INFLECTION

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Ø5

FEEDBACK

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Studio IMG.ING, *South Lawn car park, University of Melbourne,* 2017. Point cloud scan by FARO. Image reproduced with author's permission.

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Michael Thorpe
Michael Thorpe graduated with a Master of Architecture from the University of Melbourne and now predominantly works on rail infrastructure and micro housing at Grimshaw Architects. He is interested in the interface with industrial design and architecture, and has exhibited his design work in Finland, the UK, Italy and Australia. His work has featured in publications such as *The New York Times*, *ArchDaily* and *Dezeen*.

Millie Cattlin
Millie Cattlin is a co-founder of These Are The Projects We Do Together. She is fascinated with buildings and infrastructure, as opposed to architecture, and is driven to design projects that support and enable creativity and accessibility. Her first building as an architect was a temporary public toilet at Testing Grounds—leveraging an existing budget allocation for 12 months of Portaloo hire. It is a humble structure, defined by generosity and softness in public space. Six years later it's still there.

Olivia Potter
Olivia Potter is a Master of Architecture student at the University of Melbourne and a current editor of *Inflection*. In 2017 she received a Dean's Award for her studies. Her work was displayed in Federation Square after her team was short-listed for Melbourne's Backyard Ideas Competition. She is heavily left-handed and her hair currently hosts the winning cut of the Melbourne Hair Expo Mullet Competition.

Nicole Lambrou
Nicole Lambrou is a practicing architect, urban designer and researcher. Her practice tinkercraft attempts to reveal and question the relationship between people, institutions and the makings of natures through design and research. Her writing and projects focus on how the politics of climate shape urban environmental transformations. She documents the work of design and planning professionals and everyday urban dwellers in making new natures in their cities and explores the values that drive their efforts.

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William Ward
William Ward is a Master of Architecture student at the University of Melbourne and a current editor of *Inflection*. He holds a Bachelor of Architectural Design from the University of Queensland. In the past, he has worked for Twohill and James in Brisbane. His current area of interest is design knowledge, which he plans to continue researching into the future.

CONTENTS

EDITORIAL

*Lucia Amies, Samuel Chesbrough,
Sarah Mair, Olivia Potter and William Ward*

Inanimate data can never speak for themselves, and we always bring to bear some conceptual framework, either intuitive and ill-formed, or tightly and formally structured, to the task of investigation, analysis, and interpretation. —Rob Kitchin, *The Data Revolution: Big Data, Open Data, Data Infrastructures and Their Consequences.*

At present, the term 'big data' is virtually ubiquitous: think Cambridge Analytica, social credit and crime prevention systems powered by exhaustive data collection and targeted advertising in our email. *Inflection* vol. 5: *Feedback* is an exploration of how designers might manifest this trend within the built environment. Once the purview of software engineers and data scientists, trends in feedback collection, use and theory are now being influenced by designers, while their everyday practice is increasingly concerned with its outcomes.

While we speculate about the boundaries of design's future, we also critique its present and revisit its past. The original provocation for this volume of *Inflection* used Cedric Price and Joan Littlewood's unbuilt Fun Palace project as a framework for speculation. The project was a tongue-in-cheek (but also deadly serious) reaction to the marked increase in available leisure time in the post-World War II era. The allure and the life of the project (arguably) are not found in its architectural expression, but in Price and Littlewood's utopian aspiration for the truly free society that it would facilitate. The data used here, however rudimentary, is just the glue that holds the project together—data is not just referred to, but utilised to achieve a defined ideological goal.

Regardless of whether the data designers work with is 'low' or 'high' tech, what matters more is the conceptual framework they adopt to organise and prioritise that data. Data analytics might be a more technically sophisticated methodology than a participatory design consultation, but that alone does not guarantee a positive outcome for each stakeholder in a project. There is a pressing need for designers to re-engage with multidisciplinary theories and concepts that can help them take rigorous, principled positions on the increasingly difficult conditions of the "wicked problems" they encounter.[1] Sometimes, we draw such models from counter-intuitive sources: Hamish Lonergan contends that 18th century philosopher David Hume's theory of taste and criticism informs our understanding of the oft-maligned style of architectural conjecture that we find in our social media feed. In the same vein, Sarah Hirschman demonstrates how a methodology borrowed from improvisational comedy could encourage a more egalitarian approach to the everyday practice of design.

The wealth of new data and feedback methodologies accessible to designers can enrich well-established modes of practice. Kevin Jones details how a conceptual understanding of feedback loops helped inform his design team's approach to replacing the fire-ravaged campus library at Mzuzu University in Malawi, Africa. Here, structured and reflective collaboration with stakeholders and clients ultimately enriched the methodologies of each designer's practice. In a similar vein, Millie Cattlin and Joseph Norster demonstrate how Price and Littlewood's ambitions might translate to a contemporary, pragmatic context. As part of their work establishing their Melbourne-based exhibition space Testing Grounds, they have designed a space for flexibility and creative expression that is firmly grounded in modularity, affordability and practicality.

Designers could acquiesce to a popular consensus dictated by political or economic influences; but the practice of design is uniquely positioned to critique, and maybe even start to arrest, the more undesirable directions that we find our society heading. Jil Raleigh discusses how the *TreePlayer* app she helped develop fosters a cultural awareness of nature in Melbourne's CBD, using a combination of publicly-available data and design ingenuity. Similarly, Nicole Lambrou posits

that deploying smart technology in eco-engineered landscape design can play a pivotal role in altering public attitudes towards climatic risk and resilience. In fact, it is the sophisticated knowledge and interpretation of these landscapes that determines our ability to meaningfully affect them. Nicholas Gervasi and Alexander Ford's project refashions the monument into a dynamic force that speaks to the passage of time. Their proposal counterintuitively seeks to capture a temporal, fleeting phenomenon: a decades-old oil leakage from a wrecked World War II battleship, the U.S.S Arizona, becomes the site for reflection, homage and speculation. Gervasi and Ford imagine a monument that encompasses the present and future, not just the past.

Continuing squabbles over data ethics and privacy demonstrate that a proportion of those possibilities might not be all that desirable.[2] The daily movements and interactions of warehouse employees are being reduced to an efficiency calculation by sophisticated multinationals like Amazon and productivity gains are becoming dependent on constant surveillance and analysis.[3] James Bowman Fletcher focusses on the technical improvements made possible by feedback loops using the seemingly banal task of boiling water, and reflects on how productivity efficiencies that could hypothetically result in the increased free time for workers that is typically re-allocated to contracted time.

Aware of their claim to agency, practitioners start to push for a more socially conscious and integrated role for design. In our wide-ranging conversation, author and architect Jack Self suggests that designers can, and should, advocate for an ethical agenda in their projects. Curtis Roth explores the complexities of authorship and design's submerged complicity for working conditions through an exploration of the thriving art-copying market in Dafen, in the Shenzhen province of China. Roth commissioned

a series of reproductions from labourers, attaching an accompanying specification requesting that each painter also paint their surroundings, and that the reproduced painting be erased by a separate artist. The result is a series of complex, contradictory portraits that contain traces of the state's fabricated agenda, the painter's own intent, the authority of the designer and the squalid living conditions that make it all affordable. Roth's provocation invites designers to consider the dense web of sociocultural, economic and labour conditions that professional authority distances them from.

By no means does *Inflection* vol. 5 claim to hold the answers to these provocations; rather, it posits a variety of ways to approach them. Our focus here is not so much the outcomes of data-driven design as it is the methodologies, processes and frameworks that designers employ to arrive at them: what do we choose to value, and how are those values expressed in our practice?

01   Horst W. J. Rittel and Melvin M. Webber, "Dilemmas in a General Theory of Planning," *Policy Sciences* 4 (1973): 155–169.
02   Anthony Dunne and Fiona Raby, *Speculative Everything: Design, Fiction, and Social Dreaming* (Cambridge, MA: The MIT Press, 2013).
03   Tom Simonite, "Grasping Robots Compete to Rule Amazon's Warehouses," *Wired*, https://www.wired.com/story/grasping-robots-compete-to-rule-amazons-warehouses/ (accessed October 16, 2017).

NOTES ON POINT CLOUDS

Olivia Potter

The cover image of *Inflection* vol. 5 is a point cloud representation of the South Lawn at the University of Melbourne Parkville campus, and was generated from a scan produced as part of Ben Waters' Studio 19: IMG.ING (Semester 2, 2017). Gregg Franz from FARO conducted this scan using LIDAR technology.

The car park itself sits below a grassed and tree-lined lawn, used by university students and professors to relax and catch sunlight between classes. These two levels (the car park and the lawn) were scanned separately and—because the technology measures the relative distances of point coordinates—the two scans of South Lawn were able to be stitched together to create a single swarm of points.

Designed by the architectural firm Loader & Bayley and completed in November 1972, at its time of construction, South Lawn was the only fully enclosed car park in Australia. Marked at one entrance by an 18th century door from Dublin and at another by two statues of Atlas from the demolished Colonial Bank in Elizabeth Street, the otherwise almost hidden interior uses parabolic concrete profiles set on short columns to support the lawn above.[1] The car park was used in George Miller's film *Mad Max* (1979).

A LIDAR Scanner generates a point cloud by emitting rapidly pulsing (or continuous) laser beams towards objects. As it is doing this, the scanner also rotates around its vertical axis. Simultaneously, a mirror moves the scanner up and down. By turning on its horizontal axis, the scanner systematically runs a three dimensional sweep of its setting. When the laser beam detects it has hit a surface, energy is bounced back to the scanner and a timer records how long this has taken. From this information, a distance can then be calculated to record the location of a single point.[2]

This process is repeated thousands of times; points are recorded and fed back to the scanning technology to generate a cloud of relative positions in space. Each of these points is accompanied by an RGB reading, produced from a series of photographs taken by the device's inbuilt camera. This technology creates a highly accurate, fast and detailed three dimensional image of the scanner's visible physical environment. This data and accompanying process of generating digital feedback holds countless possibilities.

01   Heritage Council Victoria, "Underground Car Park," Victorian Heritage Database Report (Department of Environment, Land, Water and Planning, July 27, 2018), http://vhd.heritagecouncil.vic.gov.au/places/3808/download-report.

02   Leica Geosystems AG, "Laser scanning: Chapter 2 of 3 - How It All Works," (video) November 20, 2012, accessed July 27, 2018, https://www.youtube.com/watch?v=1lDO1UevAJI.

Opposite: Studio IMG.ING, *South Lawn car park, University of Melbourne,* 2017. Point cloud scan by FARO. Image reproduced with author's permission.

HAROLD AS FEEDBACK'S FOIL

IMPROVISATIONAL COMEDY AND ARCHITECTURE
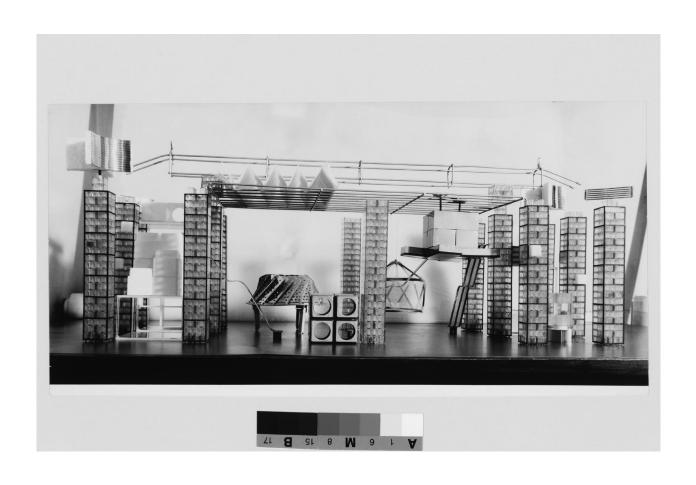
Sarah Hirschman

Architects speak about the needs of users with program diagrams in project proposals, and sometimes they perform post-occupancy surveys, but most often the ideas that drive a conceptual design aren't ever actually tested in a real way, nor do they benefit from feedback. We're left with a disconnect between intention and results. In comedy, the test of efficacy is immediate and results are clear—if someone laughs at a joke, it's a success. Looking closely at the way humour works, then, could potentially reveal clues about how architecture might incorporate feedback into its design process. In his *Jokes and Their Relation to the Unconscious*, Freud writes that the joke is "a double-dealing rascal who serves two masters at once. Everything in jokes that is aimed at gaining pleasure is calculated with an eye toward the third person […] and this gives us a full impression of how indispensable this third person is for the completion of the joking process."[1] The joke has two-way communication built into it; it is a call that demands a response to properly function. The joke is a social act as well as a creative one. Jokes invite responses, and while they might be quite different from those architects seek to induce, the way they operate as a deliberate exchange of information can teach us something about being consciously responsive in the design process.

Feedback generally refers to something exterior to the process of designing—the collection of data from clients or users. Not only does there lack a clear rubric for interpretation of this data, there's no standard mandate to collect it. How do we weigh the reported experience of one constituency over another, and how do we confirm the conclusions others make? Who decides what data gets collected and how it gets used? This essay proposes a new model for understanding communication and collaboration in the design process following Keller Easterling's observation: "Architects typically love manners, utopias and crises. We love to make difficult questions harder. We love to train [ourselves] to do labour-intensive tasks," and so "a better role for the architect is not that of an optimizer but that of a comedian."[2] The

architect's comedy is increasingly conversational, especially as worksharing software like Autodesk Revit imposes a continual call-and-response within the office in its insatiable saving-to-central. Easterling's "architect-as-comedian" operates just at the threshold of futility, dispensing with traditional "hierarchical, 'atelier' culture," in favour of direct engagement with "larger cultural organizations that actually direct most of the space-making."[3] Improvisation has been present in one form or another within architecture since the middle of the last century; this essay considers a structured subset of improvisational comedy, what might be known as "Chicago-style improv," for rigorous insight into intentional collaboration, and posit a way in which feedback can thrive within structure.

Though the basic tenets of improvisation—spontaneity, use of material at hand—remain relatively consistent, its implications and the way improvised works are received vary widely across creative fields and through time. Where the improvisation of abstract impressionist painters like Jackson Pollock might be said to access deep subconscious knowledge (an individualistic perspective) an alternate approach that became popular in the 1960s regarded improvisation instead as a kind of extreme form of collaboration. According to American Studies professor Daniel Belgrad, "this model privileged ensemble work, typically in performing arts like music and dance. In this kind of work, the artists' creative ideas were understood to emerge not 'from the depths' of the unconscious mind, but from the group dynamic."[4] This emphasized group improvisation as a way to create new works rather than considering improvisation as akin to a revelatory psychoanalysis for an individual to explore.

Architecture has flirted with improvisation before. In architect Cedric Price's Fun Palace project (1964), users were invited to manipulate their environments and create hyper-customized and specific forms that suited their needs. The Fun Palace was, as architectural historian/theorist

Cedric Price, *Fun palace*, 1964. Model. Image courtesy of
Cedric Price fonds, Canadian Centre for Architecture.