Adopting an adaptation-mitigation-resilience framework to ageing

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SocArXiv Pre-print

December 4th 2020

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Abstract

Population ageing is presented as one of the ‘grand challenges’ of the twenty-first century. Yet, policies designed to offset these challenges seem to be a jumbled, disjointed mix with no clear, overarching narrative. One of the successes of climate change science is the development of a clear, distinguishable framework to plan action: adaptation, mitigation, and resilience. This framework can be applied to designing better policy for ageing: *adapting* to support people in need today; *mitigating* future challenges by ensuring that people and institutions ‘age better’; and building *resilience* by developing both a longer-term perspective and policy learning framework.

Can ageing learn from climate change science?

For the UN, climate change is ‘an inevitable and urgent global challenge with long-term implications for the sustainable development of all countries’ [1]. Ageing is similarly characterised as ‘one of the most significant social transformations of the twenty-first century’ [2]. Both are long-term, complex structural transformations shaped by short-term political decisions.

One of the key developments of climate change science was the development of a multi-dimensional approach to both the measurement of climate change, and of responding to it. **Adaptation** means taking steps to live with the current effects of global warming; **mitigation** meant slowing the rate of global warming; and, in the long-run, countries would need to develop a greater **resilience** to climate change [3]. This allowed for a simple, yet holistic and integrated means of presenting the various challenges and measures of climate change, but also to determine a three-pronged, time-delineated means of responding to it.

Ageing, arguably, has not yet come up with such a holistic, clear response strategy. It has long been argued that chronological age is a poor proxy for need and vulnerability. Yet policy and institutional organisation tends to be modelled on a ‘life-course segmented’ paradigm, where older persons, children, young people and the so-called ‘working age population’ are considered entirely separately. For example, as Martin Vernon remarks in a recent commentary in this journal, policymakers have tended to focus on ‘arbitrary age segmentation, failing to capture the origins of cumulative disease and functional burden and missing the opportunity to incorporate wider determinants of health into prevention of poor-quality ageing’ [4].

Such critiques have shaped a (relatively) new ‘life-course’ approach to ageing [5] (rightly) delinks ‘age’ from ‘need’. This recognises the long-term and cumulative effect of circumstances, and emphasises interventions across all ages with an aim of better conditions in later life. Such approaches, however, while theoretically more appealing, tend not to square with practical policy systems and extant paradigms - such as age-friendly cities, successful ageing, active ageing - which tend to be grounded in a ‘life-course segmented’ system [6].

In the midst of this mixed messaging, the question of the most appropriate points in life at which to make interventions can become unclear. This mixed messaging is even conveyed by different UN agencies: the World Health Organisation [WHO] and United Nations Population Fund [UNFPA] emphasise a “life-course” or “life-cycle” approach to ageing respectively, United Nations Department of Economic and Social Affairs’ [UNDESA] 2017 ‘*World Population Ageing Report*’ focuses solely on those aged over 60.

I believe that ageing can learn from climate change in terms of presenting a multi-dimensional, holistic research, policy, and measurement framework. This can (a) convey a globally consistent strategy but can also be tailored for regional priorities; (b) represent a balance between the political and practical benefits of an age-specific approach and a more scientifically valid ‘life-course’ approach; (c) allow for multiple sectors and institutions to be explored and (d) present a simpler, cleaner presentation of the challenges and policy responses to ageing. The application of this framework to ageing is outlined in Table 1.

Table 1: Conceptual framework of a new ageing science approach based on a climate change science model

	Concept
Adaptation	Improving wellbeing for people and communities ‘in need’ today (as defined by their <i>characteristics</i> , not by their chronological age). [<i>Examples: long-term care provision; poverty alleviation; crisis prevention; diagnostic and curative services; mental health and rehabilitation services; home care and institutional long term care; end of life care; age-adapted consumer electronics</i>]
Mitigation	Ensuring that individuals (and societies, institutions) ‘age better’ across the life-course. [<i>Examples: disease and frailty prevention; healthy lifestyle promotion; improved income protection schemes; financial literacy; social capital development</i>]
Resilience	Building (and reforming) institutions which can better sustain the challenges associated with population ageing; enabling ‘younger’ and ‘older’ societies to learn from each other to be more resilient to ageing in the future.

Adaptation can be thought of as improving the wellbeing of those ‘in need’. To be clear, this is not about saying that all older people are ‘in need’. Drawing on the notion of a ‘characteristics approach to ageing’ [7], this ‘need’ is determined not by chronological age (e.g. over 65, or even over 85) but by a measured, *actual* need which requires an immediate policy response. This notion of ‘in need’ will, inevitably, be judged on a national (or sub-national) level according to local priorities, cultural particularities and the relevant capacity of stakeholders.

Mitigation is about ensuring that we (as individuals and societies) *age better*. We cannot hold back time; people’s ‘chronological age’ will inevitably increase. But the future is still open in terms of the physical, mental and financial wellbeing of individuals, or the capacity of institutions to support them. Going beyond the highly developed policy systems surrounding healthy/active/positive ageing [8] and a life-course approach to health and wellbeing [9], this means having a future-oriented approach where we take active steps as individuals, communities and societies to ensure we age better than both our forebears, and

our ‘other selves’ in the absence of any effort. Mitigation recognises the long-term implications of investing early-in-life to shift the paradigm on ageing. Child development is essential, as is a focus on the foundational education and skills which will maximise the potential of all.

Resilience means taking proactive steps to ensure that our systems, our paradigms, are sustainable in the face of the challenges of population ageing. This means looking carefully at the long-term viability and sustainability of existing systems; as well as developing the resilience of new/nascent systems by learning from the mistakes of other countries. Such ‘systems’ would include pensions; models of care (including the role of the family); equality law; civic society; planning systems, and so on. Social resilience can be enhanced through developing intergenerational solidarity (or, at least, justice). Long-term population policies which include migration, and emphasise human capital rather than pure numbers, may also contribute to more manageable transition [10].

Operationalisation

To take a very simple characterisation of this alternative approach, one might consider dementia. Adaptation means supporting persons with dementia today (and their families and carers). Mitigation means looking at the risk factors for dementia (in tandem with existing interventions) and trying to minimise the number of persons with dementia in the future as well as drug discovery. Resilience, meanwhile, is concerned with developing awareness and understanding among the whole population about the nature of dementia; and the strengthening, reshaping (or building) of relevant institutions. If we imagine that the family will likely be the locus of care for those with dementia (especially in low- and middle- income countries) in the twenty-first century, resilience will also be concerned with ensuring that care is provisioned in both a quality and, crucially, equitable manner.

Poverty and income protection could be another example. Goal 1 of the *Sustainable Development Goals* calls for ‘an end to poverty in all its manifestations by 2030’ [11]. A ‘life-course segmented approach’ would tackle poverty at older ages; while a pure life-course approach would consider poverty across the life-course and be age-neutral. An adaptation approach would be to recognise that those who are in poverty in later life may be more likely to suffer from multiple vulnerabilities (relating to health). Mitigation, rather, would mean addressing how the ‘financial futures’ of individuals can be enhanced such that the odds of poverty in older age are diminished (e.g. through financial education, income protection programs and so on). Resilience would mean ensuring that extant (and developing) systems of inter-generational financial transfers are sustainable in the medium- to long-term – both in terms of fiscal sustainability, but also through a social acceptance of intergenerational support and poverty alleviation.

As in climate change itself, there is an inevitable overlap between adaptation, mitigation and resilience. In the two examples given above, there will clearly be many ‘overlaps’. However, this (imperfect) approach may be able to act as a simple means of expressing the multidimensional, time sensitive challenges of population ageing; and, therefore, to determine a more rational and holistic means of responding to them.

Finally, such an approach will be ‘data-hungry’. For climate change, a more complex array of measures denote the scale of the challenge and gauge the impact of any interventions [12]. Many of our core demographic measures of ageing are outdated and misleading [13]; though significant improvements have

been made recently both in terms of conceptual measures of ageing [7], and the scale of data availability [14]. Harmonised longitudinal surveys of ageing (linked to other life-course surveys) from many parts of the world [15] have undoubtedly revolutionized our understanding of the social, medical and economic processes of ageing and would be a critical part of understanding and evaluating a holistic ageing framework. Resources would need to be reallocated so that such surveys are expanded into more lower- and middle-income countries.

Conclusion

Here I try to develop a basic framework for ageing which has gained traction in climate change science, namely adaptation-mitigation-resilience. Such a framework could offer not only a means of overcoming the age-segmented/life-course impasse; but also a simpler form of communicating and managing both the challenges and opportunities of ageing in a more holistic, and rational, manner.

But this is only the start in terms of how we approach these ‘grand challenges’.

Climate change has received much more attention and resources. The architecture for climate change is much more decisive and comprehensive: the ‘UN Framework Convention on Climate Change’, the ‘Kyoto Protocol’, and the ‘Paris Agreement’ set out clear objectives and guidelines; the Intergovernmental Panel on Climate Change takes a clear lead on ‘assessing the science’ of climate change issues; the Conference of the Parties operates, effectively, with an executive function, while UN Climate Change coordinates the activities (including the regular international meetings).

Ageing at the UN, meanwhile, straddles (at least) the UN Population Fund, WHO, UNDESA, and the High Commissioner for Refugees. The ageing teams in each agency are small; and there is, arguably, very little coordination across the system. In other words, it is clear that – within the UN system at least – one ‘grand challenge’ (namely climate change) has resources and a whole institutional framework devoted to it, while ageing does not.

The 20th anniversary of the publication of the *Madrid International Plan of Action on Ageing* will be in 2022. We have already started to think again about how we measure ageing; but perhaps this could be the time for a completely new way of thinking about responding to ageing conceptually and institutionally?

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