

# Glitching computational urban subjects

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## Abstract

This commentary explores the epistemological vector of glitch/glitch proposed by Leszczynski and Elwood for the study of events which are non-performative or 'do not compute' in computational cities. There is a particular focus on the potential for this disposition to foreground more marginalised urban and computational subjects and their experiences. It argues that glitch/glitch can help analysts to identify and draw attention to instances where these subjects are able to more fully embody the role of citizen.

## Keywords

Glitch epistemologies, computational cities, Black Lives Matter, marginalised subjects, graffiti

In early June 2020, as protests raged across the United States and the UK following the murder of George Floyd by a police officer in Minneapolis, the artist Knapple painted a mural in solidarity with Black Lives Matter in an underpass near the city centre in my home city of Norwich, UK. Norwich is a small English city mainly distinguished by its two cathedrals and meandering medieval streets. The mural proclaimed '*Norwich Against Racism. Black Lives Matter. All. Cops. Are. Accountable*'. The underpass where she painted the mural is a popular canvas for city graffiti artists, featuring a regularly changing patchwork of tags, slogans, and art with a more overt political message. Like many other cities across the UK, though still officially under COVID-19 lockdown, Norwich saw a Black Lives Matter demonstration that week. To accompany this, the City Council building was lit up in purple one evening in solidarity with protestors and in remembrance of George Floyd.

The next day Knapple's mural was anonymously reported as a piece of offensive graffiti through the

council's website. The system automatically passed the message through to a third-party contractor who then painted over the mural with black paint. Outrage quickly spread through social media and was picked up by the local paper, reporting vocal support for Knapple's mural from local business owners and the Norwich Pride committee. The Council quickly released a statement stating '[t]his has been a terrible misunderstanding and we will urgently work with our contractor to correct it. We do not consider this in any way to be offensive graffiti, we consider it an important work of art' (Walsh, 2020).

With the council's blessing, Knapple worked with other artists to create a replacement mural at the same site a day later, this time proclaiming 'Educate Equality. Black Power 1965–1985'. A

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few days later, this new mural was defaced with the words ‘White lives matter’ prompting Knapple to return and repaint her mural the third time, while another artist made a companion piece on the other side of the underpass proclaiming, ‘We need to stand together’ and another group of Norwich graffiti artists collaborated to create a Black Lives Matter mural in another part of the city. Interviewed in the local press Knapple said ‘I felt disappointed again for the black community. We are trying to do good here [...] I wanted to come down and fix this before anybody did see it. I didn’t want people to see it [...] I have got plenty of paint, people are always getting more and I will just keep going’ (Place, 2020).

This chain of events was triggered by an apparent glitch in the council’s automated complaints system, which was intended to immediately alert third-party contractors of urgent jobs such as fly tipping (illegal waste dumping), discarded syringes, and anti-social behaviour. The system design had not anticipated that the offensiveness of a piece of graffiti might be contested and did not take account of areas of the city where graffiti art is implicitly encouraged rather than seen as a mess to be cleaned up. A computational system intended to improve efficiency and create order in the city instead created controversy and disorder.

Following Benjamin (2019), we could further interpret this glitch as being revealing more fundamental assumptions and inequalities built into computational and administrative systems which particularly disadvantage marginalised communities. While there are a small number of individuals in this story whose actions were motivated by overt white supremacist motives, the lack of questioning of this job by the contractor, and the lack of a broader sensitivity to the political moment or even anticipation that such an issue may arise by council actors also speak to a more systemic bias or oppression (Noble, 2018). Benjamin’s (2019) articulation of glitch should be seen in the context of her work exploring how emerging digital technologies reinforce white supremacy. She thus positions glitches (such as an automated voice recognition reading of the ‘X’ in Malcolm X Boulevard as a ‘ten’) not as mistakes or aberrations,

but rather as revealing the fundamental design and assumptions embedded in computational systems.

Following Russell (2020), this glitch in Norwich’s city management can also be seen as a generative fissure in which it held the potential to remake, reveal and challenge computational logics and broader systems. Russell’s (2020) account of glitch reflects her work as a curator and writer interested in digital art and its potential to empower and support the exploration of identities for marginalised groups.

In their paper ‘Glitch epistemologies for computational cities’, Leszczynski and Elwood present Benjamin and Russell’s understandings of glitch as both distinct and compatible, proposing the formulation of glitch/glitch to capture how events that are non-performative or ‘do not compute’ in computational cities can be understood as both inherent to computational systems and as generative fissures within them. Glitch/glitch takes inspiration from Cockayne and Richardson’s (2018) code/code which captures how features of computational systems are simultaneously reflective of both social norms and codes as well as literally written into forms of computer coding. Leszczynski and Elwood (2022) put forward glitch/glitch as an epistemological disposition useful for the study of computational cities, which enables analysts to take seriously events and instances which are non-performative or defy computational logics without seeing them as sitting apart from the computational city.

I would be intrigued to hear how Benjamin and Russell respond to this deliberate conjunction of their conceptualisations of glitch. On the face of it, Benjamin’s take strongly highlights the dangers and harms of computational systems, whereas Russell’s celebrates the creative and shape-shifting potentials of these same systems and emphasises the agency of computational subjects. However, both accounts are rooted in an understanding that computational systems are shaped by broader social structures and assumptions – as articulated in code/code – and both have a particular focus on how this plays out for marginalised groups, particularly racialised and queer bodies. Both see glitches as inherent to, rather than separate from, computational systems. And both point to ways that glitches might serve as moments for change and transformation in these flawed systems. In a

sense then their conceptualisations of glitch might be understood as not entirely distinct but rather as describing the same phenomena but with differences in emphasis.

To illustrate the analytic potential of glitch/glitch Leszczynski and Elwood draw on two examples of glitches in the US cities: the first, a case of a seemingly out-of-place bike-share bike outside a homeless settlement in San Jose, California and the second, a non-Instagram-friendly house façade in Seattle. Both examples initially seem at odds with the algorithmic logics governing computational cities, but through Leszczynski and Elwood's analysis come to be seen as both revealing inherent features of the computational city – the use of bike-share bikes by a potentially more diverse range of urban subjects than anticipated, and the role of social media platforms in dictating urban aesthetics – and potentially generative of new ways of being in the computational city – highlighting the role played by homeless people in the life of a city, and the deliberate gaming of Instagram aesthetics to affect property prices and Airbnb marketability.

What then does glitch/glitch add to our epistemological toolkit when encountering and analysing computational systems and cities? As human geographers, we are well attuned to look for instances of controversy and rupture as being revealing of more general social dynamics and issues. We also regularly look to exceptional, extreme, or unique cases as a focus for our analyses. The wide usage of concepts of governmentality and performativity across the discipline give us the resources to understand how systems and categorisations both produce subjects and proscribe the boundaries of their behaviours, but also how there is always the potential for ruptures and mistakes which allow for human agency and the challenging of such structures. Glitch/glitch continues these traditions but with a more particular emphasis on the specificities of the digital. In particular, it helps us to grapple with the limits of the digital, while also acknowledging that the distinction between computational and non-computational might not be clear cut.

I am particularly interested to explore which kinds of urban or computational subjects are foregrounded by glitch/glitch, and what closer analytical attention

to their experiences and agency facilitated through glitch/glitch might yield. The examples given by Leszczynski and Elwood at first seem quite disembodied. A bicycle apparently abandoned or perhaps intentionally parked in an unexpected neighbourhood. A house which is one day adorned with ugly emojis. In both cases, we are invited to speculate and wonder about the intentions of the subjects who enacted these material manifestations, but we cannot know for sure if the bicycle is being used by a commuter, or if the emoji house owner knows she has made an ugly spectacle which challenges the digital marketised logics at play in her neighbourhood. Does intentionality matter to glitch/glitch and can we give voice to these subjects to further challenge reductive computational logics? One of my intentions in putting forward the Black Lives Matter graffiti example above was to further explore the potential for glitch/glitch to give voice to the subjects of computational cities and to allow for consideration of competing or ambiguous intentionalities.

Benjamin and Russell's focus in their theorisations of glitches is clearly on marginalised subjects, and particularly Black subjects, and how they might be empowered to shapeshift (Russell, 2020) or develop 'abolitionist tools' (Benjamin, 2019) to challenge and transcend these coded inequities. Drawing on code/code Leszczynski and Elwood elaborate clearly on how glitch/glitch contributes to a broader project to empower marginalised queer subjects and to queer problematic systems and categorisations. They deal less squarely with Benjamin and Russell's characterisations of race as a technology and as code/code, shaping computational systems and urban subjects' interactions with them. I wonder then if there is yet unexplored potential for glitch/glitch to more explicitly engage with a revived anti-racist and abolitionist agenda in geography (e.g. Noxolo, 2020; Oswin, 2020) by playing an important role in challenging dominant assumptions about the subjects of computational cities, both in terms of who they are and how they behave. This stands as a clear challenge to those orchestrating computational cities but also to those of us researching and analysing these processes.

The Black Lives Matter graffiti example was also intended to test the geographical applicability of

glitch/glitch. Is it as useful for understanding an incident in a small British medieval city as it is for tech-driven megacities? As Mattern (2021) has eloquently put it ‘a city is not a computer’, and therefore even the most heavily digitised and tech-driven smart city comprises elements and forms of knowledge or knowledge management which are not merely computational. Norwich does at least share some of the features of computational cities which Mattern lists such as digital platforms to facilitate citizen engagement – the site of our glitch – sensors to monitor air quality, and assemblages of cameras, scanners, and databases to track crime. Another key feature of computational cities that Mattern points to is the reprogramming of urban subjects as customers or users rather than citizens.

Glitch/glitch then becomes a potential way both to foreground the lives of marginalised computational and urban subjects, and to explore instances in which they have opportunities to challenge the narrow subjectivities embedded or ‘programmed’ into computational cities. These features seem to me to be as applicable to Norwich as they do to Silicon Valley. The erasure and repainting of the Black Lives Matter mural in my example became a focal point for discussion which centred around expressions of solidarity with Black marginalised subjects in an overwhelmingly white city and region, as well as an opportunity to challenge and remake a part of the computational city system. It received national media attention in the UK among broader discussions about coming to terms with colonial histories and the place of statues of slave owners in urban locations. Following the incident, the council promised to review its automated complaints system. The intentionalities of several of our main actors – either to express solidarity with Black people in Norwich, or to overtly defend white supremacy – are evident, while there is more ambiguity in the functioning of the complaints dashboard and the actions of the contractor. But all the actors in this story reject the role of customer or user in the computational city, and instead claim a more expansive role of citizen.

With glitch/glitch Leszczynski and Elwood offer us a useful tool to deal with a challenge we continually grapple with in studies of computational cities, systems, and technologies: to take ‘the digital’

seriously while not reifying it or separating it from other systems and practices. By opening up a new epistemological orientation towards or framing of glitches as inherent to but also creating possibilities beyond computational cities, they also create the possibility of new imaginaries of the subjects of these cities and their agency.


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