

Teaching Ciaran Carson: Classroom Approaches to the Post-Digital, Conflict-Zone Text

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In recent decades, Belfast writer Ciaran Carson has emerged as one of the most inventive of contemporary literary voices, in part for his unique style of textualising space. Carson's programmer mode of creating worlds, and hacker style of destroying and remaking them, is both fitting and visionary for our time; his evolving database of works crosses and comprises texts, genres, languages, politico-geographic territories and whole communications paradigms to express what is beautiful, and frightening, in our human networks. Carson is archetypal of textual practices of the *post-digital*, a phrase that has been used to describe both the literary practices developing since digital, enabled by technological developments in computing and informatics, as well as the resulting cultural and social formations around these.ⁱ A writer of acclaimed novels and poetry collections including *Belfast Confetti* (1989), *First Language* (1993), *The Star Factory* (1997) and *Exchange Place* (2012), Carson is known for texts that zig-zag around conventional methods of writing and speaking to provide alternative ways in: his books offer noisy, systematic renderings of modern consciousness, having traced a technological evolution of language through twenty-nine volumes over four decades. In his writing, inner and outer spaces are prolix, densely embedded with cross-dimensional relationship, littered with fractal alcoves and hiding places that typify our contemporary post-digital experience.ⁱⁱ Driven in some ways by the very specific technological challenges of the conflict zone of Troubles-era Belfast, Carson's poetry and prose are marked by what we might describe as tech-paranoia—but, in a constructive poetic answer, his texts create new logics for using tech materials, machines, and high-tech spaces in ways that privilege creativity. At the same time, from within the unique zone of Belfast, Carson's texts forge integrated and universal identity formations, through processes of translation and mediation within his texts; here the concept of regional and national identities, deeply involved with the technologies used to express and frame them, are absented in favour of rich, complex interdependencies within his texts. It's no coincidence, notes literary and technology theorist Katherine Hayles, that “the condition of virtuality is most pervasive and advanced” where centres of power are most concentrated, and conflicted intersections most frequently occur.ⁱⁱⁱ Carson's oeuvre illustrates the point, employing the technology of the printed page to simulate and process the zone of conflict in new, post-digital ways.

This paper poses Carson's texts as ideal for exploring issues that connect regional identities, technology and the arts—including highly topical issues around terrorism and nationhood—that are highly relevant for contemporary students of literature.^{iv} The game-like structures of Carson's texts are central to this; for a casual reader, Carson's writing fully lends itself to a playful reading, rife with links and connections, constellations of images and phrases, diversions from closure, hints and clues, catalogues and lists that resemble puzzles.^v As modes of acting in the world and making meaning with language, Carson routinely points to the labyrinth and the maze—game-like spaces—as ideal forms.

Indeed much of Carson's poetics across his writing career has had an indeterminate formal quality whereby form is a provision and provocation for inventing new latitudes and spaces within its grammar, a possibility space that is obviously playful.^{vi} Carson himself has even referred to his texts as games; *Belfast Confetti*, for example, he intentionally structured as "a kind of pin-ball machine narrative", where the reader can choose her own path through the text, and any part of the text might refer to many others.^{vii} I'll propose considerations and contexts for teaching Carson's game-like, post-digital text relative to broader movements in literary studies, digital humanities, media studies, and postcolonial studies; this includes methods for practical and theoretical engagement in the classroom, and openings where literature educators can build on activities already tried. This approach links literary poetics directly to forms of networked media and emerging technology practices, with the conviction that understanding these links is valuable for humanities scholars and educators alike. By using Carson's print-born, informatics-heavy text as a point of focus, I hope to highlight the many ways in which print-born literature, within the larger project of making, teaching, and analysing the literary, is now deeply involved with the contemporary informatics-embedded landscape—of which Carson's text is both illustrative and exemplary.

In recent games theory, there is a general consensus that a few crucial things are required in order to classify something as a game: rules, feedback, goals, voluntary participation; some also include features like uncertainty, fictionality, and decision-making.^{viii} As such, the term "game" can be applied to a wide variety of playful structures, from hide-and-seek to *Tomb Raider*. But regardless of where and how they might be played, game structures serve to set a scene for creative problem-solving, imposing a temporary virtual reality in which there are new constraints to be considered. The game space becomes a space for making calculations, developing strategies, trying solutions, and taking risks.^{ix} This kind of suspended, virtual imaginative space is something that games and literature share. The created world within the literary text can operate in much the same way as a game space: in traditional fictional narrative, for example, a reader is likely to experience a simulation of constraints, obstacles and goals as she identifies with a protagonist upon whom these elements are imposed. In more recent narratives, mostly arriving since about the 1960s—coincident with the arrival of the computing age—simulation has been replaced in various ways by enactment of these same elements. From Vladimir Nabokov's *Pale Fire* to the famous *Choose Your Own Adventure* series to Mark Z. Danielewski's *House of Leaves* to Carson's *Star Factory*, literary works have become increasingly like games, with reading processes becoming more meaningfully interactive for the reader. While the postmodern literary text invites reflection on intra- and intertextual connectivity almost as a rule, these texts go much farther, veering away from the intellectualization of readerly construction, and toward a more active, suggestively concrete kind of play.

On the surface, the goal of Carson's game-text appears defined by the structure of each book or poem, the imperative to get from the first line to the last, as with most books. But beyond and

beneath this imperative, each text has its own set of goals which are likely to be multiple and murky. His prose works, for instance—*The Star Factory*, *Fishing for Amber*, *The Pen Friend*, *Exchange Place*—present less-than-straightforward mysteries that the reader might play a part in solving. In *Exchange Place* there is a mystery of a missing notebook and a mysterious stranger; in *The Pen Friend*, it's a less obvious search for an ex-lover in the pages of personal letters; in *The Star Factory*, it's an even less obvious search for, perhaps, the heart of Belfast, by a dreamlike scanning of city locations. In Carson's game-like virtual realities, space and time don't operate in the usual ways. Game obstacles take the form of textual clutter ("The gate that is a broken bed") and syntactic complexity, and there is always lack of clear distinction between location and clutter, between spatial pattern and what could be described as spatial noise. Game feedback arrives in the form of clues that pan out and pathways that don't: signs of progress toward revealing a truth, bomb-blasts and security guards that stop us in our tracks, where "alleyways and side-streets [are] blocked with stops and colons."^x

In his influential theory of *procedural rhetoric* (a phrase he uses to describe the ways in which games make arguments) Bogost holds that, in games, meaning derives from interaction: a game player experiences virtual or real actions, and then the subsequent effects of those actions. By interacting with the game elements—rules, goals, obstacles, feedback—in such a way that outcomes are influenced, the player produces knowledge. Bogost and others have argued that active knowledge production (as compared with passive experiences of media such as television) can be potent in communicating information and arousing emotion. Where watching something engages us only passively, playing is active, and builds knowledge *in the body*.^{xi} Interestingly, much like contemporary video games, the dynamics and themes of Carson's text converge routinely on the construction and representation of space, where space is defined both through continuous movement across virtual-geographic locations, and through the use of a variety of perspectives. As in video games, Carson's books are littered with clues scattered across landscapes, which the reader (player?) experiences via largely disembodied, cinematic views.^{xii} And the rules and features of Carson's game often change, "as the old chess master cannot say if ever he learned / the same, since each new game blossoms with new constellations...."^{xiii} That is, Carson toys with a wide variety of textual and non-textual registers, from sonnet to mystery novel to traditional music to string of DNA, enacting or evoking all of the above; he can convincingly present the reality of the city as a complicated model aircraft kit and as a mutating virus in the same paragraph.^{xiv} Simultaneously, every form or register is also a platform to build: he embeds such a dense network of associational links that the register itself can never be taken at face value, as its contents always conspicuously point elsewhere.^{xv} Within the combined structure and freedom of the "pin-ball machine narrative", a player/reader has the agency to build the story—stories that can span multiple texts—rather than simply having it told.

The crossover between how such procedures operate in games and how this has come to operate in other areas of the arts, has been a subject of some critical attention. Espen J. Aarseth has

coined the phrase *ergodic literature* to describe literary texts that are consciously reflexive with systems and processes native to the computing age, where the aesthetic value of repetition, linking and nodal networks represents an alternative to narrative, one akin to simulation. The ergodic text privileges “active experimentation, rather than observation, of ... subject material” as a means of communicating knowledge and experience. The result is a dynamic, active literary experience.^{xvi} This kind of experience has educational value, as the strategic presentation of information through interaction is shown to clarify “patterns of value, relationships and trends ... reducing cognitive workload” and triggering emotional responses linked to experience, provoking empathy rather than evoking sympathy.^{xvii} That is, to borrow from Gunther Kress in his work on multimodal literacies, the formal changes of the literary medium, now in more or less direct conversation with new digital literacies, produce a different literary experience, cognitively and affectively.^{xviii} These differences are conversant with related transformations in communicative modes outside of the literary, representing a host of recent dramatic conceptual, social, cultural and political transformations in the world that students inhabit. However, unlike the information narratives received in other arenas—the news, for example—the literary text is a purposive offering up of instantiations of this evolution to be imaginatively and critically engaged, in ways that can be applied to the world beyond the classroom.^{xix}

The decade following the Good Friday Agreement in 1998, a period of relative peace in the North of Ireland, was also a time of dramatic economic improvement in the South, and both factors led to broad economic growth across the island through the early 2000s. A wave of commercial globalisation and an influx of global media accompanied the transition, bringing wider access to information technology and a growing public experience of global networks of communication, a process also occurring throughout Europe.^{xx} Between 1989 and 2000 Carson wrote dark networks into *Belfast Confetti*, created outward-bound and fantastic virtual environments in *First Language* (1993) and *The Ballad of the HMS Belfast* (1999), tested programmatic order and codes in *Letters from the Alphabet* (1995) and *Opera et Cetera* (1996), created a geometry of nested virtual worlds in *The Star Factory* (1997), and produced multifarious instantiations of all of these methods on smaller scales in other works. Carson himself has been vague in discussions of how technology, and particularly digitality, has influenced his work. In an interview with Elmer Kennedy-Andrews in 2009, asked whether and how the “new technological culture” and digital aesthetics may have influenced his poetry, Carson responded, “I don’t think about it that much.” Interestingly Carson has spoken about Google in interviews, linking his use of it to his penchant for (re)search, and noting how time he once spent wandering in libraries has been gradually replaced by “wandering in hyperspace. Looking for whatever might crop up between the lines, whether it’s information or disinformation.”^{xxi} But this answer is anything but complete, as with Carson there is also always much happening between the lines, whether information or disinformation.^{xxii}

Carson's text is interesting and useful in being rather an exception to the understood rule that technically cutting-edge works come from highly wired, urban centres; at the same time, he shows how a writer may react against the ubiquity of the wired while at the same time adopting many of its attitudes, structures and stylistic principles. Drawing upon innovative contemporary approaches to humanities education, I will propose a series of considerations and ideas for teaching Carson's poetry and prose in the humanities classroom, placing his writing in such non-traditional literary frames as "Terrorism" and "Immersive Media". I will draw out ways in which his text can be employed in classroom conversations on some of the most pressing questions we face now, including issues of terrorism, our digital lives, and the future of the human. Interactive tools for instruction are likely to hold special potential for teaching Carson and other post-digital writers, as they invite collective and systems-enhanced approaches to understanding contemporary writing; central to an argument for what might be called post-digital pedagogy is the reality that people under 40 increasingly demonstrate a desire to engage in dynamic informational environments that require active, playful contribution, and have the potential to enhance learning in ways that suit the future of our arts and technologies both.^{xxiii} Though my focus is on Carson, the approaches here undoubtedly will have many possible parallels with similar approaches that could be developed for other writers. I'll explore in particular how literary texts can provide game-like areas for critical educational play, where interpretations can be mapped across works, links can be followed, questions can lead on to questions; in these ways and others, the structure of Carson's text, which can conceivably be entered from anywhere, is highly accessible. In this approach to Carson and post-digital education more broadly, interaction is central to meaning; the strategies described here are curated with that in mind.^{xxiv}

Chronologically, with his writing career beginning in the 1970s, Carson's body of work sits relatively comfortably in the postmodern era; this is supported by the ways in which his post-digital methods represent a set of technological, social and economic evolutions specific to postmodern, technologically advanced societies.^{xxv} There is a major philosophical and technical link between the postmodern and the post-digital in the development of the internet, in that both support the (theoretical) inclusion of every voice which has been elided in other, dominant narratives; Carson's voice, as a writer from a disadvantaged group in a conflicted territory, fits neatly within this framework. That is, where a curriculum is divided by chronology or region, Carson falls most obviously beneath postmodernism, Irish and British literatures, and comes easily into conversation with contemporary technologies and cultural topics. In certain contexts it makes sense to place Carson in the category of Modern Irish literature, where Irish postmodernism arrives very differently to, for example, American postmodernism. Here Carson becomes a fascinating case for examining how and why Irish postmodernism is different (Why focus on the technologies of bombs and pens instead of computers in *Belfast Confetti*? Why integrate pre-modern Irish language sounds and structures into the poems of *The Irish for No*?) Also, as numerous critics have argued, the textual dynamics associated with electronic media are not contained neatly within the postmodern, nor do they neatly

follow it, but have roots in modernism.^{xxvi} Carson can be taught alongside particularly American modernists to demonstrate the cross-fertilization between American/Irish and between information ages: by using networked poetics to open up of fracture lines in the text, creating vast multi-scalar environments in the style of Hart Crane and Gertrude Stein, consciously borrowing formal elements from William Carlos Williams, and demonstrating in a number of ways how modernism and postmodernism are continuous—how one information age led to the other.^{xxvii}

Post-Digital Literature and Terrorism

In the context of literature about terrorism and conflict, Carson's works are incredibly unique and highly effective in stimulating discussion, and it is in this context that I most often introduce his works. Mass-mediatised events of mass public violence since 2001 have effectively, as Delillo predicted, marked "the actual beginning of the twenty-first century in terms of a shared global experience."^{xxviii} As a result, cultural literacy for young people now necessarily includes discourses on violence and terror, particularly relative to the media. For students coming through universities, 9/11 will likely be the first major international event that they can remember, and the majority of what our students know about terrorism will be what they have seen in the popular media after 9/11 (coverage that has had a particularly reductionist flavour).^{xxix} One of the more relevant and perhaps obvious ways in which Carson's work can be integrated into the curriculum from middle grades onwards is in discussions of the how terrorism is represented in the media, and what the role of the arts and literature might be relative to these representations. An important function of the post-violence literary work is to counter the damaging and reductive, us-versus-them, sometimes East-versus-West mentality that can prevail in popular culture and the popular media. Engaging students with texts that can represent the complexities—personal, situational, political, geographic, historical—of terrorism, violence and warfare is likely to be increasingly important, as cultural divisions across the globe seem to be coming more pronounced.

Most of Carson's major works were written during the Troubles, a span of nearly thirty years of intense sectarian violence, with Belfast frequently the site of its worst atrocities.^{xxx} Residing in Belfast for the duration, Carson composed some of his most compelling works from within that highly technologised fray, and his writing is rife with its debris: guns, bombs, wire-taps, the ratcheting of gears, deep anxieties of constant surveillance as well as ambivalences concerning personal implication, identity, loyalty. "Keeping people out and keeping people in," he writes in a poem titled "Intelligence", "we are prisoners or officers in Bentham's Panopticon".^{xxxi} *Belfast Confetti* (1989), Carson's much-lauded third volume of poems, depicts in snapshot moments the entrapment and fracture of the conflict zone; this is where, through layers of network, Carson begins "to piece together the exploded fragments" of home and the bomb-blasted psyche in the wake of civil unrest.^{xxxii} Carson's works are well suited to classroom discussions of the contexts and manifestations

of terrorism, not least because, while featuring and in many ways managing violent acts within the text, he does not sublimate violent acts to symbolism alone, nor does he simplify these acts within political metanarratives. Instead, Carson draws out their complexity with rich metaphor and unresolved poetry and prose, amplifying their significance by making a multitude of connections among moments of violence around the world and throughout history. His volume of short, accessible poems titled *Breaking News* is a good place to begin: in this, Carson's narrators speak emphatically and often tersely from the fray; in this volume Carson's style and themes are influenced by forms of event reporting—print, radio, and conversation—each as a departure point for examining the evolution of communications technologies. These poems capitalise on the conventions and politics of news media but rarely make a discernable statement; demonstration and performance are essential to these poems that imitate and sometimes grimly parody the news. Most comprise short, irregular lines that mimic the fragmented nature of the event report, a medium that is, for Carson, severe in its economy. In the poem “War” for example

Sergeant Talbot

had his head

swept off

by a

round-shot

The staccato, shots-fired starkness of news speak is part of the narrative: the severity of Carson's line breaks and the cold detachment of reportage eradicate the humanity in the poem more effectively than the reported gunfire. Throughout *Breaking News* (2003), material events of conflict and mediated events of conflict reporting contend for historical authority: for Carson war is an unsettlingly atonal arrangement of culturally-loaded artefacts and vectors of information exchange. With dark cadences we walk “the road / from Sevastopol / with boots / that lack feet” or navigate amid “Armenians and Arabs, British riflemen // ... sappers, miners, Nubian slaves, Greek money-changers, / plus interpreters who do not know the lingo [...]”^{xxxiii} Carson privileges always, in the way of Bakhtinian dialogue, “hybridity, flexibility, a willingness to engage conflicts at issue without seeking resolution, a resistance to closure, a distrust of single responses, and a keen sense of the ‘otherness’ of a past that is nonetheless not alien.”^{xxxiv}

Carson's text in this case provides an occasion to interrogate and counter the way violence and terror are covered by the mainstream media, as well as to reflect on how digital media paradigms disrupt this. Where the popular visual and linguistic rhetorics of terror have the potential to oversimplify its implications, and to potentially dull political acuity and empathy, Carson's text

evokes political violence in many instantiations via a nuanced, emotionally complex matrix of terms that is also sensitive to, but not defined by, the rhetorics of other media.^{xxxv} By intentionally echoing Russell's reports in *Breaking News*, for example, Carson gives a highly evocative rendering of the relationship between reportage and public attitudes toward war and violence.^{xxxvi} Comparing this to the more proto-digital modes in his novel *The Star Factory*, offers interesting potentialities for discussing the changing ways in which violence is represented, and understood, relative to popular media. This kind of approach answers what Katherine Hayles describes as “the need for pedagogical strategies that recognize the strengths and limitations of each cognitive mode” (new media/old media) and “underscore the necessity of building bridges between them”; the bridges, in this instance, are literary.^{xxxvii}

In my undergraduate English classroom I asked students to consider how the representations of violence in poems from *Breaking News* reflect and interrogate the way violence is reported in the news. In small groups, students examined text *Breaking News* and *The Star Factory*, and were asked to compare these with historical and contemporary newsspeak in terms of various aesthetic and formal elements: language, imagery, rhythms, sentence/line length. To assist, I handed out copies of Russell's 1854 dispatch on the Crimean War (the same report that inspired Alfred Lord Tennyson's “The Charge of the Light Brigade”) and printed articles on recent terroristic events taken from *The Guardian*, *Reuters*, the *Daily Mail*, and Twitter. The discussion that followed was largely focused on how poetry's power lies very much in its capacity for being suggestive: how the literary can represent with subtlety, where the (contemporary) news aims for clarity at best, sensationalism at worst. At the same time, the poems were able to evoke greater emotion from some students, and it was suggested that most people are desensitized to the news, where it is more difficult to feel insensitive to a poem. Carson's biographical context was important, as students engaged (in their small group conversations particularly) with the parallels between the situation of violence in Northern Ireland—about which Carson was not ostensibly writing—and situations of violence in other places and other historical moments. Engaging with issues around reportage, linked intrinsically to the politics of news media and economies of attention, students explored their own experiences of violence through the media. Most seemed to agree that a certain amount of background “terror” is now normal, though reading the poetry and prose alongside served to defamiliarize violence in a way that made its effects more keenly felt. We discussed the ways in which Carson's poems are both interrogative of representations of violence in the news media, and indeterminate, leaving the sources and outcomes of violence as open questions.

Many of Carson's works provide opportunities to explore how violent events might be processed in public and private spheres, and the role that media play in this. In *Exchange Place*, the role of the narrator's notebook is central: looking for the notebook provides the main impetus of the action of the plot. So throughout this labyrinthine novel, processes of personal record-keeping are presented in complex tensions with public historical records of violence, demonstrating large gaps

between the two.^{xxxviii} To explore this set of issues in the classroom, I asked undergraduates to keep undergraduates to keep a paper-based notebook as they worked through the novel, writing daily entries responding to questions tapping into the themes of the novel: for instance, how the form of the paper-based journal is different materially, psychologically, and semiotically from the logging platforms of social media, and questions on the nature of reportage in public vs private fora. Students also wrote an entry comparing passages from *Exchange Place* (specifically ones depicting terroristic events) with reports of terroristic events from the Global Terrorism Database (GTD), to compare aims, implications and impacts of these diverse records.^{xxxix} This comparative multimodal approach was designed to engage students with not just the historical and cultural embeddedness of particular media paradigms, but also to reflect on how they as writers/reporters can and do contribute to public constructions of history, and to consider the potentialities of taking conscious and active roles, as well as fielding ethical concerns around citizen journalism and social sharing. As they developed increasingly reflective arguments around the cultural processes of logging/reportage, students were also developing multi-literate critical citizenship as part of a linked reading and writing community.^{xl}

Textual Networks

One gets the sense, from what Carson chooses to write about—which includes the industrial histories of Belfast, libraries, printed books, written notebooks, and many, many objects—that the actual electronic accoutrements of the digital age are far less interesting than the formal affordances of networks. Things we might describe as high-tech don't usually feature in his writing; a dated references might occasionally appear with mildly negative connotations, as here:

When I hear the word BlackBerry I still think of the tangle of blackberry Berries that stain the hands and the lips. You won't find me on Facebook, and I don't do much email, though I find the internet useful for all kinds of research. I deal mainly by word of mouth and I like to meet my clients face to face, whether in public or private places.^{xli}

Although this is a passage from *Exchange Place*, having met Carson a handful of times, I gather that this is the sort of thing he would say. I can attest that he is slow at returning email and very gracious when meeting face to face. And despite the fact that Carson has integrated the dynamics of the internet into his poetics, I somehow doubt he carries a smartphone. At the same time, we can read in his poetry and prose that he doesn't resist the inevitable convergence of humans and our technologies, the cost nor the adventure of it: he is not a traditionalist, nor is he a technophile. Rather, the teeming sensorium of the network—the adventure of our new technological forms—is located for Carson not in gadgets but in the shape of knowledge they allow us to create.^{xlii}

With the influence of networks so prevalent in Carson's writing, it's interesting to situate his work not just within a literary nexus but within a nexus of broader media formats. In this his work becomes useful for drawing out questions of genre, and even the nature of textuality, for students beginning to place literature within wider a world of discourse. "In our electric age of instant and non-visual forms of interrelation," McLuhan wrote in 1962, "... we find ourselves at a loss to define the 'rational,' if only because we never noticed whence it came in the first place."^{xliii} The "rational" McLuhan indicates is typographic rationality, the system of reason imposed by the mass media via the newspaper and the novel that went on to become a seminal component of modern nationalism and the broad scale standardisation of culture. This is the very logic overturned by the digital era, and the very logic that Carson challenges in "Slate Street School":

Roll call. Then inside: chalk dust and iced milk, the smell of watered ink.
Roods, perches, acres, ounces, pounds, tons, weighed imponderably in the darkening
Air. We had chanted the twelve-times table for the twelfth or thirteenth time
When it began to snow. Chalky numerals shimmered down; we crowded to the window –
These are the countless souls of purgatory, whose numbers constantly diminish
And increase; ...
And I am the avenging Archangel, stooping over mills and factories and barracks.
I will bury the dark city of Belfast forever under snow: inches, feet, yards, chains, miles.^{xliv}

Carson's works are almost obsessively consistent in certain aspects of order, cycle, refraction and return, a feature of his writing that can operate on a variety of imaginative scales. In the poem above, the young boy fantasises about dramatic liberation of the "souls of Purgatory" from the bounds of measurable time; between the administered moments, however, the language of the poem provides quieter ways out, linking to other poems in the volume that the reader can follow at will. The "iced milk" links to a pitcher of milk in "Dresden," or an electric milk float in "Whatever Sleep It Is"; "watered ink" links to an "ink-dark sky" in "Whatever Sleep," or the "indelible ink of Dublin September 1944" in "August 1969"; the shimmering snow is also the avalanche in "Whatever Sleep," and the rain of exclamation marks in "Belfast Confetti"; the window, the "pane of glass" in "Whatever Sleep," the "Broken glass" in "Campaign," and the "bricked-in windows" of "Asylum."^{xlv} The layered, associatively-linked vectors of Carson's poems evoke an abstract structure not unlike Jorge Luis Borges's "Garden of Forking Paths," the first well-known description of a hypertext novel that can be read in multiple ways. An underlying suggestion, for Borges and for Carson, is the possibility of a virtual or actual universe in which many, or all, realities are possible.^{xlvi}

Quick and unceremonious shifts within Carson's text—shifts in style, aesthetic, orientation, location—emphasise the provisionality and hybridity of the medium in which a textual event occurs, providing opportunities to explore with students the experience of narrative and poetics relative to

textual form. The text is at points cerebral, or full of exquisite material detail, or so rapid-fire that it invites us to imbibe and forget multiple impressions as we move through the text, where content is subverted to rhythm; the fractal experience of Carson's images, repetitions and rhythms blur the boundaries between his works and confound the reader's sense of certainty (is this pitcher of milk the same one from "Whatever Sleep It Is"? or was that "Dresden"? or am I thinking of the "iced milk" from some other poem?).^{xlvii} In inviting readers to make networks of connections, Carson's text is procedural in the manner of video game narratives; in his immersive environments we often feel we are gathering scattered fragments to "solve" the text, that we are active within it, that we are moving in a textual world. This immersive quality invites productive links from literature to other media forms, not just video games of course but also table top games, crime podcasts, documentary films. Placing Carson alongside texts in other media, and including his text in discussions of concepts such as virtual reality and collective intelligence, students can explore the ways in which the blurring of frames enables new kinds of creative experiences.^{xlviii}

You might explore these issues with the novel *Shamrock Tea* (2001), for example, a book whose magic realism continually obfuscates boundaries between real and unreal experiences. Carson's third book of prose, *Shamrock Tea* contextualises an ever-growing network of communication paradigms among historical events, real places, and tellable histories. The narrative begins, "On 20 July 1434, at the hours of tierce as told by the great Belfry of Bruges, in Flanders, two green-skinned twin children – a boy and a girl of about thirteen – materialised from a storm-grating in a town square [...]" From here the book builds a tale that is interspersed with connections to other tales, and other travels, those of pilgrims, wanderers, and visitors throughout history and fiction.^{xlix} *Shamrock Tea* opts for the tone, variously as always, of a travel guide through a postmodern Flanders (not unlike the magical-realist tone of Douglas Adams's *Hitchhiker's Guide to the Galaxy*), where it becomes impossible "to discriminate between dimensions. "It is helpful", the narrator advises, "in one's meditations, to think of each image, or station, as a drawer in an extensive cabinet: for then one can, in the future, mentally open each compartment [...]" Thus the past and future meet."¹ *Shamrock Tea* is a novel easily accessible for high school students; with first-year undergraduates, I used this text as a focal point for students to challenge textual boundaries, explore textual networks, and augment these networks with new texts of their own.

In a multimodal writing assignment, students were challenged to produce a responsive or supporting text for *Shamrock Tea* that moved across platforms, using links (much as we move through Carson's text): for example, the essay could begin in a Google doc, move to an Instagram feed, then onto a Twitter stream, then back to the Google doc. The guidance for choosing platforms was simple: they had to use at least two platforms, the platforms had to be readily accessible online so that we could all view the piece, and the student should choose platforms well suited to the thesis of the piece (for instance, if visual evidence is useful, Instagram is a better platform to use than Soundcloud). Otherwise I left the structural guidelines open, with the caveat that students should consider their

essay as a performance related to Carson's novel, a creative paratext: it should work *with* the novel, responding or orienting us as readers in some way. I requested materials like original or augmented maps, hyperlinked wikis, and curations of useful historical content using platforms like Instagram and Popplet.^{li}

On one hand, students responded well to the assignment because they were being asked to do something they natively do, every day—to be a *prosumer*, to create content.^{lii} But, for the same reason, some students didn't immediately view it as an interesting way to engage a text; creating online content about books isn't a new idea, and while the less tech-savvy were slightly confused about how to proceed, the more tech-savvy (the majority) didn't initially perceive a challenge at all. The benefits came when we explored the variety of paratexts together in class, thanks to the sheer variety of approaches. One student created an interactive map, tagging lines of the novel to significant points on Google maps, where each tag then linked to a Flickr search of images of the geographic point to which it was tagged. Another student transcribed a page of Carson's novel and hyperlinked numerous words and phrases, linking them to existing internet sites that provided interesting, often unexpected context for the word or phrase. As we explored the variety of new arrangements of and around the original text, this opened up fertile discussion about the integrity of textual boundaries in the digital age. In this era of always-on, active co-production and circular forms of authorship, students are always invited, in a sense, to be proactive within textual environments, displacing a more traditional classroom structured around the authority of the teacher, author and primary text.^{liii} Paratextual production also becomes an interesting way to bring up issues around epistemology and constructive modes of analysis: in other words, whether presumption is a valid method for better understanding a text.^{liv} In this case, most students felt that it was; this is possibly because *Shamrock Tea*, like most of Carson's books, are patently constructed as textual networks themselves, upending the idea of the "original" almost as a rule, making these ideal textual environments in which to challenge the roles of reader, author and critic.

In this spirit of collaborative pro-sumption, in 2011 I collaborated on a multiplatform version of Carson's novel *The Star Factory*, which took the form of a game called *[in]visible Belfast*. This was a game made to be played both online and in the real city of Belfast, to make the city a classroom, so to speak, and designed to evoke—through a combination of various media, including websites, e-mail, postal mail, radio, graffiti, dead drop, and live events—the many intersecting layers of Carson's haunting and ambient novel.^{lv} Alternate reality games, or ARGs, are a still-emerging form of interactive narrative, sometimes used in pedagogical contexts, which uses the real world as one platform in telling the story. Uniquely, because the narrative of an ARG depends substantially on what players do, the outcome is never a foregone conclusion (which means our ARG was never going to be an adaptation, but rather a paratext). *[in]visible belfast* included coordination between online interfaces and real-time events, asking players (including students from University of Ulster and Queen's University Belfast, as well as participants of the concurrently-running Belfast Book Festival)

to follow trails of clues that led back and forth between online and offline environments. There were also players participating from around the world, via an email-driven clue delivery system that kept them apprised of the live events happening on the ground in Belfast. The concept of an ARG is embedded with a particular ethos that values collaborative problem-solving and distributed thinking, translation and transference of meaning, surveillance and movement within spaces, cryptography and pervasive sign systems, real world objects and materiality, and the concept of serious play—all elements that aligned the form especially well with Carson’s body of work.

It also aligns well with critical enquiry into the structures and culture of modern media. The ARG is a non-traditional and nonlinear medium, with many interweaving narratives rather than a single arc; it relies on improvisation and constantly attendance to possibility; it disrupts ideas of authority (for example, the authority of game designer) and requires players to co-design their experience through action and involvement in real environments (in this case, the real environment of Belfast). An ARG is, in other words, a “game that builds a story.”^{lvi} ARGs can be created on small scales or large ones, from the mini-ARG designed by an instructor or student to be played in a single class session, to the large multiplayer ARG designed by a class and played for a week on campus, or in a museum, or in a park or city, by anyone and everyone. Besides being fun, the ARG format is excellent fodder for class discussions on remediation, authorial ownership and intention, interaction, new narrative formats and post-digital literature, providing a fascinating opportunity for students to open the text out onto the world and see what happens. In the case of *[in]visible belfast*, this unpredictable quality meant that the task for designers (including myself) was demanding, as it often relied on human input rather than automation or algorithms. However, this made the experience entirely unique for participants, where the outcomes had everything to do with the passionate engagement of a core team of fifty or so players who spotted holes, uncovered clues, searched the actual city, met up with each other for live events, created wikis to share information, circulated updates to those in other locations, and tracked the narrative across numerous platforms.^{lvii} This game was produced as part of a festival with a small budget attached, but this kind of game—or any kind of playable text—are not difficult to produce on small scales: semi-fictional orienteering exercises can be organised in spaces on campus or in an urban space, for example, inviting students to explore the themes of the literature outside of the text; a text could be mapped as a walking adventure or a scavenger hunt, asking students to make connections between the textual or literary experience and the experience of real space; textual clues can be hidden across internet platforms without too much trouble. The embeddedness of the game in the environment produces a special kind of immersion, where text and reality merge into a single, unified, active experience of learning.^{lviii}

In both the paratextual classroom activity and the ARG, participants were asked to consider the way we treat these virtual realities and their potential impact off-screen and outside the confines of the book (or game), focusing on ways in which these distinct worlds are perhaps not as distinct as we would like to think.^{lix} Perhaps it’s especially evident when studying transforming zones of

consciousness, like Belfast, that assuming clear divisions of any kind is usually assuming too much; as Tessa Morris-Suzuki writes,

when I walk down the road with a machine gun in my hands to exact revenge on the people of the next village, because I have heard my grandfather's story of the past but not theirs, I step across the limits of the notion that history is merely narrative. I also step across the same limits if, without wielding a gun, I neither care nor act when disaster overtakes the people of the next village, because I have heard only my grandfather's story, and believe that they are mass murderers who deserve no sympathy... We are implicated in the events of the past because we live within the institutions, beliefs and structures that the past has created... The knowledge of history we have absorbed consciously or unconsciously through a host of media determines who we feel sympathy for, which contemporary events stir us to joy, compassion or anger, and how we respond to those events.^{lx}

Students can be invited to consider the role of textuality, virtuality, and immersion relative to history, violence, and empathy—and also play, including the nature of role-play. Can stepping into the mind or world of someone “in the next village”, whether through a book or game, change how we interact in the world? Games and other post-digital media are different from television, for instance, because we can choose to be a part of the action and to understand ourselves as such, because they make invitations or even demands to immersion. Interactive or immersive literature is not just literature adapted to new devices, but includes the textual practices that enact immersion even without new devices, practices that were already native to the literary text, and yet whose trajectories have altered since the arrival of the digital. Students of Carson can explore possibilities for being an active participant in the text, and how this might change our understanding of the history and future of literature.

Posthumanism

The humanities have undergone a radical change in the last two decades, a component of which has been the emergence of posthumanism as a major force in critical discourse. We traditionally conceive of human being as comprised in a single individual, one who has free will and discrete identity, who is capable of having individual thoughts and ideas, and taking consequent action in the world. Now we have a lot of machinery—laptops and iPhones and Instagram and 3D imaging and microwaves and prosthetic limbs and 3D printers—mixed into our humanness. These aren't just tools anymore. They have literally changed our brains. As a result, personhood itself--how we define what it means to be human, or not--is also changing. However, the appearance of posthumanism in the literature classroom is likely hindered by our traditionally humanist approach to the arts, as well as by the fact

that “new” texts—texts for which a posthumanist approach might be a more obvious option—are less likely to have made it onto reading lists.

To introduce students to posthumanism in literature, Carson is a good place to start. His network-texts complicate the boundaries of individual consciousness and individual texts to borrow, repeat, collect, translate, digress, shift, play, merge—a web of interlinking voices fill the many rooms of narrative, performing collectivity.^{lxvi} In *Exchange Place*, for example, in a sort of nested reflexivity a fictional protagonist writes of his own manuscript how “[s]ome entries are quotations from other writers, though many have no quotation marks, and sometimes I am uncertain as to whether a particular entry is my own work, or the work of another, or an amalgam of the two.”^{lxvii} Alex Houen gives a particularly interesting analysis of Carson’s approach to subjectivity in *The Irish for No* (1987), in which, he argues, poems “teeter vertiginously between different memories and narratives”, the subjective voice implying by its minimisation of the self-involved “I”, that “literature is just another element in a universe of discourse.”^{lxviii} Amid Carson’s characteristic noisy plurality, a “cacophony of competing and cooperating voices”, the coherent subject is deconstructed and replaced with a more posthuman subject, a representation reflective of complex interdependencies among humans, machines, and animals.^{lxix} The concept of the posthuman helps to critically ground the epistemological project in a context that challenges conventional dynamics of power, inviting, as Karin Murriss writes, young readers “to critically explore the meaning of a text on their own terms” using “reasoned, emotional and embodied engagement.”^{lxx}

In his distinctive idiosyncratic manner, Carson disrupts the human in most of his books, whether poetry or prose; he toys with, for example, the idea of *doppelgängers* and twins, of protagonists swapping identities either by chance or by design—a game that might be interpreted as Carson subverting the system, but also holds the potentially darker suggestion that identity is inconsequential.^{lxxi} Taking a decidedly non-sacred view of the human subject, Carson’s identity play seems to suggest that humanness is not tied to identity, but that identity is as transient and provisional as any other genre or construct. For students who are largely native to a world of ubiquitous and pervasive technology, Carson’s texts are likely to be legible and compelling deconstruction of the traditional textual body, national body, human body. Carson’s constant identity play seems to suggest that humanness is not tied to identity, perhaps is not even individual, but that it is transient and can be changed or destroyed in an instant. In this it is as provisional as any other category we may use to organise the world, and readings of Carson are helpful to challenging given perceptions, and transgressing normative ways of interpreting both literature and humanness.^{lxxii} *Exchange Place* in particular lends itself to an ecological posthumanist reading; in this novel ecosystems feature, their dynamics and processes often indistinct from the experiences of human being, with the formation of texts, bodies and ideas occurring via inextricable and constant flows of information. As such, readings of *Exchange Place* are fertile ground for discussions linking science and the arts, again bringing into

question the focus of creative arts once the human is displaced as the centre of the universe: can we better understand the literary, and human being, if we read them as ecological forms?^{lxviii}

To enrich contexts for this discussion, the systemic dynamics of the text and the systemic dynamics of human and animal behaviour, can be examined in a variety of ways: using text-generation apps, for example, or running a “classic” text (like *Ulysses*) through a textual analysis programme; watching a time-lapse video of a flock of starlings and another of people moving through a crowded shopping mall.^{lxix} Pairing Carson’s network-text with these kinds of contexts provides opportunities to discuss the ways in which literature is just one channel or form of information, and operates according to the same rules as other kinds of information: how different are the networks of the text and the networks of social media, for example, and to what degree do they equally challenge definitions of community or the idea of a self? If a sort of object-oriented ontology plays out in the networked text, designed to problematise and subvert human-centrism, what does this mean about the humanistic functions of literature, or language, as we have understood them up to now? And is Carson’s narrative style more accurate in its complex representation of the human condition, where the (post)human is more of an environment than an integrated being—or is it simply dystopian? Students can engage with the emergence of the literary, from the individual text to an entire literary period, as phenomenon or event arising out of particular ecosystemic processes, and begin to reconfigure the role of the author(s) relative to the dynamics of cultural patterns and collective intelligence. The topic of posthumanism is also valuable as a classroom tool in that it can engage new ways of addressing salient issues of, for example, feminism, technology, and the environment, providing new contexts for constructive social critique that engage the body and materiality as well as what we tend to think of as disembodied critical modes.^{lxx}

Taking into account the material landscape in which Carson developed as a writer, this becomes especially salient: human systems can seem abstract in their complexity and yet can be materially dangerous, as in the conflict zone. A tense continuity between those seemingly inverse elements of the human network is, of course, an ambient feature of Carson’s work. Carson interrogates the abstract view of human complexity by presenting an alternative form of access, that does not abandon embodiment even as network is a defining characteristic of being. We see this in his hunt for just the right pen in *The Pen Friend*:

Made for and presumably used by a lady’s hand, the Sheaffer sits tolerably well in mind, though I must hold myself somewhat differently, and there is only the ghost of a scratch to its nib as I write.... I wonder whose hand held this pen before me, what assignations it communicated, its jade cylinder resting on a dressing table between words, among scent bottles of pale amethyst and frosted lilac and delicate opal. It carries a perfume which is not ink alone, a residue of someone else, of chiffon scarves or coral and apple-green and lavender and faint orange billowing in the slipstream of a Duofold Mandarin Yellow open-topped

tourer, colours dappling the faces of the laughing foursome as they drive through a leafy tunnel and faint jazz music ebbs and flows down through the trees from the white ocean-liner of a house built on the cliff edge.^{lxxi}

The materiality and textures of the pen raise questions for the speaker concerning its origins: its history, its oldness or newness, its wholeness or brokenness, who owned it, where they went, what they felt, how things looked, sounded, smelled. Like the Tardis or Russian dolls, questions are knocked into questions—implying of course that the object has a story, that the object is open. The object has a life. This way of relating to objects challenges the quality of Modernity that separates the lives of people from the lives of objects, and refutes the idea that humanness is worthy of complex exploration but thingness isn't.^{lxxii} What Bogost has termed *alien phenomenology* makes the leap, agreeing in a sense with the Carsonian way of rendering scales of complexity with the help of objects: “keys, watches, fold rings, a salamander brooch, watches, gold rings, fountain pens, the porcelain arm of a doll.”^{lxxiii} With his characteristic catalogues and his careful engagement with things, Carson merges the human story often with that of objects in a way that does not, indeed, privilege the human. In *The Pen Friend* Isaac Beringer knows every thing intimately, as if it were human. “You might say they’re like people,” he tells the protagonist Gabriel, “and I remember their faces, and I have little stories for them, so one reminds me of another, the way you say so-and-so is like so-and-so.”^{lxxiv}

Perhaps a bottom line is that Carson’s deeply networked style—often described as “difficult”—is likely to be less so for younger generations, for whom the ability to sift through network-texts, and whose ways of thinking about reality, have been shaped profoundly by digitality.^{lxxv} Carson’s work in particular invites modes of active reading—using movement, exploration in real space, playing with narrative structure, creating adaptations, experimenting with virtual realities and real materialities – and as such his texts are likely to be productive and compelling in the English classroom. His writing also provides many opportunities to open up conversations about modern contexts of terrorism, the postcolonial, and the changing nature of writing after digital. Carson is one of a number of writers who can be approached in this way, and should be; the complexity of the post-digital print text is a complexity that students are well equipped to grasp, after all—perhaps even better equipped, on average, than those of us who develop the curriculum. This represents an important opportunity, as placing authors of world literature within mixed traditional and emergent theoretical frameworks will only become more important for researchers and educators as literary studies increasingly engages the digital.

ⁱ This use of the phrase post-digital is used to mean, most simply, “after digital”, though by default it shares some aspects of previous uses of the phrase, of which there have been a few. The first of these is by Roy Ascott, who has argued that [S]yncretic reality will emerge partly through the cultural coherence that intensive interconnectivity elicits, partly through the nano and quantum coherence at the base of our world-building, and through the spiritual coherence that informs the field of our multi-layered consciousness.

Roy Ascott, “Syncretic Fields: Art, Mind and the Many Realities”, Esbjerg, DK: Artificial Reality and Telexistence 17th International Conference (2007). The phrase *postdigital* has been used by Sandra Álvaro in the context of a “postdigital condition” that she relates specifically to recent such as augmented reality (AR), geopositioning devices and ubiquitous informatics. For Álvaro it is a word to describe late digital culture, distinguishing it from postmedia culture. My use of the phrase post-digital should be differentiated from this, covering a broader range of movements following the arrival of digital technologies on the cultural scene. Sandra Álvaro, “Complexity, Multi-perspectivism and Tracking: A Brief History of the Meaning of Image from the Postmedia to the Postdigital Ages”, *Technoetic Arts* 17.3 (2013): p 199-207.

ⁱⁱ Danielle Barrios-O’Neill, “Chaotics and the post-digital in Ciarán Carson’s Exchange Place.” *Textual Practice* (2016): p 1-18.

ⁱⁱⁱ N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (Chicago, IL: University of Chicago Press, 1999), p 20.

^{iv} Alex Houen gives an interesting interpretation in which Carson’s writing is a means of “re-scripting” possibilities for the history and the landscape via networks of language and poetry. *Terrorism and Modern Literature: From Joseph Conrad to Ciarán Carson* (Oxford, UK: Oxford University Press, 2002), p 271.

^v One of the more obvious gameful elements of Carson’s text is a preoccupation with puzzles and clues, though most often his puzzles are dissolved rather than solved. The text is strewn with suggestions of codes, but the eureka moment in which decoding yields a message rarely arrives. Carsonian puzzles have flawed cryptography as a rule. We might be introduced to the idea of looking for a particular key, or attempting to decode something, only to find out sooner or later that the key is not a key after all and the code is unreliable. “You might say that I am faced with a jigsaw puzzle,” says one protagonist to himself (or his reader). “But this is not a jigsaw puzzle. There are no straight edges or corners to help with the framing of the picture; and the picture or the story I am trying to piece together does not yet exist. Carson, *EP*, loc. 267.

^{vi} Hayles defines “driving isotropically” as moving in such a way that “any destination is equally probable”, a hallmark of posthuman orientation. Hayles, 1999, p 44.

^{vii} Richard Irvine, ed. *From the Small Back Room: A Festschrift for Ciarán Carson* (Belfast, UK: Netherlea Press, 2009), p 172.

^{viii} Ian Bogost, *Persuasive games: The expressive power of videogames* (Cambridge, MA: MIT Press, 2007).

^{ix} McGonigal, 2011, p 21. Bogost, 2007.

^x Carson, “Belfast Confetti”, *CP*, p 26.

^{xi} *Ibid.*, p 28.

^{xii} On game structures, see McGonigal, 2011 and Bogost, 2007.

^{xiii} Carson, “Zugzwang”, *FAWK*, p 59.

^{xiv} Carson, *TSF*, p 15.

^{xv} Frank Ormsby, “Ciarán Carson: Interviewed” in *The Linen Hall Review* 8.1 (Spring 1991): p 8-27.

^{xvi} Espen Aarseth, “Allegories of Space,” *Space Time Play* (2007), p 154.

^{xvii} Bogost, 2008. McGonigal, 2011. See also individual studies such as Joost M. Vervoort, Kasper Kok, Ron van Lammeren, and Tom Veldkamp, “Stepping into Futures: Exploring the Potential of Interactive Media for Participatory Scenarios on Social-ecological Systems” in *Futures* 42, no. 6 (2010): p 604-616.

^{xviii} In *Literacy in the New Media Age*, Gunther Kress writes,

The screens of computer (or video) games are multimodal – there is music, soundtrack, writing at times – yet overwhelmingly these screens are dominated by the mode of image. As the graphics become ever more sophisticated, the forms of reading necessary to play at least some of the games successfully become more subtle and demanding. . . . because the lexical and syntactic resources of written English are organised in this way . . . representation is always both cognitive and affective[.]

Gunther Kress, *Literacy in the New Media Age* (London: Routledge, 2003), 160, 171.

^{xix} Kress and others have argued that the paradigm shift has and will continue to profoundly affect the human, from cognitive and affective modes, to cultural and bodily engagement, to knowledge structures. See Kress, p 12.

^{xx} See Melba Cuddy-Keane, “Modernism, Geopolitics, Globalization”, *Modernism/Modernity* 10.3 (2003): p 539–558.

^{xxi} Elmer Kennedy-Andrews, *Ciarán Carson: Critical Essays* (Dublin, IE: Four Courts Press, 2009), p 26.

^{xxii} Houen, p 260.

^{xxiii} C. Bittle, C. Haller, and A. Kadlec, “Promising practices in online engagement” (New York: Centre for Advancement in Public Engagement, 2009).

^{xxiv} Ciarán Carson, *Collected Poems* (Loughcrew, IE: Gallery Press, 2008), p 214.

^{xxv} Treatment of postmodernity in this chronological way, however, must be respectful of inequalities in the distribution of media, devices and associated social markers from region to region. For more on this, see Jan Van Dijk and Kenneth Hacker, “The Digital Divide as a Complex and Dynamic Phenomenon”, *The Information Society* 19.4 (2003): p 315-326.

^{xxvi} Of the connection between modernism and electronic media, McLuhan writes: “It is strange that modern readers have been so slow to recognize that the prose of Gertrude Stein with its lack of punctuation and other visual aids, is a carefully devised strategy to get the passive visual reader into active, oral action. So with E.E. Cummings, or Pound, or Eliot.” Marshall McLuhan, 1962, p. 104.

- ^{xxvii} Danielle Barrios, "Ciaran Carson's Belfast: Redrafting the Destroyed Native Space" in *Nordic Irish Studies* (2011): p 15-33.
- ^{xxviii} Peter Boxall, *21st Century Fiction* (Cambridge, UK: Cambridge University Press, 2013), p 123-125:
It is the in the fiction written in response to the terrorist event that, for Don Delillo, 'marks the actual beginning of the twenty-first century', that one can see the beginnings of a new way of thinking about global relations, a new and ethically challenging way of mapping the tensions between political radicalism, violent insurrection, literary innovation, and the power and force of the global market place.
- ^{xxix} Miller, 774.
- ^{xxx} Paul Bew and Gordon Gillespie, *Northern Ireland: A Chronology of the Troubles, 1968-1999* (Dublin, IE: Gill & Macmillan, 1999).
- ^{xxxi} Ciarán Carson, *Belfast Confetti* (Winston-Salem, NC: Wake Forest University Press, 1989), p 78-9.
- ^{xxxii} *Ibid.*, p 108.
- ^{xxxiii} Carson, "Siege", *CP*, p 465. Danielle Barrios, "Ciaran Carson's Belfast: Redrafting the Destroyed Native Space." *Nordic Irish Studies* (2011): p 15-33.
- ^{xxxiv} Amy J. Elias, "Interactive Cosmopolitanism and Collaborative Technologies: New Foundations for Global Literary History" in *New Literary History* 39, no. 3 (2008): p 720.
- ^{xxxv} See Mary Patten, "What is to Be (Un) done: Notes on Teaching Art and Terrorism" in *Radical Teacher* 89, no. 1 (2010): p 9-20.
- ^{xxxvi} Barrios, p 19.
- ^{xxxvii} Katherine Hayles, *How We Think* (Chicago, IL: University of Chicago Press, 2012), p 12.
- ^{xxxviii} Carson, *EP*.
- ^{xxxix} The GTD includes, for example, US domestic and international terrorism from 1970 to 2007, with various search options and interactive graphs that can be manipulated to illustrate trends in terrorism across time and/or regions. For instruction on using this and similar resources see Miller, p 775.
- ^{xl} Donald Lazere, *Reading and Writing for Civic Literacy* (London: Routledge, 2010), p xii.
- ^{xli} Carson, *EP*, p. 2-3.
- ^{xlii} Carson, *FFA*, p. 260.
- ^{xliii} Marshall McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man* (Toronto, CA: University of Toronto Press, 1962), p 129.
- ^{xliv} Ciarán Carson, *The Irish for No* (Loughcrew, IE: The Gallery Press, 1987), p 27.
- ^{xlv} Interestingly, this linguistic architecture or verbal networking operates similarly to how Boxall describes of Ian McEwan's novel *Atonement*, whereby "repetitions produce a kind of architectural rhyming that lends a remarkable shapeliness to the narrative." (p 72)
- ^{xlvi} See also Stefan Herbrechter and Ivan Callus, "Posthumanism in the Work of Jorge Luis Borges", *Latin American Cyberculture and Cyberliterature* (2007): p 179-193.
- ^{xlvii} In Carson's poem "Slate Street School", for example, a young boy fantasizes about dramatic liberation of the "souls of Purgatory" from the bounds of measurable time. Between the administered moments, however, the language of the poem provides quieter ways out, linking to other poems in the volume that the reader can follow at will. The "iced milk" links to a pitcher of milk in "Dresden," or an electric milk float in "Whatever Sleep It Is"; "watered ink" links to an "ink-dark sky" in "Whatever Sleep," or the "indelible ink of Dublin September 1944" in "August 1969"; the shimmering snow is also the avalanche in "Whatever Sleep," and the rain of exclamation marks in "Belfast Confetti"; the window, the "pane of glass" in "Whatever Sleep," the "Broken glass" in "Campaign," and the "bricked-in windows" of "Asylum."
- ^{xlviii} For more on the relationship between immersive, active learning and critical thinking for students, see for example Michael Anderson and Julie Dunn, eds. *How Drama Activates Learning: Contemporary Research and Practice* (London: A&C Black, 2013).
- ^{xlix} Ciarán Carson, *Shamrock Tea* (London, UK: Granta, 2002), p 2.
- ^l Douglas Adams, *The Hitchhiker's Guide to the Galaxy* (New York, NY: Random House, 2002). Ciarán Carson, *ST*, p 43; 68-9.
- ^{li} The creation and engagement with what Jason Mittell calls "orienting paratexts" is useful in part because it effectively hermetically unseals the text, allowing the user/reader to "play" inside the material and help to co-create, opening up both the text, and possibilities for what the text can become. Jason Mittell, *Complex TV* (New York: NYU Press, 2015).
- ^{lii} Alvin Toffler, *The Third Wave* (New York: Bantam Books, 1990).
- ^{liii} Scholars like Kevin Leander and Gail Boldt have proposed related multiliterate methods that approach "literacy-related activity not as projected toward some textual end point but as living its life in the ongoing present," where relationships are arrived at in ways that engage unpredictable, possibly more complex networks of literacies, which often prioritise improvisation and ambiguity over certainty and authority. See Kevin Leander and Gail Boldt, "Rereading "A Pedagogy of Multiliteracies": Bodies, Texts, and Emergence" in *Journal of Literacy Research* 45(1): p 22-46.
- ^{liv} See Donna Chu, "A Pedagogy of Inquiry: Toward Student-Centered Media Education" in *New Horizons in Education*, 58(3) (2010): p 44-57.
- ^{lv} For a detailed description of *[in]visible Belfast*, 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).
- ^{lvi} For a detailed description of the *[in]visible belfast* game and its outcomes, see Danielle Barrios-O'Neill and Alan Hook, "Jumping Between the Layers: Alternate Reality Games and Literature" in *Using Games to Enhance Teaching and Learning*, Eds. Whitton & Mosely (London: Routledge, 2012).
- ^{lvii} *[in]visible Belfast* was adapted to a radio documentary format by BBC Radio 4 in February 2016. At the time of writing this was available on the BBC website at <http://www.bbc.co.uk/programmes/b06z4w86>.

^{lviii} Jane McGonigal, “‘This is Not a Game’: Immersive Aesthetics and Collective Play” in *MelbourneDAC: 5th International Digital Arts and Culture Conference. Melbourne*.

^{lix} Barrios-O’Neill and Hook, p 180.

^{lx} Tessa Morris-Suzuki, *The Past Within Us: Media, Memory, History* (London: Verso, 2005), p 235.

^{lxi} See Fran Brearton, “Mapping the Trenches: Gyres, Switchbacks and Zig-zag Circles in WB Yeats and Ciarán Carson”, *Irish Studies Review* 9.3 (2001): 373–386. “The text begins to resonate with a multiplicity of voices, some of them unforeseen. It starts to appear ‘haunted’.” Trofimova, p 83.

^{lxii} Carson, *EP*, p 16-7. Previously Carson’s lack of a consolidated subject has been interpreted as resistance to the elegiac closure that much poetic discourse on the Troubles has prompted. See Peter McDonald, *Mistaken Identities: Poetry and Northern Ireland* (Oxford, UK: Oxford University Press, 1997).

^{lxiii} Alex Houen, *Terrorism and Modern Literature, from Joseph Conrad to Ciarán Carson* (Oxford, UK: Oxford University Press, 2002), p 291.

^{lxiv} Hayles outlines a contemporarily relevant conception of human being that is not composed of a “natural” singular self, but whose cognition is located “in disparate parts that are only in tenuous relation/communication with one another”; Hayles’s humanness is based upon cybernetic collectivity or system rather than individuality. Subjectivity exists thus in the form of feedback loops within and between the components of this collectivity, and also between these components and the external environment. While individual consciousness believes itself to be coherent, discrete and in control of the human subject, Hayles argues, it operates more significantly within a network of human and non-human agents; this concept of subjectivity exists as part of a smart environment, composed of endless connections between components at a variety of scales. As a result, while experiencing the world from an imagined centre, the posthuman subject is also able to perceive her environment—both internal and external—as vast and populated in surprising ways. Hayles, 1999, p. x., p. 3-7. From Katherine Hayles, *Electronic Literature: New Horizons for the Literary* (Notre Dame, IN: University of Notre Dame Press, 2008), p 186:

The subjectivity performed and evoked by this text differs from traditional print novels in subverting, in a wide variety of ways, the authorial voice associated with an interiority arising from the relation between sound and mark, voice and presence. Overwhelmed by the cacophony of competing and cooperating voices, the authority of voice is deconstructed and the interiority it authorized is subverted into echoes testifying to the absences at the center. Natural language is put into dynamic interplay with a wide variety of mechanical codes, and textual surfaces are littered with the marks of digital machines.

^{lxv} Karen Murriss, “Posthumanism, Philosophy for Children, and Anthony Browne’s ‘Little Beauty’” in *Bookbird: A Journal of International Children’s Literature* 53(2) (2015), p 60-2.

^{lxvi} See Ciarán Carson, *Shamrock Tea* (London: Granta, 2002), p 297: “Wanting to blend in with my hosts, I learned to speak Flemish and French; I reserved English for my private thoughts. ... I learned to become another person.” See also *BC*, p. 40: “Turning onto Tomb Street, I began to feel a new man.”

^{lxvii} Terry Eagleton, *Literary Theory* (Oxford, UK: Blackwell, 1983), p 79:

Rather than merely reinforce our given perceptions, the valuable work of literature violates or transgresses these normative ways of seeing, and so teaches us new codes for understanding If we modify the text by our reading strategies, it simultaneously modifies us ... The whole point of reading, ... is that it brings us into deeper self-consciousness, catalyzes a more critical view of our own identities.

^{lxviii} McGonigal, 2011:

Ecosystems thinking is a way of looking at the world as a complex web of interconnected, interdependent parts. A good ecosystems thinker will study and learn how to anticipate the ways in which changes to one part of an ecosystem will impact other parts—often in surprising and far-reaching ways. (p 298)

^{lxix} The digital humanities are rife with fascinating “distant reading” studies that reveal compelling structures within a variety of texts; see for example Stanisław Drożdż, Paweł Oświęcimka, Andrzej Kulig, Jarosław Kwapien, Katarzyna Bazarnik, Iwona Grabska-Gradzińska, Jan Rybicki, and Marek Stanuszek, “Quantifying origin and character of long-range correlations in narrative texts” in *Information Sciences* 331 (2016): p 32-44.

^{lxx} Nathan Snaza, Peter Appelbaum, Siân Bayne, Dennis Carlson, Marla Morris, Nikki Rotas, Jennifer Sandlin, Jason Wallin, and John Weaver, “Toward a Posthumanist Education,” *JCT (Online)* 30, no. 2 (2014), p 41. See also

Snaza et al., p 41. See also Francesca Ferrando, “Towards a Posthumanist Methodology: A Statement” in *Frame Journal For Literary Studies* 25 (2012), p 9-18.

^{lxxi} Carson, *TPF*, p 14.

^{lxxii} Bogost cites Bruno Latour’s critique of Modernity, paraphrasing that “theory has attempted to split the world into two halves, *human* and *nature*. Human culture is allowed to be multifarious and complex, but the natural or material world is only ever permitted to be singular.” Bogost, p 4. Latour, *We Have Never Been Modern*, (Cambridge, MA: Harvard University Press, 2012), p 1-12, 104-7.

^{lxxiii} Carson, *TSF*, p 62.

^{lxxiv} Carson, *TPF*, p 32.

^{lxxv} See for example Ian Jukes, Ted McCain, and Lee Crockett, *Understanding the Digital Generation: Teaching and Learning in the New Digital Landscape* (Thousand Oaks, CA: Corwin Press, 2010). Hayles argues convincingly that a shift toward “hyper attention” as a cognitive mode among younger generations, driven by the digital, has implications for the academy that may even constitute a “crisis in pedagogy for our colleges and universities” (Hayles, 2012, p 99).