Bad Translation: Drawing by Contact

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Robin Evans famously claimed in his 1986 essay “Translations from Drawing to Building” that architecture is a process of translation. For centuries, the architectural discipline has tried to translate from idea to drawing to building with a minimum loss of information. However, he argues that such direct translation is impossible given the insurmountable distance between drawing and building. Instead, we should revel in the slippages and correlations between two- and three-dimensional space. By challenging conventional direct translation, Evans opened up possibilities for new methods and goals of architectural drawing, inspiring a generation of architects to develop ever more complex projection techniques for manipulating, rotating and distorting geometry. Yet this challenge did not go far enough; it continued to uphold many longstanding limitations of the architecture discipline. To finally acknowledge architecture not only as a cerebral endeavor but also a bodily one, we need to consider other kinds of “bad” translation.

As Evans rightly points out, the problem with direct translation is a philosophical one—it perpetuates the principles of essentialism. Stemming from Platonism, essentialism is the belief that forms originate in a higher realm of ideas which are then translated into the physical world. This position values disembodied concepts over material conditions. In architecture, Evans describes essentialism as the “attempt at maximum preservation in which both meaning and likeness are transported from idea through drawing to building with minimum loss.”[[1]](#footnote-1) This belief underlay the development of orthographic projection particularly in the Renaissance and Neoclassical periods, enabling a clear transition from mathematical proportions to elevation drawings to low-relief facades. Evans attacks essentialism for creating overly planar architecture: “too much bound up in the elaboration of frontalities”; [[2]](#footnote-2) but it is important that we challenge essentialism not just aesthetically but also philosophically. The elevation of disembodied concepts over the physical world keeps the origination of architecture in the realm of the general rather than the specific. Essentialism supports inherited ideals and downplays the possibility of learning from tools, materials, people, and sites.

Perhaps channeling the influences of Process Art from the sixties and seventies, Evans elevates *process* over inherited ideals by allowing the drawing process to be indeterminate and generative, producing concepts rather than simply translating them. Nevertheless, the tools involved in this process and its sequence remain highly conventional; drawings emerge only from the interaction between a person, a projection technique, and a planar surface. For Evans, drawings still precede any kind of material construction, as emphasized in his analysis of Karl Friedrich Schinkel’s *The Origin of Painting* from 1830.[[3]](#footnote-3) But if the aim is to dismantle the essentialism of architecture and its valuation of ideals over matter, then a far more radical questioning of the origins and techniques of design is needed.

If we take more seriously the precedents of Process Art, we can imagine a non-hierarchical feedback loop between concepts, material experiments, and drawings. Artists such as Lynda Benglis, Eva Hesse, and Richard Serra performed tactile material experiments, such as pouring paint, dripping latex, and throwing lead, translating them into concepts and writings which were then fed back into further material tests. Things get even more interesting if we look further afield to Body Art, where artists such as Yoko Ono, Carolee Schneemann and Vito Acconci used their own bodies as a medium to implicate both the artist and the audience as desiring, corporeal subjects. Applying this logic to architecture, one would radically undermine the influence of essentialism by starting the design process with both material experiments and desiring subjects.

Now, let us consider the possibility for “bad” translation. This process begins with contact. Designers observe materials and people through tactile, sensorial and individual interactions. They use representations—texts, measurements, drawings, images—to capture these specificities, not with the impossible aim of total translation but as a scaffolding for future interaction. These representations guide the design of insertions and alterations, which are tested materially and corporeally, and are documented with new representations. This process is a cyclical loop between the specific and the abstract—among bodies, drawings, materials, designs, and ideas—with known slippages between observations and representations. As with Evans, this challenge to architectural convention does not throw out disciplinary tools. It does not discard the idea of translation. Instead, it considers how changes in the order of operations and the insertion of new ingredients can redirect translation away from existing value systems.

By intersecting the material and the corporeal, this approach dodges several minefields in architectural discourse. It evokes a long lineage of architects—from Antoni Gaudí, to Frei Otto, to Friedrick Kiesler, to Frank Gehry—who experimented with materials to generate concepts and drawings. Unfortunately, such materialism has long carried a whiff of anti-intellectualism within the architectural discourse. Similarly, attention to the bodily experience has been dismissed for its connection to architectural phenomenology, an enemy of critical discourse. But not every call for embodied understanding aims to reinstate the universal subject and timeless typologies that permeate writings on architectural phenomenology. To begin with specificity—that is, specific materials and people with individual cultural and political conditions—is precisely to connect physical conditions with a critical and political understanding. On the other end of the spectrum, more politically-inclined practices based on engaging existing conditions and communities have disregarded the formal and representational questions in architecture, widening the schism between specificity and abstraction. The aforementioned approach of “bad” translation, in contrast, is about building a critical feedback loop between the specific and the abstract.

While this approach may seem thoroughly contemporary, it has existed for centuries as an ongoing strain of architectural practice. If we re-examine the mythical origins of western architecture in the Italian Renaissance, we see how integral physical contact has been to the discipline. Those credited with developing architectural drawing techniques in the 15th and 16th centuries, such as Donato Bramante and Raphael, prioritized the observation of existing structures as a starting point for design. Both Bramante’s surveys of ancient monuments and Raphael and Baldassare Castiglione’s letter to Pope Leo X signaled to their followers that the act of surveying existing buildings was central to the intellectual formation of the architect and the refinement of drawing techniques. Fulfilling their expectations, younger architects such as Baldassare Peruzzi and Antonio da Sangallo the Younger made extensive surveys of existing structures as references for their own design practices. They made hundreds of drawings through processes of physical observation—circumnavigating, climbing, and measuring existing buildings—to amass raw material for design.

Peruzzi and Sangallo’s survey sketches documented their physical contact with existing structures. Their surveying processes involved the use of a surveying compass called a *bussola*; [[4]](#footnote-4) this required the architect to physically move around the building and align the tool to the existing walls in order to notate the angles given (Figure 1). Dimensions were measured in palmi (hands) or piedi (feet), making explicit the physicality of the act of observation (Figures 2, 3). But these sketches of historical buildings were subsequently transformed into finished drawings that erased the mess of dimensions and corrections—turning the notation of contact into disembodied abstractions. The finished drawings sometimes even contradicted observed dimensions to favor ideal proportions, as with Sangallo’s drawing of the Pantheon (Figure 4) where he adds a staircase to make the plan symmetrical[[5]](#footnote-5). When Serlio reproduced a number of Peruzzi’s drawings in *Tutte l`opere d`architettura et prospetiva*, he made them even more abstract by relegating dimensions to textural descriptions on its facing pages. As Serlio’s text was widely distributed, images of these idealized architectural drawings were disseminated instead of the messy traces of physical observation. The canon of Renaissance orthographic drawings therefore foregrounded a lineage of essentialism and sublimated the history of design that begins with contact.

The long history of representation by contact in architecture can be mined for tools of contemporary design. Techniques intended for documentation, such as the surveys described above, actually recorded bodies coming into contact with materials. In the hands of contemporary architects, such tools can be used not only to document, but also to generatively design interactions between people and matter. In addition to orthographic drawings, many other techniques were used in the 19th century for the representation of existing structures through physical contact, such as charcoal rubbings, wet paper “squeezes,” and plaster casts. Through actions of rubbing and pressing, these processes created representations through the accumulation of mass, rather than line. Multiple versions of an existing object were produced, in a different medium and at 1:1 scale. These representational methods also recorded the contact of an observer handling a historic structure through repeated pressing and prodding. Moving even further from the architectural canon, there have been many types of ritualistic movement which have unintentionally created ephemeral drawings of architecture. Religious processions in the Piazza San Marco in Venice, for example, occurred in dialogue with the patterns built into the paving stones. The movement of bodies mapped out the spatial organization of the piazza, which in turn was articulated in stone to guide movement. Similarly, we can imagine how performance might be used today to document the organization and scale of a space, and to completely transform it. These cases show that even today, historical forms of documentation can be used generatively to produce substitutions, replacements, and iterations of a found condition.

In the hands of contemporary designers, such techniques can be used self-consciously through the processes of “bad” translation. While Evans revealed the limitations of direct translation, he looked only as far as projective drawing techniques in his search for resistance and liberation. To truly break from the lineage of essentialism in architecture, we need to acknowledge translation itself as a bodily process. From documentation to construction, design is in itself a process of interaction between bodies and material conditions. Rather than continue to erase these interactions, we can deploy the techniques that foreground them. The historical techniques mentioned above—surveying, rubbing, squeezing, casting—all form a bridge between documentation and design, ostensibly recording a condition but actually producing a transformation that records bodily interactions. When folded into a feedback loop between contact, drawing, and idea, these techniques render design inseparable from physical experience. This kind of translation occurs through iteration rather than erasure, with each iteration introducing new alterations and distortions from interactions between people and materials.

This mode of design is biased, specific, and messy. Deployed with self-awareness, it reveals the inclinations, movements, and limitations of the designer, as well as the idiosyncrasies of a site. Beginning and ending with observation, this kind of design process wrestles with the details of existing structures, landscapes and the people who use them. It abandons all ambitions of generality and universality. For too long, architecture has lived comfortably in the general, using techniques that privilege the universal over the messiness of the specific. But to be specific is to be political. At a moment when the specific needs of people and sites are clamoring to be heard, it is essential that we rethink our aims and our methods.

Conclusion

At stake in this discussion is the subject matter of architecture—whether its content should be understood as a timeless ideal, or conversely, the specificities of the external world. The mode of representation follows from its content. By aiming to translate an ideal into drawings, then into a building, one is guided toward the all-too-familiar drawing techniques of orthographic, axonometric and perspectival projections; an interrelated system of linear representations. The very word “projection” speaks to this aim of catapulting an idea from one medium to another.

As an alternative, let us consider a shift in both subject matter and medium. If we acknowledge that architecture begins with an encounter—with bodies measuring the messy material matter of buildings, landscapes, and other bodies—then we need to allow other tools of representation into the canon. This is where techniques of imprinting, casting, remaking and performing offer entirely different ways of thinking about abstraction and translation. Matter produces abstractions, which produce ideas, which produce more matter.

Projects

“Primo Piano,” 2016

This graphic floor installation at the American Academy in Rome foregrounds interactions with idiosyncratic existing conditions. The project began with documentation of the existing floor pattern—a grid of peperino stone rectangles inlaid with travertine circles and squares. Measurements of the existing floor revealed a complete irregularity across the panels, and the impossibility of generalizing its geometries into a grid. Inspired by nearby Medieval church floors with elaborate stone inlay flooring, another geometric pattern was superimposed onto the ground for the project. This superimposed pattern revealed underlying geometric relationships with the existing floor, as well as moments or irregularity indicated by distortions and compressions. To further the interplay between generality and specificity, adhesive vinyl shapes were cut out according to the design of this new pattern, then adjusted on-site to fit each irregular stone panel. The adhesive pieces were then rubbed on with the hands and feet of volunteers. After the project was exhibited for three months, it was de-installed by the dancer Melissa Lohman, who peeled the shapes up as she rolled across the floor, ending with herself wrapped in a ball of vinyl. Thus, the project began and ended with the floor being measured by bodies.

“Body Props,” 2016

A series of wearable props join bodies and buildings together. Acting like prosthetics, these objects are precisely situated between the domains of body and structure. They interlock around shoulders, necks, or hips on one side, and into architectural corners or furniture edges on the other side. By materializing the negative space between bodies and structures, they augment experiences of sitting and leaning. The creation of these objects involved mapping the precise contours of bodies and structures onto foam panels. The outer contour of each body and architectural surface was traced onto a sheet of polystyrene foam held against the body or structure, and this process was repeated for several layers of foam to roughly map the changing surfaces of each object. The foam was then cut and glued to create objects that mapped the direct impression of bodies on one side and architecture on the other. Used both indoors and outdoors, they created surprising social situations. The project was extended to more complex and lush objects wrapped in felt for an exhibition titled *Tailored* at Pinkcomma gallery in Boston. These larger hanging objects interlocked only with bodies, rather than architecture, but allowed for multiple interlocking between different people.

“Corpo Estraneo,” 2016

A recent project in collaboration with choreographer Melissa Lohman at the Piazza del Campidoglio in Rome, supported by the American Academy in Rome, turned the physical act of measuring architectural space into dance. Referencing the work of Antonio da Sangallo and Baldassare Peruzzi—namely, the act of learning by walking and surveying a site—the project was a performance with five dancers who mapped out and transformed the Piazza’s existing ground pattern designed by Michelangelo. Armed with long white poles, five women began by slowly swinging and laying down their poles to measure the first inner ring of the spiraling pattern. As they moved to each successively larger ring in the pattern, their movements became more sweeping, ultimately measuring the distances with full leaps and swinging poles. Angling towards and away from the lines on the ground, the bodies of the dancers and their poles formed three-dimensional extensions and iterations of the original pattern. Plan drawings based on physical surveys of the site were used as loose notations for choreography, acting as a framework for future movement, but the performances were developed on site at 1:1, by the dancers measuring the ground pattern with their bodies.

“Imprint,” 2017

This project is a large-scale cast of a Brutalist façade at the Orange County Museum of Art in California. As the building is facing demolition, this cast serves as both a temporary entrance wall for an upcoming exhibition and a record of the building when it no longer exists. The facade of the building is an undulating ribbed surface of sand-blasted concrete with large pebbles as aggregate. To create a large, 26 x 7 foot cast of this facade, fabricators from ADM Works made a silicone cast of the building, which in turn acted as a mold for a fiberglass cast. The resulting fiberglass copy of the building is a 1:1 replica, that captures every detail of the texture, but in a completely different material. It's translucent and light instead of opaque. Since the piece is installed in the glass windows of the front facade, the piece is backlit by daylight and appears even more ethereal. The positioning of the piece was meant to create sculptural continuity with the surrounding facade, but noticeable material discontinuity. This highlights the artificiality of the representation--its difference from the original. This is an intentional contrast to other traditions of documentation and reconstruction in preservation, which aim for objectivity. Instead, this copy acknowledges its own artificiality and the corporeal dimension of its construction.

“Inverting Neutra,” 2013

The project transforms the Neutra VDL House, designed by Richard and Dion Neutra, through three-dimensional drawing. The project calls attention to the void spaces of the house—a sequence of exterior patios that weave through the interior—by filling them with grids of hanging blue cords. The cords extend the organizing lines of the house, particularly the vertical lines found in stair railings surrounding the patio spaces. But rather than registering an underlying regularity, the project manifests differences in dimensions, scale, and natural conditions between the various exterior spaces. Despite the fact that the house was built based on a structural module, each of the patio spaces has slightly different organizing lines. The grid of strings therefore has a different spacing for each patio, expanding and contracting to fit its immediate site. The process of design, detailing and constructing the frames for these cords followed a similar logic to produce bespoke structures and attachments for each patio. Each aluminum frame structure was created on-site in a back-and-forth manner, oscillating between measuring and modifying in order to create a custom fit. Since the blue cords were weighed only with light fishing weights, they could move in the breeze and respond to human touch, thus visualizing the dramatic differences in wind exposure around the house and revealing variances in human occupation. The seemingly gridded system therefore registers the specificities of its different architectural settings and the constant movement of its environment.

1. Robin Evans, “Translations from Drawing to Building,” in *Translations from Drawing to Building* (London: AA Publications, 1997), 181. [↑](#footnote-ref-1)
2. Ibid, 172. [↑](#footnote-ref-2)
3. “Drawing in architecture is not done after nature, but prior to construction; it is not so much produced by reflection on the reality outside the drawing, as productive of a reality that will end up outside the drawing.” Ibid, 165. [↑](#footnote-ref-3)
4. Vaughan Hart and Peter Hicks, eds., “Appendix: The Letter to Leo X by Raphael and Baldassare Castiglione,” *Palladio's Rome: A translation of Andrea Palladio’s two guidebooks to Rome* (London: Yale University Press, 2006), 185. [↑](#footnote-ref-4)
5. Christoph Frommel, ed., *The Architectural Drawings of Antonio da Sangallo the Younger and His Circle*, Vol. I (Cambridge: The MIT Press, 1994), 136. [↑](#footnote-ref-5)