

Our Cities, Our Selves:

How Human Interaction Drives Change in Cities

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Our Cities, Our Selves is based on the observation that cities change not in a series of large movements but building by building, the product of a specific interaction of particular individuals. Each interaction leads to another; it addresses one imbalance but produces new one, which begets a new interaction, and so on. Fueled by persistent imbalance, equilibrium is never achieved. The city unfolds, interaction by interaction, a process whose byproducts are individual buildings – which makes the city an archive of successive interactions. Perhaps then, architecture is not the product of interaction, it is interaction.

DIFFERENTIATION: MEMORY/LOSS

Norman M. Klein begins his book “The History of Forgetting” with a description of the neighborhood surrounding him when he first moved to Los Angeles in the 1980s. Encountering a mix of bland bodegas and forlorn apartment buildings, Klein was surprised to learn later that the area had once been home to the Tom Mix Studio, the site of the first movie production house in Hollywood and a hotbed of innovation and creativity. What disturbed him was what wasn’t there, the erasure of history: that there was absolutely no evidence in the physical fact of the city that any of this actually occurred.

In his “Anti-Tours” described in the book, Klein would take students and the curious to vast tracts of empty lots on Bunker Hill, a formerly tony neighborhood in downtown Los Angeles, a carpet of Victorian homes on a hill – not unlike San Francisco – that had been cleared for decades to make room for progress; mixing history and fantasy, he would tell stories of what had gone on there, what the buildings looked like, the lives that were lived, days of heat, nights of passion, crimes, even murder. He refers to these sorts of places as “phantom limbs,” places you know are real, but you just aren’t certain without proof. He contrasts these with “false memories,” places that remind you of a life that you never lived.

For Klein these are all just tools wielded by the powers-that-be to build a Los Angeles that would make them rich, gas-lighting unsuspecting citizens to doubt memories of their actual experience, then providing them with a palatable substitute that would soothe them and allow them to develop the city as they wish. Klein calls this the “Social Imaginary,” and defines it as “collective memory of place that never existed, but was built anyway.”¹

Observing cities in Italy, Aldo Rossi sees things a bit differently. In “Architettura della Citta” (The Architecture of the City), Rossi also talks about collective memory, arguing that urban artifacts and primary structures can carry meaning for all citizens of a city; but he also embraces the way cities evolve: how everyone has their own reading of the city; how the form the a city is tied to its particular time; and how a city can change within the span of a single life.

Rossi’s version of collective memory involves the “persistence of form;” but it also draws from Carlo Cattaneo’s belief that a “city is an event and a form,” that the “union of the past and the future exists in the very idea of the city that flows through in the same way that memory flows through the life of a person.” Rossi also has perhaps a less cynical take on the evolution of a city, seeing it as a more bottom-up, emergent proposition: “... it is through the natural tendencies of the many groups dispersed throughout the city that we must explain the modification of the city’s structure.”²

Klein and Rossi both seem to be exploring the emotional relationship of the individual to the city. For Rossi, it is more a connection: the individual participates in the making of a city, and thus is emotionally tied to it. For Klein it is closer to alienation: the individual has little power or agency in determining urban form and thus feels alone, even irrelevant. But Rossi agrees with Klein when he says “often the city erases our memories of it when it changes.”³

CONNECTION: FORM/PROCESS

Histories of architecture often chronicle the field as a succession of architects or of styles. In “Toward A Critical Regionalism,” Kenneth Frampton argues that Modernism is about ideas ... “its progress might be read as a progressive reordering of what can held to be true at any given moment.”⁴

Modernism seems to have taken a foothold by the time Jean-Nicolas-Louis Durand launched his classification of building types, “Recul et parallele des edifices de tout genre” (Compendium and Parallel of Buildings of all Kinds) in 1800. More radical than Durand’s taxonomy of building types was his proposition that, as was already common practice in agriculture, a program of hybridizing building types to create new “species” should be initiated.⁵ This approach seems to have been echoed more recently when Bernard Tschumi set out

to create new hybrid building forms by overlaying often-conflicting architectural programs in projects he discusses in his book, “Event Cities.”⁶

Similarly, Eugene Emmanuel Viollet le Duc’s call for an architecture that harnessed the economy of form and function found in nature was widely read and admired, especially in America by Louis Sullivan and his protégé, Frank Lloyd Wright.⁷ Wright, according to Vincent Scully in his book, “Modern Architecture,” upped the architectural ante of his former mentor by transforming Sullivan’s more two-dimensional organic designs as three-dimensional spatial transformations.⁸

Stan Allen’s interest in fields also focuses on the formal if not structuralist character of his subject: more mathematical than quantum, the fields he explores are also attempts to develop new formal strategies rather than procedural,⁹ unlike Christopher Alexander’s “Notes on the Synthesis of Form,” whose diagrams arise out of a process resolving misfit of a form with its context.¹⁰ Correcting the often misconstrued Charles Darwin phrase, Alexander seems to hold that “survival of the fittest” is more accurately stated as “survival of the most fit,” relative to context.

However, as compelling as all this formal exercises were, they do not give a convincing argument for how a city evolves. Even Alexander considers the process as something to be studied from without, not from within – top down, not bottom up – which has never resonated with my own experience as an architect.

In “A City is not a Forest” I laid out a version of Durand’s taxonomy, identifying building species and tying their mutations to economic rather than ecological change. I proposed that the evolution of cities proceeded in a succession of economies, with different styles and architects flourishing during different periods of economic expansion. In “Architectural Fermentation and the Evolution of Cities,” I described an epiphany that occurred while working on the design of a hillside home in the Silver Lake neighborhood of Los Angeles. At the time I was attempting to start a vineyard in my own backyard and was studying the process of fermentation; as I went over the design of the home with the client, it occurred to me that our interaction resembled the fermentation process, but at our scale: as macrobes, not microbes, interacting, each seeking to make the best project possible following our own-criteria of what that meant, based on our particular role in the project. It seems that ours was the primary fermentation; the secondary fermentation is what happened when the contractor was brought in, with filtering and fining occurring through our interactions with the city.¹¹

This protracted, often contentious interaction was crucial to the realization of the project – or any project for that matter. I realized that thinking of a city as an archive of successive

economies might be inaccurate. Perhaps a city actually changes building by building, each the product of a specific interaction of particular individuals. One interaction leads to another; it addresses one imbalance but produces new one, which begets a new interaction, and so on. Fueled by persistent imbalance, equilibrium is never achieved. The city evolves, interaction by interaction, a process whose byproducts are individual buildings – which makes the city an archive of successive interactions. Thus, architecture is not the product of interaction, it *is* interaction.

INTERACTION: MIND/BODY

According to theoretical physicist Carlo Rovelli, author of “Reality is not what it seems,” all reality is interaction. In fact for him, there are no things, only events. A kiss is an event; but so is a stone – an event simply taking much longer to unfold. His thinking comes out an attempt to reconcile general relativity with quantum mechanics. The way things appear to be is based on our relative position, constrained by our senses, limited to our scale; but the behavior of subatomic particles is something else altogether.¹²

Rovelli accepts the Einsteinian structure of the universe as made up entirely of quantum fields – a sort of matrix that is both a wave and a particle at the same time – like light, or electromagnetism. When the field is disturbed, it adapts to the imbalance through the interaction of its quanta. So the four fundamental forces – gravity, electromagnetism, the strong and weak nuclear forces – are all fields adapting to imbalance through the interaction of the quanta within them. He sees the same mechanisms happening in our lives in our interactions with each other, rejecting top-down hierarchical structures promoted by people like Ludwig von Bertalanffy,¹³ Herbert A. Simon,¹⁴ and Christopher Alexander¹⁵ in favor of distributed, bottom-up, emergent adaptations to changing conditions wherever they occur.

But ideas alone do not tell the whole story; bodies interact in the real world, and with feeling. In “Body, Memory, and Architecture,” Kent Bloomer and Charles Moore talk about haptics, the relationship of a body in space;¹⁶ but I believe Sarah Williams Goldhagen, in her recent book, “Welcome to Your World,” says it better: “That cognition is situated in the body, or embodied, has myriad implications for understanding how we experience the built-environment. How our minds operate and what they register depends on the anatomy of our human body and on the technical operations of our sensory and motor faculties”¹⁷

Neurobiologist Antonio Damasio agrees. He argues that the body and brain together create the mind, that feelings contribute as much to decision-making as thoughts, and that this is crucial to our survival as a species. Clearly the sensations of pain, of hunger and thirst motivate thoughts and action in

response; but so too do feelings direct how we interact with people and situations as we come upon them: our gut reaction to a questionable handshake or inappropriate comment informs how we negotiate a transaction or finish a conversation. “We need to realize,” he says, “that we do not have brains served by the body; it’s the other way around. We have bodies served by the nervous system. Once you see nervous systems as the servants of life and not the other way around, things begin to make a bit more sense.”¹⁸

In his most recent book, “The Strange Order of Things,” Damasio sees in all living things the precursors to feelings, from the signal and exchange of single-cell organisms, to the more complex behavior of insects all managing to survive despite extreme changes in their environments, and beyond. He calls this the “homeostatic imperative,” which “is the fundamental state of operations at the core of life, the powerful imperative for all life to endure, prevail; it ensures that life is regulated within a range that goes beyond mere survival – that is conducive to flourishing and projecting life into the future.”¹⁹

Damasio believes this homeostatic impulse in humans drives the rise of culture and the creation of various tools we have developed over time to live the lives we want, and that cultural selection – the mechanism determining which artifacts will endure – mimics biological selection: “Feelings, as deputies of homeostasis, are the catalysts for the responses that began human cultures,” he says, “...and that lead to cultural selection.”²⁰ Buildings and cities are part of this: adapting to changing conditions by addressing imbalance in a system or field (our cities) through the interaction of its quanta (our selves) – not only to achieve homeostasis, but to go beyond, expanding the difference between mere survivability and absolute thriving.

In “The Interactionist City” I outline The Interactionist Protocol:

1. Imbalance: An imbalance is perceived by an individual, which leads to an emotional reaction;
2. Opinion: The emotional reaction induces an opinion as to how to address the perceived imbalance;
3. Action: The opinion sparks a course of action; if the scale of that action requires it, an interaction initiated;
4. Interaction: The interaction proceeds, pitting one’s criteria of how best to address the imbalance against another’s, an epic struggle toward an agreed-upon goal;
5. Resolution: The interaction is resolved to the satisfaction – or dissatisfaction – of all the interactors;
6. Repeat: A new imbalance is perceived, often by some else entirely, and the process is repeated with a different set of interactors.²¹

Thus a city might be seen as a structure that emerges through the homeostatic imperative in response to the never-ending

flow of imbalances occurring at all times and in all corners of a given field, addressing these imbalances in a distributed way through the myriad interactions of its citizens, and resulting in an explosion of forms – a small fraction of which is architecture – that taken together, form the city.

INTEGRATION: BEING/BECOMING

One of Carlo Rovelli’s key assertions is that what we perceive as forms emerge from events, not the opposite – the Big Bang come to mind. In two of his books, “What Technology Wants” and “The Inevitable,” Kevin Kelly seems to echo this idea when talking about the invention and trajectory of toolmaking, beginning with the invention of language. He sees the evolution of the technology not only as analogous to biological evolution, but as an extension of it. Focusing on the role of information, both in DNA and in bits and bytes, Kelly proposes that the flow of energy embodied in information has a direction and a trajectory that passes through a series of inevitable milestones – language, stories, written language, the printing press, the typewriter, the personal computer, the smartphone, wearable devices, Virtual Reality, Artificial Intelligence, etc. – toward an unimaginable future.²²

Kelly invented a word for what he refers to as the seventh kingdom of life – the technium – which covers every tool or process ever conceived of by humans, from the simplest rock used to crush acorns, to arrowheads, cooking, language, storytelling, religion, farming, social order, governments, industry, the internet, etc. He is convinced the technium has a will of its own and creates its own trajectory parallel to ours. “The technium is a tendency, not an entity, more a grand process not a grand artifact,” he says, “Nothing is complete, all is in flux, and the only thing that counts is the direction of the movement.”²³

Architects have echoed this: Aldo Rossi: “Ultimately the proof that a city has primarily itself as an end emerges in the artifacts themselves, in the slow unfolding of a certain idea of the city.”²⁴ Fumihiko Maki: “We must now see our city as a dynamic field of interrelated forces ... any order introduced to within the pattern of forces contributes to a state of dynamic equilibrium – an equilibrium that will change in character as time passes.”²⁵ Thom Mayne: “the city is a field of permanent genesis; the constant flux of its systems is the means by which its social structure evolves with greater complexity.”²⁶

Architectural Theorist Paulette Singley writes in her new book, “How to Read Architecture” that “Architecture emerges from a highly collaborative process wherein multiple individuals contribute to the completion of a collective work that ultimately results in a built form much larger than the work of a single person.”²⁷

Antonio Damasio notes that such coordination enabled the formation of the human body, which he sees as “a massively complex organism made up of cooperative systems, which are made up of cooperative organs, which are made up of cooperative cells, which are made up of cooperative molecules, which are made up of cooperative atoms built from cooperative particles.”²⁸

Rovelli’s interaction drives this trajectory: elementary particles interact to create atoms; atoms interact to create molecules, such as DNA; DNA molecules interact to create living microorganisms; microorganisms interact to create increasingly complex organisms, such as humans; humans interact to create language, tools, Kelly’s technium in all its manifestations, all in response to Damasio’s homeostatic imperative.

AWARENESS: THE PRESENCE OF THE PRESENT

Nostalgia is only possible if you can forget what actually happened.

Norman M. Klein²⁹

For Damasio, actions are emergent from feelings; for Rovelli, things are emergent from events.³⁰ Rovelli writes, “The best grammar for thinking about the world is that of change, not permanence. Not of being, but of becoming.”³¹ For Kelly, “Humanity is a process... every living thing is on its way to becoming.”³²

What does this mean for the future of cities? Perhaps the best way to relieve Norman Klein’s anxiety of the changing city would be to somehow accept what current science is telling us: reality unfolds before us in the present, as interactions initiated to address imbalance and create “persistent difference in the face of entropy’s empty indifference.”³³ So does this mean we should sit back and witness the spectacle play out before us?

I think not. We need to be aware of imbalance when we perceive it and we need to honor our feelings when we are irritated by something in our lives or our built environments. As architects and urbanists, it is incumbent upon us to be aware of what our cities are becoming; but we also need to be honest about what we ourselves are becoming. And if we find things going in the wrong direction we need to heed the homeostatic imperative and ask what we can do to fix it; and we must fight for the cities — and selves — we want to become.

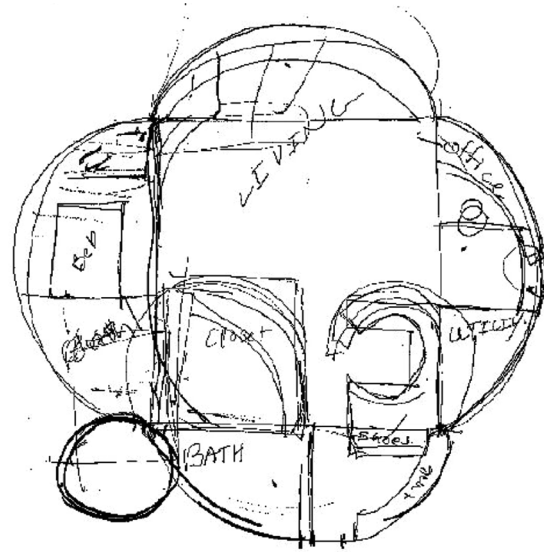


Figure 1: Raw Materials: Client’s Initial Sketch (Tim Tattu)

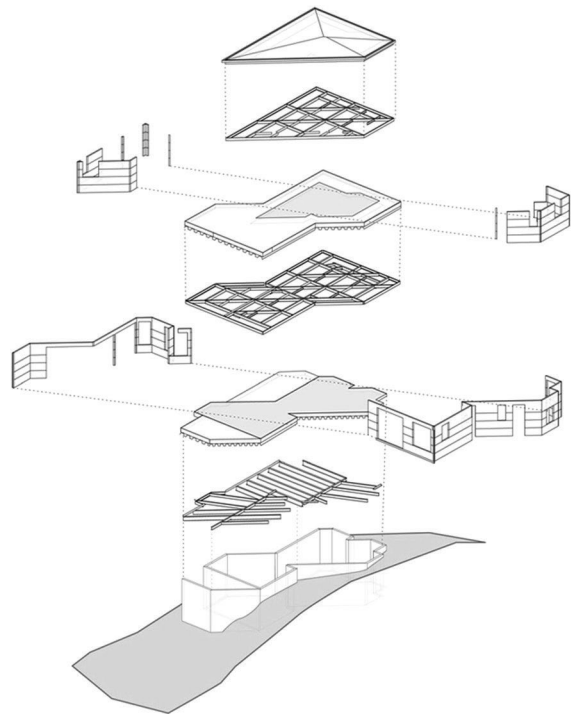


Figure 2: Primary Fermentation: Design (Rendering, Elaine Kwong)



Figure 3: Secondary Fermentation: Construction (Photographer, Taiyo Watanabe)

ENDNOTES

1. Norman M. Klein, *The History of Forgetting* (New York, London: Verso, 1997), Page 10.
2. Aldo Rossi, *The Architecture of the City* (Cambridge, London: MIT Press, 1982), Page 131.
3. IBID, Page 61.
4. Kenneth Frampton, *Modern Architecture: A Critical History* (London: Thames and Hudson, 1980), Page 9.
5. Paulette Singley, *How To Read Architecture* (New York: Routledge, 2019), Pages 282-283.
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8. Vincent Scully, Jr., *Modern Architecture* (New York: George Braziller, 1961), Pages 20-22.
9. Stan Allen, *Points and Lines* (New York: Princeton Architectural Press, 1999).
10. Christopher Alexander, *Notes on the Synthesis of Form* (Cambridge: Harvard Press, 1964).
11. Tom Marble, *A City is not a Forest* and *Architectural Fermentation and the Evolution of Cities* (Online Blog: The Design Counsel, <https://tommarble.blogspot.com>, 2010 and 2014).
12. Carlo Rovelli, *Reality Is Not What It Seems* (New York: Riverhead Books, 2017).
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16. Kent C. Bloomer and Charles W. Moore, *Body, Memory, and Architecture* (New Haven and London: Yale University Press, 1977).
17. Sarah Williams Goldhagen, *Welcome to Your World* (New York: Harper Collins, 2017), Page 96.
18. Antonio Damasio, *The Strange Order of Things* (New York: Vintage, 2018), Page 56.
19. IBID, Page 25.
20. IBID, Pages 26-27
21. Tom Marble, "The Interactionist City" *MONU Magazine, no. 23: Participatory Urbanism* (Autumn 2015): Page 86.
22. Kevin Kelly, *What Technology Wants* (New York: Penguin, 2010) Pages 46-47.
23. IBID, Page 128.
24. Aldo Rossi, *The Architecture of the City* (Cambridge, London: MIT Press, 1982), Page 131.
25. Fumihiko Maki, *Nurturing Dreams* (Cambridge, London: MIT Press, 2008) Page 44.
26. Thom Mayne, *Combinatory Urbanism* (Culver City: Stray Dog Café, 2011) Page 27.
27. Paulette Singley, *How To Read Architecture* (New York: Routledge, 2019), Page 9.
28. Antonio Damasio, *The Strange Order of Things* (New York: Vintage, 2018), Page 67.
29. Tom Marble, *After the city, this (is how we live)*. (Los Angeles: Los Angeles Forum for Architecture and Urban Design, 2008), Page 82.
30. Antonio Damasio, *The Strange Order of Things* (New York: Vintage, 2018), Page 19.
31. Carlo Rovelli, *Reality Is Not What It Seems* (New York: Riverhead Books, 2017), page 97.
32. Kevin Kelly, *What Technology Wants* (New York: Penguin, 2010), Page 128.
33. IBID, Page 62.