

INFLECTION

JOURNAL OF THE MELBOURNE SCHOOL OF DESIGN

Projection

Features:

Studio Gang
Pérez-Gómez + Siola
dNA Architecture
Fender Katsalidis Architects
Stanislav Roudavski

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EDITORIAL

Ariani Anwar, William Cassell and Jonathan Russell

The process of creating our built environment is continuous, dynamic and unending. At every moment, buildings are emerging in the minds of designers, architects and planners – being planned and puzzled out, discussed, revised and argued over. They are being drafted, documented and detailed, their functions and forms are shifting and being renegotiated. They are being constructed: ideas on paper are, slowly and imperfectly, becoming a reality. All around us, buildings are taking shape – but this is only the beginning of their life. A small minority are being analysed, critiqued and written about – most are not. All are being occupied and adapted, forming imperfect relationships with their users, and changing in the process. Some are aging and weathering gracefully, others are decaying and falling into ruin. Some are being reused and revitalised, while others are torn down and demolished. Even buildings that are long gone live on in memories and photographs, and in the traces they leave behind. All of this – from conception to demolition and beyond – is happening around us at all times: our built environment exists in a dynamic state of becoming. If we wish to understand architecture today, we must engage with the dynamism and flux which defines it. It is in this spirit that we welcome you to *Inflection* Volume 02: Projection.

To better understand the meaning of projection, it is useful to borrow some terminology from the school of process philosophy. In contrast with classical traditions, process philosophy sees the world as fundamentally defined by dynamism and ubiquitous change – it would have us trade the object-centric worldview of Aristotle for that of Heraclitus, who imagined the world around him as “an ever-living fire.”¹ This shift, from a static to a dynamic worldview, corresponds well with the trajectory of *Inflection* itself. In 2014, Volume 01 was built around the idea of an inflection point – a discrete moment from which change begins to emerge.

In this imagining, our built environment is thought of as a static entity, a moment in space and time which at best only hints at future trajectories. This year, in turning our attention from inflection to projection, we consider the contours of that trajectory, moving from static to dynamic, from point to process, and from being to becoming. Of course, none of these ideas are new to the arena of architectural thinking. Most notably, Gilles Deleuze and Felix Guattari's *A Thousand Plateaus*, published in 1980, is a work of process philosophy in which the dynamic and “smooth” is privileged over the static and “striated.” Similarly, Bernard Tschumi's theoretical and built work proceeds from an understanding of architecture as fundamentally dynamic. In the city more broadly, we can look to Guy Debord and the Situationist *dérive* for an assertion of the value of event over object. In the decades since they arose these ideas have become embedded in architectural theory, however in the practice of architecture and placemaking the static perspective remains dominant.

In these pages, our contributors provide a myriad of responses to the theme of projection. Throughout, we see themes of becoming and dynamic process emerge from vastly different but complementary perspectives. A number of contributors position projection as inherent to the act of design, in which ideas pass through stages of translation on the way to built form. Too often this process is imagined as a straight-line sequence in which the architect propels their design from one stage to the next – such an attitude undervalues the opportunities for creative adaptation which are latent in the design process. Francesca Hughes touches on the limitations of this straight-line process, questioning the abandonment of the creative possibilities of error and imprecision by architects. Along similar lines, Stanislav Roudavski argues for the value of unpredictability and surprise in digital design. Other contributors investigate their own design process: Robert Ventresca writes about the diagram as a tool for productive iteration, while Jeanne Gang speaks of the importance of research and drawing.

In examining design processes and the role of the architect, several contributors sought to rebut the status quo of architectural practice and representation. Here, Sota Ichikawa of dNA Architects considers the power of representation systems, describing his firm's radical reinvention of architectural notation. Architectural publisher Blank Space asserts the value of fiction and the written word as a mode of architectural representation and questions society's narrow view of the architect's role. This critical approach to the architect's role is expanded on in Adrian Bonaventura's *Cryptonomy*, a radically speculative piece of visual storytelling that challenges the traditional boundaries of architecture and the imaginative possibilities of a techno-future.

In the projection from idea to architecture, drawing is a particularly important and contested site. Alberto Pérez-Gómez and Angeliki Sioli emphasise the importance of criticality when utilising digital tools of representation and design, while Alexa Gower questions our assumptions about the role of the human hand with her drawing machine T.O.D. Sophia Banou's reflection on the relationship between drawing and space emphasises the connected spatiality of the drawing process. Fabio Colonnese and Marco Carpiucci continue this line of enquiry, analysing the architectural drawings and thought processes of Leonardo Da Vinci.

A place does not end once it is built, and a number of pieces tackle the complex trajectories of architecture and cities in their continued becoming. Katie Petros applies a critical lens to the trajectory of contemporary Indian urbanism, while Paul Broches writes about Four Freedoms Park in New York City, showing that even in work which appears singular and timeless, the path from idea to construction rarely runs straight. In the Australian context Michael McLoughlin shares his experience of the Outback and his thoughts on the apparent dichotomy between periphery and centre, and Timmah Ball questions our tendency to silence painful histories in the Australian city.

Amelyn Ng proposes micro-strategies for the humane adaptation of public space, while Ariani Anwar considers the role that events such as Melbourne's *White Night* have in re-framing our collective understandings of the city. Finally, in looking to the future of living in Melbourne, Karl Fender of Fender Katsalidis spoke with *Inflection* about the history and future of high-rise living in Melbourne. Together, the work collected here forms a complex, intertwined set of perspectives, orbiting around the idea of projection. Like projection itself, the collected whole is non-deterministic, non-prescriptive, and its meaning is not yet settled.

As a publication, *Inflection* has also changed as it has grown. From a germ of an idea in 2013, this journal has become a real, tangible entity. Today, *Inflection* is a platform for discourse between students, academics and practitioners both locally and internationally, and we are proud to have enabled these conversations. Going forward, *Inflection* will continue to change and evolve. As founding editors, we are moving on from studenthood to professional practice. From 2016, each edition of the journal will feature a new editorial team chosen from the Melbourne School of Design's student body. For *Inflection* Volume 03, we are proud and excited to be passing the editorship to Courtney Foote, John Gatip and Jil Raleigh – you can find a preview of their vision for *Inflection* on page 140. In this spirit of progress and change, we welcome you to *Inflection* Volume 02, and invite you to join us in our continued process of projection.

References

- 01 Johnanna Seibt, "Process Philosophy" in *The Stanford Encyclopedia of Philosophy (Fall 2013 Edition)*, Ed. Edward N. Zalta (Stanford: Stanford University, 2013).

GESTATION, PROCESS, PRECISION

A CONVERSATION WITH FRANCESCA HUGHES

Alexandra Bell, Ariani Anwar & Jonathan Russell

If we consider the world around us through the lens of projection, we soon begin to encounter new, unfamiliar questions about architecture and the built environment. When we bring dynamism and flux to the centre of our thinking, it compels us to consider more closely the underlying processes of architectural practice. Does the projection from idea to architectural form necessarily proceed in a straight line, or can it accommodate uncertainty, imprecision and error? What should we make of the polished 3D render, which hides architecture's becoming under a glossy skin?

In a milieu which privileges the static, perfect and precise, London-based architect Francesca Hughes is asking these and other difficult questions. Following the release of her new book, *The Architecture of Error: Matter, Measure, and the Misadventures of Precision*, *Inflection* spoke with Hughes at the Melbourne School of Design. In discussing the hidden-away processes of architecture, she highlights the imprecision and multiplicity which is integral to our discipline. Arguing that we have avoided these topics for too long, Hughes does not provide answers – instead seeking to inspire new conversations and new thinking in an important and under-theorised area.

Opposite:

Gergely Kovacs, Hughes Meyer Studio
Orders of Chance, 2014

Ink on paper: 80.6 x 58.4 cm

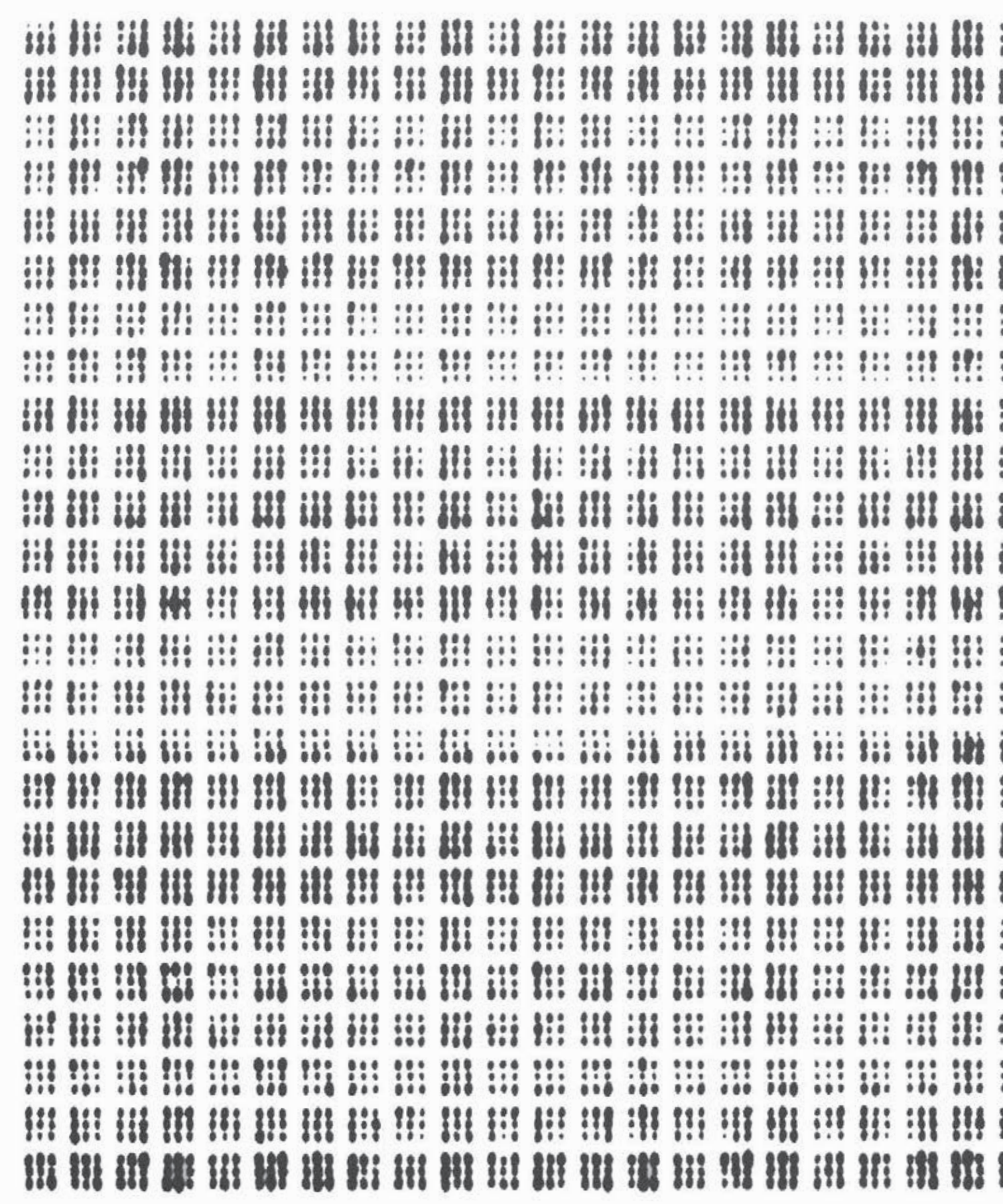
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While Sömmerring's morphogenesis conceals any anomalies or marks of the arbitrary, *Dissembling Chance* investigates the formation of a forged randomness within the deterministic body of the computer; its fundamental incapacity to make a mistake.

Inflection: *One of the characteristics of architecture is the use of representation as a tool to convey an idea. In your lecture you critiqued the prevalence of the 'slippery image' or the highly polished render in contemporary architecture. Can you discuss this a little more?*

Francesca Hughes: It's an extraordinarily rich topic. Rendering software originates from the optics industry and hence is entirely focused on the optical performance of the surfaces of a building. These images, these hyper-polished renders, do not let us past the reflections of the surfaces they portray, they do not get to their materiality, or anything beyond optical performance. This excessive, strictly superficial resolution conceals the necessary irresolution that's always going on behind the surface, the irresolution central to the building process – from the negotiations with site, and clients, and political interests, to the irresolution between different parties claiming authorship of the process – the essentially messy business of making architecture. For me it is telling that we choose to use the incredible precision of the computer not to unpack this irresolution or to find new ways to lay open and draw the indeterminacy at large in architectural production (because the best way to solve any problem is to draw it!) but instead to cover it up, and give it this really shiny surface, so shiny you actually can't see most of it because of the glare bouncing off.

So, in a sense it's not surprising that the fetishisation of precision in architecture is most heightened at this surface: the cathexis of the surfaces of architectural representation and the representation of architectural surfaces. Because this is the site (and I do mean this in Freudian terms) of the absence of the building, whereby the existence of the drawing denotes the building not being there. And once the building is there, the drawing is gone, we don't see it anymore, we see a new surface: the photograph of the building. So not surprisingly, the representational surface becomes the focus point of all of the architect's anxieties about the transmission of form through matter.



In your book you have written about Gordon Matta Clark as an artist who removes the distinction between designer and creator. Using him as a case study, how can we learn from a more direct engagement with the messiness of building?

Gordon Matta Clark's work is almost more relevant for architects now, since the introduction of digital fabrication and the way in which it starts to close the gap between the represented and the materialised, than at any time before. This doesn't mean we should all behave like Gordon Matta Clark, but it does mean that it's very instructive to look again at his work. Looking at the films he made of his process in his *Unbuilding* projects we find he eclipses representation, he is the drawing, he is both the instruction and the operation and therefore as a consequence he is able to improvise. Obviously a production economy that uses improvisation is able to allow error into the centre of production and not just keep it at the margin, nor in a sense to just desperately try to keep it out. So error has a very different value within improvisatory practices.

Do you think architects have a tendency to avoid error and improvisatory practices in their process?

Yes, in a way... and we also traditionally have gone to great lengths to cover up any trace of such practice. What I mean is that true process (not the stories of process architects tell) must be kept interiorised because it constitutes that which is not to be seen in the first place. It's during the messy process of negotiating between form and matter that error runs rife. This is precisely why historically the metaphor of gestation from biological reproduction has been so convenient for architects, because there's a moment of conception (which is fine, we can deal with that, we do concept sketches), but the potentially precarious projection between that point of inception (the idea) and the destination (the perfect end product) is, in the metaphor of biological reproduction, a wholly internalised process. Nothing can get in there, no one's going to go in and hijack the project and make it theirs and nothing can go wrong. In this sense this metaphor endows architecture with a wonderfully secure, sealed corridor between origin and end product.

Do you think that form of hiding could be endemic of the social constructs that suggest we shouldn't engage with the potential that we could learn from error in design?

Absolutely. But I think that is a different type of hiding. It's extraordinary that our knowledge is built entirely on things that are successful and not on the vast array of failed projects. But it's a trick and the lessons of failure are potentially more important than the lessons from success. This is precisely why in *The Architecture of Error* I explore the failed aircraft, the failed needle and the failed radiator that just couldn't be precise enough. Each can be understood as hardware fallout from the seminal crises which marked – indeed structured – Modernism.

You spoke about the headlong rush into precision that happened during Modernism in architecture. What connection does this have with the stripping of ornamentation?

Are you familiar with Wittgenstein's house? It's stripped of all ornamentation and his famous column has no capital. So, not only is the ornament stripped, but also there is this kind of void where the ornament once was, where ornament notionally began even... and of course ornamentation is itself traditionally a key strategy for concealing error in construction. Ornament gone, we find Wittgenstein fastidiously measuring everything. For example, he goes on site after the plasterers have finished the 6 metre high ceiling, he measures it, it's less than 1% out and he requires the whole thing to be torn down and done again. It is as if he was desperately trying to close the relationship between an absolute value and its materialisation, desperately trying to literally materialise the absolute value, to have zero margin for error. So in a sense, what we find in *Haus Wittgenstein* is that ornament is removed, but it is replaced with uniformly distributed exactitude. It is almost as if once the excess of ornament is removed, the building was coated with the new excess of exactitude, ornamented with invisible numbers as it were and a new margin of redundancy. But what is crucial with Wittgenstein is that this new ornament of surplus precision is ubiquitous: everywhere is equally precise. This is of course the precision of the digital. It's not about actually getting more precise where you need to be and kind of slackening off where you don't, in the middle of the ceiling for example, but instead digital precision is equally precise everywhere. So one can start to think about Wittgenstein's house as ornamented by integer, ornamented by redundant precision, but also one can start to think about it as being the first materialisation of the digital surface. His interest was not in the materiality of the wall, or what was behind the surface of the wall (in fact, the walls are often different thicknesses and some of them are made of different materials), his absolute obsessive interest was in getting that wall to coincide in space at the exact planar coordinates. The distribution of precision in this Viennese house is akin to that of a digital model.

When we think of digital precision I am reminded of the proliferation of generative digital design processes in contemporary architecture, which use parameters to produce the final outcome from thousands or tens of thousands of options. What do you think of this approach?

I think that it risks being an extraordinary abdication of authorship by architects. There is also a constructed false modesty around it, but worry not, there is no danger of architects ever getting modest! It's more a clever strategy: you can't critique a parametrically optimised solution because who can out-calculate the algorithm that has generated it? 'This form must be right, this solution must be correct, because the algorithm said so.' And therefore it's somehow immaculate. This is also partly delivered by a certain type of instantaneity. Le Corbusier well understood that, if properly harnessed, instantaneity can be a very powerful tool. He talks about pouring a concrete house in just three days, and the house emerges from its shuttering, with all the immaculacy of instant form. So, there is a tricky collaboration between this immaculacy and instantaneity on the one hand and the way we've engaged with parametricised production with all the abdication of authorship it entails. It is almost an engineered neutrality that is equally good for everyone, isn't it? So it basically excludes everything that's central to architecture: conflict, qualitative properties and their genuine complexity and differences. Everything difficult is just kept out. It is too good to be true and way too easy...

... and it also leads towards that universalising tendency that was so often the reality with Modernism.

Yes, it's a product of Modernism, a complete extrusion of the project of Modernism. Which is why when I go through these historiographical mantras that organise the way we relate to Modernism: ornament was removed, organic materials were rejected and so on. One could actually just carry on and say: construction was eclipsed, fabrication was automated and it's the same projection, the same trajectory just carrying on. And of course it starts with the Enlightenment, this extraordinary projection of a teleology where you end up with a destination-perfect product at the end and there is no deviation. In the book I talk about Samuel Thomas Soemmerring's intervention in the understanding of the foetus' development whereby, prior to his work, the foetus as an entity did not exist, gestation was indeterminate in origin, polyvalent, with multiple outputs described as the "mola" that were different products of the womb. They weren't considered failed products, they were just considered as different things the womb might produce and only one of them happened to be a perfect baby. There also wasn't the idea of the duality, of the mother and the child as separate entities, it was more understood as an ambiguous state of potentiality – ambiguous in its origin, potentially multiple and therefore indeterminate in its output. And so Soemmerring decided to bin perspectival space and use architectural space (parallel projection), the space of buildings, to set up this kind of wholly different thinking about the projection of form in production. And to set up the duality which is prerequisite to the representation of the foetus as an autonomous entity, faithfully following its prescribed linear morphogenesis: we have the mother, who is reduced to context and thus conveniently erased and then we have the foetus and there's just one product, so everything that deviates from that becomes erroneous and becomes a failure in some way.

Opposite:
Samuel Thomas von Soemmerring
Icones Embryonum Humanorum, 1799
Image courtesy of the Wellcome Library, London

It's interesting that that happens through the representation of the gestation process.

By the representation of this morphogenesis, yes... but it's a tricky thing, because what this drawn morphogenesis is doing is constructing a safe bridge across that difficult passage of form and matter transformation. It's almost a different kind of concealing because it promises causal linearity: 'you're going to get from A to Z, and Z is the destination-perfect product – and don't worry, there is no risk of deviation, you just follow this line.' Prior to that, the model of gestation was Preformatism, the idea that the baby starts perfect, but tiny and the projection of its production is simply about getting bigger: a simply scalar transformation. This strategy also excluded the messy polyvalency of mola etc. and this is what the job of any morphogenetic model is: to provide a singular road map of a given transformation that in its singularity is so completely censoring. I mean, bodies have produced babies in the same way through history. Women didn't start to be pregnant in a different way in 1799 than they were in 1798, but the representation and therefore the understanding of gestation has changed enormously. So in 1944, Erwin Schrödinger's "architect gene," much like Soemmerring's model, is still saying: 'don't worry we've got this line, where the architect gene secures its causal linearity, and there's no deviation.' Schrödinger was continuing the project of Soemmerring: anything that deviates from the line is dismissed as white noise, as error...

... until cybernetics comes along and says hang on a minute, the messiness is what's interesting and there's enormous instruction that is possible from this messiness.

*The Architecture of Error:
Matter, Measure, and the Misadventures of Precision*
by Francesca Hughes is available now from MIT Press.

Our built environment exists in a perpetual state of becoming, caught in a process of creation that is continuous and unending. If we wish to understand architecture today, we must engage with the state of flux that defines it. In 2015, *Inflection* Volume 02 considers the idea of projection, interrogating its meaning in architecture and the built environment. Bringing together the work of students, academics and practitioners from Australia and around the world, this issue addresses the trajectories of the architectural design process, the changing role of architects in society, and the continuing state of becoming that defines our cities.

Inflection is a student-run design journal based at the Melbourne School of Design, Melbourne University. Born from a desire to stimulate debate and generate ideas, it advocates the discursive voice of students, academics and practitioners. Founded in 2013, *Inflection* is a home for provocative writing – a place to share ideas and engage with contemporary discourse.



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