

[01] Good Evening

For those of you who haven't met me already, in one capacity or another: My name is Jeremy Kargon. I've taught or am teaching most of this crowd in second year studio, and by now I've used up my repertoire of jokes in front of them already.

So I'll tell instead an amusing anecdote about my teaching this course for the first time, last year. When I joined the department, all the other faculty here keep thanking me. "I'm so happy you're here -- instead of me" said one teacher. "We're so pleased that you can teach Materials -- so I don't have to!" Another said: "I hear you're teaching Materials -- my condolences."

[02] As far as I could tell, the last guy who taught this guy is now buried beneath Meadowlands Stadium in Jersey. Or something. Maybe *he* shot JFK...

[03] And we all know why they say those things. Construction is a mess!

But the real reason is this: Most "technology" courses in the Masters of Architecture courses taste a bit like bad medicine. They're supposed to be good for you, like statistics, but then you never want to see the subject again. In fact, the problem is that in Professional Practice, the chances are you **won't** see many of these subjects again - except for *this* one, and the other one I teach, Environmental Systems. In this class, especially, we'll be discuss-

ing topics that you'll see again and again and again.

[04] If you want a job, you need to know detailing.

[05] If you want to design, you need to know your palette.

And if you want to be an Architect... well, nobody seriously thinks you can build a building *without* materials, [06] unless you're Lebbeus Woods. And even *he's* getting things built these days.[07]

[08] Now, folks who've had me for other classes will expect that what I want you to get out of this course may be different from what other instructors expect. In fact, you *will* get all the nitty-gritty that we need to report to the accreditation committee. For those of you who watched me flounder a bit in Environmental Systems can feel somewhat more confident that among these topics -- Materials -- I know what I'm talking about.

[09] Furthermore, we have a great textbook whose only fault is its monochrome illustrations. The book breaks down the different building materials into sets of systems and lays them all out for you to absorb. So you'll be reading the book pretty thoroughly throughout the semester.

But if that's all this course should provide, we might as well go home now.

(Don't get up!)

[10] My own hope for this course is that you'll see our interaction here each week as a sort of philosophy seminar, the topic of which is your own Feeling for Materials. We'll have the *knowledge*, but I want to engender a love for that knowledge, too. And we'll be doing that in several ways.

[11] We'll be going out a couple of times to different sites, including a building down in Fells Point which is a wonderful illustration of many of the building systems we'll study this semester. The logistical challenge has mostly to do with astronomy, actually -- we have no daylight at all until after spring break, and so we'll have to wait for our field visits until then. We'll use the Morgan campus, too, as a bit of a living laboratory -- why not? At least the security guards won't chase us away.

If I can find a construction site still functioning in this economy come April, we'll make it out to see it, too.

[12] Anyway, in lieu of night-time visits to precast parking garages, we'll be making use of a lot of media resources -- you know, "video" -- that depict technical information. How does a steel frame go together? How is concrete poured in a foundation? For those of you without practical backgrounds, these videos will be crucial for your learning in lieu of actual on-site experience.

[13] And we'll also be seeing video material which depicts the participants involved in construction: The Owner, The Bank, The Public, and The Architect. Et cetera. As you'll learn the further you get into the profession, the interac-

tion between those playing these roles has as much to do with the final product as do the technical decisions we make as Architects. In fact, the societal dimension -- in the form of codes, insurance, and zoning -- has a *determinative* impact on the material make up of our buildings. We'll be learning about that, too.

But today's video won't be what I'd planned up to yesterday. As I mentioned, I'd originally conceived of this course to address, explicitly, philosophical concepts as embodied in architectural materials. Should materials determine the way in which we lay out our designs? Are some materials more "appropriate" than others, with regard to historical period, urban context, or expression of social status?

[14] So naturally I'd expected to show a video about Louis Kahn, who was almost notorious for his long-winded sermons about Architecture and its constituent materials.

[15] His most famous sentence was this: "I asked a brick what it wanted to be... and it said, 'An Arch.'"

But, man, I'm sick of hearing about Louis Kahn, much as I enjoy his buildings. And I'm sure you must have heard plenty about him too, after having Bill Chan for a year. So I've saved you today from Kahn, but that won't save you entirely.

[16] Instead, we'll see a video about the architects Herzog and Meuron. The title of the video is the "Alchemy of Building," a title which intrigues me and suggests a useful way in which to see the most recent innovations in building.

Indeed, we've arrived at a period in history during which architectural problems are being defined not by constraint but by its very lack -- a sort of epistemological freedom to innovate without religious, societal, or even biological structures to guide it. Perhaps *that* describes the spirit of alchemy, a discipline long displaced by science in the centuries past. What happened? Well, science provided both world view and praxis to supercede alchemical philosophy, which in the late medieval period was obsessed by the search for gold and for material transformation, including the possibility of eternal life. What happened? Well, science worked and alchemy didn't, and so one would think that would be the end of that.

These days, I suspect, things aren't so simple. Science-in-architecture, exemplified by the over-arching claims of designers during the heyday of modern architecture more than fifty years ago, was unable to transform for the better the lives of its experimental "subjects." That's a gross simplification, of course, but so has been the public's response to architecture in general, at least here in the United States. So perhaps the more recent generations of architects, such as Herzog and Meuron, have been on a path to reverse that failed paradigm shift in the history of architecture. In their work you see a will to transform buildings into shapes, and shapes into other shapes, and materials

into what used to be fantasy. That seems to me to be alchemy. Let's watch together this evening how it seems to the architects themselves.

What intrigues me about Herzog and Meuron's buildings is how *expressive* they are in their use of unique systems of materials. No two buildings in their opus could be more unlike, but they do share in common their innovation and their use of simple things to become much, much more than the typical building stuff. In a sense, their buildings are very much the "antidote" to Kahn's sometimes overstated material Platonism: Although Kahn, following Wright, spoke often about "The Nature of the Material," we'll find this semester that architecture is created only when an Architect finds for those materials a systematic organization, together with other materials.

No single *brick* is going to tell you what to do...

So, if we won't be talking to too many *bricks* this semester, I want you to at least talk to yourselves about the materials and details which you'll have before your eyes. If you want to know the essential idea behind a design, ask yourself: How did the putting together of the building determine the Architect's choices? You won't get all the answers this way, but you'll get answers when the getting is good...

[17] The last aspect of this course will be, I hope, the most important. I believe that first hand experience of architecture is the best way to engender what elsewhere I've called the "Ethos of Architectural Thinking." And when we go out

to the field to see examples of new construction, I'll expect you to get some work done.

This is what we'll do: We'll arrive on site, during class time, and we'll be taking close looks at what's going on.

[18] I'll ask each of you to sketch out certain details. But, please, do *not* to record your "impressions" or your "artistic feelings" about the moment. Instead, I'll ask you to sketching to record the information you learn by looking closely at the detail, so that the act of looking and the act of sketching will be together an act of critical analysis.

[19] This is the way Architects work; they work by sketching. They use their sketches to convey their ideas to other Architects and to record their thoughts for their own use. They use their sketches as tools for the process of understanding their world.

Now, I have to keep you honest. After we sketch out our details on-site, we'll go back to the studio and we'll review all our efforts together. I'll try to get actual working drawings of the buildings so that we can compare our sketches to what was actually designed.

(So we'll be keeping the builder honest too -- I can't promise that what was designed was actually built. But we'll find out.)

[20] So together with the textbook's overall survey, this is the crux of the course. If you can analyze what you see, you can learn to detail. If you can detail what you design, well, then you're an architect. There is a line of employers waiting out there to hire intern architects who juggle the different systems together and create a single detail that works.

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My students from Studio will recognize what comes next, but I do have go through the "boilerplate" of administrative issues:

In general, your take-home work for this course will be only reading -- and not a *lot* of reading, at that. The handouts describe the course requirements fairly specifically: *You have to do this, you have to do that, you gotta do this...*

Essentially, you **DO** have to *show up*.

This is your time. So I want you here, every session. This class starts at 6pm, period. I will take attendance.

Eat beforehand. I'll expect all of you to stick around 'till 9pm, unless I say otherwise. We'll have breaks, we'll have videos, we'll have fun. But don't wander off without my permission.

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A few more logistical arrangements. The handout includes a general syllabus, but I will be giving specific assignments on a session-by-session basis.

Who does NOT have home access to the Internet? ***

Assignments and most readings will be available on-line on the course web-site, the URL for which is available in the handout. I have set up a course web site on my own, professional web-site: www.JKargon-Architect.com. There's a gateway to the courses on my own homepage, and you can quickly find the material you want organized by class session number.

The web site itself will grow with the work you do. I will post throughout the semester examples of your projects for mutual discussion and for comments by folks outside our community. That's why I'm requiring an 11X17 sketch pad and some pens or pencils. I want you to document what you're learning while you learn it.

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Let's review the syllabus.

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[21] So now it's time, for all our curiosity's sake, to find out what we know now that we're starting the course. Actually, the question is not only what do we know, it's this: What do we know what we see?