

The Wayward Cast: Gipsotecas, Digital Imprints, and the Productive Lapse of Fidelity

The speed with which imitations can now be produced (sometimes appearing even before their “originals”) may soon render this form of mimicry obsolete or simply uninteresting. In his account of the loss of aura, Benjamin notes the discrepancy between the time-intensive methods of reproduction by hand versus those by machine: the quickness of the eye replaces the labor of the hand.¹ While speed may be a primary factor in this transformation, materiality is equally at play. An investigation into the traditions and techniques of physical transference of qualities from model to imprint may offer a more “productive” form of reproduction than the imitation, one in which each instantiation embeds layers of information and perspective into the original. Rapid advances in digital scanning and surveying technology in archaeology, historical preservation, and geomatics offer means of reproducing formal information that are no longer tied to the visual, our primary mode of reproduction. Architecture will need to quickly redefine its judgment and exploitation of historical material.

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The production of copies was not always understood to be an act of forgery. Ancient Rome has been the subject of exhaustive research on the translation of Greek and Etruscan tropes and forms by Roman artists and architects. But there existed a parallel tradition—the less intellectualized analog process of molding and casting—imprints of the past initially intended more as documentation than inspired variation patterned on antique models. This included a respected craft tradition in the creation of plaster casts, objects that for several centuries were highly regarded and collected. Although currently these reproductions tend to be categorized more often as artisanal or archaeological techniques than fine art, they offer another paradigm by which we might understand a contemporary possibility for the copy.

TRAJAN’S PROGENY: IMITATIONS VERSUS IMPRINTS

Trajan’s Column in Rome, perhaps because of its synthesis of monumental architecture and exquisite narrative bas-relief, has spawned a continuing trajectory of

imitations and facsimiles. It quickly becomes important to distinguish between the mimetic endeavors that view the column as inspiration versus the casts made of its exterior that were intended to produce precise replicas of column's surface. Of the former, there are numerous examples hailing from as early as the Column of Marcus Aurelius completed in 193 CE, just 80 years after Trajan's. Located a mere 700 meters away, this imposter is often confused with the monument on which it was modeled.

Many other prominent examples of imitations followed, stretching from antiquity into the 20th century, each a slight variation on Trajan's theme. The creators of these likenesses favored a relatively faithful reproduction of the imposing profile of the column plus an interior spiral stair, an exterior narrative frieze, a massive rectangular pedestal and a statue topping off the column. These tropes characterize the Column of Trajan type, a type which serves a vessel that easily accepts any new form of monumental power. In each new iteration, the statue of Emperor Trajan is removed (usually to be replaced by another all-powerful figure), and the exterior narrative history rewritten.

But there is a parallel history of copies of Trajan's Column that offers a more divergent and productive tendency: that of the casts. This lineage is perhaps even more fascinating in its desire to capture the authenticity of the original through the material transference of its qualities - formal, textural, procedural. In his catalogue to the exhibition *L'Empreinte*, art historian and philosopher Georges Didi-Huberman differentiates between duplications made through the regime of the image (imitations) and those through the regime of matter (imprints). In his essay "La Ressemblance par Contact," he positions the imprint as an archetype of thought and sensibility as much as technique.² The imprint allows for a tactile (as distinct from visual) transmission of qualities from the original to the copy, dragging with it all the "imperfections" of the physical world that the eye might edit away. While Didi-Huberman lists a range of techniques that might be understood as imprints, the cast is one of the most obvious examples. To produce a cast demands an intimate negotiation with material tendencies, focusing attention towards the process of making and away from questions of intention or semiotics. In effect, it denies the distance necessary for what we consider intellectual design pursuits. Although the column has been the subject of reproductions that fall along both trajectories (of the imitation and the imprint), it is the weighty history of casts that best defines the column while holding the most promise for contemporary practice.

FRENCH REPETITION OF REPRODUCTION

It is the French who initiate and channel the flow of plaster into and out of Rome. For obvious reasons, the French monarchs and dictators would maintain a continuous desire to symbolically and materially transpose the glory of the Roman Empire to Paris, resulting in the waves of casts of Trajan's Column commissioned over three major campaigns—François I (1540), Louis XIV (1665-70), and Napoleon III (1861-62).³ It is the 1861 campaign by Napoleon III that yields the most thorough (and productive) set of molds. This operation is a truly modern endeavor that creates not only the most extensive replica of the column, but also a machine for its material propagation. The molds were produced through the newly invented process of electrotyping (or galvanoplasty) which generates a durable metal mold capable of producing multiple casts. These molds, housed in the Musée du Louvre in Paris, have been used to manufacture a small (and slowly



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Figure 1: Cast of Trajan's Column at the Victoria and Albert Museum, London demonstrating the (failed) desire to represent the original in its entirety as well as the brick column structure upon which it was mounted. Photo: Victoria and Albert Museum, London.

growing) diaspora of casts. Complete plaster sets exist in the Victoria and Albert Museum in London and the Museum of Roman Civilization in Rome with another “recently” produced for the National History Museum in Bucharest in 1968.⁴

The Cast Court of the Victoria and Albert Museum in London, one the most famous cast galleries, is anchored by a replica of Trajan's Column. This cast is assembled erect but partitioned into two segments, castrated by the confining height of the Cast Court's glass roof. There could be no better indication of the valued qualities to be presented to the British public: symbolic power of scale. In this, the most intact physical representation of the column, there is no attempt to offer any understanding of the interior space (which would of course be difficult given that casts were only ever produced of the exterior). The fragmentation of the column echoes the curatorial agenda usually associated with the museum cast gallery—a historical pastiche of artifacts providing the British public the opportunity to grasp a “best of” sampling across historical styles and epochs.



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THE MONUMENT UNRAVELED: THE CAST AS RECONTEXTUALIZATION, AS REREADING

In contrast to the Cast Courts, the casts of Trajan's Column in Rome's Museum of Roman Civilization exemplify the potential of the cast to redefine or reread its original referent. Located in EUR (the fascist exurban city created for the 1942 Esposizione Universale Roma), the Museum of Roman Civilization was Mussolini's attempt to gather together in one location representations or reproductions (depending on the size of the original) of all the great statuary and monuments of the Roman Republic and Empire. The museum attempts to create a chronological trajectory following the triumphs of Rome (intended to serve as a justification of Mussolini's own empire). In direct opposition to the V&A's Cast Courts, the Museum of Roman Civilization presents information didactically and diachronically as it traces the development of one particular culture over history.

Because the museum houses statuary, architectural elements, and dioramas that are intended to display history as anthropological narrative, all artifacts contained within are meant to be viewed as the originals would have appeared in antiquity. Any marks from the casting process are sanded away, and whether plaster casts or fiberglass resin casts, all the statuary is painted with a patina to simulate the original marble (a clear conflation of Didi-Huberman's imitation/imprint dialectic). The display of Trajan's Column sets up a conflict between the two desires of this institution—on the one hand to recreate the appearance of the original artifact and on the other to present history through chronological sequencing. Here, Trajan's Column is arranged as a series of separate panels, as if the narrative frieze were unrolled to produce a continuous 200 meter long plaster scroll, folded into four lengths to fit within an underground corridor connecting two wings of the museum. While the imposing profile of the column cannot be appreciated (as the V&A attempts), this arrangement offers the only opportunity to read the frieze as a continuous and complete narrative (something never possible in Trajan's original). This presentation of Trajan's Column capitalizes on the potential of the cast to extend and elucidate one reading of the original while abandoning the desire of providing a holistic visual experience

Since the bulk of other the casts at EUR masquerade as antique statuary, they depend on their visual likeness to their originals (and in this way, despite being created through the technique of casting, might be more comfortably classified

Figure 2: Cast of Trajan's Column at the Museum of Roman Civilization in Rome. The dismemberment and sequential arrangement of the cast segments allow one to read the narrative in a manner never possible at the original column. Photo: Notafly/Wikipedia.



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Figure 3: *Trajan's Hollow* (2011) by Joshua G. Stein is another in the long history of casts of Trajan's Column. In this version, all other qualities of the original are consumed by the casting technique and the demonstration of the relationship between the column's interior and exterior. Photo: Michael J. Waters.

as imitations rather than imprints). By contrast, the casts of Trajan's Column rely more on their provenance—their extension of the original through the material transference of its qualities. This exoneration of the necessity for visual likeness in favor of the pedigree of process is more prevalent in the cast galleries or gip-sotecas contained within fine arts academies where the process and material of plaster casting offers a desirable acknowledgement of the copy as something other, perhaps even something more, than the original. It enables and encourages the indexing of the various techniques of reproduction onto the original form. The matrix of seam lines becomes the embodiment of the casting process, deepening the connection to the original while simultaneously eroding its visual similarities. In this species of cast gallery, we find an openness to the transformation of the original as beneficial to its understanding.

THE WAYWARD CAST: THE MISPLACED FIDELITY OF TRAJAN'S HOLLOW

Trajan's Hollow, a 2011 cross-sectional "portion" of Trajan's Column, continues the trajectory of plaster casts of the monument, accelerating the mutation facilitated through the mode of the imprint. Like the set of casts at the EUR's Museum of Roman Civilization, *Trajan's Hollow* radically departs from its original in terms of its composition and massing, replacing the vertical profile of the imperial column with the landscape of a fissured horizontal ring—a five centimeter cross-section of the original column produced as a floor cast at 1.5 times the scale of the original. As the EUR casts deconstruct the column's surface and mass in order to reconstruct its historical narrative, *Trajan's Hollow* instead sheds the historical

surface in favor of solidifying the original thickness and its architectonic and spatial qualities. This new cast favors a rendering of the mass of the column walls and helical void over the sculpted surface of the bas relief exterior (a perfect inverse of the shell cast at the V&A).

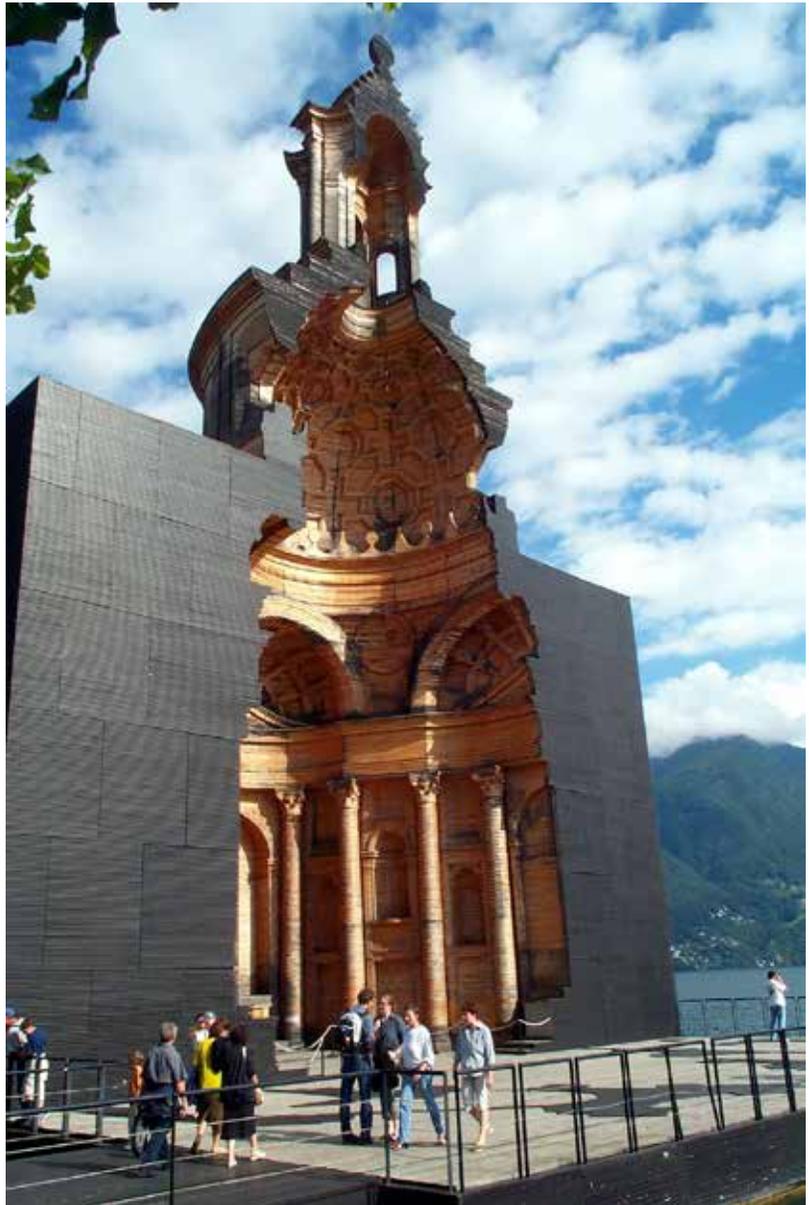
Given the catalog of other casts of the column where each advances a different rereading of the original, this reproduction exploits the opportunity to focus myopically on a singular and overlooked aspect of the original: the relationship between its interior and exterior. In *Trajan's Hollow*, there is a monomaniacal focus on technique (in particular fabrication, craft, and scalar shift) followed by a freedom to display only one aspect of the column without the responsibility of being accountable to its entirety. The symbolism of the column (so essential in all of its imitations) becomes intentionally lost through its reproduction.

Trajan's Hollow's extreme divergence from its referent while remaining connected through its material genesis advances the notion of the wayward cast. Where the typical cast strains to achieve ultimate fidelity to the original while simultaneously inhabiting the impossibility of realizing this endeavor, the wayward cast attempts to reconcile this paradox by allowing process to derail the reading of the original even more completely. Counter to the larger aesthetic of the Museum of Roman Civilization, *Trajan's Hollow* permits the techniques of casting to not only remain, but also to construct an entirely different visual appearance. In *Trajan's Hollow*, the plaster that squeezes between the mold seams remains, calcifying into a textured rhythm of fins in syncopation with that of the intensified bas relief, slowly redefining the original.

THE DIGITAL IMPRINT: MAPPING SURFACES AND MINING FISSURES

While *Trajan's Hollow* is rooted in the casting lineage of Trajan's Column, it is also one of a series of contemporary architectural exercises investigating the potential of reproduction through the virtual "contact" of new scanning and production techniques. Photogrammetry, lidar, 3D laser scanning, and other forms of remote sensing may at first seem counter to the intensely physical, analogue techniques that Didi-Huerman associates with the imprint. However, their predilection towards surface-based mapping privileges a type of virtual haptic over the visual to create what could be called a "digital imprint." This meticulous surface scan is the antithesis of a photograph—more akin to a blind contour drawing than a gesture drawing. There is no quick summary or snapshot, only textural and topological qualities (or data), obsessively traced yet devoid of intent or analysis. These technologies read a form's surface much as plaster would carved marble (or as the electroplating techniques of Napoleon III's molds of Trajan's Column), blindly tracing surface through multiple particles or waves. While these techniques document an incredible degree of textural definition, view shadows produce blind spots where information is lost to the scanning device as undercuts do within the casting process. These fissures in the surface data offer the opportunity for the process of reproduction to reinvent and transform the original.

In 1999, to celebrate Borromini's 400th birthday, Mario Botta constructed a "model" of Borromini's San Carlo delle Quattro Fontane. While the original was in Rome, this reconstruction was erected in Lugano, Switzerland near Borromini's birthplace. This reproduction attempts to "faithfully" document the original form at one-to-one scale. However, rather than rebuilding in stone, the new *San Carlino Lugano* is instead fabricated out of wood: 35,000 planks, each 4.5 cm thick, are skewered by steel cables leaving a 1 cm gap between each



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Figure 4: Mario Botta's *San Carlino Lugano* (constructed 1999, demolished 2003), a one-to-one facsimile of Borromini's San Carlo alle Quattro Fontane. Photo: LittleJoe/Wikipedia.

course of planks. This simple switch of material tectonics creates the bifurcation that spawns a completely divergent reproduction. But what enables this divergence is the connection to the original through the photogrammetric survey of Borromini's complex dome and interior. This digital mapping of the geometry offers the ability to produce a precise dimensional replica of the original that while sharing little visual resemblance in terms of architectural massing, façade, or plan maintains its pedigree through the digital imprint of the original.

Trajan's Hollow, in addition to holding material associations through plaster casting, claims its provenance through an equally intricate technique of digital indexing. Although the digital model was "constructed" as opposed to "mapped," this geometry was merely scaffolding for a parametric translation of the bas-relief figuration into instructions for CNC fabrication, resulting in a series of plaster crenellations. Behind the visually legible correlation of this process (each figure on the original narrative frieze produces one carved void in the reproduction), exits a complex digital rigging inaccessible to the public, shrouded in the technique of



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the digital imprint, ensuring an certain authenticity, albeit opaque, towards the original despite any visual discrepancies.

CURATED SYNECDOCHE: RECONTEXTUALIZING THE IMPRINT

With this wayward tendency of the cast comes an increased importance on its contextualization, curation, and presentation. The *Villa Rotunda Redux*, produced by British architecture firm FAT (Fashion Architecture Taste) for their Museum of Copying at the 13th Venice Architecture Biennale in 2012, is a scaled-down foam cast of one fourth of the Palladian original (or rather a simplified digital version found in an on-line archive) presented in tandem with its mold so that the two together imply the mass/void of the full rotunda. Here the digital imprint, however simplified, authenticates this reproduction while relieving it from the responsibility of absolute fidelity to the original. Instead, the requirements of the material and fabrication technique, that of volumetrically casting foam against a CNC-produced mold, are allowed and encouraged to transform the original model. The charged void between mold and cast, where the Palladian orchestration of interior volumes should play out, is instead a space of vestigial effects of the casting process. Its partial completeness offers the space for critique of contemporary imitation, a commentary not only on the Villa Rotunda, but on the entire lineage of its reproduction, Home Depot and all.

In Botta's *San Carlino Lugano*, only one half of the original chapel is produced, leaving a full-scale physical rendering of the architectural section drawing—the *poché* visualized through black paneling on the model's new face. Although not actually the case, the half-form initially appears to be a giant mold that might be used to produce an architecturally scaled cast. *Trajan's Hollow* also relies most heavily on synecdoche: through the association of plaster with material transference, the piece claims to actually be Trajan's Column, albeit only a thin slice. This portion of the column, modulated, enlarged, and displaced, still connects to its material origins in the marble of Trajan's Column.

Each of these contemporary "casts" is intentionally excerpted (two quarters, one half, one chunk/slice). This partial condition produces a simultaneity of interiority and exteriority—impossible to apprehend in the original forms—the disembodied sampling both imbuing the original with new information while exonerating the copy from the responsibility of complete visual imitation. As in the reliquary and the gipsoteca or cast gallery, the method of display and interaction for a

Figure 5: *Villa Rotunda Redux* by FAT for the 2012 Venice Biennale. A cast of one quarter of Palladio's original plus its corresponding mold arranged to create a *doppelgänger* in foam and steel. Photo: FAT.

contemporary audience becomes as important as the artifact itself. While both the imitation and the imprint were historically a part of the minor arts or trades, Duchamp's incorporation of the latter into his critical practice, highlights its potential to inform an avant-garde production. In his use of molds and casts, the imprint carries weight both through its material connection to the original and through the act of its recontextualization. While the fabrication techniques of the wayward cast may seem errant, its logics of excision and siting are precise and premeditated.

VIRTUAL CASTS: THE CONTEMPORARY ARCHITECTURE IMPRINT

As emerging scanning techniques continue to become increasingly integrated into architectural practice, the accompanying new data offers the prospect of an architecturally-scaled cast through the digital imprint. And whereas the imitations of Trajan's Column were condemned to continually reshuffle a limited set of tropes that would continually add up to the image of imperial power, this contemporary version of the imprint escapes this feedback loop of symbolism. Instead of a "monument to," the casts propose a "piece of" the past—a much more dynamic and productive use of the historical that is continually open to reinterpretation. While the system of assembled citation is so (in)famously associated with the post-modern, the scan and imprint achieve variation and relevance through a myopic attention exigencies of material process coupled with a transformative contextualization of the copy.

The contemporary examples prove most productive when the attempt to literally reproduce form through vastly different techniques of facture allows the final material rendering to stray from any larger sense of fidelity to the original. This seems best supported by a strategy of synecdoche or reproduction of only a sampling of the original. In addition, none of the three ever purport to be architecture, presented instead as artifacts on display in galleries and pavilions. But while they never attempt to reproduce the function of their source architecture, their potential for programmed architectural space feels imminent.

What is most important is how these examples escape the most common critiques leveled against post-modern references and pastiche. New scanning and indexing techniques, as plaster casting did before, ignore the intentions of the original artists and their duplicators, focusing instead on the actuality of the artifact—blemishes, distortions, and all. They position historical artifacts not as ruins for contemplation or idealized geometric fantasies, but as data to be "unzipped" into a contemporary context; an unearthing of the past not for easy pastiche, citation, or imitation through visual likeness, but rather a transformation of information through contemporary process, technique, and ethos. This notion of history as source material also activates an immediate past that can be recursively repositioned, recontextualized, and re-rendered. This fosters a new species of deviant archaeology where the wayward cast is allowed to cultivate a continual revealing of history through the act of reproduction, sidestepping the contemporary western preoccupation with the discrepancies between the authentic original and its (substandard) copies.

ENDNOTES

1. Walter Benjamin, "The Work of Art in the Age of its Technological Reproducibility," in *Walter Benjamin: Selected Writings, Volume 3, 1935-1938*, ed. Howard Eiland and Michael W. Jennings, trans. Edmund Jephcott et al. (Cambridge, MA: Belknap of Harvard University Press, 2002), 102.
2. Georges Didi-Huberman, "La Ressemblance par Contact: Archéologie, Anachronisme et Modernité de l'Empreinte," in *L'Empreinte* (Paris: Les Éditions du Centre Georges Pompidou, 1997) 69.
3. Napoleon Bonaparte, who had hoped to physically move the artifact of Trajan's Column itself to Paris, instead contented himself with an imitation erected in the Place Vendôme. But his desire to possess the artifacts of antiquity (or at least their likeness) was responsible for a great wave of movement of artifacts toward the Empire's capital. The Académie Française de Rome, founded by Louis XIV in 1666 is the institution upon which all other academies in Rome are modeled. When Napoleon Bonaparte revived the institution in 1803 (moving it to Villa Medici), he intended to create a base in Rome from which artists in service of the Empire could study and reproduce the classics. These reproductions, or *envoies*, were a requirement of their stay at the Academy and were regularly shipped back to the capital for review. Artists were, in effect, employed as fabricators of duplications in service of the First Empire. However, there was still the assumption that the act of copying was to also benefit the artist. This tradition would continue on a trajectory towards the cast galleries of the 19th century. The Villa Medici still maintains a gypsothèque which displays, among many other casts, a set of 76 cast pieces from Louis XIV's Trajan's Column. The casts are displayed separately, each as their own artifact, more for a study of technique, form, and affect than narrative or historical survey. In this setting for artistic study, the seam lines indexing the casting process typically remain whereas they might often be removed in more public museums focused on history and culture.
4. Valerie Huet, "Stories One Might Tell of Roman Art: Reading Trajan's Column and the Tiberius Cup," in *Art and Text in Roman Culture*, ed. Jas Elsner (Cambridge: University of Cambridge, 1996), 13.