LITERARY GEOGRAPHIES

Geographies of Science Fiction, Peace, and Cosmopolitanism:
Conceptualizing Critical Worldbuilding through a Lens of Doctor Who

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Abstract:

Critical worldbuilding offers a framework for building more compassionate spaces which are staunchly critical of violence and injustice. At the heart of critical worldbuilding is a belief that the actions, mobilities, and worldviews of a single individual can contribute to building the characteristics of these broader spaces. I advocate for a framing of critical worldbuilding through three pillars: geographies of science fiction, cosmopolitanism, and geographies of peace. I enact this framing through a lens of *Doctor Who*, a BBC television program in which an alien species faces various nemeses during their time travels across the universe both within and beyond planet Earth. Since the show's beginning in 1963, several iterations of the Doctor have faced these nemeses amidst compelling themes such as natural disaster, mental illness, and fascist social control, all within a fantastical setting yet decidedly applicable to real sociocultural issues seen within planet Earth. Using a case study of three episodes of *Doctor Who,* I undertake a literary reading of the plots through each of the three pillars as they relate to critical worldbuilding, from the alternative landscapes and fantastical metaphors of geographies of science fiction, to cosmopolitanism's dissolution of borders, to the transformative and healing praxis of geographies of peace. This research frames further work in critical worldbuilding as conceptualized through these three pillars, encouraging geographic scholars to recognize the power of individual action in creating more compassionate and peaceful landscapes.

Keywords: critical worldbuilding; Doctor Who; science fiction; cosmopolitanism; peace.

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Introduction

'Because those ordinary people, they're the key. The most ordinary person could change the world.'
The Doctor, *Doctor Who* 2x6 ("The Age of Steel")

For decades, geographers have studied literary media landscapes and their implications on perceptions and experiences of place, political ideologies, and popular culture beyond the screen (Burgess and Gold 1985; Otto 1987; Bell 1998; Lukinbeal 2005; McHugh 2005; Hoffman et al. 2007; Bushman and Davis 2009; Jazairy 2009; Laberge 2011; Longan 2011; Christensen 2013). One such implication is the opportunity to critically examine whether and how ideologies and spaces for peace are built, maintained, and reproduced, conceptualized as geographies of peace (Kobayashi 2009; Ross 2011; Megoran 2011). Similarly, scholars in geographies of science fiction have worked to construct frameworks for understanding the (re)production of peaceful spaces, highlighting how science fiction builds a more compassionate universe through alternative narratives (Kitchin and Kneale 2001, 2002). This is built in part upon the theory of cosmopolitanism, which can broadly be defined as a theory in which characteristics of microscale spaces shape the larger regions in which they are located. By exploring the interconnections between geographies of science fiction, cosmopolitanism, and peace, we create opportunities to understand how to build more compassionate societies critical of violence and injustices, a process conceptualized here as *critical worldbuilding*. Critical worldbuilding has been explored in gaming environments as a process through which role-playing games allow players to create their own worlds (Hergenrader 2017); however, this special issue instead calls for a broader, geographic conceptualization of critical worldbuilding.

In this *conceptual* paper, I outline a strategy for transformative geographical study in which geographies of science fiction, cosmopolitanism, and peace form three pillars of critical worldbuilding. As a framework for understanding how the actions, mobilities, and worldviews of a single individual contribute to the characteristics of a broader society, critical worldbuilding presents a strategy for empowering individual action against widespread, systemic injustices. I introduce the science fiction television program *Doctor Who* as a lens through which to explore correlations between the three pillars of critical worldbuilding, creating a dialectical relationship between our own world and the *Doctor Who* universe where the show's episodes, through metaphor and fantasy, speak towards sociocultural issues in our daily lives beyond the screen.

Doctor Who deploys critical worldbuilding as a recurring theme, through which ordinary, individual people create significant change through their actions. It is the longest-running science fiction television program in the world (Dinnick 2012), first appearing in 1963. Through sociopolitically-relevant plotlines, *Doctor Who* represents, reflects on, and projects the real world forward, imploring viewers to *reconsider* preconceived notions on social issues. These reconsiderations taking place at a viewer-by-viewer level, when considered *en masse*, may contribute towards building a more peaceful world increasingly critical of perpetuated injustices. *Doctor Who* episodes feature plotlines offering a broad social commentary on issues including classism, apathy towards natural disaster victims, mental illness, and social control through forced domination by violent powers. Such

episodes may influence emotional connections between viewers and portrayed marginalized subjects, encouraging viewers to (re)consider how they perceive similar "otherness" in their own lives. Science fiction scholars (Nicholls 1976; Kitchin and Kneale 2001, 2002; Gunderman 2017; Rhodes et al. 2017) have asserted the power of the genre in speaking towards sociocultural issues through metaphor and offering a framework for building real change on Earth. In this paper, I not only create a blueprint for conceptualizing critical worldbuilding through the three pillars of geographies of science fiction, cosmopolitanism, and peace, but I also advance scholarly geographic engagement with themes of empathy and compassion in *Doctor Who*. Within this research, I further engage Sorum's (2011) analysis of narrative empathy, in which an audience understands and experiences emotions *with* a character through narrative elements in a plot.

The main character of *Doctor Who* is known as the Doctor, a Time Lord from the planet Gallifrey who uses a TARDIS (Time and Relative Dimension/s in Space) to travel across space and time, usually with a human companion. Time is non-linear and instead of dying from natural/physical causes, upon fatal physical harm the Doctor regenerates into a new phenotypic form. Accordingly, the Doctor is over 900 years old. While the Doctor's regenerations up to the current season have been played by cisgender male actors who retain the gender identity in their role, the newest incarnation of the Doctor is played by actress Jodie Whittaker, a cisgender woman. Due to the Doctor's gender fluidity, throughout the course of this paper I use the pronouns they/them to refer to the Doctor *en masse*, but with he/she pronouns if focusing on a particular actor. The Doctor is *often* non-violent in their conflicts with nemeses throughout the show, although *major* exceptions exist (the Doctor has taken the lives of others in cases of rage, duress, and extreme necessity). Their "weaponry," consisting of a Sonic Screwdriver (a multifunctional tool with advanced technology), psychic paper (a blank white card which shows others what they want to see), and sophisticated intelligence and reasoning skills of both themselves and their companion(s), is used in a manner to influence others emotionally and physically. The Doctor's often pacifist approach to conflict may contribute to the show's potential to build spaces of peace by using logic and compromise rather than violent force[1].

I use the following format to analyze the geographies of science fiction, cosmopolitanism, and peace as three pillars comprising critical worldbuilding: first, I discuss the scholarly literature pertaining to each of the three pillars and identify important gaps. Second, I provide case studies of three *Doctor Who* episodes which relate to each of the three pillars. I conclude by advocating for increased geographic scholarship not only on critical worldbuilding, but also on *Doctor Who* as an important popular culture phenomenon.

Framing the Pillars

Having proposed a reading of critical worldbuilding through the three pillars of geographies of science fiction, cosmopolitanism, and peace, using the lens of *Doctor Who,* I provide in the following section a foundation for understanding each pillar as it contributes to an understanding of critical worldbuilding, as well as how each pillar frames the episode analysis comprising the remainder of the paper.

Geographies of Science Fiction

Science fiction is inherently geographical because of the ways in which it reflects upon the real physical, social, and cultural landscapes of Earth through fantastical metaphor. Geographies of science fiction is a subfield where scholars explore fantastical themes including power relations within film and television, outer space as an alternative representation of place, the cultural politics of alien invaders, and binary "us versus the other" politics (Kitchin and Kneale 2001, 2002). Scholars recognize science fiction's ability to blur lines between fantasy and reality, providing social commentary on real issues through fantastical plotlines. The manner in which science fiction critiques lived reality through this lens can be framed through cognitive estrangement. Cognitive estrangement is a representation whereby a consumer recognizes the subject matter, which is presented through a lens making it appear unfamiliar. This estranges the viewer, creating a space for new cognitive processes surrounding the subject (Suvin 1979). Science fiction has therefore been called the 'literature of cognitive estrangement' (Suvin 2005: 24), as it projects the human (or human-like) experience onto the past, present, and future. The very nature of the science fiction genre is rooted in estrangement, taking familiar representations from modern society and presenting it through a fantastical lens.

Nicholls (1976) describes the ability of science fiction to form commentary on the real world, working primarily through metaphor to describe reality: 'To read it literally is not to hear its profoundest and most disturbing reverberations' (8). Science fiction consumption may forge emotional connections between viewers and subjects based on their description of reality through a lens of fantasy. Scholars have explored implications of science fiction media in facilitating emotional explorations of fantasy and reality (Lips 1990; Piana 2002; Landon 2011; Chapman 2013; Tapper 2014). These explorations not only allow viewers to use science fiction as a form of escapism, but are also helpful in encouraging emotional healing.

Televisual science fiction can also comfort viewers, providing a sense of belonging to those with a perceived lack of community or camaraderie within a social space (Miller 2007) even if such belonging is instilled through engagement with fictional storylines and characters. As Adams (1992) notes, television blurs the defined boundaries between human-made places and the digital world: 'television (and perhaps other media) [acts] as a gathering place for vast numbers of people...[that] experientially inhabit it and relate to other persons through it or with it' (119). In the same way a person may experience comfort through face-to-face connections, they may also seek and receive comfort through televisual means. Individuals who may have no perceived connections may find common ground among the viewership of certain shows, highlighting the power of television in forming connections between large groups of people. This is particularly true within science fiction television, which can provide a platform for people from a variety of races, genders, and ages to bond over a common interest in a show (Lips 1990; Piana 2002). Geographies of science fiction are particularly suited for analyzing complex social relations within science fiction fandom, as they not only explore how alternative landscapes are envisioned and how current landscapes are contested, but they also lend insight into how

and why individuals align themselves with certain social groups across space and time. This camaraderie is exhibited in "cosplay" among *Doctor Who* viewers who, at conventions, gatherings, and promotional screenings, often dress up as characters from the series. This celebration of fandom, which may produce feelings of othering when worn outside *Doctor Who* events, provides cosplayers with a sense of community, belonging, and empowerment through collective tribute. However, internal fractalization exists within the *Doctor Who* fandom, particularly evident within the misogynistic discourse surrounding Jodie Whittaker's Doctor, the first woman Doctor in the show's history. When discussing *Doctor Who* as a platform for messages of peace and empathy, one must also acknowledge how the show and surrounding fandom may produce contradictory feelings for some viewers.

Cosmopolitanism

I envision critical worldbuilding as a restorative strategy for developing empathic spaces at an individual level, thereby building of a more peaceful world through human mobilities. Cosmopolitanism, a theory widely associated with Immanuel Kant, employs a similar framework:

> …the Stoics suggested that we think of ourselves as surrounded by a series of concentric circles of compassion in which each individual is located at the center of progressively larger webs of mutual obligation extending from the self and family to community to region to the world, with declining obligations to those farthest removed from ourselves. Cosmopolitanism advocates extending the innermost circles outward, to encompass ever larger domains of humanity. (Warf 2015a: 930)

However, many of Kant's contributions to geography are rooted in environmental determinism, xenophobia, and racism (Harvey 2000). As we appreciate and advance his theory of cosmopolitanism, we can concurrently recognize the legacies of colonization, violence, and exploitation emboldened by such rhetoric.

Cosmopolitanism is a pillar of critical worldbuilding because it presents a framework for restorative cultural change through a bottom-up approach in which social responsibility is extended without regard to geographic proximity. As Rifkin (2009) writes, 'to be cosmopolitan is to be open to 'the other' and to be comfortable amid diverse cultures…honed to a sophisticated sense of selfhood as a result of intense exposure to and empathic connection with diverse others' (431-2). Cosmopolitanism seeks to lessen the significance of geographical boundaries and borders (whether real or imagined) and view the world through an Apollonian gaze (Cosgrove 2001; Jazeel 2011). Scheuth and O'Loughlin (2008) found individuals who identify as cosmopolitan are more likely to be environmentalists, politically active, and have a positive outlook towards living among immigrants. These individuals are also generally less patriotic, signifying they place less importance on national borders.

In its past, cosmopolitanism has been weaponized to justify othering and violence towards certain ethnic groups and political movements, including framing Jewish people as traitors to national solidarity and communists as enemies to the free world (Harvey 2000;

Scheuth and O'Loughlin 2008). As Warf (2015b) notes, a modern day envisioning of cosmopolitanism, however, strives to 'uphold the essential moral value of all human beings, rather than more localized units such as tribes, nations, or religious communities' (39). A geographical cosmopolitanism integrates the global and local in a positive way (Massey 1994). I pose this question: how does cosmopolitanism speak towards a world where many countries and regions are in various states of trauma, reconciliation, and healing from the legacies of violent colonization? The decolonization process often thrives on reclaiming bonds to localized communities (Hernandez et al. 2015). Because cosmopolitanism has been accused of erasing important local cultures and imposing a Eurocentric worldview (Harvey 2000; Warf 2015b), an improper application of cosmopolitanism within critical worldbuilding could lead to spaces of injustice and erasure. As a pillar of critical worldbuilding, cosmopolitanism has the power to increase empathy particularly for those not within our immediate proximity. However, we must concurrently acknowlede our privilege and positionality when applying this theory towards peace and compassion for others. In the same manner the phrase 'We are all one race: the human race' is used to silence the experiences and voices of people of color (Faida 2017), the phrase 'I am a citizen of the world,' a cosmopolitan phrase attributed to Diogenes in classical Greece (Warf 2015a), may silence the voices of those undergoing colonial trauma and/or decolonial healing. Thus, cosmopolitanism must be applied within critical worldbuilding frameworks with careful consideration of colonial histories, advocating for empathy towards individuals both within and beyond our immediate geographic proximities.

Geographies of Peace

Peace as a theory and praxis encompasses many interpretations both within and outside of geography. Thus, it is necessary to offer an operational definition of peace for this paper. I define peace here as a state of individual and community well-being achieved through empathetic and compassionate living. Many scholars theorize that levels of peace (manifested as the absence of violence) can increase alongside empathy; conversely, as empathy decreases, levels of peace also decrease as a result (Zembylas 2007; Pinker 2011; Sagkal, Turnuklu and Totan 2013; Shamay-Tsoory et al. 2013). Dean (1960) posited empathy may be difficult to develop in environments where those who do not satisfy notions of what it means to contribute to society or those who look, live, and act different from a certain group are alienated. This may allow for a binary classification of 'us versus the other,' causing disengagement with the lived experiences of those who are alienated (Gunderman 2017). Even when counter-narratives are available documenting the lived experiences of those deemed "the other," it may still prove difficult to gain empathy for a person with lived experiences different than our own (Cook 2016). Several decades later, while this conceptualization remains influential, more scholars are defining peace 'as more than non-war' (Koopman 2011: 193), considering empathy, cosmopolitanism, and solidarity within geographies of peace. Exploring empathy within a critical worldbuilding setting represents a powerful opportunity to understand how empathy transcends small-scale interactions to larger spaces and networks.

Geographies of peace strive to understand ideologies creating spaces of social injustice, seeking to isolate the spatial facilitators of conflict and, conversely, pacification – i.e., where does conflict *not* happen and why? Geography offers a critical framework for studying peace within interactions of space, time, and politics (McConnell et al. 2014), with a focus on learning from past and present situations where peace was achieved. Such situations may serve as frameworks for rehabilitating areas currently suffering from conflict (Megoran 2011). Landscapes undergoing conflict, sometimes known as landscapes of fear (Tuan 1979), often develop through decades of hegemonic and structural prejudices such as racism, classism, and exploitation, which in turn reproduce inequality and violence (Inwood 2012). Mitchell (2003) examines new spaces of social justice by (re)envisioning the spaces in which our daily lives unfold, identifying where and why injustice happens and creating strategies for radical transformation. As a subdiscipline, geographies of peace offer a framework for building such strategies.

The intersectional nature of geography offers a prime role for studying peace relative to multiple spatial and sociocultural factors. Yet, geographies of peace are rarely studied in a standalone manner and rather are interwoven with geographies of violence and war. Geographical studies of peace are complicated because geography 'is better at studying war than peace' (Megoran 2011: 178). Despite the significant intersections between peace studies and geographic research, scholars note the distinct lack of the word "peace" within the discipline (Kobayashi 2009; Koopman 2011). Ross (2011) questions if the discipline is equipped to adequately research peace, even suggesting geographical research has focused on war and violence at the expense of peace –highlighting the former without appropriately discussing the latter. In contrast, I argue geographies of peace provide a lens through which geographers may seek to build a more peaceful world.

Episode Case Studies

Episode Synopsis 1: 'Planet of the Ood,' Series 4, Episode 3 (2008)

The Ood are a humanoid species living on Ood Sphere, the moon of a ringed planet in the Horsehead Nebula. The Ood exist in a Borg-like[2] network through telepathy enabled in part by a hindbrain held in their hands. In the year 4126, the 10th regeneration of the Doctor and his companion Donna Noble journey to the Ood Sphere. They find the moon has been colonized by humans who established Ood Operations, a company enslaving Ood and marketing them as a commodity. To "process" the Ood for enslavement, Ood Operations lobotomize Ood by removing their external hindbrains and replacing them with a small translation sphere, a device which allows the Ood to communicate with humans but not within their hive mind, effectively converting them into subservient slaves. While on Ood Sphere, the Doctor and Donna find dozens of cages containing processed Ood, as well as several unprocessed Ood with their original hindbrains intact. Angered and horrified by the actions of Ood Operations, they chastise CEO Klineman Halpen for his exploitation of the Ood and are captured by the company's security force. During their capture, the Ood strike a revolution and begin killing employees of Ood Operations, allowing the Doctor and Donna to escape. They locate Halpen, who has retreated to a

room with a large brain (called the Ood Brain, the collective consciousness of the Ood) with the intent of committing genocide of the Ood race by destroying the brain. The Doctor and Donna thwart his plans, and leave the Ood Sphere having liberated the Ood from an existence of forced servanthood.

Episode Synopsis 2: 'Vincent and the Doctor,' Series 5, Episode 10 (2010)

'Vincent and the Doctor' features the eleventh regeneration of the Doctor and his companion Amy Pond. The episode opens with the Doctor calling upon Amy to join him in Provence, France in 1890, a few months before Vincent Van Gogh's suicide. Upon arriving, the Doctor and Amy begin searching for Vincent, and soon find him arguing with a waiter at a local restaurant. After a brief conversation with the artist, they find he is battling not only his own mental illness but also a destructive alien creature only he can see. The creature, which has destroyed property and killed villagers, is described by Vincent in detail, but is unseen by the villagers, the Doctor, and Amy. Using a piece of technological equipment which allows him to see the alien, the Doctor quickly identifies the creature as a Krafayis. Later in the episode, Vincent spots the Krafayis in a window of the church. The Doctor and Vincent work together to subdue the alien, and in the struggle, the creature is killed. The Doctor, in speaking to the Krafayis, learns they are traveling through the universe alone, blind, scared, and lashing out at the unknown.

Upon the death of the Krafayis, Vincent, Amy, and the Doctor travel in the TARDIS to the Musée d'Orsay in Paris to show Vincent the impact his art and life continues to have on the world. Overcome with tears, Vincent expresses his excitement for beginning a new life with the newfound knowledge of the impact of his work. Amy feels confident the artist will not commit suicide after receiving such good news. However, upon traveling back to the present-day, she learns Vincent indeed committed suicide shortly after their visit.

Episode Synopsis 3: 'The Beast Below,' Series 5, Episode 2 (2010)

Within this episode, the 11th regeneration of the Doctor and his companion Amy travel aboard the Starship UK, a vessel meant to transport the UK away from Earth in order to avoid the aftermath of the death of the sun. They eventually discover the entire ship is atop a Star Whale (an alien species of whale) providing the forward trajectory for the vessel. To guide the whale, the pain center of its brain is exposed and it receives jolts of electricity in which propel it forward. Therefore, the whale is literally being tortured in order to continue the progress of the Starship UK. The Doctor and Amy learn the Star Whale, the last of its species, appeared just as the Earth was facing destruction by solar flares, who was then promptly captured by the humans who built a ship around the Star Whale. In order to save the whale, the Doctor decides to alter the programming of the control device to leave the Star Whale mentally incapacitated in order to no longer feel the pain of the electricity. However, Amy intercepts him and instead disables the controlling device itself, rendering the whale free to leave the ship. The whale, however, decides to stay on its own free will and continues to guide the ship, no longer in pain nor forced to transport the ship.

Framing the Episodes within the Three Pillars

Geographies of Science Fiction

Science fiction weaves alternative realities through fantastical metaphor, imploring its audiences to (re)consider familiar spaces, issues, and emotions through an estranged lens. In science fiction, worldbuilding is enacted through our own understandings of Earth to 'reproduce images of this planet through an imagined cosmos' (Kneale and Kitchin 2002: 12), extending real and perceived boundaries of Earth to the cosmos (Lem 1987). Although the details are different when building extraterrestrial worlds, there are recognizable problems and common solutions to those problems (Cohen 1991).

> (The Krafayis skewers itself on the easel and lifts Vincent into the air. Then it falls to the floor, mortally wounded.)
> Vincent: He wasn't without mercy at all. He was without sight. I didn't mean that to happen. I only meant to wound it, I never meant to..
> The Doctor: He's trying to say something.
> Vincent: What is it?
> The Doctor: I'm having trouble making it out, but I think he's saying, "I'm afraid. I'm afraid." There, there. Shush, shush. It's okay, it's okay. You'll be fine. Shush.
> Vincent: He was frightened, and he lashed out. Like humans who lash out when they're frightened. Like the villagers who scream at me. Like the children who throw stones at me. ('Vincent and the Doctor')

Vincent draws comparisons between the stigma and exile surrounding his mental illness within the village, and subsequent emotions of fear, alienation, and sadness, to those of the Krafayis, who traveled across the universe in fear and loneliness. The Krafayis serves to represent Vincent's mental illness as an alien creature only he can see, who lashes out in fear at those around him who shun him. Science fiction blurs the boundaries between reality and fantasy, as the relationship between Vincent and the Krafayis engages mental illness in a fantastical yet viscerally real manner, reiterating the power of the genre to speak through metaphor towards real issues experienced on Earth.

> (The Doctor and Donna enter a cage full of unprocessed Ood; the Ood cower in the corner. An Ood opens his hands. He is holding a small brain.)
> Donna: Is that…?
> The Doctor: It's a brain. A hind brain. The Ood are born with a secondary brain. Like the amygdala in humans, it processes memory and emotions. You get rid of that, you wouldn't be Donna any more. You'd be like an Ood. A processed Ood.
> Donna: So the company cuts off their brains?
> The Doctor: And they stitch on the translator.
> Donna: Like a lobotomy. ('Planet of the Ood')

The colonization of the Ood Sphere and consequential disfigurement and enslavement of the Ood mirrors legacies of colonization, exploitation, and enslavement both historically and currently present on Earth. The writers have effectively reproduced and projected real images of bodily harm, exploitation, and torture from Earth onto the imagined world of the Ood Sphere, inviting the viewer to partake in textual and visual comparisons between the Ood and exploited (more-than-) humans.

> Liz: The creature you are looking at is called a Star Whale. Once, there were millions of them. They lived in the depths of space and, according to legend, guided the early space travelers through the asteroid belts. This one, as far as we are aware, is the last of its kind. And what we have done to it breaks my heart. The Earth was burning. Our sun had turned on us and every other nation had fled to the skies. Our children screamed as the skies grew hotter. And then it came, like a miracle. The last of the Star Whales. We trapped it, we built our ship around it, and we rode on its back to safety. ('The Beast Below')

'Planet of the Ood' and 'The Beast Below' draw comparisons not only to human exploitation, but also the exploitation of non-humans in factory farms, slaughterhouses, and other industries built on their labor. Lobotomization removes the Ood's agency by stifling connections to their hive mind, while enslaving the Star Whale removes their free will. Many standard procedures in animal husbandry remove animals' agency by restricting their normal physical functions, such as the long-term confinement of dairy cows through perpetual impregnation, and crating/chaining of their male offspring for veal. Animal husbandry invites comparisons with the Ood and the Star Whale, imploring viewers to compare their treatment to that of more-than-humans on Earth[4]. To reiterate, I am not comparing the experiences between humans/non-humans on Earth; sociocultural and economic differences merit broader discussions towards more-than-human exploitation (for perspectives regarding this point from Black feminist vegan scholars, please see Harper (2009)). Yet, if the treatment of the Ood and the Star Whale elicits empathic emotions from viewers, viewers may take inspiration from how the Doctor acts as an activist and educator to end exploitation and *critically build* a better Universe, creating more peaceful spaces on Earth.

Cosmopolitanism

Cosmopolitanism testifies to the significance of individual actions, and the effect compounding actions in small spaces can have on larger scales. Cosmopolitanism views this process through concentric circles in which actions within the smallest circle ultimately build to influence the characteristics of the outermost circles.

> Ood Sigma: And know this, Doctor Donna. You will never be forgotten. Our children will sing of the Doctor Donna, and our children's children, and the wind and the ice and the snow will carry your names forever. ('Planet of the Ood')

The liberation of the Ood takes place in the smallest concentric circle, where the lives of the Ood on Ood Sphere are made more peaceful. In the next largest concentric circle, the liberation of the Ood Sphere also brings liberation to the thousands of processed Ood exported across the Universe as slaves. In the most outermost concentric circle, these actions, by proxy, make the Horsehead Nebula a more peaceful space. An equitable critical worldbuilding empowers individuals to take direct actions in their most immediate spaces to build larger networks influenced by their actions.

The Doctor is originally from the planet Gallifrey, the homeworld of the Time Lord species, but for reasons not relevant to this discussion cannot live on their home planet, rendering them a homeless wanderer. The Doctor offers their assistance to creatures, races, and planets across the Universe regardless of proximity to the Doctor's home planet. In much the same way a cosmopolitan is a "citizen of the world," the Doctor may be called a citizen of the universe as their actions are not constrained by boundaries or species. Further, Donna is a resident of Earth in the 21st century, rendering her both spatially and temporally distant from the Ood Sphere. However, both the Doctor and Donna act as citizens of the universe by assisting the Ood despite temporal and physical distance.

> Amy Pond: The Star Whale didn't come like a miracle all those years ago. It volunteered. You didn't have to trap it or torture it. That was all just you. It came because it couldn't stand to watch your children cry. What if you were really old, and really kind and alone? Your whole race dead. No future. What couldn't you do then? If you were that old, and that kind, and the very last of your kind, you couldn't just stand there and watch children cry. ('The Beast Below')

Similar to the compassion shown by the Doctor and Donna towards the Ood, the Star Whale in "The Beast Below" extends compassion towards the citizens of Earth burning under the solar flares, despite differences in species and homeland. By exhibiting compassion towards humans, in a broader concentric circle the Star Whale's actions create a more peaceful universe in which humans are able to continue their civilization. However, the enslavement of the Star Whale negates much of this "peacefulness," later remedied by Amy's liberation of the creature. Amy, an entirely different species than the Star Whale, extends her kindness beyond her most immediate concentric circles to impact change at a greater scale.

Could this episode influence viewers on Earth to extend compassion beyond their most immediate concentric circles? The Doctor and his companion's actions on the Ood Sphere and Starship UK speak towards cosmopolitanism as a pillar of critical worldbuilding as the Doctor builds a more peaceful universe, episode-by-episode, by helping individuals in need regardless of their location within their concentric circles of compassion. What *if* a person was influenced by this episode and *did* reach out to help someone, whether in their local community or across the world? Critical worldbuilding enlists an optimism that an individual's unique actions will compound to change the world around them. As the Doctor makes the universe a more peaceful place, cosmopolitanism suggests compassionately-minded viewers of the show could do something to offer assistance within their own circles of compassion. As the opening quote by Ood Sigma

shows, the positive repercussions of the Doctor's actions will affect multiple generation of Ood as they embark on a healing journey of decolonization. Similarly, small actions by individual humans can affect humanity for generations to come.

> Doctor: This is risky.
> Amy: Riskier than normal?
> Doctor: Well, think about it. This is the middle of Vincent Van Gogh's greatest year of painting. If we're not careful, the net result of our pleasant little trip will be the brutal murder of the greatest artist who ever lived. Half the pictures on the wall of the Musée D'Orsay will disappear. And it will be our fault. (Vincent and the Doctor)

While I explore cosmopolitanism in 'The Beast Below' and 'Planet of the Ood' through the impact of kindness and compassion across networks, 'Vincent and the Doctor' offers a framing of critical worldbuilding through the impact of negative actions across networks. When Amy, the Doctor, and Vincent endeavor to incapacitate the Krafayis, the Doctor notes the impact the death of the artist would have across both geographically and temporally distant landscapes, despite the artist's current reputation within his current landscape. Thus, small actions at the local scale may have positive *or* negative impacts within outermost concentric circles. Therefore, cosmopolitanism must account for the influence of dangerous actions at the local scale.

Geographies of Peace

As a pillar of critical worldbuilding, geographies of peace encourage individuals to examine their positionality in relation to spaces of violence and compassion, understanding how their unearned privileges (or lack thereof) intersect with these spaces. *Doctor Who* serves as connective tissue between fantastical worlds and the spaces of our own planet by offering representations of sociocultural issues through fictional metaphor.

> Donna: A great big empire built on slavery.
> The Doctor: It's not so different from your time.
> Donna: Oi! I haven't got slaves.
> The Doctor: Who do you think made your clothes? ('Planet of the Ood')

In this episode, Donna is appalled by the treatment of the Ood yet is unaware of her own positionality in regard to slavery on Earth. The Doctor reminds Donna that capitalist consumption on Earth is fueled by the emotional and physical labor of enslaved peoples (Hauser 2017). It is virtually impossible to live on Earth and consume a product free from the exploitation of humans, non-humans, and/or the environment. However, it is important to examine the myriad manifestations of slavery on Earth and denounce all forms of enslavement. This examination allows us, where financially and physically accessible, to develop consumption habits which *minimize* our interaction with these practices, making our immediate spaces more compassionate and socially responsible and ultimately contributing towards larger networks of anti-slavery and peace.

Geographies of peace also identify ideologies which facilitate spaces of injustice and inhibit the growth of compassion. Textually, the language in "Planet of the Ood" mirrors rhetoric which removes agency from more-than-humans, ultimately justifying their exploitation. Referring to the Ood as "livestock," members of Ood Operations use phrases such as 'We keep them [the Ood] healthy, safe, and educated' and 'We're exporting hundreds of thousands of Ood to all the civilised planets,' insinuating the Ood are uncivilized and incapable of self-care. This language belittles the Ood, removes their agency, and builds a culture of human supremacy. Viewers may thus develop familiarity with dangerous rhetoric emboldening exploitation, providing a toolkit for recognizing similar rhetoric in spaces on Earth.

> Amy: You could have killed a Star Whale.
> Doctor: And you saved it. I know, I know.
> Amy: Amazing though, don't you think? The Star Whale. All that pain and misery and loneliness, and it just made it kind. ('The Beast Below')

> Black: We have here the last work of Vincent Van Gogh, who committed suicide at only thirty seven. He is now acknowledged to be one of the foremost artists of all time. If you follow me now.
> Amy: So you were right. No new paintings. We didn't make a difference at all.
> Doctor: I wouldn't say that. The way I see it, every life is a pile of good things and bad things. Hey. The good things don't always soften the bad things, but vice versa, the bad things don't necessarily spoil the good things or make them unimportant. And we definitely added to his pile of good things. ('Vincent and the Doctor')

As Koopman (2011) asserts, geographies of peace should engage with topics such as empathy, cosmopolitanism, and solidarity rather than strictly viewing peace as "not-war." In 'The Beast Below,' the Star Whale, after having gone through tremendous pain and torture, continues transporting the Starship UK despite being free to leave. Amy and the Doctor, through empathy and compassion, liberate the Star Whale and create a more peaceful existence for both the citizens aboard the ship and the creature. However, 'Vincent and the Doctor' highlights the complexity of these impact in troubled spaces, where compassionate actions may provide comfort without fixing all underlying issues. As Amy and the Doctor extend empathy towards Vincent's spaces of mental illness, viewers engage with a representation of Vincent which sheds light on the complexity of these diseases. By extending empathy and compassion towards the artist, Amy and the Doctor provided Vincent with positive experiences in his life and increased, albeit temporarily, the happiness within his most immediate spaces. However, as the Doctor highlights, while they add to his 'pile of good things,' they cannot overcome the impact of his mental illness.

Peace geographers identify areas where a systemic reproduction of trauma and injustice across both time and space render peace difficult to achieve (Tuan 1979; Mitchell 2003; Inwood 2012). This is particularly true in regions which have experienced colonization, a violent process of multi-generational alienation and exploitation. Even after independence, decolonization manifests political, sociocultural, and economic impacts

through decades of reproduced emotional and physical trauma where the exploited groups either remain or withdraw from their oppressors. The Star Whale, as a colonized body, having been granted independence after prolonged emotional and physical trauma, decides to remain with their captors and even aid them in their continued safety. Although the Ood have been liberated from their enslavement by Ood Operations, those who have been processed are permanently disfigured by their lobotomies. In their decolonial journey, they will bear not only the emotional scars of forced servanthood and family displacement, but also physical scars from the removal of their hindbrain. While Provence, France is not a colonized space in the same manner as the Star Whale's body or the Ood Sphere, Vincent's treatment at the hands of the villagers represents the reproduced stigma towards mental illness often resulting in physical and emotional violence towards those with these illnesses. Equitable critical worldbuilding provides a framework for building spaces for decolonization and erosion of reproduced injustices, using geographies of peace as a pillar through which to ensure these spaces account for the generationally-reproduced effects of trauma at the hands of systemic exploitation.

Episode Wrap-Up

'Planet of the Ood,' 'Vincent and the Doctor,' and 'The Beast Below' represent a fraction of the episodes in *Doctor Who* engaging with social issues through the three pillars of critical worldbuilding defined in this paper, providing commentary with compassionate and/or empathic undertones. These themes include violence towards sick individuals in exploited communities ('New Earth', 2x1), societal shaming of teenage pregnancy ('The Empty Child/The Doctor Dances', 1x9, 1x10), LGBTQ+ representation and discrimination ('The Snowmen', series 7 Christmas special; 'The Name of the Doctor', 7x13) and sociocultural impacts of war ('A Good Man Goes to War', 6x7). Their representation within a science fiction context does not diminish the strength of the commentaries' abilities to speak towards reality; rather, because science fiction speaks to these realities through metaphor of fantasy and technology (Nicholls 1976), they encourage viewers to compassionately reconsider (or reinforce) their views not only towards the different themes presented in each episode, but also towards what it means to be othered and how othering contributes to a lack of empathy and compassion among our daily landscapes. In transformative critical worldbuilding, understanding how to increase empathy in daily spaces provides a foundation for building larger spaces of peace. Several episodes of *Doctor Who* highlight empathic considerations for other worlds and alien species; therefore, the other is not limited to human characters, locations, and experiences, but also applies to non-humans. The strength of *Doctor Who* as a teaching tool for considering compassion and empathy lies in its presentation of otherness transcending humans on Earth to include aliens from other planets and galaxies *and* those forms of humanity seemingly not human, who both phenotypically and emotionally challenge ideas of compassion and otherness.

Conclusion

As this special issue signifies, critical worldbuilding is gaining traction within geography as praxis for building transformative change within our daily landscapes translating to larger geographic areas. I use this paper to identify geographies of science fiction, cosmopolitanism, and geographies of peace as three pillars of critical worldbuilding, which individually and collectively support critical worldbuilding as a strategy for creating a more compassionate and empathic society. While I focus exclusively on these pillars, geographers can envision critical worldbuilding through a variety of lenses not mentioned here, including popular geopolitics, utopian/dystopian studies, and governmentality. Although I conceptualize critical worldbuilding as praxis for building a more peaceful society, the inverse could of course be true where critical worldbuilding may be applied to building a more violent society under the same logic presented within this paper. For example, what if a viewer of *Doctor Who* only focused on violent elements in the show, such as when the Doctor commits genocide, when Daleks exterminate human beings, or when the show enacts racist stereotypes and language? If a single viewer felt emboldened to repeat such actions based on their presence in the show, each space they then occupy becomes a space of increased violence. What if this then happened to ten viewers? Or 100 viewers? 10,000? When speaking towards critical worldbuilding as it relates to media and literary works, it is important to frame the positionality of those works in shaping real or imagined worlds at a viewer-by-viewer (or reader-by-reader) level. Harkening to the paper's opening quote from "The Age of Steel", critical worldbuilding is a theory that rests on the belief that changing the world starts with one person, also a fervent belief of the Doctor. Critical worldbuilding presents a liberatory strategy for addressing the host of issues in our world today, including catastrophic climate change, revitalized adoration for unabashed fascism and Nazism, and the dehumanization of immigrants fleeing war and famine. Liberation exists in the idea that single individuals offering compassion and empathy within their daily spaces can collectively build larger spaces of peace amidst injustice. Conversely, single individuals offering bigotry and violence within their own daily spaces can also build larger spaces of hate. Studying critical worldbuilding through the pillars of geographies of science fiction, cosmopolitanism, and peace helps ensure the conversation is framed towards building a peaceful world increasingly critical of the myriad injustices plaguing our daily spaces.

I do not intend in this article to absolve *Doctor Who* from its transgressions in social awareness and discrimination. Several episodes from classic *Doctor Who* have themes displaying racist stereotypes (Orthia 2013), discriminating against and othering groups of people (including 'The Talons of Weng-Chiang,' cited as exhibiting racist attitudes towards Chinese characters). Furthermore, some members of the *Doctor Who* fandom have questioned the hypocrisy of the Doctor's consumption of animal products while concurrently preaching compassion for living beings (explored in a recent article in *The Conversation*[3]), although I note the Doctor's attitude towards eating meat has fluctuated across the show's history. Finally, while *Doctor Who* critically engages with several social injustices, the Doctor has been exclusively portrayed by white actors/actresses since its inception and has drawn criticism for a lack of representation among this lead role. While

acknowledging these valid criticisms, it is unwise to dismiss the show's promise as a platform allowing fans to engage with concepts in critical worldbuilding, and perhaps even influence empathy towards certain topics. While remaining aware of these criticisms, we can acknowledge that many of the show's episodes and storylines engage deeply with historical and current socio-economic struggles, providing a venue for introducing transformative and healing discourse surrounding these topics.

While cultural and philosophical themes presented in *Doctor Who* have been explored in recent publications (Layton 2012; Porter 2012; Decker 2013; Hills 2013; Leitch 2013), academic literature situated specifically within geography exploring the political and sociocultural implications of the show is extremely rare. This signifies an opportunity for geographers to pursue an increased engagement with the subject. Considering the wealth of geographical themes present in *Doctor Who*, scholars from a variety of geographic perspectives can use the show to explore traditional concepts in space and place as well as emerging topics within critical worldbuilding as it relates to media and literary phenomena. While I suggest that *Doctor Who* is an appropriate lens through which to understand the pillars of critical worldbuilding, I reiterate this paper is conceptually driven. I do not claim to provide concrete evidence *Doctor Who* alters the opinions of viewers; social injustices in modern society resulting from reproduced spaces of capitalism, violence, and colonialism cannot be completely addressed by academic engagement with *Doctor Who*. The research does, however, serve as an intellectual primer for future studies using field-based methods to test these claims. For example, Gunderman (2020) conducted an empirical analysis of social media posts connecting *Doctor Who* fandom with geopolitical events, suggesting a connection between viewership of and affinity towards the show with actions taken "in the real world" beyond the television screen. It is also my hope readers may become inspired to view other film and television works beyond *Doctor Who* through a critical worldbuilding lens. Discovering the ways in which empathy manifests (or not) in our daily geographies should be an important step in expanding critical worldbuilding scholarship. Empathy, as an emotional phenomenon, is difficult to quantify and certainly cannot be proven or disproven in an academic paper. However, it remains important to capture moments through which empathy *may* develop, and selected episodes of *Doctor Who* could sensitize viewers to empathic issues. As we move forward in a world where empathy and compassion are increasingly absent from many dominant narratives in mainstream communication, particularly those of populist and racist political movements, we must remember the importance of building a more peaceful world at the individual level. The scholarship of critical worldbuilding teaches us that actions taken at a microscale work to construct a broader geography whose place identity is defined by those microscale events, and supports critical worldbuilding as a crucial area of study in the geographic discipline.

Notes

[1] In classic *Doctor Who* and the post-2005 relaunch, there are instances of the Doctor using force, resulting in physical harm and/or death to others: http://www.bbc.co.uk.

[2] I refer to the Borg of *Star Trek*, cybernetic organisms linked into a single consciousness: http://memory-alpha.wikia.com/wiki/Borg.
[3] https://theconversation.com/doctor-who-takes-an-ethical-stance-towards-alien-life-so-why-isnt-he-vegan-75786.

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