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ABSTRACT

In a time when personalised newsfeeds and automated recommendations foreclose the exposure people have to political, cultural and social encounters outside their existing predilections, it is more important than ever to think about the ways we come across the unexpected, online and off. This essay accordingly explores the shape of serendipity in a time so bent on personalisation and findability that our techniques of discovery have attained great consequence for the affectability of that which we discover. Serendipity is typically understood as an instrument of invention: the unanticipated but fortuitous incidents that inspire a wise insight or innovation. In this view, the serendipitous is not a boon in itself, but only as it leads to something else. Such thinking, I will argue, neglects that serendipity is fundamentally a mode of encounter, and one that can be as affective and autotelic as it is cognitive and instrumental.

In a time when personalised newsfeeds and automated recommendations foreclose the exposure people have to political, cultural and social encounters outside their existing predilections, it is more important than ever to think about the ways we come across the unexpected, online and off. This essay accordingly explores the shape of serendipity in a time so bent on personalisation and findability that our techniques of discovery have attained great consequence for the affectability of that which we discover. Serendipity is typically understood as an instrument of invention: the unanticipated but fortuitous incidents that inspire a wise insight or innovation. In this view, the serendipitous is not a boon in itself, but only as it leads to something else. Such thinking, I will argue, neglects that serendipity is fundamentally a mode of encounter, and one that can be as affective and autotelic as it is cognitive and instrumental.

Inspired by phenomenology's insight that expectations are a major driver of perception, my aim here is twofold: (1) to explore the horizon of the knowable for affect while taking seriously its theorisation as fundamentally precognitive and non-representational; and (2) to inquire into the 'infrastructures of expectation' that, by configuring the sensible, capacitate different types of serendipitous encounter. To these ends, I will think through serendipity less as a way to talk about fortuitous discoveries than as a mode of affective encounter influenced by the infrastructures that mediate and modulate their expectable force. Though I'll raise various examples, the thru-line here will be the particular case of encountering street art in urban and rural contexts of the American Southwest.

Following the phenomenological method of grounding theory in lived experience, I write myself into what follows as a way to emphasise my own perceptual situatedness in the scenes of encounter under consideration.

My aspiration is not interpretive or evaluative, at least not in the vein of textual hermeneutics or ideological critique. Working from a broadly Spinozist sense of affect as an intensive force that draws bodies toward or away from one another in a precognitive relation that nevertheless establishes the possibilities for what those bodies can be or do, I am suspicious of attempts to identify or isolate specific affects as if they were hard candies with nameable flavours to be twirled around on the tongue and swallowed or spit out. What is important about the affective, at least for me in this inquiry, is its imperviousness to cognition. We cannot *know* affects, only experience them in-act and then, retroactively, stammer for the language to describe them as if through a kind of *ekphrasis*. Like Katie Stewart, then, 'my effort here is not to finally "know" [affects] … but to fashion some form of address that is adequate to their form' (2007: 4). For this reason, beyond providing descriptive context, I won't much analyse street art images or critically address the issues of representation and meaning that they might raise, important as that work can be. What I hope to accomplish instead is an inquiry, grounded in on-site experience and reasoned speculation, into how cultural techniques of discovery within an algorithmic age so driven by efficiency and personalisation might create anticipatory predispositions that modify the affectability of unexpected encounters.

Jetsonorama (sans drama)

At the end of 2016, while on winter holiday, I drove with my family from Phoenix, Arizona to Telluride, Colorado. It's about a 500-mile drive that passes through the heart of Navajo Nation, the largest Indian reservation in America. The high desert there is bald and beautiful, with endless skies. For most of the drive, there's not much in the way of buildings. The road can go a hundred miles or more without a gas station. This is near the remote Four Corners area where Arizona, New Mexico, Utah and Colorado intersect at a single point, marked with a brass medallion you can pay a fee to straddle for the curious pleasure of being in four places at once. We were coursing along, taking it all in (though it rather felt like the reverse: like the land was somehow taking *us* in), when I noticed through the window something unexpected. On a derelict, abandoned structure about the size of a trailer, someone had pasted an enormous photograph that covered one of its sides completely. I remember it as a photo of a stately person I assumed was Navajo, wearing what I took to be traditional tribal clothes. For a glittering moment: total enchantment. But our car kept moving, and then it was gone.

Although that particular portrait was new to me, its general form was not. Here was an instance of street art, in this case a black and white photograph printed on large-scale office paper and pasted directly against a vertical surface so as to give the impression of having been painted on. The effect was stunning – and all the more so there, in that proverbial middle of nowhere, which had suddenly, as it were, become somewhere. Although the image was, technically, along the side of a street, and although it operated within the quickly identifiable vernacular of street art's characteristic idiom, this was street art of a different sort. But we weren't going to turn around. I knew nothing of the image's origin or story, had scarcely managed a good look as it receded in our rearview. By the

time we reached Telluride, my 'discovery' of that out-of-place artwork was the stuff of mirage.

It was a few days later, ensconced in a different place entirely, that as chance would have it, the mirage appeared again. Telluride is a wealthy, mostly white, former mining town at the end of a narrow box canyon, around 9,000 feet up a majestic corner of the Rocky Mountains. The town's ski resort brings travellers in the winter, and its music and film festivals draw visitors in the summer. The iconic snowcapped peak on a can of Coors beer – Mt. Wilson – is just outside town. While walking down Main Street of this wonderland I saw an image that looked somehow familiar. This wasn't the same image we'd seen on the reservation a few days before, but it had similar features. Here was another black and white photograph, printed and pasted to cover an entire wall, depicting what appeared to be native people in ethnically marked attire. Taped inconspicuously off to the side, on 8.5' x 11' laminated office paper, was an artist statement. This time, on foot, I stopped to look closer: 'MURALIST CHIP THOMAS (in his own words)', it began. 'The question I'm asked most frequently is how a black doctor in his 50s working on the Navajo reservation started doing street art on said reservation … '

By some happy accident, it seemed, I'd stumbled upon another mural by the same artist whose work had so enchanted me in the Arizona desert, though I never would have expected it. The artist statement included an affable picture of a wiry, energetic man with a silver beard. It described how he'd moved to the Navajo reservation in 1987 to work in a rural community called Inscription House. He wrote that he'd always been 'drawn to street art, graffiti and old school hip-hop', and how, although he 'was miles away from the epicenter, I thought of myself as a charter member'. The statement described, too, how he'd built his own darkroom after arriving on the reservation, and even exhibited his photography in galleries. Eventually, though, he explained,

> I'd become disinterested in showing my photographs in galleries isolated from the people I was photographing and wanted to pursue a more immediate relationship with my community reflecting back to them some of the beauty they've shared with me. To keep that vibe going I started pasting images along the roadside in June 2009.

The image I'd encountered on Telluride's Main Street depicted two subjects in profile, touching foreheads (Figure 1). Bandanas obscured their mouths and noses, and the words 'What we do to the mountain we do to ourselves' had been painted across their connected faces. The black-and-white photo was enlarged to cover an entire wall. Wheatpasted against the cinderblock's bright red paint, the image made a striking encounter, itself juxtaposed against Telluride's impossibly majestic backdrop of snowcapped peaks. The composition of the work was more or less symmetrical, its centre-point the connecting foreheads, its balance measured by one bandana being white with black patterning, the other the inverse. A hand from the person on the right rested gently on the back of the other's head, drawing it closer in a tender touch. One's eyes were open, the other's closed. 'We are in this together', it seemed to say. What it actually said, the inscription painted across the subjects' faces, signified a political purpose: this was about environmental justice. But the signifying element of the statement, as is so often the case, is insufficient to understand its sense, certainly when it comes to the power of unexpectedly encountering the mural up close.

The image marked its subjects as indigenous, emphasising their long, jet black hair, their dangling turquoise earrings, their skin tone and their ethnically-marked bandanas. The bandanas covering their mouths and noses alluded undecidedly both to polluted

Figure 1 . jetsonorama, 'What we do to the mountain we do to ourselves', Telluride, CO, December 2016 (author).

air and to the unspeakable alike, perhaps a double-gesture toward environmental coloni-alism and to stereotypes of the stoic Indian. Both senses were reinforced by the words inscribed on their bodies, indeed on their very faces, those Levinasian openings for all encounters with the other. Signification was not of the essence here. The intensity of the work emanated from the encounter itself, the point of contact, the relation *between* subjects, both those represented in the image and between the image and those, like me, who had encountered it and been entranced by its singularity. In the photograph, mouths could not speak, but bodies could – provided they were conjoined with each other to form one surface, one relation that could accommodate a statement that would be unintelligible without the other to complete it. Wha / twe / do to / the / moun / tain / we do / to / ourse / lves.

Over the next few days, I devoured everything I could find online about Chip Thomas. It turns out that environmental and indigenous themes often charge his work, which he signs under the name jetsonorama. Thomas posts narrative accounts of his many projects, replete with pictures, on a personal blog called 'jetsonorama (sans drama)'. It's evident from his many posts that he is an artist with copious *joie de vivre*, someone who'd decided years ago he wanted to live in a way that would make a positive difference for people who needed it most, and had moved to the Navajo reservation from the east coast to see that through. Here was someone, from what I could tell, whose art had both an activist and a community purpose. It both beautified and preached. It affirmed and critiqued. It celebrated and mourned. At least, that's how the photos online made

it seem. What I wanted to do – and what I made the case to my family that I really *needed* to do, 'for work' – was go back to the reservation and see more of the art *in situ*. Fortunately, the jetsonorama website would make that easy. Thomas had included on his blog a Google Map of all his installation sites across Navajo Nation. All we'd have to do was get in the car and follow the route.

Serendipity

The possibility of travelling through Navajo Nation on an efficient connect-the-dots path between jetsonorama's various far-flung installations raises questions about whether the affordances of digital culture encroach on serendipity or help to foster it. If the powerful impact of unexpectedly discovering jetsonorama's work on the Navajo reservation, and then again in Telluride, owed something to not having sought it out deliberately, did that mean its power would diminish when I sought it ought intentionally by using a Google Maps route to each of his installations? In a later section, I will discuss the role of digital infrastructures in facilitating serendipity. Presently, it will be useful to say more about serendipity itself.

The English writer Horace Walpole coined the term 'serendipity' in 1754 to designate an unexpected discovery, the equivalent of '*accidental sagacity* (for you must observe that *no* discovery of a thing you *are* looking for comes under this description)' (1960 [1754]: 407–411).[1] Serendipity is thus by origin figured as a term for those beneficial discoveries that are not made by design. Which is to say, it is typically held to involve discovering or realising something that is (a) favourable and (b) not found by searching for it. Though there's no reason to doubt that such a phenomenon sometimes occurs, I think there is reason to think beyond the *accident + sagacity* formula we have inherited from Walpole.

To begin with, accidents are not quite random or unforeseeable. In contrast to serendipity, accidents tend in the main to be unfavourable and somewhat predictable. My young son may be right when he spills his water and declares, 'It was an accident!' But I am equally right in observing that he'd left the cup awfully close to the table's edge and could well have seen it coming. After all, accidents are known for waiting to happen. At the same time, 'sagacity' limits the horizon of the serendipitous to an anthropogenic discovery that's knowable and articulable. Doing so leaves out the self-sufficiency of encounters whose force emerges as an affective sense-ability too impalpable to be 'known' or named. To restrict the serendipitous by its dependency upon the mental discernment that leads to discovery or invention, in other words, is to instrumentalise its force. This may be why most studies of serendipity have been associated with science, the history of which is fertile with accidental discoveries and paradigm-shifting fortuities encountered by chance. Penicillin, the microwave oven, X-Rays, Teflon, Vaseline and Viagra are just some of the discoveries or 'inventions' that came about as a result of fortuitous accidents.

It is within this instrumentalist lineage that Robert Friedel, a historian of technology, classifies serendipity into three types: Archimedean, Columbian and Galilean (Friedel 2001: 38–40). Archimedean serendipity involves pursuing one thing methodically but finding it unexpectedly in the pursuit of something else. In the famous tale, Archimedes

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[1] For a thorough history of the word and concept, see Merton and Barber, 2006.

had long been trying to measure the volume of an irregularly shaped solid object, but only realised how to do so after taking a bath and noticing that his body displaced some water. He didn't take the bath *in order* to solve the problem, but the bath happened to prompt his recognition of its solution: 'Eureka!'[2] Meanwhile, Columbian serendipity involves setting out looking for one thing, but finding another and recognising that it has value of its own. When Columbus sought a trade route to India and landed upon the Americas instead, his 'discovery' would merely have been incidental – and not serendipitous – if he hadn't also recognised the value of what he'd set upon. Finally, Galilean serendipity is marked less by the apparently accidental fortune that characterises the other types than it is by the discovery of something wholly beyond what could have been expected in a given inquiry. When Galileo made a telescope and pointed it skyward, for instance, he couldn't possibly have known that he'd find the shadows of mountains on the moon, or multiple moons around Jupiter, but his perspicacity helped him to identify what he found and to recognise its importance.

Though conceptually useful, typologies of serendipity such as Friedel's tripartite scheme or others like it (see, e.g. de Rond 2014) merit caution in light of affect theory's emphasis on the sensible over the knowable. Such schemes generally suggest that the constellation of unpredictable fortuities we understand under the heading of serendipity can take many forms, though all require the superadded element of a human discoverer's insight. Serendipity, from this view, is not purely accidental or random. It also requires the human sagacity to make connections out of context, to recognise the value in incidental encounters, and to make sense of the hitherto insensible and unexpected. For Friedel, that is, 'the creative achievement lies not so much in creating the surprise but in seeing what it "means"' (Friedel 2001: 40). By regarding this 'achievement' as the accomplishment of an individual human discoverer whose insight fulfils serendipity's unfinished promise, though, we risk missing how forces of encounter themselves mutually entangle the discoverer and the discovered as 'intra-active' partners (see Barad 2007: especially 167–168; 185). We need to be careful, in other words, not to regard material and obdurate things (bathwater, the Americas, moonshadows) as ready-to-hand and waiting to be instrumentalised by the person whose insight they inspire. Serendipity is first about the encounter and possibility of entering into a new relation, and only thereafter about discovery and fortuity.

In this wider view, serendipity exceeds scientific discovery and spills into the social and cultural fields at large, where historically the best way to cultivate serendipity would have been a matter of gathering and spreading news. In classical Athens, if you wanted to orchestrate chance encounters, you'd have gone to the agora. That's where you might have run into someone you knew, or learned some lucky news that affected your fortunes. For centuries, before journalism and the press – both as institutions and as the media technologies that enabled their ascendance – people best learned the latest information and gossip by gathering in known common places to share what news they may have had to spread. In England, for a while, that place was Paul's Walk, 'a single, vast clearinghouse for news and opinion' down the centre aisle of London's largest cathedral (Love 2004: 257). In France, it was the Tree of Cracow, a 'mighty magnet' where people gathered in

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[2]In ancient Greek, 'heúrēka' (εὕρηκα) meant something like 'I have found it', a cognate of what today we call a 'heuristic' – a technique of experiential, self-attained learning and discovery, but also a tacit celebration of serendipity *as* method.

the Palais-Royal gardens to 'find out what was really going on' (Darnton 2000). In our time of filter bubbles and personalised push notifications, it's easy not to identify these examples as precursors of our Internet, but that's what they were, albeit a more emplaced and embodied social network, open to the aleatory and fortuitous.

Engineering serendipity

Given the demonstrable benefits of serendipity, it should come as no surprise today to find cultural techniques being developed in an effort to engineer it. Cultural techniques, or *Kulturtechniken*, is a concept from German media theory that refers to what Bernhard Siegert describes as the 'inconspicuous technologies of knowledge' that organise everyday life (Siegert 2015: 2). But '*Kulturtechniken*' are ambiguous for reasons other than being inconspicuous. As John Durham Peters observes, the term itself poses translation difficulties in both of its halves: in the first, over whether to translate '*Kultur*' as 'civilization' or 'culture', and in the second, over whether to translate *techniken* as 'techniques' or 'technologies' (Peters 2015: 90). For Peters, the latter difficulty comes down to a key difference: 'Techniques are material but are not necessarily durable, while technologies always are. Speech is a technique, but writing is a technology' (2015: 91). The essential distinction, then, is that technologies enable us to leave durable marks of our presence in our absence, while techniques involve a handicraft evident only its execution.

Thomas Macho has illustrated this distinction with the useful maxim that 'Cultural techniques are always older than the concepts that are generated from them' (quoted in Winthrop-Young 2013: 8). Counting precedes numbers, singing precedes scales, dancing precedes the tango. The notion of 'cultural techniques' is accordingly not far-off from the less specific Anglo-American notion of 'cultural practices' (see Parikka 2013: 149), albeit with the added emphasis on those media technologies implicated in such practices. In its initial sense, the concept of cultural techniques referred to agricultural methods of manipulating nature for the advantage of cultivating (i.e. 'culturing') more of its bounty. Clearly these techniques, from planting in rows to rotating crops, also involved the technologies necessary to carry them out – whether a horse-drawn plough or a 600+ horsepower combine. Yet, as Geoffrey Winthrop-Young points out, the uses and meanings of 'cultural techniques' have only changed over time, so that today the term's different inflections tend either to be conflated or operationalised according to the agenda of the one deploying it (Winthrop-Young 2013: 6). My own agenda here is not to theorise cultural techniques as such, but to take seriously the ways their conceptualisation has shifted the focus, as Siegert puts it, 'from the representation of meaning to the conditions of representation' (2015: 2). In other words, cultural techniques can offer a useful way to think about those unseen but instrumental infrastructures that influence the affectability of different sorts of encounter – for instance, with street art.

So not to beg the question, though, it's worth considering whether or not serendipity can be engineered in the first place. Ask most technologists and the answer is *yes*. Jon Barnes has gone so far as to suggest that 'serendipity is an algorithm' that follows a simple formula: Level of serendipity = quality of connections x quantity of connections (Barnes 2017). If you look at relatively mature recommendation systems like those run by Netflix or Spotify, for instance, this formula isn't so far off. The challenge of such systems, however, is no longer just how to deliver recommendations that their

members will like; it's how to deliver recommendations that people will like *and* not be expecting to see. In other words, the future of machine learning algorithms in the recommendational space isn't about predictability; it's about serendipity. In such a context, 'serendipity is the quality of being both unexpected and useful (Maksai et al. 2015: 180; see also Ge et al. 2010: 259). But even for a neural network trained on zettabytes of data and capable of finding relationships and patterns that in many cases would be too obscure for human detection or processing, a foolish consistency can make quite the hobgoblin. Computers are good at randomising information or organising information and delivering it according to algorithmically predetermined rules: on one hand the stochastic, then, and on the other the orderly. Because serendipity is not *quite* random, yet not predictable based upon observable patterns either, however, it falls somewhere in between these polar affordances of code. In other words, it is terribly difficult to code for serendipity or programme it reliably as a deliverable.

Nevertheless, cultural techniques that attempt to facilitate surprise encounters do exist, as something so commonplace as architecture underscores. The Zappos office complex, for instance, has exits on all four sides of the building, but Tony Hsieh, the CEO, reportedly keeps all but one locked as a deliberate effort to engineer chance encounters among employees. Similarly, Hsieh intentionally designed his 'Downtown Project' to revitalise downtown Las Vegas with mixed-use work and living spaces integrated together to materially actualise the principle that 'the best things happen when people are running into each other and sharing ideas' (Hsieh 2013). It was Steve Jobs's final unfinished project, only posthumously realised, for Apple to have a new office complex shaped like a ring and designed with an open floorplan devoid of cubicles or closed-in offices in order to facilitate serendipitous encounters among people who might otherwise never interact. The entire space is built to increase the likelihood of productive but unexpected encounters. As it turns out, one byproduct has been that all the glass walls and windows sometimes lead people into rather painful encounters with unseen panes of glass – accidents, but not exactly happy ones.

Indeed, if serendipity were merely an 'accident' it would be easy enough to engineer. It's the 'happy accident' part that brooms the system, because for serendipity to reach discovery it would involve more than just chance or happenstance; it would require someone with the sagacity to unlock the fortuitous insight or realisation that may otherwise go unopened. A prototypical example might be browsing shelves at a library. Have you ever gone to the shelves with a call number, looking for a particular book, but left having unexpectedly found some nearby books more useful? That's serendipity. And it's because you went there within a particular context of expectation, as part of a deliberate search for something, that you had the 'sagacity' to identify those unexpected books that were relevant to your search yet unforeseeable beforehand.

But what is this sagacity, exactly? It must be more than shrewd discernment, for to reach discernment first requires an *attention* toward something to discern. So what then directs one's attention? Many things, of course. When serendipity is being engineered, it is often done by offering up an assortment of possible encounters as candidates for attention. As card catalogues have moved online, for instance, many libraries have created virtual bookshelves to facilitate serendipitous discoveries of the sort initially found in dustier stacks (Fyfe 2015). Because such efforts are designed to replicate in digital form the serendipitous affordances of cultural techniques that preceded them as

actual bookshelves, one comes upon the virtual bookshelves in the awareness that they exist for the purpose of harbouring serendipitous discoveries. Yet, in such cases, I think, it is not *discovery* or *innovation* that is engineered, but something more primary. Call it an encounter.

Unlike discovery, encounters aren't governed by sagacity or discernment. They're experienced as a relation, a meeting, an affective intensity that lends direction and duration to the encounter as it becomes whatever it will later have been. Encounters – whether with books, or with people, landscapes, works of art or many other things – activate different types of attention, not all of which will lead to a cognitive breakthrough, though they might well send us travelling down an unexpected new trajectory with conditions of possibility more capacious or restricted than those available to us just moments before. As Deleuze puts it, 'Something in the world forces us to think. This something is an object not of recognition but of a fundamental *encounter*' (1994: 139). Such encounters 'may be grasped in a range of affective tones', but whatever the tone, 'its primary characteristic is that it can only be sensed' (139). To think of serendipity as facilitating encounters instead of discoveries is to retain the intrinsic self-sufficiency of the former without foreclosing the possibility that such encounters might also blossom into the latter. But what's blossoming in a primary way is less something to be 'known' than a new affective senseability, the burgeoning of a new background expectation.

In his book, *In Defence of Serendipity*, Sebastian Olma writes that serendipity designates 'the process by which one finds something useful, valuable or just generally 'good' without actually looking for it' (2016: 10). This definitional premise is important to read closely. It suggests that serendipity ruptures the connection between search and discovery, that 'to find' need not require 'to look', indeed that serendipity is precisely what allows for one without the other. For Olma, because serendipity has historically been associated with the fortuity of unexpected discovery, and hence with the 'invention' of the new, serendipity has become a buzzword across the creative industries in their obsession with innovation and novelty. Though Olma is less sanguine about how truly innovative such industries are, it's clear that Silicon Valley is trying to harness serendipity for the purpose of profitable 'disruption'. But if serendipity involves finding without looking, then to design for the serendipitous is less a matter of inspiring new innovations than of cultivating an amenable affective environment in which they might take hold. Often, then, attempts to engineer serendipity tend toward a physical, or digitally hybrid approach rather than a fully virtual, screen-based solution.

Hybrid mobile apps like 'Find My Friends' or 'Highlight', for instance, can point out potential connections within your vicinity based on various known indices and metadata, but it remains the optional choice of people operating these apps whether or not to utilise what they suggest. Robin van den Akker gives the name 'chance orchestration' to describe how mobile, location-based social networks such as Foursquare can gamify encounters with other people using digitally augmented techniques to create both unexpected and desirable meetings. Neither pure chance, nor a wholly predetermined orchestration, van den Akker suggests that 'chance orchestration' might lead us out of our filter bubbles and 'to truly serendipitous social and spatial encounters' (van den Akker, 2014: 45). Similarly, Christian Lincoppe has suggested that the attraction of many hybrid virtual-actual mobile apps – think Grindr or Pokémon Go – 'lies precisely in their serendipity and eventfulness, i.e. their capacity to occasion location- or proximity-related unplanned

encounters' (Lincoppe 2013: 124). What these arguments suggest is not just that serendipity involves encounters *as opposed* to discoveries, but also that these encounters can be made possible through techniques and technologies amenable to bringing them about. My experience trying to track down jetsonorama's art suggests that we can think of these techniques and technologies as infrastructures of expectation.

Infrastructures of expectation

'Infrastructures of expectation' names a way of talking about the material systems and services that channel bodies toward certain encounters with an imaginable prospect of their force. Infrastructures, as Paul Edwards writes, are 'large, force-amplifying systems that connect people and institutions across large scales of space and time' (2003: 221). There's nothing flashy about infrastructures. Their 'artificial environments' are boring, mundane, so ordinary as to go unnoticed (Edwards 2003: 221). 'Infrastructure', John Durham Peters writes, 'is often as hard to see as a light rain through the window' (2015: 35). The ways that expectation can attend anticipated and unanticipated encounters alike, nevertheless, are often determined in large part by the infrastructures that bring these encounters about.

After the New Year and on our way back to Phoenix, we did end up following the Google Maps trail of jetsonorama's installations. Nearing the end of our holiday, the descent from high alpine peaks and blanketing snow into the flat and open expanse of the Painted Desert was both a literal and figurative come down. Even more so than up in the mountains, it was hard to be in that terrestrial space and not feel somehow subsumed by the land outside, not just in it or on it or passing through it, but *of* it. Back in Telluride, the mural we'd seen on Main Street, along with two stickers and a small poster of jetsonorama's that we'd noticed slapped up elsewhere around town, seemed to make some sense. But out here, in Navajo country, the area was just so vast and desolate that it seemed unfathomable anyone would come out this far to paste up much of anything. Navajo nation is over 27,000 square miles with approximately 200,000 residents. That makes it bigger than nine American states, with a population density lower than all but Alaska and Wyoming. As I began to wonder how street art could possibly make any sense out there, it became clearer that its 'sense' had everything to do with how one might come to encounter it at all. Given the size and desolation of the Navajo reservation, in other words, the odds of chancing upon one of jetsonorama's installations there had to have been slim. With the help of Google Maps, though, we had a technology that would lead us right to them. The question was, would that change the nature of our encounter? To consider how it might, it may help to understand how most networked navigation aids work.

When Google Maps, Waze or other navigation apps tell you to take I-40W to exit 273a, then continue on NC-54W to Country Club Road, you are given a sequence of cue-based steps to follow, as if being rewarded for each successful turn. This cue-based system is remarkably efficient and noiseless. It works algorithmically through an operational chain of input-outputs that do a fine job of directing people from here to there. But, because they require merely following directions, which can be done somewhat mindlessly, such cue-based modes of navigation don't always build and entrench a mind map that could help you repeat the course or cultivate a broader spatial awareness that would be beneficial, say, if Country Club Road were under construction.

By contrast, another cultural technique for wayfinding might involve cultivating a spatial mapping strategy based on a broader conceptualisation of a given territory. For instance, those who live in the same city their whole life often come to know their way around without ever needing recourse to directions or step-by-step cues. Instead, they know the 'lay of the land' and, once they're oriented, can get where they want to go based on some combination of 'feel' and local knowledge. Certainly, trial and error, repetition and exploration, are some ways that people can gain such knowledge. Another is by looking at a printed map and processing it through a sort of 'X marks the spot' overview, identifying landmarks, assessing a territory and its meaningful contexts, then planning and charting a route accordingly. This enables us to see shortcuts, make changes on the fly, and generally to wayfind on a case-by-case basis. Pigeons are famous for being especially good at this skill (Haraway 2016: 18), as are wave-pilots in the Marshall Islands (Tingley 2016) and indigenous Hawaiian (*Kanaka Maoli*) surfers with their own ocean-based knowledges of navigation (Ingersol 2016). Wayfinding techniques in this vein can differ greatly, but they involve reading the circumstances of a body in a place, constructing some kind of spatial map, and navigating based upon subsequent reference to this internalised sense of direction. There's a lot of noise in this system, but it succeeds as a navigational strategy by enabling us to convert noise into signal when circumstances call.

The cue-based mode is sometimes called 'egocentric' navigation because it's based in the perspective of the navigator: when you're here, turn *here*. By contrast, navigating by map, or by the experience gained from spatial memory, is called 'allocentric' navigation because its perspective is based upon a wider spatial context than the navigator's limited placement within it. Examples of each have made their way into the English language, with egocentric words like 'left' or 'right' depending upon a subject's perspective, and allocentric words like 'north', 'south', 'east' and 'west' implying a broader, extra-subjective orientation mechanism. Nobody seems to deny that both egocentric and allocentric modes of wayfinding are important, nor that they are interrelated and work together. Left and right can be as useful as east and west. We need not enlist neuroscientific arguments to observe, anecdotally at least, that using GPS technologies to be directed from place to place tends to habituate egocentric navigation instead of the imaginative mapping associated with a more allocentric mode. In turn, our ability to follow directions may be getting better, but perhaps at the cost of our ability to operate situationally based upon a wider spatial knowledge and sense of direction.

The key here, when it comes to serendipity, is that different infrastructures of expectation will capacitate different modes of encounter, that is, different ways of activating or supplementing the human sensorium to inculcate an inarticulable orientation that can influence the affectability of our encounters. An expectation is an orientation toward an imaginable future that also influences the way it feels once it arrives. There can be no serendipity without an infrastructure to support it. All media are regulated by those infrastructures that make them understandable. Indeed, as John Durham Peters has argued, infrastructures are precisely what 'stand under' and make possible different configurations of the knowable (2015: 33). Our wayfinding techniques, that is, are inevitably co-constituted by the infrastructures that sanction how a medium can be traversed or encountered in the first place. These infrastructures include cell towers, satellites, roads and so forth, each of which (and often in coordination) inconspicuously

establish the conditions of possibility for encounters whose meaning is not already there waiting to be 'discovered', but rather made possible by the infrastructures themselves. No navigation occurs without a medium through which to navigate, and to drive through the reservation looking for jetsonorama's art meant we followed those roads that our car was capable of traversing – most of them paved, some not – and only went altogether off-road with some risk. For most of the journey, moreover, I couldn't get a working cellular connection, which was also a matter of infrastructure: a dynamic relation between the data-plan to which I subscribed; the regional cell towers available to communicate wirelessly with my device (including those that involved 'roaming' because they were outside my carrier's own infrastructure); and with the GPS satellites orbiting invisibly overhead at some 8,700 miles per hour, while our car charged along terrestrially at 70.

As infrastructures of expectation go, egocentric navigation apps like Google's or Apple Maps may have become the norm, but at least one alternative exposes them as merely a particular type of cultural technique for wayfinding, not the only one. Crowsflight, for example, is a navigation app designed to encourage the chance encounters or misdirections that might happen on any journey not governed by the reward-chain of spatial or temporal efficiency. The app offers essentially a user-friendly compass: type in a destination and your phone will point toward it as you move, without providing any accompanying cues, directions or maps (see Figure 2). 'When we ask for directions on the street', the description of Crowsflight in Apple's App Store explains, 'a friendly finger pointing
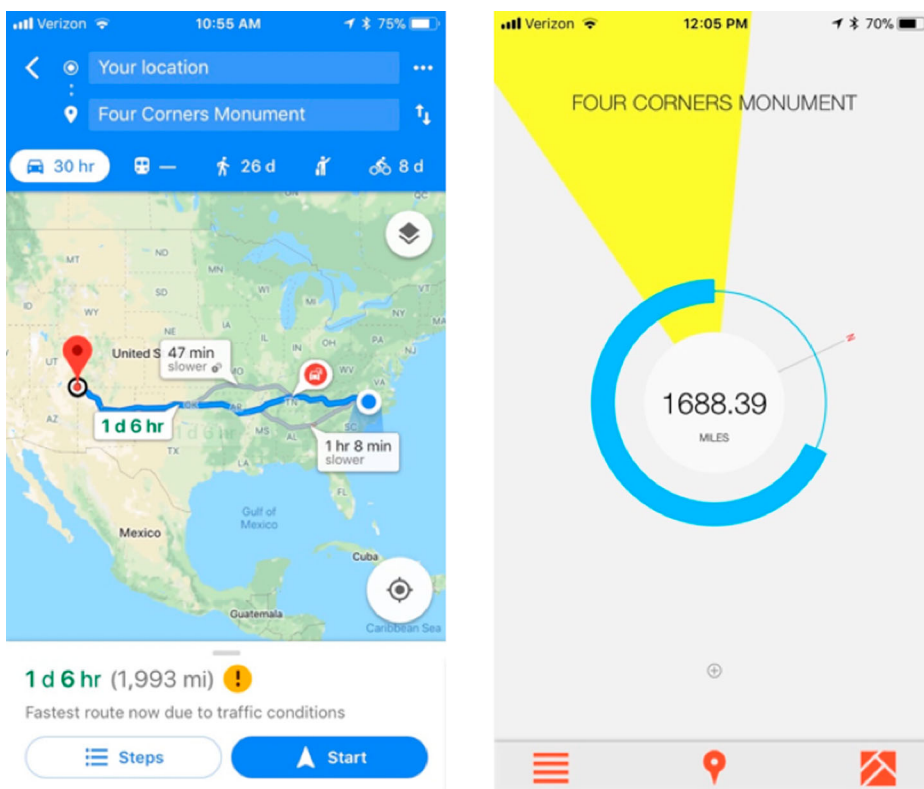

Figure 2. Screenshots of Google Maps and Crowsflight.

towards the destination is often more than enough'. The apparent idea is to encourage people to explore and wayfind on their own – and in doing so, perhaps, to stumble upon things in ways less likely to happen when following a clear set of cue-based directions.

Of course, to make more than a fool's errand of our aspiration to see jetsonorama's work on the reservation, we needed more guidance than Crowsflight. But even using Google Maps (and even when our cellular service actually worked), driving through the expanse of Navajo country made finding Thomas's scattered installations difficult. The map that he had provided on his website pinned his work's various locations according to their supposed GPS coordinates, but the roads to reach them often weren't traversable; some installations had been replaced or removed when we reached where they once had stood; others were simply nowhere to be found. For all of these reasons, the process of seeking the works out had the feeling of a mission or a quest, which made finding one of his installations more of a reward than a discovery. In a spin on the cliché, the journey wasn't just the destination; the encounter was itself the discovery.

Expectation, encounter, event

Theories of 'the event' in continental philosophy and social theory can help to underscore the encountered nature of serendipity. Depending on to which theory of the event one ascribes, events can be transformative and rare (as they are for Badiou, who treats events as akin to political revolution) or minor and ongoing (as they often are for Deleuze, who treats events as singularities that are far from ordinary despite emerging from the everyday). Without getting mired in these theories, it will suffice to observe that theories of the event generally mark a threshold, less in time or place than in possibility: they designate an 'after which' for change. But an event is not the change itself (all change being partial and still ongoing), nor that which brings the change about (its 'causes' being too many and too distributed). Events, rather, have something to do with a rupture in experience, whether by rearranging the whole parameters of a world or by shifting a faintly felt intensity or mood.

None of my encounters with jetsonorama's art, I think, rose to the level of 'event' in these philosophical senses. Each sustained too much continuity across its before-and-after. Yet, they were all mediated by different infrastructures of expectation, and these changed the tone of their respective experiences. Can I characterise these tones in words sufficient to their affectivity? Probably not. Affect doesn't disclose itself representationally in that way. But the infrastructures themselves are easier to name. Driving through the reservation at the start of our holiday, the relevant technical infrastructures were primarily the car, highways, gas stations and road signs that served as our means of conveyance to Telluride. Walking on Main Street once we'd arrived, such infrastructures mostly involved lodging, heating, snow ploughs and sidewalks. On a mission while travelling back home, assisted by a mobile phone, the salient technical infrastructures became more primarily digital: satellite, screen, cell tower, data centre. As expectations go, each of these different infrastructures had its own affordances. Responsive screens, with their real-time locative identifiers, foster a demanding impatience that sidewalk ambling doesn't. And driving, by being a cultural technique so designed as to necessitate looking ahead and facing what's to come, literally traffics in expectation. We could divide all these infrastructures into types –

analogue or digital, for instance – or associate their affordances with the affective orientations that retrospect allows us to suppose they may have cultivated; but, doing so would not adequately account for their fundamental entanglement.

Similarly, we could use Friedel's typology of serendipity to classify each of my experiences as a certain kind of serendipity, but what would that reveal? To do so would make my first encounter with the artwork on our way up to Telluride a Galilean serendipity. It involved a discovery wholly beyond what I had expected to see on the reservation. And later, when we saw a similar artwork on Main Street, that would be an Archimedean serendipity: an encounter outside the context of my expectations, yet identifiable nonetheless because the artwork from the day before had evidently been lingering below my consciousness before all at once becoming explicit (my own street-side *Eureka!*). Finally, on our GPS-assisted route back through Navajo country, finding artworks different than the ones we intended to find would count as a Columbian serendipity; we'd gone looking for one thing but encountered another. There's a tidiness to this taxonomy that makes it useful as an interpretive scheme, just as there's a convenience to isolating specific infrastructures and identifying the sorts of orientations they supposedly stimulate. But both approaches, I suggest, would only reinscribe the serendipitous within the instrumentalist parameters I have endeavoured to avoid.

After all, each of my three on-site encounters with jetsonorama's work also took place within – and were made possible by – a more encompassing infrastructural context of *leisure*. That infrastructure included such things as vacation time, ongoing income, luggage, ski gear and so on, all of which were indissociable from the indices of my own privilege (class, race, age, etc.). How to account for all of this? Recognising serendipity as a cultural technique facilitated by infrastructures of expectation invites us to acknowledge the intersectionality of such infrastructures, their messiness and inconvenience. Doing so calls us to admit precisely that serendipity *cannot* be engineered by tweaking an algorithm or remodelling a building's layout, but that the serendipitous always evades becoming a deliverable even as it cannot but occur within the infrastructures that, however subtly, affect the force of our encounters – maybe most of all those that we seek deliberately in search for something new.

What has come to be called Meno's Paradox suggests that the search for new knowledge is impossible. If you already know what you're looking for, there's no need for inquiry; and if you don't know, then inquiry is impossible. It follows that new knowledge is either unnecessary or impossible, a contradiction that led Plato to his famed doctrine of recollection (anamnesis), based on the premise that you can't come to know something you don't already know (Plato 1981: 80d-e). Plato was referring to non-empirical questions – more 'What is virtue?' than 'What's the speed limit?' – but the paradox of new knowledge illustrates the importance of serendipity when it comes to something as ambiguous as 'social change'. If we take Meno's paradox seriously, then serendipity offers a clever workaround by suggesting that the new often enters the world in excess of our plans or expectations for it (see Olma, 2017). To seek out novelty, to design for its serendipitous possibility, is to overdetermine the structure of encounters by prescribing them in advance as legitimated by the extrinsic value of innovation. But the affective force of our encounters cannot be reduced to a deliverable or packaged as a tidy message. Jetsonorama's artwork may well be 'about' environmental justice, but it gains its force (at least it has for me) less from its message than its expressivity, less from its meaning than its sense.

It may be that whatever social change people seek as part of a 'programme' to achieve something 'new' can't be innovated or discovered. Maybe it can be sought, but not found, or found but not sought. Maybe it traffics somewhere between meaning and sense, always left open, incomplete. The altar of the new can be worshipped at in many ways. It is certainly one irony of our time that, despite the internet's incredible abundance of information, we so often encounter the same things over and over again on our screens. The Netflix catalogue has the same old movies; Facebook feeds you the same old posts, all within a narrow bandwidth of what's more or less to be expected. For all their reliability, the filter bubbles and taste-making recommendations of algorithmic culture are less successful at delivering welcome and genuine surprises than more of the same. The felt desire to nurture surprises, to stave off the entropy of seen-it-all-before weariness and some-things-never-change politics – these are worthy projects. They inspire the sort of searching for change that staves off despair. But it is worth remembering that the very determination of which 'new' is worth pursuing is also something often achieved through encounters that exceed the deliberate and expectable, and are thus registers of social change in themselves, however molecular their scale.

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Disclosure statement

Notes on contributor

Chris Ingraham is an Assistant Professor of Communication at the University of Utah. His first book, *Gestures of Concern*, is forthcoming with Duke University Press.

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