Paprika!
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Parallel[Design] Approaches
February 22, 2018

Our issue encourages further exploration, underscoring how the tools of designers from other disciplines can be assembled toward new ends, inspiring dialogues and collaborative relationships between design fields.

With a total of 16 responses from the contributors, we discovered four parallel approaches in submitting their responses:
Architects (AA): Microsoft Word documents, ready for download
Tech-Savvy (T): Shared Google Docs with anonymous accounts
Graphic Designers (GD): Typeset/numbered/bullet point forms
Artists (A): Human exchange (interviews)

We hope that this issue allows you to speculate on possibilities and opportunities in design.

T1 **P!: Why did you move from architecture to digital media? What aspects of your architectural background and personal interests influence your current practice?** Clement Valla: The scale and time of architectural projects were a little difficult for me. I wanted to work on slightly smaller projects. It was also the time when every single office had became 100% digital. I found that to be an interesting change and wanted to know more about digital systems, which often involve a combination of scale, time, and a lot of drawings. I like that phase better than the construction phase.

Regarding scale and time, would you say it's more rewarding to achieve more final products? I think it depends on who you are. It could be rewarding on a personal level, but it doesn't feel as involved as working on large architectural projects in teams. It's an incredible feeling to walk through an architectural project that you worked on, even on a little part of it. That's completely different from making objects by yourself in your studio.

What made you become interested in glitches or unintended consequences like *Postcards from Google Earth*? At first I was interested in them because they look funny. I first started getting interested from a kind of intuitive bodily human reaction to images, but my interest kept up because I really started to think about what was going on with these images: why they had been created, the fact that they were the outputs of a system and not made by a person. They were images made by machines. From that I tried to figure out the reason: it is because the system uses 3D modeling and stream photography information that don't match exactly. So, there were strange discrepancies, and I thought the images were really interesting as moments of reveal.

What aspect of your architectural background was helpful in your current practices? I think all of it, especially the issues of scale and representation. *Postcards from Google Earth* has to do with how things are translated from three dimensions into two dimensions and vice versa with technology. All these strange modes of representation that are somewhere between 2D and 3D—it comes out of architectural training where you are making drawings/renderings and building buildings. I think that's the territory I'm playing with—I'm just playing with it now with more photographic means. Photography and photographic representation have become more important than drawing in my practice. But I employ the same way of thinking about the relationship betweenthe two dimensional and the three dimensional.

What would you say architecture can learn from your practice? A lot of disciplines are in this interesting zone right now—where we learn is going to run into two dimensions vs three dimensions, or dimensional projection systems vs three dimensional projection systems, and how to categorize medium. Now we've got Rhino, Maya, and 3D technologies that don't fit so neatly into a single category. These distinctions make us think how we're representing; our approach to representing is completely breaking down—and my own contribution is studying the way in which images like photographic quasi-illusionist images and 3D renderings are starting to grow on a third dimension in interesting ways. I think there's an opportunity for architecture to play with that. If I was still in architecture school, I would probably be working on architectural models that are also architectural images. Like a drawdel without drawing, but with photography instead. What would that be? A Phodel? I would want to make phodels.

There's no pedagogical way to learn about representation, and we often meander to find the right mode of representation. What is your stance on this? In my own teaching, I do more experimentation with representational tools. There are so many modes of representation. Trying to structure your learning will just give everybody a light overview of everything, and I think it's more interesting to do a deep dive. 90% of my work comes out of photogrammetry, like multiple photos creating three dimensional objects that are translated into drawings. And that's interesting, to meander and find some kind of representation that both allows certain things to be expressed but also really constrains what can be expressed.

Would you say that meandering aspect is lacking in architectural practice? The courage to mess around? There is a huge difference between school and practice. Architecture is client-driven. It's got budget-constraints. It's hard to be chaotic. You gain a little more flexibility by working on side projects or maybe shifting scales from giant buildings to small interiors. That is what was fun about working at LTL too. Even Joeb Moore's office goes from houses to small details. So, it's just finding different ways to do it. In architecture it does seem like you need a lot of projects and a lot of inertia to be able to sustain that kind of space to meander.

How do you envision your practice in the future? Are there new tools you want to learn? I don't know right now, but the current trajectory has actually been past looking. I'm more interested in the continuity of representation since the 1600s around disruptions representation. So now I'm working on cyanotypes, which is like old printing technology and totally pre-digital. This is what's fun about being an artist, you pursue these different ideas—it's still branded in terms of photography, but the overlap between photography, drawing, and 3D representations blend into each other in different ways.

Do you think we can create a network of feedback between design disciplines? Do you see that happening? That's a huge part of what I do—it's not total isolation. There's a lot of communication, studio visits, dialogue, and teaching, too. Like the process of trying to track, tile together, and making sense out of exploring certain directions to learn how to practice directions, then going back to directions that are less explored…
I think controlled chaos is good.

How does your work differ from typical architectural design objectives? I'm not working with physical structures and systems, but I'm working with software structures and systems. A lot of the software that we use and structure for representations are now owned more by Facebook, Google, Apple, and Autodesk. Every time you make digital representations, you're actually engaging in these huge infrastructures the same way any building engages the urban scale. A lot of my work is multimedia where I work with different fabricators and print shops at a smaller scale. Collaboration is the heart of my work.

Clement Valla is a New York-based artist and an associate professor at RISD. He received a BA in Architecture from Columbia University and an MFA in Digital+Media from the Rhode Island School of Design.

A1

> *"To see the entire world, do this literally: Mold the play into a medium-sized ball, set it before you in the middle distance, and squint your eyes. Make the ball small enough that you can see the entire planet, not so small that you lose detail, and not so large that detail overwhelms the whole."*

Dramaturge Elinor Fuchs (who happened to teach next door at 205 Park Street for most of her career) has had a formative effect on my creative ethics. Her pamphlet "Visit to a Small Planet: Some Questions to Ask a Play" is what she calls "a template for the critical imagination[1]." It advocates close-reading as an approach to conceptualizing, analyzing, and interpreting a play that honors its complex totality. All facets of a play contribute to its meaning: structure, content, form, figures of speech, language, character… Fuchs asks us to balance them in our interpretation. "Visit to a Small Planet" argues that we must treat every part of a play as significant. "There is nothing in the world of a play by accident," she reminds us.

Fuchs suggests that the process of interpretation is somewhat mystical. Plays—and by extension most artifacts of creative production—contain clues to their own resolution. We often personify inanimate things in theatre. For example, when evaluating the possibilities for something (say a set piece, paint treatment, or prop) we ask "what does it want to be?" This phrase performs a couple of important functions. Firstly, it removes our individual opinions from consideration, creating an objective way to see the question. Secondly, it re-focuses our attention on the uniqueness of the thing. Most importantly, it recognizes that material artifacts have a willpower of their own. By asking "what does it want to be?" we trust that the thing will guide us to the best story it can tell.

This line of thinking is not new to architecture, of course. From structural expressionism (what does a truss do best?) to Kahn's treatment of a brick ("even a brick wants to be something. It aspires. Even a common, ordinary brick wants to be something more than it is[2]") architects have evoked a similar mysticism in their work. Perhaps the theatre reminds us that this way of thinking can be generative. Animation can drive the conception of a project and imbue it with a certain richness.

Stage design is fundamentally an interpretive enterprise. Unlike many other creative practitioners who engender everything from the ground up, set designers work from a script that already has shape, form, and content. "You start with the script—that thing that you've got in your hand that everybody has," explains designer Jon Bausor, "and you interpret it together.[3]"

[1] Fuchs, Elinor. "Visit to a Small Planet: Some Questions to Ask a Play." MIT Press. <http://web.mit.edu/jscheib/Public/foundations_06/ef_smallplanet.pdf>
[2] Kahn, Louis. "Louis Kahn Talks to a Brick." ArchDaily. March 2, 2013. <https://www.archdaily.com/339111/video-louis-kahn-talks-to-a-brick>
[3] "Royal Shakespeare Company: Designing and Staging The Homecoming." YouTube. August 9, 2011. <https://www.youtube.com/watch?v=z8vugF3354U>

Ben Olsen has pursued parallel practice in architecture and scenic design for several years. He was a resident scenic designer at Artistry MN, resident props designer at Theater Latte Da, and marketing coordinator at Shelter Architecture.

AA1 Collaborate at Your Own Risk

Collaboration is not merely an additive process in which each expert or team adds their knowlege and skills to the project. The urban designer, the landscape architect, the architect, the engineer, the environmental scientist, the government, the client, ~~a~~nyone and everyone invested in a project values different criteria. Thus, interdisciplinary teams constantly prioritize and compromise, often with pain and frustration.

This constant tension gives designers endless anxiety over questions of agency and autonomy. Each "lost battle" tells us that the farther down the power totem pole we allow ourselves to fall, the less influence in decision making we have. We fear becoming tools to be wielded by someone else, destined to submit to her criteria, however good or bad she may be. So we hold on tight to every line we can draw and growl at anyone questioning it based on her own, different priorities and values.

But how did we come to this?

Let us consider the rare occasion in which collaboration feels truly remarkable. Here I speak from personal experience, but hope it resonates: the most meaningful and productive collaborations I've had changed me permanently. In order to engage in dialogue with other designers, I had to learn their language and see the world differently. They did not bend to my will nor I to theirs. Neither did we compromise in a middle ground (somewhere neutral and not that interesting, but satisfactory enough to let us both sleep at night). Instead we shaped a mutual, shared language together and worked from that new vantage point. Our corresponding worldview did not come together evenly on all sides (there was more me here, more them there), and this kept the cold and the heat without compromising into the lukewarm. We occasionally offered useful observations in service of each other's ideas, but, much more importantly, the guiding design questions could not have been formulated in either of our separate vantage points.

The best collaboration is a two-sided affair that requires deep mutual respect. It is not about diminishing ourselves nor "subordinating another person to our own standards; rather, it always involves rising to a higher universality that overcomes not only our own particularity, but also that of the other[1]". So collaboration is not merely an additive process, but it need not be compromise. Rather, it's a transformative process. And it carries a serious risk. Openness to dialogue and collaboration must leave our most precious beliefs vulnerable to change. These beliefs are not limited to design or disciplinary practice, but include the political, religious, ethical, and aesthetic beliefs which we consider essential to our character. In order to engage productively, you have to be willing to put yourself at risk. If you are not taking a risk, you are not collaborating ~~you~~ are trying to bend the other person to your will. The anxiety which designers attribute to lost autonomy might be better seen as reflecting an unwillingness to do the work of creating a shared language. We must learn to see collaboration not as the potential loss of our contribution, but as a process that fundamentally alters what we are able to contribute.

[1] Hans-Georg Gadamer, *Truth and Method*, trans. Joel Weinsheimer and Donald G. Marshall. Bloomsbury Publishing. 1960–~~20~~13, 316.

Nuith Morales is a landscape designer at Sasaki, a multi-disciplinary firm. She graduated from the Harvard Graduate School of Design in 2015.

GD1 Things I have learned in studying architecture that I have used as a graphic designer and teacher of design:

- systems
- three-dimensional thinking
- materials and their uses
- comprehending and organizing space
- proportion
- hierarchy
- color
- geometry
- putting forms together
- positive/negative
- texture and rhythm
- understanding sequence and time
- considering light
- pragmatics
- drawing as thinking
- drawing as communication
- drawing as a conversation with myself
- managing complexity
- from idea to form
- meaning
- designing for people
- creating an experience
- the importance of detail
- the importance of sketch models
- understanding scale
- how things are made
- history as inspiration
- history as explanation
- to respect nature
- critical path diagrams
- understanding construction
- site planning
- being aware of how long tasks take
- considering the cost of things
- different design processes
- how to talk about my work
- how to talk with others about their work
- having an opinion, and expressing it
- making working drawings
- writing specifications
- engineering mechanics

Doug Scott is a graphic designer, who studied architecture for six years at the University of Nebraska. Before studying graphic design at Yale, he worked for three architecture/design firms and was a draftsman and cartographer in the United States Army Reserve.

AA2 Proceed with Excitement

The current predicament our studio finds itself in is mostly caused by an aversion to the status quo and a high dose of naiveté. This does not mean we are not interested in history; it simply means we cringe when we hear things like, "This is how it should be done, because it has always been done that way." It also does not mean we simply like things that are different, or that we aren't experienced enough to just "go with the flow." Our lack of caution is constantly getting us into trouble by re-evaluating how projects are designed and made. Unfortunately, this reexamination has transcended how we produce our work, rethinking our identity as architects.

Our disciplinary promiscuity was not really planned. We have simply explored where the most potent opportunities have been in terms of design and our interests. On one hand it could be said that we have explored the boundaries of architecture and even ventured into other territories, but definitions and categories never really appealed to us in a way that we could distinguish how far we might be from what might typically be considered architecture. In many ways, we have simply been operating with a broken compass, and we never threw it away. We are still constantly oscillating between basic cardinal directions which for us have been design, building, experimentation, and technology.

As a young studio we were less concerned with our aimless state, taking advantage of it to take on a wide range of projects from video to interactive work to large scale installations. We worked with many artists and designers to help produce and execute their creative projects. In hindsight this might have been one of the most important experiences for the studio. By helping others achieve their own creative pursuits we inadvertently escaped our own creative desires while still learning how to carry out projects that required an inventive mixture of various disciplines. Having just finished graduate school, I think our ideals and untamed desires might have confused us into a perpetual state of speculation. We learned during this time that we really liked pursuing commissioned projects. We began thinking there should be less of a distinction between speculative and commissioned work. Clients, use, deadlines, etc. became just as fruitful in generating questions as the discourse we had been steeped in at school. As we started to take on our own design work, we found we had learned a wider range of skills and were exposed to a broader spectrum of territories. Our interest in commissioned projects and built architecture's elusiveness led to a broader definition of what might be considered a project for us.

Recently we have been able to reflect on our directionless condition and have realized it is a kind of identity crisis. Our studio has spent most of its early years like any teenager, struggling with physical growth, integrating our ideas of ourselves and what others think of us. As we developed our identity, or lack thereof, we chose a typical adolescent tactic: in an effort to take on more illicit design opportunities we inadvertently jettisoned the only label we had, that of an architect. Rather than solve our crisis and reclaim our traditional identity we have chosen to embrace what might be considered an adverse condition. The fluidity allowed by a lack of identity is quite liberating, while our claim to architecture is left for others to sort out. Both the critical capacity and technical skills we continue to learn as architects has given us a unique perspective while engaging with other disciplines, while the work we do that is outside of the discipline has helped us reexamine the possibilities and borders of architecture. A general lack of identity has caused us to focus on the development of an attitude rather than a style or type of work. It has also allowed us to take on a wider range of work, which has been essential for the sustainability of the studio. This can take on more energy at times, but that is balanced by the excitement of both learning new methods and engaging with other disciplines. Rather than a cautious approach driven by fitting in the boundaries of a label defined by others, we spend more time thinking about what excites us and how that might be used to reevaluate where we have been and where we are headed.

Michael Szivos is the founder of SOFTlab, a design studio based in New York City. The studio explores projects through a combination of craft, research, technology and a desire to create playful and unexpected experiences.

A2 Intersecting Parallels

Even as a practitioner of design on the fringes of our discipline, it is impossible to remove myself from everything that I have been taught throughout my architectural education.

My most recent professional endeavors have led me towards the intersection of architecture and mobility, via the field of robotics. Operating as the innovation branch of its parent company, Piaggio Group, Piaggio Fast Forward proposes and develops new lightweight mobility platforms which address the needs of future cities and their inhabitants. PFF spent its first six months researching and brainstorming over 100 ideas for possible models of personal mobility. Led by its co-founders, Jeffrey Schnapp and Greg Lynn, the company approaches mobility through the lens of architecture. Interestingly enough, my educational and professional background prior to PFF was never focused on urbanism, yet it was clear that in order to understand the complexity of mobility at the granular level, the first challenge was to understand the needs of people moving through cities. Cue case studies and market research.

As I alluded to earlier, prior to PFF I spent several years focused on robotic fabrication, composites, and process-driven craft. Directly following my undergraduate studies at SCI-Arc from 2003–2008, I worked at Machineous, realizing projects for other architects or artists. It was simple: drawings, 3D models, and budgets came in, and projects, prototypes, and installations went out. More often than not, these were "one-offs," meaning each project was an opportunity for us to reinvent our workflow and develop a new approach to a new problem. From there, I was appointed to SCI-Arc's Robot House, where for two years I facilitated various design studios and seminars utilizing the lab as a ground for research and experimentation. Since then, I've gone on to complete my graduate studies at MIT, which allowed me to build on my trajectory thus far.

Regardless of the task at hand, I've always taken an architectural approach. PFF's first product, Gita, which was revealed in February of 2017, is a prime example. Leveraging a collaboration with mechanical, electrical, and software engineers as well as boat builders in Bristol, RI, Gita is the result of design thinking that spans disciplines and scales both conceptually and literally. Much like the work of Eladio Dieste or Felix Candela, its structure is its envelope vis a vis its overall spherical form. It is design thinking that enables projects such as Gita, a vehicle the size of a bean bag, to be perceived as no different than a full scale building.

Nazareth Ekmekjian is Mobility Prototyping Designer at Piaggio Fast Forward. Nazareth received B.Arch from the Southern California Institute of Architecture in 2008 and SMarchS from MIT in 2015.

T2 Designing for Death

Designers have made valiant strides towards designing for the dead. Eisenman's Memorial to the Murdered Jews of Europe elicits strong visceral reactions when one realizes the immensity of the monoliths. Similarly, the 9/11 Memorial's two voids of the World Trade Center provoke the sublimity of past events. While these monuments can help communicate and console those affected by tragedy, it strikes me that architects are not amply prepared to design for the process of death.

The hospital can be an extremely dehumanizing environment, as if a machine for manufacturing health. This is due in part to the idea that for modern medicine, death is not a human process, but represents all its failures. When I was with my grandmother at her deathbed, the negative experience was greatly exacerbated by the built environment. A room with two other patients, a noisy ward, bleak yellow walls with bad art—all felt highly inappropriate for the situation. My family requested that she be transferred to a single patient room, where she died shortly after. Later in the day, her body disappeared, shipped to some labyrinthine corner of the hospital's basement to be chemically embalmed, only to reappear a few days later with new clothes, lying still in a casket.

Dying was not always relegated to the task of doctors. But as modern medicine and sanitation increased life expectancies, dying in the home with family was displaced by dying in hospitals with doctors. With the bulk of baby boomers approaching old age, it is certain that we will continue to see increases in chronic aging-associated diseases such as cancer, and an impending health crisis. The onus is partially on us as architects to design better spaces for dying, but also for us to engage in the larger interdisciplinary conversation about how to think about death.

In the past ten years, a philosophy of healthcare that enables well-being, rather than ensuring survival, has emerged. These ideas have been popularized by Dr. Atul Gawande's *Being Mortal*. In this book he addresses different types of senior living—from multigenerational housing to nursing homes. Religious consolations of death are also not without their place in end of life care. In her book *Dying in the Twenty-First Century*, Dr. Lydia Dugdale touched on Ars moriendi (art of dying), a response by the Church to aid victims of the Bubonic Plague by re-affirming belief and providing consolation in preparation for death. Architects are also challenging the typology of the hospital as an adequate space for dying. With the death of his wife in 1995, Charles Jencks co-founded the Maggie Centers, a series of cancer hospices across the UK designed by architects such as Frank Gehry and Zaha Hadid that are meant to complement the existing healthcare system. Their motto, "People with cancer need places like these," speaks to the dignified, solitary spaces designed for recovery and reconciliation for those experiencing the challenges of cancer.

Paradoxically, modern medicine has led us to live longer, but has also led us to endure less dignified deaths. Perhaps the time is ripe for architects to engage in designing a more dignified way of dying.

Winston Yuen studied biomedical science at University of Calgary, completing a thesis on drug synergies between blood cancer therapies. He is now interested in architecture and its relationship to health.

GD2 I work [ ].
a as a component of a complex network with multivalent perspectives
b as an individual with a unique perspective

My ideas [ ].
a are shaped by consensus and negotiation
b flow from my singular set of intersecting experiences

The issues with which I engage [ ].
a are in the world and exterior to myself
b are primarily the manifestation of my own conflicted desires

My work [ ].
a is rational, depersonalized, and informed by objective facts
b reflects my subjectivity

When presented with a problem [ ].
a I look to historical, economic and social contexts first
b I examine my own emotional response first

When working for others [ ].
a I set aside my personal desires to focus on their problems
b I exercise my own preoccupations while addressing their problems

The success of my work [ ].
a can be measured by the satisfaction of the user
b is directly linked to my satisfaction with it

My individuality [ ].
a is rarely present in the final iteration of my work
b is the subtext of all my work

My body of work [ ].
a is unified by a consistent methodology
b is unified by a consistent appearance

I employ the tools of design [ ].
a to analyze and understand external conditions
b as an act of public speech which my unique voice is ever-present

When I work with others [ ].
a I suppress my own desires and defer to a larger team of collaborators
b I try to inspire them to support and realize my own ambitions

My solutions are [ ].
a logical conclusions based on the application of proven models
b inspired results of my unique creativity

The public comprehension of my work [ ].
a is my prime focus
b is of secondary concern to me

Style is [ ].
a a rhetorical device that may be applied strategically
b my personal signature

I work for [ ].
a the good of a community of which I may or may not be a part
b myself and my own gratification

My strength lies in [ ].
a my intelligence
b my talent

Michael Rock is a founding partner and creative director of multi-disciplinary design studio 2x4 Inc., New York City, and Professor of Design at the Columbia University GSAPP. He holds an A.B. in Humanities (Literature) from Union College and a MFA from the Rhode Island School of Design.

AA3 The saying "Dal cucchiaio alla citta" (*from the spoon to the city*), by Italian architect and designer Ernesto Rogers[1], describes a creative design process that can be applied across multiple scales. Some of the most iconic everyday items are designed by architects. My personal favorites include a range of kettles by Michael Graves and Aldo Rossi for homeware company Alessi.

After moving to my first apartment, I found it hard to find furniture that would fit perfectly, so my partner and I made our own. The designs we came up with included an island bench with wheels and a modular shelf with copper pipe joints. By designing the pieces ourselves, we were able to tailor the designs to suit the limited space we had. Since then we have both designed more pieces while continuing to work in architecture.

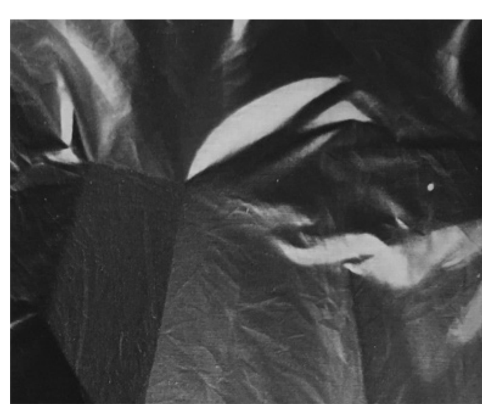
Industrial design demands a deep understanding and appreciation of the human scale. Prototypes are often 1:1, which allows direct engagement with the body. Life size mockups allow you to test out the actual experience you would have with the object. Architectural models, on the other hand, often just showcase the design outcome. With full scale models, handrails and door handles can be designed as bespoke details, rather than simply selected from standard, off-the-shelf options.

By working directly with people who make our designs come to life, we start to understand not just their craft but also the economies of production. What is the most simple and economical way to achieve the design intent? How can we minimize waste? Archie is a table made from standard pieces of terrazzo tiles most commonly used for walls and floors. The tiles have notches cut out of them which allows the pieces to slot together. Working together with stone masons and a water jet cutter, we were able to test the limits of terrazzo to achieve the slender arched legs. The geometry nests together on a single sheet to reduce wasteful offcuts.

The finer scale of furniture gives greater design freedom and experimentation. I encourage architects to work at this level of detail in their work, to engage with materials and technology as they would when designing a piece of furniture.

[1] Rogers, Ernesto Nathan. *Recording at Athen Charters*, 1952.

Nancy Ji is an architect in Melbourne, Australia. She was the winner of the 2016 Mercedes Benz Design Award for her entry, the Lily Tray Table and the emerging designer award at the Melbourne Fringe Furniture Festival in 2017.

T1a

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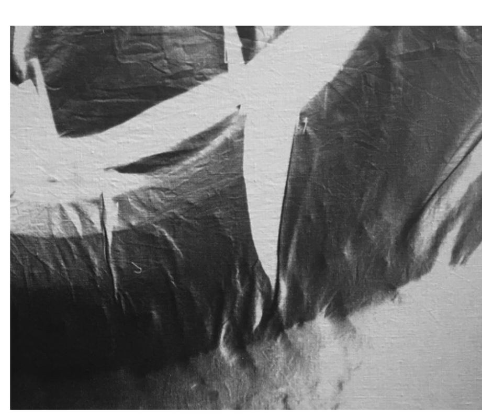
T1c

A2a


February 9
"You don't have to like your mother, but don't killer her" – (on the carnage of PJ's AT&T building)
"Knights of Columbus…which is really an insurance company for the Catholic"
–Bob Stern
Building Project Elections were held after a workshop lecture with Columbus House architect, Ben Ledbetter. Get excited for this year's house! Follow @yalebuildingproject2018 and stay tuned for the new website (to be designed by our very own computer scientist, Seth2000). Dean Berke momentarily requested a follow on @deskgarbage before retracting it.
"Twister is an extremely sexual game." (Back to School 6on7)
February 10
The majority of the Advanced Studios embark on their travel week. The fourth floor, although desolate, is periodically injected with liveliness when first and second years play badminton.
Who had the best advanced studio hashtag? #feelthepeng #nopengnoghan #RicksOn7 #BilWow #tatiB #SPvQR #arawandafulworld #hildigunnursdaughter #studioiceicebaby
February 13
Kay, Max, Baolin and Camille take it upon themselves to clean the 6th floor balcony. Zero butts remain on the bird spikes.
February 14
It's that time of the year again, a few of our classmates had roses and chocolates delivered from loved ones. I envy them. Tear emoji.
February 15
"Make it more like a thing like thing, where it becomes a thing" - Keller Easterling

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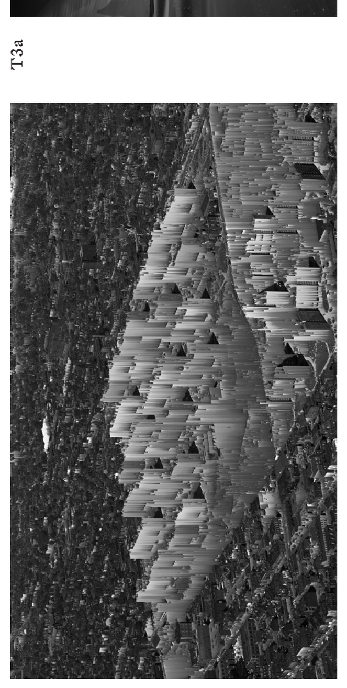
T4 Ray Wu
GD3 Luke Bulman
A3 Olivia Gilbey
A4 Nitzan Bartov
T3a–b Omer Shapira
A4a Nitzan Bartov


T3a


T3b


A4a

February 16
First Year Students engage in the Legoman team exercise with Phil Bernstein and Amy Wrzesniewski. Team D came in first with 2:23 whilst two teams "learnt a lot".
Dozens of screens tuned into the Pyeongchang Winter Olympics to watch the men's figure skating. Many were dismayed as Nathan Chen was pushed from 3rd to 4th place.
February 17
Luke Studebaker listens closely to his cup and string telephone.
February 19
Overheard - "Why are the toilets so small?" "...to make room for the 'idea'" - Max Ouellette Howitz
David Bransfield redid his first year library project over the week. No allnighters this time.
February 20
"Are you a dog whisperer?" -passerby to Anthony Vidler talking to his dog on a walk.
A panel featuring Miroslava Brooks, Brennan Buck and Marta Caldeira discussed their careers during the lunch-time talk "Between Academia and Practice".
Artist Artie Vierkant talks 'Image Objects' to viz III students. We still have no idea what we're doing. #vizortrash
Former project managers, Kerry Garikes and Dan Whitcombe were professionally pampered and styled for Pella Windows' promotional video for last year's Building Project. There were 8 cameramen and free sandwiches.

T3 **P!: You grew up in Israel where you majored in math and worked as a film editor. Did your experience play a role in shaping your early ideas and approach in design?** Omer Shapira: I was 15 when I started working as an editor, and was still using analog tools ("A/B Roll"), which are pretty much ungoogleable now. They were a few tape machines and a keyboard, and the practicum was selecting a piece of footage, watching it get copied from one tape to the other in real-time, and erasing whatever was on the other tape. This is destructive media, like clay. Not being able to undo makes you think of the object before you as a final form. But unlike clay, electronic media contains a hidden state. One of the earliest things that all analog editors learned was to understand the cost of a mistake, and to plan as far ahead as possible.

Moving to digital meant we had the ability to undo and have access to a timeline, so the hidden state became less hidden. Naturally, seeing what you're doing makes you faster. Oddly enough, I found the opposite to be true: editors who started out using non-linear digital tools were slower, because they never learned to plan a few moves ahead. A few years later, preview tools got a little better, and the practice changed: making complex sequences is now a single editor's job. That's all due to the evolution of the tool. By the way, from the early 2000s, it was apparent the editing style became more idiosyncratic. For a while, it didn't feel like an intentional aesthetic… I think it is related to the fact that editors starting at the time didn't have the same inhibitions, so they explored, but also made a lot of mistakes that were finalized. I still think to this day that editing is the only thing I was ever fully comfortable with, and it shows how important the tools are.

It sounds strangely similar to how physical models are in architecture. I think so. In parametric software, there is often a problem where many of the design choices are made by negligence from changing variables without any visual continuum between the values. Often there aren't visual ways to find a "sweet spot" in a collection of sliders in Grasshopper. This problem is not unique to design—it is a fundamental problem in Numerical Optimization fields, like Deep Learning. When searching for local maxima in a high-dimensional function, a common task is figuring out which parameters to change at a given point for a better result in parametric space. It's like being somewhere on a mountain, and not knowing where the peak is.
Commonly what you'd do is guesswork: you know what looks "slightly" better in your next step, but maybe it leads to a dead end in the overall solution. Most of the the time you just have the computer walk around the mountain, because the mountain is hard to visualize. In both cases, the problem is not compute power, but interaction design: how do you visualize the problem so there's no need to tweak parameters and get serendipitous results.

We use certain definitions of identity to find a "sweet spot" in architecture. Is there an identity that you try to create for your users in VR? We're not there yet. For example, take the problem of usability as a construct to explore sweet spot in. Any VR interaction device ranges on the continuum between 'toy', 'tool' and 'instrument.' A toy is self-explanatory, seldom useful, and typically doesn't store states or innate qualities. It's meant to be predictable for beginners to use. Instruments are at the other end: they require skill, and can sometimes hide function and state—but in the right hands can create amazing things. Think about the closest thing you have to an instrument in VR—Tilt Brush, but it's neither as simple as a toy nor as precise as an instrument, so we're stuck in "what can an average person do to be somewhat expressive and not frustrated." That's a far cry from what I would like to see as identity.

That's a stark contrast to what we can already do well in VR, which is spatial design. In VR, you apply the same basic set of tools as you do in architecture to make the space coherent for humans to use, except you're designing a ride, not just a building, which is an important distinction.

One thing that I see a lot is that architects and interior designers working in VR will not make tiny rooms; they will make rooms with long vanishing points—because hey, real buildings have corridors! We all want our eyes to be guided when reading a space. In that sense, there's nothing new about designing for VR—every nuance in spatial practices still applies. As far as interaction design goes, we have a very, very long way to go to be in the same place.

Is it because the tools are already set in architecture, so we only focus on how we think instead of how we feel? Does that present a loss in connection between the human body, mind and how architecture operates in the physical world? Let me take a step back: I think architectural tools are a little behind. For instance, when you're designing a bathroom, you have to reach for a hidden tool or think very hard before placing the door so it doesn't hit the toilet. That's fairly basic—now imagine having to figure out what congestion looks like near an elevator at lunchtime. Predicting edge cases should be the default behavior.

As a toolmaker, I'm really inspired by David Rutten, the author of Grasshopper. He needed a form of expression that other tools were at best awkward at. Grasshopper has made a very tangible contribution to the world of design—it changed the verbs we use.

Architecture needs a lot of new verbs. Models are often shown by default from above—a view which no one will see. Clients expect to see shiny buildings—and often get what they want—so architects are never forced to think about their models 20 years in the future, when it's covered in gum and grime. Simulation technology can solve that. In industrial design, people work at a scale that they understand even if the product is damaged. You can make it imperfect and test it against the real world. In architecture, the thinking is mostly speculative.

Large-scale experiments in architecture have gone massively wrong thanks to a lack of foresight. Joshua Walton (formerly LAB at Rockwell, Microsoft) once told me that he loves working with architects because no matter where you are in the world, architects are trained to collaborate on a professional level. I guess it's because when you graduate and start working in a practice, you design door knobs and stairwells for a while, and learn to integrate.

The video game industry suffers from the same problem of a large amount of repetitive work and solves it in a very different way: a large games studio will have internal teams writing artists tools for everything. The better the tools are, the larger the problems you can tackle. If you read the credits for WATCH_DOGS, there are thousands of people signed on the final product—but they didn't create a single skyscraper, they created all of Chicago, with cars, planes, physics, and humans walking around talking to each other. Then they made this entire process easily repeatable, so WATCH_DOGS 2 could do the same thing, but with all of the Bay Area. The ideas of skill integration and quality assurance seem very different in architecture than in games. In architecture there's a perception that there's not enough money to build a good tool chain, which I think is false. The evolution of tools for planning VR experiences may benefit architecture. We're solving the same problems, we need to understand some coarse human metrics.

I don't want to be a techno-optimist here, but I think there's a potential to automate some of the shortcomings in architectural design nowadays. Similar to a skyscraper design, the cost for large games are in the hundreds of millions, but unlike skyscrapers they can scale infinitely. For example, in Gensler's design for Nvidia's HQ Building, programmers built a tool to simulate the sun path inside the building and ended up adjusting the angle of the skylights early in the design process. If small firms had that as a tool, imagine how their ability to dare to make unique designs increases.

Lastly, do you have any reactions to the Design Objectives? The list is not wrong, but the practicum is naïve. Things scale at a pace that humans cannot predict without automation. We cannot simply say "This building did not take off because too many people were using it." We need to get away from designing spaces to be static. I feel like architects love designing pavilions because they can be creative while still maintaining absolute control and understanding every human scenario within. We are not at the age where you can make Villa Rotonda supported by a patron, for a handful of members of the elite to see. We are making things used by hundreds of thousands of people every year. We have to consider congestion, erosion, and disorder. If we cared about people, we really need to embrace chaos in planning.

Omer Shapira is an Artist and a Programmer, exploring trust between humans and machines with Virtual Reality and Robotics. Before working at NVIDIA, he was a Technical Director at Fake Love and Framestore VR. Omer talks about technology like you talk about your ex.

A3 In the interactive and new media field, there is always a push to adopt anything that is new. It has gone to such an extreme at times that the actual experience is no longer examined. The projects become showcases of new technology and techniques rather than well-thought-out experiences. These flashy installations become untouchable to the average user.

Unable to fully grasp the distance new technology creates, it is hard for the mind to enter into the frame or space that the design is attempting to create. When you're able to hide the tech, making it so that the naked eye cannot pinpoint every gadget or equipment used, it then allows the participant who is interacting with the piece to feel as if they are entering an experience that they are not only a part of but can have influence over.

Whether it be architecture or interactive design, its main purpose should always be for the participants (instead of audience). When otherwise, you are no longer designing for people and are now creating a piece of self-expression—a personal exploration, one that people may acknowledge from afar but never touch.

Hopefully, we can all pull away from this direction and move towards creating personal experiences that can actually impact the users instead of simply blinding them.

Olivia Gilbey is a graphic designer that went on to study interactive and experiential design.

AA4 In undergrad I had the great privilege of working part-time for David Gardener's Jewelers and Gemologists, a family owned fine jewelry store located in College Station, Texas. Founded in 1983, the store specializes in custom jewelry. Prior to working at DGI had absolutely no jewelry experience, however my experience with 3D modeling software and digital fabrication allowed me to serve a unique role at the shop.

When I first spoke to David about the design workflow of making a custom ring, it became increasingly apparent that the digital age has greatly affected the way custom jewelry is created. When David opened his doors over 30 years ago, each custom ring was made by hand out of wax before it underwent the casting process. These wax molds were created from sketches that David himself would do on a large whiteboard. He would draw them at no scale, completely free hand, and would then take pictures and hand draft them at a 2:1 scale to "work out the kinks." Only after this process would he draft the ring at 1:1 and make the wax mold using hot knives and chisels. Once the wax mold was made, the final product would be made from a burnt-out mold that final material is cast into.

With the introduction of Rhino (and a jewelry-specific plugin called Matrix), laser welders, resin printers, wax extruders, Digital whiteboards, Skype, and rendering software, the workflow of jewelry design has changed dramatically. There are now significantly fewer people involved in the creation of the final product. What once took a highly skilled professional weeks to complete now takes several people just a few days, or in some cases hours. David no longer uses a whiteboard but rather a digital touch board that he had an educational technology company come and install. Those sketches are handed off to a draftsperson and made into 2:1 and 1:1 drawings in Photoshop. They are then taken into RhinoMatrix where they can be 3D modeled and rendered, and 3D printed in wax and resin to show as iterations to the customer and for the burnt-out mold. The end process of casting and setting the stones is still the same, but it comes at a much faster rate thanks to digital technology.

This new technology does come at some cost. Older employees talked about how the wax modeling days are over and that fewer and fewer people are trained in this craft. We see the same conversation happening in architecture. As the new comes and the old phases out, what will this cost us? How will the industry change because of it? For better or worse, technology is rapidly improving. It is increasingly important for us, as students of the new digital age, to utilize these technologies to their fullest potentials, but never forget the craft of yesterday.

Nathan Garcia graduated from Texas A&M University with a BA in Architecture and Minor in Archaeology in 2017. He had interned at Mark Foster Gage Architects and Gilles Retsin Architecture.

A4 **P!: We are interested in why you transitioned to virtual reality and augmented reality design after studying architecture.** Nitzan Bartov: I loved architectural theory, but I was always interested in digital architecture. Even at school, I became more and more interested in the software that we use, how the software itself creates a certain bias towards certain types of design, and how changing the tool changes the design. I wanted to work more within the computer than in the world. Instead of focusing on a map, terrain or the society, my focus shifted to the tool and system. Then I got to work with a friend on a game when I was at SOFTlab. Shortly after, VR became a very big thing that I had the tools to create content for.

Did you become interested in tools due to a lack of them in architecture? No, it started with my general interest in glitch on the internet search zones. A lot of the ideas I got from philosophy of aesthetics were about how the function of tool makes us aware of what defines that tool; it makes the tool visible to us. So you can say I was more interested in exposing the visible tools I was using. I'm not a toolmaker, but I would be interested in building an instruction guide to help you in a software or explain to you through a path what you are actually doing. Stepping out of the comfort zone that software is giving us, I think about what other aesthetics we can create with our temporary tools. It has a wider application at least in terms of thought process for architectural products, which are often created from utopian perspectives. Not going the usual path gives you another category. While a lot of them may be gibberish, somewhere along the way you might come up with something that you couldn't even imagine. It's almost basic research. If all our research is going a certain way, can't we do basic research on dystopia or functions of software?

The AR project you created for Menorah was a parallel reality between the surprise from a holiday and the surprise from technology. There is an interesting potential for a local culture to become a global experience. Do you think that can define our new identity? I just started a fellowship at Economist Media Lab on the relevance of AR to publication, so I think about AR actively. Our reality is inherently augmented; you can draw the line as far back as cave drawings or to more prosaic antecedents like street signs. I grew up in a Modernist environment my entire life. I don't know anything outside of architecture. There almost isn't a question of whether AR is going to make it or not. It is more of a marketing question. We are never really at the space we are in. We always have these higher perspective moments even just by using a map.

It's not a topic that I directly think about, but I am curious about how singular and easily manipulated a person's experience could be in a space—that idea that we both might be looking at the same objective reality, but small shifts in a consistent way create our very subjective realities. It's both a metaphor and a real opportunity to feel the hidden layers of our reality. Then the question becomes what type of data to show and how. Are there specific stories that we can draw from foresight or a disembodied view, not from a utilitarian perspective, but a socio-economic perspective? Different types of mapping can make you more sensitive to your space.

Omer Shapira said VR is more like a ride than space. Is there any difference between architecture and AR? I would say the difference is that architecture creates space that we can all objectively judge. If you look at architecture on the spectrum of AR and VR, then it is both. Think of the creation our environment as a "human project" where architecture is trying to completely engineer control in every aspect of our lives. We create shopping malls in which we control the temperature and lighting. Then extrapolate that to civilization; only from this perspective can we try to analyze it. From that, maybe humans are actually the final medium. If architecture is somewhere on this continuum and VR is a layer of information that talks to our senses and consciousness in a very direct way, then AR is a language that might not even be worth mentioning for a few years. It's a mediator between us and the sensory world. If we compare AR to street signage, then it's not different from common uses of digital layers of information that we will have around us in five years.

Within your practice, what are the design objectives? If we look at the history of architecture, a lot of it had to do with the creation of a total environment, about exerting control. Specifically in AR right now, I'm less interested in exposing the mechanism in a computational way, and more intrigued by how I can use narratives to discuss issues. So to take a pause, let's talk about some disturbing aspects in AR: people are letting foreign agents dictate their field of view. They assume trust and objectivity, but those are just assumptions.

It is refreshing to hear you talk directly about AR and architecture. Especially in academic settings, there is a fascination with yet a safe distance from technology. We study philosophy and theory in architecture, but we never just look at the human body. We almost intentionally ignore the aspect. There are two sides for me here. First, it would have been amazing if we learned more about the human body. How do I let daylight in so it would be pleasant for the eye? What would force me to use my body in certain ways? I don't know. It's not part of our education. If we had gone through the process, part of this understanding could have been relevant in different periods of history. On the other hand, why isn't architecture taking technology into account? A, It's a very different alias. B, If you're designing an environment that's going to be here for more than 20 years, then the only permanent thing is the human body. Our responsibility is bigger than whatever technology is at present.

What time scale should AR address? It should address right now. Technology is currently moving so fast that I take everything I do to be ephemeral. It is like drawing on a napkin. You cannot say the same things for films, but I do not think that is where we are with AR and VR at all. It is very encouraging because it lets you produce something that is very relevant to a specific moment. AR is influenced by many achievements, such as image and object recognition, so there is going to be a lot of changes that are less about experience and more related to data visualization.

Are designers dictated by their tools? For example, in architecture we have human bodies. While in AR, the technology is constantly changing, therefore the projects are more temporal. A project is both permanent and temporal. A good thing to remember is that design is always planned for the human body. That might change, but let's assume the human body is persistent, and we are always navigating with technology. You are always a person of your time. As a designer, it isn't always visible in real time. The ripple effect is less relevant to me, because I am creating more narrative-driven experiences where I would create something singular to a specific site or time.

From your experience, how do you envision the network of influence to change? Where do you envision yourself in relation? I wish I knew the answer. An architect is the type of person who connects the dots between a wide network of advisors, so it is a question less about me, but more about if I have something smart to say about AR in that context. It would be an interesting perspective to insert planning for architects. Humanistically, it is important to create a space for predictable communication among people while technology goes and becomes smaller and smaller. The two scales will only grow further apart. I would argue strongly that architecture should not address the influence of technology. Technology should adapt to our habitats.

Finally, we are fascinated by your soap-opera game "The Artificial and the Intelligent". What do you plan to create in the future? I am not sure. I am now working on a project that is very reminiscent of the game. Obviously, I am fascinated with artificial intelligence and relationships. I think there is something very domestic and feminine in my work, and I try to look at ideas of communication through that lens. If I had an answer, I wouldn't need to do a project; because these are things that fascinate and interest me, my answer is a story.

Nitzan Bartov is a game designer and architect based in Brooklyn. Nitzan is also a Media Lab Fellow at The Economist, and an Advisor at the School of Visual Arts.

GD3 Books, Architecture

My work as a book designer grows out of my training and experience as an architect. I was very lucky to be educated as an architect and owe almost everything to those lessons and the people who imparted them. I can only hope to do the same for the people I teach.

Conceptual tools such as scale, adaptation, assembly, matter, historical process, functionality, economy, aesthetics, and systematicity I learned from critics and colleagues in architecture. Architecture for me now is a matter of making books: a way of modeling knowledge, giving it a shape that corresponds to the processes of reading, viewing, thinking so that an array of materials can be accessed in a way that is tuned for reception by a reader/viewer. In this way the design of the book is an architectural effort; it is the strategic release of information (in time) over a connected series of surfaces (in space). My work is to design that spatial-temporal experience.

Of course, there are overlaps and differences, possibly important factors that distinguish books from architecture: they are lighter, cheaper, faster (but just as likely to be badly conceived or executed). They are subject to objectification and fetishization to the same degree, but can still be powerfully ordinary. They can be tools for resistance, or political expression—after all, burning books or buildings both make a point.

Mostly, I'm interested in the overlap of books and architecture because they both participate in their time. Like Mies, I still like to see them as expressions of their epoch—though we might choose to measure our time differently. If a book can be open, breathing, osmotic, connecting its many readers and subjects through its particular organization and physicality, then it can be, like architecture, full of potential: affected, uncertain, coquettish, decent, obedient, insolent, found, humble, meek, conceited, matte, bright, strong, necessary, sturdy, gossamer, severe, natural, artificial, vulgar, empty, shiny, taut, loose, accurate, precise, vague, dirty, smart, fancy, thick, warm, abrasive, antique, illegitimate, proud, oblique, ghosted, mute, consistent, clean, problematic, unacceptable, inorganic, clichéd, exquisite, idiosyncratic, decorative, common, nothing, dumb, bland, full.

Luke Bulman received an M.Arch at Rice School of Architecture, a school deeply dedicated to the book as an instrument of architectural thinking. As a graphic designer he is self-trained, but benefitted from a foundation of study with Bruce Mau. He's currently teaching at YSoA.

T4 Book Review by Ray Wu

Robot Sex: Social and Ethical Implications
Edited by John Danaher and Neil McArthur

Sitting on Omer Shapira's desk, the red, uppercase title is hard to ignore.

The title is accompanied by a discreet image of an android clad in glossy white with chromic details and articulations, much like those depicted in *I, Robot*. Yet the book is written, with academic rigor, in anticipation of the False Marias of *Metropolis*, wives of *The Stepford Wives*, Prises of *Blade Runner*, Gigolo Joes and Gigolo Janes of *A.I.*, Samanthas of *Her*, Kyokos of *Ex Machina*, Maeve Millays of *Westworld*, and Jois of *Blade Runner 2049*. These collective fantasies already exists, albeit in very crude and unsophisticated manifestations, in the form of hydronic silicone dolls and virtual assistants in our pockets.

"Sex bots are coming." It is the premise of the book, and very much prophetic.

For a taste, read Chapter 11 by Michael Hauskeller—Automatic Sweethearts for Transhumanists.

Available as an online book through Yale Library or The MIT Press, $40.

AA5 **P!: You studied Theatre Arts/Architecture at Berkeley prior to pursuing a Masters of Architecture at GSD. What was the major aspect that led you to expand the area of your background?** Tomomi Itakura: I chose architecture after my undergraduate studies because I thought it would open more doors and give me a broader skill set. After grad school, it was by chance that I started doing exhibitions, but I found that design thinking in general applies to the practice of both architecture and exhibition design. Design thinking is about mapping a path to solve a problem. It involves taking in data and information through observation, research, etc., considering real-world parameters like project timelines, spatial conditions, and client needs, taking all of these things and distilling them to define the problems that need to be solved, then applying ideas for solutions, all while constantly shuffling and mentally organizing, prioritizing, and implementing the issues, ideas, and decisions in order to execute the project.

If you were to describe the design objectives of exhibition design, what would they be? First, I should clarify that my views on exhibition design are specifically in the context of fine arts museums, which is very different from exhibition design in science or history museums, or exhibit design for trade shows.

I've heard art museum exhibition designers say that their main objective is to "disappear" into the background, and that their work should go unnoticed. But I believe that the main objective of exhibition design is to enhance and elevate the viewing of artwork, which sometimes means that the design can take a more prominent role. Exhibition design is not only about making the art look as good as possible, but also about shaping or framing a visitor experience in order to enable a curatorial narrative to be told in the most engaging way. The art will always be the protagonist, but I think it's valid for the exhibition design to actively and visibly set up a context for experience of the art.

Do you see exhibition design as a multidisciplinary field? How do you envision exhibition design changing in future? Museums occupy an arena that is in between education and entertainment. It is a place to learn but it also has to be a place that people are excited to visit. I think art museums are putting more and more effort towards visitor engagement, and this will probably continue. Museum exhibitions have to be competitive in an age where we are inundated with visual imagery and have short attention spans. This means that in order to be engaging, we have to really think about how to make an exhibition relevant to a contemporary audience, and how to make a lasting imprint on visitors' minds. Museum exhibitions are increasingly incorporating immersive and interactive elements. As an exhibition designer, I find myself thinking about how to design an exhibition to be more experiential or more theatrical, while still respecting the art. It's fascinating that many of the art objects that you see in museums have been around for many years and will be around for many years to come, but how its display is designed and how it is talked about changes constantly. A hundred years from now, the same art will be on display, but in a completely differently designed context.

What do you think the relationship between exhibition, installation, theatre arts, and architecture is? What do you think is lacking in architecture or exhibition design currently? Architecture is about making space and designing how people move within a space. Theater is less about making space; it is a very controlled and framed visual experience, to help tell a story. Exhibition design is somewhere in the middle: it is about taking a curatorial narrative (i.e. a story), giving it visual form, and creating a choreographed spatial experience. A major difference between architecture and exhibitions is the fact that architecture is permanent while exhibitions tend to be temporary. In architecture, you don't get as many chances to take risks. Because exhibitions are temporary in nature and happen a lot faster, there is a lot more leeway to experiment. This has allowed me to test different qualities of space and develop spatial knowledge over time, meaning that I've learned about what works and what doesn't through actually designing spaces over and over again. I don't think it means that something is lacking in the practice of architecture, but I think there is a benefit to having exhibition design experience in approaching an architectural practice.

How do you envision your design practice in the future? My partner, Yugon Kim and I have overlapping but different expertise. Before architecture school, Yugon studied sculpture and I studied theater. We are both generalists in the sense that we are spatial and visual designers, but we are also specialists in regards to our respective expertise. Our practice is based on bringing together our different backgrounds and thinking about design holistically. We have been fortunate in that we've been able to take on an interesting variety of projects in terms of both program and scale that aren't typical to an exclusively architectural or exhibition design practice, and I hope that continues in the future.

Finally, can you respond to a list of typical architectural design objectives? All of the objectives you've outlined are valid. I think that the importance of each is different depending on the project. What I might add in terms of design objectives, at least in how it relates to our practice, is the element of poetics. In addition to the clear common sense goals of design, it's important to weave in some aspect that "touches" the people you design for, whether it's an element of drama or delight, even if its effects might be subtle or subliminal.

Tomomi Itakura is a founding partner of IKD. She was formerly the Director of Exhibition Design at the Fine Arts Museums of San Francisco. Tomomi holds a M.Arch from Harvard University and BA in Theater Arts and Architecture from UC Berkeley.