

Models as Mumbo Jumbo

MARK S. MORRIS
Cornell University

Each little piece together put,
In love, the thought inspire,
Thus in the model as we look,
Can see the soul's desire. [...]

Forever, yea, and ever live,
All models that we make,
And as a sacrifice we give,
The motto, that we take.

So now to God, I dedicate
These models I have made,
May some poor mortal consecrate
The God of Love, to save.

Harold Chancellor
"Thy Model, Lord, Is My Motto"

The 1934 exhibition in Brighton of "The Famous Richold Collection of Architectural Models" brought fame to Mr Richold from Hampton-on-the-Sea. In his spare time over many years this reclusive unmarried retiree had carved hardwood scale models of the great cathedrals of Europe as a hobby. When these were "discovered" the quiet eccentric and his models were put on display in his hometown and, the following year, offered a place in a major trade show in Brighton. The collection was so outstanding it stayed on as an attraction for several months and, as word spread, many architects and socialites came to visit. Even royalty signed the guest book. Given all the excitement, old Mr Richold passed away just before the exhibition closed. As the models were being taken down for transport, the movers accidentally dropped Amiens. The model crashed to the floor and split open to reveal a complete scale interior as detailed and precise as the exteriors that had been so admired. On inspection, all the models were found to be assembled this way. Why had Richold never mentioned it? An amateur poet who had visited the exhibition was

so moved by this revelation he penned "The Model, Lord, Is My Motto" as a posthumous tribute.¹

When Amiens broke open something magical and mysterious happened. It became evident that the interiors were not meant to be seen (the windows were only incised on the exterior), but were built for another purpose. Richold may never have intended that any of his models to be viewed outside or in – these models were not about representation in the straightforward sense. Bachelard offers one aspect, "It [miniature] gathers the universe together around and in an object. We see it open chests, or condense cosmic wealth in a slender casket. [...] And quite paradoxically, even cubic dimensions have no more meaning, for the reason that a new dimension -- the dimension of intimacy -- has just opened up."² Richold's model cathedrals were mimetic in that they accurately copied built works, but these were never meant to be seen. It might be more useful to consider these as symbolic or meditative in character.

MICROCOSM

Aesthetics of proportion, rooted to musical theories of harmony from antiquity and the early Middle Ages, sought out conditions of visible harmony. As it developed, it assumed more complex geometric, artistic and architectural expression. Harmonic proportion, from Pythagoras and Plato to Boethius and Augustine, permitted complete scalar freedom; proportions were relational but not fixed to size. This allowed a cathedral to function both as a macrocosm of the body and a microcosm of the universe; sitting in a cathedral one is simultaneously in the body of Christ and at the center of the universe. A model of a cathedral, in essence a model

of a model, forces a surrogate conceptualization of the same and condenses these effects. It is not only a matter of playing at the scalar extremes of body and universe, the model insists that total harmony demands the replay of *ordo et mensura* at all levels of scale as proof of the divine. Proportion in this way can also refer to another kind of relation, more metaphysical and beyond the reach of visible aesthetic experience. For Boethius, this is the relation of essence to existence.³

This spiritual calibration of proportion also touches on Immanuel Kant's aesthetic definition of the sublime: "What, then, is the meaning of the assertion that anything is great, or small, or of medium size? What is indicated is not a pure concept of understanding, still less an intuition of sense; and just as little is it a concept of reason, for it does not import any principle of cognition. It must, therefore, be a concept of judgment..."⁴ Architectural models work on the premise that they can represent the large in the small by adhering to proportion and scale – the very things that the sublime requires. That certain religious art is thought to express the sublime is in no small part (or in every small part) owed to the trope of the scale model.

...nothing can be given in nature, no matter how great we may judge it to be, which, regarded in some other relation, may not be degraded to the level of the infinitely little, and nothing so small which in comparison with some still smaller standard may not for our imagination be enlarged to the greatness of the world. Telescopes have put within our reach an abundance of material to go upon in making the first observation, and microscopes the same in making the second.⁵

Architectural models may be microcosmic and sublime. Through the model architects can attend to the sublime from both ends. Whereas built works must strain to be truly enormous – Kant acknowledges the Pyramids,⁶ models can render the same with certain economy. Proportion and scale can play to a quantitative sublimity. The merely small is not prized here, but the miniature, the unexpected reappearance of a known form in a smaller shape is. The model easily performs this function. Pointing to objects like reliquaries would seem to claim a place as precedents for scale models, but this simultaneously frustrates an historical narrative sequence which places the model's true origins to the Renaissance and relegates things that resemble models before that time as being of a different order.

RELIQUARIES

This notion of microcosm unlocks some of the traits of reliquaries. In proportion to the fragment of a saint, say a bony finger, its housing shrinks in harmony/proportion with it. As the finger represents the whole saint *in vitro*, its container represents a whole building. Many model depictions coming out of the Middle Ages play on their ability to represent the microcosm – the vastness of a cathedral (which is merely God's house scaled accordingly) is recast in the reliquary and in model imagery in painting. Beauty resides in the proportion which reveals and is produced by the splendor of form. The reliquary frustrates the assumption that models are economic, following Alberti's dictums regarding models that should improve the design process, save on the costs of actual building and refrain from being "colored and lewdly dressed with the allurements of painting."⁷ Reliquaries were expensive, more expensive than real buildings. The Crown of Thorns and other relics (including their gold reliquary containers) were sold by the Emperor of Constantinople to Saint Louis (Louis IX) for three times what it cost to build Sainte-Chapelle to house them; and the chapel itself is cited as *the* finest example of Gothic architecture.

It is not merely the level of craft that is impressive in certain reliquaries, but also the fidelity to architectural specificity, proportion and, in some instances, resemblance to the church that houses them. After a macabre modular system, the gray gnarled hand of St Stephen of Hungary is housed in a gilt reliquary that resembles the architecture of the side chapel of the Budapest cathedral where the reliquary is traditionally kept. Krzysztof Pomian claims reliquaries constitute one of the first types of Western collecting. Reliquaries, like art objects, "are kept temporarily or permanently out of the economic circuit, afforded special protection in enclosed spaces adapted specifically for that purpose and put on display."⁸ Reliquaries are also an index of a society's, say Renaissance Florence, technical and artistic sophistication. But more important than these, and the reason they are allied with the relic in the first place, reliquaries are first and foremost sacrificial objects. Their production is indeed costly -- requiring the finest materials, the most skilled designers and craftsmen and so on, but all this effort is expended in the production of a useless thing kept "out of the economic circuit."⁹



Figure 1. Soissons reliquary

The Soissons reliquary of 1560 [fig. 1] overrides the standard single-building type. The gilt model shows an extruded ecclesiastic map of the city; the cathedral and smaller city churches and chapels are all represented in correct proximity to each other and surrounded by golden city walls. A problem for some reliquaries in an architectural sense is an excess of riches. The Soissons reliquary is successful in model terms because, unlike so many others, it is not encrusted with jewels or overly rendered in precious material. Proportion and scale become compromised in reliquaries that materially rather than formally prove their worth by receiving impossibly large rubies and emeralds. The role of gemstones and other costly material was anagogically meant to connect the visible sign with invisible or spiritual wealth. A sapphire's brilliance evoked God's command, "Let there be light." However, the addition of jewels visually undoes the scalar conceit of the model reliquary. In an effort to make a reliquary more impressive, the addition of jewels erodes the model reliquary's architectural coherence.

DONATION MODELS

In its symbolic projective mode, the model represents a building that will be built out of the generosity of the donor. It fulfils the usual role of a model, and also denotes as an object that its manifestation was specifically based on the charity of a patron. A typical example is the late 15th century fresco at the Certosa of Pavia, Ambrogio Borgognone shows Gian Galeazzo Visconti presenting the model of the Certosa to the Virgin. The donation model picks

up on a thread that might be read across architectural models generally, embodying the donation: it denotes a kind of sacrifice. Like the reliquary, the donation represents a cost with no earthly benefit. This is a material/financial sacrifice on behalf of the donor. Underlying this is also the conception of the scale model being a sacrifice itself, in its making. The model is well-adapted to refer to sacrifice, models are sacrificial objects already.

Giotto's 1305 depiction of the donation of the Arena Chapel in Padua shows Enrico Scrovegni offering a model of the chapel to Mary with a saint and angel seeking expiation for his father's sin of usury.¹⁰ The model is handed from Enrico to Mary and supported on the shoulders of monk [fig. 2]. It is clearly a weighty scale model accurately representing the Arena Chapel itself which Giotto is thought to have designed. The model is projective in the sense that it represents the funds released for the subsequent building. It is retrospective, painted within the Chapel and corresponding to its design. Moreover, the donation is not to wash the sins of the donor, but his father whose crimes were so great that Dante put him in the Inferno. Domenico di Michelino in 1465 inverts the donation formula at the Duomo painting Dante giving his *Divine Comedy* to a model of Florence. Here Dante is as tall as Brunelleschi's dome. That Brunelleschi championed the use of scale models in the building of the dome of the cathedral only makes the image more rich in terms of the model.

Images of model donations reappear in architecture school with the presentation of "final models." The ritual of the juried critique at the end of term plays out like a Medieval donation where the models are presented on bended knee. The model is offered up to the professors and other assembled critics in expiation. The sacrifice represented in the model in terms of time, effort and expense is made in exchange for a favorable judgement, a good grade. When Bernard Hoesli of the Texas Rangers organized his studio's final jury in the traditional manner, he noted the effect.

Temporarily the mass simply overwhelms. [...] This was one of – if not the most – amiable, pleasant, enjoyable juries...in five years. The jury members sat comfortably in easy chairs. John and I placed the models on a low table in front of them. I ushered in groups which were introduced and who proceeded to make their presentations. Afterwards there was animated conversation, casual looking around, conversation, comment.¹¹



Figure 2. The donation of Arena Chapel

Consider the competition model as well. These too are built sacrificially with no guarantee that the project will win the commission. For an office to devote the time, effort and expense required of competitions, there is a sense that the expenditure, even if materially unrewarded, is somehow worthwhile. In many ways the competition allows professionals to revisit the ritual of the academic studio, attempting to best each other in an orgy of wasted time and money to prove their creative worth amongst their peers. Competition models might be viewed as donative, objects offered *pro bono* for the good of the profession and community.

MODEL ATTRIBUTES

Identifying saints or other religious figures with token objects was finely worked out well before the Middle Ages. These are usually references to martyrdom: swords, grills, wheels, stones. Models are used as attributes differently. In a Byzantine mosaic, St Peter is shown holding a very basic model church pointing to his role as church father. His other attribute, keys,¹² are sometimes replaced by a model church and other times shown beside it.

As founder of the Church, this seems a reasonable association. In every instance where St Peter is shown with keys and model, the keys never shunt down to the scale of the little church but remain in the same scalar order as Peter himself or even seem over-sized as in *The Coronation of the Virgin with Adoring Saints*, attributed to Jacopo di Cione from the late 14th century. It is like a scene out of Alice in Wonderland, St Peter has just finished the bottle or cake marked “drink me” and “eat me” in Eucharist overtones, and he finds himself in a space where objects are either too big or too small. The runner-up in the saint-with-model-attribute contest is St Paul. The connection here is a bit more complicated. Certainly, the little church might be a symbol for a Church Father, but there might be other reasons as well. In the Vision of St Paul he sees a bridge as “narrow as a hair” connecting our world with Paradise. This illustrates how narrow the path is to salvation, but it also connotes a more profound aspect to the miniature in general. “Thus the minuscule, a narrow gate, opens up an entire world. The details of a thing can be the sign of a new world which, like all worlds, contains the attributes of greatness. Miniature is one of the refuges of greatness.”¹³

Just as with reliquaries, model attributes can reference specific buildings. Justa and Rufina, patron saints of Seville, are pictured by Murillo holding a model of the city’s bell tower [fig. 3]. Their martyrdom was the result of their refusal to sell their father’s pottery for pagan ceremonies; notice the pots and jugs at their feet. Here the model denotes Seville and not the saints themselves. In the 1377 relief commemorating the building of the Ulm Cathedral, the mayor of the city and his wife are shown offering the cathedral on the back of the architect. Here donation and attribute overlap. St Barbara’s attribute is a model tower.¹⁴ Her martyrdom is completely bound up with architecture. The 4th century legend of St Barbara relates how she was locked in a high tower by her father until the day she married. She spent her days admiring the landscape and hearing the songs of passing outlaw Christians. When her father had to make a long trip, he asked Barbara to oversee, from her tower, the building of a bathhouse on the family estate. During construction of the baths, Barbara recommended changes bit by bit – moving a pillar here, adding a window there so that when her father returned he found not a bathhouse but a



Figure 3. Justa and Rufina of Seville

chapel with three windows representing the trinity. He was so furious he took his daughter before a judge who recommended her execution. When no one would carry this out, Barbara's own father volunteered and beheaded her, he was immediately struck down with lightning. The evidence for Barbara's crime was architectural, from her high vantage point she had a view of the estate as if a model below her. Through tinkering with the design – playing architect – she condemned herself. Her attribute is not her father's sword nor the bathhouse, but the tower from which she remotely built a chapel shown as a model in her hands.¹⁵

Medieval model depictions whether in painting or as things like reliquaries pose difficult questions for architectural historians. In the article "On the Reliability of Scale Models" Jean-Marie Pérouse de Montclos posits: "Works such as reliquaries or monstrances are often mistaken for actual models, just as many paintings show patrons presenting scale models as tokens of their munificence."¹⁶ This is the standard line of the historian, part of this lies in the accepted chronology: placing real

use of architectural models at the start of the Renaissance. Medieval model depictions must be something else, attributes only, but even these attributes themselves do not always bear out the argument. The design of many Gothic cathedrals is usually unattributable, Reims is special for the tomb of its architect Hugh Libergier whose death year is marked 1263. This is one of the earliest depictions of the architect. Studying the image Spiro Kostof notes, "The architect is shown with the instruments of his profession: the rule, the square and the compass."¹⁷ Never mind the model held in his right hand! So accustomed to not recognizing the model as a model depicted in images from the Middle Ages, but as an attribute, Kostof seems blind to it. One is led to infer that the model here is a professional attribute for the architect not yet accorded model usage.

MEDITATIVE MINIATURES

The miniature and the spiritual have been merged in other objects outside the reliquary. Some are projective, most are retrospective and work off associations with full-scale building types. Portable shrines and model temples from India, Tibet and the Middle East, are copies of sacred sites created for those who were too far or too weak to make a proper pilgrimage. Such scale representations of shrines were accorded the same healing properties of the real sites. These were not souvenirs, but iterations of the same divine object. Keeping the proportion of a temple, the model conserves its essence as a microcosm and, as such, need not be site specific. Spirit-Houses from Fiji with highly pitched roofs where spirits of ancestors are protected feature even smaller spirit-houses nestled inside.¹⁸ Chinese sculptures of jade carved into glistening landscapes are portable shrines of an undefined destination [fig. 4].

From the seventeenth century, arranging gardens in pottery bowls became the fashion among Chinese scholars. The bowls were filled with water, out of which rose a few stones bearing dwarf trees, flowers, and often miniature models of houses, pagodas, bridges, and human figures; they were called "Miniature Mountains..." [...] The mystical element was also present, for the mountain in the midst of the sea symbolized the Isles of the Blessed, a sort of Paradise in which the Taoist Immortals lived. So that we have here a world apart, a world in miniature, which the scholar set up in his house in order to partake in its concentrated mystical forces, in order, through meditation, to re-establish harmony with the world.¹⁹

There are Japanese versions of the miniature mountain carved in bone or inside a walnut shell; some are best viewed under a magnifying glass.

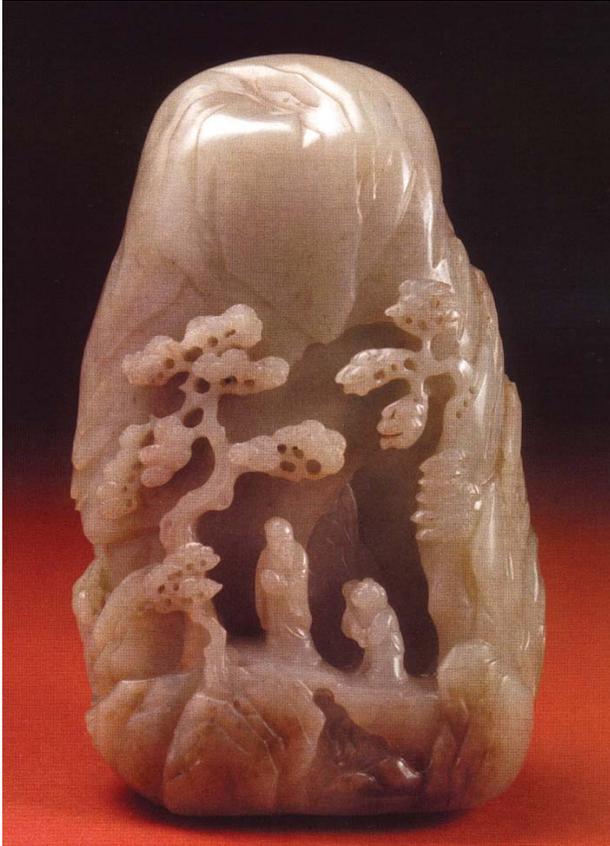


Figure 4. Miniature mountain in jade

In other traditions, the landscape is made model-like. The Hindu monkey god Hanuman is represented holding a mountain topped by temples [fig. 5]. When Rama, his master, and the monkey army were killed by a giant, Hanuman grew in scale to take revenge and destroy the giant. To bring his master and his troops back to life he dashed to a sacred mountain to find a special herb. Not knowing which one to pick, he took advantage of his new size and simply brought the whole mountain back to the battle scene.²⁰ The imagery of this scene reduces the mountain to a model. Carl Jung took interest the figure of Hanuman as an archetypal shape-shifter, describing another of Hanuman's battles with a dragon: "Once more he had recourse to his earlier stratagem, made himself small, and

slipped into her body; but scarcely was he inside than he swelled up to gigantic size, burst her, and killed her, and so made his escape."²¹



Figure 5. Hanuman

The meditative model can be a model city presented by angels (a donation working in the opposite direction) or coming from the clouds are described in Christian and Muslim texts. Compare two images of Augustine and his vision of the City of God and Mohammed being shown a sacred precinct from heaven.²² The remote formulation of the sacred sites of Jerusalem is played out in model form in the Italian Alps. Franciscan friars thought to recreate a Jerusalem for pilgrims well out of harm's way in Lombardy. The Stations of the Cross were elaborated into 43 small chapels each containing dioramas – Adam and Eve, the Annunciation, Christ condemned – at 1:2 and 3:4 scale. The Sacre Monte in Varallo attracted artists and architects to contribute designs and additions for over a century. This spawned other model Jerusalems at Orta and

Varese.²³ Solomon was reminded by the Almighty that his temple was merely a copy: "This building now built in your midst is not that which is revealed with Me, that which was prepared beforehand here from the time when I took counsel to make Paradise, and showed it to Adam before he sinned."²⁴

CONCLUSION

What to make of the mumbo-jumbo factor of the model in architecture? All the arts and sciences carry a component of this. The mumbo-jumbo factor should be attended to, but not over-stressed at the same time. The sublime and notions of the microcosm are not in themselves magical nor mysterious,²⁵ but objects striving to be magical and mysterious trade on these qualities. If, when the smoke clears and the mirrors are taken away, the sublime and the microcosm are all that is left for these types of models, that is enough to explain part of the appeal of the miniature in architecture. When a contemporary architectural model has special material effects, whether it is bottom-lit translucent cast resin or impossibly intricate laser-milled surfaces, it is really appealing in the register of the reliquary. Any highly-colored, over-detailed model breaks Alberti's rules and rolls back to Medieval representation. The donation is more a ritual act with an object than an object alone and, in this, the ritual persists in school juries and professional presentations to clients almost undisturbed since the Middle Ages.

This association becomes more meaningful when one considers that both religious and academic modelling strive at a particular sort of creativity, namely, *cosmopoiesis* or world-making. A reliquary anagogically flits between a world of sin and a city of God, both are constructed realms assisted by modelling as a visionary tool. Meditative models, likewise, evoke the sublime as a tripwire to prompt deep reflection and pure imagination. These same uses easily see application in a design studio which, as a condition of its curricular agenda, is intended to be the primary site of architectural creativity, experimentation and critique of the status quo; world-making in every sense. Models here are more than three-dimensional representational props intended to offer the illusion that an architectural proposal is eminently buildable in the workaday world. Rather, certain models in the stance of reliquaries and meditative objects are pan-dimensional glimpses of propositional worlds.

What of Mr Richold's broken Ameins? Like a ship in a bottle, it was made as a pastime. Its intricacy both external and internal was not achieved in the interests of exhibition. His models documented known structures, but to what end? Was he recreating the sacred sites of the Continent in his tiny cottage? Was his hobby a form of sacrifice or donation? Was the act of endless whittling a form of meditation? Did reality depend on him to produce model after model? Sealing the interiors, making them untouchable, performs what service? Were the model cathedrals a product of abject loneliness or misanthropy – was Mr Richold completely mad? There is no record of what became of the model cathedrals after the Brighton exhibition. Was "The Famous Richold Collection of Architectural Models" just thrown away in the end? The splitting of Amiens may have been just the beginning of a process of ruin for all the model cathedrals of Europe. Le Corbusier dreamt when cathedrals were white, others fantasized about when cathedrals were long lost models.

ENDNOTES

1. Notes See Todd, WH. *The Famous Richold Collection of Architectural and Artistic Models* (Brighton: exhibition catalogue, 1934) p ii.
2. Bachelard, Gaston. *The Poetics of Space* (Boston: Beacon Press, 1994) p 85.
3. Eco, Umberto. *Art and Beauty in the Middle Ages* (New Haven: Yale University Press, 1986) p 41.
4. Kant, Immanuel. *The Critique of Judgement* (Oxford: Oxford University Press, 1952), pp 94-95.
5. *ibid*, p 95.
6. *ibid*, p 99-100 (Savary's observations).
7. Alberti, Leon Battista. *De re aedificatoria*, Book 2.
8. Pomian, Krzysztof. *Collectors and Curiosities: Paris and Venice, 1500-1800*, trans. Elizabeth Wiles-Portier (Cambridge: Polity Press, 1990) p 9.
9. *Ibid*.
10. Mentioned in Dante's *Inferno*, see Hell, XVII, 58.
11. Caragonne, Alexander. *The Texas Rangers, Notes from an Architectural Underground* (Cambridge, MA: MIT Press, 1995) pp 225-226.
12. Symbol of papacy.
13. Bachelard, p 155.

14. Owing to the association with the tower, St Barbara is also patron saint of artillery and fortifications.

15. See entry for "St Barbara" in the standard Catholic Encyclopaedia (1917); St Barbara is mentioned in Symeon Metaphrastes, but not part of St Jerome's martyrology.

16. Monumental: *Revue Scientifique et Technique des Monuments Historiques*, no 21 (Paris: Éditions du Patrimoine, June 1998) p 6.

17. Kostof, Spiro. *The Architect, Chapters in the History of the Profession* (Berkeley: University of California Press, 2000), pp 14, 108.

18. Clunie, Fregus, "Burekalou and Lialiakau: Conduits for the Speaking Dead in Fiji." *Heaven and Hell, and Other Worlds of the Dead*. Alison Sheridan, ed. (Edinburgh: National Museums of Scotland, 2000), p 118.

19. Eliade, Mircea. *The Sacred and the Profane, The Nature of Religion*. W Trask, trans. (New York: Harcourt, 1987) pp 152-153.

20. Part of the Ramayan epic, legend of Hanuman.

21. Jung, CG. *Symbols of Transformation* (Princeton, 1976) p 211.

22. Lundquist, John M. *The Temple, Meeting Place of Heaven and Earth* (London: Thames and Hudson, 1993), p 72-73.

23. Wittkower, Rudolf. "Sacri Monti in the Italian Alps." *Idea and Image, Studies in the Italian Renaissance* (London: Thames and Hudson, 1978) pp 175-178.

24. Isaiah. 49:16.

25. Rather, they are part of aesthetics.