Caring for the future: climate change and intergenerational responsibility in China and the UK

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Abstract

Debates about intergenerational fairness and resource-use are prominent in diverse international contexts, with a large number of social policy and environmental concerns characterised as having intergenerational dimensions. This includes concerns relating to synchronic equity (how resources are distributed between living generations) and diachronic equity (saving resources for future generations), with climate change being a high-profile example of an issue characterised in this way. In this paper we explore how urban residents perceive their responsibilities towards future generations in two cities based in countries that are major greenhouse gas emitters. Drawing on in-depth interviews with a cross-generational sample of 190 people living in Nanjing, China, and Sheffield, UK, we consider whose future and what aspects of the future people feel responsible for and at what scale. This discussion is situated within an emerging critique of generational discourses that conflate caring for the family and one's own children with caring for the wider society and for the future. We argue that this has far-reaching implications for how people think about intergenerational responsibility and imagine appropriate courses of action, shaping a particular 'timescape' that privileges living generations in close proximity. We find that people in Sheffield tend to be more concerned about social and economic aspects of sustainable development than environmental degradation. People in Nanjing more readily discuss responsibility for environmental stewardship, in the wider political context of state-led and nationalist discourses of collective responsibility, but still appear to struggle with thinking about the future beyond their lifetimes and immediate descendants. We discuss these findings and their implications through the analytical

framework of geographies of responsibility, exploring possibilities for a more spatially and temporally extensive scope of care.

Keywords: intergenerationality; intergenerational geographies; climate change; care; China; UK

Introduction

Debates about intergenerational fairness and resource-use are increasingly prominent across diverse international contexts, with a large number of social policy and environmental concerns characterised as having intergenerational dimensions (Author 4 et al., 2014; Author 2 et al., 2017). In debates about issues such as housing, social mobility, welfare, education and employment, the focus tends to be on *synchronic* or distributive equity between people of different generations alive today (Attas, 2009, p. 207) – for example, the intergenerational distribution of tax and benefit policies, or public resource allocation to elderly and youth services. Simultaneously, *diachronic* or saving equity between people alive today and future generations (Attas, *ibid.*) is a major concern within international policy discourses on climate change and sustainable development (United Nations, 1992; 2016; UN General Assembly, 2015), which are often underpinned by calls for intergenerational justice and proactive steps to ensure that future people do not inherit a resource-depleted world. This concern is reflected in perhaps the most well-known definition of sustainable development, from the Bruntland Commission report *Our Common Future* (WCED, 1987, p. 16)*:*

> *Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*

A key challenge for policy-makers worldwide is balancing the demands of synchronic and diachronic intergenerational equity: ensuring that each generation can achieve a decent quality of life, whilst recognising that resource-intensive growth models and ways of consuming cannot be relied upon to deliver this in the long-term.

Despite the prominence of concerns such as these in public discourse, there is little research about how members of the public perceive their intergenerational responsibilities in light of these debates. There is, however, evidence to suggest that climate change is commonly cast as 'distant and abstract' (Klein, 2015: 3), particularly by citizens of more affluent countries, who perceive it as both distant in space (a threat to poorer nations) and distant in time (a threat to future generations) (Marshall, 2014). The idea that climate change is a relatively 'long threat' (Dickinson, 2009) compared with other kinds of intergenerational concerns is both a reflection of way it is perceived as a distant problem, and also of the time lag inherent in burning fossil fuels and the damage these emissions inflict over decades and centuries (Gardiner, 2006; Hamilton, 2010). In this paper, we talk about climate change in the context of how people think about caring for the future, not to suggest that climate change is not happening now, but to explore the implications of framing climate change as a problem that affects future generations.

In this paper we consider intergenerational responsibility from the perspective of the everyday lives of urban residents in China and the UK, drawing on in-depth interviews with people living in the cities of Nanjing and Sheffield. The rationale for focussing on the UK and China is that these countries are major greenhouse gas emitters, the former a significant player in the history of fossil fuel extraction through early industrialisation and colonial exploitation, the latter the biggest contributor to present day global emissions, more recently industrialised and exposed to the rapid development of

consumer culture (Cuomo, 2011; Hansen and Sato, 2016; Yu, 2014). When population is accounted for, per capita emissions in the UK and China are roughly equivalent (Hansen and Sato, ibid.; Le Quéré et al., 2017). Lifestyles in these countries have major implications for present and future climate change, so understanding how their citizens conceptualise intergenerational responsibility is essential for making progress towards sustainable development. We focus on urban residents' views as the majority of the population of both countries live in urban areas. The juxtaposition of the former 'Steel City' of Sheffield with the rapidly growing city of Nanjing reflects shifting concentrations of mass-production, consumption and associated environmental problems.

The paper proceeds as follows: firstly, we consider the 'generational timescape' of climate change (White 2017), situating our research within an emerging critique of generational discourses that conflate caring for the family and one's own children with caring for the wider society and for the future. We then consider the extent to which this is reflected in contemporary public discourses in the UK and China, outlining how intergenerational equity and responsibility are invoked within specific cultural and political contexts. After a brief overview of our research design and sample, the empirical sections examine how Sheffield and Nanjing residents conceptualise intergenerational responsibility and caring for the future. This data is explored thematically, from participants' insistence that care begins with families, to the possibilities and limitations of extending moral horizons to care for distant others, to their reflections on generational legacy. Finally, we reflect on the insights offered by our empirical contribution, arguing that concerns about overemphasis on 'our' children and grandchildren in the context of climate change communication are well-founded. Drawing on the literature on geographies of responsibility, we contend that caring for the future

ought to be framed more inclusively, in a way that fosters spatially and temporally extensive care ethics in relation to climate change.

The family as a generational timescape

Public discourses about intergenerationality often conflate familial, social and philosophical generational definitions (Christophers, 2017; Little and Winch, 2017; White, 2017). That is, they use 'generation' to refer to parent-child relations, to different birth cohorts characterised by a shared generational identity, and to more abstract ideas about how people alive today ought to act in respect of the past and the future. This blending of generational definitions is evident in both Eastern and Western moral philosophy. Confucius doctrine indicates that love and care begin within the family and irradiate into the wider society, a principle known as *ai you cha deng* or 'love with gradations' (Fu, 2005; 2007; Li, 1994; Tuan, 1989). A widespread saying from Mencius states that a proper person should "respect older people as we respect our own aged parents and care for the younger generation as we care for our own children" (Birdwhistell, 2007, p. 56). Rawls (1971, p. 255) argued – though later reconsidered – that people acknowledge responsibility to future generations because they care about family lines. More recently Gosseries (2008, p. 65) highlights "intergenerational altruism… linked to biological parent-child relations" and Thompson (2009) discusses 'lifetime-transcending interests', such as care for one's children, as playing an important role in human intuitions about justice.

Across various cultures, children are commonly referred to as 'the future' (Author 1 et al., 2017; Author 2 et al., 2018; Phoenix et al., 2017) and parents and families are common tropes used to

invoke social responsibility, highlighting both intergenerational tension and cooperation. For instance, in 2016 the UK's *Guardian* newspaper ran a series on Millennials with the strapline "For the first time, a generation is growing up certain that it will be poorer than its parents" (The Guardian, 2016). The same year, a House of Commons Work and Pensions Committee Report on Intergenerational Fairness (2016, p. 4) noted that "The intergenerational fairness debate should not be conducted in divisive or adversarial terms. Each generation cares deeply about their children, parents and grandparents alike." Similarly, recent commentaries in Chinese national newspapers suggest that fairness between older and younger generations is sustained by both the state welfare system and families (Economic Daily, 2017; Guangming Daily, 2017; Southern Weekly, 2018;).

Meanwhile, the rights of children, youth and future generations have become pivotal to the environmental movement's moral case for action on climate change. Recent school walk-outs under the banner of 'Youth Strike 4 climate' have seen young people calling for urgent action on climate change, while blaming the today's politicians and adults for short-changing the future, claiming: 'We are going to have to pay for the older generation's mistakes' (BBC 2019). When adults make these same arguments, they invoke emotional appeals to take action for 'our children' (Little and Winch, 2017; White, 2017), and indeed many school strikers were supported by their parents on this basis. This framing is reflected in the language of prominent public figures (Marshall, 2014), including Chinese President Xi Jinping, who has said "we should take care of the earth together for ourselves and our descendants" (Xinhua Net, 2017), and the UK's Prince Charles, who urged delegates at a UN Climate Change Conference to "think of your grandchildren, as I think of mine" (The Independent, 2016).

White (2017) proposes that the 'generational timescape' of climate change is simultaneously composed of 'the scale of the family' and 'the scale of humankind'. The former focuses on 'our' children and grandchildren and personal attachment to a not-too-distant future; the latter on future generations in the philosophical tradition of articulating moral obligations to distant past and future others. Whilst this "humanises the link between the past, present and future, and makes the complex sweep of time understandable" (Little and Winch, 2017, p. 137-8), the idea that a 'natural' chain of obligation between parents and children is scalable and equivalent to acting in future generations' interests is worth scrutinising.

Cross-cultural literature on intergenerational transfers highlights conflicts of interest between what people consider to be a fair distribution of resources within families and distributive inequalities within and between societies, with familial socioeconomic support and inheritance playing a major role in the intergenerational transmission of privilege and poverty (Liu, 2014; Niimi and Horioka, 2018; Or, 2017; Pöyliö and Kallio, 2017; Rowlingson et al., 2017). It is entirely conceivable that "the moral imperative to provide for one's family may work against a wider ethic of care invoked by global inequities" (McEwan and Goodman, 2010, p.105-106). The conflation of caring for one's own children with caring for the future has profound implications for how people think about intergenerational responsibility and imagine appropriate courses of action (Wallis, 1970). In relation to climate change, this point is well illustrated by a recent survey by Leiserowitz et al. (2017, p. 24), who found that more Americans say 'providing a better life for our children and grandchildren' is the most important reason to reduce global warming; ranked far above 'saving many plant and animal species from extinction' and 'saving many people around the world from poverty and starvation'. Such a perspective encourages people to think of future climate change in terms of continuity and within

relatively short time horizons of decades at most (Fincher et al., 2014; Girvan, 2014; Hulme et al., 2009).

The 'double inequity' of climate change means that those most vulnerable to its impacts tend to be those who are least responsible, now and in the future (Füssel, 2010; Hansen and Sato, 2016; Samson et al., 2011). The appeal to citizens of more wealthy, more advanced industrialised nations to take action on behalf of their own descendants thus fails to articulate the scale of the problem (White, 2017). This underlines a key issue explored within the literature on care ethics and geographies of responsibility (Barnett et al., 2005; Bastia, 2015; Lawson, 2007; Li, 1994; McEwan and Goodman, 2010; Massey, 2004; Popke, 2006; Smith, 2000; Wu et al., 2007; Yu, 2018): the moral weight of proximity, and how far caring for others ought to extend across space and time. Appealing to people to take action as concerned family members may on the one hand offer movement "between the micro and the macro, the lived and the imagined, the familiar and the unfamiliar" (White, 2017, p. 769). On the other hand, this privileges kin groups and people 'like us' (Wu et al., 2007), reinforcing "the global imaginary of the nuclear household" as an "ideal form for intergenerational relations around care, framed as love and duty" (Green and Lawson, 2011, p. 646). It negates appeals for a more encompassing care ethic, one that recognises the ethical claims of 'distant' others and focusses on the ways in which we are connected (Bastia, 2015; Massey, 2004; Whatmore, 1997; Yu, 2018). Feminist and queer theorists have critiqued the reinforcement of heteronormative, patriarchal and procreational family formations as the primary vessel through which people care for the future (Edelman, 2004; Little and Winch, 2017; Author 4, 2007). Others, drawing on indigenous ontological perspectives, draw attention to emplaced and relational intergenerational care ethics inclusive of nonhuman actors and sentient environments (Girvan, 2014; Todd, 2016; Whatmore, 1996). While

such perspectives are beyond the scope of this paper, they highlight the anthropocentric bias of a generational timescape premised on human descendants (White, 2017).

In the discussion that follows, we consider how contemporary public discourses in the UK and China invoke intergenerational equity and responsibility within specific cultural and political contexts. This situates our research and data on how urban residents in both countries perceive their role in caring for the future.

Generational discourses in the UK

Debates about synchronic intergenerational equity have been prominent in UK public discourse in recent years. Think tanks such as The Intergenerational Foundation and the Resolution Foundation are proactively lobbying to 'repair' intergenerational relations undermined by the socioeconomic pressures of an ageing society, focussing on issues such as housing, earnings and tax and benefit policies across generations. This language is also reflected in media and policy debates that pit 'Millennials', those born between the early 1980s to late 1990s, against 'Baby Boomers', the post-war generation accused of thriving at younger generations' expense (Shaw, 2010). This has coincided with a period of austerity and revanchist neoliberalism following the 2007-2008 financial crisis (Grimshaw and Rubery, 2012), as government spending cuts and fiscal policies have had differential economic effects on specific age cohorts (Little and Winch, 2017). This period has seen the emergence of polemic publications such as *The Pinch: How the Baby Boomers Took Their Children's Future – And Why They Should Give It Back* (Willetts, 2010) and *Jilted Generation: How Britain Bankrupted Its Youth* (Hower and Malik, 2010). Intergenerational fairness has received substantial attention in the national press, with a resurgence following the 2016 Referendum on membership of

the European Union and numerous commentaries on the generation gap between typically older Brexit[1] voters and younger Remainers[2] (Thompson, 2017). Intergenerational Fairness was the focus of a recent public inquiry and report by the House of Commons Work and Pensions Committee (2016), and two recent Chancellors have promised voters national Budgets that "put the next generation first" (Hammond, 2017; Osborne, 2016). Commentaries have also drawn attention to the relationship between UK election cycles and a political culture of short-termism that often fails to take account of future generations' interests (Schneeberger, 2011).

The notion of an 'intergenerational social contract' is a recurring theme in this debate, reflecting the predominance of universalist ethics premised on justice, rules and individual rights in Western liberal thought (Li, 1994). The Work and Pensions Committee's Intergenerational Fairness report notes that "[t]he welfare state has long been underpinned by an implicit social contract between generations" (2016, p. 3), and in its recommendations talks of "the intergenerational contract under strain" (p. 46) and "strengthening the intergenerational contract" (p. 48). Little and Winch (2017) trace the origins of this term to 18th century conservative philosopher and Whig politician Edmund Burke, who argued in *Reflections on the Revolution in France* (Burke and Mitchell, 2009 [1790], p. 96) that "Society is indeed a contract. It is a partnership… between those who are living, those who are dead, and those who are to be born." They contrast Burke's focus on continuity and stability, with the later influence of early 20th century German sociologist Karl Mannheim's theory of distinct generational identities developing among birth cohorts, particularly at times of significant historical, cultural and technological revolution (Mannheim, 1952[1923]). This sociological perspective on generations has

[1] Brexit is a popular term used to refer to the withdrawal of the United Kingdom from the European Union.

[2] Similarly, 'Remainers' is a term used to describe those who voted for the United Kingdom to remain within the European Union. Various polls suggested that over 70% of voters under 25 voted to remain.

similarly entered UK popular culture, as is evident in key generational descriptors such as 'Baby Boomers' and 'Digital Natives', and is more prevalent at times of rapid social change (White, 2017). As Shaw (2018) observes, the language of strain and crisis that is frequently employed around intergenerational fairness in the UK suggests building pressure and the urgent need for policy action. In the earlier quote from the Work and Pensions Committee about each generation caring deeply for their children, parents and grandparents, the family is portrayed as the glue of intergenerational solidarity binding generations together despite their differences, or the foundation for the intergenerational social contract. This reflects a key belief in Western moral thought that the particular care we feel for those closest to us can be extended to larger human groups through the recognition of universal ethical principles (Smith, 1998; Tuan, 1989). Paradoxically, familial intergenerational solidarity is also perceived as the primary vessel through which intragenerational inequalities in employment, housing, social mobility and so on become entrenched (Rowlingson et al., 2017). Though rooted in social conservativism, Little and Winch note that the idea of the intergenerational contract has also proved popular with UK liberals and environmentalists concerned with the negative impacts of a consumer culture of entitlement and the rights of future generations. Shaw (2018: 14) observes that 'Environmental questions are generally not well explored in the British discourse around intergenerational fairness'. However, she also notes the potential for this discourse to overlap with questions of 'climate justice' that focus on how to balance the interests of present and future generations. In this respect, younger generations occupy an ambivalent position, paradoxically characterised as more hedonistic and wasteful consumers than their forebears, and increasingly environmentally aware (Stanes et al., 2015).

Generational discourses in China

In China the notion of 'generation' is strongly related to a care ethic of responsibility and reciprocity in both familial and public discourses. Chinese scholars have argued that people alive today are obliged to maintain resources, wealth and environmental quality for future generations (Fu, 2007; Liao, 2004; Liao and Cheng, 2004; Zhang and Ruan, 2005) and that contemporaries who occupy dominant positions in relation to natural, socio-cultural, economic and political resources – typically younger and middle-age adults – are obliged to support elder generations and children. For example, Fu (2007) suggests that supporting the elderly based on a *huibao* ('repay') or *huikui* ('feedback') principle exemplifies Chinese understandings of fairness and equality. The traditional ideal of intergenerational interdependence appeals to Chinese parents and children to have a close reciprocal relationship that involves mutual support (Liu, 2017). Materially, intergenerational housing arrangements often tie people together in extended family households (Li and Shin, 2013) and grandparents play a significant role in enabling household continuity alongside rural-urban migration (Liu, 2014). Parents' responsibility for cultivating and educating their children, and children's filial piety towards their parents, are considered important in Chinese families (Li, 1994; Shek, 2006).

Li (1994) argues that Chinese Confucian care ethics contrast considerably with Western social contract and individualist perspectives, as they place greater emphasis on care as a virtue and on the importance of being responsible to the world and fulfilling one's proper role in society. In this context, cultivating intergenerational solidarity by doing one's duty as a son, daughter, sibling and parent according to the principle of *ai you cha deng* ('love with gradations') exemplifies and supports idealised intergenerational relations in the wider society. Li observes that this approach bears some similarities to feminist care ethics, by privileging the caring relation rather than universalist principles

as the basis for moral action. Confucius argued that care begins with family because caring for everyone is “noble and admirable but far beyond ordinary people's moral horizon” (Li ibid., p. 9). This contrasts with the philosophy of Confucius’ major rival, Mo Tzu, who emphasised the importance of *jian-ai* (‘universal love’) and urged people to "regard other people's countries as one's own. Regard other people's families as one's own. Regard other people's person as one's own” (ibid., p. 9; see also Tuan, 1989). That is to say, debates about the moral weight of proximity are deeply rooted in endogenous Chinese culture, in philosophical traditions that continue to influence contemporary life. How people view and discharge intergenerational responsibilities in present-day China is also shaped by significant shifts in social and economic policy. As a result of the shrinking number of children in each family due to the family planning policy launched in 1981, the previous parent-centred family pattern has dramatically transformed into a child-centred one. This is also described as *si-er-yi zonghezheng* (‘4-2-1 syndrome’), which refers to four grandparents and two parents pampering their family’s only child (Jing, 2000; Kong, 2010). Due to this family planning policy, China has a rapidly ageing population, a low birth rate and a shrinking workforce, necessitating a recent shift in social policy to meet the social, health and care needs of the elderly population (Zeng and Hesketh, 2016). The Chinese Government relaxed the one-child policy to two children in 2016, and announced plans to bring the retirement age up to 64 in its Thirteenth Five Year Plan for 2016-2020. According to the Plan, China’s ageing society has not only increased the burden of adult children who are caring for and supporting their retired parents, but also increased the younger generation’s burden of work in labour markets (Central Committee of the Communist Party of China, 2016).

Many empirical studies have shown that the generation born and raised in the reform period – the so-called ‘little emperors’ – have faced a greater income gap and social inequality in education and

job markets than their parents, even though they have better living conditions than the previous generations overall (see, for example, Best, 2014; Hu et al., 2017; Kan, 2013; Pun and Lu, 2010; Schucher, 2017; Wu and Treiman, 2007). Kan (2013) argues that the *erdai* ('second-generation') phenomenon – which refers to people's personal success often relying on their powerful family background – is connected to increasing inequality and social polarisation among Chinese youth. The declining birth rate, ageing population and migratory pressures have led to concerns about the intergenerational resilience and sustainability of family households (Douglass, 2014).

At the same time, the consumption aspirations of China's burgeoning middle-class and post-reform generations raised to pursue 'The China Dream' (Goodman, 2014) provoke anxiety about the nation's present and future impact on climate change. In this context, the Chinese Government has begun to reference intergenerational equity in its environmental policies. In the Nineteenth Congress of the Chinese Communist Party in 2017, President Xi Jinping stated that the present generation must take responsibility for "the construction of ecological civilisation [that] is conducive to the present and the future", because "human harm to nature will eventually hurt human beings" (Communist Party News, 2017). However, the Chinese developmental model privileges a gradualism or step-by-step process based on empiricist rule (Keith et al., 2014), with the macro-level political economy emphasising a series of social and economic development initiatives – the so-called Five-Year Plans – issued since 1953. Such an empiricist plan at the national scale may encourage people to think of their own future plans in the short-term, in incremental milestones.

Research context

The empirical sections of this paper are based on 190 in-depth, semi-structured interviews with a cross-generational sample of urban residents in Sheffield, UK and Nanjing, China about their perceptions of intergenerational responsibility. We were interested in people's views on intergenerational transfer and their responsibilities towards future generations, specifically whose future and what aspects of the future people feel responsible for and at what scale. This research is part of a larger interdisciplinary project that explored the themes of intergenerational justice, consumption and sustainability[3] through a range of arts and social research methodologies with people living in diverse urban contexts. This paper draws on narrative interview data for which the lead researchers in Sheffield and Nanjing used the same interview guide. Participants were told in advance that the research was part of a cross-generational study of people's consumer habits, views on the environment and intergenerational responsibility. The interview was based around discussion of a series of prompts emailed to participants in advance – for example, 'something sustainable', 'something you think you should give up for environmental reasons', and 'something you hope to leave to future generations'. It also included questions about whether people are concerned about the environment, how they think their consumer habits compare to their parents and children, who they think is to blame for unsustainable consumption, what saving for the future means to them, and whether they think people alive today have responsibility to future generations. While the phrase 'climate change' did not appear in the narrative interview guide, it frequently emerged as the focus

[3] The project also included a third fieldwork site in Jinja, Uganda. Whilst space limitations preclude discussion of all three cities here, there is a companion paper from Jinja (Author 5 et al., 2018) which outlines how familial intergenerational obligations, livelihood vulnerability and immediate socio-economic concerns obfuscate longer-term planning for the future.

of residents' environmental concerns, and questions about intergenerational responsibility followed on sequentially.

Sheffield and Nanjing residents were recruited from various neighbourhoods via local advertising and snowball sampling, and through key gatekeepers such as directors of community centres, interest clubs and local employers. Some were also recruited after taking part in a survey of city residents conducted as part of the wider research project. Interviewees ranged from age 16 through to 95 and were broadly diverse in terms of gender, socio-economic status, education and place of residency. Interviews were conducted between September 2015 and December 2016 by the first or second author, usually in people's homes or at local cafés. These interviews lasted between 30 minutes to one hour. They were audio recorded and transcribed, with the Nanjing interviews conducted and transcribed in Mandarin Chinese and then translated into English. As with any social research in translation, there may be some loss of 'original' meaning, associations and contexts, inevitably sacrificing some of the 'situatedness' and specificity of the Nanjing data when presented in English (Desbians and Ruddick, 2006; Müller, 2007; Smith, 1996). Whilst the act of translation means accepting 'incompleteness' and acknowledging these limitations (Bialasiewicz and Minca, 2005), movement between languages can also give rise to 'in-between' forms of understanding and openness to cross-cultural communication (Smith, *ibid.*). The quotations included in this paper are verbatim and have been anonymised.

‘Parents are responsible for their children’

Public discourses of intergenerational responsibility in the UK and China are shaped by distinct cultural characteristics, socioeconomic trends and philosophical traditions, but we can observe some shared concerns regarding the relationship between intergenerational familial solidarity, the wider society and future generations. In particular, the pervasive notion that caring for one’s family and immediate descendants fulfils one’s responsibility to future generations was evident in both contexts. When we asked broad questions such as ‘Do people alive today have responsibility for future generations?’ or ‘What kind of responsibility do you think people have to future generations?’, the majority of interviewees in both Sheffield and Nanjing responded by talking about their responsibility for family members. This was the case even when we added prompts such as ‘say, 50 years later’ or ’100 years from now’:

> *Without a doubt. We do have responsibility. If you take it back to families, there's no doubt at all that families, parents are responsible for their children, to their grandchildren and so forth. We do have responsibilities; we can't just live for ourselves.* (Francis, male, late 80s, Sheffield)

> *As long as my children get married we have fulfilled our responsibility, we should not interfere with their life and their lifestyles.* (Ronghua, female, early 60s, Nanjing)

Children’s needs are central to the moralising agenda in the family sphere (Hall, 2016), and this has been increasingly the case in China with the emergence of the *si-er-yi* family structure and the reconfiguration of consumption towards a child-centred model (Jing, 2000). Consistent with their focus on families and relatively short-term view of the future, many of our participants discussed ‘saving for the future’ in terms of the eventual transfer of savings and property to children:

I like the idea of saving for the future, especially money for future generations. If I have children it will be good for them to have something so that they're not totally without support from myself. (Wes, male, late teens, Sheffield)

When my child gets married, he will need a house. It is a need. I'm saving to buy him a house. Every Chinese parent does so. It is a tradition to take care of children before they have their own family, as every parent wants his/her children to have a good living condition. (Linqin, female, early 40s, Nanjing)

This suggests the prioritisation of the family as the primary sphere through which people care for the future, reflecting the Confucian principle of *ai you cha deng* (Li, 1994), or what Massey (2004) describes in a Western context as a 'Russian doll' order of thinking, whereby people prioritise responsibility to others according to their emotional and physical proximity. Accordingly, caring for the future is conceived within a restricted spatio-temporarility consisting of successive rounds of family and household provisioning.

This broad similarity among our research participants is however underpinned by different political contexts. The UK is a highly neoliberalised society in which notions of collective welfare are increasingly undermined (McDowell, 2004), and as Lawson (2007, p.3) observes: "[u]nder neoliberal principles, care is a private affair, occurring in homes and families." When faced with questions about responsibility for future generations, it is perhaps unsurprising that many of our Sheffield participants responded with caveats such as "take it back to families", or like Andrea, in her late 60s: "Well, we need to be responsible for ourselves and for our children." Post-Reform China, in contrast, has embraced a form of 'market socialism' that attempts to balance its communist past and capitalist present whist maintaining an autocratic one-party state. Here, the state is held prior to the individual

and the value of collective service is embedded in political doctrine (Author 2 et al., 2018, Nonini, 2008; Yan, 2010). Thus, even when talking about highly individualised activities such as personal savings and buying property, Nanjing residents tended to place greater emphasis on social norms and a sense of duty. Hua, in his late 50s, argued that "a normal person would say… if you still have no property, you surely have to make money to buy one", while Junyi emphasised how each household's private savings are part of a chain of intergenerational obligation:

> *I think it's out of tradition. Just like our previous generations saved up for us, we should save up for our future generations. From every household, little by little, we can save up a lot.* (Junyi, male, mid-20s, Nanjing)

This suggests that, for Chinese participants, taking responsibility for family members is not viewed through the lens of neoliberal self-governance as a private affair, but rather as a way of fulfilling one's proper role in society.

While many participants discussed caring for the future in terms of financial planning for their families, others considered how they might make a positive contribution to society through responsible parenting. Several fathers in Nanjing, for example, argued that saving for the future encompasses passing down "morality", "traditions and morals" and "Confucianism […] courtesy and politeness". Some participants hoped that they might leave a useful legacy for the future by instilling civic virtues in the next generation. Sheffield resident Abby, for instance, said that what she most wishes to save for the future is:

> *…a sense of belonging really and being part of something instead of being just lots of individuals going round doing your own thing and being individualistic* […] *It's important*

to be an individual and part of something bigger as well, whether that's family, community, workplace, whatever it is. (Abby, female, early 40s, Sheffield)

Similarly, when asked about saving for the future, Nanjing resident Bao reflected on what kind of parent he hopes to be:

I think the first thing is let my future kid know he is not an isolated individual. He/she is in this society therefore he must have contact with others. I have the responsibility to let him realise the value he might create or the role he plays in society. (Bao, male, late 20s, Nanjing)

Such views can on the one hand be interpreted as antithetical to neoliberalism, in emphasising communitarian values and a relational ethic of connection with others – perhaps as a comment on and resistance to increasingly individualist tendencies in both societies (McDowell, 2004; Steele and Lynch, 2014). On the other hand, the intergenerational transfer of moral norms around belonging and playing active role in society could be interpreted as reinforcing particular forms of self-governance and responsible citizenship. In Nanjing, this is related to parents' wish to encourage their children to be 'useful persons' with a high level of *suzhi* ('human quality'), a key concept in Chinese political discourse that refers to "the innate and nurtured physical, psychological, intellectual, moral, and ideological qualities of human bodies and their conduct" (Jacka, 2009, p. 524). Kipnis (2007, p.394) observes that in recent years, the Chinese Communist Party has drawn "an intimate link between individually embodied forms of *suzhi* that Chinese people cultivate and the collective welfare of the nation". He suggests that *suzhi* bears some similarity to neoliberal discourse as a circulating form of governmentality that is used to justify persistent social inequality, albeit with Chinese characteristics. This perspective on caring for the future by supporting the moral

development of the next generation suggests a more collective view of intergenerational responsibility, nonetheless still focussed on the family and the parent-child relationship as the basis for action.

'A harmonious society is too big a thing'

In both Chinese and Western moral philosophy, there are common and influential lines of reasoning that suggest that the care people feel for those closest to them is a starting point for caring for the wider society and by extension for the future. This was a perspective shared by some of our participants in Sheffield and Nanjing, who acknowledged feelings of responsibility for future generations and others beyond their own family members:

> *I feel very responsible for future generations because we're all here for a blink of an eye in essence so it's to be passed on to make sure that future generations, all over the world not just here – it starts from being in your community and it starts from being in your city and in your country, then it's about being aware of what you – the actions that I do, what impact it has on somebody else.* (Sandra, female, late 60s, Sheffield)

> *I think the environmental issue is very important and urgent, we need to do something about it. And we need to consider tens of thousands of children in China. So even if it is not for us, we need to solve it for our children.* (Yuanyuan, female, early 30s, Nanjing)

Nanjing resident Yuanyuan uses "our children" interchangeably with "tens of thousands of children", albeit with a national focus, to emphasise that she is talking about the collective interests of society.

She says it is important to tackle environmental issues “even if not for us”, demonstrating a degree of lifetime-transcending concern. Sheffield resident Sandra suggests that caring for other people in your community can extend to a global awareness and responsibility for future generations, similarly evoking a long-term perspective by describing her own lifetime as “a blink of an eye”. Although less common among our interviewees, responses such as these offer optimism for the possibility of oscillating between the micro and the macro spheres of intergenerational responsibility, as White (2017) suggests.

However, our data also suggests that, for many people, extending intergenerational responsibility to encompass wider human groups and future generations in the abstract is simply overwhelming. Interviewees highlighted how caring responsibilities tend to focus on personal relationships because wider social or environmental issues seem “too big” and render them feeling “helpless”. Nanjing resident Ying, for example, expressed a view suggestive of the Confucian principle of *ai you cha deng*, of care towards intimate others being manageable, scalable and supportive of social harmony:

> *Instead of advocating what we call a harmonious society, which is a too big thing for any individual to get hold of, we might as well work on personal relationships first. If every individual is able to do a good job in this respect, we will naturally have the social harmony.* (Ying, female, late teens, Nanjing)

Sheffield resident Roxy reflected on how, though she fears for the future, she tends to focus on the present as this is where she feels she can be effective:

> *This sounds an awful thing to say but you're like well, when it all goes pear-shaped I'm probably not here so it's not an immediate threat* […] *They say well, we're going to run out of X, Y, Z in 100 years and I'm like I'd love to live that long but practically I'm not*

going to […] *I have got nephews so I have got people that are the next generation, but I think if I personally had that, if I had children I think I would feel a lot differently about it. But I feel like my preservation and my energies are into the people I know, so my generation, my brothers, my parents. That's all I feel I can do something about, as in very actively.* (Roxy, female, early 30s, Sheffield)

When asked whose responsibility it is to ensure that there will be enough resources for future generations, the majority of interviewees in both Nanjing and Sheffield suggested that such matters are for their Governments, beyond the purview of individual influence or consideration (Author 1 et al., forthcoming). As Jin, in her ealy 40s, from Nanjing, argued: "Our country should take the biggest responsibility. As an individual, one has to follow the policies of the country." This is again suggestive of the primacy of a scalar or 'Russian doll' geography of responsibility focussed on nearest others (Massey, 2004). Our data reflects a familiar pattern whereby "global concerns are subsumed under, and appropriated to, a more immediate concern to demonstrate love and care for those closest to us" (Meah and Watson 2013, p. 509). For many of our interviewees, intergenerational responsibility is expressed through kinship structures and disconnected from larger concerns like climate change. Sophia, a grandmother from Sheffield, said that raising children has offered a tangible way of feeling able to influence the future, though she has some regrets about not having done more:

Because you sometimes feel – I can't – one of the things that I always feel guilty about I suppose is I never went to Greenham Common, but I wasn't well at the time and I'd got the kids and so on. If I hadn't had to work and keep myself – things like that. You sometimes feel so helpless about it and I think one of the things about focusing on your

own kids then is because you might be able to see something tangible from that. (Sophia, female, late 60s, Sheffield)

Sophia's experience speaks to feeling collective responsibility for future generations, but also feeling unsure of how to enact this beyond the role of parenting to shape future carers of intergenerational equity. She offers an interesting counter to the idea that family caregiving is necessarily supportive of the collective good, by reflecting on a key moment in her life when her caring responsibilities were an obstacle to her becoming involved in a social movement striving for change for future generations. This is a tension highlighted in feminist scholarship on gender and climate change, which cautions against essentialising women as 'earth carers' or suggesting that they are more disposed to care about future generations vis-à-vis investment in child-rearing (Gaard, 2015; Leach, 2007; MacGregor, 2010; Maskia, 2002). This literature highlights how the conflation of familial and social intergenerational responsibility reinforces patriarchal norms (Little and Winch, 2017) and increases the list of caregiving roles assigned to women (Sultana, 2014). It also questions whether women have the additional capacity to 'save the environment' and 'care for the future', thus countering the idea that the care people enact in their own families and everyday lives is scalable towards diachronic intergenerational justice.

'My generation aren't leaving a very wonderful legacy'

One notable difference between the two cities was how residents spoke about legacy. In Sheffield, reflecting UK public discourse on intergenerational fairness and the purported breach of the intergenerational social contract in the recent period of neoliberal austerity, residents expressed more concern with synchronic or distributive inequality between generations. In particular, this

concern focussed on the often-repeated assertion that young adults in the UK today are the first generation to have a worse standard of living than their parents and cannot hope to achieve the same prosperity (Shaw, 2018). When asked whether people alive today have responsibilities to future generations 100 years from now, many Sheffielders spoke to more immediate timescales and the Baby Boomers versus Millennials debate:

> *Oh, yes. Yes, but whether people think that or not, I really don't know. People tend to be very selfish, don't they?* […] *There are people, not particularly my generation, but perhaps the generation before, just totally wealthy, totally wealthy and are completely protected from austerity measures. It creates a great deal of anger amongst the younger generation, who actually continue to pay for this. It really has got to stop.* (Maggie, female, late 40s, Sheffield)

> *I think in many ways I almost feel guilty as part of the Baby Boomers or my generation; that we've – not personally but as a culture ransacked the world and made life a lot more difficult for young people. I do feel – I feel a sense of guilt about that; a sense of it's not fair for younger people.* (Sean, male, early 50s, Sheffield)

Whilst some interviewees such as Sean above alluded to environmental concerns, far more raised anxieties about social and economic issues such as access to employment, the rising cost of higher education and housing, Brexit, the nation's future economic prosperity, and protecting the National Health Service and other residuals of the post-war welfare state. Diane, for example, explained that these kinds of issues preoccupy her more than the state of the environment:

> *I guess my generation aren't leaving a very wonderful legacy for the future for people coming after us, but not only in terms of the environment. In the mid-20th*

> *century we were on trend for a lot more equality and social justice and sharing and collective facilities. When I was thinking about these generation questions here – there was a lot of collective stuff like the National Health Service and the nationalisation of utilities. Sorry, I'm moving away from the environment* […] *What seems to be on offer for young people now is being aspirational and individual stuff, climbing a ladder, not evening things out. These things matter to me, and I've thought about perhaps a bit more than about the environment.* (Diane, female, early 60s, Sheffield)

Sustainable development is typically envisaged as having a 'three pillar' or 'triple bottom line' focus on economic, environmental and social development, with the environmental pillar dominating much of the literature (Murphy, 2012; Pal and Jenkins, 2014). It is therefore interesting that in the UK – among the first countries in the world to take a long-term legislative approach to reducing greenhouse gas emissions through The Climate Change Act 2008 (Grantham Research Institute, 2014; Lockwood, 2013) – ordinary citizens, when asked to consider their responsibilities towards future generations, tend to emphasise socio-economic concerns over environmental action. Taken together with the finding that people tend to focus on intergenerational responsibility through the lens of the family, we suggest that this is because socio-economic issues such as affordable housing, healthcare and the labour market seem more directly connected with the welfare of their descendants, whilst environmental concerns such as climate change and biodiversity loss may seem more remote in space and time (Author 1 et al., forthcoming; Hulme et al., 2009; Marshall, 2014).

In Nanjing, in the context of a long collective tradition (Author 2 et al., 2018; Nonini, 2008; Yan, 2010), there is stronger evidence of people connecting family practices with collective responsibility for the

wellbeing of future generations, including in relation to the future state of the environment. Nanjing resident Xuejun said:

> *We should nurture our kids to that direction. They should know what is good or what is bad for the environment and what to do to reduce the damage to the environment* […] *None of us is stupid. After we die, our children, children of my children are still living on the earth. If you do things wrong, make mistakes, your children will bear the result.* (Xuejun, female, late 20s, Nanjing)

While research in Western contexts often highlights concerns arising from the privatisation and neoliberalisation of care (McDowell, 2004), care ethics foregrounds the public character of caring activities, reconnecting individual responsibility to public affairs (Lawson, 2007; Yu, 2018). In the Chinese context, people saw pro-environmental behaviours such as avoiding waste, saving water and energy and reducing private car use as an expression of care for future generations. They voiced concern that young people, children and future generations will fall victim to environmental problems if the present generation do nothing to recover the environment. In doing so, they made connections between familial and social intergenerational responsibilities and thereby related their daily consumption of energy, resources and environmental goods to future generations' lives:

> *When we hand over the world to the next generation, I hope the situation in the world will not be that terrible. The planet we took from our parents' generation featured green mountains and clean water, but now everything has changed* […] *maintaining the current situation is better than doing nothing.* (Feiyi, female, late 20s, Nanjing)

> *Everybody can see now that our environment has been so badly damaged and will more or less try to do a better job, at least for the sake of our future generations.*
>
> (Yin, female, early 20s, Nanjing)

This more collective concern for the environment may be related to recent state-level discourses about the importance of this generation taking responsibility for ecological development for the future of the nation (Communist Party News, 2017).

It may also, however, reflect Nanjing residents' lived experiences of urban environmental change and exposure to environmental health hazards over a period of rapid development, in contrast to Sheffield residents' more positive experiences of environmental change in a post-industrial city (Author 1 et al., forthcoming). Daowei, in his early 40s, for example observed: "When I was a child, I didn't know what smog was […] Now, you see, the sky is always grey." Based on their research with a small island community on the frontline of climate change, Fincher et al. (2014, p.201) argue that:

> *…people's lived experiences of time, of the material, local, environmental changes over time that have occurred within their lifetimes and those of their familiars, are related to the ways they respond to information about a distant future*.

That is, the relative priority of environmental concerns within Nanjing and Sheffield residents' accounts of their responsibility to future generations, may simply reflect the perceived proximity of environmental problems in everyday life *now* and thus the extent to which environmental change is perceived to pose a threat to their descendants. This is further evidence of proximity bias and short-termism pervading how people think about caring for the future, with synchronic intergenerational

equity – the change that has taken place between one generation and the next in a specific place – again proving to be more influential than global or diachronic intergenerational concerns.

Conclusion

Public discourses in the UK and China use terms such as 'parents', 'children', and 'grandchildren' to invoke collective responsibility for tackling climate change, and the family frames idealised relations of love, care and responsibility towards future generations. Such discourses are specific and relational but short-term. They fail to convey information about the actual impact of climate change, now and in the future, and the need to take long-term action to tackle its influence on human life. Responding to such top-down or state-led discourses of intergenerational responsibility, ordinary people also perceive their responsibility to the future in specific local contexts and towards specific persons within relatively short periods, typically prioritising synchronic rather than diachronic intergenerational concerns.

The restricted spatiality and temporality of the family lens presents a significant challenge to envisaging responsibility for present and future climate change. It is perfectly possible to care and provide for one's own family in a way that is ecologically unsustainable. As Helen, in her late 60s, from Sheffield, observed, in thinking about responsibility for present and future climate change: "we're not talking about my nephews or something. We're talking about children in other parts of the world who now haven't got enough food and access to water". As a geographically and historically diffuse global harm (Cuomo, 2011), climate change demands an expansive scope of care that recognises our impact on "the lives and environments of distant others" (Smith, 1998, p.21). We have

described climate change as a 'long threat' (Dickinson, 2009), both in terms of the way it is perceived as a distant problem, and the way its impacts unfold across timescales well beyond human lifespans. As Confucius suggests, this appears to be far beyond the 'moral horizon' of ordinary people when they think about their duty of care (Li, 1994). Participants in both Nanjing and Sheffield struggled to consider time beyond the period of their own lives and to imagine the distant future in which the climate might be more severely altered. Instead, they made ethical decisions and understood their intergenerational responsibilities with reference to familiar others, their locality and more immediate timescales (Brace and Geoghegan, 2010; Fincher et al., 2014; Hulme et al., 2009).

Whilst considering how climate change will affect 'our children' provides a relatable perspective on a complex and seemingly distant global problem, it does so by appealing to self-interest and the preservation of genealogy. Our research suggests that this framing tends to narrow the scope of intergenerational concern to more immediate worries like whether people's children will have financial and social security and be good citizens. It fosters a notably anthropocentric care ethic, expressed in Nanjing as a form of 'care-orientated humanism' (Li, 1994) and concerns about the impact of environmental degradation on people's wellbeing, and in Sheffield in anxieties about the fragility of the intergenerational social contract under neoliberal austerity. Our findings add empirical weight to recent commentaries that have raised concerns about the kind of generational timescape that this framing suggests, one that simultaneously "promises to extend moral horizons cross-temporally" and "runs counter to the moral inclusion of those unlike the self" (White, 2017, p.774).

The analytical framework of geographies of responsibility offers an alternative care ethic, a challenge to proximity bias and the idea that 'distance leads to indifference' (Barnett et al., 2005; Massey, 2004; Smith, 2000). This has most commonly been applied to 'thinking space relationally' (Massey, *ibid.*) in

the context of globalisation and attendant ethical issues such as the geographies of consumption, through which people in affluent parts of the world are demonstrably connected to the lives and environments of distant others. As Lawson (2007, p.1) argues: "Care ethics suggests that we build spatially extensive connections of interdependence and mutuality." A spatially extensive scope of care is certainly relevant to climate change, yet it is the convergence of a 'global storm' (the causes and effects of climate change being widely geographically dispersed) with an 'intergenerational storm' (the causes and effects of climate change being widely temporally dispersed over decades and centuries) that presents the greatest difficulty (Gardiner, 2006). 'Our children' may offer a convenient shorthand for invoking intergenerational responsibility, but our findings suggest that we need to find ways of framing caring for the future more inclusively. Writing on climate change in 1989, Bill McKibben warned that it is a mistake to believe that nature 'moves with infinite slowness', proclaiming that 'our reassuring sense of a timeless future… is a delusion' (McKibben 2003[1989]: 5). Across the world, climate change threatens not only the future but the present wellbeing of people of all ages *now*, predominantly those whose precarious livelihoods rely directly on favourable climatic conditions. This highlights an urgent need to rethink how we talk about climate change, why we take action and who we take action for, to expand our moral horizons so they are equal to the challenge.

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