

WestminsterResearch

<http://www.westminster.ac.uk/westminsterresearch>

**Adventures in Angelic Material Imagination: The Baroque and the
Digital as Recounted by Putto_1435**

Ayuso, A.

This is an Accepted Manuscript of a book chapter published by Ashgate in *The Material Imagination: Reveries on Architecture and Matter* on 9 January 2015, available online:

<http://www.routledge.com/9781472424587>

The WestminsterResearch online digital archive at the University of Westminster aims to make the research output of the University available to a wider audience. Copyright and Moral Rights remain with the authors and/or copyright owners.

Whilst further distribution of specific materials from within this archive is forbidden, you may freely distribute the URL of WestminsterResearch: (<http://westminsterresearch.wmin.ac.uk/>).

In case of abuse or copyright appearing without permission e-mail repository@westminster.ac.uk

Chapter 13

Adventures in Angelic Material Imagination: The Baroque and the Digital as Recounted by Putto_1435

Alessandro Ayuso

Body Agents and the Material Imagination

“Body agents” are figural representations enmeshed in architectural constructions. Their placement, gestures and attributes catalyze connections between potentially disparate variables in a given architectural situation. Through their recurring appearances in drawings, and sometimes through their personification in narrative text, they form evolving relationships with other entities in a design scenario, a process of constructing inter-subjectivities.¹ Body agents can “initiate an adventure in perception,” one grounded in the ambiguous dialectic between the reality and the unreality principle.² The presentation of figures that appeal to empathetic, individual and corporeal sensibilities transforms everyday, mundane matter in the imagination.

To put forth the argument that body agents activate the material imagination as part of a crucial performance in Baroque architecture, this chapter examines three *putti* designed by Gian Lorenzo Bernini in St. Peter’s Basilica and explores how, as body agents, they may continue to serve a role in contemporary design practices for an ongoing project. Architects are increasingly confronted by the ambiguity of a “new materiality,”³ and a reconsideration of the “conceptual technology” of Baroque body agents—which aided an architect’s imagination by incorporating sensation, movement and materiality in a cohesive metaphysical project—heightens the possibilities for the material imagination to play an expanded role in today’s designs.⁴

Taking Virginia Woolf’s *Orlando* as a literary model, this chapter incorporates a collection of fictional narratives from the viewpoint of a 579-year-old body agent who has witnessed the historic Baroque era—referred to here as “Putto_1435.” He recounts his participation in Bernini’s interconnected “solar system” of projects at St. Peter’s Basilica, and in a contemporary design project.⁵ Putto_1435 is “evoked” throughout history, and in each instance takes on a slightly altered form. Having witnessed so many eras first hand he is historically erudite, yet he is histrionic, playful, egotistical, and obsessed with memories of “lost opportunities” and “missed roles” in the work of Michelangelo. The latter characteristics tend to make

him an “unreliable narrator.” As Henry James writes in his preface to *The Princess Casamassima*, “the figures in any picture, the agents in any drama, are interesting only in proportion as they feel their respective situations,” creating a level of empathy that achieves a “finely aware and richly responsible” level of consciousness.⁶ Here, the act of writing allows for interpretations of the “feeling” of the Putto_1435 in Bernini’s sketches and serial representations, and as a generative aspect to the design of contemporary projects.

Body Agent Putti

Putti are an ancient Roman form of ornament consisting of male toddlers, usually nude, sometimes depicted with wings, that was revived during the *quattrocento* in Italy. In Roman antiquity, *putti* could be found as ornaments on funerary monuments mourning the death of a child, but also in illustrations of Bacchanalia.⁷ Their appearances diversified and evolved during the *quattrocento* and the centuries that followed.⁸

The vast interior space of St. Peter’s Basilica is punctuated by a multitude of figural ornaments. The *putti* decorating the “thick 2D” of the interior surface, from the fonts of holy water at the lowest register of the sanctuary to the upper-most reaches of the dome over the crossing, make for a non-Cartesian spatial constellation.⁹ While adhering to typological constraints, Bernini’s *putti* often have unique individual qualities.¹⁰

Bernini’s *putti* are productively ambiguous in three ways. Firstly, as angelic beings they possess traits and abilities that appear as “other than”—divine entities apart from quotidian existence—yet they are repositories and expressions of “techniques of the body,” and evoke familiarity.¹¹ Secondly, their spatial positioning is often liminal—situated along borders and edges of niches, frames and zones, they stitch these disparate parts together. Finally, their designs express varying degrees of adherence to empirically verifiable physicality: sometimes they retain the outward appearance of material and corporeal stability, and at other times they demonstrate corporeality and materiality that are blurred or unstable.

Baldacchino (1624–1633): Tectonic Unreality

Design Process

Let me tell you about my involvement with Signor Bernini. To tell you this story is to give you a virtual timeline of his career; I appeared in virtually every one of his finished architectural works! I first appeared in 1624 in the Baldacchino,

directly under the magnificent *duomo* designed by *Il Divino*.¹²

This *progetto* was not only Signor Bernini's; the design took place over many years, and there were many hands involved. Signor Maderno first sketched my companions dancing in the vines that grew up the twisted columns.¹³ You may miss seeing them there if you visit, because they are merely the tiniest of reliefs.¹⁴ Unlike their insignificant parts, my appearance in the project is one of my finest and most glorious starring roles, and you will most certainly not miss it if you walk into that splendid basilica!

As Signor Bernini sketched the design, my companions and I appeared and disappeared, trying out different poses and jobs. We perched on the pinnacle of *la corona*, and when we did, it extended upwards to give us a better view. In a few of the sketches, we helped to stretch it further upward by lifting the finial orb at its top. Then we were feeling quite tired from all the running about and hoisting, so Signor Bernini drew us as we were laying on the volute supports, and they bowed gently under our weight, much in the manner that *Il Divino* had drawn the old men and women and their *tetti spezzatti* in the *Sagrestia Nuova*.¹⁵

[Insert Fig. 13.1 here – portrait]

Figure 13.1 *Baldacchino superstructure study*, by Gian Lorenzo Bernini. Graphische Sammlung Albertina, Vienna.

Bernini explored the structure and ornamentation of the roof canopy through sketching.¹⁶ Angels and angelic *putti* are depicted, alternately “carrying” and embellishing the connection of the serpentine superstructure of the canopy and the Solomonic columns (Figure 13.1).¹⁷ As in Michelangelo’s elevations

and sketches of sculptural ornaments and voluted pediments for tombs for the New Sacristy, changes in the figures' actions, postures and positions correlate with the form and geometry of the scroll-like forms, suggesting that the figure is a vehicle encountering the design at a pliable stage, aiding the designer to sense its material qualities in absentia. The figures touch the surfaces of the imagined design, likely initiating a thought of the temperature and texture of the material. They lay and pull on the structure's volutes and garlands; the structural volutes compress when the *putti* are shown laying down on their center-points, changing to a more vertical, tall configuration when the *putti* are drawn at their pinnacles in upright positions.

Built Work

In the final work my job is the best: *Qua*, I stand triumphantly with my companions on the canopy of the Baldacchino, 20 *braccia* in the air, five times larger than my companions below, right in the center of everything, displaying the papal tiara!¹⁸

Alora, reader, I can admit to you that I was slightly scared, holding that *corona preziosa* just over the lip of that tall Baldacchino (which, in fact was much taller than the Cavalcanti Altar), but I resisted the temptation to show my fear—for I knew that over me, in fact high above me in the *pennacchi*, swinging on swag from the lower part of the drum, and in the lantern of the *duomo* itself, were other *putti*, and they all appeared playfully at ease—so I proudly thrust that splendid artifact forward!¹⁹

The view from here is one of the best that I have ever been privileged to witness. I am bathed in the light that streams down on me from the windows in the drum of the *cupola* above. I float in this heavenly light day in and day out, as pilgrims and visitors stream in through the entry of the Basilica; I smile confidently down on them as they crane their necks with awe and wonder.

Even though in some sketches, it appears that the *putti* may be aiding the support of the canopy structure, Bernini relieved his *putti* of “heavy lifting” tasks in the Baldacchino.²⁰ It is the angels standing atop the

columns that “lift” the roof; they appear to effortlessly grasp vines that spring forth from the brackets with only their thumbs and index fingers, and with their pinkies daintily arched upward.

The two *putti* positioned above the center of the Baldacchino’s cornice make for a prominent focal point within the spatial volume of St. Peter’s. In this instance, they are cast from bronze, but unlike the “tiny” *putti* in the columns below, they are not in relief. Instead, they are released from their mooring to the larger form. One of them, Putto_1435, even appears to “float above” the canopy’s wooden cornice, discreetly attached to the structure with iron tie-rods from the back.²¹ This *putto*’s prominently displayed levitation aids in defining an illusion of an anti-gravity zone, and the possibility, particularly from the viewpoint of a worshipper approaching the crossing, of a canopy supported by angels. The *putti* and angels work together to allow a supersession of the apparent physical connection between roof and column by an “unreality principle”; they invite perceptive visitors to take an imaginative leap.

Urbino Tomb (1627–1647): Everyday *putto*

Design Process

In his sketches of the *Tomba di Urbino VIII di Roma*, Signor Bernini depicted me standing next to the effigy of *Carità*. I realized that the tomb design was very similar to those in the final work of *Il Divino*’s Sacristy, in which I ultimately never appeared.²² It looked like I would have the chance once again to frolic and tumble from a *tetto spezzato*, and that maybe this time I could appear in stone atop it!²³

In his first pen-and-ink wash drawing, I nestled in the folds of *Carità*’s drapery, and my companion suckled on her breast.²⁴ All seemed well. But then Signor Bernini made the first clay *bozzetto*. My companion, with whom I had hovered atop the Baldacchino, was on the opposite side of the tomb, relaxing in the shadows of a perfectly shaped hollow created by *Giustizia*’s draped tunic; when I tried to do the same, *Carità* shooed me away!

Signor Bernini made another *bozzetto*, and this time two other companions appeared, and *Carità*, distracted, stopped paying attention to me (Figure

13.2). Then *Carità* nudged me much harder, and she even scolded me! Such a seemingly gentle maiden with a breast tantalizingly exposed—how could she do such a coarse thing, and with such disproportionate strength? To add to my bewilderment, *Carità* looked on with amusement as I reeled. It wasn't just *Carità*'s actions that made me lurch with such vehemence: while Signor Bernini made the *bozzetto*, he would insert it into a wooden model of the architecture, and I was squeezed by this, to the point that it left its indentation on my flesh. Dear reader, at this point I went from put-off to extremely agitated, I must admit.²⁵

[Insert Fig. 13.2 here – portrait]

Figure 13.2 *Charity with Four Children* (study for tomb of Pope Urban VIII), by Gian Lorenzo

Bernini, c. 1627–34. Musei Vaticani, Vatican City.

In the case of the tomb, the architectural surround was already complete, and the broad strokes of the composition, an elaboration on a standard tomb form persisting since the Renaissance, was already established early on in the pen-and-ink sketch. The interplay between the figures evolved further via the sequence of malleable *bozzetti*, or clay sketch models, which were likely periodically placed in a wooden model of the architectural surround.²⁶ The design media, observed in sequence, shows a progressing intensification of Putto_1435's expression. Putto_1435 is in between the lower vertex of a pyramidal composition of the tomb and the relative mass of the column, which expresses the structural load of the semi-hemispherical apse above (Figure 13.3) and is at the optimal location to express the implicit squeeze between massive architectural surround and sculptural elements.

Built Work

When *Il Divino* had sketched us in the heap below the *tetto spezzato*, it was delightful fun, but in this case I wasn't able to play any games. *Qui*, deprived of my ability to fly, I am wedged in between *Carità* and the column behind me. Furthermore, atop the *tetto spezzato*—even if I could get to it—there were buzzing bees!²⁷ I know my companions who appeared in the

twisted columns of Il Baldacchino with me were not daunted by these loathsome (and to my envy, winged) arthropods—but this member of the animal kingdom was new to me, and insects in general are not to my liking, and certainly not those who can inflict harm! Dear reader, the buzzing of these foul and dangerous creatures echoed throughout the niche as they clung and flitted about the tomb; but there was an even more dreadful *morte secca* that I noticed Signor Bernini sketching, and who I unfortunately was to see more of later: an ominous skeleton, flapping his scraggly wings and dedicating himself, back turned to the spectators, to scrawling in his devilish book. This shook me to the core. I longed to fly far from such ghouls!²⁸ Additionally, there were in my peripheral vision, huge, looming figures. Papa Urbino and the Doctors of the Church towered above us all, gesturing grandly.²⁹

Reader I tell you, I felt scared, trapped, angry, rejected and not least, squeezed. I did not like this position one bit, in between towering, malicious or indifferent figures, the remains of the deceased, and huge columns.

As the tomb was built, in a flanking niche in the apse at St. Peter's, Putto_1435 is an empathetic access point, preparing the congregant to engage emotionally with the architecture and ornament above. This is achieved in several ways. One factor is that Putto_1435 appears less like an angel, and more like a mortal: he is wingless, and wears an unbridled expression of grief. Another factor is Putto_1435's materiality: he is carved from stone identical to that comprising the accompanying *putti* and Charity, and nearly identical to the Corinthian column that appears to squeeze against him. This stereotomic mass differs starkly from the dark bronze and gilt gold effigies of the pope and the personification of death, which are hollow inside, shells left by the lost-wax casting method from which they were made. He is also at the lowest spatial strata of the Basilica's apse, nearly at eye level with seated congregants.

Petri Gloria (1656–1666): Comingling with the Clouds

Design Process

As Signor Bernini sketched the clouds and rays of light that would surround this luminescent aperture, I moved towards them. I wanted to be far from the ghoulish figures below, and I wanted to be closer to the comfortable sunlight that I basked in atop Il Baldacchino.

I hopped from cloud to cloud; I began to find that, when I reached out to touch them, my body was fusing with them! More *putti* joined me, and as we celebrated, we merged with these atmospheric condensations. It soon became difficult to distinguish who was who, and what was cloud and what was *putto*.

[Insert Fig. 13.3 here – portrait]

Figure 13.3 View showing Cathedra Petri and Gloria window, by Gian Lorenzo Bernini.

Personification of Charity and “Putto_1435” of the Tomb of Urban VIII, also by Gian Lorenzo

Bernini visible in the lower right hand corner. (Photo: Ron Weidenhoeft, PhD)

Of the three examples of Bernini’s work discussed here, the Gloria surround shows the most extreme examples of liberty taken to the expressive materiality and body image of the designed *putti*.³⁰ A series of Bernini’s sketches formed a testing ground where he explored what could be achieved with three variables: light (as rod-like rays), *putti*, and clouds. He experimented with the *putti*’s gestures, from triumphantly flying upwards with backs arched, to crouched in pious reverence.

The *putti* multiply and their bodies become more fluid as the design progresses. In one sketch, a *putto* is atop a cloud outlined in deliberately reinforced contours. Here, the ethereal substance of the cloud supports a body that appears just as fleshy and substantial as any other.³¹ But another drawing shows a *putto* with an even more angelic relationship towards gravity and mass; he does not appear to be supported by the clouds at all, but rather appears just as buoyant and immaterial as the clouds themselves.³² A cherubic face emerging from the cloud in the same sketch suggests yet further ambiguous corporeality: here, the *putto* is literally part of them. It is clear that the dynamic mass of roiling *putti*-cloud hybrids and the surrounding “rays” of light accumulated expansive momentum during the process of sketching. Taking these drawings in chronologic sequence, the atmospheric mass appears to expand explosively, enveloping

the window and then eclipsing the boundaries of the niche.³³ The divinely unstable microclimate transgresses the architectural boundaries that could confine it.

Built Work

This position is such a vast improvement from my previous circumstances. From where I stand now peeking out from behind a bundle of light rays, I truly have the best view of all. I can see across the entire expanse of the interior. The evening light below me warms my feet. I look down and I see it streaming through the window, reflecting from the *putti* clouds around it.

The copious images of blurred clouds and *putti* were sculpted from plaster; all the exposed surfaces were gilt a reflective gold (Figure 13.3). The bodies of many of the *putti* in the Gloria surround, physically fluid and contingent, are “other than,” and show the proximity of divine forces signified by the dove in the stained glass window’s graphic. Similar to Bernini’s partially disembodied *putti* in the Albertoni Chapel, also sculpted from plaster, they reflect the light from the nearby window and direct the visitor’s attention to the primary focus, the window itself, through the direction of their rapt gazes. While Putto_579’s appearance in the Urban Tomb seems to blend with the stone structure, the gilt plaster of the Gloria surround blends with the light of the window. Through the expression of the materiality of the body, a distinction is made between the earthly and divine realms.

The Body Agent Aedicula (2014): Digital Materiality

But, reader, that was all hundreds of years ago. Since then, I have contributed to many unusual scenarios, appearing in Rococo designs in Austria and Bavaria, and even in Mexican *Churrigueresque retablos* (these were great fun). I had many roles as cupid, which I would say were most boring; and then: nothing. I had no work for a century of Modernism, during which time I sat in the clerestory of the apse of San Pietro in Montorio, nursing bottles of *vino santo* and, well, feeling a bit depressed.

Now, I have been evoked again, and what I have undergone in the present day was, at first, certainly

most bewildering. Often, in the new setting where I find that design often takes place, there is no ground at all; and if there is a ground, it reminds me of those grids carefully drawn by Leonardo, receding infinitely into the distance.³⁴ My skin often has a similar appearance to the grid as if it had been overlaid onto my body. And disturbingly, I am hollow inside, save for my teeth and tongue, and the two floating orbs that are my new eyes. My flesh materializes and dematerializes sporadically; when the dematerialization occurs, I can be seen through and through my carapace.³⁵

I am slowly growing accustomed to this odd form that I have taken. Recently I assisted in the design of *un piccolo edificio*. I thought that it could be dedicated to the worship of *Il Padre*, although I don't think this is the intent.³⁶

The design began with many sketches done with pencil and paper. This process was, of course, familiar to me. But then the *disegno* proceeded through a series of films made in the gridded space.³⁷

[Insert Fig. 13.4 here – portrait]

Figure 13.4 View of Body Agent Aedicula 1:10 sectional model, by Alessandro Ayuso.

I began to take part in the films. Again I found myself with my companions, flying around the top of what was becoming a *tempietto*. I spiraled overhead, but also walked through it. I found folds, shelves, and niches that were forming (I am always attracted to such spaces). I played games with the other figures (they seemed quite unsuspecting), hiding behind corners and surprising them as they innocently walked through the convoluted *tempietto*. It was a delight to watch their startled reactions! There were times that I became entangled in the folded surface and I found I could leave my impression in it.³⁸ I touched the

surfaces and listened to the echoes of sound that ricocheted off of the planes. At first, there were only a few planes, large and flat, but as we walked through them and touched them, they became smaller and the forms softer, offering niches to hide within, much like *Giustizia*'s gown that I so envied as a hiding spot in the design of *Papa Urbino*'s tomb.

One thing that I enjoyed most about working with Signor Bernini was that he often encouraged me to fly upwards.³⁹ So here, in this very free environment of digital space, I did not hesitate to move myself to the top of what seemed like a combination of a *duomo piccolo* and an *oculo alto*. Even though it does not look exactly like those that I am used to, I know how it will work and what I should do. When visitors enter this portion of this *nuovo tempietto*, they will surely look up towards the light drifting down to them at the top; and I will be there too, looking down at them!⁴⁰

My next appearance was in the construction of a *modello*. The stuff that the *modello* is made from is strange indeed; it is certainly unlike clay. It is a strange white powder, light and fine, deposited layer by layer by a machine. It takes any form that I help to make. As I balanced at the rim of oculus, I kneaded my hands into it and I found they merged with it; this reminded me of when I merged so seamlessly with the clouds of the Gloria window. As my hands fused with the *tempietto*, I nearly lost my balance again, and additional supports sprouted from my back. In some ways, this reminds me of Il Baldacchino, when reinforcements supported me on that canopy, but unlike Il Baldacchino these new ones are not hidden but rather, they are exposed. To me, they are splendid ornaments, a new set of accoutrements to complement

my new wings, which were designed and 3D printed out of a special substance.

In the “films” that Putto_1435 refers to, the design of a freestanding architectural installation developed in an evolving, digitally produced animation. Sequences of body agents’ movements and actions were choreographed and adjusted as the design progressed, visualized through deliberate framing and camera tracking. In the animation, Putto_1435’s performance was both operative and evocative. The operative function arose from the deflection of attractor points embedded in the mesh planes; because of these, when the body agents moved, the meshes would distort correspondingly; these planes gradually transformed to define a spatial volume. The evocative aspects of Putto_1435’s actions stemmed from the cinematic quality of the animations, which incorporated his point of view and his dynamic image. The visualizations were intensified by the simultaneous composition of Putto_1435’s narrative. His biography compiles a vivid set of practices forming an intensely hybrid habitus.⁴¹ It situates the imagination of his contact with the neutral, malleable planes from the reference point of a specific corporeality.

[Insert Fig. 13.5 here –portrait]

Figure 13.5 Detail view of upper portion of Body Agent Aedicula 1:10 sectional model, two ornamental *putti*, by Alessandro Ayuso.

In the 3D printed model that followed, Putto_1435’s body merges with the superstructure of the installation. Fabricated from a single Selective Laser Sinter build, his body is continuous with the larger structure he adorns. The fused nylon powder that results from the SLS process, a corollary of the digital design image, is without overt, sensual qualities, but Putto_1435’s presence is an insistent catalyst to adventurously explore and imagine possible relationships between particular bodies and new materialities.

Conclusion

During Bernini’s design process, body agents were proxies that allowed him to sense the architecture in absentia. In the Baroque imagination, materiality oscillates between fixed forms and utter pliability.⁴² The body agent operates in between the two systems, bringing empathetic imagination to bear on the malleable forms, and aiding in the imagination of possible material crystallizations. As built ornament, the figure continues to mediate ambiguous circumstances, but in Bernini’s work at St. Peter’s it aids in the negotiation of the borders between physical adjacencies as well as between the world of the divine and quotidian. Through their expression, placement, and materiality the body agents make appeals directly to the visitors

of St. Peter's, guiding their reveries. In the narrative, having recalled his participation in Bernini's projects, where his body morphed and even at times seemed to fleetingly evaporate, Putto_1435 becomes more comfortable with the exuberant transmutability of material and form in the digital realm. With their specific, empathetic and catalytic qualities, body agents aid designer's material imaginations: their performance bypasses qualitative neutrality by encouraging wonder in an adventure in perception.

Bibliography

- Allen, Stan, "Mat Urbanism: The Thick 2-D," in Hashim Sarkis (ed.), *CASE: Le Corbusier's Venice Hospital* (Munich: Pastel/Harvard Design School, 2002), pp. 118-126.
- Bachelard, Gaston, *Earth and the Reveries of Will: An Essay on the Imagination of Matter*, trans. Kenneth Haltman (Dallas, TX: Dallas Institute Publications, 2002).
- Balas, Edith, *Michelangelo's Medici Chapel: A New Interpretation* (Philadelphia, PA: American Philosophical Society, 1995).
- Careri, Giovanni, *Bernini: Flights of Love, the Art of Devotion* (Chicago, IL: University of Chicago Press, 1995).
- Dempsey, Charles, *Inventing the Renaissance Putto* (Chapel Hill, NC: University of North Carolina Press, 2001).
- Dickerson, C.D. and Sigel, Anthony, "Charity with Four Children," in Nancy Grubb (ed.), *Bernini: Sculpting in Clay* (New York, NY: Metropolitan Museum of Art, 2012), pp. 112–17.
- Harbison, Robert, *Reflections on Baroque* (Chicago, IL: University of Chicago, 2001).
- Hersey, George, *Architecture and Geometry in the Age of the Baroque* (Chicago, IL: University of Chicago Press, 2001).
- Hills, Helen, "Introduction," in Helen Hills (ed.), *Rethinking the Baroque* (Farnham: Ashgate, 2011).
- James, Henry, "Preface to *The Princess Casamassima*," in *The Art of the Novel: Critical Prefaces* (Chicago, IL: University of Chicago Press, 2011), pp. 59–78.
- Lavin, Irving, "The Baldacchino. Borromini vs. Bernini: Did Borromini Forget Himself?", in Georg Satzinger and Sebastian Schütze (eds), *St. Peter in Rom 1506–2006: Akten der internationalen Tagung 22.–25.02.2006* (Munich: Hirmer Verlag, 2008), pp. 275–300.
- Lavin, Irving, *Drawings by GianLorenzo Bernini* (Princeton, NJ: Art Museum, Princeton University, 1981).

Marder, T.A., *Bernini and the Art of Architecture* (New York, NY: Abbeville Press Inc, 1998).

Mauss, Marcel, "Techniques of the Body," in Jonathan Crary and Stanford Kwinter (eds), *Incorporations* (New York, NY: Zone, 1992), pp. 455-477

Picon, Antoine, *Digital Culture in Architecture* (Basel: Birkhauser, 2010).

Rossholm Lagerlöf, Margaretha, "The Apparition of Faith: The Performative Meaning of Gian Lorenzo Bernini's Decoration for the Cornaro Chapel," in Peter Gillgren and Marten Snickare (eds), *Performativity and Performance in Baroque Rome* (Burlington, VT: Ashgate, 2012), pp. 179–80.

Spuybroek, Lars, *The Sympathy of Things: Ruskin and the Ecology of Design* (Rotterdam: V2, 2011).

van Toorn, Roemer, *The Quasi Object: Purity and Provocation in the Library of Utrecht by Weil Arets*, at <http://www.roemervantoorn.nl/quasiobject.html> (accessed February 20, 2014).

¹ The construction of inter-subjectivities in architecture is also a quality of the "quasi-object." Roemer van Toorn, *The Quasi Object: Purity and Provocation in the Library of Utrecht by Weil Arets*, at <http://www.roemervantoorn.nl/quasiobject.html> (accessed February 20, 2014).

² "[T]he real stands before us in all its terrestrial materiality ... we are easily persuaded that the reality principle must usurp the unreality principle, forgetting the unconscious impulses, the oneiric forces which flow unceasingly through our conscious life." Gaston Bachelard, *Earth and the Reveries of Will: An Essay On the Imagination of Matter*, trans. K. Haltman (Dallas, 2002), p. 3.

³ "The new materiality is located at the intersection of two seemingly opposed categories, the totally abstract, based on signals and codes, and the ultra-concrete, involving an acute and almost pathological perception of material phenomena and properties." Antoine Picon, *Digital Culture in Architecture* (Basel, 2010), p. 157.

⁴ On the topic of "conceptual technology," Helen Hills writes, "some scholars ... have explored baroque ... as a 'conceptual technology' that does not simply allow retrospective understanding but actually provokes new forms of historical conceptualization and interpretation." Helen Hills, "Introduction," in *Rethinking the Baroque*, ed. H. Hills (Farnham, 2011), p. 3. On the topic of sensation and movement in the Baroque, Robert Harbison writes, "In the Baroque, artists began to think of creating sensation" Elsewhere, he claims, "The Baroque sets itself apart from what precedes it by an interest in movement above all ... [this] is not just a formal exercise but signals a transformation of the human consciousness." Robert Harbison, *Reflections on Baroque* (Chicago, 2001), pp. 2 and 225. The metaphysical approach to materiality in the Baroque is described by George Hersey, *Architecture and Geometry in the Age of the Baroque* (Chicago, 2001), pp. 18–21.

⁵ "[U]nlike his predecessors at St. Peter's, Bernini did not conceive of the Baldacchino ideologically as an isolated monument, but the focal point of a veritable solar system of memorabilia" Irving Lavin, "The Baldacchino.

Borromini vs. Bernini: Did Borromini Forget Himself?”, in *St. Peter in Rom 1506–2006: Akten der internationalen Tagung 22.–25.02.2006*, ed. Georg Satzinger and Sebastian Schütze (Munich, 2008), p. 289.

⁶ Henry James, “Preface to The Princess Casamassima,” in *The Art of the Novel: Critical Prefaces* (Chicago, 2011), p. 62.

⁷ An Example of Bacchic imagery on a Roman sarcophagus can be seen in the Roman Bacchic sarcophagus of the second century A.D. in Pisa, Campo Santo.

⁸ For extensive discussion on *putti* in the *quattrocento* era, see Charles Dempsey, *Inventing the Renaissance Putto* (Chapel Hill, 2001).

⁹ Although the term “thick 2D” was originally used by Stan Allen with regards to landscape urbanism and mat buildings, the “compact and highly differentiated section” that is “not the product of stacking (discrete layers as in a conventional building section) but of weaving, warping, folding, oozing, interlacing, or knotting together” is an apt description of the walls of St. Peters where in a given wall section one is likely to find a complex interweaving of ornament, sculpture, load-bearing material and inhabitable space within the wall’s *pochè*. Stan Allen, “Mat Urbanism: The Thick 2-D,” in *CASE: Le Corbusier’s Venice Hospital*, ed. H. Sarkis (Munich, 2002), p. 125.

¹⁰ Bernini sought the individual in each figure. “[His] ambition to make every figure individual is an artistic strategy with a Christian paradigm.” Margaretha Rossholm Lagerlöf, “The Apparition of Faith: The Performative Meaning of Gian Lorenzo Bernini’s Decoration for the Cornaro Chapel,” in *Performativity and Performance in Baroque Rome*, ed. P. Gillgren and M. Snickare (Burlington, 2012), pp. 179–80.

¹¹ Body techniques refer to “the ways in which, from society to society, men know how to use their bodies.” Marcel Mauss, “Techniques of the Body,” in *Incorporations*, ed. Jonathan Crary and Stanford Kwinter (New York, 1992), p. 455.

¹² Here, as in many other places, Putto_1435 also claims to “have worked with” Michelangelo Buonarroti, and refers to him as “Il Divino,”.

¹³ Carlo Maderno was a Swiss–Italian architect who was responsible for several designs at St. Peter’s Basilica, including the façade and the initial schemes for the Baldacchino, before Bernini’s involvement with the design.

¹⁴ Putto_1435 refers to other *putti* and ornamental figures that he appears in works with as his companions.

¹⁵ In Bernini’s sketch featuring recumbent *putti*, the *putti* are in poses similar to the effigies known as Night, Day, Dawn and Dusk. Michelangelo’s “agent in Carrera ... [referred] to the female allegories as ‘the nude figures’; elsewhere, they are spoken of as ‘the two women’, and their male companions are simply the ‘old men’.” They are positioned atop the broken pediments of the Ducal tombs in the New Sacristy in Florence, date 1521–55. Edith Balas, *Michelangelo’s Medici Chapel: A New Interpretation* (Philadelphia, 1995), p. 6.

¹⁶ Since Bernini was charged with designing a *baldachin*, a temporary structure with a fabric roof detached from staves, rather than a more permanent *ciborium*, he struggled to achieve the expression of the *baldachin*, when in fact, the columns did support the heavy roof. The ornamental figures were part of the articulation of the *baldachin* type. This is described in T.A. Marder, *Bernini and the Art of Architecture* (New York, 1998), pp. 27–46.

¹⁷ Also see *Baldacchino study*, by Gian Lorenzo Bernini. Red chalk and pen over black chalk, 14 ½ × 10 ¼ in. (36 × 26.3 cm), Graphische Sammlung, Albertina, Vienna and Baldicchino canopy study by Gian Lorenzo Bernini. Pen on paper, c. 1631. Biblioteca Apostolica Vatican, Barb. Lat. 9900, fol. 2.

¹⁸ In Renaissance Italy, 1 braccio = roughly 0.7 meters.

¹⁹ Vasari noted that the *putti* atop the Cavalcanti Altar by Donatello from 1435 are shown expressing fright at the height that they find themselves. Dempsey, *Inventing*, p. 38.

²⁰ In several sketches the *putti* hold similar “ribbon-like bands” to those that the angels hold in the final solution.

²¹ Marder, *Bernini*, p. 42.

²² In the New Sacristy Tombs by Michelangelo a sketch depicted *putti*, but like much of the figural ornament, *putti* were not included in the built work.

²³ In Michelangelo’s sketches for the New Sacristy tombs, figures often appear to have a dynamic presence. *Putti* are depicted at the bottom of the broken pediment in an elevation design drawing (Paris Louvre 838) and the assertion here is that they arrived there by sliding down the pediment.

²⁴ Pen-and-ink sketch now at Windsor Royal Library attributed to Bernini’s workshop, and described by Lavin as “the earliest extant drawing for Urban’s tomb.” Irving Lavin, *Drawings by GianLorenzo Bernini* (Princeton, 1981), p. 62.

²⁵ *Charity with two children*, by Gian Lorenzo Bernini. Terracotta. 41cm. c.1634. Museo Sacro Musei Vaticani (Vatican City, Italy).

²⁶ Trim marks in the clay indicate the possibility that the figures were sculpted in conjunction with an architectural surround; Putto_1435 refers to deformations and indentations that were caused by this process. The findings supporting the scenario of the making of the model in conjunction with the architectural surround are described in C.D. Dickerson and Anthony Sigel, “Charity with Four Children,” in *Bernini: Sculpting in Clay*, ed. Nancy Grubb (New York, 2012), pp. 112–17.

²⁷ The bronze bees represent the Barberini family, to which Pope Urban VIII belonged.

²⁸ The skeleton is widely understood to represent death; it was introduced to the design in sketches following the pen-and-ink wash. A similar skeleton appears again in the Tomb of Pope Alexander the VII, and also in St. Peter’s Basilica.

²⁹ The Four Doctors of the Catholic Church and the Effigy of Pope Urbino VIII stand on either side of Putto_1435.

³⁰ In this case, to call Bernini’s design a frame is inadequate; “surround” refers to an entity that surrounds or frames.

³¹ “There is no relationship of matter and form between the angel and the body he assumes to communicate with men. The angel is like a motor for the body; his mobile body is only the outward representation of that motor.” Giovanni Careri, *Bernini: Flights of Love, the Art of Devotion* (Chicago, 1995), p. 21.

³² Sketch referred to by Gian Lorenzo Bernini, *Study of a Putto in the Gloria above Cathedra Petri* (392 × 227 mm), c.1660. Black chalk on white paper. Leipzig 7900r.

³³ The three phases of the masses expansion are recognized by Lavin, *Drawings by Gianlorenzo Bernini*.

³⁴ Such preparatory drawings with perspective grids as the ground include Leonardo da Vinci’s drawing for *Adoration of the Magi* of 1481.

³⁵ Putto_1435 is referring to the mesh shell that defines the shape of his body in the animation software that helped to initially conceive him. Putto_1435

³⁶ Indeed, Body Agent Aedicula is a non-denominational installation, where visitors are encouraged to “see themselves seeing.”

³⁷ Here Putto_1435 refers to a series of digital animations that were used to design the project.

³⁸ Imprints of Putto_1435’s body were left in the ornamental surface cladding of Body Agent Aedicula.

³⁹ The reference to *putti* appearing to fly upwards in Bernini’s designs is recognized by Giovanni Careri in the Fonseca Chapel where they appear to “advance upward.” Careri, *Bernini*, p. 26.

⁴⁰ The official name for the project that Putto_1435 refers to as the “Nuovo tempietto” is the Body Agent Aedicula.

⁴¹ The concept of habitus, coined by Marcel Mauss and elaborated by Pierre Bourdieu, refers to the predispositions of particular individuals or social groups acquired through the activities and experiences of everyday life and anchored in the body.

⁴² The constituent elements of the Baroque are described disparagingly by Lars Spuybroek as fixed forms that are “classical I-figures” and a material that is the “ground, finest white powder.” Spuybroek, *Sympathy*, pp. 44 and 66. An alternative description of the Baroque conceptualization involving a tension between fixed forms and materiality is that ideal geometric forms were thought to be comprised of ethereal heavenly substances: Hersey, *Architecture*, pp. 18–21.