NUFFIELD COUNCIL ON BIOETHICS

Forward Look 2016

25 February

Longevity

Introduction

1 The Forward Look session on longevity began with presentations from invited speakers,[1] followed by discussion with assembled guests. This note summarises themes, and also policy and ethical questions, which emerged during the meeting.[2] It should not be assumed that everyone present agreed with all points made.

Emerging themes from presentations and discussions

The value of extending the current life span

2 Are there substantial gains to be made, in terms of valuable experience, if *more* years are added to the current life span? (Is there 'any point' to extending human life?) This is an important issue that sits separately from technical questions as to *how* human lifespan might be extended (summarised comprehensively in the background paper), and warrants further exploration.

3 The work of the Roman philosopher Seneca clarifies some points which may be brought out to address this question.[3] Seneca suggests that almost everyone, once they get to their final days, says or thinks that they would like to live longer. However, their reason for expressing this desire is due to the fact that they have not organised their lives as effectively as they might have done; that is, they may not feel that they have 'run out of time' if they had made better use of the years that they had. The corollary of this argument is the question of whether increasing longevity *is* a worthwhile

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1 Professor David Gems, Professor of the Biology of Ageing and Deputy Director of the Institute of Healthy Ageing, University College London, Professor Geoffrey Scarre, Professor of Philosophy, University of Durham, and Professor Anthea Tinker, Professor of Social Gerontology, King's College London.

2 A background paper for this meeting was produced by Dr Hans-Jörg Ehni, Deputy Director, Institute for Ethics and History of Medicine, University of Tübingen, Germany. See: Nuffield Council on Bioethics (2015) *Background paper: longevity*, available at: http://nuffieldbioethics.org/wp-content/uploads/Background-paper-2016-Longevity.pdf.

3 Particularly his moral essay *On the shortness of life* ('De brevitate vitae').

aim; or if, instead, that people's lives should be made *richer*, rather than longer.

Social implications of increasing life span

4 A range of social implications of extending life spans were highlighted by speakers and audience members, including:

- The need, in *health* contexts, to pay more attention to:
    - Chronic illnesses
    - The strong link between age and disability
    - Prevention (e.g. obesity levels)
    - The role of technology
    - The rising cost of healthcare, and who's going to pay
- In *care* contexts, the need to pay more attention to:
    - The rise and cost of formal care: currently based on very low wages of paid carers
    - Changing patterns of family care: the effects of divorce, childless families, and living long distances away from family members.
    - Variations according to culture - e.g. family care in Asian countries
    - The role of reciprocal care and intergenerational links
- Wider *social* implications were also noted:
    - **Dependency / support ratios**: noting estimates that the number of people of working age who could support an ageing population will reduce significantly in the next 25 years.
    - **Living arrangements and housing**: noting that only 3.5% of people aged over 65 in England and Wales live in a care home, and that evidence suggests that living at home is older people's preference. Therefore, if extending life span is to be considered, the question of *where* older people will live also needs to be taken into account.
    - **Financial arrangements**: for example, pension provision, and addressing the employment implications of extending people's working lives.
    - **Gender differences**: noting many examples where older women (who live longer than men) are 'worse off' due to the prevalence of long-standing conditions; the likelihood of them living on their own, and being widowed; and their financial situations (older women are likely to have fewer resources).
    - **Ethnic differences**: at present, very few BME groups (4.5%) make up the UK's older population. This will change in the future, and service providers need to plan and to take account of this change.
    - **Migration**: noting the emergence of younger people who migrate to other countries (e.g. Eastern Europe to the UK) and to cities from rural areas (e.g. in China), and that a question emerges as to who

will 'look after' older people in the families of migrants (i.e. those 'left behind')?

- **Dementia**: noting the strong link between age and dementia (5% of those over the age of 65 and 20% of those over the age of 80 are likely to have dementia), and the current estimation that 850,000 people in the UK have dementia. Linked with this is the high levels of cost involved in caring for people with dementia.

Ageing as a disease

5 'Ageing' might be described in terms of calendar ageing, or 'age changes' (i.e. positive, neutral or deteriorative factors that change with age). A third interpretation – senescence – specifically reflects *deteriorative* biological change, and a set of pathologies that increase in later life. These pathologies should be treated as such, rather than approaching senescence as something that is 'natural' and 'universal' (the ubiquity of senescence does not mean that it is not a disease). The consequence of describing ageing as 'natural' is that any action to treat it would be deemed 'unnatural'.[4]

6 In contrast to the assumptions underpinning age as senescence, it was suggested that ageing is no different to any other disease, and that dual standards apply to researching how to approach combating it when compared to other diseases. For example, some argue that ageing should not be 'treated', as to do so would lead to the world's population growing unsustainably, and a complementary overuse of global resources. However, there would be outrage if this argument were extended to suggest that diseases such as cancer should not be treated.

7 These arguments were used to illustrate the conclusion that ageing has been wrongly excluded from being treated as a 'disease' as other conditions have been, despite being the main cause of disease in the world.[5] However, in contrast, it was argued that the logical extension of this argument would see an abolishment of ageing and death. Adhering to the traditional view that ageing is not a disease, but rather that there are diseases *of* ageing, would avoid this conclusion.

Policy questions

8 Discussions provoked a range of policy questions raised by the issue of extending human life span (noting, however, that not all of these questions fit into the Nuffield Council on Bioethics' terms of reference[6]).

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4 For an overview of how the terms 'natural' and 'unnatural' might be ascribed positively and negatively, respectively, see: Nuffield Council on Bioethics (2015) *Ideas about naturalness in public and political debates about science, technology and medicine: analysis paper*, available at: http://nuffieldbioethics.org/wp-content/uploads/NCOB_naturalness-analysis-paper.pdf.

5 For further discussion of this argument, see: Gems D (2015) The aging-disease false dichotomy: understanding senescence as pathology *Frontiers in Genetics* **6**: article 212.

6 See: Nuffield Council on Bioethics Terms of reference, available at: http://nuffieldbioethics.org/about/

- How might policy-makers address the question of how the development of life-extending treatments should be approached (highlighting that this issue is 'real', given the recent first trial of an anti-ageing drug)?[7]
- Should distinct human rights be applied to older people (for example, in the context of the question of their right to life span-extending treatment)?
- Do potential economic benefits of healthy old age overcome the cost of investing in research on life extending treatments?
- How should the movement of careworkers from less developed countries to more developed areas of the world be approached by governments on both sides of this equation?
- Should policy focus on *healthy* ageing, rather than *longer* (older) lives?
- Should policy-makers encourage individuals and their families to *plan* for longevity?

Ethical questions

9 Ethical questions identified during the session may be split broadly between individual and social issues (again, noting that not all of these questions fit into the Nuffield Council on Bioethics' terms of reference).

Individual issues

- Identity: in an immensely long life, does one's identity remain constant?
- Value added by individuals' contributions to justify longer lives: what should an individual achieve in order to be satisfied individually and/or to be of use to others? How should lives be structured?
- Will the mere extension of life make individuals' lives more valuable? i.e. does adding years add value?

Social issues

- Would the prospect of significant lengthening of life be 'good' for society?
- How might the prospect of lengthening life affect questions of global health inequalities?
- Social stratification: how might we address the concern that only the wealthy would get the opportunity to life longer lives? Should, for example, life-lengthening therapy be given to everyone? Or just to those who can produce a plan as to how they would spend their extra years?
    - Who might make these sorts of decision?
- How might perceptions of what ageing 'means' affect approaches to life-extension? Does a conception of ageing need to be clarified before the debate on longevity can go any further?

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7 See: Telegraph (29 November 2015) *World's first anti-ageing drug could see humans live to 120*, available at: http://www.telegraph.co.uk/news/science/science-news/12017112/Worlds-first-anti-ageing-drug-could-see-humans-live-to-120.html.