Editorial Comment – Are we content to be the NPCs of the CDT?

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I am not a gamer, never have been, but I have two teenage boys, so my familiarity with gaming terminology has grown exponentially in the last few years. The NPC is a non-player character – a (usually) benevolent entity (be that humanoid or other) not controlled by the player of the game, but rather AI. These characters are tasked with undertaking formulaic and predictable (often cringe-worthy) behavioural gestures and comments that help narrate and/or progress the player's experience of the game world. In short, they are animated props occupying space and interacting, at least superficially, with the player-activated characters to create a believable 'story'. Relying here on more authoritative sources (Dyson 2024) than my 11- and 14-year-olds, NPCs exist in games to 'fill in' gaps in the fantastical world models created by the designers; the set piece in which the 'real' game or actions and simulated experiences for the players take shape. The aim of game creators is to simulate interactions between 'players' and NPCs that belie the artificiality of the interface, that seamlessly immerse both in a 'world that lives and breathes on its own' (Dyson 2024, online) and where encounters in the game are as realistic as possible.

NPCs are then, at once, *irrelevant* and *essential* to enabling a complete 'story', creating the totalising, singular effect of the game for the user. This sounds familiar to themes debated in this issue. Replace game with city digital twin (CDT), and like Stein (this issue) alludes in her brief mention of NPCs: 'It is as though a CDT had interactable nonplayer characters standing in for the governmental infrastructures – community boards, tenants associations, environmental agencies – that would necessarily shape the policies and plans CDT users want to implement and with which they needed to negotiate' (p. 4). This statement resonated with my own ruminations on the similarity of NPCs in games and the invisible, 'human' dimensions of the city that are notably absent or partial in existing CDTs.

But another phenomenon related to NPCs also comes to mind. That is the recent rise of NPCs in subculture spheres of CosPlay (equally out of my experiential comfort zone) – where fans dress up like characters from films and video games, usually at large curated convention-style events (Dyson, 2024). The backgrounded, non-essential props initially deemed useful only for filling the materiality of the animated realm are now being re-enacted at these events and via memetic reels on social media. The invisible entities are starting to be seen, but more than seen, prioritised and lionized. Admittedly a genre-stretching pivot, but might the same be the case for emergent urban analytics, including CDTs? Can the invisible become visible; the untwinnable, twinnable - enlivened from the backdrop; activated, complete with contingent characteristics and unpredictable behaviour? Can people and their built forms and social infrastructure be more than the interactable but static 'mobile objects' of the twinned other?

Birkin et al (2025) suggest that digital twins hold the most potential (amongst the suite of data science and AI urban systems-based research innovations) to include 'soft features', such as 'travel demand or housing market aspirations' (p. 2). Yet, digitally representing

human behaviours, as the commentaries in this issue demonstrate, is clearly a central challenge to visualising human life in the volumetric city (if that is indeed the collective aim). One might turn to the expanding list (provided by Birkin et al 2025) of established and emergent digital representations of human behaviour in urban DTs, including spatial agent-based modelling, synthetic populations, and the advancement of social DTs, the latter bringing household data into consideration), none of which I can speak to, authoritatively.

Others are more pessimistic. Fotheringham (2023) for example, foreshadows the extinction of spatial process modellers, such as himself, in the age of AI and DTs, opining the lack of evidence demonstrating a strong desire in digital sciences to incorporate 'realistic models of human processes' (p. 1022) into truly spatial digital twins. 'Cities are not real if they are devoid of people but introducing people into a digital city brings about unpredictable and seemingly irrational behaviour which might be spatially heterogeneous and cohort specific' (p.1022). This lack of interest is a point for pause. This becomes a question of not what is missing in the DTs but why? Stein (this issue) seems to echo Fotheringham in asserting that when considering what is missing from CDTs, it is not because the technology is incapable of twinning it, but because it is fundamentally not of interest to those producing and using the model (p.4), more concerned with the aesthetics and science of twinning than the inhabitants of the 'real' twin.

Contingency seems to be key to the character development of both NPCs and the 'other' of the CDTs, in terms of making the experience as realistic as possible, embracing the messiness of human and non-human relationality. In response to the collection of interlocutors, Rose reiterates the optimism of Halegoua's (this issue) proposition for co-design and collaborative work with 'the humans'. There is a cautious acceptance in her comment that 'cities need twins that can visualise partial, dirty and patchy data, twins that can see gritty and damaged surfaces, twins that blink and do double takes, twins that can see two or more things at once, that can hint at things that are diffracted or made unvisible perhaps (Browne, 2015). They also crucially need assemblage of users who can work with such provisional, situated and emergent city models and with each other' (Rose, 2025, p. 2).

Might a bit of urban analytics CosPlay be in order?

The forum paper and commentaries in this volume add to the growing debate regarding the ubiquity of digital urban analytics and modelling, particularly as data-driven approaches quietly pervade urban management systems. But they also engage more fundamentally with the challenging epistemological questions posed by Rose's (2025) consideration of the imaginaries of the CDT relationally with that of the disaster film. The feminist techno-cultural critique of white masculinity pervasive in collective forms of volumetric organisation of the urban outlined here by Rose will resonate well beyond the considerable interdisciplinary reach of the commentaries of this issue. As Rose acknowledges in her response, no single paper can attend to the complexities of a cultural critique of CDTs, nor will this issue alone. We invite further interventions that continue, challenge and diversify the dialogue initiated in this issue.

References

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