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THE COMARES HALL IN THE ALHAMBRA AND JAMES TURRELL'S *SPACE THAT SEES:* A COMPARISON OF AESTHETIC PHENOMENOLOGY

And He is the Mighty, the Forgiving

Who hath created seven Heavens one above another: No defect canst thou see in the creation of the God of Mercy:

Repeat the gaze: seest thou a single flaw?

Then twice more repeat the gaze: thy gaze shall return to thee dulled and weary.

Qur'an 67: 3-5¹

Irrelevant or fanciful though it may at first seem, comparing an example of medieval Islamic architecture with a twentieth-century Western work of art illustrates the contemporary trend of transcultural investigation in the field of artistic studies.² This article compares two buildings containing a single main room: the reception hall inside the Comares Tower, built in 1310 within the Alhambra at Granada by Yusuf I; and a cubical construction, Space That Sees, erected in 1992 in the sculpture garden of the Israel Museum in Jerusalem by the contemporary American artist James Turrell (born in California in 1943).³ This type of study must be placed within the epistemological context of what Oleg Grabar calls "the mythology about globalization." He defines this concept as a "technology of awareness and recognition which would make all cultures and all knowledge accessible with the same intensity to all institutions and individuals." He then appropriately suggests, "It is possible that the information provided by procedures in the Islamic world would not exhibit significant differences from procedures used elsewhere."4

Far from being pure speculation, such a comparison can reveal the very meaning of the two works in question in the light of what they share as aesthetic phenomenologies, beyond any cultural specificity. If one considers the work of art an "effective reality"⁵ and examines the nature of the thing itself (*die Sache selbst*)⁶ and not only its history, one situates it in the very sphere of its absolute existence that transcends time and space.⁷ Therefore this work of art necessarily matches, in aesthetic terms, kindred objects from other periods and contexts of civilization: "the object in connection with objects."⁸ Did not Edmund Husserl use "the great word *Stiftung*—foundation or establishment—to designate in the first place the limitless fecundity of each present…but above all that of the products of culture that continue to have value after they appear, and that open a field of research in which they live perpetually"⁹?

A significant example of this new transcultural approach was provided by "Ornament and Abstraction," an exhibition held at the Beyeler Foundation, Basel, in September 2001. In the exhibition, Western art from the twentieth century was displayed alongside so-called decorative works from other civilizations and times;¹⁰ exhibits included a pre-Colombian textile juxtaposed with a painting by Jasper Johns and, more relevantly, a Moroccan wooden door carved in 1690 combined with a canvas by Mark Rothko, and an Islamic tile mosaic shown with an abstract work by Piet Mondrian. In his seminal book, The Mediation of Ornament, Oleg Grabar made a similar comparison of a fifteenth-century Iranian painting with the famous Broadway Boogie-Woogie of Mondrian.¹¹ In continuity with these attempts, the present article aims to approach artistic creation through its fundamental character of universality, as opposed to its ethnic, national, or religious differentiation.

To begin, a cluster of formal similarities creates a parallel between the Comares Hall and *Space That Sees.* Each work consists of a fortress-shaped structure atop an elevated site that dominates the landscape in such a fashion that it imposes its presence on the surroundings (figs.1–2). Each shelters a cubical room decorated with geometric patterns and displaying an aesthetic emphasis on a ceiling that transforms the architecture into a cosmic fiction. The Comares Hall (also called the Hall of the Ambassadors) consists of



Fig. 1. Exterior of the Comares Tower at the Alhambra, fourteenth century. (Photo: J. Laurent. Courtesy of the Fine Arts Library, Harvard College Library)



Fig. 2. Rear facade of *Space that Sees* by James Turrell, 1992. Sculpture garden of the Israel Museum, Jerusalem. (Photo: V. Gonzalez)

a vast, lavishly decorated, monumental chamber crowned by a wooden cupola and located inside the massive brick structure known as the Comares Tower (fig. 3). An ornamental configuration of large superimposed geometric panels of ceramic and stucco, focusing on a star-patterned vault, is combined with poetic and Qur'anic inscriptions with cosmological themes.¹² Sura 67, "The Kingdom," which describes the seven Islamic heavens, extends along the base of the cupola, directly beneath the muqarnas cornice at the top of the walls. Around the arches and inside the alcoves are inscribed various poems in which plentiful astral themes compare, for example, the figure of the sultan to the sun that enlightens the starry canopy of the skies.

Analogously, Turrell's construction is a place of stargazing and of meditation on the physics and metaphysics of the universe (fig. 4). As the artist himself declares, "I am making spaces that will engage celestial events."¹³ Not well known to historians of Islamic art, and perhaps too recent to belong to the historical category of universal masterpieces, *Space That Sees*¹⁴ requires fuller description.¹⁵

The work consists of a monumental half-cube made of stone and concrete masonry, standing in the middle of a gravel-covered ground and surrounded by



Fig. 3. Interior of the Comares Hall. (Photo: Garzón. Courtesy of the Fine Arts Library, Harvard College Library)



Fig. 4. Interior of Space that Sees. (Photo: V. Gonzalez)

bushes and small trees planted sufficiently far from it to stress its hieratic and minimalist volume. Blind, bare façades lead the visitor, on arriving at the site, to walk around the cube to find its entrance. At the rear, a short wall of immense rough-faced stones eventually conducts the visitor to a doorway giving access to the room (fig. 5). There, on the right side of the entrance, appears a sign that reveals the title of the work, *Space That Sees*.

The space within forms a huge, hollow, geometric figure determined by the inclined, unadorned walls, covered at half-height with tiles of ocher marble and marked along the bottom by the strict linearity of a bench. The smooth, paved floor completes the figure. This geometry of the void—the skillful effect of pure profiles, impeccable directive lines, and uniform surfaces—reaches its aesthetic peak at the level of the open ceiling, where a sharply defined square forms an aperture through which the spectator contemplates the heavens. Natural "pictures" of the firmament shaped by atmospheric phenomena—cloudy or sunny sky, starry night, etc.—succeed one another within the limits of this empty square.

Hence the puzzling title of Turrell's work actually plays a crucial role in the semantic of the building. Here, as in the Comares Hall, a linguistic element significantly partakes in the aesthetic language and uses the rhetorical strategy of personifying the archi-



Fig. 5. Entrance to Space that Sees. (Photo: V. Gonzalez)

tecture. The decorative poems of the Moorish edifice provide some of its features, such as the "talking" cupolas above the niches, with the aesthetic ability to speak;¹⁶ likewise its title provides Turrell's work with the aesthetic ability to see; we might say that while the former is a "space that talks," enjoying the power of the word, the latter is a "space that sees," with the power of sight. Moreover, despite its brevity, Turrell's title purposely attributes a fictional character to the architecture: thanks to three puzzling words, the ultra-minimal, concrete cube becomes an object poised between dream and reality. In this sense, its title seems to share with the poetic inscriptions in the Alhambra the rhetorical function of addressing the imaginative and the marvelous.

Actually, the phrase "space that sees" leads to two possible and equally valid interpretations of the work. The first and most obvious is that the construction, transformed into a living entity endowed with sight, looks at the heavens through its upper aperture, as does the visitor while sitting on the bench. The direction of vision, therefore, is from inside to outside.

In the second, more complex, interpretation, it is not the building itself that sees, but the void in the ceiling. Accordingly, the "space that sees" to which the title refers no longer corresponds to the monument or the hollow form of its interior but to the piece of sky observable from within. By penetrating the cube through the open roof, the heavens become a sort of celestial being that looks inward and may gaze at the visitor. Thus not only does the visitor enjoy a direct outward view, but conversely and interactively he is seen by this celestial space/being. Consequently, the act of seeing by the personified object occurs in the opposite direction, from the outside in. This second interpretation of Turrell's edifice does not rely solely on its linguistic identification; it is also supported by visual effects that constitute a major element of the structural composition of the work.

In the daytime and especially in sunny weather,¹⁷ natural light entering through the square breach casts over the inner walls luminous geometric figures and shadows that change place and form according to the hour (fig. 6).¹⁸ These figures and shadows seem to embody the virtual presence of a celestial entity within the room and express in visible terms its immaterial gaze from outside in. Movement and metamorphosis enliven this embodiment; it is as if a huge eye is roaming across the inner surfaces of the cubea presence or gaze that not only sees but also, inasmuch as the projected moving and metamorphic shapes render visually perceptible its action of seeing, is itself seen. Whether we consider Space That Sees as seer or thing seen, the cubic construction, despite its minimalist reference to the order of reason and its involvement of the concrete elements of nature, forms a place of wonders and surprises that aesthetically surpasses the rules of rationality. As such, it parallels the Comares Hall, which resounds with the voices of epigraphic poems and utters verses to the visitor, while at the same time raising fundamental ontological issues: sura 67, inscribed beneath its dome, deals with the major topics of Islamic cosmology and the great questions of life, death, and creation.19

Another conspicuous feature common to the two architectural works is a pool that partakes of the gen-



Fig. 6. Interior of Space that Sees. (Photo: V. Gonzalez)

eral disposition of each site. Adjacent to *Space That Sees*, one can contemplate a monumental sculpture, *Sky Pool*, made in 1987 by the Israeli artist Israel Hadany (b. 1941). This work consists of a body of mirrorlike water in a basin of steel tiles resting on a low platform partly enclosed by piled rocks (fig. 7). This pool recalls the one in the Court of the Myrtles preceding the Comares Tower, which likewise seemingly mirrors the image of the firmament on its reflecting surface (fig. 8). As a result, the combination of the cubic building and the pool in the garden of the Israel Museum strikingly echoes the configuration of Yusuf's palace in the Alhambra.

Of course the juxtaposition of these two contemporary works was not conceived in order to evoke the Nasrid site. Lacking any intended correlation, this analogy of structure indubitably shows that the same logic of meaning is intrinsic to each artistic set as a fictive or imaginative projection of the cosmos. In particular, the theme of the mirroring water per se universally raises cosmic connotations and images "in which the pond is the very eye of the landscape, the reflection in water the first view that the universe has of itself, and the heightened beauty of a reflected landscape presented as the very root of cosmic narcissism."²⁰

At the Israel Museum, the association of the two contemporary works in the same area obviously depends upon purely aesthetic features that together form a semantically coherent set.²¹ These features include the use of celestial vocabulary and the spatial procedure of making virtual images by combining elements of reality and natural phenomena with the illusion and artifices of art. It is due to analogous content and artistic modes that the palace of Yusuf I displays similar forms and visual cognitions, although the original intention to unite the Court of the Myrtles pool with the Comares Tower was not to promote the celestial rhetoric of the whole complex, but rather to apply a well-known medieval architectural scheme comprising a reception unit that is preceded by a courtyard embellished with water.²² But at a second level of aesthetic conception, the heavenly imagery produced by the Court of the Myrtles reflecting pool, allied to the cosmographic composition of the reception hall, indeed reinforces the cosmological resonance of the Comares complex and confers upon it the character of a high place of anthropocosmic imagination.23

Whatever the original motivation may have been, the similarity of morphology and typology between these arrangements is formal evidence that they are correlated creations, analogous scenic frames for the occurrence of parallel aesthetic events. As this descriptive presentation shows, the configuration of both monuments is conceived to put the spectator into an intimate relationship with the universe in all its mystery and fascinating beauty. To quote a particularly apt expression of Gaston Bachelard, each monument constitutes "an instrument with which to confront the cosmos," ²⁴ but not in the manner of an observatory whose purpose is the objective and logical comprehension of the physical world. Although mathematically structured, each creates an absolute fiction that generates a sublimating and projective perception of the universe by means of the amazement of the senses. This amazement of the senses puts perception, and not the mobilization of the intellectual forces,



Fig. 7. Sky Pool by Israel Hadany, 1987. Sculpture garden of the Israel Museum (Photo: V. Gonzalez)



Fig 8. Court of the Myrtles, 1370. (Photo: J. Laurent. Courtesy of the Fine Arts Library, Harvard College Library)

at the very heart of the cognitive relationship between seer and architecture, thereby even forming the buildings' aesthetic language. In axiomatic terms, this aesthetic system may be summarized as "Perception is the medium."²⁵

PERCEPTION IS THE MEDIUM

In critical theory, this phrase means that the phenomenology of perception, naturally involved in all aesthetic experiences of visual objects of art, constitutes the driving force of artistic language. The designated recipient of this language is the viewer's body, which forms the place of inscription of the aesthetic intention of the work. Sensory perception is therefore the genuine producer of meaning in the aesthetic experience, by broaching the more elementary, corporeal consciousness of the living being in the physical world. Lying at this primary level of the purely sensible, the cognitive relation to the work brings the spectator back to the original state of being in space that is, as Merleau-Ponty explains, "taken in the fabric of the world" (pris dans le tissu du monde), in which felt things are "an annex or an extension" of the body, "inlaid in its flesh" (incrustées dans sa chair).²⁶ Here "the body" must be understood in the phenomenological sense, as the ground of perceptive knowledge. This preobjective or prelogical knowledge results not solely from the sensory grasp of things, forms, colors, textures, or sounds but also from the resonance and repercussions of this process in the field of subjectivity, which is that of emotions and imagination.²⁷ It is within this field of subjectivity-inhabited by the dreaming, symbolic, and imaginative consciousness associated with the soul,²⁸ "the wild region" ("la région sauvage") where "fantasy is possible,"²⁹ the place of projection, interpretation, and transformation of the real-that all the cognitions of the work of art gather and operate.

In this way, the work's significance arises exclusively from what Jacques Derrida terms "a subjection of sense to seeing, of sense to the sense of sight,"³⁰ or what Turrell himself, regarding his own works, calls a process of "Sensing the Sensual/Sensing Sensual."³¹ Accordingly, "intellectual seeing" or "intellectual sight"³² operates in full interactivity with all the other phenomena of perception that necessarily inflect the purely mental activity in the aesthetic experience. It is a question of a genuinely visual aesthetics that puts to the test both sight and the way of seeing. More than that, the interweaving of the two kinds of apprehension enables pure thought to reach and explore spheres that otherwise would not be accessible to it through the direct and indebted path of the rational reading of the artistic object. For obviously, the order of the sensible leads elsewhere and is instilled with what is no longer of the sensible order.

Applied to the Comares Hall and Space That Sees, this theorem, "Perception is the medium," results in a sum of physical properties that confers on the two constructions the aesthetic status of "perceptual architecture."33 Indeed, in each site, the architecture offers one's eye a highly qualitative topological space, shaped by means of eminently material forms, colors, textures, surfaces, masses, planes, light and shadow, etc.,³⁴ that addresses one's being in direct contact with matter. It presents not objective images or visual narratives³⁵ but a physically lucid, measured, finite space with center and edges, volumes and voids: an object whose "mode of appearing," as Husserl would say,36 rests upon its pure "objectness" and its constitutive geometric order. As a result, no form of discourse remains at the heart of the architectural work's meaning, which instead rests on the signifying potential of its constitutive patterns and their aesthetic qualities.³⁷ As the Greek word for sensation aisthesis (the root of "aesthetic") suggests, aesthetic qualities are those that we appreciate in perception: the sensory, structural, and spatial ones, including the arrangement or apparent articulation of the features of the work.38

The absence of either representation or any didactic visual device, which concedes to pure forms all the signifying power of the architecture, imposes the cognitive process of sensory perception as an absolute precondition to any type of intellection. For in art, only geometry-the regulating force of the realm of matter-convokes pure perception and makes sense through it. As a whole, this cognitive system makes no separation between body and spirit or between perception and comprehension, insofar as it does not address only the mind as independent or primordial receiver of the signification of the architecture. On the whole, if perception is the medium and the signifying principle, geometric abstraction supplies the mode of realizing this principle in the materiality of the two buildings; its mode of action is in their forms. In the Alhambra, however, the lavish presence of Arabic inscriptions renders this aesthetic system more complex than that of Turrell's work and so requires further analysis.

THE INSCRIPTIONS IN THE PERCEPTUAL DYNAMIC OF THE COMARES HALL

In the decoration of the Comares Hall, the epigraphy (see fig. 3) introduces didactic elements that, in correlation with the purely perceptual ones, fully participate in the architectural language.³⁹ But in this geometric configuration, based on abstraction as distance and discrepancy with respect to the real-world object, the inscriptions, despite their imaging semantic, do not play an opposite representational role of filling the architectural patterns with a determined figurative or symbolic content; they definitely do not transform the geometric design into a kind of iconography.⁴⁰ Such a process would literally bind the scriptural cognitions to the visual ones, in a contradictory and conflicting attitude of reconciliation with the contingent world aiming to reduce the ontological opposition between geometry and life that is a purposeful part of the aesthetic conception of the room.⁴¹ What then is the nature of the relationship between inscriptions and geometry in the building? And how do the inscriptions match the perceptual dynamic of its aesthetics?

This relationship is manifold, given the multiple ontological properties of the inscriptions as both "subject bodies" (les corps propres),⁴² or objects of visibility made out of matter, and statements belonging to the abstract sphere of language. First, they form an autonomous territory dedicated to words, plainly performing their original literary role like all types of writing. Therefore their content is significant in itself, independent of the significations of the architectonic features on which they appear.⁴³ This is especially true of the religious-political slogan occurring throughout the construction, "Only God is victorious," and of the Qur'anic quotations, whose religious semantics and value are by definition intrinsic and transcendent. From this point of view, we may call the relationship between the textual and visual cognitions of the room, which emanate from the patterning formed by calligraphy and geometric design, "a conjunction of two types of propositions."

Second, the inscriptions perceptually enrich and embellish the network of geometry without modifying its abstract aesthetic character. This aspect of their contribution proceeds completely from formal participation in the beautiful visual patterning.

Finally, in semantic association with the architectural configuration, the wall texts create another kind of syntactic interrelation. Viewed in their visual context, their function clearly depends on the aesthetics of the building and must be understood in the light of its formal phenomenology, with which they necessarily cooperate. This aesthetics being of physicomathematical nature and acting on the purely sensible ground of an ordered space of mathematical morphologies, the formal phenomenology falls under the laws of suggestion rather than of representation. So it is in logical accord-not in contradiction or conflict-with this overall visual language of suggestion that the semantic of the calligraphy operates. Its alliance with this abstract aesthetics rests not on descriptive power,⁴⁴ since the inscriptions describe nothing precisely identifiable in the edifice, but rather on a rhetorical faculty equivalent in the language of words to visual suggestion in architectural forms. This faculty is evocation through textual, poetic, or Qur'anic imagery that acts on the imagination. Visual suggestion acts likewise on perception, by resorting not to the objectivity of reason and rational consciousness but to the subjectivity of feeling and intuitive consciousness.

Imagination is indeed the key to understanding this enigmatic syntax of epigraphy and architectural forms in the Comares Hall. The wall inscriptionswhether their content is known by reading, listening, or memorizing-precisely intervene and function at the second perceptual level, that of the resounding and resonating of things felt in the soul and mind, inasmuch as perceptual acts lead to acts of the imagination and bodily realities to realities of the soul, ultimately ending in imaginative intellections.⁴⁵ The poetic evocations (celestial scenes) or Qur'anic "pictures" (cosmography of the heavens) stimulate the associative faculties and thus thoroughly exploit the cognitive power of imagination to make corporeal things, particularly mathematical morphologies, conceivable through figures and images, mainly by way of analogies.⁴⁶ Thus channeling its flow along these trails mapped out of words, the wall texts guide and inflect the imagination that is called forth by the geometric design. In other words, it is the imagination that the inscriptions manipulate, fashion, or orient towards an enlivened and corporeal world of images. The purely abstract and perceptual essence of the forms themselves, "this theoretical-concrete spectacle of geometry,"47 remains absolutely intact.

The task now is to define the link of meaning between the epigraphic content and the physico-mathematical aesthetics of the building—that is, to define how, in the experience of the building, imaginative activity guided by the inscriptions shapes or colors perception, and, by extension, how imaginative consciousness intersected by these textual images transforms corporeal consciousness.

This link of meaning puts into religious and historical perspective-namely, into a particular Islamic-Nasrid perspective-the strategic, ontological determination of the building by geometry, so that a purely aesthetic order of consciousness activates, in addition, both political and religious consciousness. For geometry per se is a transcending universal that, as Edmund Husserl explains, "with all its truths, is valid with unconditioned generality for all men, all times, all people, and not merely for all historically factual ones but for all conceivable ones." 48 Geometry indeed possesses a character of absolute objectivity and intrinsically constitutes absolute truth, both physical and metaphysical; it is at once corporeal and ideal truth that consequently is radically auto-signifying. Thus independent from history and contingency, geometry is also cut off from the sacred. But it is cut off in such a way, we would assert, that in its capacities to make physical realities interplay with metaphysical idealities and to connect concreteness dialectically with the infinite, it somehow conceals sacredness of its own. This is certainly what Michel Serres suggests in his definition of geometry, "mystique + physique = géometrie" (mysticism plus physics equals geometry).⁴⁹ In Serres' equation, the word "mystique" indicates this tendency towards a would-be profane sacredness that geometry creates without reference to any particular religious faith or conception of the divine. It is a matter of secular mysticism, without idols or icons, without god or gods. To be religiously determined in monotheistic terms, this tendency toward the sacred must become a path leading to God, and its goal must be the quest for divine truth.

Precisely at this indeterminate level of the sacred that does not yet have religious content lies the signifying function of the inscriptions of the Comares Hall in syntactical relationship with the geometric ornamentation: this function is to fill the universal metaphysical meanings and connotations of the geometry with specifically Islamic content.

In fact, by attributing the creation of the world to the One God and by postulating his word as absolute explanation of it, the inscriptions invest the rational demonstration of geometric transcendence with divine origin. They superimpose a theological vision of the universe on a logical metaphysics,⁵⁰ thus making two kinds of truth—universal mathematical truth and religious truth of the Islamic divine—intersect, the one powerfully standing for the other. More accurately, the Arabic inscriptions endow the profane mystical nature of the geometry with the rhetorical power to express Islamic spirituality and faith. In this way, the physico-mathematical aesthetics of the architecture no longer possesses an indifferent character of mathematical objectivity, but rather offers the unconditional validity and excellence of a rational framework for displaying the particular existential order of Islam.

Another important contributor to this phenomenon of Islamizing the geometric design is the treatment of textures, colors, and arabesque patterning: these function as "stylistic labels" that, at a purely visual level, anchor in the context of Islamic culture the "transaesthetics" of geometry.

In other respects, the historical order lyrically suggested by the wall poems, with their central figure of the sovereign, partakes of an Islamic worldly conception that comprises a hierarchical organization of human existence. The poetic glorification of the Nasrid sultan recalls that he is the temporal representative, guardian, and guarantor of eternal, divine authority. Again, through the contextualization of geometric forms by epigraphy, the sacred becomes religious, that is, specifically Islamic.

Naturally this Islamic dimension of cosmographic expression in the Nasrid building does not enter into the constitution of the secular Space That Sees, which confers exclusivity of meaning on geometric abstraction, so that the sacredness of the place remains open to all kinds of mystical interpretations and can give rise to all kinds of beliefs, including Islamic ones, depending on the viewer's cultural background (fig 9). About Turrell's installations, Meuris writes, "The possibly mythic (mystical) character of his works constitutes one result, among others, of their conception, of which the spectator is the only judge according to the particular dispositions in which he expresses his personal affect."51 From this one can deduce that a Muslim believer's viewing of Turrell's construction through the filter of an Islamic conception of the universe will virtually transform it into a framing place for an Islamic experience of the sacred. The mystical connotation of its design will resound as the reflection of an ineffable truth, the corporeal objectivity



Fig. 9. Interior of Space that Sees. (Photo: V. Gonzalez)

of its geometry echoing the spiritual truth of the divine.

Therefore it is neither incongruous nor irrelevant to imagine the Sura of the Kingdom inscribed around the edges of the open ceiling of Space That Sees; this would not modify the work's content but would rather reduce the plurality of its metaphysical significations to a single religious meaning, as in the Alhambra, by assigning the construction a determined Islamic identity, thereby excluding all other sacred specifications that the work potentially embodies. As a result, the presence of the holy text would offer a definite answer to the question of the mystery of the worlds that Turrell's edifice, like the Comares Hall, poses through its forms. Free of any predicative pattern, however, Turell's construction allows for a multiplicity or even an infinity of answers to this question. In summary, what distinguishes Space That Sees from the Alhambra is that it constitutes a scene for the projection, not of a unique metaphysics, but of all possible metaphysics.

Conversely, just by focusing on the visual configuration, one can consider the Comares Hall without taking into account its inscriptions, as a pure geometric object analogous to Space That Sees. (This perceptual approach, one must not forget, is actually that of the ordinary visitor, who is ignorant of the content of the inscriptions and therefore incapable of understanding the building in its full complexity.) One nevertheless may have a genuine and meaningful experience of the hall, insofar as one deals more broadly with an authentically perceptual architecture possessing "an architectonic typology with reminiscences willingly mythic, fabulous, and imaginary... that inevitably make one think about remote mythologies."52 Based on the pure perception of suggestive or allusive shapes and arrangements, this experience consists of interpretative vision realizing the signification of the work as possibility, not as fact or evidence. It is the viewer's coordinated perceptual processes of projection and selection (perception being by definition projective and selective) that invest the free field of the geometric construction, open to multiple meanings, with a content defined by the viewer's own mystical vision.

For apart from its directive or inflecting epigraphic element, the Nasrid monument, like Space That Sees, offers a subjectivist aesthetic that considers the experience of the work an individual state or attitude and so creates between the work and the viewer a relationship of reciprocal determination. Turrell's comment on his installations also holds true for a strictly perceptual approach to the Alhambra: "The work has the reality given to it by the person looking at it."53 So for certain spectators, the Comares dome, like the ceiling of Space That Sees, will evoke the celestial dwelling of God or the heavenly place of eternal life, while for others it will suggest the absoluteness of the infinite or the immensity of the firmament. In brief, viewed in this way, it embodies equally all conceivable metaphysics and theologies.

It is clear that the predicative power of the Arabic inscriptions does not impair the deep complementarity of the two constructions, whose aesthetic foundation remains "Perception is the medium." This foundation, entirely implemented by geometric abstraction, serves a determinate goal, which is, as the amazing device of the ceiling suggests, to ascend to spiritual heights from the firm basis of corporeal truths.⁵⁴ As Descartes notes in *Cogitationes privatae*, "Sensible things are apt for conceiving Olympian things."⁵⁵ The Sura of the Kingdom inscribed in the Comares Hall both confirms this goal of spiritual ascent and indicates its fulfillment in a single direction, through Islam.

In both buildings the instrument of ascent from low to high is perception and the elevating faculty of imagination that it stimulates, and the ground of action is geometry. A material space defined for perceptual experience, whose ultimate objective is to promote the quest for spirituality by putting the human being into contemplation of the immensity of the world and beyond, and perhaps into touch with the divine that is coextensive with this immensity—we call this a phenomenology of the sacred. Logically, to this phenomenology belongs an aesthetic evocative of all myths, imprecise but suggestive, that is entirely served by geometric abstraction and its power of ontological determination.

GEOMETRIC ABSTRACTION FOR A PHENOMENOLOGY OF THE SACRED

In dealing with the architecture of the two sites in question, we must consider the double aspect of their exterior and interior geometry, which plays a particularly important role in the phenomenology of the sacred. This character of sacredness relies on a theatrical, dreamlike shift of place and time produced by an unexpected transformation of simple exterior into extraordinary interior: a dialectic of outside and inside that enacts the ontological duality of the real and the imaginary.

The exterior of the two constructions presents an aspect of elementary materiality, conceived to pose each edifice as an earthly place according with the landscape and forming an integral part of the surroundings. The plain monochromatic quadrangular volume of each structure is exempt from all decoration and displays the tangible reality of a sturdy geometric object firmly anchored to the ground. By thus emanating the rational solidity of a physical body in perfect adhesion to the earth, each building immerses the visitor in a world of pure concreteness easily grasped through primal and essential material qualities of volume, color, line, and texture. This almost neutral appearance fulfills the precise cognitive objective of reserving for the interior of each building the aesthetic task of surprising and enchanting the imagination through pure fiction. As Bachelard explains, "A complete metaphysics, englobing both the conscious and the unconscious, would leave the privilege of its values within."⁵⁶ This enchantment will occur with all the more intensity by dynamic contrast with an exterior that marshals the contrary forces of a steady, earthly order.

In architecture the aesthetic of the sacred conceives the visitor's experience in the initiatory logic of a true journey of determined steps, corresponding to determined states and significations. At each site, an intimate relationship with tangible materiality constitutes the starting point of the journey that, through a channeled conditioning of body, soul, and spirit, ends in a sacred moment of contemplation and a supreme act of sublimation inside the building. To acquire its dimension of inner adventure and its full value of sacredness, this ultimate, contemplative stage of indoor experience must be realized in radical opposition to the primal one outdoors. More accurately, the initial step of the aesthetic journey must be lived like the final one, in a state of exception, "in the region of the superlative,"57 but in a situation strictly opposite to that of achieving an ultimate end beyond the world: that is to say, a situation of origin, of a pure beginning on the earth as an absolute "here."

The immediate outer area of neither the Comares Hall nor Space That Sees is designed as an irrational world of wonders or a total fiction echoing or auguring the inner marvels of the edifice, as at the Palace of Versailles (to cite a particularly conspicuous example). Each edifice rather constitutes an extension of the landscape, bound to it by the organic link of geometry that organizes things in connection with other things behind the veil of their chaotic appearance. The landscape and architectural whole is composed of a quasi-mathematical set of masses, lines, cubes, spheres, and cones that one might describe with Maurice Merleau-Ponty's words about Cezanne's paintings: "pure forms having the solidity of what could be defined by an internal law of construction; forms that taken together, as traces or crosssections of the thing, let it appear between them like a face in the reeds."58 The significant reference to elements of nature-vegetation, stones, water, etc.at the Andalusian and Israeli complexes reinforces the character of earthly space that makes each building not merely architecture but a true "work-place" (*oeuvre-lieu*) in the physical and geographical sense, a fixed and stable locus in the geometric harmony of worldly things.

The exterior conditions of both "earth-works"⁵⁹ convoke the primal experience of living in the concreteness of the world, perfectly antithetical to the experience of the inside. In both the Moorish palace and Turrell's installation, the exteriors are neither complements to the interiors nor resolutely fictive fragments of nature entirely subordinate to an architectural logic proceeding from artifice, as at Versailles. Instead, with its sensuous garden that domesticates natural elements but does not deny its link with nature,⁶⁰ the environment of each edifice appears in continuity or connection with the great outdoors around it, adjusting itself to a horizon of hills and city—Granada or Jerusalem.

Even within the intimate, reserved, and sophisticated arrangement of the Court of the Myrtles, this aesthetic force of extroversion remains at work: the delightful spectacle of the garden, with its rare plants and flowers, cool water, and pool mirroring the firmament, induces a keen consciousness of corporeal realities that for Muslims are truths bearing witness to the greatness of God's creation. Such sensitive beauty optimally stimulates all the perceptual states of the body encountering this "concrete flow"61 resulting from the contact with things: the seeing, hearing, smelling, touching, and moving body in union with both the natural elements and the architectural features. In this sense, although the Court of the Myrtles embodies a kind of utopia, it also forms a supersensible world, isolated by walls from the immediate surroundings but ontologically constituting an outside space, defined by its connection and claimed aesthetic link with the earth.

In the sculpture garden of the Israel Museum, where no protective walls exert the contrary forces of introversion and extroversion, the earthly and rational character of the external space necessarily increases manifold. This absence of enclosing features maximizes, as if to demonstrate their transcendental nature, the phenomena of both the feeling and the felt $(du \ sentant \ et \ du \ senti)^{62}$ that determine the powerful outdoor experience of the architecture as an earthly place. Thanks to the sophisticated configuration of Turrell's cube, the visitor walking around it not only comes into contact with a strongly defined material space but also encounters the very being of space, as a place of coexisting things (*lieu des coexistants*).

Indeed, coming first upon an anonymous, flat, blind facade that is the rear of *Space That Sees*, the visitor feels oddly perplexed⁶³ by an unidentifiable thing

characterized by absolute neutrality (fig. 10).⁶⁴ What appears is an ultra-object without any identity other than that defined by its perceptual qualities and material structure: what Donald Judd would call a "Specific Object."⁶⁵ The bareness and impeccability of its geometric volume makes it a pure presence, completely merged with the immediate environment as if growing from the soil, whose color it borrows. Due to this very neutrality, however, this pure presence turns out to be dominating and polarizing; it releases a hypnotic energy that induces even the more reluctant visitor to continue the exploratory adventure.

Actually, the visitor's state, clearly planned by the artist, is that of "non-awareness," which is necessary to restore the dynamism of a pure perceptual relationship to things and space in order to establish the relevance and newness of their emergence. Following Bachelard, it is a matter of "living what has not been lived and being receptive to an overture of language."66 Free of all symbolic weight and any reference to worldly factuality, this solid, in its original, crude nudity, reveals to the visitor the power of the reciprocal, vital attraction that things as "associated bodies"67 exert in their ontological relationship of connection. With an invisible and silent force, the solid initiates a voiceless dialogue of perception in which the spectator engages without being aware of it, becoming a purely sensitive body, a genuinely virgin being ready to experience without hindrance "the earthly conditioning of the soul"68 that the exterior of Turrell's construction, like the Court of the Myrtles, brings about by means of its aesthetic configuration.

The absence of visual clues or signals that could indicate the raison d'être of the cube impels the viewer to endeavor by a sensory investigation of the site to understand what he is seeing. All the senses are wideawake and engaged in the extreme experience, "the perception of perception."⁶⁹ The visitor scrutinizes opaque walls, soil, and surrounding landscape in order to discover some tokens that will reveal the secret of the mysterious object, till he eventually realizes that it shelters a room. At this point a new experience, the second step of the aesthetic journey, begins.

There, at the sill of the doorway that lets the visitor catch a view inward, the extroverted forces of the exterior of the cube come into interplay with the opposed, introverted forces of the interior, opening



Fig. 10. Rear facade of Space that Sees. (Photo: V. Gonzalez)

into a perspective of exploration (fig. 11). The external aspect of a fortress, due to the heavy, thick mass of the construction, reinforces this double physical nature of inner-and-outer and open-and-closed. Such a physical nature belongs to any architecture but always appears emphasized in edifices invested with sacramental or religious meaning. The highly rhetorical effect of the spatial dialectic between the two antithetical topologies transforms the interior of *Space That Sees* into pure fiction; even though its visual features, unlike those of the Comares Hall, present no radical modifications, a change of world decidedly occurs.

Reinforced by a similar external disposition, the same aesthetic phenomenon obtains in the Comares Hall.⁷⁰ Like the explorer of the Turrell site, the viewer in the Court of the Myrtles is bought to a highly perceptive state by the bucolic walk. While enjoying the earthly spectacle of the garden and preparing to enter the hall, he faces an imposing, enclosed, opaque

volume that conceals in its protected midst some secret or surprising marvel. In Turrell's installation, the austere, almost blind tower continues to enact the mystery of the unknown until the very end of the visit—the astonishing view of its bosom—through what we may call "the aesthetic of the hidden," a corollary of the aesthetic of the sacred. This aesthetic contributes to puzzling the visitor in order to endow the last station of the architectural journey with the dramatic dimension of a denouement and the revealing dynamic of an epiphany: the point of completion of the phenomenology of the sacred.

But this completion could not be realized without the visitor's crucial act of gaining access to the building by means of a carefully conceptualized entrance, the gate that reveals the ontological dialectic of the outer and inner spaces. At each site, the doorway is not merely a practical and beautiful device but also a strategic place in an architecture active in setting up different stages in the duration of an aesthetic



Fig. 11. Corridor of Space that Sees. (Photo: V. Gonzalez)

journey. The point of access to the interior is conceived to confer on the act of entry the dynamic of exchanging the purely corporeal phenomenology of the outside for the much more complex phenomenology of the inside, implying a qualitative exchange of functions among body, soul, and mind. In this sense, we may say that there is "ritualization" of the act of entering.

In the Nasrid palace as well as in the Turrell installation, access is attained through intermediary stages that transform the crossing of a threshold into a prepared break between outdoors and in, thereby conferring on the room the character, generally proper to sacred or religious places, of a disconnected world—a space of isolation and introversion like a secret chamber or a sanctuary. In the Alhambra, a portico and an antechamber called *La Sala de la Bar*- *ca* (Room of the Blessing) separate the Court of the Myrtles from the Comares Hall (fig. 12). The precious decoration of this antechamber and its axial portal underscores both the functional and the rhetorical importance of the entrance, effecting scenographically the sequential unveiling of a succession of spaces.⁷¹ Under an enfilade of arches that achieve in stucco the effect of fine, hanging draperies, the progression inward takes on the solemnity of a sacramental gesture, that of passing from a graspable world to an unimaginable one.

In Space That Sees, the process of ritualization naturally rests not on dazzling decoration, since the concern of the work is minimalist aesthetics, but rather on the sharply profiled perspective of a tiny, doorless corridor that discloses a room as bare, blind, and neutral as the facade. Somewhat like the disquieting architecture imagined by Lewis Carroll in Alice's Adventures in Wonderland, this puzzling corridor appears as a tunnel that paradoxically hides and reveals its destination in a truncated view at once near and far (see fig. 11). This partial and distant view into the bosom of the construction fills it with oddity and presages some sort of surprise but does not yet provide any clue of its sense. It offers a strong visual incentive to proceed towards the unknown-a mute, irresistible, and almost threatening invitation to quit the clear, rational order of the outdoors for an uncanny adventure within. In the silence of this geometry, which balances quasi-oppressive solidness and quasi-disturbing emptiness, the mystery of the cube remains well kept. To be revealed, it requires of the visitor a daring move inward, through the whimsical corridor.

In the end, whether geometry as aesthetic mode utilizes dazzling, prolific, and ostentatious ornamentation or the impressive impact of minimalist reduction, in both works of architecture it has the same specific function-that of dramatically opposing the earthly logic of the real, belonging to the outside, with the unreal essence of the imaginary, proper to the interior. The pivot-point of this aesthetic and ontological topography is the entranceway, shaped as a graduated trail that renders the action of entering, essential for perceiving the building's core, as a sacralizing and sacralized (but not a sacred) gesture. In this initiatory progression, the entranceway supplies the necessary preconditioning for the overwhelming discovery of the interior space, a world beyond geometric definition that is the very place of sacred-



Fig. 12. Portico of the Court of the Myrtles and entrance to the Sala de la Barca, 1370. (Photo: Garzón. Courtesy of the Fine Arts Library, Harvard College Library)

ness. This interior, psychologically transcendent, constitutes a microcosmic fiction whose physical nature is entirely dominated by the dynamics of ascension.

A MICROCOSMIC FICTION DOMINATED BY THE DYNAMICS OF ASCENSION

In the Comares Tower as well as Space That Sees, once the threshold is crossed, the topography of the room forms quite another physical entity-another geometry of strictly utopian order that, disconnected from the site exterior as a particular geographical locus, constitutes a place of universal implications. The visitor passes from an elementary geometry in accordance with the constructive laws of the real world to a utopian one born from geometric imagination and conceptualized by geometric reason. Whether, as at the Alhambra, the room utilizes the principle of cumulative, intricate decoration and rich textures and colors, or, as in Turrell's construction, the contrary principle of reductive hollowing out and sober tones, the result is one of geometric creation at the highest degree of knowledge, excellence, and rigor.⁷² Square solidity, sharp edges, straight lines, and strict divisions limpidly delimit an impeccable finiteness without the least defect of balance or proportion.⁷³

Thus embodying mathematical idealities, each of the two buildings shapes an absolute space and offers a perfect example of sensible morphological ideality-what A. Chevrillon, regarding geometric forms in general, called "the ethics of crystal."74 Therefore, each is at once a spectacle and a receptacle of transcendence, as described by the words of Michel Serres: "This virginal space, already homogeneous and isotropic, and therefore measurable, becomes abstract because all has been subtracted or removed from it, all has been snatched or eradicated from it, yes, extracted. No more obstacle, all goes through it."75 We are no longer in Granada or Jerusalem, but within a space that is our world, microcosmic,⁷⁶ whose psychic weight inclines towards metaphysical meditations and imaginative reveries. Correlatively, we quit the horizontal order of the concrete world and enter a central, abstract space enlivened by the elevating forces of verticality.

This double change of dimension, from the particular to the universal and from the real to the imaginary, rests upon a physical aspect of centrality whose spatial properties "cosmicize," or render visible in the clearest architectural terms, the metaphysical postulate of the microcosm correlative to the macrocosm. Enfolding its nucleus in the concentrated figure of a square, each of the two rooms fundamentally presents itself as a center. By thus enacting the ontological determination of a world by its center, each room duplicates in the realm of artistic forms the universal topology of the omphalos. As Bachelard emphasizes, "Every universe is concentrated in a nucleus, a spore; in a dynamized center."⁷⁷ This peculiar central configuration generates a dynamic of spatial and directional tension that gives the building a cosmic morphology—a true aesthetic cosmogony in which the constitutive dualities of the architecture embody those of the physical universe.

Necessarily, the centrality of each space provokes upward movement, thereby creating a polarity from bottom to top that stretches toward the infinite skies. The aerial axis of verticality, counterbalancing the solid horizontal foundation of the square form, finds a visual echo in the geometric patterning of the walls, which are divided into two distinct zones, one above the other. In the Comares Hall, the ornamentation is sharply divided between the lower zone of polychrome tiles and the upper revetment of sculpted stucco that extends to the wooden dome. In Space That Sees, vertical polarity is created by the subtle division of the walls into two zones of similar color, the lower one marble-covered and the upper one painted concrete (see figs. 4, 6, and 9). In this fashion, both works replicate in architecture the natural dichotomy of the earthly and the celestial spheres. Accordingly, the two double poles-floor and ceiling and lower and upper wall sections-become metaphors of the earth and the heavens, articulated by the geometric combination of centrality and upward tension.

There are slight differences, however, in the way the two edifices make use of this aesthetic phenomenon. The Nasrid construction, with its high, straight walls, stresses upward movement toward the cupola, emphasizing the psychic power of its elevation. In contrast, in *Space That Sees*, the physical dynamic of horizontality remains strongly dominant: although subtly nuanced by the incline of its interior walls, which diminish in thickness in order to broaden the space at the top, the earthly force of the cube's base is reflected at the level of the ceiling, which is sharply defined by its square profile. Nonetheless, the ceiling, by incorporating the very reality of the sky and its natural aerial dynamic, offsets the almost crushing horizontal weight of the structure and so, like the Comares Tower, imposes a significant upward verticality.

Their dissimilarity thus does not spoil the fundamental symmetry of the two constructions in their cosmographical disposition. Both are firmly rooted, earthly entities that respond to an aerial world, the ineffable world of the heavens. These responses are perceptible through two essential components of the spatial disposition of each edifice: movement and light.

Concerning movement, a skillful kinetic conception of each ceiling activates another fundamental spatial dialectic, that of the fixed earthly ground and the moving heavens. In the Alhambra, the concentric arrangement of the starry patterns of the wooden vault provokes an optical illusion of motion and dilation that radically opposes the static character of the square chamber (fig. 13). Turrell's cube, in contrast, obviously owes its spatial aspect of movement to the outward-directed aperture of the roof, which displays a live view of the slowly changing reality of the firmament, strikingly manifest on sunny days in the diurnally scrolling projections of sunlight upon the walls (see fig. 6). By virtually or actually adding the vitality of movement to the great binary morphologies of the structures, the antithetical energies of the weight of the soil and the lightness of the air fully enjoy their metaphoric power in the elaboration of the aesthetic cosmogony of the two buildings.

Finally, light, a visible and sensibly graspable expression of time, is the sublime and crucial element for the completion of this cosmogony. It is also the most primal element of all, insofar as the perception of these architectural works and, consequently, the very sense of them depend entirely on luminosity. Referring to his overall artistic objective, Turrell says, "Light is the material that I use and manipulate to work on the medium of perception."78 In the Comares Hall, too, light is so used and manipulated. Whether filtered through polychromatic stained glass and artificially modulated by the contrasting colors of painted wood in the Alhambra,⁷⁹ or whether descending straight from the skies in all the purity of its natural brightness in Space That Sees, the supraspiritual and ultrapositive presence of light inscribes the microcosmic fiction both in the rational moment of real time and in the irrational expanse of eternity.

These are the visible and invisible features of the two constructions that, like Jacob's ladder, virtually put the earth in communication with the sky—communication that the viewer himself experiences aesthetically in the upward course of his vision, for the experience of this cosmic architecture is essentially an experience of seeing, not in the ordinary sense, but as a quasi-sacred act of revelation.

HANGING VISION, WONDERING GAZE

The geometry of the Comares Hall and of *Space That Sees* awakes a double consciousness of centrality and verticality that induces particular modes of aesthetic perception and bodily behavior. Enclosing the visitor, the central and vertically polar space of the room first produces an insulating psychic effect that allows him to experience the architecture in a rush of surprise. Next, the energy of this physical centrality tends to immobilize the visitor's body in a fashion such that the process of taking possession of the place occurs essentially through sight, in a highly ocular concentration on specifically targeted objects. The eye moves in defined directions, as opposed to wandering indifferently from one point to another, building its own visual itinerary.

In the two sites, this perceptual behavior has identical modes. First, a fluid succession of visual gestures enlivened by gradually increasing sensory intensity culminates in an extreme state of focused upward gazing. The elevating dynamic of the centrality, strengthened by the design of the walls in superimposed, concentric sections, induces the viewing of each room in a peripheral spiral that involves an upward movement of the head towards the top part of the building-the strategic and vital point of the construction, where all the directional tensions converge. Second, the power of sight dominates all the perceptual forces to the extent that the rest of the body no longer participates in the aesthetic experience. The being-body is reduced to a being-gaze that releases the very essence of the act of seeing.

To be fully experienced, the architecture in fact requires the visitor to sit, and its conceptualization purposely includes a device to optimize bodily comfort, since an unpleasant or painful sensation would disrupt optical activity and diminish its intensity. In the Nasrid period, the guest-visitor in the Comares Hall was invited to sit or recline on precious cushions in order to best enjoy the spectacle of the dome as the peak of the architectural experience. In Turrell's installation, the artist has carefully planned the design of the bench that runs around the periphery



Fig. 13. Ceiling of the Comares Hall. (Photo: from V. Gonzalez, Beauty and Islam)

of the room and allows the visitor to assume a posture of full rest (fig. 14). Despite its minimalist and unimposing aspect, this slightly inclined bench removes the potential discomfort of looking upward and even provides the spectator with a gratifying sensation of relaxation.⁸⁰

From this point, everything occurs in and through sight, a quasi-ecstatic state of vision that hangs on the splendid vault, whether the starry cupola of the Comares Hall or the "skyroof"⁸¹ of *Space That Sees.* As Bachelard puts it, "Here, as elsewhere, life is energetic at its summit."⁸² All the rest of the construction seems but a pedestal for this absolute place, the focal point of an absorbed, captive gaze. Seeing becomes aerial contemplation, forgetful of both body and time. Correlatively, the vision of the eye becomes the vision of the soul, in the sense that Descartes in his late writings gave to the genuinely profound gaze involving inner sight. About Descartes's thought, Dennis Sepper observes, "The paradigmatic metaphor for the soul's activity is seeing."⁸³ In both the Comares Hall and *Space That Sees*, such an extreme state of seeing achieves the earthly conditioning of the soul through perceptual forms that precondition the aesthetic activity of the mind—namely, the imaginative perception called forth so intensely by the irrational zone of the ceiling. In this perception of the ceiling, not only does one become visionary, but one feels to the highest degree the immensity of the world, its infinity.

THE CEILING AS A "FRAGMENT OF THE INFINITE"

The cosmic ceiling generates an endless stream of mystical-celestial views—images of immensity—while it arouses multiple metaphysical emotions—feelings of the vastness of the world and of the ineffable depth of the firmament. But the upper reaches of neither *Space That Sees* nor the Comares Tower *represent* the



Fig. 14. Interior of Space that Sees. (Photo: V. Gonzalez)

celestial vault. Although the wooden dome of the latter has been analyzed as representing the seven Islamic heavens of the Qur'an by means of geometric symbols, images, or pictures,⁸⁴ that view applied to either work misinterprets it as a world of incarnation, whereas each ceiling displays an aesthetic configuration built on the absence of objects and the nonreality of subjects—built, that is, on abstraction. Turrell himself has released a statement that applies equally well to the Alhambra: "There is no object per se in my work."⁸⁵ One might also cite Ludwig Wittgenstein's explanation of the generic concept of "picture" in the *Tractatus Logico-Philosophicus*:

2.12 The picture is a model of reality.

2.13 To the objects in the picture correspond the elements of the picture.

2.131 The elements of the picture stand, in the picture, for the objects.

2.14 The picture consists in the fact that its elements are combined with one another in a definite way. 2.141 The picture is a fact.⁸⁶

If one follows this logic, one clearly understands that in these monuments there is precisely no "fact" of this sort, in the material sense. Instead, the conception of the Comares dome and the "skyroof" of *Space That Sees* comprises a complex set of aesthetic paradoxes and depends on a rational, abstract construction of forms without abandoning absolutely the notion of picture. It completely redefines pictorial discourse⁸⁷ by making the reality and objectivity of physical things collaborative with the unreality and subjectivity of the products of the imagination.

Thus, if one confines oneself to the different "fact" -to paraphrase Wittgenstein-of the aesthetic constitution of the two ceilings, one observes that they are not finite objects but open spaces that in their finitude contain infinity-spaces where the sensible world dissolves into metaphysical abstraction. The endless concentric spatial structure geometrically fashioned in the Comares dome⁸⁸ corresponds in Space That Sees to the most radical of all spatial entities: the void, a real aperture through matter that dives directly into the unfathomable emptiness of the sky (fig. 15). As the former contains a virtual infinity of mathematical order concealed in its geometric structure, the latter displays "live" the corporeal truth of the infinity of the firmament. Ideal or real, this aesthetic space neither represents nor symbolizes but truly demonstrates the fundamental cosmological

feature of the endlessness of the universe, that foundation of all mystical or metaphysical imagination.

Thus the infinite exists, but only against or through the reality of the finite, marked by the earthly horizon. In the two works, the finite is defined by the square rim of the ceiling: in the Comares Hall a powerful mugarnas cornice crowning the walls, and in Turrell's cube the sharp edges of the aperture. As a frame for viewing, this square delimits the visual field through which the spectator contemplates an endlessly spreading space and virtually grasps a "fragment of the infinite." Hence the roof design of each construction positively resounds with cosmic amplitudesof the immensity of the celestial vault, of the divine infinite, of eternity-and finitudes-of the seven Islamic heavens, of the planets, of a moment of grace. In other words, the design is an aesthetic device that enables consciousness to move into space and time, in wordless thought and imageless vision.

This "fragment of the infinite" is not, however, a completely disembodied space, nor is it a radically positive entity that proves some physical law of infinity by the objectivity of its forms. Far more than a pure mathematical abstraction in the Nasrid palace, or a crude reality of the void in Turrell's construction, the ceiling offers an authentically poetic spectacle, in which the concreteness of things seen, merging with the imagination of things felt, forms a vibrant and fluctuating complex. Paradoxical, equivocal, and ambiguous, this cosmic abstraction conceals in the indeterminacy of its endlessness or emptiness a possibility of determinacy. It suggests images, or rather it creates a tension toward figuration that somehow introduces in the pictorial plane of each ceiling not a picture itself but the idea of a picture.

In the Comares Hall, it is through the path of analogy that the geometric space of the dome opens into the field of images. Schematically resembling universally known representations, the starry design does evoke pictures of constellations and galactic formations. Associative constructions of the mind or iconic metaphors created by analogy, these pictures nevertheless cannot be identified with the didactic, material images that characterize representation. Instead, they constitute a kind of presence-in-absence—present in the mind, absent or latent in the reality of the mathematical design. They have to do with an abstract aesthetics at the margins of figuration, a free and open field propitious for elaborating all sorts of conceptual or imaging metaphors. The truly literary, textual metaphors of the inscriptions then work upon the realm of the visible to complete an aesthetics in opposition to discursive artistic forms, entirely founded on imaginative interpretation.

For its part, Space That Sees produces images from the void not by means of analogy but by what Meuris calls "realistic illusion,"89 an ephemeral celestial picture formed by natural elements themselves-banks of clouds or bird flights-contained momentarily within the square of sky. But beyond the view of nature framed by an open architectural device that is traditionally likened to a painting (as, for example, in several of Magritte's works), it is the very entity of a picture in its generic sense that seems to appear before the viewer's eyes. The hollowness of the square slowly gives birth to the ghostly vision of a standard, monochromatic canvas, filled with blue or white color-the perfect illusion of an image created from nothingness, above all not by means of a representational technique. This optical phenomenon, which owes nothing to classical trompe l'oeil, is due to the highly sophisticated fashioning of the rim of the square and the edges of the aperture to appear as purely two-dimensional. The extremely flat rim and sharp edges veritably transfigure the reality of a three-dimensional, void-and-volume composition into a pictorial fiction in two dimensions. As the virtual and the real compete in the Alhambra, here matter and non-matter enter into concurrence to break down the boundaries between reality and fiction, absence and presence, and abstraction and figuration. Here imagination is free to embroider and shape its own constructions, its own mysticism, and its own sacredness.

EPILOGUE

Undoubtedly a video would improve this discussion by demonstrating, live and in simultaneity, the phenomenology of the two works with all their parallelism, both aesthetic and conceptual. Only an investigation in real movement, by the viewer's "traveling," makes possible a complete and carefully thought-out visual account of this phenomenology, above all of its essential part: the aesthetic experience for which these buildings were made. But let us leave aside this daring idea—perhaps a future project—for some concluding remarks.

In spite of the Islamic determinism of the Alhambra, due in great part to the presence of Arabic inscriptions, the Comares Hall and *Space That Sees* as-



Fig. 15. Aperture in the ceiling of Space that Sees. (Photo: V. Gonzalez)

sert themselves as symmetrical constructions. They are two versions of a perceptual architectural scheme dedicated to metaphysical meditation through a single path, that of a high corporeal intimacy of the viewer with matter and space-the limpid, firm, and transcendent path mapped out in the evidence of geometry. More than that, Turrell's cube presents a contemporary and secular version, a minimalist epitome, of the Comares Tower. Constituting a perfect duality, both works are objects characterized by a radical geometry-one maximizing and cumulative, the other minimalist and reductive. This distinction enhances, by complementary contrast, their deep conceptual similitude. Islamic or contemporary, they reconcile material and spiritual consciousness for the sake of existential knowledge. They are both works of existential art that adopt sacramental connotations for a genuine phenomenology of the sacred: all cults, forms of mysticism, and metaphysics intermingled.90

In this sense, although they both belong to the category of non-religious architecture, the Comares Hall and *Space That Sees* assuredly become sanctuaries.

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APPENDIX: EXCERPTS FROM THE INSCRIPTIONS IN THE COMARES HALL⁹¹

- On the portico preceding the Sala de la Barca:
 - Blessed be He who has entrusted you with the command of His servants and who through you exalted [the world of] Islam in benefits and favors;
 - and how many infidel lands did you reach in the morning only to become the arbiter of their lives in the evening!
 - You put on them the yoke of captives so that they appear at your doorstep to build palaces in servitude;

3.

- you conquered Algeciras by the sword and opened a gate which had [until then been] denied to our victory...
- O son of eminence, prudence, courage, and generosity, who has risen above the most brilliant stars,
- you have risen on the horizon of your kingdom with mercy to dissipate the shadows of tyranny,
- you have secured the branches from the blowing wind, and you have frightened the stars in the vault of heaven;
- if the flickering stars tremble, it is from fear of you, and if the branches of the willow bend, it is to give you thanks.

In the small niches at the entrance of the Sala de la Barca:

- I am [like] a bride in her nuptial attire, endowed with beauty and perfection.
- Contemplate [this] ewer to understand the full truth of my statement;
- look as well at my crown and you will find it similar to the crown of the new moon;
- Ibn Nasr [Muhammad V] is the sun of this heaven in splendor and in beauty; May he remain forever in [this] high position without fearing the time of sunset...

In the Comares Hall, at eye level inside the central alcove where the sultan sat enthroned during audiences:

- You received from me morning and evening salutations of blessing, prosperity, happiness, and friendship;
- this is the high dome and we are its daughters; yet I have distinction and glory in my family.
- I am the heart amidst [other] parts of the body, for it is in the heart that resides the strength of soul and spirit;
- my companions may be the signs of the zodiac in its heaven, but to me only, and not among them, is the Sun of nobility;
- for my lord, the favorite [of God], Yusuf, has decorated me with the clothes of splendor and of glory without vestments,
- and he has chosen me as the throne of his rule; may his eminence be helped by the Lord of light and of the divine throne and see.

Under the cupola: see the beginning of this article and note 1.

Around the arch over the central alcove, Qur'an 113, "The Dawn," in its entirety:

Bismillah. Say: I take refuge with the Lord of Daybreak, from the evil of what He has created, from the evil of darkness when it gathers, from the evil of the women who blow on knots, from the evil of an envier when he envies.

NOTES

- 1. J.M. Rodwell, trans., *The Koran* (1909; reprint, London and Rutland, Vt.: Everyman, 1999). The entirety of sura 67, "The Kingdom," is inscribed in the Comares Hall beneath the wooden dome.
- For example, Oleg Grabar has long utilized the comparative study of Islamic and Western art. See especially his seminal book, *The Mediation of Ornament* (Princeton, N.J.: Princeton University Press, 1992). See also F. S. C. Northtrop, *The Meeting of East and West* (New York: Macmillan, 1946) and John Renard, "A Method for Comparative Studies in Religious Visual Arts: Approaching Architecture," *Religion and the Arts: A Journal from Boston College* 1 (fall 1996): 100–123.
 - The motivation for my choosing these two particular buildings was experimental. The Alhambra has been the main subject of my research, and anything that can help me understand this masterpiece immediately becomes a subject for me to work on. While practicing systematic phenomenological analysis and using contemporary art and criticism as major tools to study Islamic objects, I often compare Islamic and Western works of art or consider their common aesthetic concepts. My experience of Turrell's construction during a visit to the Israel Museum was interestingly similar to my experience of the Comares Hall—hence this phenomenological inquiry.
- From "What Should One Know About Islamic Art," an unpublished lecture given at "Exploring the Frontiers of Islamic Art and Architecture," a symposium organized by the Aga Khan Program for Islamic Architecture (Massachusetts Institute of Technology, Cambridge, Mass., May 19– 20, 2001).
- Edmund Husserl, Husserliana, vol. 23, no. 15, pp. 386–392 (Dordrecht and Boston: Kluwer Academic Publishers, 1976), translated into French by Marc Richir, "Phénoménologie de la conscience esthétique," Esthétique et phénoménologie (1999) Revue d'esthétique 36, pp. 9–13; see especially p. 10. In English, see Galen A. Johnson, "Husserl and Merleau-Ponty: History, Language, and Truth," in Henry Piertersma, ed., Merleau-Ponty: Critical Essays (Washington, D.C.: University Press of America, 1990), pp. 197–217; and Frederick A. Elliston and Peter McCormick, eds., Husserl: Expositions and Appraisals (Notre Dame, Ind.: University of Notre Dame Press, 1977).
- 6. The phrase specifically refers to a methodological concept of phenomenologists, including Edmund Husserl and Martin Heidegger. Concerning the phenomenological method in the study of art, see *Esthétique et phénoménologie* and Galen A. Johnson and Michael B. Smith, eds., *The Merleau-Ponty Aesthetics Reader: Philosophy and Painting* (Evanston, Ill.: Northwestern University Press, 1993). See also the following American studies on French phenomenology, deconstruction, and

structuralism: Martin Jay, Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought (Berkeley, Los Angeles, and London: University of California Press, 1993); Jacques Ehrmann, ed., Structuralism (New York: Anchor Books, 1970); James Schmidt, Maurice Merleau-Ponty: Between Phenomenology and Structuralism (New York: Palgrave-Macmillan, 1985); Rodolphe Gashe, "Deconstruction as Criticism," Glyph 6 (Baltimore: Johns Hopkins University Press, 1979); and Gary Brent Madison, The Hermeneutics of Postmodernity: Figures and Themes (Bloomington: Indiana University Press, 1988). About American aesthetic philosophy and criticism, see Monroe C. Beardsley, Aesthetics: Problems in the Philosophy of Criticism, 2d ed. (Indianapolis: Hackett, 1981).

- The phenomenologist Roman Ingarden practiced "historical reduction," which he considered one of the conditions necessary for reaching "things themselves." Cited by Leszek Brogowski, "La détermination, l'indéterminé, une surdétermination: Réflexions sur une ontologie de l'œuvre d'art à partir de Roman Ingarden," *Esthétique et phénoménologie*, p. 59.
- 8. Edmund Husserl, *Esthétique et phénoménologie*, p. 11. See also Roman Ingarden's concept of "things themselves," cited above.
- 9. "Husserl a employé le beau mot de *Stiftung*—fondation ou établissement—pour désigner d'abord la fécondité illimitée de chaque présent...mais surtout celle des produits de la culture qui continuent de valoir après leur apparition et ouvrent un champ de recherches où ils vivent perpétuellement." From Maurice Merleau-Ponty, *La prose du monde* (Paris: Gallimard, 1969), pp. 73–74.
- See the exhibition catalogue: Markus Brüderlin, ed., Ornament and Abstraction: The Dialogue between Non-Western, Modern, and Contemporary Art (Cologne: Dumont; Riehen/Basel: Fondation Beyeler; and New Haven: Yale University Press, 2001). See also the exhibition review: Harry Bellet, "Les noces crapuleuses entre l'abstraction et l'ornement," Le Monde (Paris), Sept. 2–3, 2001.
- 11. Grabar, *The Mediation of Ornament*, pls. 3–4. Grabar also contributed to the catalogue of the exhibition in Basel.
- 12. See Appendix. See also Antonio Fernandez Puertas, *The Alhambra: From the Ninth Century to Yusuf I* (London: Saqi Books, 1997); Oleg Grabar, *The Alhambra* (Sebastopol, Ca.: Solipsist Press, 1992), pp. 112–15; and my own recent analysis, "Understanding the Comares Hall in the Light of Phenomenology," chap. 3 in *Beauty and Islam: Aesthetics in Islamic Art and Architecture* (New York and London: I. B. Tauris, 2001).
- Label copy from the exhibition, "James Turrell à Paris," organized by Electricité de France, Paris, April–July 2000.
- 14. In the terminology of contemporary art, "installation" designates a work that may include any type of two- or threedimensional object but that is not sculpture, painting, or architecture in its traditional sense of having utilitarian function. Although we will continue to use the shorthand term "architecture" for Turell's work, "architectural installation" would be more accurate.
- Further sources on the artist and his work include: Craig Adcock, *James Turrell: The Art of Light and Space* (Berkeley and Los Angeles: University of California Press, 1990); Oliver

Wick, Jost Kippendorf, and James Turrell, James Turrell: Long Green (Zurich: Turske & Turske, 1990); Peter Blum, Mapping Spaces: A Topological Survey of the Work by James Turrell (New York: Peter Blum Edition, 1987); Jacques Meuris, James Turrell: La perception est le médium (Brussels: Éditions La Lettre Volée, 1995); and Guy Tortosa et. al., James Turrell, ed. Beaux Arts SA: Les hors-série de Beaux Arts Magazine (Paris: 2000).

- 16. Together the inscriptions, including quotations from the Qur'an, poems, and pious expressions, create a highly animated "textual world" that coexists with the "visual world" of the architectural forms; metaphorically, the whole building "speaks" through these inscriptions. See Appendix and Gonzalez, *Beauty and Islam*, p. 42.
- 17. In this construction, as in his other "earthworks"—including *Irish Sky Garden* in Ireland and *Roden Crater* in Arizona (where the artist now lives)—Turrell has taken specific advantage of regional climate—in this case, the bright sun and densely blue sky of the Middle East.
- 18. Thus relating it to Turrell's series, *Projection Pieces*, begun in 1967 when he was seeking to endow light with volume by projecting it into corners or onto surfaces of walls.
- 19. See Gonzalez, Beauty and Islam, chap. 3.
- 20. Gaston Bachelard, La poétique de l'espace (Paris: Presses Universitaires de France, 1958) p. 190, and The Poetics of Space, trans. Maria Jolas (New York: Orion Press, 1964), p. 209. Bachelard also quotes Thoreau's Walden: "A lake is the landscape's most beautiful and expressive feature. It is earth's eye, looking into which the beholder measures the depth of his own nature." (The Poetics of Space, p. 210).
- 21. In particular, this work by Hadany may be related to other Turrell installations entitled *Skyspace* and *Skylight*.
- 22. One may find instances of this scheme in the earlier palaces of Samarra or Madinat al-Zahra'. About Islamic palace and garden typology, see D. Fairchild-Ruggles, *Gardens, Landscape, and Vision in the Palaces of Islamic Spain* (University Park, Pa.: Pennsylvania State University Press, 2001).
- 23. The term "anthropocosmic" (see, e.g., Bachelard, *The Poetics of Space*, p. 4) refers to a cosmology positioning human thought as the central point of reference within the universe.
- Bachelard, *The Poetics of Space*, p. 46. See also Gaston Bachelard, *The Poetics of Reverie: Childhood, Language, and the Cosmos*, trans. Daniel Russel (Boston: Beacon Press, 1971), p. 171.
- 25. Borrowed from Meuris's subtitle; see note 15 above.
- Maurice Merleau-Ponty, L'oeil et l'esprit (Paris: Gallimard, 1964), pp. 19 and 26. See also James J. Gibson, The Ecological Approach to Visual Perception (Hillsdale: L. Erlbaum Associates, 1986).
- 27. Pre-logical or pre-objective knowledge is a Husserlian concept applied to art by Maurice Merleau-Ponty, first in *Phénoménologie de la perception* (Paris: Gallimard, 1945), then in *Le visible et l'invisible, suivi de notes de travail* (Paris: Gallimard, 1964), and finally in his last book, on Cézanne's painting, *L'œil et l'esprit* (Paris: Gallimard, Édition Claude Lefort, 1964). Merleau-Ponty analyzes *le flux concret*, "the concrete flow"—the phenomenon of primal knowledge through corporeal contact with the world. On this subject, see Daniel Payot, "Un fond de nature inhumaine: De l'origine des images," in *Esthétique et phénoménologie*, pp. 95–106. In English, see

James J. Gibson, *The Perception of the Visual World* (Boston: Houghton Mifflin, 1950); Roger Fry, *Vision and Design* (London: Chatto and Windus, 1920); Rudolf Arnheim, *Art and Visual Perception* (Berkeley: University of California Press, 1954); Forrest Williams, "Cézanne, Phenomenology, and Merleau-Ponty," and Michael B. Smith, "Merleau-Ponty's Aesthetics," in Johnson and Smith, *The Merleau-Ponty Aesthetics Reader*; and Bernard Charles Flynn, "Textuality and the Flesh: Derrida and Merleau-Ponty," in *Journal of the British Society for Phenomenology* 15 (May 1984).

- 28. The consciousness associated with the soul differs from that associated with the spirit or mind, the former being active in, e.g., dreaming or what Husserl calls "phantasia," the latter in pure thinking: see Bachelard, *The Poetics of Space*, p. xvi; Marc Richir, "Commentaire de *Phénoménologie de la conscience esthétique*," in *Esthétique et phénoménologie*, pp. 15–23; Gary Brent Madison, *The Phenomenology of Merleau-Ponty: A Search for the Limits of Consciousness* (Athens, Ohio: Ohio University Press, 1981); J. H. van den Berg, *The Phenomenological Approach to Psychiatry: An Introduction to Recent Phenomenological Psychopathology* (Springfield, Ill.: Charles C. Thomas Editions, 1955); and Glen A. Mazis, "*La chair et l'imaginaire:* The Developing Role of Imagination in Merleau-Ponty's Philosophy," in *Philosophy Today* 32 (spring 1988).
- See Maurice Merleau-Ponty, Le visible et l'invisible, and as cited by Sebastien Pluot, commenting on Turrell's Hi-Test, in Tortosa, James Turrell, p. 40. See also Rémy Kwant, From Phenomenology to Metaphysics (Pittsburgh: Duquesne University Press, 1966).
- Jacques Derrida, Edmund Husserl's "Origin of Geometry": An Introduction, trans. John P. Leavey Jr. (Lincoln: University of Nebraska Press, 1989), p. 9.
- 31. Quoted by Meuris, La perception est le médium, p. 19.
- See Husserl's explanation of this concept in Donn Welton, ed., *The Essential Husserl: Basic Writings in Transcendental Phenomenology* (Bloomington and Indianapolis: Indiana University Press, 1999), pp. 115–16.
- 33. Used by critics to define James Turrell's monumental installations, this expression is equally applicable to the Nasrid building. See Guy Tortosa, "Une architecture de la perception," in Tortosa, *James Turrell*, pp. 7–19.
- 34. See the description of each building at the beginning of this article.
- 35. See Gonzalez, Beauty and Islam, chap. 3.
- See Edmund Husserl, "Phénoménologie de la conscience esthétique," *Esthétique et phénoménology*, pp. 9–11. See also Welton, *The Essential Husserl*, pp. 113–17.
- 37. See Matila Ghyka, *The Geometry of Art and Life* (New York: Sheed and Ward, 1946) and Wilhem Worringer, *Abstraction and Empathy* (London: Routledge and Kegan Paul, 1953).
- See Nick Zangwill, "Aesthetic/Sensory Dependence," in British Journal of Aesthetics 38 (January 1998): 65–82.
- 39. About the inscriptions in the Alhambra, see Jose Miguel Puerta Vilchez, *Los codigos de utopia de la Alhambra* (Granada: Biblioteca de Ensayo, 1990); Grabar, *The Alhambra*, and Gonzalez, *Beauty and Islam*, chaps. 3–4.
- 40. See Gonzalez, Beauty and Islam, p. 48.
- This refers to Henri Bergson's theme of the opposition between geometry and life.
- 42. The word as subject body (le corps propre) is a fundamental

phenomenological notion set forth by Husserl, who uses the terms *Leib* or *Geistige Leiblichkeit* (spiritual corporeality). See *Edmund Husserl: Formal and Transcendental Logic*, trans. Dorion Cairns (The Hague: Martinus Nijhoff, 1969), p. 21; and Valérie Gonzalez, "The Double Ontology of Islamic Calligraphy: A Word-Image on a Folio from the Museum of Raqqada (Tunisia)," in İrvin Cemil Schick, ed., *M. Uğur Derman armağanı: altmışbeşinci yaşı münasebetiyle sunulmuş tebliğler = M. Uğur Derman Festschrift: Papers Presented on the Occasion of His Sixty-Fifth Birthday* (Istanbul: Sabancı Üniversitesi, 2000), p. 313.

- 43. Furthermore, a historical source reports that a poem that particularly pleased the Nasrid sultan was then integrated into the epigraphic decoration of the Alhambra. See Maria Jesus Rubiera, *La arquitectura en la literatura arabe: Datos para una estetica del placer* (Madrid: Hiperión, 1988).
- 44. As opposed, for example, to François René de Chateaubriant's claim of "le pouvoir descriptif des psaumes" (the descriptive power of the psalms) in *Le genie du Christianisme* (Paris: Gallimard, 1978; orig. pub. 1802).
- 45. In terms of content and process, this type of intellection must of course be distinguished from the logical or rational kind, although these too may lead to activities of the imagination.
- 46. About the philosophy of imagination, see "The Ontology, Physiomathematics, and Psychology of Imagining in the Early Writings of Descartes," a chapter in Dennis Sepper, *Descartes's Imagination: Proportions, Images, and the Activity of Thinking* (Berkeley, Los Angeles, and London: University of California Press, 1996).
- 47. Expression borrowed from Michel Serres, *Les origines de la géométrie* (Paris: Flammarion, Champs, 1993).
- 48. In Derrida, Edmund Husserl's "Origin of Geometry," p. 179.
- Serres, Les origines de la géométrie, p. 212, where he adds, "La géométrie, coupée de la sacralisation, pose un espace indifferencié."
- 50. That is, the rational metaphysics established by the classical Greeks, which is based on logical observation of the cosmos as the overall system of knowledge.
- 51. Meuris, La perception est le médium, p. 34.
- 52. Ibid., p. 24.
- 53. Turrell, in a 1983 interview by Suzanne Pagé: see Tortosa, *James Turrell*, p. 44.
- 54. Developed in scientific terms by Serres, *Les origines de la géométrie*, this concept also applies to theology.
- 55. Cited by Sepper, Descartes's Imagination, p. 48.
- Bachelard, *The Poetics of Space*, p. 7. See also Siegfried Giedion, *Space*, *Time*, *and Architecture*, 5th ed. (Cambridge, Mass.: Harvard University Press, 1967).
- 57. Bachelard, The Poetics of Space, p. 89.
- Passage from M. Merleau-Ponty, L'œil et l'esprit, translated by Smith in Johnson and Smith, The Merleau-Ponty Aesthetics Reader, p. 140.
- 59. A contemporary term for works of art constructed in preexisting natural or urban settings. Also known as "land art" or "earth art;" other practitioners include Robert Smithson, Gordon Matta-Clark, and Richard Long.
- 60. Aesthetically and conceptually, a garden need not emphasize its relationship with nature; it may instead present itself as a pure fiction, rerouted from any original goal of sensory enjoyment and acting mainly on a viewer's mental

VALÉRIE GONZALEZ

level. Gardens à la française and Zen gardens exemplify this.

- 61. See note 27 above.
- 62. Merleau-Ponty, Phénoménologie de la perception.
- 63. This feeling of perplexity even affects those who know Turrell's work in general; it is the artist's intent to provoke such feeling.
- 64. This description is based both on my own aesthetic experience of Turrell's construction and on the behavior of other spectators I observed—behavior that was not different from my own.
- 65. Donald Judd, another American, is perhaps the most famous of radical minimalist artists. He titled his geometric sculptures and installations "Specific Objects" to emphasize that their significance lies in their object-ness.
- 66. Bachelard, The Poetics of Space, p. xxvi.
- 67. Merleau-Ponty, L'oeil et l'esprit, p. 13.
- See Carl G. Jung, *Contributions to Analytical Psychology*, trans. H.G. and Cary F. Baynes (New York: Harcourt, Brace, 1928), pp. 118–19. Quoted in Bachelard, *The Poetics of Space*, p. xxxii.
- 69. Meuris, La perception est le médium, p. 18, describing other Turrell works; the phrase applies equally to Space That Sees.
- 70. One must nonetheless take into account that the use of the room as a place of reception was—and presumably still is—known beforehand, so that its overwhelming beauty was and is anticipated. While the visual effect is less pronounced after repetition, the aesthetic system still functions as initially conceived.
- 71. The Comares Tower and the Sala de la Barca were built separately, each by a different Nasrid sultan—the former by Yusuf I in 1310, and the latter later in the century by Muhammad V, who also completed the reception room—so that the existing configuration was not originally conceived as a whole. Nevertheless, the portal plays a fundamental rhetorical role in the use of the architectural unit as a throne hall. A second important feature of the entrance, of a human rather than an architectural order, was the stationing of the sultan's guards, in requisite official dress, at each side of the entrance; the presence of these guards rhetorically magnified the grandeur of the complex as much as did its ornamentation and architectural arrangement.
- 72. The major scholarly works on the geometric systems of the Alhambra are cited in Gonzalez, *Beauty and Islam*, chaps. 3–4. Turrell, prior to attending art school (1965–73), received

his undergraduate degree in mathematics and psychology. Thereafter he used his scientific interests in the service of his art; in 1968, for example, he was associated with the Art and Technology Program, organized by the Los Angeles County Museum of Art to encourage cooperation between artists and scientists.

- 73. Although it has been claimed that the Comares Hall, on close observation, has defects in its ornamentation, the high quality of the overall composition remains indisputable.
- 74. A. Chevrillon, La pensée de Ruskin (Paris, 1922), p.130.
- 75. Serres, Les origines de la géométrie, p. 52.
- 76. This effect is religiously conceived in the Alhambra and secularly conceived in *Space That Sees*, but what matters in both is the cosmological principle of correlation between macrocosm and microcosm.
- 77. Bachelard, The Poetics of Space, p. 157.
- 78. Tortosa, James Turrell, p. 34.
- Originally the cupola was painted so that the star patterns appeared in bright hues within the multicolored geometric setting.
- 80. One notices a mixture of surprise and satisfaction on visitors' faces when they sit on the bench; their gestures also show gratification. These psychic and physical effects are intentional components of Turrell's project.
- 81. This coined word is inspired by titles of Turrell works; see note 21 above.
- 82. Bachelard, The Poetics of Space, p. 109.
- 83. Sepper, Descartes's Imagination, p. 54.
- 84. Gonzalez, Beauty and Islam, chap. 3.
- 85. Quoted in Meuris, La perception est le médium, p. 19.
- Ludwig Wittgenstein, *Tractatus Logico-Philosophicus*, trans. C. K. Ogden (Mineola, N.Y.: Dover, 1998), p. 33.
- 87. The plan of patterned ceilings must be analyzed in pictorial terms.
- 88. Referred to as a "deductive structure" in Gonzalez, *Beauty* and Islam, p. 58.
- 89. Meuris, La perception est le médium, p. 44.
- 90. See the phenomenological analysis of existential art in general in *Esthétique et phénoménologie*, pp. 142–44.
- Translations of the poetic inscriptions are from Grabar, *The Alhambra*, pp. 141–43. Qur'anic translation from Rodwell, *The Koran.*