

This paper serves as a preface; it provides me with an opportunity to sketch out several themes, or inclinations, concerning the implications of technology within its relationship to architecture.

The taxonomies and toponymies of architecture are manifold. Taxonomies refer here to the multi-layered sieves through which we understand architectural production; regarding toponymies, I am concerned with the possible proper names which we use to *title* that thing which are, by virtue of their taxonomies, difficult to grasp.

In order to position these thoughts, I will render architecture with the following triad of terms: Theory (or Madness), Praxis (or Reason), and Pedagogy (or Judgment). These terms delimit a configuration; they define a field of analysis, evaluation, and production. These processes are not only acasual, but are contiguous in their spatial deployment and concurrent with respect to time. I begin with these because they set out a ‚foldline‘; they constitute a Duchampian ‚infinitesimally thin‘ section from which a space of critique and making can extend.

This triad refers to a structural rhythm, and not a static or hierarchical relationship. That is, one term does not take precedence over the other, nor does one term assume a middle or regulating position. In fact, a continuous shifting, i.e. a reassignment of names (toponymy) occurs in that pedagogy's possible judgment is the architectural institution's reason and the student's madness. Employing a mathematical model, one could say that the three are members of a set, or better, a tulle.

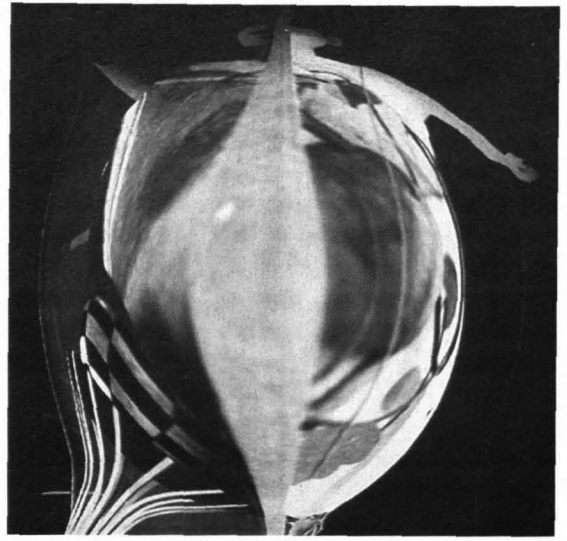
This triad, in its extension, presents a field in which I will situate several concepts concerning the implications of technology and architecture.

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Architecture is writing a fiction of its relationship to technology. By fiction, I do not mean the dichotomy fiction / non-fiction, or documentary / story-telling, but am referring to the Latin root, *fin-gere*: to form, to mold. The problem is not that a forming or molding is occurring; it is that the architecture is not performing the writing, and is thereby acquiescing its role as author and "reproducing itself without resistance."

Too many theoreticians, architects, and teachers fail to understand the simple and seemingly banal truth that: things (drawings, buildings, city plans, theories, curricula...) are made through modes of production, and these methodologies and tools form a conceptual model which is inseparable from the development of form and content. One can still hear architects intoning: ‚I have an idea and then I draw it up.‘

This acceptance–without–engagement has, of course, been occurring throughout the history of

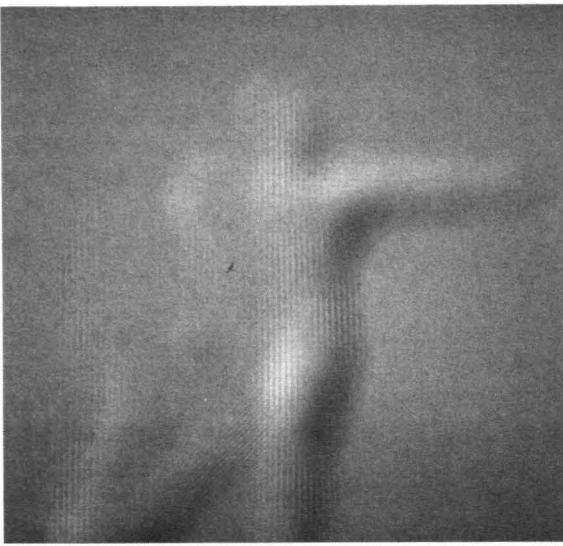


architectural production. There have been only a few who have taken on the socio-political-economic implications of the projective geometries, figurative model-building techniques, or ISO- and DIN-Normed drawing rules. There is, however a difference of kind and not of degree between the tools which architects use in the ‚digitized world‘ and those which they used previously.

The architect chooses a particular hardness of pencil because, after a relatively short practice period, he has learned that it may be inappropriate to use a 6B for working drawings, or does in fact use the 6 B to do construction documents in order to reveal certain institutionalized form-making processes. Similarly, one can speak about the use of an adjustable triangle vs. a 30–60–90, or the use of a 0.18 vs. 0.70 Rapidograph pen.

Although profound changes in the representation of space, and therefore the making of cities, were the outcome of the advent of the adjustable triangle, I would maintain that these are changes of degree and not of the kind compared to the implications of the move from the technical pen to the use of Computer Aided Design programs. Architectural ideas are being produced today with a tool about which the architect typically knows very little. This is at best irresponsible, at worst, dangerous.

I am alarmed by the distancing – the gerund is used here in order to emphasize an action, a participation – which occurs between architecture and its present digitally-based modes of production, and that this spacing is left unattended and therefore marginalized. I term this distancing *white space*, and, by setting this concept into that field comprised by theory, practice, and pedagogy I hope to reconfigure this distancing into a positive engagement. making...



3 The white space of technology

Two beginnings:

1. Analogous to white noise, white space is that which is a 'blend of all the [spatial] frequencies distributed equally'.
2. In the computer programming language C++ , *isspace* is a function which returns a nonzero value if white space (i.e. blanks, tabs, newlines, carriage returns, vertical tabs, or formfeeds) is encountered, a zero value otherwise.

Moving through these analogies *analogously* to assigning values to variables in computer programming, I rename them thusly:

"the diffusion of the the similar"

"the accretion of phatic space"

These two concepts are not of course mutually exclusive. They define a space of dispersion and densification, of what Roland Barthes called the *field* and the *punctum*. They are in a state of that which Deleuze and Guattari have elegantly named *reciprocal presupposition*.

The diffusion of the similar

The possibility to produce many images very quickly without judgment creates spaces which are qualitatively undifferentiated — a blend of all spatial frequencies. Of course, the computer is (and particularly the Internet) correspondingly constructed: user and platform neutrality are aimed for. What A does with the CAD program is not the same as what B does, but it is similar. What A sees while browsing the Net with her Mac is similar, but not the same, as what B sees using her DOS machine. This inhesion of similarity in a computer's architecture is expressed in a similarity of spatial configurations across many applications: the reshapes, the extrudes, the multiple extrudes, the sweeps, the meshes, the convert-to's, the duplicates, the mirrored, the copied and the pasted, the grouped and the ung-

rouped, the rotates, the scaled, the flipped horizontally, not to mention vertically, and last but not least, the standard views: top, front, right, bottom, back, left, right isometric, left isometric, right-rear iso, left rear iso, lower right iso, lower left iso, lower right rear, lower left rear...

The accretion of phatic space

At the same time that there exists this diffusion of the similar, there is an accretion of phatic space. Roman Jakobson (after the ethnologist Bronislaw Malinowski who originated the term), referring to the the six functions of the speech event, states that the phatic function establishes, prolongs, or discontinues communication. It "...may be displayed ... by entire dialogues with the mere purport of prolonging communication." He cites the following dialogue to illustrate the phatic:

'Well!' the young man said. 'Well!' she said. 'Well, here we are,' he said. 'Here we are,' she said. 'Aren't we?' 'I should say we were,' he said. 'Eeyop! Here we are.' 'Well!' she said. 'Well!' he said, 'well.'

The phatic function is in evidence in the 'filtering' aspects of common computer software which accrues spaces of contact, but not necessarily of meaning. At one level, this contact manifests itself in the recognition of a specific software in the form of the made object (be it image, computer-aided manufactured model or façade panel, etc.) What many architects have in common today are the computer programs with which they analyze, evaluate, and produce ideas. This commonality is similar to the 'Well.' What we have, in fact, is the following dialogue:

'Photoshop!' the young man said. 'Photoshop!' she said. 'Mini Cad,' he said. 'Mini Cad,' she said. 'Strata Vision?' 'Micro Station,' he said, 'Eeyop! Photoshop.' 'Well!' she said. 'Well!' he said, 'well.'

At another level, this contact persists in a proliferation of images. For example, using an image-manipulation software such as Photoshop, one can apply a multitude of filters to an image in order to change its form. The main purpose of this profligate production is to establish or prolong contact, and not necessarily to communicate ideas which have gone through a rigorous exploration and refinement, and which reveal a content of form.

Whereas the phatic function in human communication occupies, relative to other aspects of speech, a short period of time, in computer-aided architectural production, and in the domain/extent of the Internet, the phatic takes up a disproportionate amount of space. The identification / naming of the white space — is it a blank, tab, newline, or carriage return — is necessary for the computer to sort input. The analogous white space of the filtering program takes on an importance, though, where the questi-

on has to be asked: how do we re-form our role as architect to engage this phatic space, and not merely to accept it as a given; to bring it up to a level of importance commensurate with its phatic function, while lessening its prodigal use of time and space.

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In the plane of theory, the diffusion of the similar can be explored in order to unfold what I call the *space of portability*, that space created by the movement of information amongst differing platforms and across interfaces. I am particularly interested in how we might develop tactics (opaque) and strategies (specular) of occupation of this space of portability into a conceptual model which could support a kind of architecture of the *shifting*, a *provisional* architecture.

Praxis uses the diffusion of the similar in the so-called practical exchange of data between, for instance, the architect and the structural engineer. Drawings go through conversions where lines are similar, but actually contain different information. In this possibility to convert is a fundamental change in the relationship between architect, engineer, builder, costing manager, etc. That the lines converted are falsely understood to be the same is an extension of some very confused notion of the authentic original architectural drawing, even more absurd in the electronic transfer of information. Tactics must be developed to utilize this seemingly diluted similarity, where the design and construction of a building can become a conscious process of interdisciplinary production in a time when computer programs have *supposedly* made us all not only great designers, but great graphic artists and costing consultants to boot.

With respect to theory, the white space of the accretion of the phatic can take a variety of possible directions. While the diffusion of the similar focuses on the *field*, the phatic looks at the *punctum* of architectural creation in this age of the electric. It is necessary to take on the possible lessons from software, from variable assignment, for instance, to develop a theory of the provisional architecture, based on this white space of the blank, the carriage return: to provide a structure, not analogies, not metaphors; to provide *functions*.

The phatic can focus on those aspects of architectural praxis which concentrate on the specific filters which we use in order to go beyond the "reproduction without resistance," and to begin to exploit the pixelate, the wrap, the pinched, the sharpened, the embossed, noise, and others.



The accretion of phatic space / the diffusion of the the similar

And lastly to the ever-present arbiter of moral judgment, teaching. The project of pedagogy must focus students on the silent white spaces of the institution's agendas. At the Technical University Berlin, and I believe at other schools of architecture as well, students are learning how to produce drawings with CAD programs such as Architrion or MiniCad, learning how to change pictures with Photoshop, learning layout techniques with Quark Express or PageMaker, and how to make homepages with PageMill. In the end, the institution is maintaining its strategies of producing technicians and not thinkers, researchers, or designers. That is, the academic institution maintains its irresponsible position of conscious non-self-criticism.

As I was manipulating (with Photoshop) a scanned photograph of a figure (produced by a student of Oskar Schlemmer; this image served as the motif for the poster of this colloquium) I realized that, yes, its very easy to produce many images quickly. But what interested me was the editing process through which I chose one image over another, where I was able to judge one to be better than another. Many factors are involved in this process, of course, from so-called taste regimes to my intentions concerning this paper. However, what also plays a role is my experience of images not produced with the computer: seeing a Rubens, a van Gogh, a Caravaggio, a Tintoretto, a Chagal, a Picasso, or a Duchamp.

My desire is neither to romanticize some better time, nor, through my teaching, to marginalize the computer as dangerous. My question is: what are the criteria used to judge one filtered image of the figure as being better than another when the student's primary mode of production and experience of the image is the computer itself, though he has no understanding of how that image is produced. And a related question: how do we help students to

develop their own positions vis-à-vis this knowledge, i.e. to develop a set of criteria with which to judge, investigate, and create.

Essentially, nothing less than an overhaul of the university's current curricula is necessary. The concepts outlined above could provide a starting point for a critique-cum-engagement. One conclusion to be drawn from these notions of white space is that architecture students, and architects who are using computers, must know basic computer science, from understanding how hardware functions, to learning the underlying concepts of programming. Today, more and more students will have this knowledge before they enter a program of architecture studies. This kind of foundation coupled with a serious discourse concerning the implications of the use of computers by architects (as part of a curricula and not just a colloquium) could lead students not only to understanding what assigning a value to a variable means, but also to using this knowledge to develop conceptual frameworks and formal research.

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I postulate a spatial production which occupies both the field of the *diffusion of the similar* and the densification, or spatial accretion, of the phatic utterance's possibility of communication.

A critical position within a particular methodology evolves with time. With computers, however, time is so compressed that there is a lack of concepts (theories) which could help architecture renegotiate its role as 'author'.

Serious reflection and theorization is necessary not only to confront those models which we are performing, but also, and more importantly, to reconfigure architecture's capacity to produce culture in this time of the digital.

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