



Amor (1980)

James Macgillivray

Tectonics and Space

Architectural Thought in the Films of Robert Beavers

TECTONICS

Il me faut dire quelque part que des monuments comme le Parthénon, ou la Maison Carrée, ou n'importe quel monument comportant un péristyle à colonnes, évoque le plus adéquatement, dans l'ordre de l'architecture, un instrument à cordes. Car il y a, sur le devant, les colonnes tendues comme les cordes de la lyre (par exemple), et derrière, le temple ou la maison elle-même, c'est-à-dire la caisse de résonance. (Francis Ponge)¹

The room in the title of Robert Beavers's *Listening to the Space in My Room* (2013) is on the ground floor of a house that the filmmaker shared with an elderly cellist, Dieter Staehelin, and his wife, Cécile. Before it was occupied by the Staehelins, the structure was used for agri-

¹ "I must say that monuments like the Parthenon, or the Maison Carrée, or any monument consisting of a peristyle with columns evokes most appropriately, in the realm of architecture, a stringed instrument. For there are, on the front, tight columns like the strings of the lyre (for example), and behind, the temple or the house itself, which is to say the resonance chamber." Francis Ponge, *Pour Un Malherbe*, Paris: Gallimard, 1965, p. 188–189. Author's translation in consultation with P. Alan Meadows, *Francis Ponge and the Nature of Things: From Ancient Atomism to a Modern Poetics*, Lewisburg: Bucknell University Press, 1997, p. 61.

² Robert Beavers interview with the author, October 22, 2015.

cultural purposes, and before that it housed a small textile manufacture. The Swiss architect Oskar Burri had initially intended to establish an artists' community in the small neighborhood in Zumikon, a town on the outskirts of Zurich, but was only able to build four houses there, including the Staehelins' renovation in 1962. Burri's work on the building was extensive; it mostly involved converting the industrial space for habitation, but also adding columns to the first and third floors where the structure of the slabs was not sufficient due to differential settlement in the foundation.² Early in the film, Beavers is heard to say "each column made of a tree trunk" as the dark knotted wood of one of the columns fills the center of the screen. It is one of the tree trunk columns of Burri's renovation.

For Burri, a column made from a tree must have been a stark contrast from the white *pilotes* he would have been exposed to in his apprenticeship at Le Corbusier's office. It's likely that the trunk presented the simplest and most economical option but also a satisfying resolution of the factory building and its natural setting. The straightforward transformation from living tree to architectural column provides an interesting counterpoint to other themes of making in Beavers's work. In *Work Done*

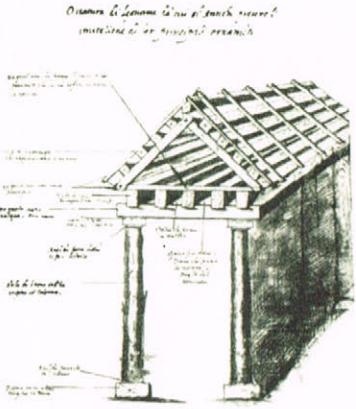


Fig. 1

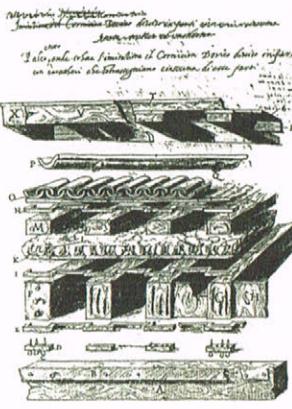


Fig. 2

(1972/1999), for example, the filmmaker contemplates the processes that turn the turbulent waters of a river into a block of ice, mountain rock into the cobble stones of an urban street and a stand of green trees into the stacked and bound pages of a book. Burri's column is not subject to any such transformative process; it is still the trunk of a tree and also, now, something which we call a column. Yet the tree trunk column is not only of interest for the labor of construction that it represents but also as a reference to the origins of Hellenic architectural form and ornament, origins that carry through the Roman, Renaissance and Baroque architectures that figure so prominently in Beavers's films. Films like *Amor* (1980), *Ruskin* (1975/1997), *From the Notebook of...* (1971/1998) and *The Hedge Theater* (1986–90/2002) not only depict the material and space of canonical Western architec-

ture (descended of Greek origins), but they do so with an unparalleled sensitivity and awareness of the architectural thought that went into those forms and spaces, one which I hope to clarify in the following pages. When these architectural forms relate to their archetype, the classical Greek orders, they do so in ways that innovate and sometimes contradict their origins. At the same time, the Greek orders themselves are a stone translation of what was originally a wood-based construction. The tree trunk column in *Listening* short circuits the centuries of formal allusion in Western architecture by presenting an unadorned version of the earliest Greek column, the trunk of a tree.

De architectura (c. 15 BC), the first recorded architectural treatise by the Roman Vitruvius, establishes the origins of architecture in the rudimentary wood structure that came to be

known as the primitive hut. He describes a pre-architectural building culture where early humans "erected forked uprights, and weaving twigs in between they covered the whole with mud."³ But Vitruvius does not go on to explain the development of the masonry form of ancient Greek architecture from this primitive model. Indeed, when the Greeks translated the details of their own wood construction into the sculpted forms of stone, they severed ties with the strictly mechanical nature of the joinery.⁴ As a result, there is an abiding anxiety in architectural theory derived from the archetype of Hellenic form; we have the built form of the Greek temple, and from Vitruvius, the notion of a wooden origin, but the precise correlation between the two becomes a hermeneutic dilemma for architects starting in the Renaissance. Attempts to articulate lines of connection from the primitive to the classical vary: For example, in 1568, Gherardo Spini published a

³ Vitruvius Pollio, *Vitruvius: Ten Books on Architecture*, ed. and trans. Ingrid D. Rowland, New York: Cambridge University Press, 1999, p. 34.

⁴ This is readily seen in the shaft of the column: In wood construction, the shaft would have been a single piece – the trunk of a tree. At the capital, timbers came together in complex joints of three or more pieces. In the translation to masonry construction, the shaft is made up of short cylindrical sections whose size is a function of their weight. The capital, where the column joined to the beam and roof, is often rendered from a single piece of stone, obscuring the joint while transcribing its outward appearance in a kind of three-dimensional silhouette. This adherence to outward appearance without inward consistency introduced an ambiguous relationship between structure, construction and ornament.

⁵ Hanno-Walter Kruft, *A History of Architectural Theory from Vitruvius to the Present*, London: Zwemmer, 1994, p. 96.

treatise containing several plates that attribute all elements of the orders (the cornice, dentils, frieze, architrave, triglyph, etc.) to distinct wood forms resulting from a comprehensive but still theoretical structural system (Fig. 1).⁵ In 1755, Marc-Antoine Laugier's *Essai sur l'Architecture* elaborated on Vitruvius's "forked uprights" with the addition of a pediment-shaped roof and foliage at the joint between column and roof suggestive of the acanthus leaves in the capital of a Corinthian column (Fig. 2).

TECTONICS: KARL BÖTTICHER AND THE HEDGE THEATER

The primitive hut figures very strongly in Beavers's film *The Hedge Theater*. The film weaves between architectural settings (two of Francesco Borromini's masterpieces, San Carlo alle Quattro Fontane and Sant'Ivo in Rome) and images of man-made structures in nature, one a *roccolo* outside Brescia and the other an outdoor theater in the Mirabell Gardens in Salzburg. Early in the film, the camera lingers on the composite column capitals of the exterior pilasters at San Carlo and intercuts these shots with images of the tree canopy of a *roccolo*, a netted circular enclosure of trees for catching birds. As in Laugier's famous print, the leaves in the canopy of the grove of trees point to the natural and ancient origins of the sculpted acanthus leaves at the top of Borromini's columns. The light of the sky coming through the canopy of the *roccolo* looks similar to the coffering of Borromini's dome (Fig. 3). Later the double columns in the courtyard of the church are compared to the doubled trunk



Fig. 3. 4



of a tree set apart from the others. These analogies to primitive enclosures in *The Hedge Theater* substantiate a direct lineage from pre-architectural origins, the simple but persuasive myth of the primitive hut. However, other analogies in the film are far more sophisticated and take advantage of the ambiguity of architectural form.

Within the discourse of architecture, attempts to clarify the intersection between structure, construction and ornament are referred to under the rubric of *tectonics*. In the 19th century, with the beginnings of modern archaeology and the opening of Greece following independence, German theorists sought to make more systematic claims on Greek ornament but also more broadly on tectonics as a distinct part of architectural thought. The archaeologist Karl Bötticher delineated the relationship between structure and ornament. In his major work *Tektonik der Hellenen* (1844), he theorized the Greek formal orders as having *Kernform* and *Kunstform*,

that is a *core-form*, pertaining to the mechanical or structural purpose, and an *art-form*, a decorative symbol which often references the origins of wood construction.⁶ One of Bötticher's more famous examples is that of the cyma, a moulding course that joins together the different strata in the Doric entablature. Bötticher noted that when it occurs higher up in the entablature (with less weight above it), the cyma is still a steeper and more vertical profile; when it occurs lower, its profile is shallower and more horizontal, as if it had been compressed by the greater weight of the elements above it.⁷ The forces inside the stone of the

⁶ Wolfgang Herrmann, *Gottfried Semper: In Search of Architecture*, Cambridge: MIT Press, 1984, p. 143. Original text in German: Karl Bötticher, *Die Tektonik der Hellenen*, Vol. 1, Potsdam: Riegel, 1844, p. XV.

⁷ Gottfried Semper, *Style in the Technical and Tectonic Arts, or, Practical Aesthetics*, trans. Harry F. Mallgrave and Michael Robinson, Los Angeles: Getty Research Institute, 2004, p. 40.

cyma, which transfer gravity loads from a wider portion to a more narrow one, bring forth a core-form which fulfills this structural function. At the same time, through the plastic medium of stone, the art-form of the cyma translates this purpose into a symbolic expression of its function. The symbol enlivens the stone by analogy, making it appear to behave like a material other than stone which reacts to larger gravity loads by splaying out. Thus in Greek tectonics, "the intention is not to characterize the stone as dead stone but, on the contrary, to let the dead substance of the stone fade away... As soon as the stone is covered by a form analogous to its idea [i.e., an art-form], the concept of the stone has disappeared and that of the analogue takes its place."⁸

All this is to say that when Beavers trains his camera on the Renaissance, Baroque and Rococo architectural objects of Rome, he is framing subject matter that is uniquely suited and already subject to several layers of analogy. In *The Hedge Theater*, for example, among the shots of San Carlo and the *roccolo*, Beavers introduces the image of a buttonhole being sewn

⁸ Herrmann, *Gottfried Semper*, p. 143. Original text in German: Bötticher, Vol. 2, p. 29.

⁹ P. Adams Sitney, *Eyes Upside Down: Visionary Filmmakers and the Heritage of Emerson*, New York: Oxford University Press, 2008, p. 364.

¹⁰ Inherent in this analogy is an empathy for objects that approaches the poetry of Francis Ponge, one of Beavers's favorite poets. It could just as easily be compared to the architectural sensibility of someone like Louis Kahn; his famous query of brick ("What do you want, Brick?") was the beginning of a reinvention of tectonics and ornament in modern masonry construction.

in a white shirt (Fig. 4). With respect to analogy between the bird trap and church forms, P. Adams Sitney reads a shared trajectory toward the sky and ceiling as suggestive of the possibility "that the church might be a cage to catch the Holy Ghost or, conversely, the Holy Ghost's snare for human souls."⁹ However, there is a complimentary gravitational movement in the film toward the ground, embodied in the form of the button. Once we have seen the sewing of the buttonhole several times, the tectonic aspects of the church take on a new tactile quality and clarity. When the camera's view moves down a column and comes to rest at the base, the analogy to the buttonhole has imbued the image and the stopping of downward movement with the structural performance of the spread base of the column; the circular column might be pushed into the soft ground by the vertical loads of the building above it were it not for its wider button-like base. In another shot of the *roccolo*, Beavers again compares the base of the column to the primitive hut, showing the bottom of the rudimentary structure of sticks sunken in the ground. Just as Bötticher described the different profiles of the cymae reacting to the varying gravitational loads they took from the entablature, Beavers amplifies the symbolic aspects of the column's art-form while making palpable the core-form of its structural performance in equilibrium. Inherent in this analogy is an identification with objects based on the axis of gravitational forces. It is through our upright stature and experience of gravity that we feel the forces going through the column, as if we were a caryatid in its place.¹⁰

Moreover, in the modern house of *Listening to the Space in My Room*, with its reframing of the tree column, we can see even more expression of structural loads and gravitational forces; Beavers's camera pans down the wooden columns with the same movement used in *The Hedge Theater*, but the forces inside the tree trunk columns are far less stable than those in San Carlo. While Beavers was living at the Staehelins' house, he noted that the hillside it was built into was constantly in the motion of settlement. In other words, the movements in the soil that made the columns necessary in the first place are still at work, leading to an imbalance in the vertical and horizontal axes of the house. This instability is especially present in the diagonal camera movements looking at the windows where the shots appear equally unmooored from the vertical of the jamb and the horizontal of the sill.

TECTONICS: GOTTFRIED SEMPER, WORK DONE AND AMOR

Contemporary with Bötticher, the architect Gottfried Semper also developed a theory of tectonics, although it was not limited to the Greek orders but applied more broadly to the influence of primitive material culture in architecture. In his most radical work, *Der Stil in den technischen und tektonischen Künsten oder Praktische Ästhetik* (1863), instead of relating every aspect of ornament to a primitive origin, Semper put forward four elements of architecture which were developed through four different materials and techniques. These were the hearth, roof, enclosure and substructure

(Fig. 5). Semper's quasi-materialist table, showing the origin of architectural elements from matter and as transformed through craft practice, is strikingly similar to the various material processes that Beavers implies in the images of *Work Done*, where water is frozen into ice, a mountain is quarried for stone, trees are made into paper, and pig's blood is fried into pancakes. While Semper's crafts come together in the idea of a building, the various materials in *Work Done* are in a sense a reconstructed genealogy of a poetic image.

Elsewhere I have argued that Beavers and Gregory Markopoulos developed unique editing practices based on their materials (16mm reversal film) and their sensitivity to technique (A&B roll printing).¹¹ For Markopoulos, this culminates in the form of his final film *Eniaios* (1948–c.1990), with its long stretches of black leader akin to the dark ground of a mosaic.¹² For Beavers, committing his footage to memory allows him to edit for A&B printing without dependence on repeated viewings. This imbues the connections between shots with the inward quality of memory, a quality that has its mirror opposite in the viewer:

"The spectator must discover why an image was chosen to be represented; the silence of such a discovery becomes a moment of release. It is not the filmmaker's work to tell you: his

¹¹ James Macgillivray, "Film Grows Unseen: Gregory Markopoulos, Robert Beavers and the Tectonics of Film Editing," *The Journal of Modern Craft*, Vol. 5, Issue 2, July 2012, p. 179–201.

¹² Robert Beavers, *Eniaios* panel discussion, Museum of the Moving Image, New York, February 19, 2011.

work is to make the film and to protect what he does, in the serenity of a thought without words, without the quality in words which would destroy what he intends to represent."¹³

The inward moment of revelation, what he calls "release," makes use of memory in the same way that the filmmaker's editing does; the spectator brings together the images of different shots by comparing the memory of one with the present-tense experience of another. These moments of unspoken contact between filmmaker and spectator constitute the joint, the tectonic assembly of Beavers's films, much as the cement splice holds strips of film together.

For Semper, the origin of the technical arts, and in turn architecture, is the knot: "The knot is perhaps the oldest technical symbol and...the expression for the earliest cosmogonic ideas that arose among nations...The weaver's knot is the strongest and most useful of all knots, perhaps also the oldest or at least the first that figured in the technical arts."¹⁴ Perhaps due to his own intimate experience with hand splicing film, Beavers expresses a similar feeling for the primacy of the knot in several of his films. I have mentioned the stitching of the buttonhole in *The Hedge Theater*, but there are also the knots in the bird-catching nets of the *roccolo* and

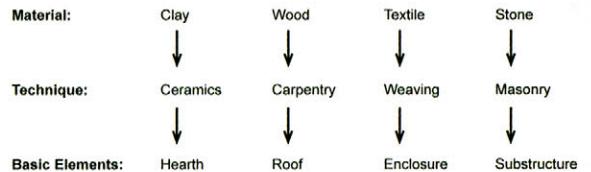


Fig. 5

the stitching of the book binding in *Work Done* as well as the sewing of a bespoke suit in *Amor*. These references to knots and textiles not only acknowledge similarities among the diverse subject matter in the films but also point outwards to the craft of his own editing practice and the work of joining objects together through analogy and visual similarity. As such, many of Beavers's films possess a self-similar symmetry; the analogical knots of his editing join together depictions of craft traditions with still more knots, joints and handmade assemblies of material.

In *Der Stil*, beginning from the knot, Semper elaborates the textile arts in all their aspects, eventually attributing the invention of architectural enclosure and the origin of the wall to the hanging of fabrics and carpets by early humans. This he further illustrates by the common root of the early German words *Wand* (wall) and *Gewand* (garment).¹⁵ In *Amor*, the correspondence between architecture and textiles comes closest to Semper's conflation of wall and garment. Early in the film, Beavers introduces this theme through a repeated juxtaposition of the tailoring of a bespoke suit with images of debris netting on a building undergoing restoration. As the fabric of the suit twitches

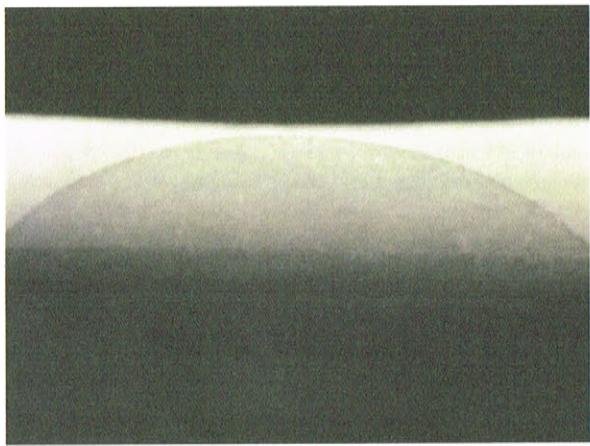


Fig. 6



Fig. 7

(francs) e dal suo prezzo
opportuno con termine italiano,
gamba che anche in qualche

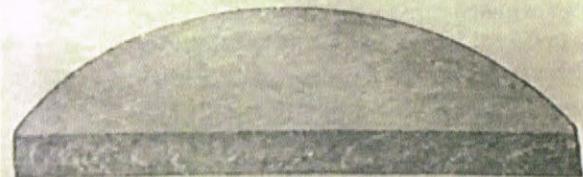


Fig. 26. Mezza luna.

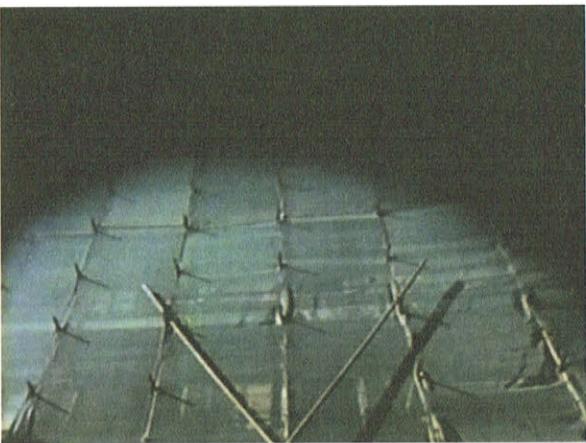


Fig. 9

Fig. 8

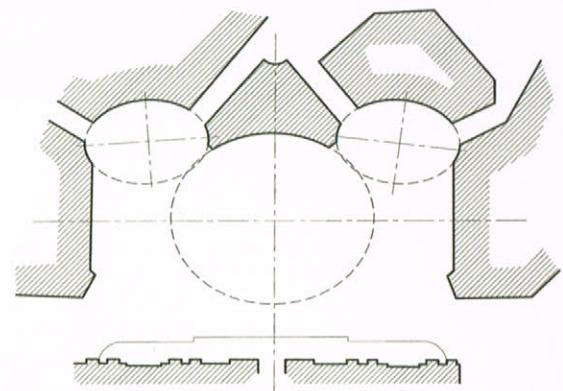
and sways under the unseen hand of the tailor, so too does the diaphanous fabric on the scaffolding billow in the wind. The thin steel poles of the scaffolding emerging from the shadows behind the fabric look very similar to the white tacking stitches used by the tailor to keep fabric in place while the suit is constructed. Among these shots of the suit and scaffolding, Beavers also includes a static shot from an Italian book of tailoring showing an illustration of a tool called a "mezzaluna," a block of wood shaped by a shallow arc with a straight edge on one side (Fig. 6). Beavers's reaction to this shape in sequence goes back to a shot of the scaffolding (Fig. 7), but shows it in a broad sweeping pan, as if mimicking the arc of the half moon. After two shots of hands clapping, the shot of the mezzaluna repeats (Fig. 8) and then we see the scaffolding again; this time, however, instead of mimicking the curved shape with the moving arc of a pan, he shows the fabric of the scaffolding framed, its image cut off, by the arc shape of the top of the lens rotated on the turret of his Bolex camera (Fig. 9).

These early mimetic exercises seem to be a preamble for a more lengthy consideration of the Piazza Sant'Ignazio in Rome later in the film. Designed by Filippo Raguzzini in 1728, the piazza is the space in front of a group of Rococo buildings gathered around a series of ellipses in plan (Fig. 10). The panning shots of the piazza recall the earlier pan in response to the arc of the mezzaluna, but this time the camera follows the shape of the piazza's plan. Unlike the pan of the scaffolding which shows the building receding in the diagonals of perspective at its



Fig. 10, 11

beginning and end, the pan of the piazza is in a sense followed at a constant radius by the curved form of the building. The pan follows the taut horizontal string course of the Rococo façade and, influenced by the earlier images of the suit, it looks more like the bas-relief of fabric piping (Fig. 11). That the two spaces, inside



the suit and within the street-walls of the piazza, rely on a secret geometry – an architectural plan and a sewing tool – is an extraordinary corroboration of Semper's equivalence of wall and garment.¹⁶

TECTONICS: RUSKIN AND THE TECTONIC OF CRAFT

Ruskin is Beavers's second long-form film with a historical subject matter. It is an oblique portrait of the 19th-century theorist and art critic John Ruskin and looks at its subject by retracing the locations of his major work *The Stones of Venice*. As Beavers films the various architectural objects and landscapes from the book (primarily in Venice, but also the Swiss Alps and London), his camera is in a sense interrogating Ruskin's character by trying to recreate his gaze. As in the book, the result is the delineation of a very specific aesthetic taste, yet, in contrast, Beavers's film has no recourse to words or text as a means of legitimizing his taste in aesthetic theory (Beavers later edited out voiceover passages from *The Stones of Venice* that he had included in the first version of the film). The feeling of watching the film is one of constantly questioning the images for a personal taste behind the lens, a sensibility that would collect the images under the rubric of beauty.

Beavers's *Ruskin* is exceptional in its ability to elucidate his subject's theory of architectural ornament by simply filming the places and things that Ruskin used to illustrate it. As Semper did, Ruskin also theorized a "wall veil" as the primary tectonic element and used this image to further Alberti's derivation of column from wall in *De re aedificatoria*.¹⁷ He is conscious

of the vertical axis of gravitational forces acting through columns; however, he maintains that columns are gathered together from the material of the wall veil.¹⁸ As such, the forces in Ruskin's walls don't only act vertically but also in accretion along an axis going in and out of the wall. In *Ruskin*, Beavers's camera is especially attentive to the accumulation of texture and detail in surfaces. The encrustation of ornament and patina, the build-up of mortar nearly engulfing a sculpted angel's wings, the iron anchor plates that keep the masonry walls from buckling outwards: all of these details suggest a tectonic system measured by the growth of detail in a surface of deep relief.

¹⁶ Although Beavers has not read Bötticher or Semper's work on tectonics, they are part of a longer history of philhellenism in German culture of the 18th and 19th centuries that both he and Markopoulos would have been exposed to when they lived in Munich for seven years. Munich itself is site to many public works built at the behest of the greatest German philhellene, Ludwig I. Bötticher's work on tectonics was made possible through the greater access to antiquities after Greek independence, a war partially funded by Ludwig I. Ludwig II commissioned Semper to build an opera house in Munich. The design of that unbuilt work was used whole cloth, without the architect's knowledge, for Wagner's *Festivalhaus* in Bayreuth. Markopoulos in turn was deeply inspired by Bayreuth as a model for the Temenos. Harry F. Mallgrave, *Gottfried Semper: Architect of the Nineteenth Century*, New Haven: Yale University Press, 1996, p. 266–267. Robert Beavers interview with the author, May 19, 2011.

¹⁷ Semper discusses woven fabrics as the first (prehistoric) wall. Ruskin uses the term "wall veil" and proposes that columns could be interpreted as a gathering together or bunching of the veil, as when curtains are drawn and make columnar-looking shapes of cloth on either side of a window.

¹⁸ John Ruskin, *The Stones of Venice*, ed. J.G. Links, New York: Da Capo Press, 1985, p. 64.



Ruskin

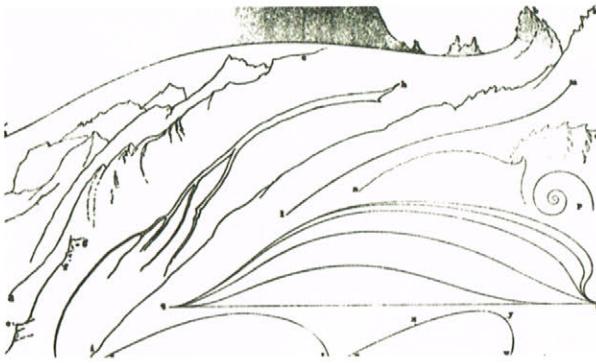


Fig. 12

This aspect of the wall veil becomes strikingly apparent when Beavers films a grassy hillside in the Grison Alps from above. For a moment, the black and white image lacks a discernible trace of up or down, but reinforces the axis going in and out of the picture plane. It looks very similar to another image in the film of a decaying wall whose variegated texture is accentuated by raking sunlight and because it is filmed in black and white, the image of the grass surface of the hill sustains its scalar and directional ambiguity up until the wind causes the grass and branches of small bushes to move. It also expresses Ruskin's immense appetite for visual aesthetics, almost to the point of entirely eliminating the context of objects in order to better appreciate their qualities. In the section of *Stones* titled "Abstract Lines," Ruskin compares the scale-less lines of a willow leaf, a glacier, the branch of a fir tree, a mountain range above Lake Geneva, and a paper Nautilus shell among other things (Fig. 12).

Although they were roughly contemporary, Ruskin's tectonic thought is vastly different

from that of Bötticher or Semper. To begin with, he abhorred the architecture of neoclassicism, perceiving architecture's fall from grace in the derivative copying of Roman and Greek form during the Renaissance, copying that reduced the craftsperson to an automaton. Ruskin's tectonics doesn't refer to a symbolic language imposed upon structural necessities, but rather is scaled to the labor of the individual artisan in a medieval economic structure which he called the Gothic. The individual craftsman works within the parameters of a portion of a building's ornamentation and is given a latitude of self-expression on that piece of the ornament. When taken as a whole, the individuality of the different pieces, an expression of different hands, leads to a variety of form which Ruskin calls "changefulness." The well-being of the workman is expressed in the beauty but also the lack of perfection in the ornament:

"The degree in which the workman has been degraded may be thus known at a glance, by observing whether the several parts of a building are similar or not... if, as in Gothic work, there is perpetual change both in design and execution, the workman must have been altogether set free."¹⁹

Moreover, the craftsman's work is to transmute the natural and abstract forms of God's work into ornament. Ornament is distinct from sculpture because it fulfills an architectural function; unlike sculpture, the degree of detail and composition in ornament is fitted to its location on the building. The motif that

¹⁹ Ibid., p. 164–165.

Ruskin particularly commends is that of foliage. One example is in the "Vine Angle" at the Ducal Palace depicting the drunkenness of Noah with a dove perched among the leaves (Fig. 13, 14); Ruskin called this relief "faithful as a representation of vine, and yet so designed that every leaf serves an architectural purpose, and could not be spared from its place without harm."²⁰ Later he marvels at the depiction of wind: "...in several cases, the sculptor has shown the undersides of the leaves turned boldly to the light, and has literally *carved every rib and vein upon them in relief*."²¹ Another example is in the vaults of the porches of St. Mark's. Ruskin describes "sculpture, fantastic and involved, of palm leaves and lilies, and grapes and pomegranates, and birds clinging and fluttering among the branches, all twined together into an endless network of buds and plumes..."²²

One sequence of shots in *Ruskin* features the Vine Angle prominently. Markopoulos describes the event of filming it in "The Threshold of the Frame" (1973): "Beavers has pointed to the birds, to the minute grapes, to the very beard of Noah himself; a beard beautifully entwined and, perhaps, the magic symbol of the man who created Noah."²³ In one of the most arresting shots in *Ruskin*, Beavers captures a liv-

²⁰ John Ruskin, *The Stones of Venice*, 4th Edition, London: J.M. Dent & Sons, 1935, p. 184.

²¹ Ibid., p. 308. Emphasis added.

²² Ibid., p. 66.

²³ Gregory Markopoulos, "The Threshold of the Frame," *Film as Film: The Collected Writings of Gregory J. Markopoulos*, ed. Mark Webber, London: The Visible Press, 2014, p. 314.

²⁴ Ibid.

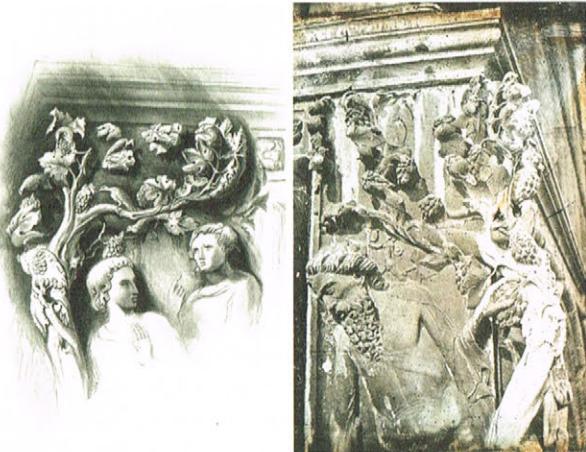


Fig. 13, 14

ing pigeon in vine foliage. Again, Markopoulos relates that "...in a square a group of birds settled in the vines of the Church of St. Gregory. There Beavers filmed, and before the birds scattered, one kept fluttering in the air like the spirit of the place."²⁴ This shot is remarkable in its ability to recreate for the viewer a moment that Ruskin only theorized as having occurred in his Gothic workman: the moment of free inspiration and translation of animated natural phenomena into motionless stone ornament.

Ruskin saw vegetal form as the most intrinsically Gothic ornamentation, and he imagined workmen as having a particular fondness for the creation of plant detail. In the subject of foliage Ruskin conceives the natural predilection in the Gothic for tranquility and redemptive craft:

"In that careful distinction of species, and richness of delicate and undisturbed organiza-

tion, which characterizes the Gothic design, there is the history of rural and thoughtful life, influenced by habitual tenderness, and devoted to subtle inquiry; and every discriminating and delicate touch of the chisel, as it rounds the petal or guides the branch, is a prophecy of the development of the entire body of the natural sciences, beginning with that of medicine, of the recovery of literature, and the establishment of the most necessary principles of domestic wisdom and national peace."²⁵

The craft of carving was not unknown to Beavers before he made *Ruskin*. A large wooden tray in the shape of a leaf hangs on the wall of the living room in Beavers's mother's house in Falmouth. It was carved by Bernice Hodges, a neighbor of the Beavers family when they lived in Weymouth. Hodges had a workshop in her basement and worked on ornamental wood carvings for buildings in and around Boston, including Trinity Church. As a boy, Beavers spent time at her house and observed her at work. Later she taught him to carve wood as well. Although it is a different craft from masonry, perhaps it was this early exposure to wood carving that led him to search out and film the most famous carvings from Ruskin's book. Indeed it was Hodges who gave him a copy of the three volumes of *The Stones of Venice*, including all the plates and drawings, before he left for Europe with Markopoulos. In 1972, on a trip back to visit his family, Beavers found the book and read it, which ultimately inspired him to film *Ruskin* in Venice in 1973.²⁶

SPACE

As much as Beavers's architectural films take part in a discussion of tectonics by virtue of their subject and also their analogical operations (so similar to those of architectural form), there is another aspect of architecture in the films, an ambition to give form to something which doesn't really exist in the two-dimensional image of film: space. Tectonics and space are of course hard to separate; the structural innovations of building materials and assemblies have for the most part been in the pursuit of the enclosure of space. At the same time, the proper architectural treatment of those structural elements has inflected and clarified the spaces that they enclose. Yet, in architectural discourse, the concept of space is relatively new.²⁷ Although Greek architecture lies at the origins of Western architectural theory, still its trabeated (post and lintel) structure did not so much create an interior space as it occupied the boundary between earth and sky. In his formative study *Strutture e Sequenze di Spazi* (1953), Italian architect Luigi Moretti traces the invention of space in architecture not to the Greeks but to the building culture of the Romans:

"The columns of the Greek temple enclosed rectangles with their blades of shadow, which seem to surround and form inviolable cells,

²⁵ Ruskin, *The Stones of Venice*, ed. Links, p. 173.

²⁶ Robert Beavers e-mail correspondence with the author, January 17, 2015.

²⁷ Peter Collins notes that prior to the 18th century, there is no mention of the word in architectural theory. See his *Changing Ideals in Modern Architecture, 1750–1950*, 2nd ed., Montreal: McGill-Queens University Press, 1998, p. 285.

born of the bowels of the earth. Greek architecture was an algorithm of light and also of the shades of unknown forms where the gods hid. The high plane and the luminous vault of the heavens are the marvelous extraverted spaces which the colonnade pylon of the temple supports... The great spaces of architecture arise [instead] with Rome and are the magnificence of it. United with superhuman vaults, and with walls of incredible strength, instinctively breathing the indestructible military works that ruled them, they express the conscious power of a community... On the ruins of the walls indicating these volumes, from Brunelleschi to Michelangelo, Renaissance and Baroque space was born and with it the sense of the grandiose in the new polity of the west."²⁸

The Greeks gave us the language of tectonics, but the Romans invented architectural space. Many of Beavers's films are implicitly concerned with space due to their subject matter and location: *Amor*, *Work Done*, *The Hedge Theater*, *From the Notebook of...* and *Ruskin* all prominently feature the architectural descendants of Roman space. Placing his camera within these architectures, Beavers pursues the representation of their space through several methods. One of these is camera movement. At

²⁸ Luigi Moretti, "Structures and Sequences of Spaces," *Oppositions: A Forum for Ideas and Criticism in Architecture*, Vol. 4, trans. Thomas Stevens, New York: Wittenborn Art, 1974, p. 124–126.

²⁹ Robin Evans, *The Projective Cast: Architecture and its Three Geometries*, Cambridge: MIT Press, 1995, p. 9.

³⁰ Paolo Portoghesi and Marisa Tabarrini, *Storia di San Carlo alle Quattro Fontane*, Rome: Newton & Compton, 2001, p. 73.

the Naturtheater (or hedge theater) in Salzburg, the Piazza Sant'Ignazio and the Churches of San Carlo and Sant'Ivo in Rome (in *Amor* and *The Hedge Theater*), the camera, placed some distance away from the curved surfaces of its architectural subject, rotates around the central point of the tripod describing an arc. This movement unrolls the curved or elliptical surface of the walls but also grasps at the elusive center of the space. In other words, when the panning motion of the camera doesn't elicit a change in the size of the objects it represents, the viewer can intuit a curved wall shape with the camera at its focal point.

In Renaissance architecture and even more so in Baroque and Rococo, the central point of space is a captivating but ultimately untenable place. The architectural historian Robin Evans has noted how elusive the center can be and indicates the example of nine potential centers in the eminently centralized circular layout of Raphael's Sant'Eligio in Rome.²⁹ When, in *The Hedge Theater*, we arrive at two of Borromini's churches, San Carlo and Sant'Ivo, we find the central point even further obscured: at Sant'Ivo by the compound geometry of the cornice line, at San Carlo by the extreme complexity of the oval shape. The architect Paolo Portoghesi has analyzed the form of San Carlo as a truncation of St. Peter's Basilica: the rectilinear pauses of the cruciform arms which delay contact between the central space and the apses have been removed and the entire plan (a cruciform of circles) has been, through an anamorphic process, transformed into elliptical and ovoid shapes.³⁰ In other words, what were once sepa-

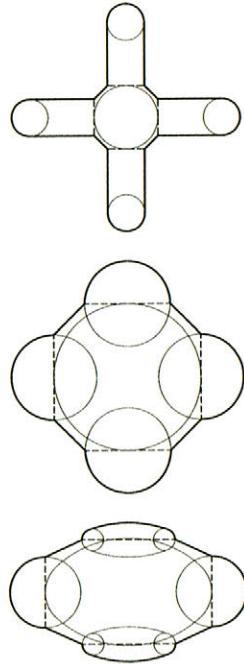


Fig. 15

rate spherical domes in St. Peter's with their own centers have been pushed together and overlapped in volumetric concatenation due to the distortion of anamorphosis (Fig. 15).

SPACE: ANAMORPHOSIS IN THE HEDGE THEATER AND AMOR

Anamorphosis, the distortion of a form through projection (the most common of which is the foreshortening of perspective), shows up in Beavers's filming notebooks for *Ruskin*. Dated "14.9.73" and next to the words "Circle perspective:" is a sketch of an elliptical shape followed by "the lens and the third dimensional, horizontal circle in which the back becomes the bottom." (Fig. 16)³¹ Beavers has attributed this note (which concerns the morphology of a re-

lationship between a form's front and back in three dimensions to one of top and bottom on the two-dimensional screen) to a trip he took to the Scuola San Rocco in Venice. Although the ceiling from the ellipse sketch is never seen in *Ruskin*, we do see an elliptical matte near the beginning of the film. The sketch of the ellipse refers to a series of rounded paintings by Tintoretto hung on the ceiling of the school. The most famous of these, *The Glory of San Rocco* (1564), shows the titular saint seen from below, surrounded by angels along the bottom edge of an elliptically shaped canvas. The illusion of San Rocco and the angels receding into the heavens is accentuated by the elliptical shape of the canvas, in effect portraying a circular opening in the ceiling as if it were seen in perspective. Beavers explains looking up at Tintoretto's paintings as part of a larger concern in the filming of *Ruskin*:

"My way of thinking & seeing while filming *Ruskin*...moved back and forth between the perspective of looking downwards to the ground or the desktop & volume of *The Stones of Venice*, upwards to the ceilings, to the façades or sky and straight ahead. I thought often about how to film and edit this looking downwards or upwards [for] the space on the screen which is always directly in front of the viewer...Looking up to the ceiling and seeing painted images within circular framed shapes, I thought how it would look when projected onto the screen instead of being above on the ceiling."³²

³¹ Robert Beavers, *Ruskin* filming notes, Temenos Archive.

³² Robert Beavers e-mail correspondence with the author, December 30, 2015.

14.9.73 Circle perspective:
the lens and the third dimensional, horizontal
circle in which the back becomes the bottom.

Fig. 16

The mechanism of anamorphosis makes palpable the fact that the viewer is displaced from the center of a circle, a feeling that is heightened by the frontality of the film screen on which the image appears. More than a decade after the sketch, *The Hedge Theater* takes up the ambition of the note from *Ruskin* and explores the shape of the oval or ellipse to draw connections between the circular pool in the *roccolo* and the ovoid form of San Carlo's dome. Seen from a distance, the round pool reflects the tops of the trees and sky in the shape of an ellipse surrounded by grass and dirt. The dome would appear to be the inverse of the pool's ellipse, but in fact, since it is already an oval in plan, it cannot be reconstituted into a circle by the viewer's movement in space. *Listening to the Space in My Room* takes up the theme again in the elliptical shape of a circular mirror reflecting clouds and sky; with the shot focused and metered for the light of the sky, the rest of the image appears blurred and black as if it were a matte, a pure distillation of both above and below.

Could this exploration of anamorphosis entail an acknowledgement that the film image can only show a projection of space and not space itself? If one of Beavers's greatest ambi-

³³ Robert Beavers e-mail correspondence with the author, April 6, 2016.

tions in film is the depiction of space, the frustration of that desire by the flatness of the screen leads first of all to a celebration of its spatial ambivalence. In *Amor*, the equivalence of walls and garments elicits this ambivalence, as if space could be turned inside out like a piece of clothing. Salzburg's Naturtheater introduces one of the most powerful two-dimensional representations of space: the hedge wings of the theater get smaller and move toward the central axis of the stage as they recede in the composition of a "one-point" perspective (Fig. 17). This exaggerates the foreshortening of perspective by making the stage appear in the X-shaped composition where the center of the X is the vanishing point on the horizon and the tops and bottoms of the hedges make the diagonal lines of the X. Later this X shape is taken up again with two different objects. The first is the image of an envelope alternately backlit and frontlit. The leaves of the envelope are seen partially open, holding space, or closed and flat. Backlighting the open envelope allows Beavers to show the space either concave (like the theater) or convex, pushing toward the lens of the camera (Fig. 18).

The ambiguity of the X composition of the envelope is reinforced by the depiction in three different images of an architectural ornament known as "nailhead" or "diamond ashlar rustication;" a built example in Verona (Fig. 19),³³ a



Fig. 17

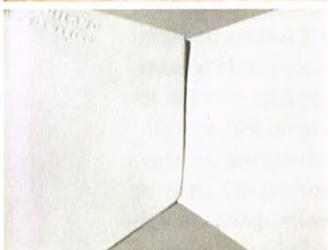


Fig. 18



Fig. 19



Fig. 20



Fig. 21

painted *trompe l'oeil* in a passage off the Piazza Dante Aligheri (also in Verona) (Fig. 20), and the façade of Gesù Nuovo in Naples as depicted on the 10,000 Lire banknote (Fig. 21). The X shape of the vertices of these diamonds rhymes with that of the envelope and the hedge theater but challenges the concave spatial reading of those images with a convex object (the carved "nailhead" ornament on the face of a building that appears like a stud or a spike) instead. The use of the backlit banknote and envelope would seem to suggest that the implied mirroring of the film's title (between *amor* and *Roma*) could equally apply to the two-dimensional depiction of space in film, which could be alternately concave, convex or flat. Space depicted by the cinema is thus somehow doomed to ambivalence. Beavers responds to this frustration of space with a playful inversion of the rules of perspective, both in *The Hedge Theater* and *Amor*; however, the films are not resigned to this flatness. While he does ironically acknowledge the limitations of the medium in one context, Beavers persists in his desire for the representation of space in others. He does this first and foremost with sound.

SPACE: SOUND AND RESONANCE

Beavers's films are intricately woven with sound which has resonated in the actual spaces where he filmed but was not recorded syn-

³⁴ Michel Chion, *Audio-Vision: Sound on Screen*, ed. Claudia Gorbman, New York: Columbia University Press, 1994, p. 68.

³⁵ Ibid.

³⁶ Ibid., p. 79.

chronous with filming. Michel Chion has noted in *Audio-Vision* that just as an image in film is delimited and contained by the frame, "there is no auditory container for sounds, nothing analogous to the visual container of images that is the frame."³⁴ As such, when sounds are put together with the film image, "[t]hey dispose themselves in relation to the frame and its content. Some are embraced as synchronous and onscreen, others wander at the surface and on the edges as offscreen."³⁵ Ambient sounds (which are the majority of sounds in Beavers's work) "are often the product of multiple specific and local sources (a brook, bird songs) [and] what is important is the space inhabited and defined by the sound, more than its multi-source origin...The more reverberant the sound, the more it tends to express the space that contains it."³⁶ Beavers works painstakingly on the sound in his films in order to achieve an expression not of the sound source itself but of the space it exists within.

Sound is essential to *Listening to the Space in My Room*. The film depicts four people inhabiting a single house (upstairs, Dieter and Cécile Stachelin, and downstairs, Beavers and his partner, the filmmaker Ute Aurand) in part by the sounds they make: Dieter tunes his cello and practices scales, Cécile reads a German text, Beavers speaks and his projector whirs. The film sets up an equivalence between the resonance of bowed strings in the interior space of a cello and the same sound resonating within the volume of the house's interior. This is similar to the analogy between the interior space of the camera and the interior space of a room

(camera in Italian) that Beavers explored in *From the Notebook of...* But *Listening* uses sound to describe the space of the interior in far more detail. Beavers deliberated on the title of the film while he was finishing the editing, by turns calling it *Sieben Fenster* (*Seven Windows*), *Tobelhus* (the neighborhood in which the film was made) or *Thresh Hold*.³⁷ The earlier titles hint at a defining quality of the film in which the threshold of a window delineates the space of four different people but also holds and separates their sounds. The juxtaposition of non-diegetic sounds that "wander" at the surface and on the edges of the frame with the image *within* the frame provides for the incredible immediacy of the space.

The similarities of certain sounds in *Listening* (the lawn mower and the projector, or the cello and recorded music from the soundtrack of Beavers's film *The Suppliant*) further complicate our ability to place them and prolong the time in which they can wander in space without a source. This ambiguity of sound correlates to the movement between spaces in the film and the mimetic movements of the camera: "I could say metaphorically, that a pendulum swings between my sense of self and of these other human beings; it also swings between my rooms on the ground floor and the floors above me and the space outside, and this pendulum (my editing) is suggestive of music."³⁸ Beavers's use of sound counteracts the flatness of the image by a complex connection of the view seen to the space in which it exists. In this way, Beavers gives the viewer a very clear location within an overall spatial system. Like space,

sound is not necessarily visibly present; its spatial qualities are communicated through our senses in ways that are outside of language.

SPACE: SPACE AS TANGIBLE VOID

In looking at an object we reach out for it. With an invisible finger we move through the space around us, go out to the distant places where things are found, touch them, catch them, scan their surfaces, trace their borders, explore their texture. Perceiving shapes is an eminently active occupation.

(Rudolf Arnheim)³⁹

When he proposed a systematic study of architectural space in *Strutture e Sequenze di Spazi*, Moretti was sensible of the invisibility of space but was also aware of how conventional architectural representation (plans, sections and elevations) tended to make it flat. Instead he subjected the space of Roman, Renaissance and Baroque architecture to a diagrammatic process whereby all the negative space of the interior was abstracted and rendered in solid plaster. Particularly in the Baroque example of Guarino Guarini's Santa Maria della Divina

37 "A new film [I am making] is in the house in Switzerland. There is color in the film and sound qualities. It is filmed on three floors, so how to suggest vertical structure? The word and concept of 'thresh hold,' spelled with two h's. In this sense there is a relation to *Pitcher of Colored Light*." Robert Beavers interview with the author, May 19, 2011.

38 Robert Beavers quoted in Mónica Sáviro, "The Art of Effective Dreaming," *Lumière*, November 2013. www.elumiere.net/exclusivo_web/nyff13/nyff13_14.php

39 Rudolf Arnheim, *Art and Visual Perception: A Psychology of the Creative Eye*, Berkeley: University of California Press, 1974, p. 43.

Provvidenza (a church very similar in form to San Carlo), the resulting object is something wholly unexpected: the fluid transition from one volume to the next belies the linear geometries of the plan (Fig. 22). Beavers's film *The Stoas* (1991–97) contains a similar ambition of making space visible, but with startlingly different means. It begins by simply portraying the inside of industrial arcades in Athens, moving from one end to the other in static shots that discover a continuity of space in the alleys as a box shape. The orthogonal form of these arcades makes the shots resonate with square shapes and projections of squares in space. In one shot, the foreground contains a projection of bright sunlight from a square lightwell (Fig. 23), while the square opening onto the street radiates in the distance. In another shot, a square pallet in the foreground barring entry to the arcade appears to be related to the lightwell of the same arcade because they are the same size in perspective (Fig. 24).

Interspersed with these images of the empty arcades are shots of two hands appearing to hold space between them. In a conversation with Aurand about *The Stoas*, Beavers describes the hands as something similar to Moretti's plaster models. He had initially wanted to "film

40 "Conversation about *The Stoas*: Ute Aurand and Robert Beavers," *To the Winged Distance: Films by Robert Beavers*, London: Tate Modern, 2007. See also p. 143 in this volume.

41 Similarly, in *Amor*, the hand feeling the bespoke garment relates to the panning shots of architecture: "There is an urge to unite the eye and hand in touching, and to sense contours by grasping, etc." Robert Beavers correspondence with the author, November 2, 2015.

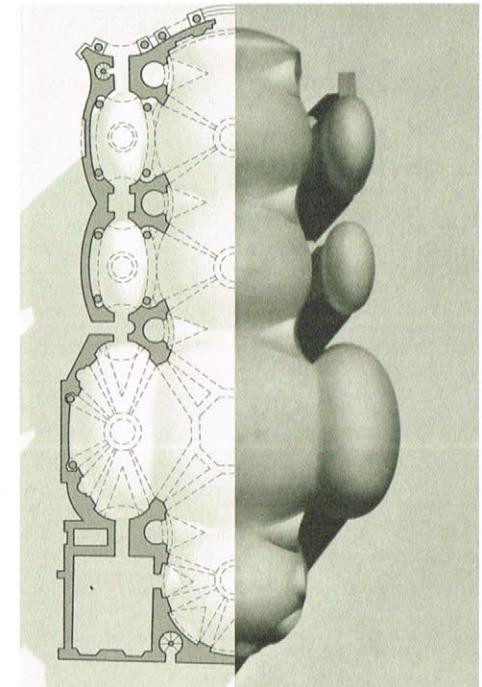


Fig. 22

vases and the space inside the vase that is not seen...the starting point was more the form of the vase than decoration..." But this conception transformed: "[The hands were] all that remained of my initial intention to suggest the space inside the vase that is not seen, the hands remained to suggest this space."⁴⁰ Two hands, outstretched towards the camera, the fingers extended but slightly bent as if cupping the air. They are not still, but alive and moving, not holding a tool or touching an object like so many of the other hands in Beavers's films, but simply feeling the emptiness between them (Fig. 25). The image conveys something beyond the visual: the felt sense of holding space between one's hands.⁴¹ Reconciling or uniting the

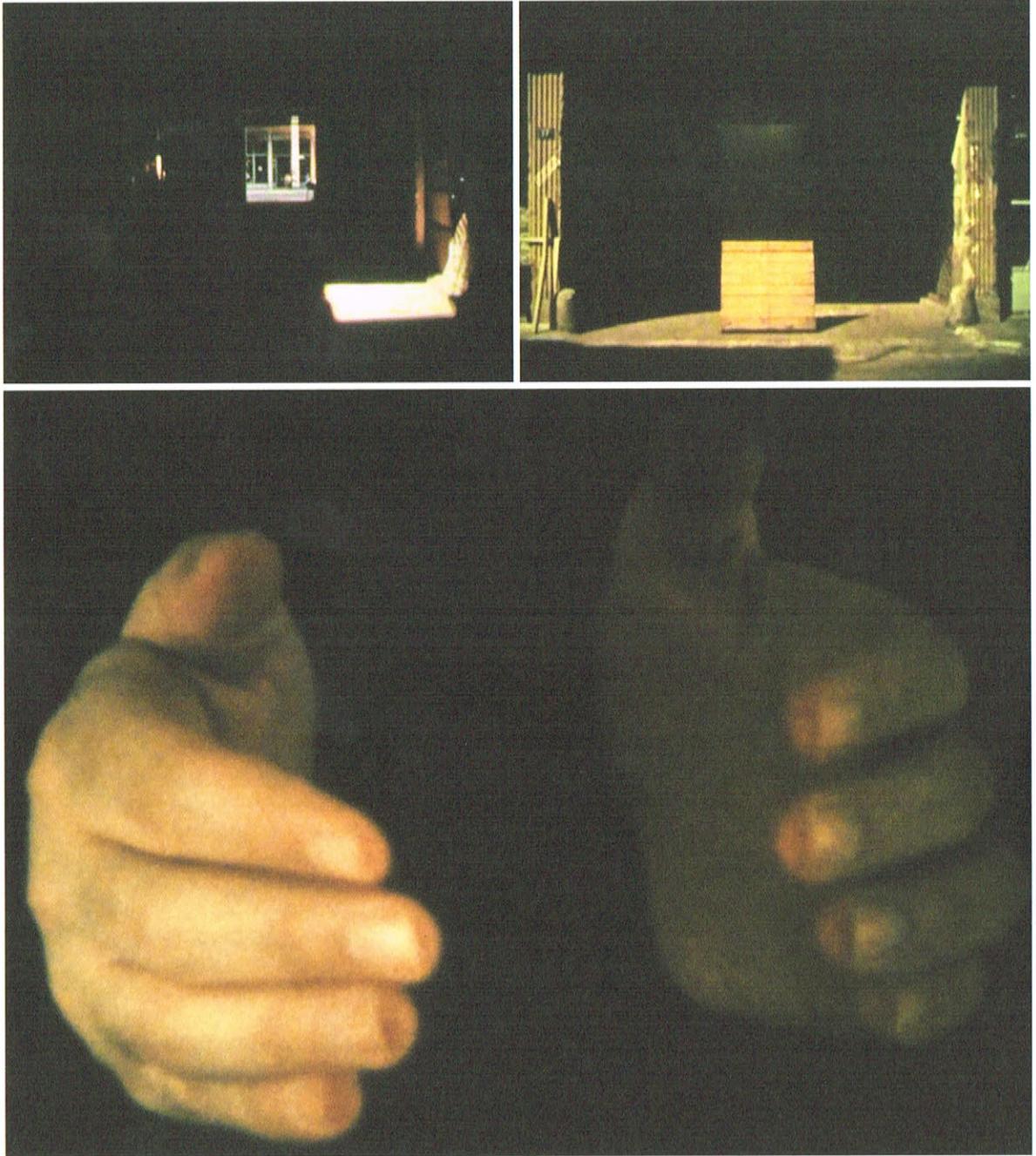


Fig. 23, 24, 25

hand and eye in this manner connects them through the ineffable conduits of the body's perceptual system. Space remains as invisible as air or a void but is also felt. Beavers refers to the pursuit of space with hand and eye in connection with the title for his 18-film cycle, *My Hand Outstretched to the Winged Distance and Sightless Measure*: "The rightness of the contour of space, or an object, is related to the hand. There is a sense of space even as something I would touch with my hand, that there would be a pleasure in proportion and space."⁴²

CONCLUSION: TECTONICS AND SPACE

Broadly speaking, Beavers's feeling for tectonics is centered on the connection between handcraft and form. The button and the base of the column, the suit and the faux stone of a rusticated façade – these analogies restore a tangible haptic dimension to architectural details which are often relegated to the status of visual ornament. Like Bötticher, Semper and Ruskin, Beavers reveals that these forms are dynamic and contain life forces inside them and on their surfaces, but are also always related to our sense of having objects in our hands. Conversely, space or the apprehension of space is addressed to the eye and the ear. Anamorphosis creates two-dimensional images from spatial compositions by virtue of the optics of the eye and camera. These images still hold their spatial information, but it has been rendered equivocal. Sound is often allowed the same ambiguity

⁴² Robert Beavers interview with the author, October 20, 2016.

as image, ultimately emphasizing the space of the shot.

If we treat Beavers's films as architectural treatises, it is fascinating that they eschew the conceptual separation between space and tectonics largely due to the parity of hand and eye. In all of Beavers's work, the camera and the editing table become the locus for a reconciliation of the hand and the eye. Indeed, his camera is an intimately handled thing. From his custom mattes and filters, to the manipulation of the lens turret and his use of the mirror to show his hands working the camera, the eye in the camera is often seeing at the behest of a hand's maneuvering of the field of view. Sometimes, even sounds are synced to the visible gestures of hands, like the sync marks used in sound editing.

In the quotation at the beginning of this essay, Ponge likens the peripet Greek temple to a stringed instrument. The image operates on the similarities of the two objects: the columns and the strings, the walls of both. It also complicates the analogy by an obvious shift in scale and the fact that while the columns and strings appear similar, one is held in place by compressive forces while another is pulled taut in tension. These correspondences and contradictions are so similar to those in Beavers's work that it is no wonder that Ponge should be one of his favorite poets. A deeper kinship lies in the fact that the instrument was made by hand and, moreover, that the instrument's form invites the hand to play the strings and cause its hidden space to resonate.