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Graduate Sessions 4: Transdisiplinary Applications

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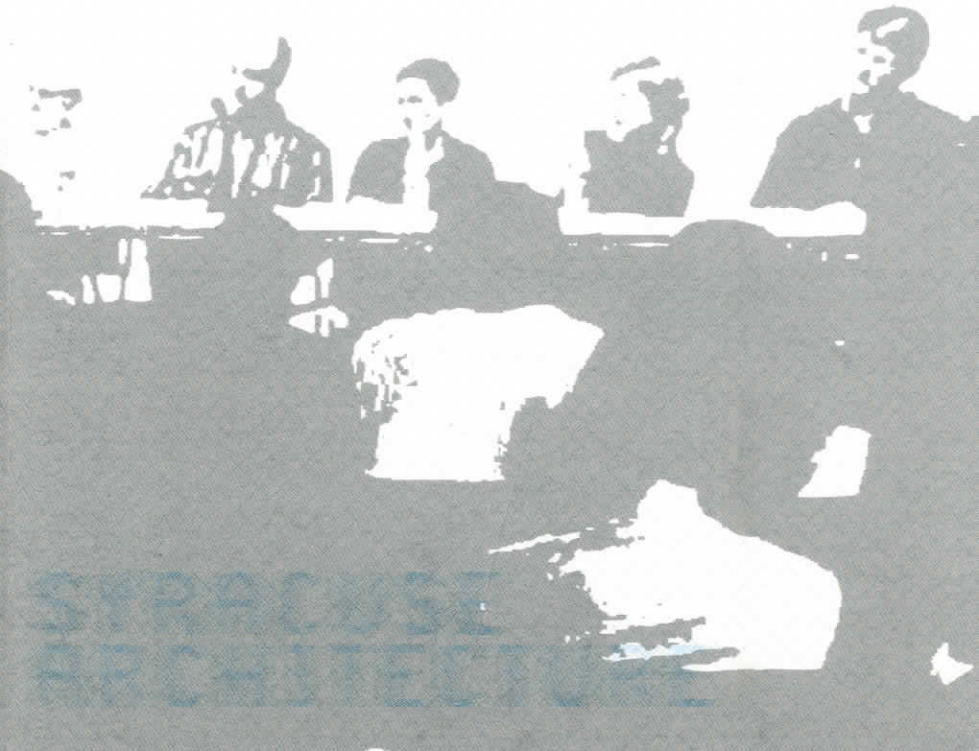
graduate sessions

4 TRANSDISIPLINARY APPLICATIONS

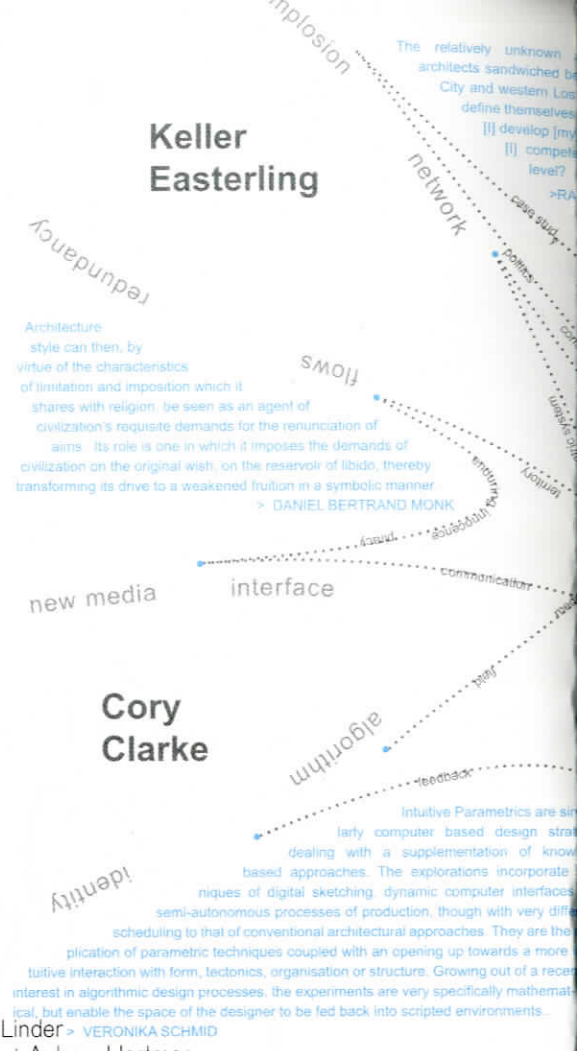


Transdisiplinary Applications
Graduate Session 04
04.12.06

Syracuse University
School Of Architecture
Graduate Programs
Mark Linder, Chair

Cast (in order of appearance):

Mark Linder
Daniel Bertrand Monk
Keller Easterling
Brian Lonsway
Ted Brown
Kiel Moe
Mark Robbins
Aaron Sprecher
Veronika Schmid
Raymond Ryan
Anne Munly
Cory Clarke
Lori Brown
Brian Goehle
William Villalobos



Credits:

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Graduate Sessions Graduate Sessions is a series of seminars and symposia offering Syracuse Architecture graduate students the opportunity to engage leading scholars and practitioners in conversation and debate. The resulting pamphlets offer unique insights into the work of our guests as well as the ongoing concerns of our students and the graduate programs.

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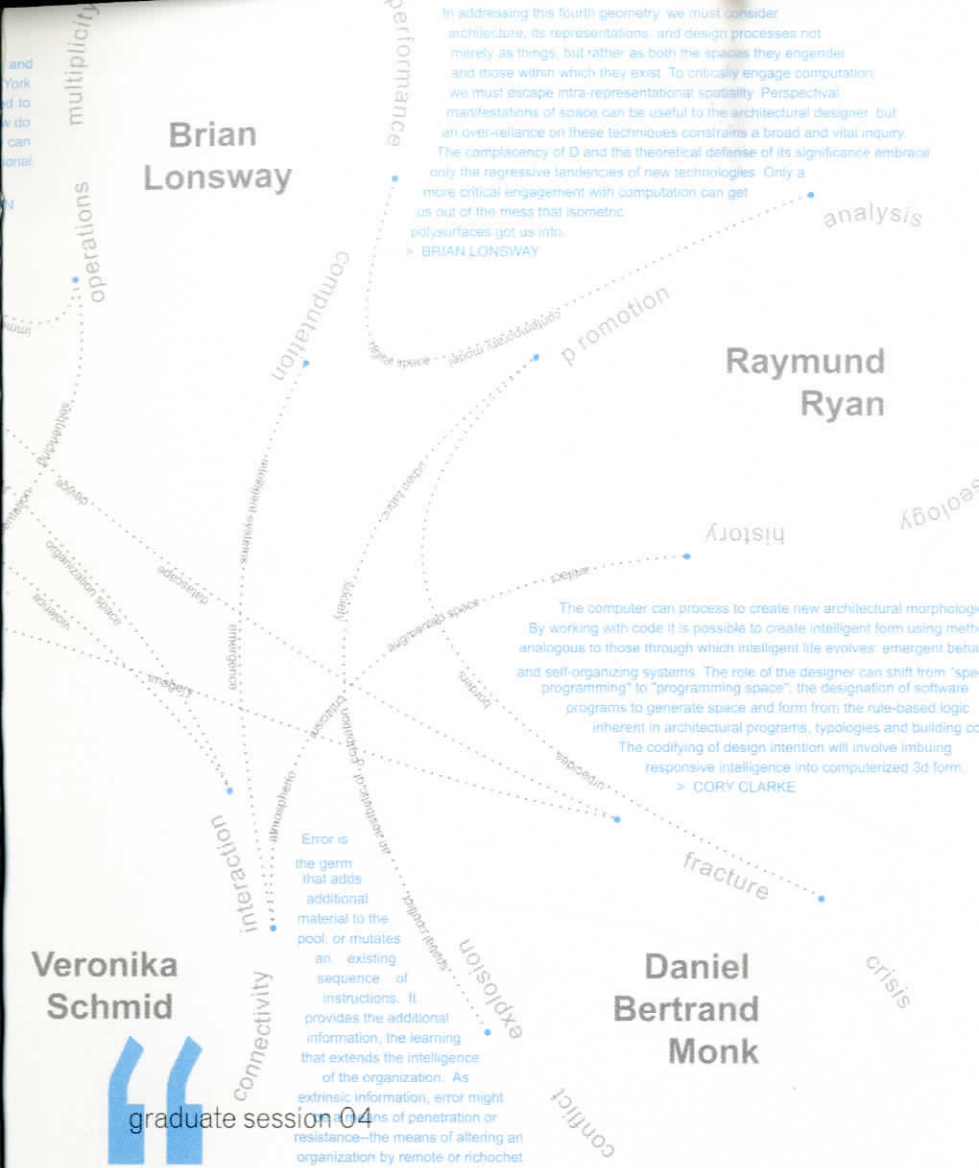
Brian Lonsway
In addressing this fourth geometry, we must consider architecture, its representations, and design processes not merely as things, but rather as both the spaces they engender and those within which they exist. To critically engage computation, we must escape intra-representational spatiality. Perspectival manifestations of space can be useful to the architectural designer, but an over-reliance on these techniques constrains a broad and vital inquiry. The complacency of D and the theoretical defense of its significance embrace only the regressive tendencies of new technologies. Only a more critical engagement with computation can get us out of the mess that isometric polysurfaces got us into.
> BRIAN LONSWAY
Raymund Ryan
The computer can process to create new architectural morphologies. By working with code it is possible to create intelligent form using methods analogous to those through which intelligent life evolves: emergent behaviour and self-organizing systems. The role of the designer can shift from "space programming" to "programming space", the designation of software programs to generate space and form from the rule-based logic inherent in architectural programs, typologies and building codes. The codifying of design intention will involve imbuing responsive intelligence into computerized 3d form.
> CORY CLARKE
Error is the germ that adds additional material to the pool, or mutates an existing sequence of instructions. It provides the additional information, the learning that extends the intelligence of the organization. As extrinsic information, error might ... means of penetration or resistance--the means of altering an organization by remote or richochet.
> KELLER EASTERLING
Veronika Schmid
Daniel Bertrand Monk
graduate session 04
multiplicity
operations
performance
computation
promotion
analysis
history
interaction
connectivity
explosion
fracture
crisis
conflict

INTRODUCTION Mark Linder

This issue of Graduate Sessions combines the panel discussions of Transdisciplinary Applications, a symposium featuring designers and researchers who studied the discipline of architecture and now are expanding the field of the discipline by applying specifically architectural techniques to problems and projects outside of, or marginal to, the proper domain of the profession. These recent and emerging practices realize the potential of architecture to address concerns that are not traditionally understood as the responsibility of the architect. They not only challenge professional norms, they are fundamentally altering and reorienting the role and ambitions of theory in architecture. The symposium examines the proposition that, *increasingly, the most significant and influential theoretical work and research in architecture are Transdisciplinary Applications*: that is, instead of directing theoretical work internally (to understand, critique, or reconfigure the discipline itself) or assimilating theories from other disciplines (to reinvigorate the discipline), these modes

of applied theory attenuate disciplinary limits by insisting on the capacity of architecture to engage new constituencies, to operate in unusual contexts, and to address pressing contemporary problems and opportunities.

The symposium gathered a diverse group who in various ways, and to various degrees, produce and deploy architecture in altered modes or unconventional territories. Their transdisciplinary practices demonstrate the malleability of disciplinary identities and both intensify and expand architecture's field of knowledge. But they do not presume disciplines can unproblematically "share" knowledge or base their collaborations on a common set of basic concepts. Instead, transdisciplinary research works at the limits of one's discipline, where disciplinary rigor can still operate but must abandon the claims of authority or mastery that pertain at the center.

Transdisciplinary works realize the potential of architecture to address concerns that are not traditionally understood as the responsibility of the architect.

Transdisciplinary architecture works against the grain of two tendencies in contemporary architectural theory and practice. On the one hand, many architects today are calling for a recuperation of disciplinary identity. Their motto is "nothing but architecture." At a time when design is a global growth industry and architecture seems close to reclaiming it status at the top of the heap of the arts, these architects no longer look to other disciplines to justify or motivate their work. This position might seem a responsible recuperation of

disciplinary identity, but it is actually a reckless and reactionary turn. Architecture's identity, for better or for worse, has been constructed through exchanges with other disciplines for centuries, so the current call to discipline is a move against architecture's own tangled history. It is also a strategic move against the past several decades of theory: its discursive involutions, its deep antagonism to simple, centric conceptions of discipline, and its implicit alignment with the second tendency in current theory and practice: the all-too-pervasive appeals for *inter*disciplinarity, which are themselves just as suspect as calls for the return to discipline. Advocates of interdisciplinarity tend to believe that, by its very nature, a discipline isolates itself and produces disciples. It's not even much of a stretch to consider that the appeal of and to interdisciplinarity lies in its potential to serve as a euphemism for academic or artistic freedom.

It is often said that 95% of all construction does not involve architects, but it is more troubling that 99.4% of all design does not involve architects.

Transdisciplinary Applications begins with the premise that both interdisciplinarity and discipline-specificity are insufficient. One of the most interesting, and perplexing, discussions of this predicament appears in Reyner Banham's final, posthumously published, essay, "A Black Box: The Secret Profession of Architecture." Banham was educated as an engineer and spent his entire career criticizing the professional mindset of architects. He insisted that architecture, in order to remain culturally significant and to retain its claims of

Transdisciplinary designers expand the field of the discipline by applying specifically architectural techniques to problems and projects outside of, or marginal to, the proper domain of the profession.

expertise must adopt a more experimental and encompassing attitude, particularly in regard to technology. But in his final essay, Banham lamented that the "*modo architectorum*" had changed little, not only in his lifetime, but since the Renaissance, and could be characterized precisely by one word: *disegno*. At the end of the 20th century, as in 15th century Florence, "being unable to think without drawing" remained "the true mark of one fully socialized into the profession of architecture." Banham's essay offered only two bleak options: disciplinary retrenchment or interdisciplinary dilution. Either architecture could risk irrelevance, suspicion, and ridicule by "closing ranks and continuing its conspiracy of secrecy," or it could open itself to scrutiny and "profane and vulgar" outside discourses but "risk destroying itself as an art in the process."

Was Banham's last essay a profound realization, a sly provocation, or a cranky tirade? Is his tone resigned, satirical, or bitter? Was it frustration, a love of mischief, or sheer cantankerousness that led him to identify the discipline with a single, fundamental technique? Did he really believe that architecture, or any discipline, could be founded on such basic and transmissible codes? His prior writings suggest otherwise. Despite his last words, Banham retains his appeal because of his belief in the adaptability, versatility, and future potential of architecture which, like all disciplines, is a malleable

institution. Disciplines are discursive: and, as Banham's uncanny capacity to find architectural significance in industrial design, pop art, engineering, and gadgetry shows, none of architecture's discourses is contained entirely within the discipline itself. Perhaps we should simply take Banham's essay as symptomatic and anticipatory of today's complex and confused debates about not only the discipline, but about interdisciplinarity and theory as well.

Transdisciplinary architecture operates at the limits of architectural knowledge, where disciplinary rigor is still possible, but claims of authority or mastery must be abandoned.

So, in an attempt to move beyond the perplexities of Banham's last words, this event offers transdisciplinarity as a less sanguine and more overtly theoretical approach than either disciplinarity or interdisciplinarity. Unlike an interdisciplinarity which presumes an unproblematic sharing of methods or concepts, transdisciplinarity insists on the necessary value of distinct disciplinary identities. Unlike the call for a return to discipline, transdisciplinarity is in no way a retrenchment. Rather, transdisciplinary work happens at the edge or limit of our discipline, which is where we become acutely aware, in need of, and able to revise the tools, technologies, and discourses of architecture.

Presenters:

Cory Clarke is Adjunct Assistant Professor at the Columbia University Graduate School of Architecture, Planning and Preservation and Technology Director at Tender Creative LLC.

Keller Easterling is Associate Professor at the School of Architecture at Yale University and the author of *Enduring Innocence: global architecture and its political masquerades* (MIT 2005).

Brian Lonsway is Assistant Professor in the School of Architecture at Carleton University and the author of *Making Leisure Work: Architecture and the Experience Economy* (Routledge 2007).

Daniel Bertrand Monk is the George F. and Myra W. Cooley Professor of Peace and Conflict Studies at Colgate University and the author of *An Aesthetic Occupation: the Immediacy of Architecture and the Palestine Conflict* (Duke 2002).

Raymund Ryan is co-curator of the Heinz Architectural Center in Pittsburgh.

Veronika Schmid teaches at the Architectural Association with Inter 6 and works at Arup's Advanced Geometry Unit with Cecil Balmond. With her partner Alistair Gill she founded Impossible Productions Ink.

Syracuse Architecture Faculty:

Mark Linder - Graduate Chair and Associate Professor

Theodore Brown - Associate Professor

Kiel Moe - Assistant Professor

Mark Robbins - Dean and Professor

Aaron Sprecher - Assistant Professor

Anne Munly - Associate Professor

Lori Brown - Associate Professor

ML: Let's start with the ends of Dan's and Keller's presentations and try to open a dialogue between them. Dan's recovery of the term *Ackerstrasse* implied that the most diligent attempts to address the global problem of housing are instrumentalizations of architecture that confuse the issue of architects' agency. Keller's presentation addressed equally global phenomena, but ones seemingly marginal to the architecture, then ended with an appeal to simply do less harm. So it seems to me that your expectations of how architectural intelligence ought to be deployed or applied are similar, but the ambitions are somehow divergent or at least different.

DM: I was not exhorting you all to start building *Siedlungen*. What the *Ackerstrasse* example suggests is that architecture at its most political evinces a fabulous form of what Keller calls "special stupidity," through which it projects itself as being engaged and where the height of that punitive engagement is, in fact, the height of resignation. That said, and as someone who now has the luxury of not making his living from architecture, I cannot help but feel a certain degree of nostalgia for a positive role for the architect as a specific intellectual. In this I am completely in alignment with Keller's appeal to mitigate the damage we do. There's a paradox here which is a constitutive aspect of our historical existence. On

Ackerstrasse literally translated means 'field' or 'acre street'. As
the fabric of Berlin have been more important than the Ackerstrass
World War II it was the largest and the most iconic representative
the poorest of the poor live in thoroughly rationalized and function
advancing function as functions own end. Dan Monk

The spaces I am looking at banish the contradictorily information usually associated with the regulation of urban environments - but the spaces of human rights abuse, labor abuse and environmental abuse are the way the world is being made. Keller Easterling

one hand, as Keller has made very clear, we inhabit a framework, a kind of a historical condition that is so polymorphously complex that our attempts to mitigate problems or house the world can lead to a series of unintended and horrific consequences. For example, the movie *Darwin's Nightmare* documents how a sincere effort to feed Africans resulted in a series of events that no one could have possibly imagined. The introduction of Nile Perch into Lake Victoria has caused huge jumps in AIDS rates and arms smuggling because the same Russian cargo planes that export the Nile Perch bring back guns that fuel conflicts in Central Africa. That's one side of the paradox. On the other hand, let's never lose sight of the fact that there is no other world than the one that we make. We are irreducibly historical subjects. So at some level I think that is a constitutive contradiction.

KE I didn't see the divergence between these two particular talks. The *Ackerstrasse* and the "environments of exception" I've been looking at are actually and precisely the same subject. So,

litical fact: few architectural interventions in
nce before the fire bombing of the city in
e squalor barracks of Berlin, the place in which
otments that were in their calculated efficiency

though I'm using Agamben's term, the enviroments I'm looking at are slightly different from what he's talking about in that it is not a governmental paradigm; rather it's a naturalized commercial paradigm that mimics government. Direct resistance to the violence of those environments only ignites a kind of mutual recrimination—to use Dan's term—or gives you that pairing needed for a—to use a Bateson term—symmetrical conflict. So my ambitions are not just "do no harm." No, I say, let us be active, very active, but be sneakier about it, so that we do not produce a

"Special stupidity" possesses cunning that makes it one of the most successful political strategies in the world, lubricating with the release and reception of extreme fabrications and occlusions. Obfuscation is its chief tool. Stupidity creates a naturally occurring narcotic reality that welcomes everyone and is much more successful than measure or reason. Keller Easterling

chemistry which fuels violence. We should be looking for indirect means to change these situations. I have been thinking about that because the environments that I've been looking at aren't made directly. As I was saying, it's almost like they're made from an Etch A Sketch, but a very funny Etch A Sketch, where you turn toggles and something changes in summation across many, many spaces. So it's learning to turn those toggles. If you look at El Ejido there is not only environmental abuse, but abuse of labor from North Africa.

The stupidest thing to do there would be to stand with a placard and say, "These workers need housing." That would ensure their encampment. It would be very dangerous. So, instead, one has to learn how to turn those toggles with the intent of being effective against abuse.

ML: What do you tell students who enter architecture school with a certain idealism and imagine design as a way of doing good or making the world better? For them, your shared position makes results seem distant or complicated even as you're able to point to—as Dan puts it—the very real and inarguable political and social affects of architecture. So, what is being counseled?

DM: Keller's images point to a factor which I think connects our talks very directly. I could point to the *Ackerstrasse* and she could point to all of these anonymous and really wild locations where none of you will really have much of a stake (or if you do it's because you haven't had much luck as an architect). We have to look beyond the limits of political engagement being defined by architecture schools. For example, the path I have chosen has given me a great deal more respect for purely technocratic knowledge, which seems to be fading in schools of architecture with amazing speed. The typical attitude is, "we're above this," but if you don't understand what a company like Champion Homes does, then you're screwed. I'm talking about the manufactured home industry. The American poverty trap will guarantee that the 1 percent of design that is left to 'architects' will be reduced to .3 percent in

the coming decade. The amazing renunciation of pure dumbass knowledge that seems to be treated as beneath contempt in the schools of architecture has become a kind of "specific stupidity" and a kind of "specific intelligence" at the same time.

KE: There is no correct or an authentic kind of a political activity. We are looking at—and running studios inspired by—El Ejido or tourism in North Korea or automated ports and other similar conditions because they spark your ingenuity. The most boring possible thing you could do is ride the wave of "architecture from within." There's no superior seduction in that. Rather, we look at something like this incredibly abusive situation where there's 2,000,000 tons of plastic used every year and 3,000 hours of sunshine and you are inspired to think, what else can do you do with that? The magnitude of the abuse is fascinating. It's a huge resource that gets your blood going. Architects are smarter than many other people and are capable of correlative thinking. So—Champion Homes: who needs them?

DM: But you're the one who suggested that ingenuity is not what's going to get us out of this situation that you described.

KE: Actually, you do need to know about Champion Homes.

DM: I'm not suggesting that you compete with Champion Homes for business. I'm saying that if the choice is between the kind of knowledge that will have a positive but undesirable political

> The institution of architecture fails to acknowledge, but at the same time unwittingly reveals its own political functions or applications by refusing to identify the *Ackerstrasse* as 'Architecture' as well as failing to recognize the implications of failing to identify the *Ackerstrasse* as 'Architecture'. Dan Monk

effect and not knowing anything, I'd rather know something. Champion Homes is really fascinating because of the rural poverty phenomenon that you are surrounded by in Syracuse. Just drive around fifteen minutes and you will see a burgeoning new landscape that is the same kind as those Keller is interested in. I'm infatuated with the burgeoning of exotic landscapes of ingenuity surrounding single-wide homes and why they appear. Champion Homes is a fact. To me it's far more fascinating than innovative technical solutions for, say, translucent concrete block. I would like to see that alternate agenda find a place in the instruction of architecture. Because, at least in the elite fifteen schools of architecture in the United States, only the translucent concrete block achieves recognizability and then presents itself as a radical act.

KE: I was only hastening to second your point because, no, you don't need Champion Homes or hope they'll ask you to design one of their manufactured homes. But you do want to devour Champion Homes because they're where the information is. Why would you not devour their knowledge and the reasons for their success?

DM: I meet up with the plant manager of Champion Homes once a year and we have a long conversation about what they've been able to do in one year. Their sophistication far exceeds any of the incredibly funky things that I see in architecture schools and publications. We dismiss it because it's clad in vinyl, but it's not going to be vinyl for much longer. Most important to me is that this is an epistemological problem. The knowledge horizons that exist today in schools of architecture are at some level fundamentally

The paradox of Architecture is the paradox of the *Ackerstrasse*: th
to the point where it might be possible to house the world and mee
is not even articulated as architecture's immediate and pressing ai
field of building and construction now appears to be directed toward

inadequate. Not that they will ever be totally adequate to any historical situation, but looking at it from the standpoint of a different field, they're hopelessly romantic and regressive. There is this assumption that all architecture operates according to a series of paradigms that really only exist in boutique architectural practices. Students of architecture are all sold this crock that you could be one of those. It reminds me of when I would go to my dissertation advisor and say, "I can't live on this stipend you guys are offering us to do a Ph.D., and, you know, he'd invite the four of us in my class to have beers and say, "Well, you know it's true. It's really terrible. But I could only get you maybe another $2,000. That really won't make that much of a difference so it's not worth

my while. Besides, you're among the few who could really end up making money doing this. So just ride the wave." Right? At some level that's what happens in architecture schools. Most of you are destined for very different lives than the ones that involve translucent concrete blocks. Many of you may end up actually measuring Gap stores so some other firm somewhere like Kansas City can produce standard Gap stores, and you may make a comfortable living doing that.

productive capacities of humankind have advanced the most basic needs of human existence, and this Instead, the sum total of human knowledge in the extreme leisure. Dan Monk

BL On the question of the political, I think it is also important to value the role of a certain kind of scholarship. Many of the talks today addressed the recovery of a moment of architectural theorization and architectural production. For example, if you take the case of someone like Kevin Lynch, what's interesting is how his five concepts of spatial organization have radically transformed our landscapes even though Lynch himself said urban space making shouldn't be constrained by those five things alone. The way it has been interpreted has created all sorts of rationally controlled, structuralized notions of space. The political question is: why did architectural discourse dismiss Lynch as being reductive and no longer of value, while others who actually produce urban

environments picked him up and said this is exactly what we need to do to make a profit and to get people to come through our spaces? Something like that allows us to understand that a reductive translation or collaboration is not something we can dismiss. One of the latest real estate fads is "Lifestyle Centers." Their rhetoric is quite humorous because they propose a radical reintegration of the shopping mall with residences by putting commercial space on the ground floor and residential areas above, but way out in the suburbs with a huge parking lot surrounding it. There is one in particular, Santana Row in San Jose, California, which stipulates that the residents do not own the exterior of their window blinds. Instead, they are owned by the commercial establishment below. So, real estate development has embraced a highly reductive version of Lynch to create Lifestyle Centers. All these reductivities have to become part of our scholarship again. To continue to dismiss them is highly problematic.

KE Well, it's true. These are the materializations of capital that have gone on while we have been focused on the front of the screen. Unless you understand the politics, the incentives, the motivations, you can't occupy that new territory of, for example, time and price differentials. It's a very powerful territory to work in.

> While we have been fascinated with this side of the computer screen because it dramatizes our beloved geometries, the architecture that I am talking about is on the other side, where all the wires are leading away to the places where people are fighting and dieing and making money cheating each other. Keller Easterling

> Sometimes I imagine that our training as architects might resemble something more like improvisation classes rather than the classes to learn the masterpiece monologue from Hamlet. We are learning to act and react to dynamic situations like the training of a double agent which requires understanding patterns of cheating towards an ethical struggle rather than righteousness. Keller Easterling

BL: Very fun, too

TB: The transdisciplinary for me relates to Keller's distinction between learning improvisation and performing long passages from Hamlet. I would like to link Hamlet with the established institution of architecture: spatial knowledge, spatial skills, *Grey Room*, and the making of form. Improvisation, it seems to me, is aligned with the transdisciplinary: use value, Reyner Banham, and lateral strategies toward engagement. I would like to link improvisation to the project of applications, and the project of the conference. Is that fair?

KE: I think so. When you learn improvisation—I was trained as an actor—you are taught to always speak in infinitive expressions. In architecture we are only trained with nouns. In improvisation you are taught to be reactive. You can't keep thinking about your response. I don't want to get rid of *Grey Room*: why would you let go of any of your tools or critical faculties or knowledge? You want it all.

KM: I never teach architecture as a noun, only as a verb. For me, the seemingly innocuous act of architectural material specification is perhaps the most routine and pervasive and, therefore, penetrating act that we have. Many, I presume, perceive it as the most banal and prosaic aspect of architectural practice, yet some of our most profound engagements with the state of things in the world are found at the depths of our practices, rather than at their boundaries. My question is: When is transdisciplinarity just an expression of boredom or dissatisfaction? When is it a form of oppressive and vulgar colonialism? And when is it a truly emancipating and sane form of practice? I see it as something like material specifications, because it absolutely connects us to the world and builds our world in the most literal way, but is also at the center of our professionalism. The oscillation between the two has been the most productive for me.

MR: To extend the metaphor of learning a play, until you get really comfortable with the lines and you begin to get the blocking, it's really hard to move around in the part. As architects, we do have a special field of knowledge, and in order for us to move around in the world—to be effective—we need to know how to act as architects, to play our role, to know our discourses, but we need to know that other ways of making sense of the world—other discourses—exist.

AS: I want to shift the subject a bit and talk about the role of images and data in Brian's and Veronika's talks. Veronika showed only images and Brian showed almost none. It seems that today

we are flickering drive back and forth between data and images, and that situation, that dichotomy between both, is not possible to maintain any longer, right? So, the question is, how do we move *in between* data and images in architecture?

VS: The relationship between image and data comes out in the work we do at the AA with interface design and students developing their own tools. I think it's important for designers to understand the data that they're working with and to develop ways in which they can interact with this data on a more intuitive level. That's the idea of the interface. With relation to Frank Stella's work, he's the intuitive aspect of it and I'm the interface. So, I like to interface between the parametric and the intuitive.

Interface design allows something more than a common parametric design to achieve optimization of structure or organization of program. Veronika Schmid

BL: Whether we want to acknowledge it or not, the computational tools we use are based on a phenomenally narrow view of space, language, data, and information. So when you ask the question about data and image I think it is interesting to trace those issues back to their computational origins. For example, the researchers who laid the foundation for modern computing are the same guys who devised the spatial theory that has dominated the American landscape and that so called mainstream architectural theorists

A notion of Derrida's theory states that the 'differential engine' would the representation of a preconceived idea, rather that code would in be those representations that would themselves constitute meaning that was preconceived outside the computer. Brian Lonsway

dismiss for being instrumental. First of all, data can be image or anything else. So the same data that can be image can be sound. Sound designers create images of their sound that aren't visual. So even the image is no longer visual in terms of the way it has been transformed by computation and simulation, making the data and image no longer inseparable. Second, data is both the code and the phenomena underlying information. So the fact that data can be many things is part of a radical shift in what data is informing in terms of architecture today. I think we take a lot of it for granted. We collect data. We represent data. We get data about a city; we use data for GIS and get a nice image out of it. We want to make sure it's in the right format for the laser cutter, the CNC machine, or the SLA machine, but we don't really conceive of the ramifications for architecture from a particular collection of that data. I think that's what makes this relationship between image and data such a challenge. How can we understand data's relationship to architecture and how can we imagine or "image" it in new ways?

AS: I would like to get back to intuition, Veronika, and your work with Frank Stella. How do you divert from a highly rationalized model, and tools that are still infused with a lot of functionalism. Are you able to process a different type of model that integrates the perceptual and the rational?

allow us to articulate an architectural code not as
fact perform the very idea of meaning. It would
and not merely represent the idea of meaning

VS: I think it works in the relation of different techniques. We're not applying a strictly architectural process of production, but we are stepping the techniques in a different way specific to each project. Although the projects with Frank do come across as purely intuitive, there is still a step process that we run through for each project.

MR: Veronika's work is part of a shift in the relationships and boundaries between art, space and architecture over the last 20 years. I remember a collaboration between Frank Stella and Richard Meier where the roll-down blinds in one of his houses were overprinted with a Frank Stella pattern. That was the architect collaborating with the artist. Veronika's collaboration with Stella is developing his interest in space, and moving him off the wall as an artist. The fabrication of the artifact is embedded in the artist's practice, not an image to be lightly laid on some other substructure. Actually, many of the presentations we saw today displayed similar kinds of mixings, rather than an overlap.

Frank Stella has very unique views of both terms 'parametric' and 'intuitive' that, for architects, bears different notions of material, its effects on structure and in a wider sense on the notion of tectonics or how something comes about and essentially is. Veronika Schmid

AS: That brings me back to Brian, because the work you've shown involves the interaction between several different tools or techniques. How do you distinguish between techniques and technologies?

BL: I would say there is technology as system and there is technology as artifact. I think the two get conflated. When we talk about technology we often mean a piece of technology or an artifact of technology and that is fundamentally different than the notion of technology. We have commercialism to thank for that. I still think it is important to return to the idea of technique. I have a question for Veronika about the title of your talk, 'Intuitive Parametrics': is it the intuitive deployment of parametrics or the emerging of intuition within a parametric system?

The relationship between parametric and the intuitive goes towards making more precise an idea of application, since what is implied is that it is not simply the translation of techniques or modes of production from one mode to another, rather the techniques deform in the process of such through precise implications in the application. Veronika Schmid

VS: In parametric models the parts are constrained: that is, rule based mathematical equations establish firm relationships within the model. For me, the intuitive part of structuring a model—in architecture or something outside—lies in how you act on those

relations. So I will structure an architectural project very differently than a project I do for Frank. The relationships established within the parametric model work differently in each case.

BL The notion of intuitive parametrics is provocative. Could one create a formula and a series of arguments that actually support the notion of intuition? In other words, could one create a model that is not fully constrained? Typically, we can intuit something when a model is partially constrained because the computer shows us a dynamic image, but a model that could be both resolved and intuitive is fascinating to me.

AS Brian, I was wondering about your definition of performance. Because that's the problem with intuition: At which level does it become performance? The way I understand it, the architectural formula of form-structure-function, has been transformed into a new formula which is information-system-connection. I wonder if it's not actually a question of performance, like the way the code will perform or the way the image will perform. Then how do you actually control the space of effects that today's tools are continuously producing and streaming?

BL This whole idea of the performative within architecture has become *de rigueur* (that is, if it's not already *passé*) as a challenge to functionalism, especially with computer simulation. We can now understand the performance of buildings quite visually and accurately from a data perspective. I think there's an aspect of

performance other than how buildings perform or how systems perform or simulating performance. Actually performing computation is different than using computation to understand the performance of something. For architects it has become the disciplinary intent to make a building or an urban system and see how it performs. What if we asked, "How is that analysis or how is that study or how is that making itself a performance?" I think we have understood that more intuitively. When someone is using a computer they should consider the performance of the tool rather than defer performance to the idea of simulating something else.

> It is not the machine that is the problem, but it is the way that the machine has been framed. Brian Lonsway

RR: One of the Huxleys, either Aldous or Julian (I've forgotten which) said that the difference between data and information is that information is knowing what to do with data. But more important than that, knowledge is knowing what to do with information. I think the benefit of an architectural education is having that kind of knowledge. I'm not quite sure this is a return to the empirical, but it's coming back in some strange way.

MR: The relationship between intuition and a more rational approach to design is a fundamental tension for all architects and is part of the anxiety that pervades the studio, having to accomplish certain objectives like structure and enclosure, but also being asked

to think about what it is and where it comes from. What we've seen in the all the lectures are overlays about how we should think about what we do as architects. Dan might have stepped outside of architecture, just as any architect may end up performing outside his architectural training, but we always carry that training with us even when we apply those abilities beyond traditional architectural agendas. In any case it's not a choice between a strict adherence to the discipline or complete revolution; rather it could be multiple approaches.

KE: I certainly wasn't calling for architectural revolution, nor issuing a call to the barricades, although I did feel a little like a cheerleader. I typically make the architect a straw man, but Dan also did that quite well. I ended up saying that this is about the expertise of knowing nothing—in other words: the expertise of knowing nothing for sure. So there can be no complete revolution, only constant revolutionizing. The question of whether you can do no harm is tricky. Really we are talking about the act of reducing harm. That's an ethical struggle, because ethics is not really knowing if you're right. That also means that ours is not a closed expertise, but an expertise where one must constantly know more and more and more.

Righteousness provides the wrong chemistry to fix conditions of abuse. Keller Easterling

AM: I'd like to bring together Keller, who did a fabulous job placing the architectural discourse in a gigantic framework or context, and Brian, who posed the question of the relationship between architecture and data. This made me think of geographers who make sharp distinctions between data and information. For them data needs to be put in some sort of context to become information, to become useful, and overtly political. So what might you say about how architecture is linked to the political?

KE: Well, I was suggesting that there is territory there for us as architects. It's not an imperative that should somehow define the discipline. But it's another seduction for us that's found not on the style pages but on the international pages. Just as exciting and just as thrilling, maybe because of how obdurate and difficult it is.

AM: What you're saying is that it's one possible course; it's an architecture.

KE: Right. The species of political activity that I was trying to describe can learn from many of the practices in these discussions. Like the idea of seeing a computational world ex-corporated from the enclosed mechanics of computation or the art practices and those sturdy, resilient models of form making that Veronika was talking about. There's a reciprocal movement back and forth.

Frank Stella's interest in parametric design is not based on an interest in digital techniques, rather on a need for more advanced formal explorations and new techniques of fabrication. Veronika Schmid

AM: I wonder whether the transdisciplinary has an easier home in urban culture, if that condition prompts individuals to move outside of their own discipline.

CC: Bateson famously said that "information is the difference that makes the difference." So I wonder, what is the difference that defines the boundaries of architecture? One idea of the symposium is that the transdisciplinary happens at the boundaries of architecture, but we're all involved with architecture schools, so we're not too far outside, are we? Would the "entertainment environments" of the Rockwell Group be more at that boundary?

MR: Originally, when Mark was conceiving this symposium, I said, why don't we get members of Pink Floyd? They were all trained as architects. In fact, only part of me was joking because I wonder if there is a kind of bandwidth determined early on in our formation as architects that influences the way we architects can make music, make advertising, make dance.

ML: I like Mark's notion of bandwidth. The choice of who to invite to this event was determined, to a certain extent, by considering who is operating on the same bandwidth as this graduate program—you know, which channels do our Syracuse Architecture TVs receive. Hopefully, today's symposium came in loud and clear. I agree with Anne that transdisciplinarity is a kind of virtual urbanity or a way to perform as an urban actor with the sophistication and nuance and competition and questions of image and identity that

we normally associate with urban life. But in a transdisciplinary world those interactions are often global or cybernetic or informational. I'm also acutely interested in the politics that can be traced in the careers of everyone on this panel. Each of us has some kind of war story about constructing our identities as architects. To answer Cory's question, we could track the transdisciplinary by accounting for how our identities as architects evolved out of our training and the kinds of disciplinary politics that everyone up here is working out all the time. Whether we're thinking broadly about issues of power or deeply about what's at stake when we write specs, each of us is asking, how do architects still have power or agency in whatever has become of the city?

LB: I've been thinking all afternoon about our students' relationship to the cultural, political and informational practices we're advocating. How do you begin to become responsible for the things that are being discussed? Hopefully, you see ways that architecture can begin to broaden the way we think about the world at large. Today's discussions have brought up some really interesting ways to expand how we think about architecture and its relationships beyond the schools of architecture. You are the ones who are the torchbearers.

ML: That should fire up the audience. Any questions out there?

BG: Mark's theory class this semester has focused on the same issues as this symposium. We've been working out the concept

of transdisciplinarity and looking at the kinds of practices and architectural identities it might produce. Where is our identity as architects today? And what other fields can we move into as architects?

> The relationship between Kevin Lynch, Christopher Alexander and Christian Norberg-Shultz positions a fundamental and systemic shift in the way that we began to theorize architecture vis-à-vis the machine. These three people began to embed the relationship between the machining (as scientific and precomputational) and the idea of natural language into theoretical discourse. Brian Lonsway

BL: There's a difficulty just in the question itself. I think the problem is in seeking an identity. In philosophy and the cultural theories of the last fifty years, there has been an assault on the idea of identity. I mean, just throw it out the window. Don't try for it. Deleuze and Gauttari in *A Thousand Plateaus* start off by saying there're two of us who wrote this book and each one of us are many, so there's already quite a crowd. The search for a single identity is part of the crisis. The quest for disciplinarity is what provokes the problem of transdiciplinarity. If we understand architecture to be a composite, we are in a much more empowering position, even if it resembles dilettantism. Yet so much of our educational motivations

in the United States in the last fifteen years have been supporting the idea of the dilettante, whether that means interdisciplinary collaborations, or breaking down boundaries in architecture, or interactive media, or multi-cross media work in the arts.

KE: Can I tell you what I fantasize about on your behalf? There's the dilettante, and then there's something that's like a lateral move in culture, a hybrid career. If you have a medical degree or a law degree you're supposedly qualified to do all sorts of things. Now you'll run Green Peace, or now you'll be President of the United States. Architects don't seem to do that, yet architects are incredibly useful correlative thinkers. This is a highly prized skill all by itself. You're able to think and solve problems across categories. That is a huge, huge thing that I wish would make you feel that you could do just about anything.

BL: Keller for President! [laughter]

WV: I would like to ask Brian Lonsway to elaborate on his comment that computational tools are beginning to provoke discovery and exploration of things we haven't yet fully realized. What applications might lead to those kinds of realizations?

What if we were able to have an irresolution machine which rather than trying to resolve minor discrepancies understood the potential of the machine to not resolve itself. The machine would always be in a dynamic relationship with indeterminate forces that allow us to keep the variables as variables and suspend the argumentative nature of the computer. Brian Lonsway

Like the American Kennel Club, the institution of architecture does not recognize dogs if they do not have a pedigree. Dan Monk

BL: That goes back to the conversation about understanding the distinction between techniques and technologies. I was suggesting that there's all this other stuff that complicates the distinction. We are humans. We have many attributes. The search for computerizing some of them is a bit absurd, but when we interact with computers there's already a dynamic at work. So on one hand it's just a matter of how you use the things you choose to work with. You can do great things with dumb tools. We do that all the time [holding up a pen]. It's a question of how you perform with them. On the other hand, I do think there are some interesting approximations to what I would call a more subjective way of understanding computing. One example is self-organizing neural networks and what is called a self organizing map (SOM). It's programming level, but SOMs can represent a context or a social construct without necessarily embedding a strict representation in it. Unlike a database where you enter a five and five is there later, in an SOM you put in a five and there's something like a five. That's how the software used for speech recognition works. It hears a thousand people say yes, so it understands pretty much anyone saying yes. There are some interesting approximations taking place in these systems, but critical provocations require looking at it with a different eye. It's mostly technique.

DM: Computing is one regime of technique and discovery, but I think everyone here today wants to find greater potential for the

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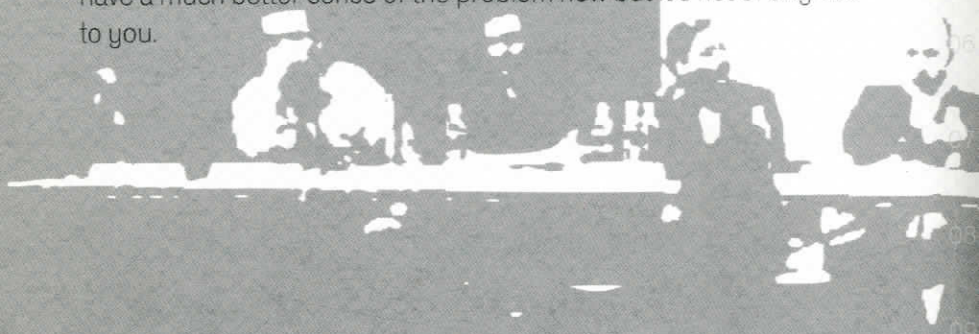
discipline of architecture.. I also think that someone who really wishes to look directly, unflinchingly and without preconditions at how architecture exists politically has to stop looking in the pages of *Grey Room* or should begin questioning how we teach and define the limits of architecture in professional schools. The kind of studio projects we assign and what we consider to be the limits of study are political facts complicit with the each other. If you're asking, "what's your curriculum," that's a really interesting question because, personally, I voted with my feet. In order to be able to engage in a political analysis not bounded by the demands of instrumental reason, I chose what I consider to be a Cassandra's paradox in that I have a much better sense of the problem now but it's not of any use to you.



What we need is not more architecture, but more applications of architecture. Architecture can be applied to almost anything.