# Climate Change and Contemporary Chinese Science and Speculative Fiction: Invisible, Extractive, and Uneven Boundaries

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In recent years, Chinese language science and speculative fiction (SF) narratives have increasingly highlighted climate issues such as sea-level rise, planetary temperature changes, and environmental themes like ocean plastic, e-waste pollution, and urban waste management industries. Alongside issues of globalised techno-capitalism and mass consumerism, Chinese authors have also offered cultural considerations of current social topics in China, such as migrant laborer rights, widening socio-economic disparities, and industrial waste activism. Whilst the growing attention in contemporary Chinese SF on domestic environmental affairs is one half of the story, narrating China's environmental and climate relations overseas is the more difficult other.

This paper explores the need for and potential of Chinese SF to address climate justice beyond the current borders of mainland China, to reflect on the country's own environmental practices internationally, and to gesture towards long term cultural dialogues with the global climate justice movement. Whilst I only focus on one culturally and geographically specific area, my aim is to also offer a critical view on the growing global environmental and climate SF subgenre. I believe it is essential to situate these narratives within the urgent consequences deriving from the realities of geopolitical problems and the worsening climate crisis. Fundamentally, it should reiterate how the global climate injustices that many already disproportionately experience daily are far from being speculative fictions.

I illustrate this through my title frames for discussion: the invisible, extractive, and uneven boundaries that shape the ecological, socio-political, and cultural processes relating to climate change. I also briefly indicate why it is necessary to understand how environmentalism works differently in China compared to other places, in order to better orient our reading of Chinese climate and environmental SF. I then outline the thematic portrayals of climate and environmental issues in key contemporary Chinese SF stories. For this specific paper, I focus on authors in mainland China, rather than other Chinese-speaking geographies. Drawing from combined literary, social science, and anti-colonial climate research, I explain why Chinese SF writers should look beyond domestic Chinese environmentalism and include geographies of China's extractive practices in Africa and Southeast Asia. Reflecting on contemporary Chinese SF authors' and scholars' ambitions to redefine global SF, I close by encouraging Chinese climate SF to recognise and tell the kinds of worldbuilding stories that defy hegemonies and to develop an intersectional approach to global climate storytelling from one region of the world to another.

**Invisible, Extractive, and Uneven Boundaries**

To begin, I am interested in reading environmental and climate SF from mainland China through the invisible, extractive, and uneven structures that drive the climate crisis and our cultural responses. These often interweave, blur, and overlap causes and effects. I argue that speculative narrative tools can allow clarity, in order to create more tangible directions in the face of a daunting reality. With invisible boundaries, I refer not only to the metaphorical concept of borders in SF scholarship, through which the genre allows us to cross into the unknown, but in particular who and what have been rendered invisible by which stories get told. The SF author and Chinese literature professor Xia Jia comments that "the science fiction from non-English speaking countries, including Chinese science fiction, cannot be found (in the history of SF) … In other words, Chinese science fiction is invisible, it is unseen and folded into the history of science fiction." (Wang) I add that whilst the climate movement and climate SF have gained mainstream traction, especially in the past decade, it should be recognized that many from the non-Anglophone world's politics and cultural sectors are yet to break through the invisible boundary maintained by those with the material and social benefits of systemic privileges.

The climate crisis was caused—and continues to be sustained—by colonial violence against people and nature in pursuit of the accumulation of wealth and power through industrial petro-capitalism. To cross a boundary denotes a severance of an agreement, trust, or ethics. State and corporate funded extractivism cross the boundaries to scar lands, bodies, and cultures, and continue to devastate ecologies around the world in their efforts to profit from natural resources. As we read climate SF stories, it is vital not to detach from a sense of justice of reimagining the political structures to hold corporate and state culprits to account, and fall into an aestheticization of a crisis, where techno-fixes bury the colonial histories of climate change. I think about how cultural responses to political crises are not immune from adopting their own extractivist mindset.

This leads me to question and foreground how the uneven consequences for human and non-humans are presented in climate narratives. For people, the exploitative processes disproportionately affect Black, Indigenous, and people of colour, the working class, disabled people, our LGBTQIA+ communities, and other minoritized groups. The boundaries between ecological, socio-economic, and humanitarian issues overlap as simultaneous crises. Therefore, we need our climate narratives to be steered by social and ecological justice combined—also known as climate justice. With these interrelated boundaries and processes in mind, we can more constructively examine climate SF in its political capacities.

**Environmentalism in China**

It is important to briefly outline China's domestic environmental affairs and how they are politically structured. Recently, I wrote a report for NüVoices on the panel Climate and Gender in China, co-organised by Young China Watchers (for their environmental webinar series) and NüVoices, which is an international collective of self-identified women and non-binary creators and researchers working broadly on the subject of China. The speakers, environmental journalist

Karoline Kan and Zongqi Yu (climate change activist and the Chinese Youth Delegate for the 24th UNFCCC), established that organizing in Chinese environmentalism is very different from that of other parts of the world. It is a top-down system, in which environmental organizations operate as an extension of the government's policies. Both Kan and Yu argued that more needs to be done to raise the cultural awareness of environmental and climate issues, and offer solutions in education, policy, and (social) media engagement, which can hopefully lead to generative public discussion.

While I observe that Chinese SF stories increasingly highlight climate and environmental themes, I do not expect authors to be responsible for directly shifting climate politics. Rather, I identify the fact that their stories nurture some degree of cultural awareness around these urgent issues, in the way that Kan and Yu hope for in multifaceted public engagement strategies.

**Contemporary Climate and Environmental Chinese SF**

In the following section, I share a few of my favourite climate and environmental SF stories by authors from mainland China. In the past two years, we have read most of these following stories as part of a monthly reading community that I co-founded, the London Chinese Science Fiction Group. While we do not curate the reading list thematically around climate issues, it is interesting to observe how many of these do encompass themes insofar as they illuminate the fast-paced social changes China has been going through in recent decades.

*Folding Beijing* / 《北京折叠》 by Hao Jingfang / 郝景芳 (written in 2012 and translated by Ken Liu in 2015) is a social critique set in near-future Beijing. The city has been reconstructed in order to geospatially segregate its inhabitants into three locked social classes, such that they unevenly share hours on the Earth's surface on a rotational 48-hour period. The working class, largely laborers processing the city's waste, is the largest, and will never experience social mobility. The protagonist, working class Lao Dao, has a near-impossible secret mission to deliver a message between the two upper classes. He finds himself feeling existentially angered after accidentally winding up in a policy meeting aimed at replacing his class livelihood as a laborer with automated waste industries. It is a powerful story that holds social realism at the core of its speculative environment, commenting on those compromised by so-called progress, and reflecting on the widening wealth gaps as China continues to economically develop. It is a well-known story internationally, too, having won the 2016 Hugo Award for Best Novelette.

*The Story of Dao* by Regina Kanyu Wang / 王侃瑜 (written in English in 2019) is a queer multispecies ecology SF text that illustrates how an island (*dao* in Chinese) first experiences and learns about climate change. They realize they must communicate a plan to all the other species living on their back, such as the gingko tree and various animals, and do so through a cybernetic root system. Collectively, they work to mitigate the sand erosion by sea rise. Last year, I invited the author to contribute her story in my curated exhibition *Climate Knowledges* (2020) in Rotterdam. Regina collaborated with the musician Tessa Qiu, who narrated the story as a sound piece.

*Poems and Distant Lands* / 《为了生命的诗与远方》 by Gu Shi / 顾适 (2019, translated by Ken Liu 2019) deals with ocean plastic pollution, as two innovators design a technological apparatus to recycle the unnatural marine materials. After failing to impress their funders enough to launch the project, they leave their sample technology forgotten in the ocean. However, they realize years later that it has given rise to biomimetic ecological systems underwater. The author herself is an urban planner who speculates about how cities will face these challenges in the coming decades. Gu Shi has discussed with me how climate and environmental SF in China has grown to become a very interesting topic for writers like herself, in how it connects the imagination with real world impact.

*The Reincarnated Giant* / 《转生的巨人》 by Wang Jingkang / 王晋康 (2005, translated by Carlos Rojas 2012), tells of a wealthy elderly man who pays for a procedure to be reborn as a baby with his adult brain fully functional. His insatiable appetite exhausts the fictional nation's resources and labor force, until he has grown as big as a mountain, and dies unable to hold up his own heavy head, as he is still a baby. It can be read as a critique of how unending neoliberal consumption overlaps with the patriarchal systems that exploit the Earth's resources for individualistic gains. *The Reincarnated Giant* is also a speculation into the complex biopolitics involving anti-aging technologies and legal selfhood.

Whilst all the stories mentioned so far are short stories or novelettes, *The Waste Tide* / 《荒潮》 by Chen Qiufan / 陈楸帆 (2013, translated by Ken Liu 2019) is a novel. It details the laboring class resistance of Silicon Isle, a fictional e-waste landfill, that is based on one of the real world's biggest e-waste landfill sites, Guiyu, in China's Guangdong province. Alongside a protagonist who becomes a cyborg after an e-waste viral infection, the novel also interestingly depicts international corporate relations and leads readers to reflect on our complicity in creating the inhumane working conditions of those barely surviving on the e-waste recycling industry.

This selection of titles not only reflects some of the current literary styles in contemporary Chinese writing, from the "ultra-unreal" (Ning) to SF realism to homegrown cyberpunk, but they also remind us that many elements from environmental and climate narratives are globally relatable in their anxieties and the desire for solutions.

**Politics of Global Climate Change**

Following these selected blurbs, I now look at the need to situate climate and environmental SF to the real, international challenges of today. Particularly, it is insightful to pay attention to how, like their Western counterparts, Chinese state and commercial activities are creating uneven developments and socio-ecological degradation that impact people in different geographies within and beyond their own. There are many complex threads we could analyze to examine China's environmental footprint both domestically and as an export to other countries in Africa and Southeast Asia, with the following being only a few examples.

Returning to Karoline Kan and Zongqi Yu, they point out that China's 2020 summer floods were not only widespread and disastrous, but also most heavily affected poorer rural areas where agriculture is the main land use. This impacts how the most socio-economically disadvantaged will recover, amidst a pandemic no less. Also, I add that since China banned other countries (largely from the developed West) from delivering the world's recyclable waste to its shores, this waste is now shipped to its neighbors in Southeast Asia. Unfortunately, this is where the processing facilities and working conditions for laborers may be even less developed and less safe. Another example of international environmental degradation is one that many SF stories across the world focus on: innovating and mass-producing high-tech instruments. China's push towards Industry 4.0 attempts to satisfy high income nations' unending demands. With the iPhone, two of the world's most powerful companies, Apple and Foxconn, profit off the exploitation of migrant laborers. Many face not only excessive overtime, hostility, and violence on the factory floor, but worker suicides are a common occurrence, as sensitively documented in *Dying for an iPhone* (2020) by Jenny Chan, Mark Selden, Pun Ngai.

Further, the metallic and mineral goods feeding China's Industry 4.0 come mostly from Africa. With industrial development projects and resource extractions abroad, China's efforts to stockpile minerals is an issue of socio-environmental concern. In a piece on Tor.com, Tochi Onyebuchi, an American science fiction writer and former civil rights lawyer of Nigerian descent, commented on China's "debt colonialism" in Africa as "further crushing the promise of a self-sustaining African infrastructure and see continuity." (Onyebuchi) I want to add that there are also discussions to be had about the anti-Black racism against migrant laborers from African nations working in Guangzhou when the Chinese city locked down over COVID-19, and many such cases were well documented on social media (see Black Livity China).

**Chinese SF and Global SF**

So what does it mean for Chinese SF to be gaining attention in the global SF arena? Perhaps it is a chance to narrative one's own story, to defy racialised stereotypes and assumptions based on political conditioning? A couple years ago, author and translator Ken Liu offered the suggestion in his edited anthology I*nvisible Planets* (2016) that readers should come to Chinese SF without the aim to find Chinese cultural characteristics, whatever you desire or imagine them to be. He later explains, "When you go into space, you become part of this overall collective called "humanity." You're no longer Chinese, American, Russian or whatever. Your culture is left behind." (Liu in Tsu) However, I take the opportunity in this very moment and momentum of SF from mainland China to resituate this.

In Chinese climate and environmental discussions, where policies illustrate idyllic and natural landscapes of China, we can also find eco-nationalistic depictions of pristine plains in popular culture. But, in examples like the recent live-action film *Mulan* (2020), the ethnic majority in China, Han, is portrayed as defiantly hegemonic through these scenes of beautiful landscapes. The realization later dawns upon reading the film's rolling credits that only miles away from the filming

location in Xinjiang are the mass detention and labor camps that have been imprisoning Uighurs and other Turkic Muslims, in what is considered by international human rights campaigners as an ongoing genocide. Humanity isn't collective, cultures are not left behind, and most of us are not going to space.

Further, whilst African SF growingly narrates themes of Chinese "neocolonialism, there has been little writing from Chinese SF on this. Scholar Nedine Moonsamy authored a paper called "Science Fiction Offers A Useful Way To Explore China-Africa Relations" (2019). Her research focuses on three short science fiction stories from Africa, which look at the cultural perspectives of this situation, as indicated by speculative narratives of China and Africa's futures together. I would like to encourage Chinese SF scholarship and authors to also work collaboratively across borders and cultures to untangle these events and relationships. If we are to hope for speculative fiction to culturally influence or resonate with real life climate and social justice, we need to integrate the politics of global climate change to these narratives.

I return to the title of my presentation, particularly on the invisible boundaries, as a reminder to foreground the people and issues that are actively *invisibilized* in our stories, be they our speculative and science fictions or our day-to-day news. When I started the London Chinese Science Fiction Group, I wanted a space to critically discuss and broaden the insights of our multilingual, international communities. I hope to achieve this by refusing to follow a canon-in-the-making that slowly embodies and reiterates the existing colonial hegemonies in SF, which we can instead deconstruct.

I finish with a quote from the author Jeannette Ng's recent piece in response to *Mulan* (2020), which I feel is generative in repositioning Chinese SF in relation to who gets to tell which stories for whom. In "Beyond Authenticity: the Spectre of Han Hegemony" (2020), Ng emphasises that there are "...multitudes contained within "Chinese" culture and storytelling. There is no single, unified "Chinese"-ness and to imply there is only one Acceptable Cultural Narrative for All Chinese People is itself part of the problem. To claim sole authority and ownership of these units of cultures reinforces Han hegemony."

As the city of Chengdu bids for WorldCon 2023, one of the biggest dates in the global SF calendar, I encourage the Chinese SF community to recognize and tell the necessary worldbuilding stories that defy hegemonies, as China calculates its new era of global relations.

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