Desiring Practices
Architecture, Gender and the Interdisciplinary

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The word ‘garb’ has its etymological roots in the word ‘garbo’, which means grace, generosity, good manners in both Italian and Spanish. Both words are associated with outward appearances, coverings—habits. The word garbo is also specifically associated with ‘contour’ and ‘outline’, sometimes used in reference to the gentle curvature of the hull of a ship.¹

The joint, that is the fertile detail, is the place where both the construction and the construing of architecture take place.²

This paper focuses on one of Louis Sullivan’s most celebrated buildings, the National Farmers’ Bank in Owatonna, Minnesota. The bank was designed and constructed in the first decade of this century and marks the beginning of the end for Sullivan’s career. While the building is often cited as an example of organic regionalism, at the time of its construction it was a freak of nature, an odd weed that had found room to grow. To this day it remains exotic in every sense of the word. First time visitors to the bank often mistake it for a house of spirits. Locals go about their business, but are afraid to be caught looking. The building throbs like a pair of lovers in church, subverting its own intentions. Its form clearly transcends its function.
Frank Lloyd Wright once described the National Farmers' Bank as "a high wall with a hole in it." His hidden agenda, of course, was to divert attention: "How long will it be before the world recognises me as the Master and Sullivan as the man?" Although he later changed his tune and praised the building as one of Sullivan's best, his earlier condemnation betrays his uneasiness with the bank's surplus detail. His critique suppresses the parts in favour of the whole and its high wall. His fear was understandable; the building's simple geometry is a clever ruse: without this centring device, we would be swamped.

In **Reading in Detail**, Naomi Schor questions the gender and the sexuality of the detail. Her 'Archaeology' traces its traditional association with the feminine and the decadent, and deconstructs a variety of attempts to sublimate, displace, and fetishise 'detailed'. While Schor's aesthetics are built primarily on examples from literature and painting, a more comprehensive 'history of the detail' would certainly find much to ponder in architecture. In light of Schor's tentative conclusions that no evidence so far supports a gendered explanation of the historical opposition in Western culture between idealism and detailing, this study is not framed in those terms. I am interested, instead, in Schor's comment that "Whether or not the detail is feminine... the need to affirm the power and perversity of the feminine particular cannot for the moment be denied." She elaborates:

> Indeed, further investigation of this question may lead us to formulate a surprising hypothesis, namely that feminine specificity lies in the direction of a specifically feminine form of idealism, one that seeks to transcend not the sticky world of prosaic details, but rather the deadly aspereities of male violence and destruction.\(^\text{9}\)

Therefore, "a high wall with a hole in it" suggests a weak aesthetic position for the National Farmers' Bank only if one chooses to draw a line between detailing and idealism. Guided by Schor's hypothesis, then, it would be a mistake to take sides in any war between the material and the immaterial. While this paper suggests another reading of the National Farmers' Bank through an examination of its details, it is not an attempt to validate detotalisation, but to make room for another kind of intelligence, one not usually associated with architectural design: the building is stitched together, at once sea(d)mony and unseat(ed)ly. It must be considered 'master-piece-work' because it is both brilliantly conceived and out of control. It defies dichotomy, an ethereal and erotic bank? The details alchemise as they organise.

This case study's larger ambition is not to fetishise the detail itself, but to arouse interest in methods of detailing. The everyday practice of construction documentation precedes the object—the process of fabrication is a more significant subject. I have no desire to take the bank apart according to its details; I crave, instead, its reconstruction. The architectural detail can only be read in the context of re-enactment. Architecture is a collaborative performance art form where methods of production are at least as consequential as the final product. A history of architectural detailing—as opposed to that of the detail—would be another history:

> It would be possible, I think, to write a history of Western architecture that would have little do with style or signification, concentrating instead on the manner of working. A large part of this history would be concerned with the gap between drawing and building, in it the drawing would be considered not so much as a work of art or a truck for pushing ideas from place to place, but as the locale of subterfuges and evasions that one way or another get round the enormous weight of convention that has always been architecture's greatest security and at the same time its greatest liability.\(^\text{4}\)

The most potent issues of gender in architecture—those which arise from practice—are suppressed by conventional history which privileges the product over its methods of production. Architecture remains intransigent to the extent that its everyday practices are bound and gagged. This case study of the National Farmers' Bank through its techniques of detailing is an attempt to rescue the everyday practice of working drawing production from history's indifference. This study is also a demonstration of what architecture has to contribute to the question of detailing raised by Schor's work.

The original transparencies of the National Farmers' Bank working drawings are lost, along with Sullivan's diary and most other records of his office's daily transactions. My story is necessarily pieced together from those documents that remain behind, a relatively complete set of blueprints used during construction and a few letters by George Grant Elmslie, Sullivan's draftsman and this project's most significant other. Four years ago, I stumbled upon the blueprints, which had been stored unceremoniously in the bank basement since its actual construction. The prints I found had clearly been discarded, sloughed off like work clothes at the end of the day. Many of them were full-size details. As I pulled the largest ones from the abject heap, I marvelled at their survival:

> As all working drawings and specifications of architectural work are instruments of service for use during the actual construction, full-size details may perhaps be called 'temporary instruments' of service. The general working drawings, specifications and scale drawings are always sacredly filed and guarded after the completion of the work, to serve as permanent records of executed work, and very often become active again should any addition or alteration to the executed work be required.

Full-size details are not so sacredly treated, for although they may be kept for some time after their service is over, they are usually too large to permit permanent economical filing. Often the method of construction or use of a particular material, which was the very latest at the time the detail was made may have become entirely out of use, with the progress of science, in
a short time. Should later information be required of work executed from a particular drawing, this can best be obtained from actual conditions at the completed building. Therefore, detail drawings should be made as simply and as economically as possible, but making details simply and economically does not mean neglecting careful study.¹

The blueprints left behind in the basement inevitably call attention to details. Over half of the drawings were drafted full-size, a practice common among Sullivan’s peers but starting to wane when the bank was constructed.² In the context of Sullivan’s entire career, and of common practice among his contemporaries, the large number of full-size construction details produced for the National Farmers’ Bank is quite unusual.³ Full-size drawing was normally reserved for ornamental details. Full-size details of other building components were called for in special circumstances only. In this set, full-size details are the rule, not the exception. This anomaly forces a consideration, then, of a more ambiguous relationship between ornament and structure than is the case with most of Sullivan’s other work.

Throughout Sullivan’s career, his ornamental designs were usually sketched freehand with a soft pencil at whatever size the paper at hand dictated.⁴ Many of Sullivan’s preliminary sketches that survive are on small scraps of paper and pieces of stationery. At the outset of the design process, these details were often simply graphic designs with no designated scale.⁵ Although Sullivan did occasionally prepare full-size working drawings for ornamental elements, that task was usually assigned to his draftsmen. The final design emerged from a three- or four-step process of enlargement and refinement; the ultimate tracing was frequently inked. The design process did not stop with drawing, however. Most elements were also subsequently modelled and prototypes were necessary for many methods of their manufacture. Sullivan’s practice was common, and no doubt he thought of himself as the overseer in this process. Nevertheless, the degree and nature of his participation must be questioned in many cases, especially in that of the National Farmers’ Bank. All surviving sketches and drawings of the building are in George Elmslie’s hand.

I made every drawing that enters into the fabric of your building, every design from your stencilled walls to your stained glass, your clock, electroliers, grilles, everything. I never meant to say anything of this kind, but at the parting of the ways surely no harm is done.⁶

How many times with a modeller at his clay, in interpretation, I have watched the 3-dimensions appear and what high grade pleasure it was, “Emphasize this more! Too deep here! Raise this part of the foliage! Subdue here.” Finally O.K. and just as desired and impossible to show on a drawing.⁷
By the 1920s, architectural magazines were publishing articles about drafting-room practice that dismissed full-size drawing as outmoded. The reasons are very clear: ornamental embellishment of buildings was denigrated in some circles and many draftsmen had lost patience with the instability of dimensions over wide expanses of shrinking and stretching drawing surfaces—many had been trained in more reliable methods of detailing. Given the newly emerging machine aesthetic, tolerances of all sorts had become very narrow.

Just after the turn of the century, however, full-size drafting was a flourishing practice. At the time it might have even seemed relatively efficient: in contrast to just a few years earlier, large sheets of linen could now be unrolled, not pieced, special drawing tools could be purchased, not adapted; and, most importantly, the blueprinting process could be more carefully controlled because it now used artificial illumination, not sunlight. These advantages notwithstanding, the full-size drawing still presented a challenge—to its maker and the builder. The question remains: why did George Elmslie, an experienced draftsman, choose to make such an extraordinary number of full-size construction drawings for the National Farmers' Bank? While Sullivan's part in this decision will probably never be known, it is safe to assume that, given all the evidence, Elmslie made most of the day-to-day decisions in Sullivan's office at this time: any ambiguity these prints create between the necessary and the excessive must be his doing. If the building is something other than a bank, it is because George Grant Elmslie, the quintessential everyday man with time on his hands, found too much freedom in his anonymity. The drawings, like the building, are a sanctuary for his proclivity to overdo.

Casually inspecting the bank blueprints, we see little precise delineation of ornamental surfaces in elevation—only bits and pieces of this skin cling to the drawing surface here and there. Since most of the full-size details in this collection of blueprints were drawn in section, they often present aspects of the building obscured by ornamentation. These sections are rarely literal slices through the building; the skin is sometimes detached for closer inspection. On rare occasions, the ornamental skin is peeled away completely before the cut is made. A section through one of the four 2-ton electroliners, for example, describes the monstrous fixture as if it were a bony structure, not as it appears: a massive surge of foliage through the banking room ceiling. The electroliner print was prepared as a shop drawing by Winslow Brothers Ornamental Iron, not by Elmslie. It is dryly intriguing but ultimately disappointing: we need to touch the models and castings that produced the light fixtures' extravagant garb.

Elmslie's full-size section through the building cornice, on the other hand, is much more intimate: it lets us rub against the out-of-reach and put our hands in secret pockets. The cornice's elevation is only lightly delineated; its brave front barely shows. Elmslie exposes the hidden contours of this apparent boundary
between building and sky. Now we know: the proud top of this building is a fragile rim of lonely spaces. Elmslie claimed the cornice was one of Sullivan’s two contributions to the bank design. This drawing lets us feel the corbel’s doubt: is this too much? is this too far?

Below the cornice, the building’s ordinary brick bearing wall comes to life when it hits the outside air: the exterior tapestry brick surface is braided with tile and studded with terracotta. Sheet 42, a full-size plan section, details how this spectacle quietly wraps a corner. It takes a reduction in scale, however, for its companion, sheet 42 1/2, to show how the display plays out across the elevation. Horizontal and vertical sections impose upon the elevation—and weave it together. Inextricably linked, these two drawings are not static cross-sections and fixed elevations, they are diagrams of a dynamic tectonic scenario. The prints are most easily read by acting out the construction process, brick to tile to brick: the fabric becomes a fabrication. These prints threaten to lose us if we do not play along. Trapped in the necessity of joining, no detail seems excessive.

The brick details, like the cornice— unlike the electror— are concerned with the materials which define the building’s surfaces. While methods of attachment to the larger architectural armature are conspicuously absent from most full-size fragments, the details reveal the extent to which these places have been embedded, not merely draped. For example, the sandstone plinth actually bleeds into the common brick backing at the bank’s corner; taking the place of brick, stone bears a more pedestrian burden. The skin of this building is a thick assemblage, not a simple profile.

If the number of full-size construction details for the National Farmers’ Bank seems improper, it is simply because they blur distinctions between the building and its ornament and between building and drawing. The National Farmers’ Bank blueprints are the primary demonstrations of a spectacular architectural event. They affirm, simultaneously, the pleasures of drawing and building and, in doing so, affirm their intimate corporeal connections. The blueprints make a place for our hands even as they describe a construction too large and complex to grasp.

These enormous prints are the luxurious, erotic conflation of sight and touch. They intend to seduce. We want to lie down next to them, trace their contours. We want to wrap our bodies in sheets of details. We want them in the same way we want the bank: both these drawings and the building make us forget, for the moment, that we came to make a transaction. Not since medieval times has the gap between drawing and building been so infinitesimal, yet charged.

Of all the prints in the bank basement, the most beautiful is sheet 43—plaster details for the banking room ceiling. Due to its leathery texture, the 42 inch x 94 inch print is easy to handle, despite its frayed and stained appearance. This sheet was handled a great deal during construction: a template in the most literal sense, it is pricked with the scars of its own projection, traces of translation from drawing to building. We naturally imagine that the building itself must be correspondingly wounded, but the plaster mouldings are too distant to examine. To assume this blueprint was the only tool necessary to define these plaster details is an innocent mistake; however, it had an accomplice. As is true with many buildings, the models, casts, and other devices produced for the National Farmers’ Bank have been discarded or consumed by their own construction. In this case, the secret link between this drawing and the building was a temporary contrivance, another template, fabricated on the construction site to mediate their differences.

The delineation of the ceiling moulding profile barely survived its fabrication. The precisely drafted edge is interrupted and erased. It is also defaced by a trail of tiny holes that mark a contour once shared with the zinc-and-wood mould that ran its length. The running mould itself required temporary guides, slippers, at its nib and toe. Brushed with paraffin oil to prevent swelling, the mould dragged its
negative impression into the wet plaster surfaces. Spread out on firmer ground below, the full-size plaster details recorded this messy construction process. The drips and stains now ornamenting the print collect and organise another image of the bank interior.

Medieval architects used similar techniques. The use of full-size templates was an especially sophisticated practice in the Middle Ages. While they were frequently custom-made for specific projects, they were also reused and shared among guild members. Methods of template production and specifications for particular patterns were often carefully guarded in-house secrets. Medieval templates were encoded with instructions that went beyond their obvious two-dimensional shape or outline; they were devices which, when properly deployed, generated three-dimensional details and components. In a sense, they were instruments of projective geometry before its invention. Architectural projection is now most often used as a prefiguration device, an aid to formal composition. Any notion that the drawing might guide the fabrication of a builder's implement, survives only in the most inventive practices. Like the National Farmers' Bank plaster details and the brick diagrams, the medieval designer's working methods linked hand to eye to mind.

As we might expect, in contemporary practice, templates are frequently configured on, and implemented through the computer, not by hand. In Frank Gehry's office, for example, manufacturing software appropriated from the aerospace industry will be used to cut complex curves in the Disney Concert Hall stonework. A similar process is being examined for the production of curved glass templates. In the case of stone, the computer model will control the production of component parts directly, while, in the case of glass, it will define a template only and serve as a link between model and materialisation. In Gehry's practice, where the model comes first and drawings follow, the computer is becoming a method of doing away with the production of traditional working drawing, a tradition which makes complex and idiosyncratic geometry difficult and expensive to realise: the computer is not a medium for streamlining working drawing production, it is instead a convenient tool that further enables the firm's haptic and intuitive aesthetic. In architecture, desire and pleasure as well as signification are materialised or suppressed by methods of detailing. Frank Gehry's use of computers, then, is both evasive and subversive; in the laboratory of this alchemist, the war machine is disarmed.

Like Gehry's computer models, the partially destroyed sheet of plaster details for the National Farmers' Bank is not a drawing in the conventional sense. A template of a template, its enigmatic surface brings to mind the medieval tracing floor. In the Middle Ages, the tracing house protected a large plaster floor that medieval designers inscribed and reinscribed as they worked, floating new layers of plaster over mistakes and revisions. Archaeological reconstructions of
these floors are palimpsests of the construction process. It was the first structure built at the cathedral site, the place where the building was configured and its templates were designed. There was a built-in reciprocity between drawing and building; the construction process—to borrow a phrase from my colleague Julieanna Preston—made a life-size formwork for the activity of drawing. This blueprint—like its contemporary counterpart, the electronic workspace—is a portable tracing house.

In addition to their work within the tracing house, medieval designers also mapped out full-size figures directly on the site itself, or on the building as it was being constructed. Vestiges of these practices remain in contemporary construction methods, but the architect usually makes his or her marks on a model in the office. In contrast to medieval methods, modelling is now a substitute for building and, in many cases, the mock-up makes a mockery of materiality. In the office of Venturi and Scott-Brown, Robert Venturi makes a habit of revising studies, line drawings pasted to foam core boards, with a pink magic marker. These drawings, and subsequent revisions, are frequently plotted full-size from a digital file. The stone arcade for the Seattle Art Museum was studied this way—the final dimensions of the reveals determined from a series of full-size facsimiles constructed of foam sheets. In Venturi’s case, however, the process is simply a validation of intention: the stone itself is a veneer not much thicker than the model itself. In contrast to Frank Gehry’s CAD/CAM models, Venturi and Scott-Brown’s full-size models and drawings are tools for composing, not constructing. The building itself becomes an armature for similar surfaces of cultural projection.

Postmodern ironies aside, to those of us burdened by a more conventional approach to orthographic projection—point to point, plane to picture plane—full-size drawing seems curiously anachronistic, excessive, labour intensive. Consequently, we are prone to misread the National Farmers’ Bank blueprints, just as we misread the medieval tracing floor. These full-size drawings are not pictures but demonstrations of how drawing builds: no polite dialogue but an erotic ménage à trois. These prints seek the hands of the drawing’s illicits accomplices, the builder and the builder’s tools. Exaggerated to the point of hallucination, these details do not simply delineate the building, they embody its fabrication.

Despite their obvious differences, the medieval architect’s plaster tracks, Frank Gehry’s electronic signals and the National Farmers’ Bank blueprints share a similar approach to architectural production. In each instance, the full-size image is a demonstration not a prefiguration. The full-size detail, then, gently draws together the building and its makers; it maps another architecture, the architecture of materialisation.

At the turn of the century, the production of full-size details usually followed the construction process and mirrored the social organisation of the building trades involved in the project; a detail was drafted, as the need for specificity arose, often taking its fundamental dimensions from the partially completed building. In the case of the National Farmers’ Bank, however, several full-size details were drawn prior to any actual construction at the site. In general, these details represent a certain amount of prefabrication, appropriating information about building elements that had been modelled and cast elsewhere by the various craftsmen involved in the project. In the act of manufacturing the bank, drawing alone was often an impotent technology. The excessive number of full-size details—some of which might be considered wholly unnecessary—must be considered a civil attempt by Elmslie, who perhaps had too much time on his hands, to reclaim the building from its subcontractors, to gather close around him—like so many Pygmalion fragments—this more distributed construction site. His obsessive delineation might also be considered an attempt to participate, vicariously, in the construction process. The bank’s full-size details not only demonstrate its materialisation, they also construct a more fugitive architectural image. In Sullivan’s office, hundreds of miles away, Elmslie’s elegant contours took the building’s place.

The National Farmers’ Bank is not a bank but an armature for material excess—responsibility for the building’s excesses is distributed and concealed among its details. For the most part, the building’s overall ornamental effects are the product of relentless repetition of the individual unit, and this accumulative effect—the flow of various materials and methods of assembly, one into the other—was co-ordinated but unforeseen. As the bank materialised piece by piece, the scale of its effect became apparent: the building as a whole was both formed and deformed one piece at a time. In the end, however, the full-size details remain the bank’s most significant surplus: more like diagrams of collaboration than instruments of prefiguration, they focus our attention on the dynamic act of detailing, away from the static image of the detail. They beg us to re-examine our daily habits—to practice architecture con garbo.

The practice of full-size detailing is not so much a gendered practice as it is a gendering practice. Methods of detailing, then, call attention to the architect’s body. This body is...
This rare, affirmative understanding of the body animates the "feminine particular" but it does not necessarily predetermine its form.

Although the full-size working drawings for the National Farmers' Bank do not seem to present a viable methodology for new practices, Frank Gehry's work demonstrates how the desire to manipulate materials in new ways demands its own methods of mediation and frequently rediscovers the full-size template. While digital codes seem far removed from George Elmslie's gentle superfluities, it is simply the hard, bounded surface of the computer projection, the video screen, which appears to sever our relationship with materiality. The corporeality of architecture persists, however.

The practice of full-size detailing is, of course, only one particular method of architectural inscription, but this practice of excess persists—perhaps because it is a desiring practice:

It has been argued that while psychoanalysis relies on a notion of desire as a lack, an absence that strives to be filled through the attainment of an impossible object, desire can instead be seen as what produces, what connects, what makes machinic alliances, instead of aligning desire with fantasy and opposing it to the real, instead of seeing it as a yearning, desire is an actualisation, a series of practices, bringing things together or separating them, making machines, making reality. Desire does not take for itself a particular object whose attainment it requires; rather, it aims at nothing above its own proliferation or self-expansion. It assembles things out of singularities and breaks things, assemblages, down into their singularities. It moves; it does.

All Photos: Clare Cardinal-Pett

Notes
1 A footnote offered by Marco Frascari after presentation of an earlier version of this work at Open and Closed Representation, the University of Pennsylvania, March 1995.
4 Elmslie letter to Frank Lloyd Wright, 1936, pp. 140-142.
6 Schor, Reading, p. 97, (author's italics).
7 Schor, Reading, p. 97.
8 Evans, R., "Translations From Drawing to Building", AA Files, no. 12, 1986, p. 16.
10 Breiby, "Making", Points.
11 See, for example, Paul Sprague's catalogue of the Sullivan collection at Columbia University's Avery Library Archives, The Drawings of Louis Henry Sullivan, Princeton: Princeton University Press, 1979. Many historians have been frustrated by the fact that a larger number of working drawings for Sullivan's buildings have survived than preliminary sketches. This has happened partly because Sullivan had a tendency to hang on to the construction documents and throw away other work. I think it is interesting to ponder why he threw away what, even at that time, he knew might become objects of desire.
12 Sprague, Drawings.
13 During the discussion following my presentation, "Full Size", at Open and Closed Representation, Alberto Perez-Gomez pointed out that the notion of scale commonly associated with architectural practice did not exist during the Middle Ages. While it is important to remember Perez-Gomez's comment when, later in this paper, I draw some parallels between full-size detailing and medieval practices, it is interesting to point out here that Sullivan (and possibly Elmslie, to a certain extent) did not seem to have much interest in issues of scale, leaving that practical matter up to others; his imagination may have been more medieval than he would have liked to acknowledge.
14 Elmslie letter to Mrs. Lydia Bennett Freeman, December 7, 1959. Typescript copy at the Northwest Architectural Archives, University of Minnesota.
15 Elmslie letter to Purcell dated October 15, 1940, at the Northwest Architectural Archives.
16 Breiby, "Making", Points.
18 Elmslie letter to Purcell, April 18, 1939, Northwest Architectural Archives.
20 Author's conversation with Michael Maltzan of Frank Gehry and Associates, Summer 1994.
21 Historically, aircraft production and shipbuilding have many techniques in common with architectural practice—that the two industries (which have obvious military purposes) have, until quite recent times, made prevalent use of full-size drafting is only briefly noted here. A more comprehensive study of the history of full-size detailing in architecture would call for a richer elaboration of the connections between architectural production, the aerospace industry, and shipbuilding.
23 In aircraft production the "tracing floor" is referred to as the 'lofting floor' and full-size drafting is called 'lofting'. Smooth, level, wooden platforms were common—eventually replaced by metal. The drawing surface was typically painted light green to reduce glare. In shipbuilding, the terms 'lofting' and 'laying off' are used interchangeably. In the shipyard, 'mould loft floors' were usually carefully constructed wooden platforms, blackened, then marked with chalk. The floors were occasionally 'screved' to make chalk-catchng grooves in the wooden surface. In both cases, the 'floor work' led to template production. All these activities now take place in electronic space.
24 Conversation with Mark Stankard formerly of Venturi, Rauch, Scott-Brown, Summer 1994.
26 Grosz, Volatile, p. 165.