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STATION ELEVEN AND TWENTY-FIRST CENTURY WRITING

Reading Very Well for Our Age: Hyperobject Metadata and Global Warming in Emily St. John Mandel's *Station Eleven*

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In recent years, the practices of symptomatic reading have been called into question by scholars such as Stephen Best, Sharon Marcus, Cathy N. Davidson, David Theo Goldberg, Rita Felski and Bruno Latour. It is claimed that such reading has become either formulaic or politically inefficacious. This article argues, against such thinking, that Emily St. John Mandel's Arthur C. Clarke award-winning novel *Station Eleven* (2014) presents several challenges for an age of so-called post-critical reading. Given that this novel is, in some ways, about how the future will 'read' our present, I use the metaphor of 'metadata' here to think through the series of ruined objects in *Station Eleven* that project a hyperobject-like extent across two epistemic contexts. I argue that this is a comment on interpretative reading practices and an invitation for politicised symptomatic readings of the novel. Using this approach, I show that *Station Eleven* is a novel that is deeply concerned with global warming and with colonial nationalist legacies, even while such concerns appear buried—or even absent—within the novel. If one takes the novel's surface instruction to look for 'another world just out sight', these concerns of the early twenty-first century emerge as central to the forking futures of Mandel's work.

Introduction

For several decades, academic English departments have devoted substantial intellectual energy to an understanding of how we read. Much of this has focused on the near-ubiquitous, symbolic, Anglo-American literary-critical paradigms of ‘unveiling’, ‘interpreting’, ‘revealing’, ‘the hermeneutics of suspicion’, ‘symptomatic reading’ and even ‘critique’, reading strategies of depth and closeness that have emerged since the modernist period (for a range of approaches, see Graff [1989]; Liu [2004]; Williams [2014]; and the special issue of *Representations* [2009]).

At the beginning of the twenty-first century, it is the claimed predictability of such against-the-grain interpretative paradigms and politicised unveilings that has led Rita Felski and others to feel dissatisfied with the symptomatic reading practices that developed from the Althusserian schools, regardless of how ethically sound such approaches may continue to seem (Felski, 2015: 4). Indeed, as far back as 2004 Cathy N. Davidson and David Theo Goldberg suggested that it was time that we ‘critiqued the mantra of critique’, while N. Katherine Hayles has noted that ‘after more than two decades of symptomatic reading...many scholars are not finding it a productive practice, perhaps because (like many deconstructive readings) its results have come to seem formulaic’ (Davidson and Goldberg, 2004: 45; Hayles, 2012: 59). Stephen Best and Sharon Marcus even went so far as to point out, almost ten years ago now, that although it has ‘become common for literary scholars’ in symptomatic traditions ‘to equate their work with political activism, the disasters and triumphs of the last decade have shown that literary criticism alone is not sufficient to effect change’ (Best and Marcus, 2009: 2). It may in fact be, as Bruno Latour puts it for the social sciences, that this Kantian-derived mode of critique is ‘running out of steam’. Perhaps it is time, he has suggested, to move away from matters of fact—from conditions of possibility that highlight social construction—to matters of concern (Latour, 2004: 225–48).

This focus upon reading and interpretation is not the sole preserve of academic comment but is also undertaken by works of fiction, indeed self-evidently so in the case of much metafiction. Emily St. John Mandel’s *Station Eleven* [2014] is one

such work that, I argue, stages acts of interpretation and reading as among its central concerns. This significant novel—nominated for the National Book Award, a finalist for both the PEN/Faulkner Award and the Baileys Women's Prize for Fiction, and winner of the Arthur C. Clarke Award—is saturated with objects that seem to stand for other, potentially critical, politicised objects from the reader's time: things-not-in-themselves, as an idealist tradition might put it (for more on philosophical idealism's challenges to the presentation of objects, see Ameriks, 2000: 1–17). It is a novel that is populated, in its futuro-dystopian phases, with a pile of debris at its feet; a heap of ruined but symptomatic objects that signpost back to the various political contexts of the reader's present with a dramatic irony. Such irony usually centres around the fact that these objects function as empty signifiers that future Earth inhabitants cannot correctly *read* while the readers of Mandel's novel itself know full well for what these signifying objects stand. Certainly, a failed 'digging down' into these objects by Mandel's future world inhabitants allows for the contemporary reader's feeling of critical superiority to emerge, as charted by Felski. For in identifying connections between ruined future objects and our present, the reader can feel praised for understanding how to read such objects. This is a feeling that is similar to the compliment bestowed upon Tyler by Clark in the novel: that one might 'read very well for your age' (Mandel, 2015: 259).

This is also a feeling, though, to slightly twist Peter Brooks's formulation, of an 'anticipation of retrospection': a one-upmanship against a future that cannot correctly read our present, embodied in the text's 'museum of civilization' to which I will later turn (Brooks, 1984: 94). For to 'read very well for your age' carries a double meaning in Mandel's trans-temporal novel, when 'age' is taken to mean 'historical era' as opposed to one's number of birthdays. The broken computers, useless electricity pylons, and abandoned schools that populate the novel are all of this temporal nature, pointing back from their reduced, non-functional state in a future era towards the mourned-for lost utility of the reader's present. Yet the inhabitants of the future either yearn to rediscover such lost utility or cannot imagine the correct function of this para-infrastructure. The critical superiority that Mandel's novel

affords to the present reader—even if it is ultimately refused, since we recognise that we may fall into the traps of her future and already be misreading our own past—is in part a critical superiority of our present reading ability over that of the future; an anti-positivist superiority centred around the historicity or temporality of reading. Of course, reading, Robert Darnton has taught us, ‘has history. It was not always and everywhere the same’ (Darnton, 1986: 24). We might add only that reading also has imagined futures that will not always and everywhere be the same.

Such plays on temporality and reading are core to the genre of Mandel’s novel. It is, of course, a cliché by now to note that works of science and speculative fiction such as *Station Eleven* enact a critique of the present. By projecting and amplifying the concerns of the present onto utopian or dystopian futures with new features, such works yield to us a cognitive estrangement effect through the *novum*, in the famous terms of Darko Suvin, or in the critical utopian framework of Tom Moylan (Suvin, 1979; Moylan, 1986). Yet, we also know from the work of Lois Zamora that, more generally, apocalyptic texts such as *Station Eleven* require procedural ‘translation or interpretation’, since the etymological root of the word ‘apocalypse’ is steeped in the religious traditions of ritual and cloaking, to which Lee Quinby also points: it comes from the concept of revealing, of revelation (Zamora, 1993: 10, 16; Quinby, 1994: xi–xii).

In this spirit of revelation, Mandel’s novel, I will argue in this article, yields ruined objects that function as a kind of critical, descriptive ‘metadata’ for the actual reader’s present that will be misread by her future fictional characters, even while the book’s own readers recognise the referents. Such metadata, which I will define more thoroughly below, are second-order data that describe a deeper structure. They are ‘data about data’ that contain a contextualised description or explication of an object but not the object itself.

Metadata form an appropriate metaphor with which to describe the hollowed-out symptomatic objects of Mandel’s future to which I will turn for two reasons. First, this is because metadata and post-apocalyptic fiction both share, to an extent, a concern about risk-management of unknown futures; a central premise

of Mandel's text that projects a speculative-dystopian alternative future. Indeed, scholars from Kevin Kearney, through Susan Mizruchi up to Claire P. Curtis have all claimed, to various degrees, that the didactic power of post-apocalyptic fiction is derived from the potential of mitigating future risk (Kearney, 2012: 162; Mizruchi, 2010: 119; Curtis, 2010: 5). On the other hand, one of the core uses for metadata within archival and library contexts is to describe an object for the purpose of *preservation* against the risk of future destruction. Core to the notion of metadata that I will here set out is that they are supposed to describe an object that could be, or even is, lost, but that can be partially reconstituted or accessed through its meta-description; access to worlds that are out of sight. The second reason that I here use the term metadata to detail Mandel's objects is that metadata are never free of context in terms of their interpretation and they also present a similar structure to that of symptomatic readings. That is, metadata pertain to other objects. Metadata 'point' beyond themselves and describe, but they are not the thing-in-itself.

Certainly, characters of Mandel's future world misread object metadata in ways that return the reader to a distanced present, an uncanny future-present that not only relativises an understanding of our own time by asking the reader to imagine how the present could be seen differently, but one that does so by distorting the familiar objects that sit around us, awaiting their time, imperfectly preserved for a type of future critique, based on interpretative reading. Mandel's post-apocalyptic world, however, also beckons to critical interpretation, to symptomatic reading, through such object metadata.

Indeed, *Station Eleven* achieves its signposting of symptomatic, deep reading practices, I will argue, through metadata objects that are distributed between two epistemic contexts that present a future history of reading. For the text alternates between a twenty-first-century present in which the character Miranda Carroll draws her comics about the fictional space station, 'Station Eleven', even as her private life falls apart and a future world that has been ravaged by the Georgia Flu emerges, leaving a far-reduced human population to fend for itself. Yet between these two epistemes,

the future world of Mandel's text is transformed through infrastructure/utility depletion and metadata/aesthetic expansion. Early in the novel, for example, Mandel gives the reader an 'incomplete list' of all the things that have expired in her future setting: 'No more cities. No more films [...] No more pharmaceuticals [...] No more Internet [...] No more reading' (31–2). Yet, when the cities are no more, the buildings that form the outline of the city remain, albeit crumbling; mere signposting metadata of a city. Descriptions of our world at the meta or structural level persist in Mandel's future, waiting to be read, even while the functionality of that world is degraded. Even without the internet, there are still non-functioning computers; the material meta-apparatus of the virtual 'world'. Indeed, inventors rig up laptops to makeshift generators in order to search futilely for 'the impossible-to-imagine Cloud' (38). In just a short twenty years, the ubiquitous 'cloud'—actually, of course, a metaphor for distributed network storage systems—has become unimaginable to the younger members of surviving humanity (see Hu [2015: *passim*]).

As shall be seen, the overlapping and diverse readerly contexts for the signalling non-functional objects in *Station Eleven* act as both invitations to and warnings against symptomatic reading. Through the multiple textual instances wherein characters are unable to read either utility or aesthetics respectively from the objects that span the two epistemic contexts of Mandel's novel, *Station Eleven* metatextually shows that objects, texts, or metadata are never able to speak in full command of their subject matter. However, the argument I make here seeks to challenge the idea that it is possible to move to a post-critical paradigm in any straightforward way, at least in Mandel's novel. Instead, there is a *chiastic structure* at work in *Station Eleven*—for, if reading *with* the grain in Mandel's novel, a post-critical technique, the reader is pushed by the novel's metatextual remarks about reading objects into a symptomatic mode; a post-critical paradox (for more on 'reading with the grain', see Bewes [2010: *passim*]). That is, the novel invites us, at its surface level, to read symptomatically by offering depictions of characters reading and misreading objects. To do as the text suggests invites a cautious reading of the objects within a symptomatic paradigm. To read *against* the grain of the text and to ignore the surface invitation to read deeply, an apparently symptomatic technique,

would only then result in a post-critical approach of reading only on the surface, but this involves ignoring an apparently surface-level injunction of the novel.

In order to make this argument, the remainder of this article will be divided into three sections: the first deals with the philosophy of metadata and (hyper) objects; the second turns to Mandel's text for instances of metadata signposts that, I claim, encourage symptomatic, deep and political readings; and the third and final section reads the alternative contexts that emerge from symptomatic readings of *Station Eleven's* objects, particularly with respect to two contexts of global warming and postcolonialism, which I claim are actually central to the novel's future dystopia in the unwritten spaces beyond its final pages.

Metadata Hyperobjects

Before moving to Mandel's fiction, if I am to claim that the objects in Mandel's novel function as a type of 'metadata' that ask for a persistence of critique and symptomatic reading, it is worth first asking: what are metadata? And what constitutes an object?

In contemporary news stories, most readers have probably encountered the term 'metadata' when it intersects with crime, punishment and spying. For instance, recent arguments made by proponents of mass surveillance have focused on the idea that what spy agencies need to read is sometimes not the content of messages, which may in itself be irrelevant, but rather that which can be inferred from the blank spaces of content when one knows the circumstances of transmission and reception: the metadata. It may be that 'this is *just metadata*', as Senator Feinstein claimed in 2014, but it is also clear that metadata alone provide sufficient clues to profile individuals, often with chilling consequences (O'Keefe, 2013).

But it actually turns out to be harder to define metadata than one might hope. The term metadata first arose in the 1960s but came to prominence in the 1970s context of Database Management Systems (DBMSs) (see Vellucci, 1998). In the usual definitions, the term refers to 'structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage an information resource'. It is meta- (beyond) data (from *datum*; a given thing). Furthermore,

'metadata is often called data about data or information about information' and can be subdivided into structural and descriptive metadata (National Information Standards Organization, 2004). Descriptive metadata pertain to specific objects; the copyright that applies to a book or the ISBN of the object in question. Structural metadata are the formats of data containers, e.g. the layout on the page of a copyright declaration or the structure of an ISBN.

Yet this only takes us so far. In order to conceptualise metadata fully, we must also have an understanding of what is meant by 'data'. For metadata are themselves 'just' data. Data are sometimes taken to be opposed to information, its unstructured counterpart. In such thinking data + metadata = information. That said, the challenge here is that there is no consensus on the definition of such terms (for a range of definitions, see Nonaka and Takeuchi [1995]; Garvin and Berkman [1996]; Amidon [1997]; Horibe [1999]; Dixon [2000]; von Krogh et al. [2000]; Tiwana [2001]; Kelley [2002]; Pentti [2002]; Liew [2007]; Davenport and Prusak [2010]). The format of descriptive metadata, however, can be described by structural metadata. It is also possible to conceive of a further level of description for structural metadata and so on to an infinite regress. As Martin Mueller and John Unsworth put it with respect to data and metadata: 'what counts as second-order, depends on the boundaries of the first order', a similar problem to that faced in the discipline of English studies if attempting to draw a strict divide between creative and critical practice (Mueller and Unsworth, 2007; Eve, 2016a: 29–31). This leads to the paradox that in order to define metadata as 'information', rather than as 'data', will require an infinite number of metadata elements, each to define the other. Data, on the other hand, can refer to a variety of things. In fact, in many conversations it is the case that the word 'data' can safely be replaced with the term 'stuff' and still retain the same degree of specificity. Data can range from a few lines in a spreadsheet up to petabytes of quantitative material.

Primarily, though, what I want to draw out here is that metadata, like a paratext and like other types of formal structuration (such as a book's materiality), provide semantic contexts and signals for reading works (for more on how diverse

aspects such as metadata might be considered forms, see the argument for a broad definition of 'form' in Levine, 2015). Some works of fiction also play with these forms, subverting their usual formal purpose (the novel-within-a-novel form of Percival Everett's *Erasure* [2001], for instance). Others depict scenarios related to metadata (the fictional libraries and catalogues of Jorge Luis Borges, for example). Some works, in parodying other works of fiction, act as descriptions of those other works, thereby becoming a type of pastiche-metadata themselves (David Foster Wallace's 'Westward the Course of Empire Takes Its Way' [1989] as a parody of John Barth's 'literature of exhaustion'). It is certainly also the case that metadata in its formalist senses can be read through the same techniques that are applied to other literary and cultural artefacts. Because metadata are also data, they can be subjected to the same critiques. Metadata, though, do not exist in a vacuum. In fact, through their intrinsic structures of reference, metadata are by definition intertextual, or inter-data, phenomena that add affiliated semantic contexts (see Eve, 2016b). I also contend that objects, within novels, can function as types of metadata.

To turn to my second point of definition, then—on how we define an 'object'—requires a detour into the realm of philosophy of science and back to Bruno Latour. In his seminal work *We Have Never Been Modern*, Latour highlights (and criticises) two opposed strains of social-scientific thought with respect to objects. The first school to come under fire from Latour is the social constructivists. This mode of thought is one wherein most aspects of objective reality can be shown as determined by social convention, important for my argument about Mandel's novel since it is the social conventions of reading politics that I am bringing to the fore. The classic example of this is gender. Western cultures have traditionally assumed that there are two genders that are constituted by possession of specific sexual organs. Yet we also know that a range of secondary sexual characteristics (and even primary sexual characteristics) is possible. The determination of gender categorisation into binaries is, therefore, a mutable social choice made for various socio-legal and economic reasons that are often highly questionable. For Latour, however, the social constructivists falsely claim that they

have privileged insight and are the sole class of people who can see through this social construction. In Latour's words, social scientists often think that:

Ordinary people imagine that the power of gods, the objectivity of money, the attraction of fashion, the beauty of art, come from some objective properties intrinsic to the nature of things. Fortunately, social scientists know better and they show that the arrow goes in fact in the other direction, from society to objects. (Latour, 1993: 51)

With his customary ironic phrasing, Latour here criticises the aloofness inherent in claiming to be able to see beyond the horizon of ordinary people.

On the other hand, Latour notes, the second strain of social-scientific thought scoffs at the idea that people might be free and claims that people are determined by objects. A good example of this would be the curious phenomenon that people in cars seem to drive closer to cyclists who are wearing helmets, apparently falsely and subliminally reassured by the presumed additional safety (Walker, 2007; contested by Olivier and Walter, 2013). Although it is unwise to conflate correlation and causality, the narrative here becomes one in which objects (helmets) determine human behaviour (driving). Latour sardonically remarks on this thus:

The social scientists are standing guard, and they denounce, and debunk and ridicule this naive belief in the freedom of the human subject and society. This time they use the nature of things—that is the indisputable results of the sciences—to show how it determines, informs and moulds the soft and pliable wills of the poor humans. 'Naturalization' is no longer a bad word but the shibboleth that allows the social scientists to align themselves with the natural sciences. All the sciences (natural and social) are now mobilized to turn the human into so many puppets manipulated by objective forces—which only the natural or social scientists happen to know. (Latour, 1993: 52–3)

In other words, on one side of this type of thinking lies the assertion that human beings project value structures upon objects and then believe these value characteristics to be natural (gender, for example). On the reverse side, though, the methods of the social sciences involve studying, measuring and determining how objects, as though free of social construction, influence people's behaviour (such as bicycle helmets). As Latour puts it: 'In the first denunciation objects count for nothing; they are just there to be used as the white screen on to which society projects its cinema. But in the second, they are so powerful that they shape the human society, while the social construction of sciences that have produced them remains invisible' (Latour, 1993: 51–3). This is the same kind of debate at work in the space around symptomatic reading. Are texts to be treated as ideological by-products, determined in the last instance by materiality, or can they speak in ways that defy present ideologies?

If objects can be double-sided in their constructivism, though, or even situated within a much longer history of substance/form divide, then more recent thinking within the realm of so-called object-orientated philosophy (OOP) has tried to grapple with the nature of things (objects) that are too large or distributed for human thinking to thoroughly comprehend or perceive (see Hui, 2016 for example, as an instance of such thinking in the digital realm). Timothy Morton, in his 2013 book of the same name, dubbed and explicated such paradigm-shifting, historical-marker objects as *hyperobjects* (Morton, 2013). When plastic can take many human lifespans to degrade and climate change occurs at speeds that are, to be ironically blunt, glacial, it becomes difficult for human art forms or philosophy to contend with their implications. How, for instance, one might ask, can a work of fiction that is read over the span of a few days really grapple with global change that takes place over thousands of years?

For Morton, hyperobjects are phenomena that defy the conventional scale and distribution of objects. The examples that Morton invokes are global warming, solar systems, planets, and oil fields (Morton, 2013: 1). The first three of these 'objects' are hyper in terms of scale and perception; they are above intuitive

comprehension in terms of their size and, at a level that is now perceptible to humans, such objects actually generate space-time in their cosmic-field distortions. The last of these examples, though, is different, for it pertains to distribution. For Morton, 'the end of the world' took place for the first time in 'April 1784' when Watt invented the steam engine that began the rapid scaling of global carbon deposit and subsequent planetary warming (Morton, 2013: 7). In this sense, an oil field is not an object of stupefying size, but an object of disorientating distribution. The implications of the oil field stretch into a distant and unthought future. Even after the last drop of the oil field has been burned, its space-time distribution and chain of causal effects will continue as a ghastly drowning afterlife. It is, as I will show, primarily in this sense of time distribution that *Station Eleven*, and other dystopian novels, function in a hyperobjective fashion.

Hyperobjects, as I will twist them here, do still have a human element to them, namely in their positional relationship to their own definition. Therefore, although Morton poses his project as an undoing of poststructuralist anti-humanism in favour of an object-orientated ontology (which will effect a Copernican turn upon Foucault's famous 'face drawn in sand at the edge of the sea' in *The Order of Things*), the idea of 'above' ('hyper') requires an orientation to the defining being (Morton, 2013: 195; Foucault, 2007: 422). To some beings, such as Kurt Vonnegut's higher-dimensional Tralfamadoreans in *Slaughterhouse Five* [1969], a hyperobject too vast for human comprehension might be a hypo-object, a tiny fleck of spacetime. Object-orientated or not, in their very naming hyperobjects present a relationship to humans: hyperobjects are hyper only for people.

But what is it that makes a hyperobject hyper? Is it simply a matter of scale relative to the human definition? Not precisely. The distribution of a Styrofoam cup is a good example here and one that Morton himself uses. The Styrofoam cup that will not degrade for centuries 'extends beyond presence, to an uncanny realm in which it is shot through with nothingness', according to Morton (Morton, 2013: 191). In other words, the presentism under which we accord the appearance of objects as their bounding in space-time is not usually a correct way of thinking

about such hyperobjects. For these objects actually exist well beyond our scope of comprehension in terms of time and space. We use a humanised notion of time and history, one measured in human lifespans, to convince ourselves that the *now* is the time and the *here* is the place of an object's existence and that speculation beyond this frame of comprehension is useless, a reference to an empty other and unknowable future. What makes the hyperobject hyper is that it does just this: it punctures human notions of epistemic change by straddling different frames for comprehension. If we turn back to a Foucauldian idea of epistemic contexts (epistemes) and breaks (rupture), then at least one definition of the hyperobject is an 'object that can straddle such epistemic timespans', even when we do not realise it. Objects, in other words, that stretch into epistemes to which we do not have access. In this reading, Morton appears, at least to me, more Foucauldian than might be thought.

The ways in which metadata pertain to hyperobjects can be seen in this relationship of presence to extension, much in the way that signifier might relate to signified under the Saussurean linguistic model of the encapsulating sign (see Saussure, 1998). Metadata are, it should be remembered, proxy objects that describe their target referents, even while admitting that interdata reference is more variegated, subjective-interpretational, and contagious in its traces than this supposedly linear 'metadata to object' relationship might pose. They are both constructing and constructed, as per Latour's circle, for, in a sense, metadata are both external and internal to the objects they describe. They are external because they sit apart, describing their objects, functioning like signposts on the road to the object itself. They are internal to the objects because they often point from inside; the title of a book, for instance, is likely to appear *within* the book itself.

In this way, metadata can straddle epistemic contexts (as can their objects), signposting the way to objects and worlds beyond our current comprehension. This is what, I claim, happens in *Station Eleven*. In such a sense, metadata speculatively signal the extension that is hidden by any one human observation of presence. But metadata must also be read. As Lisa Gitelman *et al.* note, no data are raw

(Gitelman, 2013: *passim*). All data require interpretation to produce meaningful information. How these data are read will determine what any one episteme can know or think about the objects to which the metadata point, which may or may not straddle epistemic contexts in a hyperobjective fashion. In this way, metadata can be hyperobjects of a type, but they can also point to the complex extension of objects beyond their mere presence and outside of their default frame of reception, managing risk of future destruction with their function of preservation within a conception of time that points to entropy and degradation.

Metadata-Like Hyperobjects in *Station Eleven*

The epistemic and ontological space-time conditioning of Mandel's metadata hyperobjects that invite symptomatic readings are encapsulated by the final line of the novel, where Clark contemplates 'another world just out of sight' (333). That is, the devastated future in *Station Eleven* emerges, not as a whimper, but as a bang. Out of nowhere in the text comes the disturbing virus that will wreck humanity's scientific and populative progress as we know it. In *Station Eleven*, in the blink of an eye, Arthur Leander collapses on stage, and the world collapses outside. In terms of distribution, then, the dystopian post-flu environment is not one that is interminable leagues of time hence, but is instead a world that is 'just out of sight' and just out of knowledge.¹ For Mandel, the new world is just around the corner, ever more proximate than we might hope, even as it represents a reconfiguration so drastic as to render it unrecognisable to the present. Signalling that readers should be searching for 'another world' that is 'just out of sight' is the primary metatextual indicator with which Mandel conditions her readers to seek the invisible or the unspoken, within reach, for interpretative unveiling.

This epistemic play that jars with the reader's present in a dislocated future can be seen in the way in which Mandel describes both weaponry and the symptoms of the Georgia flu. In the first case, Mandel seeds her text with many jarring disjuncts,

¹ In addition to its ableist connotations, it is curious that Mandel should use 'sight' as her overriding metaphor for knowledge, given that Martin Jay has traced the growing mistrust of vision in Western epistemic philosophies over time (Jay, 1994: 298).

particularly those of the sort that read, with their blunt nihilism (or perhaps optimism?), '[t]wenty years after the end of air travel' (35), that seem designed to unsettle readerly expectations and time-orientation. The strongest of these, at least in my reading of the novel, however, pertains to the unfolding of a single sentence: 'The Symphony shot two deer for dinner later, pried the arrows from their ribs, and strung them over the hoods of the first two caravans' (127). The epistemic environment in which I reside is one in which the verb 'shoot' is inextricably linked to propellant-based firearms; rifles and pistols. This sentence creates a type of 'shock' of the hermeneutic because the later mention of arrows, instead of bullets, is a recontextualisation of the contemporary hunting environment. The sentence is a type of metonymic dialectic play for the novel, then, that one would normally expect to see from writers like Theodor W. Adorno and Samuel Beckett. Indeed, this sentence could scarcely be better designed to jolt an awareness of a fictional extension that sits behind the presence of the present; exposing the speculative possibility of a regression from the certainty of contemporary technological progress that readers might feel.

The second of these epistemic shocks through hermeneutic resituation, though, is found in the meta-representation of illness in the text. In one passage that depicts the early days of the flu onset, a CNN reporter in the novel asks his or her interviewee, an epidemiologist, what symptoms people should look out for with the new lethal virus. The disease expert responds by saying that the only things to beware of are the '[s]ame things we see every flu season [...] Aches and pains. A sudden high fever. Difficulty breathing' (235). This yields another type of metadata-like structure that is frustrated by the situation of illness. For in this case, the metadata (the signs/symptoms that point to an underlying pathology) are indistinct. The superficial signs are difficult to read. Records of the disease's public manifestation are of little use here to potential patients in assessing the likelihood that they have the lethal Georgia flu as opposed to a regular viral infection. In diseases' almost idealist separation between pathology and symptom, thing-in-itself and perception, there is a meta-structure for the almost-knowledge of the reader's own present that is continually re-presented in *Station Eleven*.

This is so because the objects that are found from the old world in the future of *Station Eleven* are indistinct from how they appear to the reader of the text. Consider, for example, the non-functioning laptop in the novel. It is certainly the case that a laptop is a laptop is a laptop. However, what readers are given with the laptop is an instance of the variability of metadata *interpretation* (construction) across epistemic periods. In this case, for different group members, the laptop represents different things. For those old enough to remember the pre-flu days, the laptop is metadata for loss, grieving, and a world that no longer exists. For the younger members of the group with no experience of the old world, the laptop is metadata for hope, optimism, and the potential for resurrection. But the laptop is nonetheless permanently altered and recontextualised in the text; imbued with the theology of electricity and technology from a bygone advanced civilization. It is certainly the case that ‘the people who struggle most’ with the new world are those ‘who remember the old world clearly’, those who cannot simply accept the epistemic break (195).

Indeed, one of the clearest ways in which Mandel gives a disconcerting context to our present in her novel’s future is through the ‘place where artifacts from the old world are preserved’ (one of the key functions of metadata): the ‘Museum of Civilization’ (146, 255). The objects in the ‘Museum’ share one or both of two characteristics: they do not function and/or they can no longer be manufactured. All the objects are, therefore, in the limited sense in which I am here redeploying the term, hyperobjects that span two different epistemic frames (and potentially exist beyond any human framing). They are also, as we are invariably told, ‘beautiful objects’ (225). In fact, the transformation that is most clearly visible after the global catastrophe, at least in terms of the preserved objects in the future, is that the ordinary and the everyday are here aestheticised. This appears to be a result of their loss of functionality. Indeed, the future world is one wherein beauty is found in the removal of utilitarian function. We rarely see, in *Station Eleven*, a true hint of utility aligning with beauty, except perhaps in the reactivation of the electrical grid that occurs towards the end of the novel as the future world ‘circles back’ to an illuminated shadow of its former state (311, 278).

If beauty and utility are frequently opposed in *Station Eleven*, though, there is one particular recurring object that transcends both worlds and defeats such binaries of utility vs. beauty: the snow globe, which appears to have no function but that of aesthetics on either side of the text's great flu. For the seven-year-old Kirsten, 'the object' of the paperweight snow globe is 'the most beautiful, the most wonderful, the strangest thing anyone had ever given her' (15). It is for Clark, much later in the novel's chronology, one of many 'beautiful objects' that took considerable 'human enterprise' to produce, only for aesthetic value (255). In the world of the future, as discussed above, objects with previous utility are changed; 'there seemed to be', writes Mandel, 'a limitless number of objects in the world that had no practical use but that people wanted to preserve' (258).

The snow globe, though, is also an object that, in the pre-flu environment, 'has no memories attached to it' for Arthur (321). It is here that the snow globe takes a more sinister turn: as a representation of planetary weather, with its micro-storm clouds gathering within, it is one of the metadata traces in the present moment of the hyperobject of global warming. Yet, in Mandel's text, the possibility of global warming seems superficially far-fetched. The novel exists in a space in which air travel is no longer possible and in which there seems to be no way of continuing to extract the hydrocarbons that, when burned, would contribute to the ongoing radical change to the constitution of Earth's climate. Humanity, in its destruction and near-obliteration, has avoided the fate of rising sea levels and damaging weather patterns. The inevitability of the hyperobject known as global warming was not stopped by politics or collective action, but by the flu.

Yet despite its warning of a time beyond humans, in *Station Eleven*, there is a curious blend of the posthuman and the human for, although the future world is shorn of its utilitarian contexts and left only with its metadata husks, signposting utility from an aesthetic realm, the sense of loss that this yields is centred upon humanity. Indeed, time and time again the novel emphasises loss through memory and nostalgia. For instance, the reader is told that it seems 'like the people who struggle the most with' the new world 'are the people who remember the old world clearly', as though 'the more you remember, the more you've lost' (195). In other

words, the future here, although one in which the age of humans looks to have passed, is also one that can be only textually understood in relation to what was lost. In this sense, *Station Eleven* is a novel that thrives on an odd type of nostalgia, a nostalgia that seeks to recuperate the past in a future action that has yet to be undertaken.

Among the clearest ways in which this double-edged nostalgia of future action can be seen in the text is, again, through its metadata-like objects. Take, for instance, the building that is encountered by the Travelling Symphony and that we are told 'had been a small school' (129). In this case, the building is related back to its utilitarian functional purpose; a nostalgia for an era when children were taught together in safe communal spaces where they could scrawl naïve words on their desks: 'Eva + Jason 4 evah'. Yet, at the same time, Mandel writes that 'every student locker had been emptied', providing a fine metonym for her future society of metadata objects as a whole; an emptied-out world, left only with its outer descriptive structure. For some of the characters in *Station Eleven* this nostalgia proves too much and the disjunct between what was and what is becomes too great. For instance, Jackson explicitly says to his companions that 'I don't know how you stand it', to which Kirsten thinks:

We stand it because we were younger than you when everything ended [...] but not young enough to remember nothing at all. Because there isn't much time left, because all the roofs are collapsing now and soon none of the old buildings will be safe. Because we are always looking for the former world, before all the traces of the former world are gone. (130)

In searching hollowed-out objects—such as student lockers—for the former world, we once more see metadata-esque structures here. For the 'traces of the former world' that Kirsten seeks are not the former world itself. Instead, she seems to be searching for signs and clues that will *point to* the former world, supposedly still somewhere in existence but just out of sight. It is almost as though, in temporal terms, the former world is not 'former' at all, but rather contemporaneous yet lost.

The former world, of course, is actually the sought-after *future* world. What Kirsten and others are afraid of is an inability to remember the future.

Furthermore, in order to seek this former and/or future world, it appears that one must be deconditioned to nostalgia, but not to the zero degree. Those who are too young 'to remember nothing at all' will not be presented as *good readers* of the past's future in *Station Eleven*, for they will not connect the metadata signs to the former utilitarian state that should, in the minds of many, be resurrected. On the other hand, those who knew of and can remember the previous functions of the future-world's metadata too well are unable to comprehend the change in the status of the objects. It appears, then, that there is a 'sweet spot' in the normally distributed bell curve of memory where, around its central apex, lie the individuals who remember enough to construct the future but remember too little to be overcome with grief in the present.

Symptoms of the Alternative Ends of the World

Thus far in this article I have argued that *Station Eleven* is a text that invites critical interpretations or symptomatic approaches, against the emergent paradigms of a range of recent literary-theoretical work. The ruined objects that accumulate, in a hyperobjective fashion, across the text's two epistemic time-spaces present the reader of *Station Eleven* with a range of characters who are unable to correctly 'read' the metadata-objects with which they are presented, objects that have clear connotations for the ability of the contemporary reader to surpass Mandel's characters. Those in Mandel's dystopian future cannot read the utility of the wrecked objects. Those in Mandel's present (contemporaneous with the reader) cannot see the aesthetics of their technologies. These worlds are overlaid atop one another but 'just out of sight', like metadata without a referent. By continually signalling, through its de-contextualised objects, that such objects can have alternative contexts outside of the current configuration, *Station Eleven* asks to be read critically: if there are always-unspoken contextual reconfigurations of metadata objects, why should there not also be such textual reconfigurations?

Yet, to follow this through and to conduct a symptomatic reading places the supposedly optimistic ending of Mandel's text under question. As Clark and Kirsten look out at the community who have restored electricity to an entire grid, the questions that arise are: how and where will it lead? The 'how' seems likely to imply the burning of fossil fuels, although one could charitably speculate upon solar panels and wind power. The 'where will it lead', of course, is back onto the destructive path taken by the pre-flu world; existing within the hyperobject of global warming. As with Russell Hoban's *Riddley Walker* (1980), in which the secrets of the nuclear age are sought out by the wandering travellers of Kent, the errors of the past will be repeated as we 'cycle back'—except, in this case, as implied through the snow globe, the cycling back does not refer to just the plummeting of humanity as the deadly disease sweeps the world. It also means a cycling back-to-the-future, in which the distanced present is itself a setback, a regression that will not differ from the last time.

Such thinking on global warming is predicated on a moment of textual slippage, rather than mere political speculation in the era of the Anthropocene. While *Station Eleven* never directly touches upon the unfolding disaster of human-made climate change, The comic-book-within-a-book world of Doctor Eleven (drawn in Mandel's novel by Miranda and read by Kirsten) is one that is submerged beneath the waters of the ocean. As Tyler describes it:

“It's like a planet, but a little planet”, Tyler said. “Actually it's sort of broken. It went through a wormhole, so it's hiding in deep space, but its systems were damaged, so on its surface? It's almost all water”. He was warming to his subject. (324)

If the comic books in *Station Eleven* serve as synecdochal nods to the many science fiction genres to which the novel pays homage, then here we are given a microcosm of our world; a space that is 'like a planet', only smaller, as any synecdoche would be ('a little planet' or a snow *globe*). Yet, the planet as depicted in the novel is 'sort of broken', its 'systems' having been 'damaged' as the advancing technologies that allow deep-space interstellar travel cause a feedback loop of destruction, much as the

combustion engine accelerated the alteration of planet Earth. This has transformed the surface of the planet-like object into a space that is 'almost all water', the exact future prediction of current climate research. As if to ram the point home, we are told that Tyler, who will survive in an airport (the honorary home of climate change), was, specifically, 'warming' to his subject. When Arthur Leander further questions his son on this matter, the reader is told that the planet has become:

"All water!" Arthur raised his head. It had been a mistake to let Tyler get so far away from him, but perhaps the mistake wasn't unfixable. "So they live in the water, Dr. Eleven and his—his people?"

"They live on islands. They have a city that's all made of islands. There's like bridges and boats? But it's dangerous, because of the seahorses". (324)

The world that Tyler paints for his father summons to mind other post-apocalyptic global-warming scenarios, such as the (arguably terrible) movie *Waterworld* [1995], in which all of the polar ice caps have melted. Specifically, the danger of the seahorses summons future mythologies of dangerous beasts that live below the surface (say, spice worms in *Dune* [1965]) while the island-hopping nature of their future life is reminiscent of *Waterworld's* 'atolls'.

Indeed, the linear progress of technological advancement in *Station Eleven* that resurfaces at its close is also complicated by the elements of the past that bear a colonial or damaging presence, but to which those with memory and nostalgia still cling. For instance, teenagers in the new world, we are told, struggle to understand the idea of the internet, 'how it was everywhere and connected everything'. In a way, the internet is represented here as another hyperobject. Impossibly large and interconnected, it defies understanding and observation for those outside of a paradigm of nonrivalrous object exchange (digital objects). The 'internet is all around you', we are told (202). On the other hand, however, the internet can only be explained to these younger people in *Station Eleven* through 'maps and globes, the lines of the border the internet had transcended' (262). While the students can understand locations (they understand 'here' on the map), they cannot comprehend the borders

and nationalities. 'What are the functions of these imagined communities?', they might ask (for more on the term 'imagined communities', see Anderson, 2006: *passim*). For although 'there had been countries and borders', it remains 'hard to explain' why such entities—so seemingly natural and real to so many in our present—should come to exist (262).

In this sense, then, although *Station Eleven* is a text that shows a future world seeking to recover a different future, it is one that is simultaneously post-human and all-too-human. It is a post-human (and post-colonial) world, in which it is difficult to explain the ideas of maps, borders, countries and nationalism. But, at the same time, it is a world in which humans and technology will come back to the fore, one in which we are shown metadata traces that point to a uniquely human focus on death: 'not graves' but 'grave markers' (55). Of course, Dieter does not realise that his pronouncement on the death-cult's future sites of death (for those it has exiled) acts as a mirror of the resurrection of technological capacity and global warming within the text. The anticipation of future death and figurative death within the novel are, indeed, paralleled in the resuscitation of the electrical grid at the novel's close.

What perhaps is most disingenuous in the argument here is, of course, that posthumanism is integral to true thinking about hyperobjects. However, by defining 'metadata hyperobjects' as those that straddle epistemic breaks, I have introduced a constituting concept that, so far as we know, is uniquely human: knowledge. Indeed, I have argued that hyperobjects are insufficiently defined, usually, in terms of their scale (for any scale must be relative to something else and the unasked question remains: to what is the hyperness of the hyperobject relative?). But, by using knowledge as an interchange mechanism, we can conceive of objects that are hyper both in terms of *time* and *mass*. The oil field that extends into the unknowable future, or the Gaussian space-time warping of planets. Both are, in different ways, 'large', but they can be unified by a relationship to epistemology.

Station Eleven, I have argued, presents a series of objects that function in metadata-like ways, but that are also much like hyperobjects, in that they transcend

epistemic boundaries that otherwise would not be breached. Indeed, the hyperness of the metadata-like signs in the novel comes about because of the fundamental incomprehensibility within normal object frames for these resituated things. The *shared* epistemic construct that de-scales these objects, however, is their aesthetics. In Mandel's novel, there is always 'still such beauty' in a world of denatured objects, sprung from the reader's present into a future that seeks its own future in that dislocated past. Yet, if one reads *Station Eleven* with an eye to its functions of reading that draw attention to interpretative processes, global warming and postcolonialism rapidly rise to the fore as central concerns of the novel.

But what of post-critical reading here? Is it a straightforward return to complicity with critique and symptomatic reading to come back to ideas of the Anthropocene in Mandel's text, amplifying moments of subjective reading experience in order to make an argument that is politically expedient at the present moment of my writing? Perhaps. Yet the novel also explicitly issues a challenge of knowledge that requires an unveiling: if other worlds can be just out of sight, it must be possible for us to bring them into view by following the metadata pointers across projected future epistemic breaks.

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