"Detail: The Subject of the Object"

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1. The Subject as Citizen

The "details" of architecture shift attention away from the architectural object and focus it instead on its maker, the subject. Unlike composition, spatial sequence or structure, which can be read as inherent in the object's own logic, details, even conceptually, don't make themselves. To suggest that there is "excellent detailing" in a building is to imply that *someone* understood the responsibility of construction. The maker/subject of the building is always implicated.

But the nature of that subject is ambiguous. In architecture, unlike the other arts, no one person actually makes the object. Not only is there the significant distinction between designer and builder, or the multi-layered group of designers in an office, but the designers/manufacturers of the myriad of products used for a project bring the history of their own making with them. Nor is there currently any real thought of the status of these subjects in the larger realm of culture, an inquiry into his/her position in the complex web of social production. This tradition, so acutely theorized in the likes of William Morris and John Ruskin, seems to be missing in a contemporary world where making is necessarily conflated with production, production with manufacturing, and manufacturing with multi-national networks.[1]

Nevertheless, phenomenologically driven texts that concentrate on the significance of detail, material and tectonics – indeed, that claim detail as its unique province - have implicitly taken hold of this issue and, without examining the actual modes of production involved in architectural detail, given an implicit characterization of the ideal architectural maker. This Heideggarian subject is fundamentally alone, "dwelling" in a clearing in the forest, communing with nature, sensitive to the landscape and its natural materials, and aware, until the damage brought by modernism, of local building traditions. The buildings that this ideal dweller makes are not only expressive in their detailing of the ecology, but honor the tactile over the visual, the natural over the man-made, the "authentic" over the commodified. Kenneth Frampton's "critical regionalism" is perhaps the most well known of this tradition, and his "Intimations of Tactility," an early critical regionalism piece, is a particularly good example of this phenomena and one that forms a foil for this article. Here, he directs his criticism at "instrumentality", the use of "universal" procedures, and promotes, listing some of his sub headings, "tactility," "ritual," "sensuality," "posture," "landscape," "earth," "water," "air," and " body." As here writes, "The tactile returns us literally to detail, to handrails and other anthropomorphic elements with which we have intimate contact; to the hypersensitivity of Aalvar Aalto, to the coldness of metal and the warmth of wood; to a comparable sensibility in the work of Carlo Scarpa who was capable of articulating a building in such a way that its surfaces implied a range of sensuous experience. In Scarpa's later work, the built-form is inlaid with binary stimuli and associations: smooth versus rough, polished versus pitted, distended versus recessed, labial versus phallic."[2] The writings of Alberto Perez-Gomez, David Leatherbarrow, Marco Frascari, and Karsten Harries, all in someway indebted to Heiddegarian phenomenology, participate as well in this characterization.

For those of us interested in tectonics and the connections implied between the architectural object and the human subject, these texts are both provocative and extremely frustrating. This vision of the subject is nostalgic and unrealistic, not only with regard to Western urbanism or globalization, but with regard to information technology. A more inclusive, more political, and more socially constructed subject needs to be brought forward, one that is less an existential being and more a productive citizen.

To investigate the subject /maker of architecture as part of a collective is, in a sense, to examine works that have different

characteristics than those privileged by phenomenology. While the admired projects there tend to be of stone or wood and have Aalto and Scarpa as the leading practitioners, the work implicated here is machined, cladded, thin and produced in more anonymous, less "master/atelier" context. But what is being called for here is ultimately less an appreciation of a certain type of work than a certain type of analysis, one that insists that a discussion of detail and tectonics not forget that issues of production and labor are at stake.

This is not, in other words, a claim, Marxist or otherwise, for exposing the proper distribution of labor in architecture. (Indeed, we should be reminded that Marx's paradigm of pre-industrial labor is itself ultimately nostalgic and regressive.) It is an examination of those thinkers and makers who do investigate how labor falls into a larger context of cultural and aesthetic relations and therefore provide the framework for a contemporary, non-phenomenological discussion of detail.[3]

2. Architecture as Procedure: Gottfried Semper

Semper is the theorist par excellence addressing the issue of architecture as procedure. Semper, In *Der Stil* (1863), proposes that architecture finds its motivation in the technical arts. He moved the discussion of style away from one centered on abstract formal changes resulting from an era's visual development to one focusing on production. In *Der Stil*, he identifies four procedures or "technical arts" that he says form the basis of all architecture. Parallel to this are the four materials that historically are associated with those procedures. The four technical arts are textiles, ceramics, tectonics (carpentry), and stereotomy (masonry); the four material conditions associated with them are pliable (fabric), soft (clay), elastic (wood) and dense (stone). While there is a natural affinity between the arts and the materials, Semper is clear that these are just initial and not essential affinities; one could find, in other words, examples of each of the other three materials for each technical art. His interest is a celebration of the range of these procedures, not a material determinism. In addition, Semper indicates that of the four technical arts, textile is dominant by lending aspects to the other three, thus implying that the knot, as the major operation of textile, is the essential architectural mode of production, and that cladding, the pinning of the fabric onto the frame, is the significant act of enclosure.

As has been well documented, this upset the "original hut" theory of Laugier's – in which a primitive man lays out branches/beams on top of four trees/columns to discover the essential trabiated structure/hut - and put the notions of "origins" completely up for grabs. But more importantly, for establishing a different mode of envisioning the subject of production, he also shifts the discussion of production in three ways. First, it displaced the emphasis on the all powerful, singular master designer who singularly conceives of an architectural act (again, alone in the forest). In its stead, Semper provides the image of a community that practices techniques communally and which only marginally requires the input of the "designer". Women seemingly perform the making of architecture as well as men and labor is divided into different activities, which accumulate over time. Second, with the emphasis on textiles and cladding, it moves the dominant architectural condition away from structure and focuses on skin and enclosure. Cladding makes the act of attachment and the otherness of the skin apparent, thereby also alluding to the possibility that this skin might not be place-bound and might have its own separate set of makers elsewhere. Third, he provides a significant place to ornament, an inherent condition of textile, and thereby ensures that the issue of production isn't reduced to mere utility, but intrinsically keeps its connection to artistry, expression, and aesthetics.

3. The Critique of Craft: Adolf Loos

While Loos is not arguing with Semper directly – indeed, in his concern for the laborer, has significant affinities – he nevertheless picks up the debate of production and relocates it in cultural modernity. He takes on, in other words, precisely the issues of craft and ornament that made Semper's analysis seem dated in 20th century industrial society. He also identifies, as Semper did not, the tension between the "designer" and the community of craftsmen.

Loos argues more directly with Josef Hoffman – and implicitly, before him, William Morris – regarding the reintroduction of the "joy

of labor" for the assembly-line worker. Hoffman's contention was that this joy depended on working with your hands, "the sensations of hands at work, precious instruments that are void of feeling like machines."[4] For Hoffman, the same joy also guaranteed unique unrepeatable objects. Loos, in opposition to this, claimed that craftsmanship is *essentially* impersonal; that any evocation of a craft tradition would acknowledge its repetitive, system-like essence. As he says, regarding the carpenter, "straight lines, right-angled corners: this is how the craftsman works who has nothing in front of him but his materials, his tools and his predetermined objective."[5] Indeed, for Loos, the tension is less between hands or no hands than between the craftsman and the artist whom he unhappily has to serve. Liberated from the dictatorship of the artists (and the unnecessary traditions of the past, the craftsman would naturally make things "in the modern spirit." Modernity is here linked to precisely the dismissal of the need for the autobiographical expression of the unique object. In effect, where others saw tension between craft and industry, Loos identified their natural affinity.

From this stems two other pronouncements, both of interest in thinking through the labor of detail: the separation of art from the utilitarian object and the ornament-as crime theory. For the first of these, he attacks the essential aim of Hermann Muthesius and the Werkbund: the desire to conflate the artist with the contemporary craftsman. This urge, Loos believed, not only hid essentially romantic and nationalist pretensions, but also artificially aestheticized the object and robbed it of its natural, rational production. While this separation could be understood to ultimately glorify the purity of true art, Loos is more interested in the potential social liberation that occurs when the utilitarian laborer is spared the burden of making "art" and society spared the need to aestheticize everyday life.

For the second, it is clear that ornament, in being linked to the willful artist, would be suspect on socio-productive grounds alone. But the brunt of Loos's attack is economic. "An ornamental craftsman has to work twenty hours to reach the pay a modern worker earns in eight. In general, decoration makes objects more expensive, but despite that it does happen that a decorated object, with materials costing the same and demonstrably taking three times as long to produce is put on sale at half the price of a plain object. The result of omitting decoration is a reduction in working hours and an increase in wages."[6] He is clear that a worker's hand will be happier if they are well paid.

Loos is politically sensitive here to the fact that the status of making and the maker is attached to economics and his introduction of Marxist principles is to be commended. Likewise, his disdain for the self-aggrandizing artist who doesn't have real concerns for the laborer or the user is instructive. While he separates art and utility in a radical,even reductive, fashion, he lays out the essential oppositions at work in architectural production, oppositions that need to be taken seriously by future thinkers. He likewise implicitly lays out a notion of detail that neither fetishizes the act of bringing disparate materials together nor ignores the fact that in doing so, the diversity of materials and productsbrings with it disparate social relations.

4. The Author as Producer: Benjamin and Brecht

Benjamin and Brecht, two writers who more consciously base their theory of production on Marxist ideology and view the issue of aesthetic production from the point of view of class, not merely the artist/artisan divide, take Loos implicitly to task. As Theodor Adorno pointed out, the desire for the separation of art/pleasure from utility is fundamentally flawed. "Utilitarian objects…have a much more immediate affinity with the pleasure principle than have works which are responsible only to their own laws… According to the bourgeois ethic of work, pleasure is wasted energy. Loos agrees."[7] He proves, to Adorno, his inherent bourgeois naivete. Likewise, as Reyner Banham has pointed out, Loos's "economics" takes no account of the capitalist apparatus of market control and profit distribution. Loos has successfully addressed the status of the laborer vis-à-vis "design" and linked it to capitalism; he has failed, however, to adequately articulate the complex relation between economics and culture, base and superstructure, true needs and false desires.

In "The Author as Producer," (1934) Benjamin insists that the "advanced" (proletariat) author must acknowledge his obligation to his "political tendencies"; and he wants to prove that work with the correct political tendency *must* have "literary quality". The text

reveals this through its "literary technique". To determine how the work fairs in this formulation, Benjamin says that one must ask, "What is the works *position* in the relations of production of its time?" In this regard, work that doesn't perform/enact a functional transformation of contemporary techniques leaves intact the essential bourgeois, romantic, individualist experience regardless of its revolutionary content.

For Benjamin, the theatre of Brecht is the best example of this functional transformation via a thorough re-examination of the apparatus of theatre. In choosing "epic theatre" - in contrast to Goethe and Schillers choice of "dramatic theatre" - he was opposing a theatre that assumed the viewer's passive acceptance of dramatic illusion, the observation of another world beyond the invisible fourth wall of the stage. Brecht wanted to make the viewer an active, critical participant in the play and thereby make theatre into a laboratory for social change. Some of the techniques that Brecht used were: 1) no fixed character, because character was associated with fate and inevitability; instead, individuals are presented relating to "social situations"; 2) no dramatic climax, just episodes montaged together; 3) independence of music, décor, and choreography from action and each other; 4) no acting; actors narrate, demonstrate, and quote, but never "act the part of…"; 5) no lighting effects; night, for example, is indicated not by dimming lights but by the appearance of a lamp or a moon. No longer is the theatrical production just the thing you see presented on the stage, but the entire apparatus that itself remains hidden but makes possible what you see. While one doesn't want to make simplistic analogies, this implies, for architecture, the obligation to demonstrate the non-inevitability of our material, tectonic, structural and manufacturing choices and the intrinsic foreignness of their relationship to each other. This would constitute "architectural technique".

It was, of course, Benjamin who also wrote "The Work of Art in the Age of Mechanical Reproduction" (1936) and suggested, much to Adorno's dismay, that "new" techniques of mechanical reproduction, while destroying the aura of original art, rightly placed art into the hands of the masses. Adorno's indignation rested on what he saw as Benjamin's simplistic (and Brechtian-corrupted) Marxism that assumed that if the art was by and for the masses, it would be revolutionary. Adorno, much more skeptical about the numbed and consumerized masses, feared precisely this access. But while there certainly is a naiveness to Benjamin's (and Brecht's) faith in the audience to be enlightened, he definitively points out that the camera – its techniques, its uses, its audience and its directors – will/has fundamentally changed the nature of art. Details such as the manner in which the camera is held, the manipulation of editing, the way the projector is set to spin all point to the lack of "authentic" productive techniques or a single notion of author. For "architectural technique," this implies less a celebration of the physical detail itself than the marking of the transformations different materials have been subject to before arriving in that spot, in that configuration.

5. Materiality and Revolution: Vladimir Tatlin

Tatlin is linked to Brecht by a shared familiarity with the Russian Formalists, a group of literary theorists who were interested in making language real/physical as opposed to symbolic, and exposing the devises that the author uses to manipulate the reader, underlining its artificial nature. Tatlin brings this Russian theory to the visual arts. He also brings us back to the issue, raised by Semper, of the connection between material and modes of production. And unlike Benjamin and Brecht, he also provides an interesting example of an artist who doesn't theorize about proletariat art but operates directly in that political context.

In the materials that he used for his reliefs, Tatlin looked for a "necessary form" residing in material and the social function it serves. The essence of the Tatlinian project was sculpture that consisted of real materials that exist in the same, real space as the viewer and that did not refer to or represent anything else. It was, as implied, the visual analogue of Brecht's epic theatre that denied illusion to another realm beyond. In contrast to other contemporary artists who he visited and studied (such as Picasso and Boccioni), Tatlin insisted that his counter and corner relief's neither occupied nor revealed an idealized or transcendent reality. Indeed, even in contrast to Naum Gabo, his fellow constructivist, Tatlin's work was singularly non-representational. While Gabo shared the same additive, planar, and metal-dominated language with Tatlin, the former was interested in exploring a conceptual space revealed by

what he called stereometry, the simultaneous reading of the interior and exterior of a volume. The metal panes are only datums, not shaped and cut metal.

Instead, for Tatlin, the material was the generator of form. His palette was limited to industrially produced or packaged materials that had, for him, fixed formal properties. Wood that is not "natural" but planed, sawed, layered boards- was understood as an opaque geometric plane, flat on both sides and cut with clean edges; it could be perforated with a drill; it was cut for its silhouette and could be parallel to or angled from the wall to which it had formal affinities. Metal was produced in thin sheets; in its purest form, it wanted to form a cylinder or cone, configurations that give it compressive strength and which can be produced by cutting, bending and folding without recourse to forging; or as wire, it could demonstrate its tensile strength and its appropriateness for suspension. Glass is almost invisible and hence exists somewhere between inner and outer space and is both on this side and that side of the space of the viewer. In Tatlin's corner reliefs, the material of the shadow/light formed at the corner of the room becomes physicalized and provides the vertical datum that organizes the work; the two walls forming the corner are both support for and active background to the sculpture itself. The room is brought into the sculpture as well as the sculpture into the room, and again, the whole "work" exists in the same space as the viewer.

Tatlin's Monument to the Third International is an interesting foil to these pieces, introducing into art other realities of production. Having abandoned his reliefs at the time of the October Revolution because they were "useless" and "decorative", he devoted himself to his metal and glass monument. While three models were built for it and it occupied years of Tatlin's life, it was abandoned because Russia had neither the iron nor the technology to build it. The models he made were out of wood, each piece and each connection hand carved. While the most political of his works, this politics was neither commensurate with nor supported by the "architectural techniques" of construction at that time.

Tatlin, as suggested, forms an interesting comparison to Semper. As we suggested, he explores the natural affinity between materials and the procedures associated with them. But he also opposes Semper, and hence reveals the complexity of what making in a social context entails. On the one hand he is, unlike Semper, a material determinist; procedures are wholly dictated by material and have no aesthetic existence independent of them. Where Semper's procedures are more important than the materials they have affinities for, Tatlin's materials are more important than the procedures as well as the "design". On the other hand, he, unlike Semper, explores and values the *spatial* implications these procedures, for each material gets deployed in space and occupies space differently, and again, that space – now charged with proletarian production – embraces the viewer. If brought to the realm of architecture, the details that signify the actual properties of the industrially produces materials then also implicate the person/user who then touches and uses a particular door knob or light switch, positioning him or her in the chain of "authors" manipulating the material.

6. The Factory-Made House: Gropius et al

It is ironic to move away from the most (politically) revolutionary of contexts for architectural production – the Russian Revolution – to one of colonization and war. But the issue of the factory-made house brings us to these themes. It also seemingly brings together many of the issues raised above: the deployment of the full "apparatus" of mechanical production; the indeterminate but critical issue of the role of design and the architect; the dilemmas raised by the non-unique, repeatable object; the potential distance between the location of "dwelling" and the location of production. But it is ironic also that this context provides the material and expertise to build what was impossible for Tatlin and the Third International. The prefabrication of buildings was a significant feature of the nineteenth century colonization. Not only were industrialization and colonization linked as economic phenomena, but they also were physically linked in the form of the exported prefab building. Used for both military/administrative purposes as well as for homesteading, huge quantities of portable buildings could be produced and transported to all parts of the world.

The Manning Corporation, operating in London in the 1830's, sent out timber parts for buildings that required constructing only foundations and assembling components, with no fastening of joints, no cutting, or nailing. Soon wood was replaced by iron, and borrowing techniques and materials from bridge construction (also imported), British companies began to produce buildings of corrugated iron sheets. This material was appropriate for both the skin of the building and the roof, with the latter often bent and vaulted over the space, requiring only a tie rod and no internal roof structure. In this construction, sheets were simply bolted to the frame, and the pattern of sheet size and the bolt placement became the building's main form of aesthetic expression. As systems became more complicated and also more refined, name architects increasingly became interested in the possibilities of pre-fabrication.

World War I brought both the need and the expertise for prefabricated housing, particularly in Germany. There, Gropius, among others, worked on mass produced houses. Perhaps the most notable experiment was his design for the Growing House exhibition of 1932. Gropius at that time was a consultant to the Hirsch Copper House Department that had bought the patent for what was known as the Foster metal pre-fabrication design. The Growing House, made of copper, was a knockdown system in which each structural element constituted a wall-section adapted at its edges to be joined to other sections. Each section was a wooden skeleton frame covered on both sides with metal sheathing, the space between filled with insulation.

With World War II, the urgency of prefabricated construction slowed in Europe while it increased in America. The need to provide housing for those relocated to wartime industrial centers was particularly acute in this country. The experience of the Farm Security Administration in providing quality housing for migrant workers provided the experience for the wartime work. The FSA had hired independent architects for their housing, which, while not wholly prefabricated, nevertheless experimented with new materials and low cost assembly**.** Vernon DeMars' design for a farm workers' community at Yuba City, California in 1940, for example, was clad in redwood plywood on its lower level while the upper level was clad in the newly invented Cemesto, a one- and-one-half inch thick sandwich panel consisting of layers of asbestos-filled cement on a fiber core. The Division of Defense Housing in 1941 followed this example and hired name architects to design prototypes for them, including Walter Gropius and Marcel Breuer who produced the Aluminum City Terrace in New Kingston, Pennsylvania, which still flourishes today.[8]

But the most experimental project of prefabrication remains the "Package House" project that Gropius and Konrad Wachsmann initiated on their own in1943. Having set up the General Panel Corporation to develop and market their house, the two German immigrants eventually bought a Lockheed aircraft engine factory in Burbank, California to produce it. (The enterprise failed when government insurance for such projects died.) The most innovative aspect of this house was its universal joint system, the single detail that allowed the plans to be enormously flexible. This joint, a "X" type system that took years to perfect, connected every panel in every condition. The panels were load bearing, with thermal board on the exterior and an internally insulated flush panel in the inside. The edges of the wall panels were beveled at 45 degrees to be secured to the universal joint.

Experiments such as this indicate how far one can go not only in designing the repeatable object (or the repeatable component) but also in making factory labor a thing of both economic and cultural value. These buildings have no pretensions of being place-bound and insist on laying bear their distant factory origins. It is impossible to determine who or where the subject of this object actually is. While this anonymity has proved to be a difficult marketing element, it nevertheless focuses on the detail as *the* place allowing different materials, products and builders to unite successfully around the fabrication of a single object. Gropius and Wachsmann's universal joint, in particular, indicates precisely how one detail is evidence of and witness to the plethora of procedures that have taken place elsewhere by the factory worker and resolved by the local craft builder in a manner that allows his work to be both repeatable and unique.

7. Digital Production and the Semparian Object: Bernard Cache

Bernard Cache takes the notion of industrial production to a certain extreme at the same time that he brings it directly back to

Semper. It also forms another way of thinking about prefabrication and its relation to aesthetics. The problem with these pre-fab systems, besides their failure due to government and market resistance, is their limited exploration into the appreciation if not need for the aesthetic dimension. Despite Adorno's having said that we bring the pleasure principle to all utilitarian objects, the prefabricated house assumes that artistic expression is neither desirable or necessary. And despite the fact that this is in complete accord with Loos's dictum to rid the utilitarian object of all artistry, his buildings are so likeable precisely because he saw where "artistry", for better or worse, still was lodged in modernity. Cache's studio, "Objectile," takes on precisely this dimension. Cache and his collaborator Patrick Beauce experiment with software technologies in order to digitally design and manufacture building components. Objectile has worked with TOPCAD, a French company, to design complex surfaces and has devoted most of its attention to simple components like panels and doors. In particular, it is working on "zero-error" procedures on stress-free MDF panels. The aim is to have a materially rich but fully digital architecture. [9]

Cache notes the affinity of Objectile's work to that proposed by Semper's theory; he, like Semper, has come to architecture through the techical arts and his interest in decorative wooden panels aligns with Semper's interest in skin, skin patterns, and the cladding of skin on structure. Cache wants to insist that Semper's four procedures allow not only for new materials but almost require them to demonstrate and fulfill the potential effectiveness and range of their capacity. Indeed, for Cache, information technology (as a material, not a procedure) is the ultimate destiny of all four procedures: textiles are linked to over and under modulation; ceramics to operations in radial coordinates; tectonics to non-rotational transformations described by Cartesian coordinates; stereometry to tiling and Boolean operations. And despite his even-handed attendance to all categories, he sees, as does Semper, that textiles/cladding/modulation is the most fundamental of them all.

Cache's interest in non-standard modes of production is linked to an aesthetic/formal inquiry on the one hand and an economic one on the other. In a taxonomy that itself reminds one of Semper, Cache breaks images down into three major categories – framework, vector, and inflection. (In the old taxonomy, square, triangle, and round/curved.) He pays special attention to inflection because it is the least rational, the most decorative and hence the greatest test to the computer's rationalization and mathematization. It is, as well, the key to non-repeatability. His furniture pieces are "strictly reproducible" but also "purely deformable;" he just has to change the value of certain variables.

Loos then is denied his claim that ornament is wasted work; indeed, Cache goes beyond this to say that Loos failed to see that all of architecture, once its task goes beyond the mere handling of downward loads, is fundamentally indeterminate and hence "ornamental". But more importantly, when conceived in the manner of "Objectile," this ability to do singular, decorative, and playful objects *rationally* redefines the ultimate relation to labor. "What we seem to be constantly reminded of is the violence of work – not only children in mines, but the disciplining of bodies and minds, the division of time and the control of space… Loos put the qustion of ornament correctly in refusing to disconnect it from the question of work. And he was also right to refuse a craftsman's ornament whose exchange value diminishes with the development of the modes of production. But industry has changed. Irregular curved surfaces have become the object of automated processes…. So what might be the value of our ornaments…? That the Good is still possible, that there are still margins for maneuvering in the structure of capital, and that work is not our only social horizon."[10]

One can't help but be skeptical of the ultimately Hegelian urge here: everything has a place in the system; his work is the fulfillment of Semper's procedures and implicitly, one thinks, the history of making; his neo-Marxism lets the economy off the hook and puts the Marxian dialectic back in the realm of philosophy - Hegel's ultimate victory. Nevertheless, as with Hegel, there is a huge amount that is illuminated along the way regarding mass production, the transformation of the apparati of production, and the desire to simultaneously respect the mode of production and not be slave to it. In the process, there is also no distinction between the object as a whole and its detailing; the detail, set in the mathematical program of the computer, becomes the object; the detail is spread

out entirely over its surface. In giving us an image of a subject and object that are simultaneously determined, as well as an object that is indistinguishable from its detail, Cache is giving us a subject and an object that exists far from the forest and is thoroughly embedded in the web of contemporary production.

Conclusion

In a text by the philosopher of technology, Peter Caw's, he asks for a "praxology" of technology, an examination which is not a philosophy of technology but an analysis of the practices *within* technology. In this, we would, amongst other things, dissuade ourselves of the concept that "technology" has abused us: we may be at the mercy of other men who mistreat technology, but the remedy for that is outside technology.[11] It seems that in architecture, a similar "praxology" would be appropriate, one in which technology is not seen, as in the Heideggarian tradition, as basely "instrumental" or threatening to "authentic" making. Such a praxology would allow us see the details of architecture for what they actually are, and from there, appreciate their over-determined and deeply social essence. This in turn would allow us to reread both the subject and object of architecture. This article is a step in instigating such a practice in the discourse of architecture.

Footnotes

[1] Besides the authors/architects examined here, Jennifer Bloomer is a refreshing exception. She alerts us to the fact that it should be impossible to ignore this issue in texts like "Pale Houses, Silenced Shadows," *Assemblage 37*, in which she writes, regarding the beautiful and intricate handiwork of Southern pre-civil war dresses found in an attic, "The splendor of these amazingly architectural pieces takes my breath away. I think of the labor of dark hands cutting, stitching, boning, tatting, embroidering, washing, ironing, buttoning, but never wearing, never hoping to wear, and I inhale deeply in righteous indignation, but also in awe of this rich archive of labor." (p. 54)

[2] "Intimations of Tactility: Excerpts from a Fragmentary Polemic," *Body and Architecture*, Rizzoli, New York, 1988

[3] While it may seem that the entire oeuvre of modernism, with its privileging of construction over form, should be included here, I have found that the most interesting development of this theme is outside the canons of high modernism. Someone like Mies, for all of his rhetoric – god is in the details; only issues of construction not form are entertained - doesn't actually develop his buildings or his polemic in a sustained way. His concern is (and this is not a criticism) more spatial than constructive.

[4] Gravaguolo, *Adolf Loos*, Rizzoli, New York, 1982, p. 61. From Loos, "Hands off," 1917 in *Samtliche Schriften*, p. 342-47.

[5] Ibid.

[6] *Ornament and Crime: Selected Essays*, ed. Adolf Opel, trans. Michael Mitchell, Ariane Press, Riverside, CA 1998, p.171.

[7] Gravagnuolo, p. 86, ftnt. 156. Adorno's "Neue Rundschau", Berlin, #4 1966 pp. 585-600

[8] *World War II and the American Dream*, ed. Donald Albrecht, MIT Press, Cambridge MA 1995.

[9] From an as yet unpublished paper that Cache gave at the Anymore Symposium of ? to be published by the Anyone Corporation and MIT Press later this spring.

[10] "Vegetable Rinceau"

[11] Peter Caws, "*Practice* and *Techne*," in *The History and Philosophy of Technology*, ed. George Bugliarello and Dean Doner, University of Illinois Press, Urbana, 1979, pp. 227-237.