

Invisible Belfast: Flat Ontologies and Remediations of the Post-Conflict City

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[in]visible Belfast was a research driven indie alternate reality game (ARG) that ran for 6 weeks during the spring of 2011 in Belfast, and was subsequently adapted, 5 years later into a fictional documentary for BBC Radio 4. The ARG is a participatory and dispersed narrative, which the audience play through. The text expands outwards across both physical and digital platforms to create a mystery for the players using everyday platforms. The ARG is a product of media convergence and at its heart transmedial; defined by its complexity and modes of participation. The fictional radio documentary which remediated the ARG into a more simple linear structure, but possibly a more complex narrative form, retells parts of the story for new audiences.

The premise of *[in]visible belfast*—the game and later the documentary—is itself an adaptation of writer Ciaran Carson’s novel *The Star Factory* (1997): a postmodern adventure through the complex psychogeography of Belfast. A trail through the labyrinthine text, which paints the history of Belfast in poetic prose. **This chapter will map the concept’s journey from novel to game to radio, contextualising its development within its political and urban landscape; charting the remediation of the narratives as they fold out across multiple media and complex story arches.**

The chapter will draw together ideas from previous publications on ARG, Transmediality and complex textualities from the authors, and reflect on the textual trajectories that the remediation of the narrative has taken from the original book, through the ARG, into the radio documentary.

Building upon recent approaches from environmental philosopher Tim Morton and games theorist Ian Bogost, the authors argue that **Belfast’s history propels medial adaptations of a particular kind, characterised by a ‘flat’ ontology of space and time, and a sort of diffuse and dark urban experience for designers/producers and players/listeners.**

Note: The authors of this chapter are the original game designers for the ARG and the first author was a producer and presenter on the BBC documentary *Invisible Belfast* (2016).

Introduction

In February 2016, BBC Radio 4 broadcast *Invisible Belfast* (Garrett 2016), a slightly left-field radio documentary in which a young American student, reading a novel, ends up lost in the pages of the book, and lost in the city itself. The idea of an invisible, explorable Belfast that exists parallel to the visible city was drawn most recently from an indie Alternate Reality Game (ARG) produced half a decade before, titled *[in]visible belfast* (Barrios-O'Neill and Hook 2011). In this game mysterious puzzles were spread across multiple digital platforms and across the physical city of Belfast, drawing players into multifarious historical and imaginative interstices of the city. This ARG format created a connected but dispersed and nebulous textuality (Hook 2017) where players must work to traverse the text and explore the meanings generated. To trace the lineage further back: the *[in]visible belfast* game had its roots in the book *The Star Factory* (1997), written by Belfast poet and novelist Ciaran Carson. Nodding to Italo Calvino's *Invisible Cities* (1972), *The Star Factory* is a labyrinthine text in which a subterranean Belfast becomes legible through playful repeated explorations into its many narratives (Barrios-O'Neill and Hook 2012). Carson's *Star Factory* is full of holes and gestures continuously at portals between worlds, its text littered with associative links that beckon the reader to follow at will (Barrios 2011).¹ In this article, we (the designers of the *[in]visible belfast* game) examine remediations of Carson's text both as radio documentary and indie game. We give close attention to the constraints and affordances of each medial rendering of what we refer to as the *invisible Belfast concept*, emphasising ways in which form arrives not only via the page, screen, interaction or soundwave, but also in the implicit social forms that underlie any expression (Levine 2015). With this in mind we investigate what such processes of remediation might express about the social and political processes at work in Belfast's history. We trace the concept's media genealogy through novel, game and radio documentary, arguing that the complexity of Belfast's history in particular—including the functions of various media in its ongoing conflict—propels medial adaptations that engage flat ontologies and object-oriented modes of performance. Certainly each text has unique potential for operationalising in-text the political conditions of the city, at different scales and with differing rhythms. In one sense this hones in on idiosyncratic conditions of Belfast, engaging with modes by which these are amplified by particular remediative strategies; in another sense our reading which is non-exceptionalist, posing object orientation as a meaningful ontology for exploring complex urban space.

We have adopted the lens of *flat ontology* to make sense of this evolution, both as a way of interpreting the form that each text imposes on Belfast, and as a way of linking this to broader political contexts that have shaped the history of the city both the post-conflict politics of the city but also the scales and flows of power and institutional influence in the streets of the city including the flows of

mediated and unmediated information. *Flat ontology*, also known as *object-oriented philosophy* (as coined by Graham Harman 1999 as part of his doctoral thesis) and *object-oriented ontology* or OOO (as adapted and developed by Levi Bryant 2009), is a way of conceiving the world from a non-anthropocentric ontological position, rejecting the now-standard Kantian privileging of human existence over that of other, nonhuman things (or objects). OOO philosophers Harman (2010), Bryant (2013) and Bogost (2012) argue, in a view diverging from a Kantian construction of reality, that objects *do* materially exist independently of human cognition, and thus should be considered equal to humans, ontologically speaking. A key component of OOO is a foregrounding of the fundamental relationality between human and non-human stuff, a fundamental acceptance of the vast networks of systemic physical and biological relationships governing all objects, in all environments. If we think of our reality in this highly systemic way, we can also usefully speculate about the lives of objects, which exist at different scales (from a tin of soup to a transport network) – not anthropomorphically (positing that the object experiences the world like a human does) but rather by trying to imagine the world as the object lives it (Bogost 2012:6). This has a certain politics attached: by repositioning our way of thinking about human experience, OOO entails an ecological rather than hierarchical way of reading reality, in which everything is network-relational (Morton 2013). In this kind of construction, individualism and tribalism become hard to justify; after all, humans and objects are all made of, and subject to, the same basic materials and physical processes. Applying OOO, boundaries defining self and other become intensely provisional and temporary, even meaningless; even invisible. This reorientation, which the invisible Belfast concept promotes in a variety of ways, allows for new modes of engaging with the visible and invisible spaces of the city. Harman prescribes such a method for object-oriented literary criticism:

[W]hile many of the literary methods recommended by object-oriented criticism might already exist, here I would like to propose one that has probably never been tried on as vast a scale as I would recommend. Namely, the critic might try to show how each text resists internal holism by attempting various modifications of these texts and seeing what happens. Instead of just writing about *Moby-Dick*, why not try shortening it to various degrees in order to discover the point at which it ceases to sound like *Moby-Dick*? Why not imagine it lengthened even further, or told by a third-person narrator rather than by Ishmael, or involving a cruise in the opposite direction around the globe? Why not consider a scenario under which *Pride and Prejudice* were set in upscale Parisian neighborhoods rather than rural England – could such a text plausibly still be *Pride and Prejudice*? Why not imagine that a letter by Shelley was actually written by Nietzsche, and consider the resulting consequences and lack of consequences?

Harman's recommendation is taken from his 2012 essay "The Well-Wrought Broken Hammer: Object-Oriented Literary Criticism". This builds on Heidegger's 'broken hammer', the idea that the moment an object breaks is the moment it becomes visible to us. This is salient to the aesthetics of

the ARG, which depends upon designers and players 'breaking' and otherwise misusing a variety of platforms and technologies in order to make an alternate reality visible. This is more or less what we were up to when we designed our game: without necessarily articulating it as such, we were driven by the same principles of breaking and remaking the given text in order to generate new legibilities, inviting players to reveal the text's mechanisms and configurations by cracking them open. In remediating *The Star Factory* we too explored its textual rhythms and operations in order to map out, on one level, the machine of the text, and on the other, the imaginative machine of Carson's version of the city. The remediations, as they diverged further from the original, were decreasingly recognisable: our game was to image the text away from the words on the page and to embed it, layered, through the streets of the city and the networks of the internet.

Bogost also has argued for ways of reading that apply principles of flat ontology, treating the text as a configurative system composed of *units*, discrete nodes belonging to bigger configurations (as a subway car belongs to a transport network) and also containing their own configurations (as a subway car contains systems of mechanical parts). Units comprise objects existing at a variety of scales simultaneously. A text, by this model, becomes a system or "an arrangement of discrete, interlocking units" that produce meaning through their performance within a particular arrangement (Bogost 2006:ix). This performance-by-arrangement is not unlike the procedure involved in a chemical reaction, or in T.S. Eliot's *objective correlative*, itself a sort of poetic algorithm (1997).² Below we apply a configural reading to each of the invisible Belfast texts, examining how such arrangements play out in time and space.³ Starting with Carson's novel, we analyse the texts to illuminate the non-hierarchical, ecological processes at work in the environments of Belfast that each text performs. We posit that this kind of reading is invited by Carson's original, a text that is thoroughly anti-romantic and non-anthropocentric, that takes a complex view on realities in which humans and other materials are inextricably entwined, and where things must be considered at a variety of vast and tiny scales (Barrios-O'Neill 2017).

Postmodern Novel: *The Star Factory*

Carson's novel is in fact a sort of anti-novel, a spatially-organised treatment of Belfast in thirty-two parts that reads more like a magical-realist travelogue or a series of object lessons than a straightforward novel (Barrios 2011). Each section is named to link it to a space located within the city, but rarely does the narrative stay bounded in that location; instead, Carson uses material details of each space as springboards for casting hidden worlds within its cracks. *The Star Factory* borrows from Calvino's *Invisible Cities*, and indeed, without constraints of word count and time, we might have begun this genealogy there or even further back; in Calvino's book as in Carson's, the city appears

each time through a different lens of memory or imagination, and each time manifests characteristics which are distinct and divergent from what came before, suggesting a universe of possibilities within a single city. Carson has written directly about Calvino and his representation of urban space, linking it to his own work in his *Self-contained Images and the Invisible Cities of Tokyo* (2012). As such, the city is a system of interconnected humans, objects and environments, connected always by the medium of narrative. The urban space, like the human mind, is

inhabited by constellations of such crucial points, whose stars are transformed or regurgitated into patterns of the everyday. A kitchen interior, for example, is a suitable location, wherein its panoply of objects ... become hooks on which to hang the items of the story; the room becomes a virtual embodiment of many stories.

(Carson 2012:66-67)

Belfast is thus composed of units – a kitchen, an object within a kitchen – which hang together in an (external) system of narrative, and at the same time contain (internal) worlds: the narrative interior of the kitchen, the narrative interior of any object in the kitchen. In the above passage, Carson reflexively describes a method of storytelling whereby a cloud-like narrative contains countless possible alternate or alternating planes, accessible by links: here, the object-hooks that suspend different units of story. The larger structure of the novel suggests that the chosen sites of Belfast serve too as hooks upon which the narrative is suspended in space, often in the form of seemingly ordinary objects at first glance.

Carson is known for an almost obsessive attachment to objects, and his novels and poetry often give close-up views of objects, identifying with them rather intimately: “Stamps bristle with tiny numbers, minute letters, diminutive leaves and eyes. They are graphic cellular tissue. All this swarms about and, like lower animals, live on even when mutilated.” (Carson 1997:30-31)⁴ Objects are involved in the inextricable mesh of things moving with us, inside us, around us, and through us, while we also equally live with, in, around, and through them (Morton, 2013~~9~~). As objects are imbued with humanness, the human is imbued with object-ness: DNA, tissue and swarms, disembodied, robotic, explosive, deeply material. Material is likewise as capable of knowing us as we are of knowing it: the stamp, “salivated on by thousands of tongues,” records “vast spectral demographics of deoxyribonucleic acid chromosome.” (Carson 2012:2065) The living record created through this interchange between objects and humans (as another form of object⁵) is both map and ever-changing structure, its dynamics deepened by the infinite unfolding or burrowing away that becomes possible by engaging specifically through OOO. Following the narrative through the cracks in materiality, “There are holes within holes” as you chase this story or that one down warren-like pathways, “an intestine maze of chambers, ante-rooms and corridors” (Carson 1997:131-2).

As Terry Eagleton has argued, an enclosing form can produce a “mythical unity” by which the form of the text evokes or mirrors a model of social unity (2005). *The Star Factory* is resistant to

totalisation and rejects any novelistic imperative to present a model of social unity (a model which anyone living in Northern Ireland or any 'post-conflict' city knows is a fiction). The text generates instead a fractal and multiple version of the city, precluding as it does the tidy boundaries of linear logic, and any insistence upon linear causality. The shape of the text is thus ecologically networked, demonstrating how "forms grapple with themselves ... blossoming from two dimensions into a thought-bubble cycloidal realm ... nebulous as cloudscape" (Carson 1997:37). It is an environment of correspondences that "see the everywhere" (Carson 2012:58). This materiality manifests in Carson's obsessive catalogues of objects – "tulips, train tickets, electric torches, books of matches, postcards, phonographs, ball-point pens" (Carson 1997:13), inventories that are living and personal, in which every unique material thing, the "ordinary furnishings" that make up the nonhuman panorama, has a history of its own, a world contained, following the OOO imperative of reading an entire world "within a device" (Bogost 2012:9). At the same time, Carson's objects repeat fractally, with a single type or version of an object appearing across the text, and then scattered through his whole body of prose and poetry, in many facets, again and again. These objects include bombs, pens, scarves, an airplane on a blue sky, a vase of flowers, a Dresden vase, a constellation of stars, a map of Belfast streets, a van containing a bomb, rusting mechanical parts – the list could go on. These particular (versions of) objects degrade, evolve, indicating their systemic nature, where even the most complete object is yet a fragment or phase, belonging to a larger configuration. The fragments of repeating objects also become associative links to countless other places, in and out of the text—this fragile vase evokes that other vase, its particular conditions and historical moment; that bomb is also every bomb. Appearing in numerous and composite forms, constellations of vases and bombs gesture toward a sense of infinite relational networks, a flat ontological approach to the universe.

In the ecological rather than hierarchical way of reading reality, the politics of OOO and flat ontology resist/reject imperialist and linear realities (Morton 2013: 17-19). Interpreted this way, the very shape of *The Star Factory*, flat rather than hierarchical, has an embedded politics. This politics is both avoidant and alternative, disrupting the sovereignty of the top-down view, circumventing the myth of forward progress characterising colonising discourse. As a configuration or system, *The Star Factory* gestures, rather, at infinite connectivity, infinite relativity, infinite provisionality; there are no identity politics concerning objective forms, and all things are more or less equal. Critics have often described Carson's politics as resistant to spatial domination, with Neal Alexander characterising his orienteering of the cityscape as implying "a utopian spatial politics," (2008) a Benjaminian resistance to surveillance and paramilitary terror through the forging of alternative routes. This response to Carson's work is echoed in Stainer's analysis which argues that Carson presents "alternatives to exclusionary sociospatial identities" (Stainer 2005:380). This alternate-route resistance ultimately

produces a game-like quality in that we orienteer the text as much as we read it, mentally following Carson's links each time they appear, tuning in to the ever-expanding network-environment of Belfast that the text subtly communicates. While the reader moves forward through the text, this does not always mean they move chronologically or alphanumerically through the pages; the linearity of storyline is replaced with an accumulating network of story-bits, or story-units, rendering an environment or storysystem, through which the text's/reader's journey is as circuitous as the operations of a natural ecosystem, with a rhythm almost as visceral.

Indie Game: *[in]visible belfast*

In *The Star Factory*, Carson poses a reality comprising numerous dynamic relationships among humans, nonhumans and their environs, casting the city as a theatre of systems (Barrios-O'Neill 2017:1429-30).⁶ As game designers, we were inspired to offer more points of entry into this theatre of systems by reimagining some of its structures within the context of a *playable* system: a game. Thus *[in]visible belfast* arrived as an indie ARG that remediated the central concept of Carson's novel as we interpreted it: an adventure through the "collapsing city" of Belfast, poised between layers of reality; its architecture posing a virtual labyrinth, and its object-laden landscape generating obstacles and interventions of many kinds (Horton 1999:324). The game lasted six weeks, and invited players to join a protagonist named Ana in exploring a complex, almost ecological, narrative version of the city. To help them on their way, players were provided with resources: a central website that provided an online base and a place for players (known inside the games as 'conspirators') to supply answers to puzzles; cryptic messages posted on various social media from a dark antagonist identifiable only by the moniker "[in]visible belfast"; clues that could be gleaned from character blogs and social media accounts; occasional emails delivering puzzles or tasks; and *The Star Factory* novel. To give an example of how units of the game played through: at the top of the first email received by players was the logo for *[in]visible belfast*, and the torn and unlabelled corner of page 47 of *The Star Factory* with sections redacted. In the redacted material on the page, Carson references the origins of Belfast, naming the year 666 AD. This is significant to the clue delivered in the email:

This city is marked with a number, and from this number it grew. This is the start of our tale, as it was the beginning of the city. This number will unlock the door to the maze.

To progress, players had to identify the book, find page 47 in a normal copy, read the text, connect it with the clue above, and enter the number 666 into the password field on the main hub website. The game, as a performed text, had no singular beginning, but rather, like the book which

inspired the game, the experience had multiple entry points ('rabbit holes'). A second of these was a teaser video shared on social media: in this, the protagonist is searching for a book on the Pleiades constellation in the university library, and stumbles across a copy of *The Star Factory* containing a note which, eerily, is addressed directly to her. This copy of the book becomes a cypher for players, helping them decode puzzles and historical layers of the city. A third entry point came in the form of an interview on *BBC Arts Extra*, in which the protagonist presented what she had found and invited the public to help solve the mystery. The edges to the formal text blurred into the city and the network by embracing a core aesthetic of ARGs, known as 'This Is Not A Game' (TINAG), which blurs the fiction of the ARG with the 'real' world outside of the game (Hook 2017). With the *[in]visible belfast* game, we wanted to recreate the experience of the city as a system of interconnected units, and this reconception of the novel as a game was in part an argument for the post-digital temperament of Carson's cloud-like narrative—its constant associative linking, its countless possible routes, its infinite unfolding that is both playful, and networked in the post-digital sense.

The city is, explicitly for Carson, a signal-processing environment; he describes, for example, Belfast Central Library as emitting "radio-beacon light-rays" (Carson 1997:176), and the Vatican as a hub that "picks up the music of the spheres, broadcasting it *urbi et orbi* [to city and world]." (Carson 1997:219) The city for Carson is not just a physical, visible space, but a Hertzian invisible environment. The city "broadcasts itself" in bits, such that "everything in the city, everything in the world, everything in the known universe, could be expressed ... Such a system lends itself to all possible forms of graphic, phonetic, and optical expression" (Carson 2009:171). This is what we hoped to capture and remediate, and indeed what we felt was invited by the text itself: a new way of expressing the invisible city.

In contemporary convergence culture, every story becomes a possible storyworld and everything becomes potential fodder for new modes of access. New methods, Henry Jenkins writes, build consciously "on what has come before, ... offering new points of entry" – our impulse was an instantiation of this (Jenkins 2006:95). Games are especially well suited to this kind of project, able to remix fragments and segments of existing narrative into rich, experiential environments.⁷ Our game environment was composite, a multiplatform combination of the actual Belfast, with players exploring and using various locations in the city itself, and a Carsonian, virtual version of the city that we rendered using both his text and our added narrative frame. For the players, the game became a lens for the city itself. Recurring themes and images from the novel were woven through the story as recurring and repeating motifs and clues; and while we tried to stay true to the spirit of Carson's original novel, we also attempted to translate its concept to the real city, in real time. We linked the game to key locations from the original Carsonian text, and often required the players to take a copy of the book with them to the locations and use it to interpret the space, or as a cypher to solve riddles

posed by the antagonist to propel the narrative forward. Patterns of recurring visual motifs, such as star constellations, helped guide players through the labyrinthine narrative. This played out at different scales and rhythms through the ARG, starting with the Pleiades star cluster (a constellation also known as the Seven Sisters⁸); images and suggestions of stars recurred throughout as guidepoints, as did the number seven. The Pleiades helped to structure a live immersive performance called *The Water Clock*, the first live meeting between Ana and players. Drawing in a number of connected mythologies added additional layers of complexity to the text but allowed for a richer and more engaging experience for players who could draw connections inbetween the layers of the text, exploring its topology and mapping its limits. Locations from *The Star Factory* were used throughout the ARG but we had to make a number of editorial and authorial decisions about what could be included and what should be excluded for player safety. The ARG plays out in real time and space, so there were a number of locations which if visited alone at night could be considered dangerous for the players, or areas which could be considered inappropriate to play.

This required us to depict many Belfasts, on many different scales, from the micro and specific (highly personal histories of the city, for example, as produced in web forum discussions) to the macro view of the city-as-process, continually historically and politically reconfiguring itself; composed of and by information. To help explore this, we wrote our protagonist as an immigrant to the city, seeing through fresh eyes, but we also gave her a personal family history that was entangled in the city's past through her father. Ana (the protagonist) is the (invented, by us) daughter of one of Carson's friends featured in *The Star Factory* novel. This device compounded the complex world-building which slipped in and out of Belfast as a city, and the pages of Carson's novel.

The game text, like that of the novel, was networked rather than linear, constructed as a responsive system of connected puzzle chains. As designers of a responsive ARG, much of our time was spent lurking in forums and watching the chatter of the players, which allowed us to develop each next phase of the game informed by how players reacted to and solved the previous set of clues (Hook 2017). Its narrative was driven by a refusal (again like that of the novel) of "metaphysical assumptions about causality in favour of observing linkages between objects, bodies and discourses" (Levine 2015:113). We used the ARG to produce a form that was also a process of unfolding (or burrowing away) across multiple online platforms, where each new segment of the game provided a cumulative contribution to the big picture: an opaque number clue given online leads to an address in the actual city; going there, the player discovers it is the headquarters of a secret society; researching this society online, the players sees they are putting on an event in town, the nature of which is unclear; attending this event, the player experiences a live performance which is a Belfast take on the Greek myth of the

'Seven Sisters' (or Pleiades) star cluster, which is a theme of part of Carson's novel; going to this section of the novel, they discover another clue; and so on⁹.

A player base of less than two hundred worked collectively to pool individual knowledge and resources, keeping track of the known quantities on spaces they designed and maintained. This included two collectively produced player wikis; maps, images of real-space artefacts for sharing, and a massive accounting of Belfast history was collectively unearthed, logged, and discussed through player managed forums online and offline. Game puzzles and artefacts used a combination of media including email, websites, social media messages, videos, radio broadcasts, street graffiti, dead drops (USB drives embedded in the fabric of the city, sealed into gaps in walls) and live performances. The mixed reality aesthetic of the ARG genre enforced a constant blurring of boundaries, disguising its own mediation and linking the invisible with the visible. This blurring creates a text without delineated edges, that has players assisting designers in building an alternate version of reality which takes shape in real time, and often in real space. This produces a transmedia topology, which comprises the "ecologies of interaction, participation and creation with and of the text" (Hook, Barrios-O'Neill and Mairs Dyer 2016:124).

The resulting alternate reality - for which the ARG genre is named - exists entirely within and between a transmedia topology of interconnected media artefacts, which are linked in complex ways to each other and to the real world, producing a multiplatform textual ecology which players must learn to navigate. As in Carson's Belfast, "there are holes within holes" (Carson 1997:70), coherences rendered with blocks of (responsive) narrative. Other designers have compared the unit-based writing approach to the writing of music, and *storybeats* in the writing of the ARG *Conspiracy for Good* (2011), where the narrative and puzzles became repeatable and interchangeable units in a wider system (Stenros, Waern, Montola, Ollila 2011:2) The game's aesthetic, like that of Carson's novel, was vaguely *noir*, driven by the sense that players were being "watched, overheard, recorded", that the "deeper you drill down, the more secrets emerge, all of which can seem at any moment to be the key" (Jenkins 2006:99) and where "the main protagonists are wont to disappear at any time" (Carson 1997:70). Game players became escapists from the real city into the virtual and invisible, renegotiating known and administered versions of Belfast, deepening their comprehension of its complexity as they did so.

The ARG form could be described as ontologically flattened, defined by a rhizomatic, network-shaped narrative and also by the interactions of units (players, designers, environment). The infinite-unfolding/infinite-burrowing dynamic that compels players 'down the rabbit-hole' also makes it relatively straightforward to integrate artefacts into the fabric of the game narrative. Physical artefacts or objects have been central within the ARG genre, from jars of honey which were sent to

journalists as part of the promotion for *I Love Bees* (2004) to mobile phones hidden in birthday cakes in *Why So Serious* (2007). Physical objects are valuable in these contexts because they are a limited resource, generating knowledge-sharing and collective efforts within the game. Physical artefacts also garner attention, having a certain archaic cache in the otherwise vastly virtual world of gaming, and forum conversation revolves around the canonicity of objects within the game, and their relationship to the reality that has been constructed (Hook, 2017:58). *[in]visible belfast* delivered information via virtual spaces, but we frequently used physical objects and points in real space to focus attention: an altered ex-library copy of *The Star Factory*; a network of entryways in North Belfast; a configuration of streets around the Falls Road; a gravestone in Milltown Cemetery (Barrios and Hook 2011)

The sprawling shape of the resulting narrative is the precise opposite of the ‘well-wrought urn’ of the traditional arts, existing instead as a live/living process that is neither exhaustive (there are so many possibilities of where the game might have gone, which it did not, making these equally present and absent – it is an insistently incomplete form) nor principal (the ARG form does not purport to be the only means of access to its content, built by definition out of composite materials and infinite borrowings). This kind of configuration reflects the infinite connectivity, infinite relativity, and infinite provisionality to which Carson’s novel gestures, rendering Belfast as a systemic unit in the Bogostian sense (2012:25), the city a node that comprises numerous systems and also helps to compose others. The ARG could enact what Carson’s text suggests: an active web of narrative interdependencies, an object-loaded network, an urban space with multiple interactive levels of operation. With *[in]visible belfast*, we tried to evoke, not just a system, but a complex system, reflective of the emergent dynamics of collectivity. We aimed to address collectivity of players, of information flows, and the complex history of Belfast.¹⁰

The remediation of Carson’s concept from novel to ARG involved adjustments to the affordances and constraints of the multiplatform space and the dynamics of participation and interaction. The ARG format has an embedded ethos aligned with that of flat ontology, as well as what we might interpret as the embedded politics of *The Star Factory*; the novel, and the game, are resistant to totalisation, to conventional modes of imposing authoritative control, opting instead for something more organic (Jagoda, Gilliam, McDonald, and Sparrow 2017). As in the game, the novel invites the reader to piece the city together herself, from the fragments of an exploded urban consciousness, and thus cultivates a kind of ownership – even for someone who have never been to Belfast or are playing the game remotely, participating from another country– born out of narrative traversal. This is consistent within the broader field of gaming: when the purpose of play is diversion and fun rather than linear progression, games become a sort of flat-ontological approach to problem-solving. As Tim Morton has written, a “profound political act would be to choose [an] aesthetic construct ... that

doesn't require smoothness and distance and coolness", but rather insists on the interconnectedness (and thus the lived intimacy) of complex worlds seeping across conceptual boundaries and into our everyday lives (2013:1837). Diversionary world-making, the principal activity of the ARG as well as the activity that distinguishes it from other kinds of games, requires players to employ critical and aesthetic strategies to reframe the city. In *[in]visible belfast*, as players became accustomed to operating within Belfast-as-process, these tropes were overwritten by a sense of moving through and (re)constructing deeper time and a more complex history. This process-aesthetics renders complexity through, on micro-levels, the complex historical positioning of individual objects; and on macro-levels, the pullulating nature of the city, its bigger "formations, explosions and reformations", the nature of which are not, in the end, particular to Northern Ireland, but are endemic everywhere (Morton 2010:98). Concerned with big networks and big concepts, the ethos of the ARG genre emphasises interdependency and the value of thinking in systems and collectively – making it liberal as a form. Not surprisingly, many ARGs are self-consciously staged and performed, like *[in]visible belfast*, in conflicted spaces or around difficult subjects such as climate change, corporate control, and political governance. A well-known example is the game *World Without Oil* (2007) which helped players explore an alternative present characterised by an increasing oil shortage, requiring renegotiations of relationships to fossil fuels; another is Tim Kring's *Conspiracy for Good* which enables players contribute to real world social good while making legible corrupt forms of corporate control; and the ARG *Future Coast* (2014) where players explore narratives from a future where the climate crisis has effected the sea levels, flooding large areas of the globe. The ARG is, finally, a form that is dynamic rather than didactic, eschewing authority in favour of empathy. This 'forward' is not linear or competitive, but collective and diffused; players are compelled through a murky space with only provisional boundaries – for example, the space of multi-layered Belfast, which stands in, more broadly, for the troubled concept of territory itself.

BBC Radio Documentary: *Invisible Belfast*

BBC radio producer Conor Garrett approached us in 2015 with the aim of developing the *[in]visible belfast* concept into a documentary for BBC Radio 4. His hope was to achieve the feel of the game, even if listeners couldn't interact in the same way; he wanted to evoke similar complexity and provocation to explore the mysteries of the city, posing it as a labyrinth, generating a texture of ambient narratives, emphasising the uniqueness of its regional literature, making the city freshly legible and salient. In the BBC production, *Invisible Belfast* became a story of an American student (renamed Danielle), searching the city for the author of a mysterious note found in a library copy of

The Star Factory – repeating some of the same plot points found in the ARG. Danielle’s search takes her on a circuitous route through the city, where she meets actual people from Belfast and is told real stories about their lives in the city. She ultimately locates the source of the mysterious note, but in the end (as in Carson’s novel and in our game), as much is left hidden as is revealed.

In this version Carson and game designer Danielle Barrios-O’Neill play themselves, so to speak, and passages from the novel are overlaid and intermingle with the framing narrative. While very different from the game (and the novel) in its format, the radio version does indeed capture the feel of what preceded it, providing another entry point into the concept of the invisible city of Belfast. As a listened-to piece, the documentary has intimacy and immediacy that are unique to its format; audio and radio have particular affordances that suit a flat-ontological experience. While it is definitely not interactive and participatory, it approaches a simulation of the listener being on a journey with the protagonist, “between the adjuncts and intervening avenues of Belfast and Carson’s narrative” (Garrett 2016).¹¹ Like the written text at the beginning of this folded remediation, audio performances also have the capacity to create psychological, imagined and invisible spaces that are mysterious, loaded with potentiality, and can make associational leaps with relative ease. At one point in the *Invisible Belfast* documentary, a brick salvager on the Shankill Road describes how Belfast brick was collected from demolished houses in the 1970s; this merges into a passage from *The Star Factory* on the art of bricklaying; this merges into a conversation Danielle is having with Queen’s University Professor Eamonn Hughes about the history of destruction and rebuilding that has shaped practically every corner of the city, giving the lie to the phrase “safe as houses”. In the spatial and temporal edit the narrative weaves and overlaps, drawing these aural worlds into a single, ambilocated imaginative space. At the same time, aural signals, rather than demarcating a space, gesture toward a plethora of possibilities; in this way radio affords a degree of ontological looseness, where sonic cues and language can make open claims (Barnouw 1947). You don’t need anything but sound effects to build a world, but at the same time you never know whether that world is there or not – a feature that resonates with the uncertainty of both Carson’s text and the TINAG aesthetic of the ARG. Taking a more practical approach to the same idea, Richard Hand and Mary Traynor have remarked: “There is a peculiar dichotomy in audio drama between its *constraints* and its *limitlessness*”, where it has the potential to “realise anything”. Aural media can represent almost any object or space without the budgetary implications of producing effects in film or television, for example, where objects must be visually present. Still, the format demands producers find ways to communicate the environment without constantly describing it, which is a special challenge in itself (Hand and Traynor 2011:103-105). In this, there is an ontological verdancy, a fertile and sometimes haunting space where uncertainty is the main principle. It might even be said that sound has the ability to amplify ontological

gaps, and thus to disrupt the politics of static states by invoking an alternate reality that is fluid, murky, and fluctuating.

At the same time, audio drama is intimate. Whereas a game that migrates and spreads across multiple interfaces on the internet might be alienating for some, a single audio experience that takes place in less than an hour, arriving directly into the ears or into the private space of one's car, is likely to be more effective at drawing those listeners in. Richard Berry and others have explored how audio producers, particularly within the rise of podcast culture, have developed an intimacy-driven aesthetics, whereby the closeness of the medium (sometimes literally reverberating in the body) and its ability to mimic close, intimate speech, become its defining qualities (Berry 2006:148). This aesthetic was famously exemplified by the radically intimate style of Sarah Koenig of the *Serial* podcast (2014), and reflects not only the technical capacities of the medium but also the sense of community that surrounded first radio, then podcasts. While radio was historically both reflective and formative of the imagined community of the nation, radio's offspring (not excluding BBC iPlayer, where *Invisible Belfast* is at the time of publication still available) extend these communities according to networks of shared interest, irrespective of location (Berry 2016:666). This multi-located positioning of the digital radio broadcast plays well against the hyperlocal-and-yet-universal Belfast constructed in both Carson's novel and the *[in]visible belfast* game, making the concept accessible not just via a new medium, but according to new cultural and social formations.

Sound also has the ability to problematise bodily boundaries, another concern of both the book and the game. While reading is visual (distancing and objectifying), hearing has a reputation for being felt and lived, *in time*; we don't feel vision as we feel sound, and while sight relies on external physical stimuli, sound has broader sensual parameters, linked more closely with touch (Schafer 2009:43). For Marshall McLuhan, the ear "is hyperaesthetic compared to the neutral eye"; the auditory sense is delicate, sensitive, involved: "[i]f we sit and talk in a dark room, words suddenly acquire new meanings and different textures. ... All those gestural qualities that the printed page strips from language come back in the dark, and on the radio" (McLuhan, 1964:303). For radio, because the auditory experience happens 'live' or is at least a paced and continuous narrative narrative, it can produce a more intense, immediate, seemingly *living* experience than movements across web platforms might, which are often experienced as stammered, less linear and more explorative. A narrative told across web platforms and the city scape is always interrupted and this is always one of the many design constraints which shapes the narrative discourse. The pervasiveness of aural experience is effective in communicating the concept of the invisible city, thrumming not precisely *under* the surface of what is seen, but also in, around, and through it. Aural forms have the capacity to express the permeability of space and of the body by other forces, because sound itself permeates

the body in noticeable way; hertzian and wave forms can fill and vibrate the body and simultaneously broadcast on frequencies both analogue and digital outwards in global networks. There is an irony inherent in these micro-local instantiations of Belfast, as the city is also strange and global – mediated via global digital radio – even as it permeates the physical body. This models versions of reality that are contingent upon the embeddedness of the body in systems, and the attendant lack of clear bounds between the self-as-object and the surrounding environment.

An intimate ‘web of kinship’ that is evoked by the friendly, social and intimate form of radio might also tap into certain tribal sensitivities, simulating a sort of exclusive involvement specific to this medium. The effect is no less powerful for the piece being broadcast by the BBC, a cornerstone of British national identity; in the case of the *Invisible Belfast* documentary, the production is both Northern Irish and British, subject to the institutional standards and norms of the larger BBC network while actively pursuing a picture of Belfast that is local and realistic, if overlaid with a fiction (and the documentary was broadcast on both BBC Radio 4 and Radio Ulster in 2016). The remediation of an indie game to a radio programme on a major national network presents a certain matrix of problems around institutionalisation, namely the ways in which “institutions preserve forms” that may or may not suit the original concept (Levine 2015:60). Contemporary gaming, after all, emerges through digital platforms and is shaped by the politics of the internet, which are often purported to be post-national and post-genre, subverting and rejecting the cultural forms that came before, including print and radio. This is directly at odds with Carson’s novel, which is itself subversive to the politics of print and to national formations, appearing to make the game a push in the ‘right’ direction in terms of its fidelity to the ‘original’ – and also might suggest that a turn to national radio would be a step in the wrong one. But things are not so simple, of course. Radio indeed has a checkered past in Northern Ireland, as it for decades functioned within the news media as one channel by which to stir up public reaction, and to track and reproduce sectarian conflict on the ground (Rolston 1991:34).¹² The politics of radio in Ireland’s history have been continuous with tribal identification and division, a fact that complicates its ability to, even in the era of digital radio, render a ‘flat’ political landscape: the politics are embedded in the paternalistic power of the BBC name itself. But the gaming industry, too, is shaped and governed by dominant political forces in national and global contexts; and the games that result, even when they manifest formally or philosophically subversive elements, also often serve the interests of major corporations, with ARGs as no exception¹³. Furthermore, approaching the problematics of post-colonisation is undoubtedly less risky with an indie game than with a major radio network production: indie games, after all, go largely under the radar of public opinion; not so with anything broadcast on the BBC, which boasts a quarter of a million listeners weekly (Horrocks 2013).

The question is really whether any of the formal entry points (novel, game, documentary) are able to express the ethos of the concept they reference. If the game intended to simulate a system, perhaps the audio version provides a way of ‘tuning in’ to the same system. In the radio version, various planes of sound impinge upon each other over the course of the piece, creating a listening experience that is more complex than usual: as voices overlap with other voices, and as passages of the novel interrupt and emerge from dialogue, the listener is engaged in a noise-sifting project that is not unlike what one experiences when wandering through an urban space: noticing patterns, sifting data from noise but instead of turning out the overlapping stories and noise of the city, we invite the audience to tune into a curated version of it. (We might guess that this effect would be amplified if a listener was listening on a mobile device while moving through an actual city.) The narrative of the radio documentary has a clear beginning, middle and end; making it more linear than either the novel or the game. Within its limited half-hour time frame, it cannot represent as many layers or links to other places and realities, though it can gesture to them. Despite this limitation, it is extremely effective at recreating the broad aesthetic of the novel’s traversal of Belfast sites, with its real histories and concrete details. Garrett’s interviews with real people helped to achieve this. Perhaps what is most markedly missing from the audio version is the otherworldliness of the city’s layers: “I cannot help but see”, Carson writes, “bits of Belfast everywhere. Berlin, Warsaw, Tallinn, New York, to name some, have Belfast aspects [. . .]” (1997)

The real stories embedded in the fictional narrative are also effective at communicating that this project, if entertaining, is a serious one as well. It seems possible that a game (even a serious one) is not likely to be taken as seriously as a radio broadcast (even a partly fictional one) broadcast by the BBC, despite how many games take on important political and social subjects, especially the growing field of serious games.¹⁴ In *Newsgames* (2010), Bogost, Ferrari and Schweizer discuss the ways in which controversy and games interact, and the degree to which games can be seen to represent serious or ‘newsworthy’ events. They argue that, as performances of historical, newsworthy and serious subjects extend to the interactive space in more playable formats, this will also encourage “new modes of *thinking* about news in addition to new modes of production”—modes which are more active and involved (Bogost, Ferrari and Schweizer 2010:80). At least superficially, the radio version of *Invisible Belfast* may be able to address the lack of seriousness that some, rightly or wrongly, attribute to gaming in these contexts. The radio format, or more accurately, the public’s expectations of the radio format, can possibly afford a level of gravitas and worthiness, and even social realism, that the field of games studies might not (Bogost, Ferrari and Schweizer 2010:63). The problem is that the invisible Belfast concept up to this point has engaged an important dimension of playfulness, having a speculative nature, and critiquing the format and realism of news media as much as anything. This

is especially problematic, as Carson has been particularly critical of the news with his volume of poetry titled *Breaking News*, which plays with (and breaks) its formal logics (Barrios 2011:16-19). The radio version attempts to balance this by including both the fictional frame and real interviews. However, these are easy to tell apart, making this analogue to Carson's original design less effective, as we end up with competing realisms – one speculative, one based on real city Belfast stories – that never converge (Bogost 2012).

Conclusion

Elements of flat ontology feature in all three versions of the invisible Belfast concept, with varying degrees of success. What the radio version backpedals on, and indeed must do in order to appeal more broadly, is the view of Belfast as always-already post-apocalyptic, formed (like everything) of endless constructions, explosions, dissolutions, and reconstructions. Belfast cannot be 'homey' in the conventional sense and also uncanny in the OOO sense, and the radio version opts more for the former, influenced by the norms and conventions of BBC radio production and a particular understanding of its audiences. This more homey version of Belfast precludes an ontological wildness to a large degree. The game, by contrast, is involved in a deep mapping of the many possible realities of the city, reflecting the spatial turn of representation in the humanities, and equally linked to expanded applications of informatics to the literary text.¹⁵ That is, the game was intended to be a move toward the democratisation of knowledge, the flattening of epistemologies and ontologies, in line with Carson's own post-political project. It was always more concerned with void (uncertainty and verdancy) than delineations of any kind. The same cannot necessarily be said of the BBC documentary, nor is it likely that a listener would be able to fully divorce the content from the powerful institution of the BBC, which, relative to the political conflict in Northern Ireland, is not a historically neutral voice (Tierney 2015). As Bill Rolston has pointed out, those whose lives are the content of the city's history "may speak or be spoken to, but the framing is still in the hands of the programme-makers" (Rolston 2007:3). This is truest of the BBC version of the concept; it is the least true in the case of the indie game, where players had active roles in creating the narrative (even if they were not conscious of this while playing), and were encouraged to investigate the histories of the many Belfasts on their own terms. This suggests that the game, though it had the smallest audience of all three versions, had the greatest potential as a model for transformational post-conflict art. Yet the radio version still serves as a captivating and productive entry point to the storysystem. Its reach was comparatively massive, and its development informed by much the same ethos as the original, despite technical and structural constraints.

While the complexity expressed in these texts is uniquely of Belfast, it is also at the same time microcosmic of broader, global crises and transformations. These texts, and the concept that serves as a throughline, represent a new position for art to inhabit, where its composite and unique post-boom, postcolonial, post-conflict matrix of conditions has become a precedent for the broader contemporary imagination, rather than anomalous within it. This can be expressed in valuable ways across a variety of media, which are in modern convergence culture thickly interwoven. The remediated evolution of the concept discussed here is intensely post-digital: advances in technology allow us to visualise and model our networked political and creative situations more accurately, and to develop artworks which operate on similar principles. In turn we are able to unfurl the nodal issues, revealing forms of contingency and precarity that always existed. Belfast, Ireland, or indeed any 'home' in this context becomes a vulnerable space without simple boundaries, and without easy distinctions between self and other within that space – a fact sure to be as much a source of fear as of wonder. Reading art through flat ontologies and object-oriented politics is one method of favouring wonder over fear in this context; it is a movement against the violent politics of, as Morton puts it, “trying to fit a form over everything all at once.” (2016:150) Unconvinced of boundaries and irreverent of form, flat ontologies are deeply post-national, even post-political; in difficult places, they locate and generate space to play.

References

- Alexander, N. (2008) 'Deviations from the known route: writing and walking in Ciaran Carson's Belfast', *Irish Studies Review* 16 (1): 41-54.
- Barnouw, E. (1947) *Handbook of Radio Writing*. London: Little, Brown & Company.
- Barrios, D. (2011) 'Ciaran Carson's Belfast: Redrafting the Destroyed Native Space', *Nordic Irish Studies* (10): 15-33.
- Barrios, D. and A. Hook (2011) *[in]visible belfast*, digital game/ARG.
- Barrios-O'Neill, D. (2017) 'Chaotics and the Post-digital in Ciarán Carson's *Exchange Place*', *Textual Practice* 31(7): 1417-1434.
- Barrios-O'Neill, D. and A. Hook (2011) *[in]visible belfast*, digital game/ARG.
- Barrios-O'Neill, D. and A. Hook (2012) 'Jumping Between the Layers: Alternate Reality Games and Literature', in: N. Whitton and A. Mosley (eds) *Using Games to Enhance Learning and Teaching: A Beginner's Guide* pp. 178-192. London: Routledge.

- Berry, R. (2006) 'Will the iPod Kill the Radio Star? Profiling Podcasting as Radio', *Convergence* 12(2): 143-162. doi: 10.1177/1354856506066522
- Berry, R. (2016) 'Part of the Establishment: Reflecting on 10 years of Podcasting as an Audio Medium', *Convergence* 22(6) [Online] doi: 10.1177/1354856516632105.
- Benjamin, W. (1996) *Walter Benjamin: Selected Writings, Volume 1, 1913-1926* Trans. Rodney Livingstone Ed. Marcus Bullock and Michael W Jennings. Cambridge, Mass.: The Belknap, Press of Harvard University Press
- Bogost, I (2006) *Unit Operations: An Approach to Video Game Criticism*. Cambridge, MA: MIT Press.
- Bogost, I. (2012) *Alien Phenomenology, or, What it's Like to be a Thing*. Minneapolis, MN: University of Minnesota Press.
- Bogost, I., S. Ferrari and B. Schweizer (2010) *Newsgames: Journalism at Play*. Massachusetts: MIT Press.
- Bryant, L. (2009) *Principles of Onticology*
<https://larvalsubjects.wordpress.com/2009/01/31/principles-of-onticology/> [accessed 6th September 2019]
- Bryant, L. (2013) *The Democracy of Objects*. Ann Arbor, MI: Open Humanities Presslan.
- Calvino, I. (1972/1972) *Invisible Cities*. Boston, MA: Houghton Mifflin Harcourt.
- Carson, C. (1997/1997) *The Star Factory*. London: Granta.
- Carson, C. (2009) *The Pen Friend*. Belfast: Blackstaff Press.
- Carson, C. (2012) *Exchange Place* [electronic edition]. Belfast: Blackstaff Press.
- Carson, C. (2012) 'Self-contained Images and the Invisible Cities of Tokyo' in I. De Angelis (ed) *The Japanese Effect in Contemporary Irish Poetry*, pp.65-80. London: Palgrave Macmillan.
- Conspiracy for Good (2011) [website]
- Eagleton, T. (2005) *Myths of power: A Marxist study of the Brontës*. New York: Springer.
- Eliot, T.S. (1997) *The Sacred Wood: Essays on Poetry and Criticism*. London: Faber and Faber.
- Garrett, C. (2016) *Invisible Belfast*. Available on BBC iPlayer at time of publication at
<http://www.bbc.co.uk/programmes/b06z4w86>.
- Harman, G (1999). *Tool-Being: Elements in a Theory of Objects*. Dissertation, Depaul University
- Harman, G. (2010) *Towards speculative realism: Essays and lectures*. New Alresford, UK: John Hunt Publishing.
- Harman, G. (2012) 'The Well-Wrought Broken Hammer: Object-Oriented Literary Criticism', *New Literary History* 43,(2): 183-203.
- Hand, R. and M. Traynor (2011) *The Radio Drama Handbook: Audio Drama in Context and Practice*. London: Continuum.

- Hook, A (2017) 'The Game Did Not Take Place—This Is Not A Game and Blurring the Lines of Fiction', in A. Garcia and G. Niemeyer (eds) *Alternate Reality Games and the Cusp of Digital Gameplay*, pp. 56-77. New York and London: Bloomsbury.
- Hook, A., D. Barrios-O'Neill and J. Mairs Dyer (2016) 'A Transmedia Topology of "Making a Murderer"', *VIEW European Journal for Television History and Culture* 5(10): 124-139.
- Horrocks, P. (2013) 'A Quarter of a Million Tuning In', *BBC Global News* online accessed at <http://www.bbc.co.uk/news/blogs-the-editors-23032145>.
- Horton, P (1999) 'From Romantic to Postmodern: Imagining the Real in the Work of Ciaran Carson', *The Canadian Journal of Irish Studies* 25(1/2): 337-351.
- Jagoda, P., M. Gilliam, P. McDonald and A. Sparrow (2017) 'Alternate to Alternative Reality: Games as Cultural Probes', in A. Garcia and G. Niemeyer (eds) *Alternate Reality Games and the Cusp of Digital Gameplay*, pp. 31-55. New York and London: Bloomsbury.
- Jenkins, H. (2006) *Convergence Culture: Where Old and New Media Collide*. New York, NY: New York University Press.
- Levine, C. (2015) *Forms: Whole, Rhythm, Hierarchy, Network*. Princeton, NJ: Princeton University Press.
- McLuhan, M. (1964). Radio: The Tribal Drum. *AV Communication Review*, 12(2), 133-145. Retrieved from <http://www.jstor.org/stable/30217121>
- Morton, T. (2010) *The Ecological Thought*. Cambridge, MA: Harvard University Press.
- Morton, T. (2013) *Realist Magic: Objects, Ontology, Causality*. Ann Arbor, MI: Open Humanities Press.
- Morton, T. (2013) *Hyperobjects: Philosophy and Ecology after the End of the World*. Minneapolis, MN: University of Minnesota Press.
- Morton, T. (2016) *Dark Ecology*. New York, NY: Columbia University Press.
- Rolston, B. (1991) *The Media and Northern Ireland: Covering the Troubles*. London: Springer.
- Rolston, B. (2007) 'Facing Reality: The Media, the Past and Conflict Transformation in Northern Ireland', *Crime, Media, Culture* 3(3): 345-364.
- Serial (2014) WBEZ Chicago
- Schafer, M. (2009) 'I Have Never Seen a Sound', *Journal of the Canadian Acoustical Association*, 37(3): 32-34.
- Springett, (2015) 'Going Deeper or Flatter: Connecting Deep Mapping, Flat Ontologies and the Democratizing of Knowledge', *Humanities* 4(4).

Stainer, J. (2005) 'The possibility of Nonsectarian Futures: Emerging Disruptive Identities of Place in the Belfast of Ciaran Carson's *The Star Factory*', *Environment and Planning D: Society and Space* 23(3): 373-394.

Stenros, J., Holopainen, J., Waern, A., Montola, M. & Ollila, E. (2011) "Narrative Friction in Alternate Reality Games: Design Insights from Conspiracy For Good" Proceedings of the 2011 DiGRA International Conference: Think Design Play <http://www.digra.org/wp-content/uploads/digital-library/11301.54362.pdf>

Tierney, S. (2015) 'Towards a Federal United Kingdom? Lessons from America' in *Political Insight*, 6(2) 16-19.

Zyda, M. (2005) 'From Visual Simulation to Virtual Reality to Games', *Computer* 38(9): 25-32.

¹ We have previously written about the way the [in]visible belfast game was constructed, from an educational perspective; see Danielle Barrios-O'Neill and Alan Hook, "Jumping between the layers: alternate reality games and literature" in *Using Games to Enhance Learning and Teaching: a Beginner's Guide* (London: Routledge, 2012).

² Eliot's objective correlative was a concept he developed to describe a particular method by which the poet can produce an affect in the reader, through precise design of the poem and attention to how it performs as a sequence of cues. Eliot describes this as

a set of objects, a situation, a chain of events which shall be the formula of that particular emotion; such that when the external facts, which must terminate in sensory experience, are given, the emotion is immediately evoked. (Eliot 1997:97)

³In *Unit Operations* (2006) Bogost does a reading of the film *The Terminal* and argues that the film "invites" the viewer to perform a configural analysis, to understand the film as a system. (p 19) The same could easily be said of Carson's novel. For more on object-oriented modes of criticism, see Harman's *The Well-Wrought Broken Hammer: Object-Oriented Literary Criticism* (2012)

⁴This language is adopted from *Selected Writings* by Walter Benjamin and is mentioned again in Carson's novel *The Pen Friend* (2009:188).

⁵ Within OOO all things, including human and nonhuman animals are objects.

⁶Carson's text frequently "goes beyond the poststructural and beyond the postmodern, by casting texts and human beings as highly dynamic systems, paradoxically aware of our own chaotic structures. This situation is only possible in conversation with the world of communication networks."(Barrios-O'Neill, 2017:1429-1430)

⁷ OOO is a form of *speculative realism*, a loose grouping of philosophical approaches that reject Kantian parameters of reality, which are contingent on human cognition alone. Other approaches in this group include eliminative nihilism, cyber-vitalism, and speculative materialism. For more on this, see Graham Harman, *Towards Speculative Realism: Essays and Lectures* (2010) Bogost has argued that speculative realism is perhaps best achieved by games (2012:5).

⁸ The trailer had a number of sections or layers which linked together using the names of the seven sisters. There are hidden hotspot links in the [YouTube](#) video that lead to seven additional videos that reveal layers of complexity if the players uncover them. The pace and the layers of the video increase as the player moves through the [Seven Sisters](#). The videos reveal a number of locations which become key to the narrative structure of the ARG and build momentum with layers of audio and questions.

⁹ Although the description [imagines](#) the path through the game as a straight line, this was never the case. This description is of the planned path by the author of a series of puzzle solutions, and narrative unlocks. For the player the experience is always emerging, always there but invisible and always in negotiation with the text and the worldbuilding process.

¹⁰ Bogost links systems theory and OOO using the 'unit' concept, which "finds precedent in systems theory and complexity theory, including applications in biology, cybernetics, chemical engineering, computer science, social theory, and the myriad other domains that seek to explain phenomena as the emergent effects of the autonomous actions of interrelating parts of a system." (2012:25)

¹¹ Text from the BBC website description of the programme available at <https://www.bbc.co.uk/programmes/b075t5jv>. The full description:

We all like to get lost in a book - but when Danielle, an American visitor to Belfast, stumbles upon a mysterious handwritten note in a 2nd hand copy of Ciaran Carson's novel *The Star Factory* - she finds herself on a labyrinthine journey through his prose and through the hidden side-roads and alleyways of the city.

As she searches for the elusive Irish author and poet, it soon becomes clear that there's much more to Belfast than meets the eye. This is a city that regenerates itself through layers of history and memory where the main protagonists are want to disappear at any time.

Between the adjuncts and intervening avenues of Belfast and Carson's narrative, Danielle realises she can't read the city like a book as it will always exceed the confines of the pages...

¹² The role of radio in stoking conflict has been well documented in Rwanda, Bosnia and elsewhere; as a result, "the modernization and professionalization of the media are often essential elements of reconstruction in war-torn societies." Rolston (2007:344).

¹³ Larger scale ARGs are often used as promotional or marketing activities for large brands. Even the example of *Conspiracy for Good* used in this article was sponsored by the brand Nokia to showcase its new mobile technology and functions of the latest version of its smart phone.

¹⁴ *Serious games* are a growing category of games that take on real social issues, often with the goal of cultivating real-world impacts. Bypassing the simplistic fallacy of games you can win, serious games often attempt to avoid the reductiveness of 'winning' or 'losing' and present reality in more cyclical and systemic ways. Serious games often seek to obfuscate differentiation between the realm of the real and the game-world, allowing the problematics of the real world to become a kind of immersive experience

¹⁵ We borrow 'deep mapping' from Selina Springett, who examines this practice of as a consciously performative act connected with the 'flattening' of knowledge systems (2015).