

## Detail Deliberations<sup>1</sup>

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Fall 2008

Naomi Schorr, in her Reading in Detail: Aesthetics and the Feminine, indicates how detail – in the visual as well as literary arts – is always foregrounded at moments of crisis in culture, at moments when the notion of the subject is being reinterpreted. She makes the point that detail, in being linked to issues of ornament, the everyday and the feminine, is an arbitrator in a definition of humankind that is other than male, white, and hegemonic. I would like to suggest that the change to architectural production brought on by parametric design, though not normally linked to a discourse of detail, is in fact essentially tied to it and that this is indeed a moment of architectural detail crisis. As such, we need to trace both the nature of the new detail and the reconstituted subject it implies.

The 19th and early 20th century witnessed a similar crisis and the socio/aesthetic issues of this period provide the terms for a contemporary analysis of detail. Because industrialization brought with it a threat to craft and anxiety over detail (either supporting craft or effacing it), the expressive, economic, and social status of both were at the forefront of architectural debate. Both the problematic and the imagined aesthetic solutions offered at this time are strikingly similar to those of today.

John Ruskin, perhaps the most provoked 19th century architectural moralist, developed a life's work equating good architecture with good workers with a good society. Thus, his concern that the craftsman not be a slave to the designer/architect, mindlessly carrying out prescribed procedures, is a plea for the craftsman's essential identity and his role in the detail is at its heart. If the artisan is doing nothing but sanding, refining, and perfecting something he had no hand in forming, it is a-moral conceptually and economically. A particular definition of detail emerges – it is born when craftsmanship dies.<sup>2</sup>

Weighing in on this concern but with a different judgment, Adolf Loos, the early 20th century cultural modernist, professed a less sentimental view of the freedom of the craftsman and the need for self-expression. Loos argued with his Viennese predecessor Josef Hoffman – and implicitly, before him, Ruskin and William Morris – over the need for the “joy of labor” that comes with working off the assembly line and directly with ones hands. Loos claimed that craftsmanship is *essentially* impersonal; that any evocation of a craft tradition would acknowledge its repetitive, system-like essence. Of the carpenter, he writes “straight lines, right-angled corners: this is how the craftsman works who has nothing in front of

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<sup>1</sup> This essay is indebted to authors who have made observations that this essay attempts to weave together, but whose original insights stimulated much of the thinking here: Bernard Cache, whose articles draw attention to the fact that current parametric means of production are a fulfillment of late 19th century aspirations; Ed Ford, whose examination of the difference between 19th century construction and 20th century construction in his Details of Modern Architecture is not just technical but conceptual and social; and Paolo Tombesi, who in his presentation at the “Building in the Future Symposium” and his essay here, is so dexterous in putting the profession of architecture in the context of labor economy.

<sup>2</sup> Edward R. Ford, Details of Modern Architecture. MIT Press (Cambridge MA) 2003, introduction.

him but his materials, his tools and his predetermined objective.”<sup>3</sup> Indeed, for Loos, the enemy isn’t the non-manual, it is – and here he does agree with Ruskin - the artist that the craftsman has to serve. The craftsman on his own would naturally make things “in the modern spirit,” modernity being defined by the dismissal of the need for autobiographical expression. In other words, Loos identified the natural affinity between craft and industry in their shared dispensing of artistry altogether.<sup>4</sup> For Loos, likewise, the true architect who understood that he was *not* an artist dispensed with the traditional working drawing and its concern for fixing dimensions and details. He prided himself in never dimensioning a building, for being “an architect without a pencil,”<sup>5</sup> directing the workers personally at the job site.

Gottfried Semper, in his *Der Stil*, proposes another story of detail, one that both displaces the dichotomy that pits it against craft and also places both at the beginning, not the end, of the production process. In his indication that cladding was the principal act of architecture, he shifts attention away from structure toward enclosure and with it, emphasizes the primacy of textile. Knotting is *the* primary design act. Not only does the Semperian model make the smallest of details (the knot) the most essential design opportunity, but designer and producer, in the form of the weaver, are one and the same. In this description of pre-industrial production, the tension between detail and craft, architect and artisan, is not only discarded, but the image of the all-powerful, singular master designer/architect is replaced by a communal work force. Detail here is no longer a condition of paranoic control; rather, it motivates a democratic, shared system of authorship.<sup>6</sup>

But this picture of detail/craft resolution is disturbed then on another front. Otto Wagner, following Semper, elaborates on the implications of cladding for contemporary design production. He, like Semper, felt that the essential work of the architect was to understand cladding’s role in the larger task of construction. But if he, like Semper, felt that the architect and builder pursued the same tectonic path, he also identified the progressive falling apart of the different types of builders. Predicting the huge transformation in building production brought on by steel construction, he recognized that the specialization of trades would liberate the final light, swift process – the application of the skin, the cladding – so completely from the earlier, heavy, slower one - the erection of the steel frame - that they would operate independently. The independence was not just a formal, compositional one, but procedural and temporal: each would form their own working union and each would operate according to independent schedules. While this notion of design does not presume the superiority of the designer over the builder or the architects detail over the builder/artisan’s craft, the fracturing of the builder into

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<sup>3</sup>Benedetto Gravaguolo, Adolf Loos, Rizzoli, New York, 1982, p. 61. From Loos, “Hands off,” 1917 in Samtliche Schriften, p. 342-47.

<sup>4</sup>It needs to be remembered as well that Loos thought that architecture was NOT an art; that art only had a place in the monument and the urn.

Modernity here is linked not just to the elimination of craft-as-associated-with-ornament; it is associated with an economic rationale that says the modern way is both less labor intensive *and* more valuable. See Gravaguolo, p. 61.

<sup>5</sup> This is an observation made by Richard Neutra in his Survival through Design (Oxford University Press, 1964). P. 300, quoted in Ford, p. 223.

<sup>6</sup> This sociological equation is not made by Semper himself. I am implying it from his description of the origins of architecture being rooted in a prior craft tradition. Implicit in this is the now familiar understanding that craft is historiographically associated with the feminine and art with the masculine, to the detriment of the former. Hence Semper implicitly de-marginalizes this gender bias. It should also be pointed out that this model is a precursor to off-site fabrication. In as much as the weaving could be done away from the site and its structure, the notion of genius loci and its ethnocentric notion of authorship also is displaced.

different trades in fact puts the architect/designer on notice: the longer and more divided the production chain, the more the need for the designer's detail to control the outcome.<sup>7</sup>

These disparate but ultimately similarly anxious turn-of-the-century speculations about the status of the detail and the emerging architectural subject finds, in the mid-twentieth century, a "resolution" in the victory of "detail" over craft. The control embedded in the architectural detail, so feared by Ruskin and Loos, and the redeployment of the artisan into the ranks of specialized union labor described by Wagner became the hallmark of the new era. One needn't go into the full complex story of the modern detail that is so astutely surveyed in Ed Ford's The Details of Modern Architecture. But it is worth describing some of its characteristics - as well as those of the resultant architectural subject - to layout the mise-en-scene of our subsequent reaction to it. As Ford describes it, the modernist detail was the non-detail, which is to say, it was not about expressing the technique of construction but rather the effect of the plastic composition that didn't want to be distracted by attention-grabbing detail. Modernism's concern for an architecture both monolithic/heroic in its seeming compositional unity and weightless in its seeming machine-like disengagement from the ground yielded an aesthetic of an effortless "just-arrived". Detail, always the conveyor of difference (and not monolithicness) and support (not weightlessness), was put into the service of not looking like it existed, of not looking like labor was required.<sup>8</sup>

But of course, labor was not only required, it was hugely systematized. The conflation of a fordist (not Ed) model of horizontal linear production inscribed on top of a professional model of vertical knowledge-based hierarchy increasingly organized not just the design-to-build trajectory, but the internal organization of both design production (the architectural office) and construction (general contractor and subs). The antagonism and unhappiness engendered by the hierarchical aspect of this with regard to the overall trajectory - architect over contractor; general contractor over subs - needs no elaboration; nor does the lack of pride on the part of these construction worker in the work they do: the fragmented and compartmentalized nature of their production guarantees a disconnection from the product. What is logically more surprising, given that they operate seemingly at the top of the hierarchy is the unhappiness of the architectural professionals.

The causes for this unhappiness are complex and more completely described elsewhere,<sup>9</sup> but it is certainly related to the economic and cultural marginalization of the profession when design is so divorced from production that it becomes an unnecessary luxury. But more specifically, to focus on the architectural work, the structure of the architect's office, mirroring the overall trajectory, is divided vertically between master/partner/designer and production staff; staff then are increasingly specialized in both vertical demarcations in relation to proximity to "design" and horizontal divisions of sequential specialization. In this, the separation of "detail" from design - illogical given their historical equation (detail being the means to of the architects to control the artisan) but logical given modernism's aspiration for the monolithic (the detail that should look like it isn't there) - leaves the detailer, supposedly the purveyor of control, at the end of the horizontal chain and the bottom of the vertical

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<sup>7</sup> Ford, p. 211.

<sup>8</sup> Ford, introduction, especially p. 7.

<sup>9</sup> See numerous essays in this volume, especially Joshua Prince-Ramus and Phil Bernstein.

ladder. In a perverse schizophrenia, this detailer, sitting at her desk, pretends to assume the identity of the construction worker who will actually be, say, installing a window one year hence out in the field. The dissatisfaction experienced by this staff person, divorced financial, sequentially and aesthetically from the fruits of his/her labor, results in an antagonism to both the process and the other players.<sup>10</sup>

One can suggest, then, that the current crisis of detail is not the result of parametrics or digital technology; it is the result of a regiment so illogical, ill-conceived, and unsatisfying that it would modify on its own accord. But it is important to see that parametrics is so “revolutionary” because it has the capacity to so precisely dismantle both the linear and the hierarchical nature of the industry. It is perhaps too sweeping to say that parametric design collapses intention and execution - thus effectively eliminating the need to organize, either linearly or vertically, players at either end of the spectrum. There are many scales (and unresolved difficulties) in which such a claim needs substantiation. But at the scale of the detail, the manner in which *assembly*, usually at the backend of design, is brought to the front has significant repercussions. Because parameteric design deals with numerical equations delineating not shape but topology, not spatial relationships but performative “this will effect that” relationships, there is no difference between the information which guides assembly and that which guides “design”.

The most blatant evidence of this is the demise of the working drawing, which no longer describes dimensions (design) but rather the order and requirements of construction (assembly). This is true for both on-site construction and off-site construction. For on-site construction, one thinks of assembly/design of SHoP for the Porter House Apartment building, in which the panels are described not only for the manner in which they will be cut from the zinc sheet, but labeled for the order in which they arrive and are stored at the construction site. For off-site construction, one thinks of the design of the metal panels of the Neiman-Marcus store by A. Zahner in which the manner in which the panels are braced on the factory floor, so that the shop workers have access to all necessary faces and cavities, is built into the design of the panels.<sup>11</sup> And because labor and material information regarding assembly at the back end informs the design at the front end, those who provide that information - the fabricators and the subcontractors - are seen as players providing essential design information.<sup>12</sup>

The interesting thing about the new parametric detail is that the contemporary aesthetic ‘cause celebres’ they support mirror so closely those of the 19th century architectural theorists who struggled so hard to *fight* the role of detail. Ruskin, Semper, Wagner, and Loos recognized at the turn of the century that architecture is intrinsically found where structure is covered up and that cladding is the essential “modern” tectonic *modus operandi*. Today the consistency of surface described and allowed by

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<sup>10</sup> The consultants who remain outside both the general contractor and the architectural office chains - the engineers, lighting and audio-visual consultants, the expeditors, the model-makers, etc - hired on a per-project basis, ironically do their work with less antagonism, acknowledging as they do that they are not offering a product but a service. Likewise, the manufacturers of the goods that actually make up the majority of the built product - the window manufacturers, the built-up roof manufacturer, the floor tile manufacturer, etc. - completely divorced from the buildings that their goods are deployed in/on, are free to concentrate on applying their expertise directly to their product, letting the free-market judge their relative success. How ironic, then, that these manufacturers and consultants remain the least identified with the buildings to which they contribute.

<sup>11</sup> See William Zahner’s essay for this volume.

<sup>12</sup> See Paulo Tombesi’s article in this book. He makes a plea for seeing all players from architects to contractors to fabricators as participating in an activity called “design”, each with different specializations.

parametric design is the same, if more extreme, version of cladding.<sup>13</sup> On the one hand, new levels of tolerance are achieved when assembly can be modeled exactly in advance. On the other hand, the necessary reliance on smaller units to accumulatively form a large surface relies, ultimately, less on the nature of the repeated units than on the repetition of the means of their joinery. The mastery of repeatable assembly more than the mastery of the production of repeatable units allows the fabrication of the seemingly seamless skin.

Likewise, these same theorists noted that the new role played by the skin was an opportunity to liberate the surface to be expressive aesthetically and tectonically. This surface was “ornament” in the sense that it was not essential to constructional needs but not trivial in as much as it was the mark of cultural demands.<sup>14</sup> In contemporary design, mastery of the connection allows a similar notion of ornament, different from that of the industrial 19th century, where it was seen as either as a form of distraction (fear of a blank surface) or deception (hiding moments of material disjunction). Now, the urge for elaboration moves to the essential nature of the surface, that is its *shape* (warped) and materiality (texture). Because the intersection no longer absorbs design intelligence, the surface between these intersections gets to deform, breathe, expand and contract.

Also, then, the emphasis that Ruskin and Semper place on the inexact, or, to use Ruskin’s word, “rudeness”, stems from an aesthetic desire to see the vagaries and idiosyncrasies of material shine through; to make sure that sanding and refining didn’t leach the material of its true character. To a certain extent, this can be seen as a contest between tool and material, where material is supposed to win. In contemporary design, this reliance on numerical performance that guides the tools of cutting, eroding, and bending, is simultaneously neutral to the material upon which it performs; and transformative, in this neutrality, of the material. Precisely because the material - steel, wood, glass, plastic, stone - is treated in a non-materially specific manner by the machines, the materials reveal unexpected effects. The surface is simultaneously very material and very abstract, very familiar and very defamiliarized.<sup>15</sup>

And finally, it should be pointed out that all of these aesthetic similarities are matched by a logistic one, namely, the demise of the working drawing. Loos’s pride at never dimensioning information in a drawing

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<sup>13</sup> It can also be seen in relation to the modernist concern for the monolithic. Just as modernism tried to aesthetically suppress the separation of skin from structure, so do parametrically designed skins attempt to look like they are not hung onto a structure but rather constitute the structure itself. Indeed, the fact that so much intellectual energy is going into discovering a panel system integrating structure and skin can be seen as the enduring modernist belief that it isn’t *really* architecture if it isn’t about structure. It is an indication that despite this paper’s argument, the new detail and its aesthetic equivalent has not broken with past paradigms.

<sup>14</sup> Ruskin’s celebration of ornament was based primarily on the opportunity it provided for the craftsman. For Semper and Wagner, it was a symbolic expression of a tectonic evolution. For Loos, ornament, as we well know, was supposedly a crime. But this was primarily in relation to the material deception associated with ornament; he was not adverse to the ornamental, decorative nature of rich materials, and he understood that while there was no structural reason for his highly refined and excessively rich panels, there was a sensuous and culturally-justified need for them.

<sup>15</sup> See the discussion in this volume by both Scott Marble and Branko Koleravic regarding risk. Branko sees the risk in the manner described here: you simply can’t predict the actual material effects of the prescribed process. Marble sees the risk as located in the gap between imagination and control and hence less on material uncertainty. Nevertheless, he does, like Branko, indicate that the risk in certain unknowns like this is where invention arises.

is consistent with the present day dismissal of drawings that dimension for that describe assembly procedure. If Loos's motivation was to work with the craftsman/construction worker and today's motivation is that dimension is already inscribed in the parametric protocol, the underlying meaning is the same: the drawing is not a document of aesthetic control but procedural logic.

Given that it would be incorrect to see contemporary detail practices as a "return" to an appreciation of "craft" over "detail" or the artisan over the architect - contemporary practice is too embedded in the industrial logic of modern production - it might be difficult to explain this re-emergence of aesthetic affinities. But I would suggest that it is related to a shared underlying social concern for the laborer that was excised in modernism; or, to think it another way, that there was unfinished 19th century business that is only now being readdressed. To quote Ed Ford again from his Details of Modern Architecture:

In so far as 20th century architects have concerned themselves with the social consequences of their work, they have focused on the way in which buildings affect the behavior of their occupants. Insofar as 19th century architects concerned themselves with the social consequence of their work, they focused on the way in which buildings (and particularly their ornaments) affect those who build them. There is perhaps no greater difference between the architects of the 19th century and those of the 20th than that each group was so indifferent to the social concerns of the other.<sup>16</sup>

This then is the point. Contemporary practice revitalizes, through the new detail, the interest in "those that build them" and thereby offers the opportunity to readjust the psychologically diminishing roles that all players in the design-to-build continuum have come to know. The opportunity now, with our changing the means of production, for changing the organization of labor and with it changing the notion of architectural laborer is too powerful to ignore. Via both Ed Ford and Naomi Schorr, the question of the new architectural subject is foregrounded. We need to realize that all of the speculation about parametric detail and its potential is only culturally relevant if it affects not just the objects we make but the identities, both personal and professional, that it lets us assume.

It is perhaps crude sociology to think of this in terms of demographics, but it is not irrelevant or uninteresting. Already, one of the happier by-products of parametric design is not only the displacement of both the master architect controlling both staff and general contractor but also the icon of the great (and grey) white male. In previous eras, the younger generation fought the father figures in the guise of the avant-garde; radical forms were the means of moving the architecture along. Generally, these battles were fought outside of the profession, for the profession itself was seen as the problem. Today, recent graduates displace the older generation not with hipper styles but with their entrepreneurial expertise directly related to a notion of making that operates in an open systems of exchange.<sup>17</sup> No longer anti-professional, they are, shall we say, neo-professional - enthusiastic about what being a player in the profession has to offer, but uninterested in the limits that the profession of old exerts. This is not merely

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<sup>16</sup> Ford, p. 9.

<sup>17</sup> A conversation with Sheila Kennedy, who has an essay in this volume, regarding what KVA looks for in a potential hire yielded the observation that they don't focus on design or portfolio any longer but rather demonstrations of entrepreneurial skills.

a result of this younger generation's learning new digital tricks that old dogs can't learn. It is, as much as this, the fact that people are entering the profession having passed through other, less Howard-Roarkian disciplines - computer programming, finance, construction management, engineering, fabrication, landscape architecture, sculpture.<sup>18</sup> These disciplines and the cultural cache they are beginning to have help attract a much more gender-diverse population as well. One only has to open an architectural journal or attend a parametric design symposium to see the difference in the age and sex of the participants in comparison to five years ago. The "crisis of detail" identified by Schorr does indeed reflect on the feminine.

The changing demographics are also related to changing office identities: what constitutes the "office", as staff is no longer a fixed employee sitting at a desk at the back of an office named after its partners, is much more fluid than in the past. The worker may be hired on a per project basis and sit somewhere far from both the central office and the location of the building. In this situation, neither a vertical nor a horizontal paradigm of labor organization prevails, and traditional identities of "boss" and "staff" tend to fall away. If the detail of contemporary architecture is spread temporally and spatially throughout the organizational protocols, the subject of contemporary architectural production is spread throughout the network of conflated production.

Having said this, it is precisely at moments of radical change that we need to be most vigilant. If the groundwork is laid for a less reified notion of professional identity, we need to be concerned that this does not get replaced by another form of reification. The temptation to see the shiny intricate objects enabled by digital fabrication, produced as an end in itself, is great. However, it not only displaces one form of objectification with another, but also leaves us as subjects defined by the technology that we so happily look to for liberation. In this case, we would not have progressed beyond the limits of production that motivated the 19th century theorist's critique of the industrial detail. It is much more interesting to use technology to dispense with fixed identities all together.

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<sup>18</sup> See Paolo Tombesi's essay in this volume.