

Sanford Kwinter

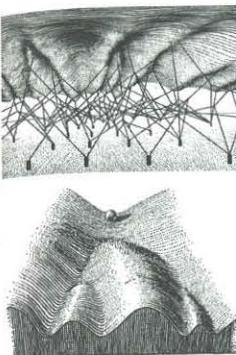
Sanford Kwinter is a writer, editor and philosopher with a background in comparative literature. Co-founder of Zone Books with Jonathan Crary and Bruce Mau, he was involved in the ANY series of conferences and has published among other *Pandemonium: The Rise of Predatory Locales in the Post-war World*, *Mutations, Architectures of Time: Towards a Theory of the Event in Modernist Culture* or his recent *Far from Equilibrium*. He is currently a visiting associate professor at the Harvard University Graduate School of Design and the head of Studio !KASAM, a content and communications design firm.

Jason Payne

Jason Payne is co-founder (with Heather Roberge) of the Los Angeles-based studio GNUFORM (www.gnuform.com). Their work is informed by research and an experimental approach, involving the application of material dynamics to the organization of form. Payne has taught at Rice University, Pratt Institute, Bennington College, Rensselaer Polytechnic Institute, and since 2002 teaches at the UCLA Department of Architecture and Urban Design.

A conversation between Sanford Kwinter and Jason Payne

Sanford Kwinter: We met back in the mid-nineties. I was in L.A. and you came to a lecture carrying a copy of the first volume of *Artificial Life* from the Santa Fe Institute ...



The epigenetic landscape:
Illustration of the gene's modulation of the landscape's form.

Jason Payne: Yeah, in the mid-90s that was the first hard core access to real Complexity theory. The paradox is that I was drawing cellular automata by hand, doing catastrophe experiments... It was at most a physical understanding I was seeking, but I was convinced that it was the way forward; it just felt right. I remember the Waddington diagrams of the epigenetic landscape you published around then. I was fascinated by them, but didn't yet understand how to think about their architectural ramifications. It was a great time because nothing had yet congealed into an identifiable set of stylistic characteristics. It was also a scary period because of the lack of technical expertise around then. We did not yet know what to draw or how to draw it.

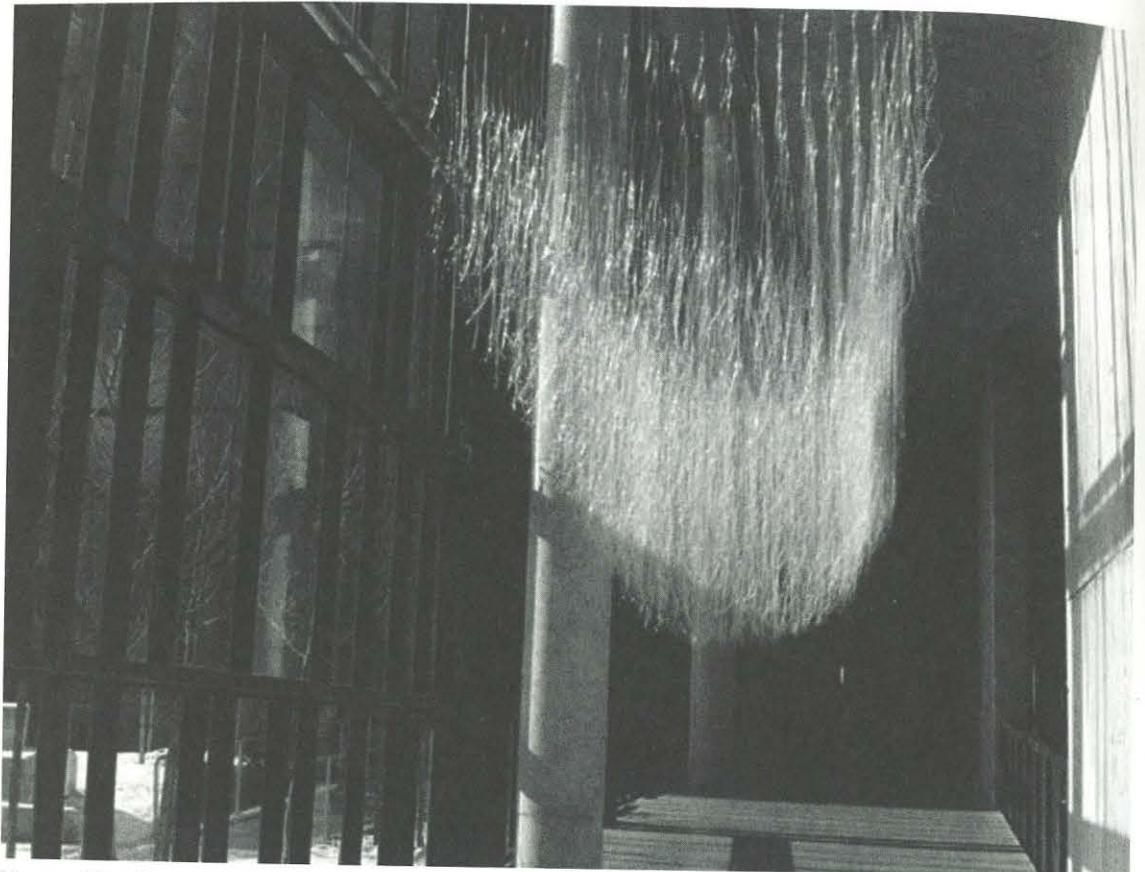
SK: A few years later we were working together on the East Coast developing a website for an architecture school and you brought in some quite bizarre pictures of sea protoplasm...

JP: ... **that was two male octopuses of different species having sex with one another.** One was really big, light-colored and angry-looking, the other small and dark, hard to make out in the murky water. The photo was taken in 1977 on one of the very first trips down to one of those fields of black smokers in the deepest part of the Pacific. The point is that nothing like it had ever been seen, and it added importantly to our awareness of the overall monstrosity of the natural environment itself. Like many in those days, I had been reading Deleuze, Georges Bataille and the Marquis de Sade. Each had written in a theoretical way about "buggery" which I found to be the height of both genius and hilarity. I know I'm not the only one of my generation to harbor a fascination with the monstrous. A lot of work one sees in California schools today looks strikingly similar to those two lovemaking octopuses!

SK: How did you get from organized plasmas to the fibre spaces you showed at the *Gnuform: Hairstyle* exhibition?

JP: When I first began to think about hair—hirsutism—in architecture I was only half serious. I thought I'd go through the exercise of taking hairiness as seriously as possible (like the others I mentioned did with buggery) and see if it could generate new principles for design, knowing there was a high likelihood that it would be merely comical. To my amazement, it yielded a

number of interesting results (also plenty of laughter.) I began by researching the ‘biology’ of hair morphology and then, with Heather Roberge, started to develop particle animations on the computer to simulate the behavior and organization of ‘hairy systems’ so that we could eventually understand how to digitally ‘grow’ hair. Pretty soon we were shaping hair into increasingly architectural organizations... Today we’re actually known for our use of hair in projects both in terms of generative principles and as decorative motifs. We’re still amazed that we actually pulled it off... our first act of architectural buggery you could say! The possibilities of hirsutery are certainly far from exhausted, but I’m now interested in finding other unsuspecting systems to sneak up behind and see what kind of offspring they can be made to produce.¹



Man-o-war (Jason Payne and Heather Roberge of Gnuform)

SK: A lot of people on the West Coast are currently pursuing the motif of ‘grotesque’ architecture. A quick glance from a distance suggests the extended influence of Frank Gehry...

JP: I would agree that interest in the monstrous appears to be all the rage now. Greg Lynn refers to it as “monstrous indexicality.”

SK: The index is a category of sign in which the ‘mark’ is a direct (literal) result of a physical or mechanical action on a material. Like something half way between Aristotle’s ‘material’ and ‘efficient’ causes, except that the index’s most important feature is that it represents an unmediated and uninflected causality. Do you think it is this one-dimensional literalism that Lynn is referring to, the one typified by the cliché of Frank Gehry crumpling up a piece of paper and sending it off to the engineers to build without so much as a further thought or any systematic elaboration?

JP: If I had to guess what he means by this I would say it is a form of indexical work spun in a particular aesthetic direction. The term ‘indexing’—another shibboleth in danger of losing descriptive potency through casual overuse, especially on the West Coast—would refer here at its most general level to generating an organization by playing one system off of another. A simple example in nature would be a seedpod; the bulging skin of the pod serves as an *index* of the pressure exerted by the seeds within.

So the term I believe refers to work that makes a central point of indexing, where displaying the indexing motif has become an end in itself. This usually means that there is a visible reciprocity between the two (or more) systems. It could be argued that first generation of “indexing” is exemplified in Peter Eisenman’s work, which of course develops an even earlier kernel of indexicality drawn from Colin Rowe. The second generation—indexicality’s “golden age”—came with Eisenman’s offspring, with the work of people like Foreign Office Architects, Reiser+Umemoto, Greg Lynn, etc. But the third generation, the students, you might say of Eisenman’s students, appears to have accepted indexing as a method unconditionally, largely without the critical perspective or the spirit of philosophical inquiry brought to it by their predecessors. With our work (sure, I include myself in this generation) it often seems that everything is indexed. It is only natural, then, that a variety of styles of indexing would emerge, of which the “monstrous” is but one. The word “grotesque” as you used it, has also been employed frequently in relation to this work but its use in my opinion is less useful than in its clear reference to a past architectural language with specific formal and spatial qualities such as heaviness, “molten” massing, high ratio of poché-to-space, undulating surfaces, deep, rich coloration, complicated plans and sections, asymmetrical composition, deep, narrow spaces, obscured construction technique, high level of decoration with ornamental references tending toward the occult, etc. Today’s ‘monstrous’ often appears scary, with repeated elements that look like bones or other biomorphic shapes such as teeth, claws, or scales. Only shapes with a sinister or threatening appearance seem to do (flowers don’t work, though occasionally carnivorous plants make an appearance.) So, among this group of third generation practitioners it has become increasingly important that the indexicality be stylistically inflected.

I think this is good because style can be a source of invention. On the other hand, this kind of—often shallow—work is virtually overwhelming many of the more important schools of architecture today. In fact, certain schools are now pumping out nothing more than the same monotonous fields of gently undulating, repeating forms, each subtly inflected by its neighbor. It's not so much that the work is bad—although it is rarely very good—it's that it is, despite the lack of quality, so *persuasive*. It's already become stultifyingly routine even before anyone has even begun to describe what it is...

SK: So what is it?

JP: At its best, I'd say the work could be described as an optimistic attempt to circumvent the representational function in architecture. For some time there has been a desire to somehow get beyond representation and meaning but to do so seems impossible because our work always involves the manipulation of signs and symbols. Indexicality is clever in that the symbols become elements or agents and meaning becomes performance or behavior. Technically we still work through representation, but it is less about making marks and more about making forms. There are two strains of indexical work currently circulating through our discourse in L.A. The first (and by far most popular) is concerned with indexing purely as image. Most of this work is derived from the AA in London and from Columbia (New York) in the 1990s, and then from SCIArc, and UCLA in more recent years. These designers and schools seem to believe that an overwhelmingly “indexed” composition is somehow an impressive or adequate reflection of what is most contemporary and therefore produce compositions that, more than anything else, strive to be *obviously indexical* (or parametric, or scripted) in aspect. This work seeks to *look* as indexical as possible as if this were a virtue in itself. Sadly, but not surprisingly, these designers talk mostly about “imageability”—how important it is for each office to have a distinct “image,” etc. (there are those who seek to be “monstrously indexical,” others “elegantly indexical,” or “interactively indexical,” etc.) These designers, primarily oriented toward appearances, rely on 2D representation (refined digital renderings) to promote their practices. Their genealogy may well run directly from Eisenman through Lynn and FOA but their motivations are very different. Although the work is not devoid of merit, I believe it is actually deliberately superficial and more than likely represents a dead end. It operates largely as a clique of ersatz (and not easily defensible) contemporaneity and is already well on its way to having been exploited and exposed beyond public tolerance.

But there is a second, obviously rarer path that interests me far more. It is one that involves the use of indexing incidentally, simply to get the job done. Indexing to produce distinct effects, indexing to connect two different systems, etc. Its use is more sparing and judicious, less naive and therefore less glorified and totalizing. “Use when necessary and then move on” type of thing. Very pragmatic. (Such “pragmatic indexicality” by the way, while deeper and representing a genuine form of research, does not leave an image any less powerful or salient than the other more superficial forms that are essentially calculated for this effect. The work of Reiser+Umemoto would be an obvious example of the second approach.) The second tendency generates compositions that are instantly distinguishable from the first:

more heterogeneous and less one-dimensional, more nuanced and historically and culturally invested than those of the former group. Likewise, the designers in this group do not form nearly as cohesive a front as do those in the first group (they do not generally interact with one another as a defined, idiomatic “front”). Their influence over students is different as well. Average students are rarely attracted due to the absence of prescriptive formulas, but exceptional students are often attracted to the openness, difficulty and speculative aspects of it. This ‘school’, still underground but clearly having an impact on its more visible counterpart, makes predominant use of 3D models, especially physical ones. There is less emphasis on rendering skills and they frequently eschew animation altogether. You won't see them scripting anything except as a last resort. *This group's genealogy doubtless seems more complicated, even contradictory, with lines running through Reiser+Umemoto and Lynn but also through Miralles and Eisenman and even, paradoxically perhaps, Libeskind.*

These practices include Ruy-Klein, in which mixtures of advanced parametric logics and arcane manual tradecrafts (such as embroidery) blend to produce uncanny compositions that are *not quite synthetic and not quite natural*. Rhett Russo stirs parametric connections into even more idiosyncratic selections of low-tech substrate to create projects that studiously avoid digital cliché. Lawrence Blough of Graftworks uses clever mixtures of various “abstract” geometries with the more prosaic realities of construction and building materials. In a slightly different vein are the subtle approaches of Ferda Kolatan and Erich Schoenenberger of su11, in which the work sails deliberately close to the parametric wind but resists the totalizing applications of these softwares by using non-parametric methods,

strong programming and contextual sensitivity. I view su11's work as a kind of resistance from within. *What distinguishes these practices is their understanding that parametrics are not forms but simply relations between forms*—obvious perhaps, but rare in current production. These designers, and their far deeper understanding of indexicality and parametrics, will ultimately rule the day.

Indexing does seem to be our innate lens for seeing the world—the oscillations and interactions of indexical composition are native to us; they derive from our historical experience with certain kinds of electronic music, rave culture, ecstasy, videos, and video games. We are well aware that we have not yet managed to make a fundamental contribution. It doesn't take a lot to realize that much of the reason probably lies with our generation's general distaste for intellectual gravity, our satisfaction with liteness, our lack of political or revolutionary



Hanging stair (Lawrence Blough of Graftworks)

commitment, even our lack of concern with our own history. (This arguably has to do with being so steeped in a culture of irony—it's not that we aren't intellectually serious, but more that we don't entirely trust it.) On the other hand, I'd say we have failed to recognize that the volumetric elements—the bones, teeth, claws, and scales I referred to earlier that characterize some of the new indexical work—represent a major breakthrough of a kind! One could say that these represent the beginnings of a physical, material rewriting of what otherwise has remained merely diagrammatic. I'd say this is what currently distinguishes the second from the third generation of practitioners, the awareness on the part of the older group of the potential role of matter to propel this work forward. For example, FOA's use of specific angles of repose in the landscape to create a variety of programmatic possibilities in their project for the Coastal Park in Barcelona, or Reiser + Umemoto's tracking the movement of the utility core by the density of window mullions in their Sagaponac House are each examples of real material organizations created through indexing with real material elements. You said it yourself once in a lecture: "matter is the new space." As I see it, our generation has found two ways forward on this theme. We either take up the pragmatic realism of the second generation and think in terms of architectural elements, or we weight the more abstract volumes we seem to like so much with the physics of substance and mass *so that we can begin to build with them*. Either way requires a much more serious incorporation of matter into the work.

SK: The "matter" question as you note has been a fundamental one to me as well. And yes, it has been disconcerting to hear emerging designers and teachers in recent years, mouthing the same jargon from 12 and 15 years ago only now, the second time round, disconnected from any discernable historical or intellectual substrate—as if it were suddenly now only a parochial architectural issue, in fact a drafting issue at that. There is an often terrifying predominance of 'shop talk' and endless waxing about things like scripting as if entire arguments were somehow bundled up within the word itself, but which no one in the sect is willing (or able) to divulge... I suppose that I would be classified among your 'second generation' practitioners. I would remind you that there is considerable encroachment of 'third generational' postures in our ranks as well. But certainly no one talks about things like scripting as if it were anything more than a drafting technicality. **Our generation was in love with ideas and their extensions, not techniques. How did the shift come about?**

JP: I have some ideas about that. But it's worth asking what role technical developments have played, since so many practices place these so centrally in their projects. "Scripting" for example, is a very simple thing: an efficient way to produce differentiated repetition in digital modeling that would otherwise require a great deal of time and effort. At its essence it is a method for reducing the number of keystrokes required to model, alter, and then repeat a particular form. There is no mystery behind it and it is, contrary to myth, easy to learn (dangerously easy in fact—it's where the term "Maya monkeys" comes from.) It is a powerful tool for modeling and an important technical skill for the digital designer to possess. As I said, I strongly believe that its use should be backgrounded to a supporting role in contemporary indexical work. Through scripting it is possible to produce so much material so fast that

scripted product almost always overwhelms the scene, forcing all else out. On a superficial level this frequently generates good-looking images because most scripted compositions appear *full*. They also appear coherent and cohesive due to the finely calibrated change in each repeated form. All of this of course is quite deceiving since it represents a largely random gesture with a huge (automatic) computational response. The fullness I mentioned leaves no room for any architectural element not able to be produced through scripting, nor does it leave room for the inevitable thickening that occurs during materialization. Similarly, the coherence and cohesion, being of a rarefied and exotic nature, often do not mix well with disparate and quotidian elements so often required in realistic architectural proposals. I feel very strongly about this so when I script (which is rare) I try to bury the scripted material within layers of unscripted composition.

SK: There is no doubt that the same economic logic—efficiency—that favors extending single design gestures over exponentially larger expanses of space, as in most new suburban developments especially in the developing world (Asia, South Asia, the American sunbelt, etc.), is also at work in the popularization of this new technique. It represents an impoverishment that has become routine in our culture and needs no explanation. Yet everyone remembers when cartoon animation was first rationalized and routinized and became no longer the product of the hand: the plasticity and movement of the space and its objects became so poor and diminished that one had to listen rather than watch in order to be engaged by, or move along with, the narrative and its forms. And then suddenly, yet after a very long time, movement of an extraordinarily beautiful and nuanced sort returned to the screen, largely thanks to the digital innovations of Pixar and their followers. Surely this suggests that the techniques are not solely to blame for the ugliness and clumsiness of contemporary architectural production, it is the minds and worldviews of those who are developing and using them that need to be explained.

JP: Absolutely. The shift is from substance to image and definitely corresponds to generational values. In my view, while each generation is largely continuous with its predecessor, each is also largely conditioned by its original experience of architecture and of life, the former occurring during their education. **The "second generation" began their education during a rather rich transition from modernity to postmodernity that was characterized by a kind of disciplinary "exfoliation"; as the discourse moved toward postmodernity in its various guises it opened itself more than ever before to a variety of external influences: philosophy, literary criticism, mathematics, the sciences, etc.** The field seemed more fertile than ever before, open to new growth through new ideas, techniques, and mediums. The second generation eventually coalesced into a group ultimately concerned with form and geometry but these were forms and geometries strongly connected to outside influences. Even today you find these designers far more adept at moving from architecture's formal interiority to speculations on more worldly ramifications. By contrast, the "third generation" is largely mired in a kind of disconnected expertise in form- and image-making. **By the time we entered architecture school, postmodernism was defunct and deconstructivism had flared out as a bankrupt mishandling of philosophical ideas that ultimately proved too complex for simple representational**

appropriation. We saw both the beauty of these projects and their obvious superficiality vis-à-vis deconstruction, and I believe this led to a certain cynicism regarding the role of conceptual underpinnings for advanced architecture. The transition from Derrida to Deleuze occurred shortly thereafter, coinciding with the dramatic rise of digital processes. The concepts of Deleuze meshed well with an emerging digital idiom ("smooth and striated," "rhizome," "folding," etc.) making deeper interpretations of this strain of poststructuralist thought unnecessary. My sense is that the "second generation" saw Deleuzian thought as a natural, more optimistic conceptual foundation for the evolution of experimental architecture, while the "third generation" viewed Deleuze's landscape of metaphors far more literally, knowing they could build the kind of catchphrase terms listed above in new and elegant ways using advanced software. This has played out as a relatively a-critical cavalcade of folds and rhizomes, both smooth and striated, over the past 15 years or so.

SK: There is no doubt that what you call the 'third generation'—one hopes not a definitively lost generation—not only have a distaste for attaching thought and argument to their work, but rely on incomplete understandings of the arguments and thoughts that they claim to presuppose in the work of their predecessors and teachers. This point was convincingly made by Reiser and Umemoto in their *Atlas of Novel Tectonics*; they took a third of the book to decry the laziness and disingenuousness of the following generation. And they could have been far more brutal. (Van Berkel and Bos offer the same criticisms in their *Design Models: Architecture, Urbanism, Infrastructure*.) But what is particularly strange is to find a generation without a discourse at all aside from metaphors and vague pronouncements about 'effects' copped from TV and campy films. For my own part, I have found small practices of greater humility such as Aranda and Lasch, who don't generally make forms that people want to imitate, of far greater interest than the latest generation of Playboys (to cite Gideon as I did when describing the soulless output of the second generation several years ago). Terraswarm's (Aranda/Lasch) work is essentially laboratory research, with a genuine heuristic drive. When they did their billboard project in Brooklyn last year it may have bored the third generation playboys, but it constituted a breakthrough that neither the MIT nor the Penn school had been able to achieve; they applied algorithmic 'machines' to color and light and demonstrated that they had deeper insight than others about how instructions (universally) determine form. They made the rest of the 'third' or emerging generation seem depressingly parochial by comparison. Likewise when they used video-mounted birds to 'cursor' the city below they were approaching the dictum that sustained me through the '90s, to "let matter model matter". . . For me the litmus test in all this is who really believes in nature of nature (the "logic of the living" as François Jacob called it) and who's imagination is limited to making amusing pictures of it. Another example is the research of Achim Menges (at Offenbach and the AA) who derives all his experiments from the concrete world of materials loaded with forces and uses the software environment to capture the geometries that the real world produces and to subject them to systematics in the same way that second generation practitioners might. He naturally speaks about a 'physiology' of forms in the same way as a biologist: because he has a purchase on actual behaviors—and not only fantasies of behaviors—he can operate on matter in a way not dissimilar to the meshworks of nature.

His forms are resultants, not of crude literalisms like 'indexes' but of 'logics' and algorithmic machines: a "Darwinian machine" that strives to innovate and a "Bernardian machine" (after Claude Bernard) that seeks to restore equilibrium (or homeostasis). Because he has understood that form is an exfoliation of logic—not force—he may be alone to have any claim to being a materialist in the end. His forms invariably begin in the world, get processed in the parametric environment and are redelivered—and tested—in the world. So I think there is very strong justification to doubt the continuity of the third generation with the first and second except in very few limited cases. Something fundamental is being lost in the transition in most.

JP: To speculate on differences in generational sensibility deriving from worldview and life experience is obviously tricky, fraught with assumptions and generalizations that could never apply to every specific case. Nevertheless, I do believe that each generation is, to a degree, distinct from the others for reasons well beyond differences in education and disciplinary history. Generations X and Y are often described in terms of their unique cultural influences such as the rise of music videos and video gaming, the proliferation of sub-genres of all kinds (especially in our musical forms,) the absence of wars in which we are directly engaged (such as Vietnam for the boomers) and most interestingly for me, our particular predilections with respect to drugs. All of these, I would argue, would lead to interesting and useful observations on what makes our generation distinct, but it is the latter that strikes me as perhaps the most revealing of all. It is here that one can grasp something essential in our particular understanding of what architecture should be and do.

Very regularly a particular drug rises above the level of general recreational use to capture a larger moment in time, a *zeitgeist*, and as such becomes symbolic of the feel of its time. In the late eighties and nineties that drug was arguably ecstasy (MDMA). Like cocaine in the eighties or acid in the sixties, ecstasy rose to prominence alongside the whole sensibility of a generation. I like to refer to the distinction as *the ecstatic vs. the acidic* because my observations on ecstasy's impact on the development of a generational sensibility relies on its comparison to the impact LSD had on the '68 generation. The primary difference between the action of the two drugs involves the perceived location of the high itself: acid is "felt" most profoundly in the mind whereas ecstasy "feels" more distributed *throughout the body*. An acid trip tends to be an alienating experience, turning the user inward toward an exploration of "inner space." Observations and experiences while on acid tend to be cerebral in nature, with users reporting revelations involving the rationalization of life and experience. Ecstasy, on the other hand, generates deep feelings of connectedness with others and is famous for producing a poignant set of physical desires, all pleasurable, from thumb-sucking and jaw-clenching to powerful compulsions toward physical contact with others in the form of hugging, massage, close dancing (usually during raves,) and even sex. To put it simply, acid tends to enhance *thought* while ecstasy encourages *feel*. Acid is *cerebral* while ecstasy is *nervous*.

Whether today's young architects actually took these generational drugs of choice during their formative years is mostly irrelevant—there exists nonetheless the universality of knowledge of these substances in their broader culture. In the late sixties as in the nineties, both drugs fueled the growth of their own cultural cosmoses, driving new developments in music, fashion,

art, film, psychology, and even law and politics. To listen to the acid-amplified brilliance of Hendrix's guitar is to have a momentary taste of his transcendent technical intelligence regarding the limits of the electric guitar just as losing oneself to the collective, writhing trance of an over-crowded rave approaches the effects of actual MDMA intoxication. Given this, I suspect that the icy-cold alienation and fierce precision in the early work of "paper architects" like Eisenman and Hedjuk was somehow reflective of the acidic atmosphere of the time. That work was *thought* rather than *felt*, at least in its first moves, with any feel that might emerge being secondary. I am similarly convinced that the conceptual depth of the "second generation" has been largely conditioned by this commitment to the primacy of the cerebellum over the nervous system if for no other reason than the lack of a new drug during the eighties to force a shift in consciousness and culture (cocaine, while clearly popular after acid and before ecstasy, simply does not produce mind-altering effects of the magnitude necessary to shift cultural awareness and atmosphere in the same way.)

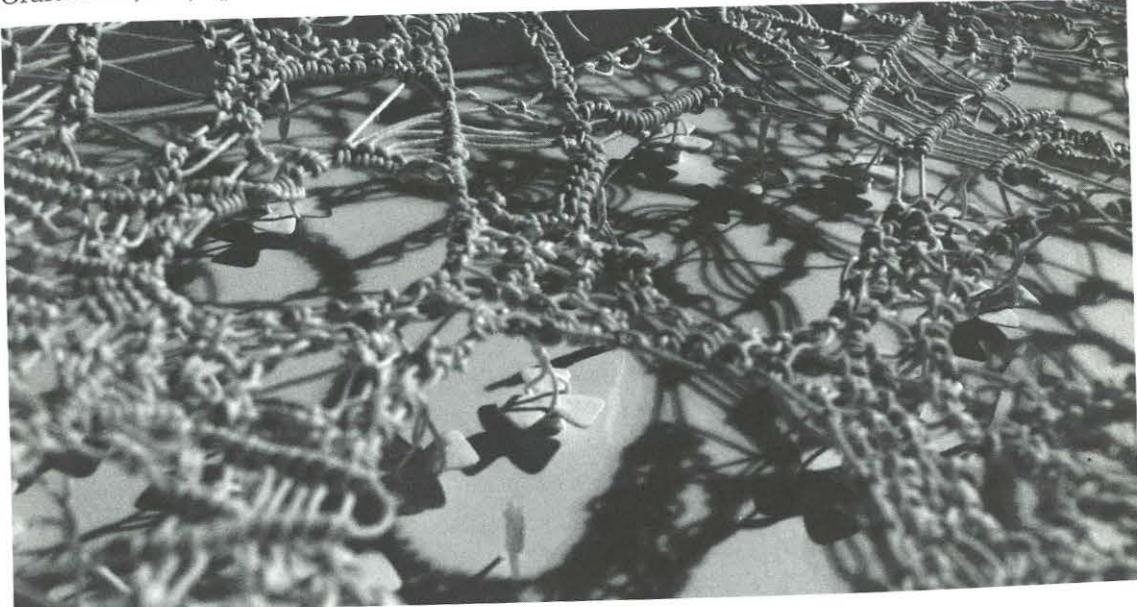
The rise of MDMA use and its wide cultural impact during the nineties produced what I would call an *ecstatic sensibility*, an atmosphere entirely different from its predecessors. You see this in music in the shift from lyric-based songs attempting to convey message to sound-based songs preoccupied with feel. In architecture, focus shifted from cerebral ratiocination to physical sensation, but this transition has not been entirely smooth or coherent. There was no singular moment at which my generation consciously decided to move toward this new sensibility for calculated reasons. Instead, much of the shift has occurred due to ambivalence toward—and ignorance of—historical lineage as well as the transformation in thinking and technique brought about by digital tools.

Beyond this putative shift from the cerebral to the nervous, there are other parallels that are likely connected to ecstatic sensibility. MDMA is synthetic and much was made of this shift to "designer drugs" when ecstasy first came on the recreational scene. Prior to MDMA, drugs were understood to be one-of-a-kind substances: marijuana was marijuana, cocaine was cocaine, etc. (This, despite varietal strains of the organics and different preparations possible with most drugs.) MDMA, on the other hand, is but one member of a large family of phenethylamines that includes hundreds of other related psychotropic compounds, each with its own feel.

The proliferation of the phenethylamines continues to frustrate drug enforcement agencies because each one must be legislated in turn. (For a fascinating trip through the different colors and flavors of these compounds see Alexander and Ann Shulgin's classic *PIHKAL*, an acronym standing for "Phenethylamines I Have Known And Loved.") Due to the ease of recombination to create new drugs, "designer drugs" such as ecstasy became known not so much as singular compounds with fixed identities but rather as a distributed field of related effects. Some are more visual than others, some more "feely," some cooler and some warmer, some are noticeably "tingly" sending pleasurable chills through the body throughout the trip while others only send the classic "onset chill" once in the beginning, some feel distinctly sexual while others feel platonic, some are quite speedy while others more lethargic. These are nuanced differences and we are comfortable with the delicacy of distinction required to connoisseur these substances.

We have in turn become highly attuned, even finely tuned, like the engines in temperamental British sports cars. For this reason we feel that the perceived self-similarity in our design work is a misperception by outside critics not so attuned to sensing subtle difference. Some designers within our "clique," as you call it, seem especially committed to differences so fine they resist perception even by their peers (the work of Hernan Diaz-Alonso at SCIArc, for example seems indistinguishably similar to itself in every iteration—even I (an avid and close reader of this strain of work) find it difficult to tell them apart. My own taste is to strive for much greater distinction in general—both within and between projects—both a function of, and the reason for, a far lower reliance on parametric software as well as a general distaste for closed systems.

A further important characteristic of the ecstatic is its "speediness." MDMA tends to heighten awareness rather than dull it (as do the opiates, marijuana, and alcohol) and ecstasy is often cut with amphetamine, to increase its speed even more. Speediness is actually a combination of two effects that blend nicely: a compulsion toward increased activity and euphoria. When you are properly "speeding" you are feeling more than just fast, you are feeling good and fast. Much third generation work feels good and fast. Fast generally means an excess of elements (say, hundreds rather than dozens) and good fast work displays exuberant excess. Some designers achieve exuberance through the flamboyance of individual components which, when repeated over and over achieve a powerful sense of fertility. I use this strategy as well but never in isolation; for me, blooms of activity are best rooted in more stable soils, a lesson I learned when working with Jesse Reiser and Nanako Umemoto. (Other contemporaries of mine work this way as well: David Ruy and Karel Klein of Ruy-Klein Architecture, Lawrence Blough of Graftworks, etc.) Speediness is a hallmark quality of third generation desire.



Ruy KleinArchitecture, 2007. PS1 Competition Entry (Finalist)

Of course, the adage that “speed kills” is true, and there is clear risk when over-amping architectural compositions. I call this “redlining”. It’s a form of death by acceleration or overdose that has become common, and to which scripters are the most prone. It happens when the work becomes nothing other than a restless, compulsive accumulation of parts. The workspace becomes so overfull and overwrought that everything—program, structure, space—is squeezed out. So enamored of algorithmic flow, speed freaks either forget or ignore the prosaic concreteness of architecture’s pragmatics. Embarrassing arguments as to “alternative functionality” are offered after the fact but don’t come close to salvaging a broader efficacy and relevance for work which is essentially as meaningless as the worst ‘70s formalism.

SK: I’m not indifferent to your fantastic arguments, although I’d say they’re more seductive than comprehensively convincing. There is no doubt in my mind that affective worlds present as wholes in which all parts determine one another. Your emphasis on ‘experience’ I’ve long argued, is an inadvertent—and interesting—recidivism of your generation, yet not necessarily a regression. While our generation and the one that preceded ours made done with phenomenologies, yours has turned to it as if 50 years of philosophical emancipation never happened. I remember the first time I was in a classroom and was struck to the quick by a comment that made me jettison a considerable amount of faith in “history”: it was 1991 and a student evoked an emerging band called Nirvana as having introduced a new type of affect into our culture that was seeking a response in architecture that simply did not pre-exist but rather needed to be made. I knew Nirvana slightly, but had no sense yet of how utterly fundamental they were (that student already did). Without understanding it exactly, I knew she was right, or at least potentially right. But if affects are historical, one ought to be as nuanced as possible in thinking about them. We used to contrast the urban ‘speed’ scene and music of the ‘60s to the more ‘bucolic’ atmosphere of pot and the psychedelics (think Velvet Underground vs. the Doors or protest music). Certainly it felt convincing; at any rate these WERE two different worlds and they did not for the most part meet. I myself experienced the 1990s very differently from you. **I remember this period beginning with the revival of psychedelic utopias associated with the rise of electronic interfaces and cybersculture: virtual reality for example began as a political, psychic and erotic ideal**, especially through journals like *Mondo 2000*. It was the first glimmer of a revival of a counterculture: genuine, but brief. Soon after, a so-called new ‘psychedelic underground’ emerged strongly associated with the emerging sciences of chaos, complexity, dynamical systems theory, a smattering of hindu-buddhist ethics and cosmology, and a strong connection to nature and computational metaphysics. There was also the typographic revolution associated with surfer culture that found its most eloquent exponent in the magazines and graphics of David Carson. A whole new approach to letterforms, photography, image culture and lifestyle had emerged, California-based, and without a doubt neurochemically assisted. (To say that the ‘acid’ era was gone, would be a true mistake; it had simply found a new context and mood to live in.) In any case the Nirvana argument certainly had resonance with these simultaneous developments (distress, for example was a predominant affect in both music and typography...) The neurochemistry associated with this era actually had much more to

do with the legendary molecule DMT (Dimethyltryptamine), the anthropological lore around ayahuasca, ethnobotany, psilocybin, neurochemicals that allowed one to experience vast correlations within one’s own body, to experience one’s own physical body as intelligent, as mind, as a cascade of information within matter, the same features that one was beginning to be able to study in computational realms and in nature at large. It was a period when the transformations in knowledge that were arriving allowed one to conceive of oneself not as IN the world but AS the world itself. (DMT was famously a drug that Harvard’s ethnobotany department demonstrated to be capable of producing “collective hallucinations” in which entire groups would somehow see the same things.) Yes, there was a wave of epistemological and ethical holism that helped drive perception and research and by extension that drove design. It culminated in a deep belief in algorithms as the new units of the ‘real’. Algorithms were connected to experience, sensibility, aesthetics AND research. In any case, it was the context in which we, at least, were reading the papers of the Santa Fe Institute. Computers played a role only until around 1992. By the time the first Silicon Graphics machines arrived on the design scene computers had already become peripheral to the developments that were really interesting. Unfortunately, many architects got connected at just that moment, while others who were already moving with the new developments, lost their direction and became fatally distracted by computers rather than by computation. **The real issue is algorithmic complexity as a new model of matter, form and behavior on a general scale.** It meant many ideas had to change. Today it is hard to find ideas at all in the new work, let alone an acknowledgment that relations between things have changed and that there are a million new things to learn and make. The argument of about feelings is fine (if effete sounding to my generation) but it doesn’t account for history. My take on the history of the body in the 1990s is quite different the one you propose: I see your third generation as having lost its connection to the material substrate in which the mind works, exiled within an equipment-saturated world, sold on the hype of cyberfreedom and cybersociality and compensating wildly with ersatz realities like ‘special effects’. A whole generation of designers today thinks that design cues should be taken from movie production! The DMT world is a world of total interconnection and feedback, so compressed that information, movement and matter—and the nervous system—are indistinguishable from one another. I still see this—what I used to call ‘wet’ computation—as the way to outlive the now defunct ‘computer revolution’. In the ‘90s, I would argue, the mystery of the body was revealed to us as a product of ancient organized forces that we started to name with new names like ‘attractors’, ‘basins’ and ‘chreods’. The affects of the body were linked not just to forms but to the active forms that gave forms and that connected everything present to what is oldest and most primitive in matter. This is what a DMT excursion shows you in the most explosive and dense way. Its like a trip into Darwinian past AND into the chemistry of one’s flesh at the same time. (It is said to be the most intense experience the nervous system can experience and it involves both psychedelic visions and intense ideation.) Perhaps its most important feature of all is the insight of cohesiveness that it produces. In today’s ‘third generation’ discourse this ideational dimension is gone. Many designers think forms come out of computers or movies.

JP: While this is certainly true of some, it is not true of all. For the most part I'd say it's a result of a parallax view: digital terrain is not native to older generations of critics and observers and a just evaluation requires close reading. The two schools I am describing have their own distinguishing nuances.

I too remember the moment in 1991 when Nirvana burst onto the scene, and I could well have been that student you refer to for I had the same sense that the new sound would force a larger cultural reckoning. When *Rolling Stone Magazine* interviewed Cobain I was struck by the way he explained both his vocal affect and his approach to writing lyrics. He commented that he sang from his upper abdomen, just below the breastbone, because "...that's where I scream, that's where I feel..." **Vocal coaches will tell you that this method is technically incorrect and even harmful over the long term. Cobain surely didn't care, his misuse of the vocal instrument was the only way for him to convey the grinding, guttural sound that was, for him, meaning.** As another *Rolling Stone* writer (Chris Mundy) observed of this shift toward affective rather than lyrical communication that "...the medium is the message." There was a politics to grunge but no distinct "message," and that was intentional. It would impact culture through other means, through the power of mood, effect, and posture. It was NOT a nihilistic turning away from the political dimension of rock, but rather an attempt to move past earlier, lyrical forms of communication that these artists felt had become exhausted. What the third generation architects are doing now is not dissimilar to this. I don't expect you'd describe Nirvana or early Smashing Pumpkins as "effete". Similarly, I find your comment about phenomenology hard to make sense of. I'm advocating work that appeals directly to the senses. In the end what matters is architecture's efficacy...what it *does*. Architecture, history shows, is often capable of building images of thought, and we also know that architecture sometimes aims for a more direct influence on life. A commitment to the latter can disrupt the representational clarity of the former. Right now we are seeing a clash between these two fundamental motivations playing out not only in the work of the third generation but in the second as well. Your account of the influence of complexity on architecture illustrates this well, and it is true that most experimental, digitally-oriented design has become mired in what you call an equipment (and software) saturated world. These designers, some knowingly and some not, are consumed with mere representations of technology, complexity, and computation. While I find this project weak and uninteresting, I recognize that it *is* a project and is, in some way, connected to representational work of the past (for example, the stillborn, high steroid, "high tech" movement of the eighties, not a pretty picture either then or now). On the other hand, I do not feel so unsympathetic to the original "machine aesthetic" work of the early century: the initial appeal to aircraft, automobiles, and machines in general quickly evolved endemic forms and made this inspirational material *native to architecture*: clean lines, taut skins, and fearless expression of function was more a product of the era's architecture than the machines themselves. Architects simply borrowed the desire and made it their own. The very best digital today work seeks this same kind of durability through disciplinary responsibility.

SK: If phenomenology means nothing to the emerging generation, I'd say this was more a liability than a virtue: it effectively leaves them without a framework to discuss experience, or a model to produce and modulate it with work. For my own part, I return to phenomenology more and more in my teaching these days; I make an effort to show why it failed and has been so denigrated in the course of 20th century thought, but then show how contemporary developments, especially in neurology, have the potential to redeem many aspects of it.

One of the primary doctrines of neurology is that the mind can best be understood from the study of its pathological states, rather than its healthy or 'normal' ones. This on its own provides a framework for thinking about what you call 'affective' states: in any case it saves it from the impressionism and neo-connoisseurship that is becoming a hallmark of the third generation's discourse. In other words, pathology produces *organized disturbances*; even the classical 20th century model of aphasia produced or described 'poetic' products as possessing a systematic intelligibility. That's what poetics is. Likewise with the model of evolutionary psychology: it offers a framework to explain states of mind, and especially capacities of mind in relation to form, and as responses to environmental pressures of the evolutionary past. It may even explain what you call 'effects'. In the 1960s some psychologists used to speak of "aesthetic fright": an example is the baboon's, or certain birds' fear of serpentine forms that they KNOW are not real snakes. Current work-thought constellations in architecture do not provide much room for anything but expressions of taste and usually campy taste at that. **Some have tried to revive 'beauty' as a criterion of judgment, as if we were back in the 19th century salons of provincial town-dwellers who had never visited Paris but affected to adopt (what they thought were) its attitudes nonetheless. Once systematics goes out the window, there is no limit to how far things can regress.**

In addition to this foreclosure of criteria, the foreclosure of concepts with which to grasp, extend and develop the work, there is that certain poverty that you have noted to exist in the products themselves. This probably has to do with the profound error into which a generation is now falling, which is to have mistaken parametric software and scripting techniques as "design" tools when they are not this, but only realization or resolution tools. Jesse Reiser is fond of remarking how Michelangelo classified weaving at the bottom of the scale of the arts—with nothing lower—presumably because it represented the simple playing out of a one-dimensional algorithm or instruction by a single gesture (of the shuttle) repeated a thousand times (he considered weavers to verge on imbecility). The production of cloth here is of course not of the tapestry variety, but that of the simple repeated pattern. Clearly the effect you began by describing as a benchmark of compelling design, what I would suggest calling here the 'dialogical' effect in which more than one set of instructions is played off of the others (although the two superimposed systems of indexical design seems a very poor understanding of this) is a dealbreaker for the strong advocate of the script. Anyone with a passing acquaintance with renaissance art has encountered the well-noted deadness of Piero della Francesca's painting of The Ideal City. They will also know Masaccio's radical Christ in The Holy Trinity: for Masaccio taught painters how to use perspective by realizing that it could not be applied roately as it was

in the Piero. Scientific perspective, literally applied, killed the space and the life of the painting; it had to be used, as you said of scripting, in the background, in piecemeal manner and with judicious restraint. One experiences the same thing when looking at the works that come out of studios in our so-called best schools: once you've got past the strained forms, a poverty of both the senses and the sensibility hits one (a poverty that goes beyond the mindlessness of the forms, but is actually a property of their counterfeit nature, as they try to pass themselves off as 'matter' or 'life', when in fact they are only movie sets for films and action stars that will never come...) I also am unable to agree that second generation computer architecture is all that much to be proud of. I often find the input of engineers—generally directed by constraints and goals—to be the only thing of real interest in works generated in these ways. Have you never noted that the work coming from European schools is so much more sophisticated these days than the American work for the first time in decades? Is it because the parametrics and the scripts are modulated and deployed within a much more crowded—and therefore overlapping and constrained—social, intellectual, historical and sensual environment? The *tabula rasa* fallacy is available only to the American psyche...

JP: If phenomenology is re-emerging as a potential framework for this idiom, it's probably because it coincides with the shift (still underway) from process to product. For a long time, technique and process were, in themselves, the endgame of much of the younger digital work. A few years ago many of us became frustrated with this misguided goal and became more vocal about shifting the stakes of the game. At first most of the dialogue concerned very discrete "effects" as being sufficient products of the work, but now we're advocating a more comprehensive attempt to create entire environments, atmospheres, and sensibilities that are more layered and complex. Direct appeals to phenomenological ideals are not likely to occur in the foreseeable future, but "lower," more carnal and nervous phenomena such as the pathologies you mention may be found useful. 'Low' is currently of topical interest, and is in no way inferior to 'high'. While the shift from process to product in digital work and the indexing school is gaining momentum, the more hard-core parametric designers (including the ultra-rarefied algorithmic, or scripting camp) are slower to change course. Parametric design requires a high level of technical expertise that takes years to master. What we are seeing today with parametric and scripting software is no different from the missteps architects made in the mid-90s when they mistook means for ends and ended up fetishizing software environments like SoftImage, Alias and Maya. But I don't view this as catastrophically as you do; I view it as a kind of training that prepares for later, more comprehensive and mature performances. At any rate, the aim is to get beyond the process obsession of the '80s and '90s. I am optimistic for two reasons: first, the awareness, intelligence, and commitment to real product on the part of leading practitioners I've mentioned earlier, and second, the increasing volume of criticism from above. You are not the only one to decry what you perceive as a lack of focus on the part of the third generation. In recent years even those who've been sympathetic to our work have raised concern (this includes Eisenman himself, Jeff Kipnis, Sylvia Lavin, Greg Lynn, Jesse Reiser, etc.) I have faith that advanced digital design in general and parametrics in particular will find its way out of the bramble of technical savantism toward a more healthy, robust, and pragmatic deployment.

SK: As you know I find the ideas that have transformed thinking about form over the last decades to be extremely beautiful, and the work done in their name to be rarely satisfying (indeed often ugly and simplistic). Among the notable exceptions to this was the formulation of Ben van Berkel in the late '90s. Its simplicity was the most astonishing thing of all and he used it as the title of an article: "The Box AND the Blob". UNStudio's ability to invent is largely a result of the intellectual flexibility they opened up for themselves with formulations of just this type, the recognition that nature creates its machines from everything it has at hand and integrates them into working wholes. The American school is often unable to find this sophistication in its processes, since it is highly technocratic and obsessed with promotion through theoretical innovation. Now that you make an argument for your generation's interest in the 'real' as opposed to the speculative, one might expect a similar increase in sophistication. But the opposite has been true. The output has become increasingly strained and desperate for effect (indeed 'effects' is one of their favorite terms, as if their legitimate business was to be creating 'special effects' that find success in cinema only because they vanish from the screen within a few instants of their appearance and thus never need to survive the scrutiny of an intelligent minute...). I do believe the 'indexicality' you are speaking of is a remnant from the 1970s and should have been put to rest as among the worst of the literalisms that have plagued architecture in recent decades, yet I confess to finding the issue of repeated elements or modules a step beyond this. The latter 'parti' is one whose allure I do not actually understand, but it is one in which I am far more certain there is something useful to understand or to find. Parametric software and the script-generated continuums of contemporary digital work have a material quality of which something physical as well as metaphysical could be said. What I used to call the "parametric blanket" (largely because these works resemble a featureless blanket thrown over a highly articulated traditional workshop model) has nonetheless a materiality that could sustain discussion, a history that is at the very least interesting (dating, no doubt, from Kipnis's and Shirdel's work at the AA in the early 1990s) and some precedents in meshwork that have a rich etiology (Reiser and Umemoto). At the same time there is an almost complete flouting of the cybernetic dictum that information can be defined as "a difference that makes a difference". The current work appears to show no interest in such second order differences: indeed it eschews nearly all information of the standard kind. Is the contemporary period one in which there is a deep suspicion or antipathy to form?

JP: At its most basic, parametric design represents a deep commitment to a geometrical project as the centerpiece for architectural evolution. While geometry has often been central to architecture, it has not always been so. The architect's faith in geometry waxes and wanes through history and my generation has consciously accepted and extended geometry's primacy from our immediate predecessors. For this reason, our work, at least as far as it relates to architecture's interior, is largely an extension of that of the prior generation. Some have remarked that this seemingly uncritical acceptance of an established model for design leads to mannerism and that we have succumbed to it. But I would argue that the deep cultural pull of an ecstatic sensibility prevents such stagnation. For while the third generation takes as given much of the same material as the second, its interest in it is for entirely different reasons.

You could say that the second generation's appeal to geometry was largely a reactionary return to architecture's interior, a turning away from the pastiches of postmodernism while the third generation optimistically embraces geometry not as an act of resistance, but as an opportunistic movement forward. While they played defense (and we are grateful for it) we now play offence. Our unique lens for processing this material will inevitably push our work away from what has come before, seen already in calls for a "new phenomenology" to address our compulsion toward sensation, atmosphere, and affect.

Further, our appeal to the "lite" and the "low" (in contrast to our predecessors' reliance on more traditionally "high" forms of thought) is not anti-intellectual: many of us accept a "base materialism" as our primary mode of operation. Much of MDMA's impact has been through its commonality and inclusiveness (we *all* get it and it was able to infiltrate the larger culture—music, clothes, hairstyle, mannerisms, etc.). Ours is a deliberate shift from high to low and therefore there is less interest in announcing scholarly foundations (which run through Lucretius, Nietzsche, Bataille, Bergson, Deleuze, etc.).

SK: Parametric tools are doubtless among the most powerful computational devices yet to be put at the service of architectural production. But parametric software is not design software and its use as such has failed to produce objects or worlds of interest, novelty or depth. The charm of the many automatic processes embedded in it is undeniable but this has led many designers into the production of debilitating clichés. (It is rare to meet someone who does not express deep boredom at viewing its products in the schools, even those who produce them in their own work. The observation that it "all looks the same" has become universal.) This did not have to be the case. Most of all, the recent turn away from concepts, ideas, theories and systematics in general (toward the values you list above) have meant that architecture is now failing to draw advantage from the new (and often spectacular) ideas coming out of the sciences of form. For example, there is a new type of systematics that is being studied in genetics today known as "modularity" which may well turn out to provide some of the most powerful keys to understanding the emergence of hierarchical structures in complex forms. Modularity is pure design theory, and utterly accessible to experimentation and manipulation with design software. It operates on units and causes vertical 'decomposition' of series' of units (this is Herbert Simon's word, and modularity is one of the last things he wrote about before he died) into differentiated functions, roles and developments. The separations are like integrated divergences and allow for very rich matrices to arise, indeed everything that characterizes forms that support a wide variety of behaviors and performances. Another is 'population thinking', a term borrowed from evolutionary theory, but which shows how speciation might arise from a continuum of highly similar—or even effectively identical—units. A third important idea ignored by those who claim to be interested primarily in 'affect' is the supposedly central problem of 'emergence' and 'catastrophe' (understood of course in the sense of appearance as discontinuity). Even in Goethe's algorithmic imagination he could 'decompose' complicated botanical forms into superposed interacting gradients (very different from indexicality and in fact a litmus test in the form-theoretical world). He generated more interesting plant forms with his pencil, his eye and his innate mastery of systematics in the form

of intuition than the digital products one sees today, indeed since Saarinen's TWA Terminal perhaps. My feeling is not that parametrics represents a false path, its that the new generation has the wrong tool if they are truly interested in atmospheres and moods. What we have to lament is an anti-intellectualism and a sterility that uses software and connoisseurship as an alibi and a foil. But there can never be an important architecture devoid of ideas.

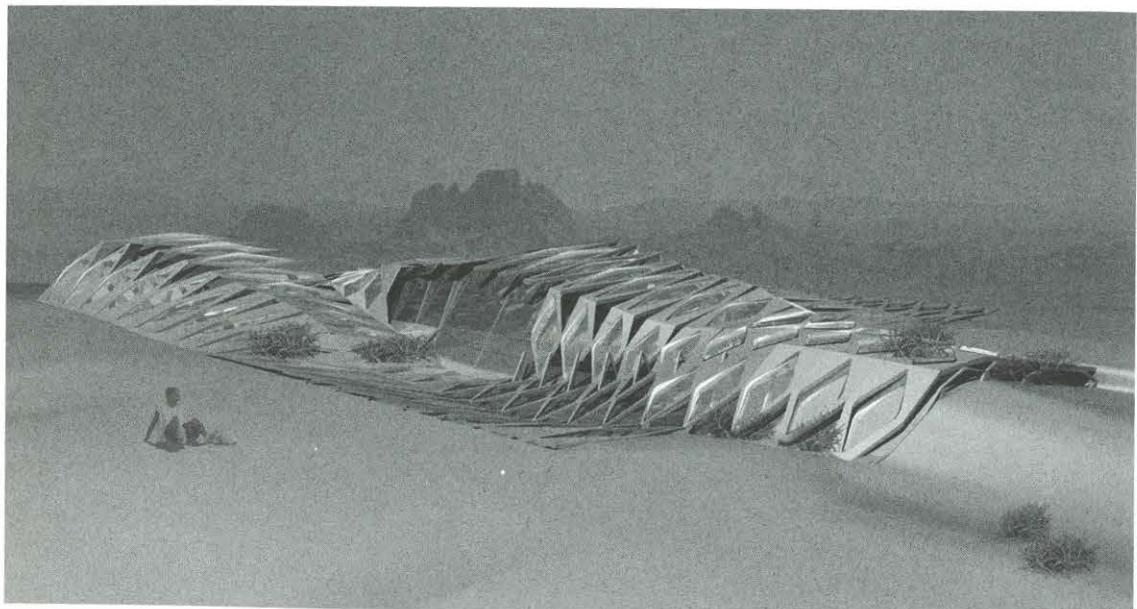
JP: The beauty and promise of emerging parametric work lies in its potential to be materialized in real structures, in both its *inflection* and its *complexion*. *Inflection* involves a specific thing's ability to swerve away from other things to become itself (I cite here Lucretius' notion of the "clinamen" or atomic swerve that produces difference, in order to further underscore a materialist intention for this work). All parametric material is inflected through an attached physics, either real or imagined (in the case of work that remains within a digital medium) making it fundamentally different from the diagrammatic indexing that came before. This requires some explanation: when the diagram is understood as primary and virtual (lacking physicality) then matter becomes secondary and complacent. Materiality is merely wrapped around, or laid over, an underlying organizational armature that is somehow understood as free of the lowly material constraints and frictions of the real, a form of idealism you could say. My own model tries to posit matter as organizer: matter first, organization second. This model for architectural composition requires a different mindset of the designer. Instead of understanding the basic ingredients of architectural composition—points, lines, and planes—as empty vessels for extrinsic values, affiliations, and meanings, this material is conceptually reframed as *intrinsically motivated* and *full*. Points, lines, and planes come laden with distinct qualities in measurable quantities such as density, pull, drag, tension, compression, acceleration, and porosity. These qualities and quantities, or *properties*, allow geometry to become behavioral and active rather than representational and passive. In this approach the designer no longer develops geometry for what it draws but for what it does. Upending the traditional organization-matter relationship in this way, takes place through a process called "rewriting," and it is this move that I think you are responding to with optimism. Rewriting is a term from Artificial Life. I first came across it in the work of computational botanist Przemyslaw Prusinkiewicz's work on L-Systems, relatively standard subject matter for those studying complexity. L-Systems are rule-based systems designed to create branching morphologies. In order to give area, volume, and mass to otherwise dimensionless branching systems (as when approximating leaf growth) Prusinkiewicz "rewrites" the featureless branch, or line, with a simple shape. This entails simply removing or overwriting the line with a bounded area or volume. Doing this over and over creates the artificial approximation of a growing plant, especially when the rewritten shapes interfere with one another in the way real leaves displace one another on a live plant. Seeing the transfer of locational logic with the addition of dimensional information allows us to imagine similar transfers with increasingly "architectural" material as we build systems up from more abstract, diagrammatic armatures. Matter drives organization as physics draws the diagram. The key here is to accept that one *invents* some material at each step along the way—that it can never be found entirely in the preceding step. To "rewrite" an underlying armature is not to

simply wrap it in a material stand-in (the costume of building materials on the diagrammatic body underneath) but rather to progressively erase and redraw the diagram through substance (this works only when the substance corresponds to some material, buildable reality).

Hence, the increasingly intelligent, physical, and alluring forms we are starting to see in parametric design as in su11's *Dune House*, where a parametric armature becomes structure, realistic in material, dimension, and disposition. With this material, the hurdle of inflection has been cleared. I sincerely think of this as a milestone in the application of complexity to architecture.

We now confront the higher aspiration of *complexion*, or the full identity of a thing. Deriving from a medieval idea that bodies are the expression of four fundamental "humors" (choleric, melancholic, phlegmatic, sanguine) complexion ultimately involves physiological disposition. Entire, well-formed and functional bodies are what is at stake with this term—no longer homogeneous, self-similar assemblies of parts that cannot possibly address all of the issues involved in whole buildings. This requires real combination of truly disparate systems and so far, with parametric design, we admittedly don't have much of that. Instead we see beds of inflected matter, primed but not yet fired. The interest in taste and temperament is not an attempt to sidestep history and theory in exchange for a consumable "liteness," but a commitment to make sense and product of work that stands among the important developments in recent architectural experimentation.

In 1929 Bataille made a new dictionary entry for the term "formless" in an effort to "bring things down in the world."² Parametric design finds itself in a rather awkward position today vis-à-vis this kind of materialism. For me the choice is clear: the task of the form is most important, not its meaning...we all want the continuity promised by complexity,



but some have yet to understand that real continuity often goes unseen. It is not always expressed at the outermost, visible skin of a thing, but is often found flowing invisibly through it. Only by looking at the *workings* of a structure can its continuity be accurately assessed. Complexion, then, is the resultant amalgam of qualities thrown off of such working bodies. But to get back to your question about component-based surfaces: the roots of this technique lie in complexity theory; specifically, the necessity for huge numbers of components to work interactively to produce large fields of inflected material. This is both a remarkably simple, beautiful idea and an arduous, time-consuming task. The past several years have been consumed largely by the single-minded pursuit of this principle as it applies to architecture, albeit in a rather narrow sense. Seeing the results and *understanding them as provisional*, we now must challenge the necessity for the literal expression of large populations of elements. "Parametric blankets" will inevitably be woven through, buried under, and teased apart as we move toward less literal expressions of population dynamics. I am tired of the complaint "it all looks the same everywhere." Connoisseurs of this work never say this for we know that the idiomatic terrain is variegated even where it seems smooth and that in places, as I've illustrated above, there are deep schisms. And it gets rougher as we go along: the inertia of self-similarity we see today is giving way to increasing difference.

SK: I suppose that for a generation that grew up 'never not' doing architecture in a computer, the etherea of screen-registered lines and surfaces has become the new clay environment, a new type of base matter that can still aspire to nobility through operations. If you are asking the world to wait a bit, how can one deny you this, but the clock does tick...

JP: Important things take years. The variety of experiment and the level of acquired skill is higher today than it has ever been. My main concern is that it feels as good later as it does now.

¹ Payne is referring here to the now well-known phrase of Deleuze to "faire un enfant dans le dos" (to make a baby in/behind one's back) by which he describes the way he sought to use other classical philosophers to produce strange new concepts in the way that a woman can deliberately use a man to become pregnant unbeknownst to him. The phrase was famously mistranslated by Brian Massumi as committing "buggery."

² Georges Bataille, "Formless." *Documents* 7 (December 1929): 382.