arts: The Education and Training of Early Modern Architects*, chaired by E. Neil (Assumption Coll.); *Taxonomy and Medieval Architecture*, chaired by R. Bork (Univ. of Iowa); *The City of God and the City of Man: Medieval Urban Churches and Their Uses*, chaired by L. Hollengreen (Univ. of Arizona) and A. McGeehee (Oregon Coll. of Art and Craft); *Architecture and Science in the Renaissance and Baroque*, chaired by A. Payne (Univ. of Toronto); *The Country and the City: European Courts and Capitals, 1400-1900*, chaired by T.L. Ehrlich (Colgate Univ.); *Is Architecture Frozen Music?*, chaired by R. Nauman (Univ. of Colorado at Denver); *Reports on the End of Architecture and Architecture's History*, chaired by W.M. Charney (Kansas State Univ.). For further information about the Annual Meeting, consult the on-line site at: http://sah.org/cfpmi.html

2001

17-21 April: **54th Annual Meeting of the Society of Architectural Historians** will be held in Toronto, Canada. Members of the Society and representatives of affiliated societies who wish to chair a session at the Annual Meeting are invited to submit proposals by **7 January 2000** to the General Chair: Diane Favro, Dept. of Architecture and Urban Design, 1317 Perloff Hall, UCLA, Los Angeles, CA 90095-1467; fax: 310-825-8959; e-mail: dfavro@ucla.edu. Sessions covering every period in the history of architecture and all aspects of the built environment are encouraged, and may be theoretical, methodological, thematic, interdisciplinary, pedagogical, revisionist, or documentary in premise. Proposals of not more than 600 words, including a session title, should summarize the subject and its premise. Include name, professional affiliation, address, telephone and fax numbers, e-mail, and a current resumé. Consult the Call for Papers for the 2000 Annual Meeting in Houston, published in the April 1999 issue of the **SAH Newsletter**, or available at the SAH website: http://www.sah.org.

ONLINE

ACMRS Home Page: http:/www.asu.edu/clas/acmrs
ACMRS Calendar of Events and Fall Newsletter are now available online. To access calendar, see
http://www.asu.edu/clas/acmrs/Fall_Calendar_1999.html.
To access newsletter, see
http://www.asu.edu/clas/acmrs/acmrs_fall_newsletter_1999.html.

EuropaNet offers up-to-date information on fellowships and grants for research in Europe arranged by month of deadline date. Also listed are conferences, seminars, summer institutes, and links to research centers and organizations active in European studies across Europe and the United States. Lists are updated twice a week. Contact: http://www.EuropaNet.org

Read the new issue of the Nexus Network Journal!
Nexus: Relationships Between Architecture and Mathematics
The first issue of the Nexus Network Journal is now complete and online at the URL: http://www.leonet.it/culture/nexus/network_journal. This issue includes two featured articles, *Spirals and Rosettes in Architectural Ornament* by Kim Williams and *Triangulature in Andrea Palladio* by Vera W. de Spinadel and a book review of **Nexus: Architecture and Mathematics** by Leonard K. Eaton. The Virtual Library page provides a valuable bibliography of books relating to all aspects of architecture, art and mathematics, with an automatic link to Amazon.com, the world's largest online bookseller. The Conference Reports and Bulletin Board pages will help keep you up to date on past and future meetings, as well as provide links to their web pages.

Please participate in the Nexus Network Journal by sending comments, additonal links, book references for the library and articles and book reviews for future issues. Contact: Kim Williams, Architect, Via Mazzini 7, 50054 Fucecchio - Florence, Italy; e-mail: k.williams@leonet.it

Eureka: The Archimedes Palimpsest. The Walters Art Gallery, Baltimore has launched the site http://www.TheWalters.org/Archimedes for a special exhibition of the same title. The site provides a virtual journey through the life of Archimedes and the Palimpsest.

History of Science sites are listed at: http://members.aol.com/mcnelis/medsci_index.html. Included is the SHMTS based at Oxford founded by Alistair Crombie and Jean Gimpel.

The Bayerische Staatsbibliothek has just launched a prototype of an internet database which provides access to the digitized illustrations of 75 selected incunables from its collection. The invention of printing in the fifteenth century not only revolutionized the transmission of literature of all kinds, but also promoted the presence of late Gothic art in many areas of life in the form of illustrated works.

This project intends to document this development and to make accessible the illustrations in books both to scholars and to a general audience on the World Wide Web. Initially it is intended to digitize the illustrations of incunables printed in German-speaking countries from the collections of the Bayerische Staatsbibliothek. Most of these are black and white woodcuts, frequently with later coloring.

Searches will be possible by bibliographical data of the editions, based on the records of the Incunabula Short Title Catalogue (ISTC), as well as by attributes assigned to individual images, based on iconographical contents and themes. Thus, it will be possible to compare depictions of animals, plants or cities used by different printing houses as well as to

search for illustrations by individual artists.

The bibliographical description of the incunables is based on BSB-Ink (Bayerische Staatsbibliothek : Inkunabelkatalog (BSB-Ink) [Red.: Elmar Hertrich] Wiesbaden : Reichert. 4 vols. 1988-1998; vol. 5 in print) and ISTC.

It is possible to either browse among the illustrated pages in order of their appearance in the printed book or to do specific searches for iconographical features which have been recorded using ICONCLASS; searches can be done systematically following the Iconclass structure or alphabetically by keywords. Captions have also been recorded.

The prototype is accessible under the following URL: **http://mdz.bsb.badw-muenchen.de:6336/digbib/inkunabeln** We are grateful for any comments on the functionality and contents of the database. Please note that due to the size and number of images, access to the server can be slow. Contact: Dr. Bettina Wagner, Ludwigstr. 16, D-80539 München Germany; email: bettina.wagner@bsb.badw-muenchen.de tel. 89 / 28638-2337 (mornings) bzw. -2262 (afternoons) postbox: D-80328 München

The Worlds Monuments Watch List of 100 Most Endangered Sites sets priorities and seeks funding to rescue endangered historic art and architecture. In 1999 grants were awarded to such monuments as Hagia Sophia in Istanbul and the Teotihuacan Archaeological Site in Mexico. The year 2000 list of endangered sites will be announced in Fall 1999. For more information, see the website at: http://www.worldmonuments.org

EXHIBITIONS

"The Dig" – Thirty Years of Excavations at Psalmodi, France is on view at The Williams College Museum of Art until 12 December. Photographs, architectural plans, and drawings document the thirty years of excavations and study by professors Whitney Stoddard and Brooks Stoddard at the site of the Benedictine monastery at Psalmodi in southern France. The standing remains and plan of the Gothic church have been uncovered, a Romanesque structure unearthed, a Carolingian site discovered, and remains of fifth and sixth century building campaigns recovered. For further information, contact: The Williams College Museum of Art, Williamstown, MA 02167-2566; tel: 413-597-2429; fax: 413-458-9017; website: http://www.williams.edu/wcma/

Egyptian Art in the Age of the Pyramids is on view at The Metropolitan Museum of Art, New York through 9 January 2000. The exhibition collects 250 works borrowed from over 30 museums in Egypt, Europe, and North America created during Dynasties III-VI (c.2650-2150 BCE). and includes sculpture, decorative objects, tools used in the construction of the pyramids, and several scale models of the period's architecture. For information, call 212-535-7710 or visit the website at: http://www.metmuseum.org

Divine Mirrors: The Madonna Unveiled can be seen at the Davis Museum, Wellesley College, Wellesley, MA during the Spring 2000.

Art and Science: Joris Hoefnagel and the Representation of Nature in the Renaissance is on view at the J. Paul Getty Museum in Los Angeles, CA from 12 October 1999 through 16 January 2000.

Vive la France: French Treasures from the Middle Ages to Monet is at The Walters Art Gallery, Baltimore from 26 October 1999 to 16 January 2000.

Knights of the Holy Land: The Crusader Kingdom of Jerusalem will run through 29 January 2000 at the Israel Museum in Jerusalem. The exhibition includes finds from local excavations, sculpture, manuscripts, reliquaries, and coins. A catalogue is available.

Pilgrims and Jubilees in the Middle Ages: Medieval Pilgrimages to Saint Peter's Tomb will be held in the Palazzo Venezia, Rome from 21 October 1999 to 26 February 2000.

Sur les trace des châteaux forts: la naissance des chevaliers en Beauce et Perche de l'an mil à 1199 will be held at the Maison de l'Archéologie in Chartres through 31 May 2000.

Tilman Riemenschneider: Master Sculptor of the Late Middle Ages continues at the National Gallery of Art in Washington, DC through 9 January 2000, then will move to the Metropolitan Museum in New York between 7 February and 14 May 2000. A catalogue accompanies the exhibition.

The Apocalypse and the Shape of Things to Come, which will include manuscripts, prints, and drawings from the eleventh century on from the British Museum and British Library, will open at the British Museum in London on 17 December 1999 and run through Spring 2000.

Christ and Mary will be the theme of an exhibition of manuscripts at the Vatican Apostolic Library, Vatican City from January to Easter 2000.

Orders of Architecture/Origins of Ornament explores the classical symbols and forms of the five orders of architecture: Doric, Ionic, Corinthian, Composite, and Tuscan. Drawn from a rare book collection, the exhibition will include digitally-reproduced illustrations from the works of Palladio, Piranesi, Robert Adam, Inigo Jones, and Colen Campbell's *Vitruvius Britannicus*. The exhibition at the New York School of Interior Design, accompanied by a series of lectures, is on view through 25 March 2000. For information, call: 212-472-1500.

NOTES FOR CONTRIBUTORS

To avoid unnecessary delays in the preparation of the *AVISTA Forum Journal*, the editor requests contributors to follow the guidelines listed below.

Form

1. Manuscripts must be clearly printed on a letter-quality printer on standard size paper. Please use twelve point type.
2. If possible, send the disk of your manuscript prepared on Microsoft Word for Macintosh. Include a hard-copy print-out with your disk.
2. Provide author's name, institutional affiliation or city of residence on the title page of the mauscript.
3. Notes must be supplied at the end of the manuscript on separate pages. Please **do not** embed them in the text.

Notes

1. Endnotes should follow the practice of **The Chicago Manual of Style** (14th edition). Books are cited as: J. Fitchen, **The Construction of Gothic Cathedrals** (Oxford, 1961); articles as: J.S. Ackermann, *Gothic Theory of Architecture at the Cathedral of Milan*, **Art Bulletin** 31 (1949): 84-111. If you type your manuscript use quotation marks in place of italic, underline in place of bold type.
2. Abbreviate title of this journal as **AFJ**. Other periodicals should be spelled out on first mention.

Illustrations

1. Illustrations are the responsibility of authors. You may send legible photocopies of visual material for the initial submission of your manuscript. For publication, high-quality, glossy black-and-white prints are essential. They should be no smaller than 5 by 7 inches.
2. Original drawings should be submitted whenever possible, although high-quality photocopies of line drawings are acceptable. The editor will no longer redraw faint copies or attempt to interpret ambiguous sketches.
3. Authors are responsible for obtaining permission to reproduce illustrations when necessary and for any fees associated with their publication.
4. Authors should provide illustration captions printed on separate pages at the end of the manuscript. Information should include the name of the building or object, location, date, specific description of image, source: e.g. Saint-Urbain, Troyes, begun ca.1263, interior, choir (photo: M. Davis).

Miscellany

1. Dates: use figures and numbers as 10 June 1194. Form the plural decade without the apostrophe: 1130s. For bracket dates write each year in full: 1220-1269, not 1220-69.

ANNUAL AVISTA BUSINESS MEETING

The twelfth annual business meeting of *AVISTA* was held 7 May, 1999 in Schneider Hall 1220, Western Michigan University, Kalamazoo, Michigan during the Thirty-third International Congress on Medieval Studies. Warren Sanderson, President, called the meeting to order at 12.04 p.m.

President's Report: Warren Sanderson. This was a successful year for *AVISTA*. Grantsmanship was especially good for us. The level of interest in our subject is rising. John Smedley, who was present, has indicated interest in having Ashgate publish material from *AVISTA* sessions.

Treasurer's Report: Harry Titus. (separate document.) *AVISTA*'s finances are flourishing owing to grants.

Editor's Report: Michael Davis was not present, but submitted a written report on *AVISTA* **Forum Journal**. (See addendum below)

Electronic Media Report: Paul Gans. The *AVISTA* web site is to move to a new server, but URL will link to it to prevent confusion during the switch. The new webmaster will be Steven Walton of the University of Toronto.

Program Committee Report: Marie-Thérèse Zenner. (separate document.) Issue for discussion: title for festschrift in memory of Jean Gimpel arising from *AVISTA* 2000 sessions. Janet Snyder moved and William Clark seconded that the new title be: **Innovations through History: Studies in Medieval Science, Technology and Art in Memory of Jean Gimpel.** John Smedley of Ashgate Publishers spoke about prospects of publishing *AVISTA* work in series. He stressed that he seeks quality work for Ashgate. John spoke warmly about *AVISTA*, our work, and his wish to bring to print some of our material.

Publications Committee: Warren Sanderson announced that he had appointed Nancy Wu as chair of the Publications Comittee with the understanding that there would be two others TBA. William Clark moved, Paul Gans seconded, and members present approved this action.

Discussion followed, centering on relationship between Michael Davis, *AVISTA* **Forum Journal**, and the board. Also, discussed was the relationship of the Publications Committee to the Electronic Media Committee and the website. In further discussions Nancy Wu indicated she was not seeking to control either Michael and *AVISTA* **Forum Journal** or the website. She sees her position mainly as a liaison between them and also with John Smedley or other publishers who might wish to work with the organization.

Nominations Committee: Richard Sundt, chair; William Clark, Charles Stegeman, members.

Board Terms: Normally three years. Goal: fifteen members, with five of these elected every year. Because of irregularities, some shorter terms are proposed, viz. Stephen Murray, Alan Stahl (1 year) and Paul Gans (2 years).

New slate of officers proposed:
> Warren Sanderson: President
> Carl Barnes, Kathryn Talarico: Vice Presidents
> Barbara Bowers: Secretary
> Harry Titus: Treasurer

Current and proposed new board members:
> **Terms expiring in 2000:**
> Current: Marie-Thérèse Zenner, Steve Walton, Richard Sundt
> Add for shortened (1 year) terms:
> Alan Stahl, Stephen Murray.

> **Terms expiring in 2001:**
> Current: Janet Snyder, Robert Bork, Richard Hoffmann, Nancy Wu
> Add for shortened (2 Year) term: Paul Gans

> **Terms expiring in 2002:**
> New slate: Lynn Courtenay, Nigel Hiscock, Richard Schneider, Carol Neuman de Vegvar, Bert Hall.

Paul Gans moved and Janet Snyder seconded that the entire slate be accepted by acclamation. The vote was unanimous.

The newly elected board then had to select its representative(s) for the Executive Committee, made up of the Officers plus at least one Board member. Robert Bork was nominated, and Janet Snyder volunteered. Paul Gans moved and Carl Barnes seconded that Robert Bork be elected to the Executive Committee. The vote was unanimous.

NEW BUSINESS

Electronic Media (Website) Committee

Steve Walton proposed as members: himself, Carl Barnes, Beau Harbin, Paul Gans, and Dick Jones. The vote was unanimous.

Carl Barnes commented that the *AVISTA* web page should have hot links to the Barnes' web page, where Villard material was being archived. He proposed combining the Villard overview with a more extensive article on his homepage (http://www.oakland.edu/~cfbarnes) and linking it with the revised edition of his bibliography. Harry Titus agreed, and suggested efforts to expand the number of links on the *AVISTA* web page.

Program Committee

Marie-Thérèse Zenner asked what would *AVISTA* do at Kalamazoo for its 2001 topic. Barbara Bowers proposed the history of hospitals with the hope to include historians of science and medicine, and perhaps historians of urban environments. All present agreed and Barbara Bowers was appointed chair for the 2001 program.

Adjournment

William Clark moved adjournment and the meeting was adjourned at 1:10 p.m.

Respectfully submitted,
Bert Hall
Secretary (ret.)
13 May, 1999
Revised 25 June, 1999

ADDENDUM: Report from the editor, *AVISTA* **Forum Journal**

The 40-page volume 11 number 2 was published in March and preparation of volume 12 number 1 has begun. Publication of the *AVISTA* session abstracts was a valuable part of the spring issue and I would like to make this a regular feature. For this and future issues, there is a chronic shortage of article reviews and I am especially eager to include science and technology pieces.

Forthcoming issues will include an essay that uses music and viewer movement to analyze architecture and sculpture, and a debate-in-print, triggered by a short but inflammatory piece by John James on the approaches to plan design study by architectural historians. Marie-Thérèse Zenner has suggested that *AVISTA* might publish selected papers from the Kalamazoo sessions and I encourage conference participants to submit edited and annotated versions of their talks. Groups of short (5-7 manuscript pages) essays could form interesting ensembles.

I vow to realize two issues a year – a fall issue (October/November) and a spring April/May volume. I would like to work more closely with Paul Gans and Steven Walton to coordinate electronic and paper publication in an effective way. I proposed to Paul that several of articles from past issues be posted – perhaps two or three at a time on a rolling basis, and Warren Sanderson had the idea that articles could be posted on the web site before publication in **AFJ**.

Respectfully submitted,
Michael T. Davis
5 May 1999

AVISTA FORUM
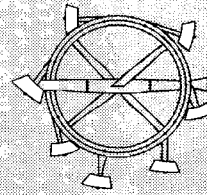
DEADLINE FOR AVISTA FORUM JOURNAL
Volume 12, Number 2, Spring 2000
15 February 2000

*Contributions on any aspect of medieval science, technology, or art in Europe or Asia
or their impact on and afterlife in the modern world are invited. Analytical and critical review
of recent publications (articles, books, electronic) are invited.*
Please send articles or reviews to:

Editor-in-Chief	**Michael T. Davis** Department of Art Mount Holyoke College South Hadley, MA 01075
Article Reviews *(Science and Technology)*	**Pamela O. Long** 3100 Connecticut Avenue NW, #137 Washington, D.C. 20008
Articles Reviews *(Art and Architecture)*	**Carl F. Barnes, Jr.** Department of Art and Art History Oakland University Rochester, MI 48309-4401
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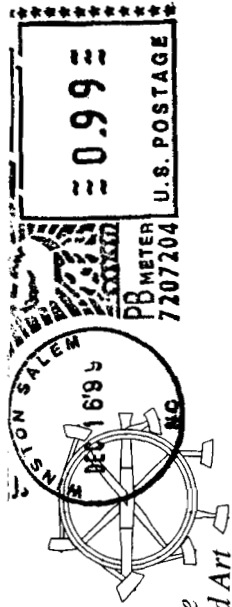
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