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Ecological Gentrification in Response to Apocalyptic Narratives of Climate Change: The Production of an Immuno-political Fantasy

Contact:

Earl T. Harper
School of Geographical Sciences
The University of Bristol
University Road
Bristol
BS8 1SS
earl.harper@bristol.ac.uk

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Abstract: Anxieties over the potential impacts of climate change, often framed in apocalyptic language, are having a profound but little-studied effect on the contemporary western urban landscape. This paper examines the ways in which current theorisations of 'Ecological Gentrification' express only half the process, describing how green space is used for social control, but not how ecology is used as a justification regime for such projects. As urbanites seek out housing and living practices which have a lower environmental impact, urban planners have responded by providing large-scale regeneration of the urban landscape. With the demand for this housing increasing, questions of inequality, displacement and dispossession arise. I ask whether apocalyptic anxiety is being enrolled in the justification regimes of these projects to make them hard-to-resist at the planning and implementation stages. The paper shows that in capitalizing on collective anxiety surrounding an apocalyptic future, these projects depoliticize Subjects by using the empty signifier of 'Sustainability' leading them into an immuno-political relationship to the urban landscape. This leaves Subjects feeling protected from both responsibility for and the impacts of climate change. Ultimately this has the consequence of gentrification coupled with potentially worsening consumptive practices, rebound effects and the depoliticization of the environmentally conscious urbanite.

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Urbanizing the Apocalypse

Throughout the history of film, audiences have witnessed and experienced their own desires, fears, anxieties and fantasies played out before them on the silver screen. The play of shadows created by cinematographers is used by scholars engaged in psychoanalytic research to ‘read’ the collective dreaming of society (Metz, 1982; Lebeau, 2001) allowing insight into what terrifies and thrills us in the current moment. The current trend for sci-fi futuristic film, which portrays the end of the world, and serves as a warning to scholars of the level of anxiety over the future felt by (predominantly) Western societies. Many of these narratives take place in cities, the human species is, after all, an increasingly urban one (UN, 2014) so it makes sense to make these films relatable. This paper takes these numerous stories of our ultimate destruction as indicators that urban societies are increasingly frightened about their own demise. The paper asks what these anxieties tell us about our relationship to urban natures, broadly conceived? Can ecological gentrification be thought of as a response to apocalyptic narratives of climate change? And, if so, what does this do to the urbanite’s ability to act on climate change mitigation and socio-environmental injustices?

This paper examines the ways in which ecology is used as a justifying means for gentrification projects. Drawing on literature of ecological gentrification (Dooling, 2009, 2012; Checker, 2011; Cucca, 2012; Gould and Lewis, 2017; Bouzarovski *et al.*, 2018; Rice *et al.*, 2019) and immunological fantasy (Esposito, 2010, 2011; Neyrat, 2010; Kaika, 2017; Swyngedouw and Ernstson, 2018) the paper advances a theoretical argument for combining these two bodies of work: ecological gentrification and immunological fantasy. To achieve this, three conceptual moves will be made. The first move is to explore the often apocalyptic framing of climate change through scientific reports, the media and film, the second to explore the ways in which ecological gentrification has been written about and theorized, the third to understand whether a theory of immuno-politics can reveal something more about ecological gentrification projects and their effect on the inhabitant’s understanding of their role in climate change. Several related philosophical thinkers will be brought together to form the conceptual basis for these moves, including Marx, Debord, Lacan, Rancière and Esposito.

The implications of the presence of an immunological fantasy in the contemporary, gentrifying urban landscape are profound. Beyond the assertion made by Rice *et al.* (2019) that inner-city gentrification leads to higher environmental footprints due to the increasing level of affluence being accompanied by increasing consumption, there are two main consequences of an immuno-politics of ecological gentrification in action. Firstly, the inhabitants of these urban

spaces are asked to do nothing beyond living in a certain housing development in order to limit their environmental impact, thus opening opportunities for them to increase their negative environmental impact in other areas of their lives. Secondly, by creating spaces which are socio-economically exclusionary, but justified through the enlisting of apocalyptic discourses of climate change in the planning, marketing and visual urbanscape, gentrification becomes a powerful and difficult-to-resist process in the contemporary city. These concerns will be attended throughout this paper by exploring the potential relationship between ecological gentrification and immunological politics as they relate to apocalyptic imaginaries of climate change and the ever growing emergence of a culture of fear (Davis, 1999; Hulme, 2008; Swyngedouw, 2013a).

I begin by outlining some of the problems with apocalyptic narratives, as well as a discussion of their widespread use. This discussion is used as the basis for understanding how anxieties around climate change can be mobilized in justifying large-scale, capitalist urban regeneration. This regeneration is then related to the literature on ecological gentrification to explore the similarities in the outcomes, before attention is turned to theories of immuno-politics to explore the depoliticizing effects such projects can have. The major contribution of this paper is the bringing together of three emerging bodies of work (apocalyptic depoliticization, ecological gentrification and immuno-politics) which are currently only related loosely with one another. By contributing in this way, it is hoped that this paper will elucidate some of the implications of the theory and give ground to an avenue of potential resistance to ecological gentrification.

Imagining the Future (or Lack Thereof) in an Apocalyptic Era

Bonneuil and Fressoz (2016) paint a bleak account of the current (3 years past) state of the planet, highlighting the many varied ways in which the planet's ecosystems and species are beginning to suffer and decline in strength and numbers since humans gained globally significant power over the planet's resources. The bleak description they give is nothing short of apocalyptic and yet, is completely in line with the current scientific consensus. The argument they make in this first chapter is simply this: if the science is to be trusted, then we are living in the end times. To quote the International Energy Agency's truism of over 8 years ago: "If we don't change direction soon, we'll end up where we're heading" (IEA, 2011: 1).

The power of the apocalypse as a narrative tool is illustrated well by Bonneuil and Fressoz (2016). By the end of the chapter I felt myself desperate for an answer, a solution to the mess we find ourselves in. This effect is true of other forms of communication, some more popular

than others, such as the 2009 film, *The Age of Stupid*, directed by Franny Armstrong. The message of immanent ecological collapse is mobilized by Armstrong to spur society into collective action to tackle climate change. The film's success, I would contend, was in the accompanying community organising (through pressure and campaign groups such as 10:10 and *Not Stupid*) that took place, giving an answer to the apocalyptic future which was presented on the silver screen. One aspect where this film, perhaps, misses the mark, is that an increasing number of scholars are arguing that it is too late to think of immanent, yet future apocalypse – the apocalypse is already here, just unevenly distributed across space (Williams, 2011; Swyngedouw, 2013a).

A growing number of scholars are turning to apocalyptic film to explore the ways in which this genre is not only a symptom, but also constitutive, of societal anxiety and fear over an uncertain continued existence (Dixon, 2003; Thompson, 2007; Ginn, 2015; Kaplan, 2016). The representation by cinema of a future which is both terrifying and unavoidable (particularly true of cli-fi films, such as *The Day After Tomorrow* (Emmerich, 2004) and *After Earth* (Shyamalan, 2013)) has a powerful effect on the audience's psyche, as they are simultaneously enrolled in the production of new desires and the living out of existing desires through a process of collective dreaming (Lebeau, 2001; Žižek, 2011). The issue, from a cursory analysis of thirteen films viewed by me and a more comprehensive analysis of 61 Cli-Fi films by Svoboda (2016) is a tendency to articulate the resolution of the crisis around a 'hero' or a *Deus ex Machina*. Tuhus-Dubrow (2013) also points out that Cli-fi genre novels and films tend to portray a much more violent cataclysmic event than the slow and eventual reality of climate change, in part because a slow, incremental change in global average temperature is not particularly exciting when compared to, for example, *Sharknado 5: Global Swarming* (Ferrante, 2017) in which the last family on Earth travel the planet and time in order to stop an outbreak of tornadoes (originally made more powerful and frequent by climate change) which contain not only sharks, but dimensional vortices. Returning to more realistic films, such as *The Day After Tomorrow* or *WALL-E*, the two key problems with the combination of these trends is a possibility that the audience believes 1) climate change is not real because the world does not look like the catastrophic imagined future on the silver screen (Sakellari, 2015) and/or that 2) even if it is real, the solution comes from the Other, not the Self.

The hero in the film takes on greater significance when we refer to the Lacanian mirror stage (Lacan, 2006). In this stage of infant development, a child gains its identity by observing its reflection in a mirror at around 18 months of age. For Lacan, the formation of the Self is always

predicated on an observation of the Other, leading to complex breaks and splits in the Self identity of the Lacanian Subject which I won't explore fully in this paper (Lacan, 2006). However, as Williamson (1978) points out in her seminal analysis of advertisements, the mirror stage does not stop at 18-months of age and continues to function into adult-hood. This has profound consequences for the film-going public, as much Self identity in contemporary, film-literate society is formed by observing the Other acting on the screen. When we watch *The Day After Tomorrow*, we do not simply sympathize with Jack Hall (played by Dennis Quaid), we – in some small way – *become* Jack Hall, saviour of the planet. This is a point which will be returned to later in the paper.

Importantly, in a society which exists with the knowledge that the future may not exist, or at the very least, be very unpleasant for a lot of people, films which have a hero and, as in *The Day After Tomorrow* and countless others, a 'return to normal' at the end, provide comfort. The apocalyptic genre reminds us that even if our very existence is at threat, we, as the hero, will survive and all shall be well in time.

If we are to take seriously the claim made by Žižek in the opening sequence of *The Pervert's Guide to Cinema* (Fiennes, 2006) that "Cinema is the ultimate pervert art. It does not give you what you desire, but tells you how to desire", then, what does this mean for a Subject facing the news that we now live on an increasingly warm planet with weather events like the 2018 European heatwave and US Wildfires due to become the average in twenty or so years? And how does this relate to the study of gentrification in contemporary cities? These two questions are now attended to through a Lacanian and Marxian framing of the problem of climate change and an Espositan analysis of community and immunity.

The value of the apocalypse

If the claim that we no longer should look to the future for the apocalyptic times (Swyngedouw, 2010a, 2013a, 2018; Williams, 2011; Feinberg and Willer, 2011) is taken seriously, why does Hollywood and popular culture have such a focus on the future? We already know from film that climate change happens in the future (Emmerich, 2004; Armstrong, 2009; Shyamalan, 2013), scholars agree that this tendency to look forwards is almost ubiquitous and is a tendency they perhaps repeat themselves (e.g., Dixon, 2003; Thompson, 2007; Skrimshire, 2010; Mulgan, 2011; Ginn, 2015; Kaplan, 2016). However, the IPCC's (2018) latest report outlines the Herculean task of reversing the global trend of increasing CO₂ emissions within twelve years of the report's publication and down to net zero emissions by 2040, to produce any significant likelihood of avoiding 1.5°C of warming by the end of the century. Turning to the

theory of the *Combined and Uneven Apocalypse* (Williams, 2011) is a timely and important task.

The parallel between Neil Smith's seminal work on *Uneven Development* (2010) and Evan Calder Williams' work on the *Combined and Uneven Apocalypse* (2011) is that to enable specific geographic areas to enjoy a high standard of living, the negative effects of the system are simply transferred elsewhere. In Smith's work, this solved the problem of the coercive law of competition in Marx's (1867 [1976]) *Capital*, using geography and space to explain how the West can maintain dominance by exporting human and natural resource exploitation to other areas of the planet where the economic and regulatory cost is lower. Williams draws this parallel out by explaining how Anglo-American communities can transfer the effects of the apocalypse to other areas of the planet, allowing themselves an existence relatively free of environmental change. This is evidenced by such techno-managerial fixes such as the Dutch Maeslant flood barrier (Rijkswaterstaat, 2019) which, not only prevents flooding in Rotterdam, but inevitably displaces the resultant water volume which potentially creates flood problems elsewhere.

This is not something especially new to the academic community, indeed, Bachram (2004) theorized carbon trading as a form of 'Carbon Colonialism', allowing post-industrial and industrial nations to continue on their current course by exporting responsibility for preventing climate change to developing nations over fifteen years ago. In an example even more relatable, the planetary extent of our lifestyles (through cotton from India, Coltan from Congo, fruits and flowers from Kenya and coffee from South America) create massive socio-ecological problems in the countries of origin whilst allowing the (broadly speaking) Anglo-phone world to enjoy comfort and luxury (Swyngedouw, 2006). Due to the relatively mature literature on the concept of a combined and uneven apocalypse this paper does not attempt to further this area of study but uses it as a starting point from which to understand that a socio-ecological catastrophe is already underway, even if it isn't felt strongly yet in the nations with the responsibility for causing it.

What value, then, does the apocalypse have, in the countries which are exporting its negative effects? The answer is provided jointly by Žižek (2011) and Swyngedouw (2010a, 2010b, 2013a, 2018): the apocalypse makes possible the solutions which were previously thought unpalatable or undesirable, such as gentrification and further neo-liberal enclosure of everyday life. This is a point which Žižek (2009) develops from Klein (2007), extending the concept of *The Shock Doctrine* to include ecological catastrophe as well as militarily induced

destabilisation. In this argument, the shock and awe tactics of US military intervention in South America made the implementation of neo-liberalism and the installation of new political regimes possible by completely destabilising the existing social conventions and norms (Klein, 2007). This can be extended to environmental disaster, argues Žižek (2009), where even though insurance companies can tally the ‘losses to the economy’ after a natural disaster, the disaster serves to reinvigorate flows of capital by providing an “ideological *tabula rasa*” (p.19) upon which to install new ideas (or double-down on the old ones, as the case may be). This can have a depoliticizing effect, however, as ideas and solutions are hastily accepted and paid for before the full consequences can be recognized. This point is also echoed by Badiou (2008: 139), who argues that:

...after “the rights of man,” the rise of the “rights of Nature” is a contemporary form of the opium of the people. It is an only slightly camouflaged religion: the millenarian terror, concern for everything save the properly political destiny of peoples, new instruments for control of everyday life, the obsession with hygiene, the fear of death and catastrophes.

The fear generated by an ‘enemy at the gates’ makes the unthinkable, thinkable. In the case of climate change, however, the unthinkable is business as usual. Logically, this makes sense: if the system which we were using got us into this mess, then surely a different system is needed to get us out? The question then arises as to why the system has not changed substantively in the time we have known about climate change? Again, Žižek (2011: 328, italics in original) offers us a partial answer:

...the impossible is becoming possible. An event first experienced as real but impossible (the prospect of a forthcoming catastrophe which, however probable it may be, is effectively dismissed as impossible) becomes real and no longer impossible (once the catastrophe occurs, it is “renormalized,” perceived as part of the normal run of things, as always already having been possible). The gap which makes these paradoxes possible is that between knowledge and belief: we *know* the (ecological) catastrophe is possible, probable even, yet we do not *believe* it will really happen.

The disavowal of the actuality of climate change, then, is further aided by the ability to export the negative effects and the responsibility to mitigate to other parts of the planet, effectively immunising oneself from the very idea of being part of an apocalyptic present or future. The notion of immunisation plays out in interesting ways in urban environments, with devices such as air conditioners which may protect the occupant of a house from a heatwave, whilst simultaneously increasing the temperature outside the building (through both energy

consumption releasing CO₂ and the more immediate heat-pump effect), worsening the conditions of the heatwave which the air conditioner is immunising against. This follows arguments put forward by Esposito, Derrida and Baudrillard that immunity against a particular catastrophe such as terrorism, ecology or tyranny, often leads to an erosion of the very things it seeks to immunize, i.e. increased surveillance and erosion of civil liberties to protect the freedom that terrorists seek to destroy (Mutsaers, 2016).

If a Subject is unable to disavow knowledge of climate change and the ever-more-present apocalypse (in other words, they are an environmentally conscious Subject), then ecological gentrification and sustainable urban planning offer a way to immunize oneself against the problem. As Žižek (2009: 53) reminds us, in the era of ‘cultural capitalism,’ the utility and status-signification properties of a commodity are no longer of significant importance, instead replaced by the *experience* the commodity gives:

Consumption is supposed to sustain the quality of life, its time should be “quality time” – not the time of alienation, of imitating models imposed by society, of fear of not being about to “keep up with the Joneses,” but the time of the authentic fulfilment of my true Self, of the sensuous play of experience, and of caring for others, through becoming involved in charity or ecology, etc.

Ecological gentrification, through the signification of a sustainable urban future, free from the effects of climate change, as well as liberating the consumer from the burden of knowledge that they are causing climate change, becomes a highly valued commodity for the urbanite seeking to be ecologically (and to some extent, socially) altruistic. The purchase of the commodity enables the consumer to experience eco-friendly life, without having to actually do much about it.

Signifying Sustainability

Swyngedouw (2018) opens up a problem with the purchase of eco-friendly livelihoods by exploring the signifier of ‘nature’ at its most basic level, drawing on Smith (2010) and Žižek (1991, 2000), among others. These authors argue strongly that ‘Nature’ in its own right does not exist, but instead is made sense of through its relation to a multitude of other signifiers, such as ‘cat’, ‘river’, ‘virus’ or ‘radiation’. The implications of the emptiness of Nature in the context of ecological gentrification is that, whilst Nature is often seen as a source of Truth, or of meaning, it is essentially meaningless and produced by the society which invokes its concept. Therefore, the use of Nature as a means of justification for a project becomes seemingly incontestable. The call to avoid the apocalypse through ecologically friendly architecture becomes irresistible to answer. In itself, this call and the resultant architecture are

not a problem – undeniably we need to change the urban design paradigm if we are to avoid runaway, dangerous climate change – but, when the call is packaged into a single signifier and then used as a commodity use-value, a problem emerges.

Gunder (2006), Gunder and Hillier (2009) and Davidson (2010) discuss the ways in which ‘sustainability’ may have joined ‘Nature’ as an empty signifier, simultaneously meaning nothing and everything. Sustainability in urban planning acts “as a foil to give the appearance of doing something about global warming and the environment, when in effect it is largely deployed to maintain the priority of economic growth for achievement of global competitiveness” (Gunder and Hillier, 2009: 20). Whilst Brown (2016), returning to the arguments of Laclau (2006) on the radical foundations of the empty signifier, argues that the emptiness of meaning is only part of the argument. Instead, for Brown, Sustainability functions as an indicator for moments when all other signification fails, standing in opposition to the dissatisfaction felt by the one who chooses to invoke the term. Sustainability, then, stands for something which exists only in the Lacanian Real – the shady realm of ideas, concepts and things we know exist and yet cannot articulate because we lack the linguistic and communicative coherence to do so. Sustainability, according to this theory can only be effectively understood by welcoming it to the Symbolic Order, making it communicable amongst Subjects. In other words, Sustainability does not have a meaning inherent of itself, but it does signify a longing for something other than what we currently have.

This Gordian knot of signification brought about by the use of the term ‘Sustainability’ or ‘Nature’ tells us something important about the value of the terms in contemporary urban planning. If the term means ‘something other’ to the system of signification we currently use, then how can it be commodified and sold as part of the new urban development paradigm, especially under neoliberalism? For Marx (1867 [1976]), the collection of commodities which, together, form the basis of Capitalism, are discrete objects, each with their own use-values and, if thrown into the circulation of capital, exchange-values. Sustainability does not, then, fit the model of a traditional commodity, and yet it is used as a signifier of value when selling all manner of things, from pens and toothbrushes through to cruise holidays and high-rise apartment buildings. However, Marx (1867 [1976]: 125, emphasis added) also hints at a way through this conceptual fog when he states that:

The commodity is, first of all, an external object, a thing which through its qualities satisfies human needs of whatever kind. The nature of these needs, whether they arise, for example, from the stomach, *or the imagination*, makes no difference.

Marx also talks of the ‘appearance’ of the commodity as the basis for the foundation of a capitalist mode of organisation. This ‘appearance’ is especially important when we consider the contributions of Debord (1967) who, partly due to his engagement with the Situationist International movement and the advent of new visual technologies around the time of his writing, saw Capitalist relations increasingly as social relations mediated through what he termed ‘Spectacle’. Spectacle, according to Debord, was the next step from Marx’s commodity fetishism, where the desire for the satiation of a need (i.e. shoes to prevent injury to feet) is replaced with a desire to possess the commodity (i.e. buying shoes, because shoes must be bought). Debord takes this one step further and argues that the desire for possession is replaced by the desire for the appearance of possession (i.e. buying high-fashion, uncomfortable shoes because they signify an ability to buy expensive shoes, even if cheaper shoes are more comfortable). Whilst this is a gross simplification of Debord’s theories, the key point to take forward is this: the utility of the ‘thing’ commodified is secondary to the appearance of the ‘thing’. Therefore, and this will be discussed in more detail in the following section, if a thing looks ‘sustainable,’ says it is ‘sustainable,’ and costs more because it is ‘sustainable,’ it must be ‘sustainable’ – whatever that means. The keen-eyed reader will here notice a contradiction between Debord and Žižek over the utility of a commodity in the era of cultural capitalism. This contradiction, I argue is resolved partially by exploring Debord in more depth.

Debord’s underlying assumption is that the Spectacle is the mediation of social relations by image. Image, for Debord does not simply mean the visual, but is expanded to include all forms of image, which includes *imago*, an ostensibly complete and fully-rounded image of the thing in question, obscuring any contradictions contained within the thing itself. If, as Debord argues, the mediation by Spectacle is something we come to enjoy, then the very exchange and consumption of more Spectacle becomes the experience which Žižek argues is the outcome of cultural capitalism. A second consequence of this mediation of social relations by Spectacle and experience is that, bearing in mind the emptiness of Sustainability as a signifier, the future has been replaced with an emptiness by the prevalence of apocalyptic narratives of climate change. In a future which is so uncertain, the Subject’s Symbolic Order breaks down with respect to what is possible and likely to happen. The Symbolic Order is derived from socially accepted and conventionalized linguistic and visual coding (Fink, 1995) and, according to Metz (1982) and Lebeau (2001) is, at least partially, derived from film. This means that for situations which have yet to be socially conventionalized or experienced by the individual Subject, film can be drawn on to allow the Subject to make decisions about the future. With the trend for

films showing the destruction of the planet halted by one really smart man (and I use ‘man’ advisedly here) with a technological fix, this becomes the Subject’s default way of thinking about climate change. All we need do is find the techno-fix necessary for us to become the hero of our own apocalypse.

Marx, Debord and Žižek here reveal the basis for commodification of ‘Sustainability’, it must be possessed to signify to others that the purchaser lives sustainably, which fulfils a human desire originating in the imagination, giving the experiential consumption typical of cultural capitalism – the experience of belonging and of doing good.

Ecological Gentrification: (Un)Intended Consequence or Justification Regime?

The discussion so far in this paper has been to explore the conceptual and practical value of apocalyptic narratives in producing a situation where consumers are desperate for solutions to the crisis we are in, regardless of the consequences of those solutions. This is an important discussion to have, especially in relation to Debord’s theories on Spectacle. Whilst the main thrust of Debord’s work is that the Spectacle begets more Spectacle in order to sustain the mediation of social relations and contain them within capitalist circulation, he also hints at the inclusion within the Society of the Spectacle of a form of counter-spectacle – a ‘safe rebellion,’ if you will. This counter-spectacle is already factored in, allowed and even welcomed by the organising structures of the society, as it allows people an outlet for dissatisfaction and dissensus, without actually challenging the primacy of the hegemonic ideology. Loftus (2012) agrees with this, by reminding us that, oftentimes, environmental movements and NGOs reproduce the very inequalities and problems they seek to diminish or support the principles and practices of neoliberalism whilst simultaneously standing in opposition to them. They are, effectively, permitted forms of protest: a safe rebellion.

It is the contention of this paper, then, that whilst sustainable architecture and urban planning is traditionally framed as a radical alternative to post-industrial urban planning, this new form of city design is little more than a continuation of the ways of the past, commodified in much the same way as Žižek’s (2009) example of Starbucks Coffee offering the consumer the chance to buy a cup of coffee and all the socio-ecological goodwill to undo the negative effects of the coffee being grown, roasted and transported, thus justifying a higher price than elsewhere – the commodity and the experience are both factored into the price. The rebellion against the atomization of society through the provision of green, community spaces, a protest against

private transport by providing transport-oriented infrastructure and a rejection of a ‘leaky’ resource economy by closing the loop of waste and recycling are all permitted forms of behaviour. The permission is given precisely because it allows gentrification and capitalism more generally to continue, except with less popular resistance due to the ecological credentials and the sense of difference.

Ecological gentrification appears in the existing literature as the potential for green spaces to (re-)produce inequalities through middle- and upper-class inhabitants desiring environmental amenity. For example, the construction of New York’s High Line Elevated Park was intended to provide an urban park for the citizens of New York to escape the urban grit of street level but has, according to the project’s architect, Robert Hammond, had the unintended consequence of raising property prices along its length and forcing out economically vulnerable residents (Bliss, 2017), a process which Anguelovski *et al.* (2018) describe as the “green gap”, following Smith’s (1987) “Rent Gap” theory.

This form of gentrification appears in the literature with a variety of names: ‘ecological gentrification’¹, ‘eco-gentrification’², ‘green gentrification’³, ‘environmental gentrification’⁴ and ‘(Low-)Carbon Gentrification’⁵. Whatever name is used, the process is generally defined by “new or intensified urban socio-spatial inequities produced by urban greening agendas and interventions, such as greenways, parks, community gardens, ecological corridors, or green infrastructure” (Anguelovski *et al.*, 2018: 1-2). Due to the similarities in definition, the term ‘ecological gentrification’ is used throughout this paper for the sake of simplicity.

However, as Rice *et al.* (2019) argue, the definition of ecological gentrification can be expanded beyond the above to include climate change driven gentrification. For Rice *et al.* (2019: 6), ‘carbon gentrification’ (as a subset of ecological gentrification) is defined as:

middle- and upper-income residents’ preference for neighborhoods that offer the opportunity to walk, bike and ride transit in a mixed-use, dense urban environment, as a means to lower their carbon footprint, which are often, but not always, centrally located in urban areas, leading to a rise in housing prices for those areas.

¹ (Dooling, 2009, 2012)

² (Cucca, 2012; Rice *et al.* 2019)

³ (Gould and Lewis, 2017; Anguelovski *et al.*, 2017; Anguelovski *et al.*, 2018)

⁴ (Checker, 2011; Curran and Hamilton, 2012; Pearsall, 2012; Sandberg, 2014)

⁵ (Bouzarovski *et al.*, 2018; Rice *et al.*, 2019)

Importantly, this ‘carbon gentrification’ or ‘low-carbon gentrification’ as Bouzarovski *et al.* (2018: 846) term it, is seen as an almost passive process by which the building of low-carbon infrastructure and mixed-use urban space attracts a different demographic, thus gentrifying the area. This does extend the definition of ecological gentrification somewhat, but still focusses its discussion around the after-effects of placing green or low-carbon infrastructure in an urbanscape. As yet, it says nothing of the use of ecology in order to justify a project which is understood as gentrifying before ground has even been broken.

The form of apocalyptic and millenarian terror described by Badiou (2008) and presented earlier, which is brought about when referring to ecology in the contemporary era, gives a justifying argument to new urban (re-)development. The narrative of gentrification moves from ‘attracting a better class of people,’ to ‘do this or else we die’ so long as the architecture is ‘sustainable.’ To enable the effective communication of the need for these projects, the visual mediation of society is turned to. The visual renderings and the construction hoardings surrounding projects typical of ecological gentrification have a distinct visual identity. They are almost exclusively produced in green tones, plenty of computer-generated lawns, trees, ponds and reeds line the pedestrianized streets and boulevards. The roof gardens are given prominence in the visual identity, organic coffee shops and florists fill the computer-generated shop fronts (in one site studied⁶ along with, humorously, ‘Starbooks Coffee’ storefronts – and, no, that is not a typing error).

Journeys in the Ecologically Gentrified Urbanscape

To explore the way in which the urbanscape helps to produce, create and re-create communities, several case studies were carried out in preparation for the present work. However, to avoid detracting from the theoretical nature of this paper, the case studies are not presented as empirical work here. Instead, I would like to describe the sights and sensations evoked from the case studies, which I am certain will resonate with many readers across the Euro-Austro-American world.

The site feels futuristic, yet also very ordinary. Walking around the buildings, one notices traits of a global architectural style, now seen everywhere from London to New Delhi, with a canvas of tall, glass apartment blocks, augmented with metal and glass ‘fins’, multicoloured enamel and metal panels and interesting cantilevered designs to allow ‘chunks’ to be missing from the buildings. This is very ordinary, we could be strolling through Rotterdam, down the High Line

⁶ In compiling this paper, the author studied two UK examples: Elephant & Castle (London) & NOMA53 (Manchester) as well as the De Ceudel development in Amsterdam, The Netherlands.

elevated park of New York, down Altamont Road, Mumbai past the Antilia building or Barangaroo South in Sydney. The futuristic element comes partly from the use of ecology around the project. The break from the traditional urban paradigm of a central park or greenspace is seen in the continuous threads of green running through the space between the buildings. Small reflecting pools form a buffer between the concierge's glass windows on the ground floor and the bustling street beyond. Green walls cover the ventilation access for the underground car parks (kept out of sight and out of mind), and cycle hoops and stands (mostly empty) adorn every pedestrianized space. There is obviously infrastructure associated with these buildings, but it is hidden behind green metal doors, tastefully decorated with holes in the shape of leaves or stars.

Around the corner, a collection of shipping containers stacked one on top of the other around a square provides a space of phantasmagoric enjoyment. These symbols of mass-consumerism and bunker-fuelled, high-emission, global, standardized shipping of plastic products from China and then plastic rubbish back again are now home to artisan workshops, international food take-aways, yoga studios and tattoo parlours. The space conjures feelings of safety, isolation from the bustle of the city just a few metres away. The feeling of protection and the production of an enclave within which to eat, drink, enjoy music and discuss the joys and woes of life with friends fits nicely with Bernadini's (2013) argument that the post-modern adult, eschewing the responsibility that comes from the end of Althusserian interpellation determining one's career path, seeks out a space of infantilisation, a space where needs, desires and wants are fulfilled by the community and the Other, in line with Freud's theorisation on the origins of sociality in infants (Lebeau, 2001). The protection afforded by the multi-coloured shipping containers and being surrounded by people who look and seem similar to you is replicated by the steel fencing erected around the gardens of the residential complexes of the main development regeneration back across the road. The feeling of having reclaimed something soulless back from the neoliberal, global consumerist industry and making it personal, private and safe is a potent sensation. Even though this space is provided by one of the biggest city-planning corporations on the planet (in the case of Elephant & Castle in south London's Southwark borough, the same people who planned and built the London Olympic Park, and are currently renovating the UK's Houses of Parliament), it feels anti-commercial yet pro-business, anti-capitalist and juxtaposed to the glistening skyscrapers and pristine homes being erected all around.

The seeking out of a community which can fulfil the Subject's desires and remove their fears, is theorized by Esposito (2010, 2013) as searching for *communitas*. Strictly speaking, *communitas* moves beyond the concept of community as being something one belongs to or can possess, and instead reconceptualises it as something one embodies. The total and utter commitment to provide for the Other, a gift without return is the defining characteristic of *communitas*. Esposito argues that, in opposition to *communitas*, *immunitas* represents a Subject who, unable to provide for their own needs, depends entirely on the Other, taking without reciprocating. In the case of an immuno-political condition, the population (however large and

however defined) seeks immunity from the intrusion of some kind of existential threat by seeking an Other which embodies *communitas*.

The urbanscape feels like a community. It is friendly, there are people milling around, interacting in cafes and bars, playing with their children in the parks. There is ample seating in the shipping container village, the hoardings around the construction site show people getting married, young couples teaching their children to plant vegetables, young professionals get coffee together in the social spaces and sit around laptops, laughter and smiles on their faces. However, much of this appears to be a superficial community at best. The gardens behind the fencing only have one or two children playing (I visited the main fieldsite for this study during working hours, the evening and at the weekends at various times during the year), the seating is laid out with two chairs to a table, obviously designed for only two friends at a time. The security guards and CCTV cameras which keep careful watch of me as I take photos around the site, the number of empty cycle hoops, the difficulty the developers seem to be having in selling the retail units and the uniform, pristine look of the empty housing units all add up to a sense of friendly isolation, but one predicated upon the existence of a pre-fabricated community with permitted activities and zero-tolerance of interruption.

Deconstructing the Urbanscape

Returning briefly to the realm of film theory and psychoanalysis, it is my argument here that the Lacanian Mirror Stage is relevant to the production of an Immunopolitical fantasy in ecological gentrification projects. The displacement of the former, ethnically and economically diverse inhabitants of the area, the destruction of the fabric of the urbanscape and its subsequent replacement with a global architectural style, the popular resistance to the project and the hoardings which paint a very different demographic for the future of the area all indicate that this is a good example of large-scale urban gentrification (Smith, 1996, 1986 [2005]; Rérat *et al.*, 2010; Lees *et al.*, 2016). The use of ecology and greenspace to create ‘buffer zones’ between the residents and the former community, combined with the securitization and policing of those spaces, suggest that this is a good example of traditionally conceptualised ecological gentrification, too (Quastel, 2009; Checker, 2011; Curran and Hamilton, 2012). Why, then, does the inclusion of sustainability as a justification regime make this project difficult to resist?

The Lacanian Mirror Stage gives us some insight into this problem. Here, a connection to the visuality of the ecologically gentrified urbanscape is made: whereas Lacan uses the example of an infant examining their reflection in a mirror at 18-months of age to form their Subject identity, visual theorists have long recognized that *any* ‘reflective’ surface can assist in Subject

identity formation, at any age (Williamson, 1978). By reflective, they argue that any surface which shows a human face looking back at the observer can be considered reflective and therefore a surface which helps a Subject form an identity based on the Other they observe in the image. The hoardings are a good example of this. Subjects pass by the site, witnessing images of happy community members, united in their fight for an ecologically and socially just urban future. The more the passers-by interact with these images (i.e. people who spend the most time there and potentially live there), the more they form their Subject identity around this concept. Whilst the people depicted in the hoardings do not directly look back at the observer, their averted gaze, the perspective of the rendering and the life-size scale of the people creates a sense of observing a real scene. The Subject passing by is inserted involuntarily into the scene they observe.

The occupants of the space no longer need to consciously choose sustainable lifestyles. As long as they exist within this space, they are helping to save the planet. A sense of belonging is created, of being part of the community they see around them, even if they never interact with any actual co-residents, because the identity they form from witnessing the images and the Sustainability discourse all around them is one of belonging. As was mentioned earlier, simply by existing within the space, surrounded by images of people saving the world, the Subject consuming the urbanscape becomes the hero, Jack Hall (played by you) saviour of the planet. The experience of belonging, of doing good and of being liberated from the burden of responsibility for climate change becomes a powerful elixir. Not wanting to stop there, the urbanscape even offers you immunisation against the ever-more-present apocalypse, protecting you from your potential failure to stop it.

This is concerning for a number of reasons. Firstly, the sense of belonging within a community, yet potentially never actually interacting could lead to a disavowal of the knowledge of non-belonging. To put this into terms generated by Rancière (1999, 2015) those without a part in the distribution of the sensible – in this case the entire community as the distribution of the sensible is produced by the developers – do not realize they have no part. The provision of a ready-made community built on the foundations of the experience of living in a more ecologically friendly way creates a sense that the Subject has already rebelled against the old system of high-carbon living. Meanwhile, the architects and developers have created a space of perfect neoliberal consumption, with experience and signification forming the basis of desire and exchange.

They feel included in the politics of the space yet have no real ability to govern it as it is held in private ownership. The voice that the inhabitants have in the process of politics extends only so far as choosing to consume Sustainable architecture, the private ownership of the space means any demand beyond that is not sensible and therefore the occupants cease to have a part – they are perceived as noise, not voice and are no longer political subjects (Rancière, 2004). Therefore, they cannot perceive the notion of a political moment, an act of asserting ones part in the exercise of governance, and enter a post-political condition (Žižek, 1999; Wilson and Swyngedouw, 2015; Swyngedouw, 2018), where the idea of rebellion against the architects of the urbanscape is non-existent, in part because it is already included in the Spectacle of the project. The Subject consuming the urbanscape is surrounded by the empty signifier of Sustainability, never knowing what that actually means but knowing that they are doing it. Their uncanny dissatisfaction with the old way of living in a non-Sustainable way is now satiated, their conscience clean and green.

Secondly, the immunization from the apocalypse achieved by seeking out a community which helps them fight climate change is a fantasy. There are two reasons for this. As discussed earlier, the immunization is attractive precisely because it demands nothing of the inhabitants of the space. This means that the people attracted to the space are likely to believe that simply existing within an ecologically sound space is enough, they need not cancel their short-haul flights to Europe, or stop driving a car for short journeys, acting out the well-known Jevon's Paradox (Alcott, 2005). Sustainable urban design, can theoretically, and somewhat ironically, create a heavier ecological footprint. The second reason, and perhaps simplest, is that immunity from climate change is somewhat of a fantasy. The impacts of climate change cannot be excluded from so specific an area. Heatwaves will still affect the project, as will increased or decreased rainfall and harsher winters. There is some adaptation achieved, such as passive heating and cooling systems, or rainwater harvesting, but ultimately, the habitability of the planet will eventually become an issue for every organism, should climate change continue unabated.

Thirdly, as Rice *et al.* (2019) point out in their excellent analysis of Seattle's tech-industry driving low-carbon gentrification in the city, the displacement of working-class communities who, traditionally, have lower consumption capabilities due to a low income creates the space for a higher-income inhabitant. Densification and low-carbon technologies in the urbanscape do lead to lower ecological impact when using a territorial emissions accounting strategy. The direct emissions from heating homes, lighting rooms and streets and the increase in capacity

utilisation of public transport and non-carbon intensive modes of travel like cycling and walking lead to the production of less pollution. However, as Rice *et al.* point out, the higher income of the residents of the space will, most likely, lead to higher consumption of goods. Swyngedouw (2006), as discussed earlier in this paper, makes the claim that our neoliberal livelihoods in contemporary cities is predicated upon a global resource base – consumption within a territory affects the entire planet. The combination of low-carbon city living with the realisation that we live in an era of planetary urbanization (Brenner and Schmid, 2015; Riddick, 2015) means that the ecological footprint of an area undergoing ecological gentrification may, perversely, increase the ecological footprint of the city when taking consumption and life-cycle impact into account.

There is a second reason for this contradiction, which is not highlighted by Rice *et al.* (2019): rebound effect, or Jevon's Paradox (Alcott, 2005). Jevon's Paradox, a problem originally applied to the consumption of coal in the Industrial Revolution states that efficiency in engineering through improvements to technology or even economies of scale can lead to savings in the fuel consumed per unit of work done. However, the Paradox comes into view when the savings made are attached to an economic value. In other words: "The 'savings' [are] theoretical only, because lower costs heighten demand" (Alcott, 2005: 10). Following this argument, not only do the new occupants consume more than the previous occupants because of their higher purchasing power (as discussed in the previous paragraph), but also because the cost of heating, transport and electricity are lowered by living in the ecologically friendly project.

Which Apocalypse do we Want?

The potential implications of this are important to consider. The representation of climate change as an apocalyptic event, either happening now but elsewhere or happening here and in the future, creates an acceptance of solutions which might otherwise be unacceptable (Swyngedouw, 2010a, 2010b, 2013a, 2013b). The desire for a more sustainable city has arguably created a pathway for large scale urban gentrification (Bouzarovski *et al.*, 2018; Rice *et al.*, 2019), using ecology as both the justification and the control mechanism. The provision of a community space for fighting the coming apocalypse through unity and consensus can, paradoxically, create further isolation in the urban environment. This is concerning when we consider arguments put forward by a number of scholars in social movement theory that connection between peoples and struggles is especially important for allowing radical

emancipation (Holloway, 2010; Castells, 2012; Earl, 2016). Holloway's (2010) arguments are especially prescient here in his *Crack Capitalism* thesis.

According to Holloway, the 'fabric' of capitalism is analogous to a glass sheet, and resistance to the enclosure of human existence is like punching the glass. Sometimes, he describes vividly, the punch will bounce off the glass, making no effect, other times the glass will crack, sending a spider of cracks across the fabric. Wherever possible capitalism will re-seal the cracks, subsuming them within the fabric, similar to Žižek's statements that crises are often re-positioned as always already having been part of the system and Loftus and Debord's argument that capitalism and spectacle contain within them the possibility for safe rebellion. The strength of Holloway's argument, however, lies in his recognition that, if enough cracks form, and connect with other cracks, the glass will eventually shatter. The forms of resistance that Holloway refers to are simple acts of non-capitalist activity, such as reading a book, doing something that you enjoy without remuneration or throwing a brick through a multinational coffee house window. The difference between Crack Capitalism as a form of resistance, and the random acts of resistance we all carry out on a day-to-day basis, however, is that the acts have to be carried out in connection with and along the lines of continuity between other cracks.

Whilst I certainly do not wish to suggest that *LendLease*, in their plans for Elephant & Castle, have examined the Crack Capitalism thesis and structured urban space to prevent connection and continuity, it is very easy to see how these forms of resistance, given the analysis presented above, become difficult to maintain and a depoliticization of the resident Subjects becomes possible.

The apocalyptic narrative of climate change, then, potentially leads to a second catastrophe. In trying to mitigate against and adapt to climate change, projects may inadvertently lock occupants into a future of isolation, immuno-political fantasies and powerlessness. The scale of some of these projects and the quality of the buildings contained within represents a significant investment in the future of the urbanscape. These projects will be around for many decades to come, locking a large number of households into an urbanscape which is currently thought of as sustainable, but may prove to be totally unsustainable socially and ecologically in the near or distant future. This could potentially lead to a situation where climate change occurs, yet significant numbers of people are left powerless to change the urban fabric or their behaviours to stop it.

It is my argument, therefore, that the apocalyptic narrative of climate change under a capitalist mode of urban development leads to a future characterized by a loss of control over the material conditions of one's own life, should the currently available, large-scale solutions be accepted uncritically. By moving into one of these projects, the potential is there for a social apocalypse, one of permanent capitalist enclosure and of isolation. The irony of this situation is that the very narrative of apocalyptic climate change and the death of community that the project seeks to halt may, at best, be unaffected by the project, and at worse, be made more severe by it. The question facing urban planners now is stark: how do we stop the apocalypse of climate change without the apocalypse of ecological gentrification?

Conclusions

The conclusions of this argument are relatively straightforward. The production of an apocalyptic narrative centred around climate change and negative human action against the planet and its inhabitants has created the possibility for previously unacceptable modes of urban development to become acceptable. The emptiness of the signifier of 'Sustainability' has created the opportunity for an incontestable mode of urban regeneration which, in its results, differs very little from traditional models of gentrification, except that it generates less resistance from those who seek to live a more environmentally friendly existence.

The sustainability of these projects can be communicated visually and discursively to passers-by and potential residents through signification of community and immunity. Community provided by the very material of the project, and immunity from all manner of socio-ecological ills through fencing, buffer zones and the evacuation of the political moment from the Subject's Symbolic Order. The discharge of responsibility for ecologically sensible behaviour from the Subject to the community also contributes to this politics of immunisation, in Espositan terms at least. Whilst the development may have some less ecologically damaging features than the site's previous infrastructure, in the form of district heating, solar panels, green walls or rainwater harvesting, the behaviours of the residents is potentially unchanged at best, or, due to a feeling of already doing their bit for the environment, made worse through extra consumptive activities and/or carbon-intensive travel modes.

The level of anxiety felt by contemporary society is concerning. With an increasing number of elements of the political and ecological realms becoming destructive, exclusionary and divisive, there is more potential for apocalyptic narratives to take hold, making solutions which were previously unacceptable, more palatable. Climate change, or so the argument of this paper

goes, has great potential to become exactly this sort of narrative. When time is of the essence, and the consequences cover such a wide-ranging area of influence, it becomes easy to justify projects by making reference to the requirements of keeping the planet habitable. The pathways for resistance are unclear, it would be easy, given the analysis presented in this paper and many others, to blame the problem simply on capitalism. In fact, earlier drafts of this paper did just that. The key to providing a way out of this, I would therefore contend, is to focus on how the political moment becomes obfuscated from view. The depoliticizing effects of climate change and immuno-politics are powerful. By obscuring from view the contradictions and exploitations inherent in the combined and uneven apocalypse, the continued, comfortable existence of the middle- and upper-classes can continue whilst the precarious and vulnerable of the world live out the apocalypses brought about by supporting those lifestyles.

By recognising two concepts: 1) we are already experiencing the apocalypse on an uneven geographical footing and 2) humans and non-humans are now entwined in a process of politicization, a productive avenue for unpicking the political moment with respect to ecological gentrification opens before us. The knowledge that, if the Anthropocene is to be taken seriously, humans and non-humans are now equal partners in the planetary scale processes of Earth, means that Nature (however defined) must now have a seat at the table. This must, necessarily, change the way we do politics, especially when considering that our actions on one part of the planet at one specific time have clear and traceable effects through space and time. The planetary urban, predicated upon the harnessing of the rural and the bodily power resident in slums and informal settlements the world over, must incorporate the voices of those outside its territory in order to produce a more just environmental politics.

The emptiness of 'Sustainability' presents perhaps the largest challenge to a properly political moment. When a signifier stands for nothing and everything simultaneously, it can be co-opted, transformed and agreed upon by everyone and no-one at once. However, by recognizing its emptiness, and its call for something other to what is present, a radical potential is revealed, so long as Sustainability is re-conceptualised as a particular, rather than universal, concept. For those who would seek to gentrify to be unable to use ecological imperative for justification, a more complex Nature and Sustainability must be recognized. One which takes into consideration the socio-ecological imbroglios we all interact with on a day-to-day basis and does away with a positivist notion of Nature equalling truth.

This paper set out to demonstrate that there may be cause for critically studying the relationship between apocalyptic anxieties and narratives of climate change, ecological gentrification and

immuno-politics. It has shown the complex ways in which apocalyptic narratives can be utilized to provide justification for projects which otherwise would be seen as unpalatable at best and unjust at worst. The relationship between the depoliticizing effects of apocalyptic discourse and ecological gentrification was then shown, followed by a brief description of how these projects provide a sense of immunisation against the socio-ecological ills of the world. The consequences of this conceptual link are that, through the enrolling of climate change as a narrative device in apocalyptic films, or through the use of apocalyptic discourse in reporting climate change both academically and in the media, anxiety over a non-existent future could be driving forward gentrification, with its associated dispossession and displacement of vulnerable people. Consequently, the new densified and 'sustainable' urban landscape may, despite promises to the contrary, lead to increased environmental degradation through both increased consumption of the more affluent residents and the Jevon's Paradox of increased efficiency leading to increased consumption.

As Swyngedouw (2013a: 17) reminds us: "The elite's fears are indeed only matched by the actually existing socio-ecological and economic catastrophes many already live in. The apocalypse is combined and uneven. And it is within this reality that political choices have to be made and sides taken." Sustainable and ecologically benign architecture, then, particularly at large-scales, should be critically examined for its continuing role in depoliticizing the city and the displacement of vulnerable populations. Beyond the local geographical effects of displacement, the potential for such projects to also reinforce the apocalyptic conditions facing humans and non-humans in other parts of the world is high. Socio-ecological justice in the age of the Anthropocene can, and must, extend beyond geographical boundaries.

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