HYBRID ARCHITECTURE, HERETICAL RELIGIONS, AND THE EPISTEMOLOGY OF CULTURAL TRADITIONS

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This paper examines historical churches in Armenia, Cappadocia, and Greece to uncover traces of processes that transmitted elements of heretical religions to Christian territories. The buildings exemplify how certain aspects of cultural traditions remain unexamined for the same reason that they survived undetected when political powers attempted to eradicate them. Whereas politicians and theologians have focused on verbal arguments, heretical views have persisted as culturally unconscious but materially consistent practices. Thus the study shows that hybrid cultural traditions can be studied as tacit shifts in modality of thought manifesting themselves in architectural decisions and experiences.

EARLY CHRISTIANITY AND HERETICAL BELIEFS

Heresy exists only in relationship to the dominant orthodoxy, as by definition it threatens a politically secured dogma and its right to impose a worldview. The concept of heresy is therefore symptomatic of operations of pure power and provides an ideal opportunity to explore the coexistence of political domination and cultural resistance. This coexistence of contesting worldviews remains largely unexamined because of historians’ tendency to examine only the explicit logic of political forces—i.e., conscious efforts to establish control—or to fall back on the old-fashioned logic of determinism. As a result, the study of history has typically overlooked less-conscious practices that typically fall under the category of cultural traditions. Although such phenomena can be found all over the world and across time, this study focusses on the period spanning 4th through 11th centuries when Christian religious ideology was becoming emblematic of the West, during which institutionalized Christianity was established in opposition to (and, I will argue, tacitly negotiated with) beliefs defined as heretical.
Before Christianity became the first state religion in Armenia in 301 CE and for many centuries after that, Christian beliefs were multiple and diverse, contributing to a tapestry of dynamically interacting and evolving religious traditions. When Constantine convoked the first Council in Nicaea in 325 CE, his intention was to establish a religious canon for his theocratic state of Byzantium. The invited bishops were charged with eliminating all narratives that cluttered a pure notion of the Christian dogma, the first phase of a long process to turn the biblical canon into a controllable and enforceable system. The bishops arbitrarily deemed many biblical sources apocryphal—i.e., of dubious origin and theologically irrelevant—and established unequivocal interpretations for accepted texts. Like many contemporary historians, the members of the first Council in Nicaea focused on the rational integrity of the verbal system they were producing even though religious practices in the lands under these bishops’ jurisdiction were much more complex. Many nominally Christian communities accepted conflicting narratives and a variety of material practices, resulting in the interaction and merging of many ancient and newly invented beliefs. Some of the most influential, and thus most threatening to Christian orthodoxy, of these systems were syncretic religions that included elements of biblical narratives.

Early Christianity’s most adversarial relationship was with what have come to be called dualistic concepts of divinity. Unlike the older and more common polytheistic systems that assumed the existence of many gods, dualistic religions threatened the beliefs of followers of Jesus Christ by answering certain fundamental questions that strictly monotheistic traditions could not. To put it simply, these questions revolved around the origin and function of evil: if an all-perfect and infallible god created the world, how is it possible that the world includes decay, misery, suffering, and crime? Their answer was that the world was created not by one but by two gods. In this dualistic view, one deity is in charge of all that is perfect and safely beyond the reach of human beings, and the other has created and controls the imperfect material world in which we live, a simple division that placed all people squarely in the domain of the devil-god. This dualistic concept of the cosmos took a large spectrum of forms. Some dualistic religions, especially those based on ancient Greek philosophical traditions, emphasized the tension between perfection and
imperfection. People following what is currently referred to as Gnosticism made a profound distinction between corporal and cerebral perceptions of the world, absorbing many ancient narratives that assigned symbolic meaning to different kinds of thought and experience and viewed thought rather than empirical experience as the most reliable source of religious insight. All these traditions aspired to acquire gnosis—a secret understanding of the material and immaterial world. The Persian legacy that competed with Greek traditions for centuries was steeped in the Zoroastrian worship of fire as the symbolic representation of pure, life-giving energy. In that system of beliefs, Ahura Mazda, the good god associated with the sun, was in endless competition with Ahriman, who represented forces of destruction and darkness. This emphasis on fire as both material and immaterial served to connect earthly elements and immaterial principles.

Perhaps the most refined and consequential version of these dualistic views was Manichaeism. Conceived by Mani in the 3rd century CE Persia, Manichaeism was an intentionally and explicitly syncretic compilation of Gnostic, Christian, Jewish, and Zoroastrian beliefs. Prosecuted by Persian priests during Mani's life and by Christian and Muslim authorities for centuries after his death, forms of the religion eventually spread across the Middle East, Europe, North Africa, Indo-Persia, and deep into Central Asia and China. The cross-cultural appeal of Manichaeism was rooted in its theological construction, as, unlike its competitors, it was broadly inclusive and struck a unique balance between a high degree of visual evocation and the strictest rules of verbal logic. The Manichean's conception of dualism revolved around the issue of light, which it presented as the most intellectually refined connector between the material world and the universe of abstract concepts. Mani's surviving writings clearly demonstrate his mastery at creating evocative visions of a world pulled apart by the forces of darkness and light and explaining how the sacred light had been stolen and dispersed in the material world. Like Gnostic narratives, this religion of light, as it was often called, was also obsessively complex in its use of numbers and names of secondary deities, their relationships, and actions. Thus, Mani managed to both paint an imagination-firing view of the mythical origins of the world and construct a highly elaborate and logical system of cause-and-effect narratives. His religious system was designed so that intelligent and imaginative leaders could exploit the coexistence of multiple religious
traditions and satisfy the political need for enough consistency to organize Manichean communities and control their verbal and material practices.

More effectively than other dualistic traditions, Mani defined the world as divided between two opposing deities and presented a system for bridging the divide. Yet, as is the case for all religions, the further his followers spread, the more hybrid their symbolic traditions became. Although elects (priests) aspired to lead and control people by representing their knowledge as comprehensive and as penetrating both symbolic domains, the people who followed them, especially in remote and secluded locations, exercised these worldviews in more intuitive ways and daily material practices that included local traditions and physical conditions. To understand these complex processes and their cultural consequences, therefore, requires moving beyond the study of textual sources to explore the material production of people who were immersed in these nuanced exchanges. Architecture can be particularly instrumental in this endeavor because some of the most symbolically contested religious issues revolved around the constitution of places of worship. Indeed, I contend, key features of Christian church buildings in these areas evolved from little-known and culturally unconscious dialogues between nascent versions of Christianity and symbolic sensitivities created by the dualist legacy. As I will show, the construction of churches raised three issues of religious symbolism. The first was how to physically construct a place of worship. In the material universe, where everything had been created by the devil-god, any act of material construction would necessarily enhance the domain of the evil. How, then, could any church made of stone, bricks, or wood be truly appropriate for worshiping the good god? The second symbolic issue was where to site a place of worship. Since any landscape explicitly represents the symbolically tainted materiality of the world, what kind of place in a landscape would be suitable for praising the god of immaterial reality? The third was what role light and daylight should play in a Christian church, a particularly acute issue because light was so directly associated with dualistic beliefs. How could a Christian church make use of light without evoking heretical associations? In the rest of this paper, I will examine how these issues were resolved in three churches during the time and in the region in which this dialogue took place.
ARMENIA

Although the official history of the Armenian Church does not openly acknowledge that its faith might have evolved in dialogue with dualist beliefs, and in fact cites many instances when church officials and political rulers prosecuted religious dissent, many of its old churches nonetheless seem to directly respond to the three symbolic issues mentioned above. Figure 1 shows a telling instance, the Holy Cross Church on the island of Aghtamar in Lake Van, now in Turkey. A vivid example of Armenian churches built before the 15th century, which are easily recognizable by their siting, composition, and craft, its pure geometric form stands in figurative contrast to the vastness of the open space surrounding it. The only fragment that seems rooted in the ground, a low entry hall visible in its foreground, is a later addition. The structure is geometrically pure because instead of referring to the conventions of classical orders it is the most elemental composition of solid shapes. Made of reddish sandstone, its walls and roof intersect at perfectly cut corners. The decorations on its elevations do not seem designed to compete with the form’s overall purity of form and material but appear as if delicately drawn on the stone. The central part of the building dominates the landscape because it is strongly vertical; its central space (the equivalent of the naos in Byzantine architecture) is almost three times higher than it is wide. These kinds of refined figures are usually found on the edge of large open spaces, as at Lake Van; marking peaks of natural promontories, as in Khor Virap; or are dramatically surrounded by a vast valley, as in Noravank or Tatev. In such churches, the site is selected to heighten the contrast between the figurative clarity of geometrical forms and the natural background of the landscape. The issue of form was inherently significant in Gnostic and Manichean beliefs, as the notion that a form could be fair or hideous supported the duality of form and matter—a way of creating polar opposition between an abstracted shape and a material thing. The refined forms of Armenian churches seem to have grown out of this way of thinking.
The oldest examples of churches in Armenia, however, avoided the challenges posed by the first two dualistic issues discussed in this paper by hiding places of worship in natural or enlarged caves. As if trying to avoid adding to the domain of the devil-god, early Christian worshipers preferred found places with no external form. The Geghard monastery in the Kotaïk region, historically one of the most important sacral sites in Armenia, provides a good example. Established in the 4th century CE by Gregory the Illuminator, the founder of the Armenian Church, and partly destroyed in the 10th and 12th centuries by Muslim invaders, it was reconstructed in the 13th century, later became a center of learning and ecumenical power and played an instrumental role in preserving religious and cultural identity of Armenia. The monastery is also called Airivank, "the Monastery of the Cave," because its oldest portions were either natural caves or carved out of solid rock. Figure 2 shows a fragment of such an interior, the zhamatun or gavit—the equivalent of the nartex in Byzantine churches, but also a mausoleum for its founders. The zhamatun leads to Astvatsatsin, the second oldest cave church in the main complex of the Geghard monastery. That oldest church in the complex, Avazan (basin), is similar to the space shown in Figure 2. All these interiors integrate dualist traditions with Christian design patterns, and it is difficult to find architecture that makes one more aware of the basic elements of the natural world than these spaces. Natural elements such as water, solid matter, air, and fire/light, which play only a marginal role in the Christian tradition, were essential components of dualist
systems, which saw in their relationships the structure behind the devil-god's design. Water is an essential part of the Geghard experience. As the right side of Figures 2 and 3 show, water seeps from natural cracks in the wall, making the zhamatun’s rocky surfaces wet and sensually evocative. At the top of the interior, a carved dome admits daylight that softly illuminates all of the interior’s natural and artificial forms. Interiors carved out of massive rocks are also always colder than the exterior, which is heated by the sun, and thus caves support greater humidity and water condensation. This increased density of the air is vividly apparent when direct sunlight enters the space through the oculus and materializes as a luminous beam, as evidenced in Figure 2. Consequently, in Geghard, all of the natural elements that were symbolically charged in Gnostic and Manichean narratives are heightened as perceptual phenomena: matter as the rough surfaces of the rock, water appearing on walls and collecting in the floor cavities, air thickened by the humidity, and light and fire represented by sunlight and candles.

![Figure 2. Geghard monastery interior.](image)

This experience is quite different, however, than what one would observe in a natural cave. While the space shown in Figures 2 and 3 seems to have been shaped by principles of geometry, its design has actually been driven to a large degree by light considerations. Although the sacral architecture of many religions and especially of Western Christianity has used symmetry to represent the symbolic importance of certain places, the layout of the zhamatun in Geghard violates these rules and instead gives priority to the distribution of
light. Figure 3, a computer-generated orthographic view of that interior, shows that the main volume of the zhamatun is not symmetrical. The space is carved much deeper on the north side (left in the picture), and even the small altar in the center is slightly shifted to the left. All the symbolic signs are also carved in the north half, where they dynamically interact with the light coming from the moving sun. The south wall (right in the picture) is without decoration, and its primordial character is emphasized by the cracks and water.

Builders must have carved the solid rock while observing the effects created by daylight, as they appear to have adjusted the size and shape of the interior and the position of the sculpted figures to the way sunlight reaches them. In Geghard’s zhamatun all the key questions posed by the dualist traditions have been answered in a strangely non-Christian way. Daylight became more important than the correct position of an altar or the overall symmetry of the temple layout. The oldest volumes have no exterior presence, and their interiors preserve and reveal the natural state of physical matter. The newer structures in the monastery, built as additions to the old cave-like interiors, are designed to create a strong geometric contrast to the natural complexity of the valley surrounding them.

Figure 3. Geghard monastery photometric model.
CAPPADOCIA

Examples of this hybrid way of thinking about a place of worship can be found all over Armenia because this part of the Christian world has always been the most exposed to the religious traditions of the East, especially of Persia and the Middle East. Just as the seclusion created by the Caucasus Mountains has helped preserve some of the oldest languages and cultural traditions in the region, it also helped maintain diversity in religious attitudes. Armenia's neighbor, the powerful Byzantine Empire, represented a more radical attitude. As they waged a war against heretics in an attempt to totally eradicate those unwanted influences, the three issues of religious symbolism discussed here came into focus in Byzantium during iconoclasm fueling a century of destructive power struggles. Between 730 and 842 and including the second council of Niceae, the empire engaged in the bloody persecution of those who worshiped figurative depictions of God. Seen more broadly, however, it was a war over the constitution of places and objects of worship. Although largely glossed over by Western history, this was a time of intense conflict between the Byzantine Empire and Paulicians, a fiercely iconoclastic sect of militarized Armenian Christians who followed noncanonical writings of the apostle Paul and a mixture of other beliefs. Their version of Christianity was so different from those established by the councils in Niceae or Armenian Orthodoxy and so close to dualistic traditions that many historical sources refer to the Paulicians as Manichaean Christians. The largest, best organized, and militarily strongest group of religious dissenters during the period, it originated in western regions of Greater Armenia and spread across Asia Minor, especially in the central region between Pontus and Cilicia. They even created their own state around Tephrike (modern Divriği). When the Byzantine Empire was not fighting with them, they used them as a military buffer to protect its borders against Arabs or Bulgars. Finally defeated in 871, many Paulicians were slaughtered or forcibly relocated and some were absorbed into the Byzantine system of so called military and administrative themes. Although the Paulicians did not leave any buildings that can be directly attributed to them or their religious principles, an example from Cappadocia, the region where the descendants of those rebellious heretics were likely to have lived, may reflect some of their beliefs.
The history of Cappadocia is inseparable from that of theocratic Byzantium, but also includes Zoroastrian traditions and even late cases when orthodox bishops were prosecuted for heretical practices. In that region, even today, one can find villages in which every homestead includes an ancient Christian chapel carved into solid rock, which have now all been converted by Muslim farmers into stables or storage spaces. The largest collection of elaborately decorated rock-carved churches near Göreme (Korma) has been converted into a national museum. The construction, or rather carving out, of these places of worship coincided with the iconoclasm controversy in the 8th century CE and continued until the 11th century CE. Almost all of them adopt the spatial pattern characteristic of structures built of stone in Byzantium centers and their painted decorations resemble the iconographic programs of better known orthodox models. Yet, in some of them, the range of influences cannot be understood by conventional historical methods of analysis.

The Chapel of Saint Barbara (Azize Barbara Kilisesi), constructed at the beginning of the 11th century, provides a good example. Shown in Figure 4, its simple interior is marked by a strange system of signs painted in reddish ochre directly on the surface of light-colored volcanic rock. According to Dorothy Wood, figurative paintings were later added to these abstract patterns. Although she describes those as “folk decorations,” she also suggests that the reddish signs are Byzantine military standards and scepters, which would increase the likelihood that Armenian soldiers and their descendants in the Cappadocian/Anatolic Theme may have participated in creation of such spaces. The chapel’s similarity to Armenian designs also includes certain characteristic non-Christian signs. A circular symbol painted prominently at the top of the north vaulted ceiling in Saint Barbara resembles the sun-like rosettes on the vaulted ceilings of some Armenian churches. Thus, it seems possible that nominally converted soldiers with Paulician sympathies may have contributed to the design of the chapel.

More important to this analysis is that the spatial and experiential characteristics of the chapel’s interior reveal a dualistic way of thinking. First, the space, which is seemingly laid out and oriented according to Middle Byzantine orthodox principles, has only one opening, the deep entry door on its south side. In the
past, the door connected the chapel with the no-longer existing nartex, meaning that the light accessing the interior today is stronger than it was originally. Yet the position and the size of the door remain the same, and even if the original interior was darker, the distribution of daylight inside the chapel must have been very similar. As Figure 4 shows, the natural illumination creates a vivid visual differentiation in the ritual center of the chapel. The further one moves from everyday reality, the more the interior appears as if made entirely of light, shade, and red signs. Thus, this chapel makes a case for thinking about places of worship as made of visual phenomena and abstract symbols. By diminishing one’s ability to consider its material construction, this experience strongly resonates with the first of the aforementioned dualistic issues. Moreover, these illusive visual attributes stand in contrast to the landscape, which consists of natural pyramids and cones that look almost surreal—as if they had been obsessively sculpted for arbitrary reasons. The chapel is hidden in one of the smaller rocky hills, which is not much bigger than the interior itself (Figure 5). The old nartex must have been small and contained by another rocky mound, which would have appeared to the left of the picture. This place of worship exists only as an interior and creates a profound difference between the interior and exterior realms. This distinction, which illustrates the second dualistic issue, is even stronger in the Chapel of Saint Barbara than in other rock-carved interiors in Cappadocia in which figurative pictures cover all the interior surfaces. To a dualistic way of thinking, religious iconography consisting of human figures, buildings, and views of the natural world alluding to the exterior world—the devil’s domain—would thus weaken the symbolic difference between the inside and the outside.

Figure 4. The Chapel of Saint Barbara in Göreme, interior.
Yet this chapel's engagement with the function of daylight, the third dualistic issue, seems the most striking. The tension between light and darkness visible on the back wall of the main apse in Figure 4, for instance, seems structured in a deliberate way. Figure 6 shows a digital model of the interior as seen from the outside. The photogrammetric technique used to produce this image maps the light on the surfaces in a way that directly corresponds to phenomena recorded by a camera in the actual space. As it shows, the central and the northwestern apses (visible at the left and bottom of the picture) are strongly divided into bright and dark areas by the distribution of daylight, a visual phenomenon that is a permanent feature of the space because the door aperture provides a stable source of light. The distribution of light and shadow shown in Figure 4 can be observed from morning to evening, its contrast increasing only at midday. This visual effect would have been even more constant in the past, when light entered via the nartex, because the source of light would have been even less dependent on the position of the sun. Upon closer analysis, this way of illuminating a space intended for Christian rituals reveals that this interior, like that of Geghard, was shaped according to the logic of light. Figure 7, a digital model of a top view of the chapel, shows that the geometrically ideal form has been distorted in its construction, as its northeastern portion (top right in the figure) is not aligned with the orthographic grid of the chapel's main body. The white beam drawn in Figure 7 reveals a possible reason for that seeming imperfection: the central and northeastern apses were shifted so
that the light coming from the door aperture would divide their back walls into two relatively equal parts, bright and dark. Although the general shape of this interior was based on conventional Middle Byzantine patterns, it appears that when the builders started to carve out its eastern end, they watched the effects of the daylight and adjusted the shape accordingly, suggesting that in Cappadocia, as in Armenia, light phenomena were considered more important than faithfulness to the geometric design conventions of orthodox places of worship. Although the community that commissioned chapels such as Saint Barbara may have had little specific knowledge of Paulician and other dualistic heresies, the evidence suggests that they at least subconsciously paid attention to symbolically charged issues of materiality and light and that their architecture therefore transmitted and preserved those earlier and officially suppressed religious concerns.

Figure 6. The Chapel of Saint Barbara in Göreme, photometric model.
GRECE AND MIDDLE BYZANTINE ARCHITECTURE

The Middle Byzantine period in art and architecture started in 843 CE, right after the end of iconoclasm. Praised by historians as a renaissance of artistic production, the burst of creativity in this period was a direct reaction to the preceding century of destruction. New churches and icons manifested the triumph of those who had invested their political capital in Christian orthodoxy and rejected eastern or ancient ways of thinking about God. New monuments were meant to communicate the rejection of the idea that the true divinity was inaccessible to the human mind and that all material production of religious icons was sacrilegious. Figurative representation became orthodox again as political powers restored their control over iconographic programs and religious practices. This shift from individual contemplation of the nature of divinity to institutionalized religion as a political ideology can be observed in many of the magnificent churches constructed during this period. One of the best known and definitely best preserved among these is the Katholikon in the monastery of Hosios Loukas, built in Greece around the first quarter of the 11th century, soon after a second wave of forcibly relocated Paulicians reached Thrace. Its design is based on the "cross-in-square" model characteristic of Middle Byzantine architecture. Most studies of the space have

Figure 7. The Chapel of Saint Barbara in Göreme, light diagram.
elaborated on its relatively well-preserved and masterly executed collection of mosaics and their symbolic meanings. As I have previously revealed, however, the Katholikon’s most distinctive feature was the way it controlled daylight.23 This sophisticated visual apparatus has remained insufficiently explored because contemporary methods of analysis are not only too limited to study its symbolic complexity but have in fact contributed to significant alterations of the original church interior.

Figure 8 consists of two images, a photograph of the interior the way it looks today and a digitally simulated view of how it likely appeared in the past.24 The difference has resulted primarily from the contemporary use of totally transparent glass in exterior apertures, changes in certain windows, and the loss of gilded mosaics in the dome. In the past, the interior would have been generally darker and daylight precisely concentrated in certain portions of its volume. Figure 9, an analytical record of daylight distribution within the empty space of the interior during that time, shows that bright light was concentrated mostly inside the dome cavity and on the second-floor galleries, which were accessible only to the monks. For lay believers in the dark layer of space on the ground floor, the Katholikon created a paradoxical place of worship. The volume of brightness at the top of naos was only implied, perceivable in the glittering of the gilded mosaics. The threshold between this non-figurative representation of the divine realm and the realm of humans below would have been indeterminate and inscrutable. All the finish materials, including mosaics, colored glazing, and polished stones, used in the church were optically similar in that they all reflected or transmitted light, creating glistening or shimmering effects, optically unifying and dematerializing the interior. Stone literally emitted light in places where thin translucent slabs of marble were placed between areas of radically different light intensity. One such condition, bright galleries and darker volumes of bema, is shown in the upper left corner of Figure 9, although the current difference in light intensity is too small to produce the original effect. (Solid slabs of thin white marble installed in the southern wall of the church, however, still delicately filter sunlight into the interior.) In contrast to these paradoxical impressions, the interior is contained in a building that, when viewed from the outside, seems crudely material. The large, irregularly blocks of stone of which the walls were built imply connection to the landscape. Thus, the Katholikon reflects all three aspects of the
dualist legacy: the interior turns the physical construction and materials into an environment made of light phenomena, the exterior resembles the materiality of the landscape surrounding it, and daylight is instrumental in making this paradoxical place of worship possible.

Figure 8. Katholikon in the monastery of Hosios Loukas, now and as it would have appeared in the past.

Figure 9. Katholikon in the monastery of Hosios Loukas, light analysis.
EPISODEOLOGY OF HYBRID ARCHITECTURE

Although the Katholikon in the monastery of Hosios Loukas was an imperial commission, one of many constructed by iconodule leaders after their victory over Paulicians and other iconoclasts, this crowning example of political and military triumph is not only symbolically hybrid but almost seems to glorify the heretical imagination. Thus, the church may provide key evidence of the impact of dualist religions on Middle Byzantine architecture and how deeply their ways of thinking had been internalized by the orthodox design principles. Such evidence, I submit, has epistemological implications. Sacred buildings are typically studied as direct expressions of conscious intentions, which are presumed to be aligned with a particular ideology, or are described as physical objects known only to the extent they conform to conventional taxonomies of architectural styles and their periodization. Even scholars, like Alexei Lidov, who acknowledge the limitations of this conventional knowledge and call for new explorations of the hierotopy of light—the light-centered constitution of Christian Orthodox places of worship—tend to reduce what we can know to an understanding of these traditional material practices as a unique kind of artistic creativity.25 Yet the shifts in and transfers of modalities of thought exposed in the cases discussed here are not expressions of individual creativity, nor of conscious conspiracies to smuggle heretical ideas into orthodox places of worship. What they do reflect, I would argue, is that builders have always used architecture to give form to common and frequently unconscious cultural biases and ways of thinking that are too complex for explicit narratives. Although some historians admit that an absence of written and constructed sources “does not exclude the existence of a living tradition which might be carrying on an old custom,”26 most overlook inconsistencies in old narratives or hybrid material conditions within a symbolic structure that could inform new understandings and refocus old knowledge.27 As the examples above illustrate, a more productive epistemic approach would include culturally subconscious and non-verbal exchanges in our construction of historical knowledge. Material practices, especially those involving religiously charged architecture, provide an ideal medium for transmitting and interrelating the most contentious worldviews and traditions. The spaces discussed here have tacitly preserved ways of perceiving and thinking about the world that were officially suppressed and their obvious supporters prosecuted to extinction. Yet that officials based their legal cases only on evidence of
conscious actions or explicit beliefs is precisely what allowed those spaces to exist. What these churches have shown us is that traditional environments are much more complex than current knowledge tends to assume and therefore provide uncharted opportunities for studying the history of cultural relationships.

NOTES AND REFERENCES

1 This research project has been supported by a University of Minnesota Grant in Aid.

2 Perhaps the most consequential for the formation of Western Christianity was the Sasanian period (224-637 CE) in Persia, when various versions of dualism became more open to other religions. See Shaul Shaked, Dualism in Transformation: Varieties of Religion in Sasanian Iran (London: School of Oriental and African Studies, University of London, 1994).


5 Most existing Manichean texts and religious decorations have been found in remote places in Egypt and China (Turfan). See, for example, Samuel N. C. Lieu, Manichaeism in Central Asia and China (Leiden: Brill, 1998) and Manfred Heuser, and Hans-Joachim Klimkeit, Studies in Manichaean Literature and Art (Leiden: Brill, 1998).

6 Mani was also a painter and illustrated his original texts.

7 Many authors have discussed how Armenian cultural traditions include ancient and Asian elements, yet rarely they have admitted that dualist religions have played a significant role in shaping Armenian Christianity. See Levon Abrahamian and Nancy Sweezy, Armenian Folk Arts, Culture, and Identity (Bloomington: Indiana University Press, 2001). This religious tension has generally been acknowledged only when discussing ancient religions. See, for example, James R. Russell, Zoroastrianism in Armenia (Cambridge, Mass.: Harvard University, 1987).

8 See, for example, Murad Hasratian and Zaven Sargsyan, Armenia: 1700 Years of Christian Architecture (Erevan: Mughni. 2001).


11 The oldest cave church in Geghard, Avazan, was the site of ancient pagan rituals centered on the natural spring still existing in the cave.
12 This picture was created with the help of Photomodeler Scanner software, which converted hundreds of photographs into a point cloud model of that complex interior with photogrammetric precision.

13 Armenia was one of the main centers in which Gnostic and Zoroastrian traditions interacted. See James R. Russell, Zoroastrianism in Armenia.

14 The officially accepted end of iconoclasm coincides with the flight in 843 or 844 of Karbeas, a Byzantine general (protomandor of Theodote Melissenos, strategos of the Anatolikon theme) and a group of 5,000 persecuted heretics who found refuge in the Paulician state. Later he became the Paulician leader. See Nina G. Garsoian, The Paulician Heresy: A Study of the Origin and Development of Paulicianism in Armenia and the Eastern Provinces of the Byzantine Empire (The Hague: Mouton, 1967), 126-127.


17 Dorothy Wood states that such abstract decorations mark the oldest phase of making these places of worship in Cappadocia and even treats the reddish patterns and signs as temporary embellishments. Dorothy Wood, “Byzantine Military Standards in a Cappadocian Church,” Archeology, 12 (1959), 40.

18 Ibid.

19 This sign’s position is also similar to that of a sun sign prominently carved in another old church in Geghard, Žamatoun (built in 1288). Natalia Teteriatnikov has suggested that connections between the design of Cappadocian and Armenian churches can be traced also in the sizing and position of other interior elements. Natalia Teteriatnikov, The Liturgical Planning of Byzantine churches in Cappadocia (Roma: Pontificio Istituto Orientale, 1996), 36.

20 Orthodox Byzantine churches were entered from the west.

21 It is difficult to measure this interior without the help of range scanning or photogrammetry. The few published plans show the layout without the distortion; See, for example, Figure 19 in Suna Güven and Meltem Ari, The Inscribed-Cross Churches in Göreme (Ankara: Middle East Technical University, 2004), http://etd.lib.metu.edu.tr/upload/12605118/index.pdf.

22 Many historians believe that the Katholikon was built in 1025. Carolyn Connor, however, suggests that it was built closer to the third quarter of the 10th century. See Carolyn Loessel Connor, Art and Miracles in Medieval Byzantium: The Crypt at Hosios Loukas and its Frescos (Princeton, N.J.: Princeton University Press, 1991), 82. Note also that the monastery of Hosios Loukas, located near the town of Distomo in Boeotia, was connected by land to Constantinople via Byzantine Thrace, which at that time was populated by Paulicians who resettled there in 747 and around 970-5. This exposure to heretical beliefs may also have included direct remnants of Manichaeism. Nikos Chausidis argues that Manichean communities might have survived in Macedonia and contributed to the emergence of Bogomils there. See Nikos Chausidis, The Funeral Stelae of the “Kavadarci Group” in Macedonia: Manichaean Interpretations, UDK: 904: 725,942 (497.7), or https://www.academia.edu/3816591/N._Chausidis_The_Funeral_Stelae_of_Kavadarci_Group_in_Macedonia_Manichaean_Interpretations_Nadgrobné_stele_tzv._Kavadarske_skbunie_iz_Makedonije_manijejsko_tumacentj.

24 To study light in Katholikon, I used a physically based software program, Lightscape 3.2, which is no longer available.


27 Many chapters in *Hierotopy of Light and Fire* include examples clearly implying connections to dualistic traditions, although these cases are glossed over without considering their heretical imports. See, for instance, Fabio Barry’s reference to Paulinus of Nola’s describing the church of St. Peter at Tarentaise as “a prison of light,” a term frequently used by Manicheans to emphasize the entrapment of the sacred light on Earth. Fabio Barry, “The House of the Rising Sun: Luminosity and Sacrality from Domus Ecclesia” in *Hierotopy of Light and Fire*, 92.