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Successful ageing: A historical overview and critical analysis of a successful concept

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ABSTRACT

Since the late 1980s, the concept of 'successful ageing' has set the frame for discourse about contemporary ageing research. Through an analysis of the reception to John W. Rowe and Robert L. Kahn's launch of the concept of 'successful ageing' in 1987, this article maps out the important themes and discussions that have emerged from the interdisciplinary field of ageing research. These include an emphasis on interdisciplinarity; the interaction between biology, psycho-social contexts and lifestyle choices; the experiences of elderly people; life-course perspectives; optimisation and prevention strategies; and the importance of individual, societal and scientific conceptualisations and understandings of ageing. By presenting an account of the recent historical uses, interpretations and critiques of the concept, the article unfolds the practical and normative complexities of 'successful ageing'.

Introduction

The concept of 'successful ageing' has played a central role in contemporary research and public discourse about ageing for more than two decades. Famously articulated in a paper titled "Human aging: usual and successful" (Rowe & Kahn, 1987), published in the journal *Science*, the concept has since been extensively used in scientific literature, along with related concepts like 'active ageing', 'positive ageing', 'healthy ageing' and 'optimal ageing'. Rowe and Kahn's short, programmatic paper has not only been widely cited in the geriatrics, gerontology and ageing research literature, but also by researchers from nursing science, odontology, psychology, sociology, political science, and other fields of broad relevance to the medical, social, cultural and political understandings of ageing. Since 1987, more than 2000 research papers and chapters in collected volumes have referred to Rowe and Kahn's paper, and it is still being widely cited today.[1] Several hundred articles have also used the term 'successful ageing' without referring explicitly to this original article.

This continuous and diverse reference to Rowe and Kahn's paper in the scientific and scholarly literature over the last quarter century indicates that the concept of 'successful ageing' touches upon some of the basic concerns in contemporary understandings of ageing. Our point of departure for this paper is the assumption that the concept of 'successful ageing' has become an obligatory passage point both for medical researchers, and for scholars interested in ageing from a social–scientific perspective. By following the reception of the concept, and by analysing its uses and the debates around it, we aim to highlight some of the fundamental issues and problematics within current ageing research that have emerged from and along with this concept.

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[1] Google Scholar shows 2050 citations and, according to Web of Science, 998 of these are from scientific articles (December 31, 2013).

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The purpose of this article, then, is to analyse the themes that have emerged and map the complexities and important issues involved in the reception of Rowe and Kahn's concept. We concentrate this thematic history on the concept's initial reception until the end of the 1990s, which can be characterised as the concept's most formative period, and well illustrates the emerging themes and problematics that are also present in more recent publications. In the following, we first introduce Rowe and Kahn's paper and briefly describe the context of its origin as well as its basic arguments. We then follow the paper's reception within the broad field of ageing research, highlighting themes and discussions among some of the central players in the field.

The empirical basis for the analysis is the published research literature based on a systematic search in two online databases: Web of Science for peer-reviewed journal articles and Google Scholar (to capture book chapters and other academic sources not listed in WoS). We sorted through this material to pinpoint those articles that directly engage with the concept (i.e., make more than just a passing reference to Rowe and Kahn's article). This heuristic exercise provided us with an overview of the prime discussants and themes, but the wealth of data also necessitated that other avenues of investigation remain unexplored. For instance, quite a few publications were directed more at general questions of health care policies or 'quality of life' and were not included here.

As the material and themes emerging from this investigation show, the subject of ageing is very heterogeneous. This is also reflected in the structure of this article; rather than draw out one theme or discourse, we think it is more useful to convey some of the complexity present in the historical material. As researchers involved with ageing will be the first to recognise, this complexity is a characteristic of the phenomena of ageing and ageing research, not least when engaging with conceptual frameworks like 'successful ageing'.

Laying the foundation for success

Although the notion of 'successful ageing' can also be found in earlier literature on ageing, it did not have much impact on the discourse and practices of ageing research. The breakthrough for the concept came with the MacArthur Foundation Study on Successful Aging, led by gerontologist John W. Rowe and funded for ten years between 1984 and 1993; data from the study was still being analysed and published for several years afterwards (e.g., Glass, Seeman, Herzog, Kahn, & Berkman, 1995; Rowe & Kahn, 1998; Seeman et al., 1994; Seeman, Singer, & Charpentier, 1995). When the study began in 1984, American gerontology was perceived to be in a crisis. In terms of national research funding, priorities had changed from clinical and health-care services to basic biomedical research, particularly research on Alzheimer's disease. Earlier biomedical investigations that once seemed promising had failed to find a cure for or a method to defer "the vicissitudes of senescence". Furthermore, disengagement theory, the formerly dominant theory within social and behavioural ageing research formulated in the early 1960s – which stated that ageing naturally and inevitably entailed a gradual withdrawal from society and social relations (Cumming & Henry, 1961; cf. Bengtson, Silverstein, Putney, & Ganz, 2009) – had by the mid-1980s become discredited and seemed outdated (Achenbaum, 2000: 419). The need for new theoretical developments was therefore widely recognised by the gerontological community (Katz, 1996: 104–134; Rowe & Kahn, 1998: xi; personal e-mail correspondence, Rowe 17 January 2011).

The task set by the MacArthur Foundation was to lay the intellectual and methodological foundation for a "new gerontology". To fulfil this aim, the Foundation emphasised the importance of interdisciplinary co-operation. Cross- and interdisciplinarity had characterised ageing research since the emergence of a field of gerontology in the early 20th century, but the call for interdisciplinary approaches to ageing gained importance from the 1980s onwards (Katz, 1996; Achenbaum, 1995; cf. Rowe, 1997). As director of the MacArthur study, Rowe assembled a group of 16 well-known researchers from high-profile institutions spread out across the United States with diverse biomedical, behavioural and social–scientific backgrounds. The study did not include interdisciplinary co-operation with scholars from the humanities, however, and all the researchers selected had fairly similar views on what counted as a scientific approach (Achenbaum, 2000).

In contrast, and by their own count, the MacArthur successful-ageing study resulted in almost one hundred scientific publications (Rowe & Kahn, 1998: xiii). Furthermore, the research and formulation of the concept that the assembled group of researchers had developed – and which was first articulated in the "Human aging: usual and successful" article – was disseminated to a large number of researchers. This included the members of the Gerontological Society of America, "the world's largest group of scholars in gerontology", who each received a copy of Rowe & Kahn's, 1998 book *Successful Aging*, which expanded upon the main themes of their initial article (Rowe & Kahn, 1998: xiii; Achenbaum, 2000: 425). Although in this article we focus on the original article and not the book, the book's popular dissemination of the MacArthur study's results can be seen as an important work of interdisciplinary science communication. In this and other ways, the concept of 'successful ageing' was brought to a wider professional audience, and it subsequently influenced the agendas of several prominent scientific institutions in both the United States and Europe.

Furthermore, growing medical and political concern about the possible economic and health-care 'burdens' related to North America's ageing populations provided a significant context for how 'successful ageing' emerged as a conceptual frame for ageing research. Often mentioned in ageing-research publications from this period (including most of the publications discussed here), this concern produced new demands for the governance of ageing bodies and populations. Such governing was increasingly framed within dominant discourses of neoliberal politics, which emphasised solutions based on individual responsibility — something with which 'successful ageing' has also been strongly associated (Sandberg, 2008: 122–123). Thus, the history in which successful-ageing discussions and practices participate can also be related to the political management of life and death on both an individual and population level — or the biopolitics of ageing, to use a Foucauldian term. Biopolitical analyses of ageing research

(Katz, 1996) and the larger field of biomedicine (Rose, 2007) might further contextualise the history of 'successful ageing' beyond the scope of this paper.

Introducing Rowe and Kahn's argument: the challenge to contemporary ageing research

In the introduction to their 1987 article, Rowe and Kahn wrote:

> Research in aging has emphasized average age-related losses and neglected the substantial heterogeneity of older persons. The effects of the aging process itself have been exaggerated, and the modifying effects of diet, exercise, personal habits, and psychosocial factors underestimated. Within the category of normal aging, a distinction can be made between usual aging, in which extrinsic factors heighten the effects of aging alone, and successful aging, in which extrinsic factors play a neutral or positive role. Research on the risks associated with usual aging and strategies to modify them should help elucidate how a transition from usual to successful aging can be facilitated. (Rowe & Kahn, 1987: 143)

This quote summarises Rowe and Kahn's main arguments and central discussion points for ageing research: that the methods, the presumptions about causality, and the aims of ageing research up until then could and should be challenged.

Rowe and Kahn argued that when the methodologies of ageing research focused only on the averages of the ageing population, they produced a particular idea of what normal ageing was, i.e., the usual, and what counted as pathology, i.e., the clearly diseased or dysfunctional. In addition, Rowe and Kahn argued that the traditional focus on the binary categories of 'normal' versus 'diseased' neglected the heterogeneity among older people; by implying that the large group of people defined as 'normal' were in a harmless condition, gerontologists suggested that the 'normal' was also 'natural'. On the whole, this conceptualisation of normality tended "to create a gerontology of the usual" which only led to functional decline or disease later in life (Rowe & Kahn, 1987: 143). In Rowe and Kahn's perspective, the "usual" seemed not to be normal in the qualitative sense but rather potentially ill — or, in line with another increasingly widespread medical discourse at this time, *at risk* (cf. Petersen, 1996; Rose, 2007).

Instead, Rowe and Kahn argued, a focus on the heterogeneity of the elderly populations provided an understanding of normal ageing as consisting of both "usual ageing" and "successful ageing"; and as a consequence the purpose of ageing research should be to investigate how individuals can attain a "successful" condition, defined as having "little or no loss in a constellation of physiologic functions" (Rowe & Kahn, 1987: 144). Closely related to these arguments was the criticism of viewing the average age-related decline as "age-intrinsic" (ibid.); instead, they emphasised the importance of social and environmental factors on the physiologic and mental development of ageing individuals.

In Rowe and Kahn's view, the heterogeneity of the elderly population – which included "older persons with minimal physiologic loss, or none at all, when compared to the average of their younger counterparts" (ibid.: 143–144) – was evidence of the malleability of elderly bodies. This heterogeneity was a major counterargument to the traditional definition of ageing in terms of an inevitable physiological and cognitive decline. By introducing the notion of 'successful ageing', Rowe and Kahn stressed that individuals themselves could potentially avoid such declines by maintaining and improving their health through better lifestyle habits related to, for instance, diet/nutrition and exercise.

Empowered populations

Contributing to developments and discussions that were already underway in the field of ageing research, these arguments mark a shift in the research perspective: from a focus on treating disease to a focus on preventing disease. Age-extrinsic factors, such as diet and exercise, could be seen as controllable and modifiable, thereby opening up the possibility for prevention (e.g., through lifestyle changes), while they placed more responsibility and power for generating change/health/success on the individual than a focus on intrinsic and population-related issues would do. The notion of heterogeneity had also been an issue in earlier influential works about ageing (e.g. Butler, 1975), but whereas this earlier emphasis on heterogeneity had centred on the distinction between disease and normality (cf. Riley & Bond, 1983), Rowe and Kahn's distinction between "usual" and "successful" instead provided these issues with new terms that underscored the potential empowerment of individuals.

This also became clear in the many subsequent research publications that adopted Rowe and Kahn's perspective. One of the early contributions from counselling psychology articulated it as such: "People need to be empowered to prescribe a life course that best fits who they are and who they want to become" (Ponzo, 1992: 212). And further: "we need health-promoting attitudes and actions that move us to a society where the prime of life can be all of life, and where most of us die in our prime, at ripe old age" (ibid.: 211). Formulated in ways that explicitly or implicitly opposed an age-burden caused by increased life expectancy, public-health researchers likewise argued that "active intervention in areas which promote healthy aging might lead to an aging population which retains high levels of function for a longer proportion of their lives and is therefore less dependent on their families and the health care system" (Guralnik & Kaplan, 1989: 708; cf. Bortz, 1989; Seeman et al., 1995). The empowered individual and an ageing population with high levels of function and independence were both on the same track.

As an example of general developmental trends in biomedicine, this shift in focus – from age-intrinsic to age-extrinsic and from treatment to prevention – also considerably expanded the scope and role of medicine. Whereas research focusing on disease had traditionally met and investigated these conditions within an institutionalised setting, and sought to define the generalisable symptoms and aetiology of a given disease condition in this context, the focus on health (or 'success') necessitated a focus on factors and individual bodies situated outside medical institutions, and required the investigator to look for the (multi)causal

processes and pathways that led to different physiologic conditions in this context (Rose, 2007). With 'successful ageing' as a goal for ageing research, researchers stressed the need to identify variables and investigate the predictors for high levels of physical functioning. As another publication from the MacArthur Study formulated it, "acknowledgement of the variability in rates of decline in functioning has brought new attention to questions regarding the identification of factors that are associated with more successful maintenance of functional abilities with aging" (Seeman et al., 1994: 97) — or, in the negative formulation of the same, the goal was to find the "potential risk factors [that] are likely to influence performance" (ibid.: 107; cf. also, Guralnik & Kaplan, 1989; Moen, Dempster-McClaim, & Williams, 1992; Seeman et al., 1995; Strawbridge, Cohen, Shema, & Kaplan, 1996). In other words, *how to* achieve successful ageing became a research topic for ageing research.

How to operationalise the concept?

It was quickly recognised that it would be difficult to operationalise successful ageing. One methodological difficulty was, for instance, that the measuring tools developed in gerontology (and related disciplines) were created to measure levels of transgression from an unimpaired norm, rather than measure and distinguish between people without major impairment (Garfein & Herzog, 1995; Berkman et al., 1993: 1137; Strawbridge et al., 1996). The acknowledgement of heterogeneity among the unimpaired on the one hand seemed to point to the difficulty of categorisation and classification of differentially ageing individuals, while, on the other hand, health-intervention strategies seemed to necessitate a renewed classification of "the heterogeneity among nonpathologic populations of older adults" (Garfein & Herzog, 1995: 7 of 9; see also Strawbridge et al., 1996). As the goal of ageing research shifted, the toolbox also had to change; in addition, this affected the general understanding of the purpose of research and the knowledge produced.

For example, not only did the topic of successful ageing (and how to achieve it) potentially put more aspects of people's everyday lives under medical scrutiny, it also added more importance to the dissemination of scientific knowledge about ageing, precisely because these aspects were outside of medical institutions and required a certain amount of self-governance. Thus, knowledge about predictors and risk factors were not only seen as tools for the health practitioner or ageing researcher, but also as possible tools for individual (self-)directing, health-promoting practices. In the literature, this is frequently demonstrated by the two ways in which successful ageing is framed; namely, as *something someone does* (living a healthy, active life) (e.g., Moen et al., 1992: 1633), and as *an aim or act* of health promotion or ageing researchers (e.g., Ponzo, 1992: 210). This merging of the aims and practices of individuals and the health sciences also seems to reflect a merging of individual and population-related perspectives; with the increased emphasis on prevention – as the answer to *how* to achieve successful ageing – individual choice became an important factor in public-health and medical considerations. In other words, in order "to prevent declines and also perhaps to improve levels of functioning" (Seeman et al., 1994: 107; cf. Ponzo, 1992: 212), medical and individual choice should align in ways that secured the empowerment of the individual as well as optimal benefit to society.

In a later article, Rowe and Kahn also addressed the call to clarify and classify the conditions and heterogeneity related to successful ageing; here, they expanded upon their concept of success and proposed three components necessary for it to be fulfilled: 1) a state of low probability of disease; 2) good physical and mental functioning; and 3) active engagement with life (Rowe & Kahn, 1997). In this formulation, successful ageing not only referred to the absence of disease and disability, but also the absence of risk. Furthermore, since the physiologic measures and calculated (risk or health) probabilities only expressed "what a person can do, not what he or she *does* do" (Rowe & Kahn, 1997: 433; their emphasis), success now demanded "active engagement" — a criterion which is related to both the aforementioned broad scope of ageing research as well as the normative and political implications of this particular perspective (going beyond mere risk-management and optimisation, and instead positioning 'success' as a social criterion).

The idea of active engagement also echoed other developments within ageing research at the time. Concurrent with 'successful ageing', for instance, conceptual frameworks like 'active ageing' and new formulations of 'productive ageing' were becoming increasingly popular, emphasising activity and productivity as a norm that the elder populace should strive to attain. Especially 'productive ageing', which was originally conceptualised by Robert Butler in the early 1980s (Butler & Gleason, 1985), is related to Rowe and Kahn's work in different ways. Butler and Rowe worked together at the Mount Sinai Medical Center in New York, which Rowe was president of from 1988 to 2000, and where Butler founded and directed the geriatric department from 1982 to 1995 as professor of geriatrics and adult development (Cole, 1992: 227; Aufses & Niss, 2002; Rowe, 2010).[2] In 1975, Butler had coined the term 'ageism' to describe discrimination based on negative stereotypes of old people (cf. Cole, 1992: 227), and his later work on productive ageing continued to emphasise the positive aspects of ageing and the value of elderly people.[3]

In line with 'successful ageing', the notion of 'productive ageing' incorporated a reconfiguration of negative stereotypes with individual empowerment and societal concerns — but also received criticism from some of the same scholars (cf. Holstein, 1992 and below). Some researchers also suggested other concepts; Garfein and Herzog (1995), for instance, used the term 'robust aging' as a redefinition of successful ageing, while Curb et al. (1990) – arguing for a broader understanding of the term – introduced the utilitarian concept of 'effective ageing', which aimed to help researchers develop "health-care practice and policies that will maximize the quality of life for the largest

[2] Mount Sinai had also been the workplace of Ignatz Leo Nascher, M.D., who coined the term 'geriatrics' in 1909 and worked at the hospital until 1916 (Cole, 1992: 203). Ageing-historian Andrew Achenbaum has called Nasher a "father" of geriatrics in the United States (Achenbaum, 1995: 45).

[3] For a discussion of 'productive ageing', see Morrow-Howell, Hinterlong, & Sherraden (2001).

number of older people" (Curb et al., 1990: 828). Neither of these suggestions gained momentum, though, nor did they seem significantly different from Rowe and Kahn's term. In addition, just as with 'successful ageing', the conceptualisations of 'productive' and 'active' ageing – although politically powerful and influential on research approaches across a variety of disciplines – were nevertheless difficult to pin down and operationalise. While successful ageing was often linked to independence, activity, socialising and productivity (Glass et al., 1995), for example, such terms were broad concepts that allowed for a variety of interpretations, definitions, research subjects and methodologies (Berkman et al., 1993: 1137) — and they were all concepts contested within and among each discipline.

What is (not) ageing?

An important aspect of the discussions related to the difficult distinction between on the one hand successful, normal (or usual) and the other hand what, in this context, might be called unsuccessful ageing, was the fundamental issue of how to define and distinguish between ageing processes as such and disease processes or other non-ageing processes (a contested issue tracing back to the early 20th century debates about pathological and natural models; see Cole, 1992: 185–211). In particular, this was a topic for the parts of ageing research that were more orientated towards thinking in terms of medicine and geriatrics, and which attempted to isolate age-related diseases from ageing itself (Bortz, 1989: 1092; Kavesh, 1996: 55). But as biogerontologist Edward J. Masoro (1991: 508) remarked, not only was it difficult to separate disease and ageing, the main difficulty in understanding ageing biologically was the problem of cause and effect: i.e., of separating 'primary ageing processes' from processes that were a result of ageing (see also Berkman et al., 1993: 1138). Statistical associations said little about the 'direction' of causality, and age-related conditions had to be considered to have multiple causes (Berkman et al., 1993; Seeman et al., 1994). Furthermore, differences in any given cohort may reflect recent changes, life-long patterns or exposure, or nutritional patterns in earlier life stages (Berkman et al., 1993).[4] When looking at a human body, what was the expression of ageing as such, what was the expression of symptoms of ageing, and what was the expression of other influences?

These questions also formed the basis for geriatric opposition to 'successful ageing' as a useful concept for ageing research. Geriatrician James Goodwin, for instance, argued that such concepts left little room for "natural death", and considered every manifestation of bodily ageing to be a disease or "due to past dietary and lifestyle indiscretions." "Indeed," Goodwin wrote, "the emphasis on successful versus usual aging may provide physicians and others with a club with which to beat their 'unsuccessfully' aging patients" (Goodwin, 1991: 630). Goodwin's criticism also explicitly contrasted the political usefulness of the concept with its usefulness to promote 'good science' — the definition of which, as his criticism also showed, depended on the ontological point of departure; i.e., where the distinction between natural decline and disease/lifestyle influences was believed to exist. Goodwin's position was that the failure of bodily systems was a process of life that (although it could be influenced) should be seen as an unavoidable fact, and that death was thus something that ageing research should accept and come to terms with, rather than to see it as a failure.

Although a minor voice in the general reception to the concept of successful ageing, Goodwin's contestation of Rowe and Kahn's framework can be related to earlier characteristics of the ageing field. As formulated by historian of ageing Thomas Cole, "geriatricians in the 1970s launched a vigorous campaign to separate disease from physiological aging" on the one hand, while on the other hand, "a new version of natural death appeared [defined as] the inevitable outcome of linear decline of function in vital organ systems" (Cole, 1992: 108). If Cole's characterisation of the field is correct, then it is striking that, at this later point (in the material addressed here), Goodwin's argument for this kind of natural death was a singular occurrence. In the discussions about successful ageing, death was mostly present as mortality rates and a risk to be avoided, and it was rarely mentioned directly. In contrast, the discussion about how to separate disease and ageing can be seen as a constant and prevalent topic in the short history of the notion of successful ageing. This topic, as Cole (1992) has shown, has a long history, but takes on a flavour of added complexity in the setting of 'successful ageing' research, with the increased emphasis on life-course heterogeneity and the influence of extrinsic factors (cf. Hendricks, 1996: 141). As the importance of extrinsic factors was further stressed, the meaning of ageing research methods and approaches, presumptions, and interpretations also changed; in ageing research that investigated biomarkers of ageing in order to predict ageing processes, for instance, one consequence was that if age changes were due to extrinsic factors, then physiological measurements were not reliable biomarkers of intrinsic ageing (Masoro, 1991: 503).

Interventions from psychology and interdisciplinary perspectives

Simultaneous to these discussions, social and psychological perspectives on successful ageing were increasingly influencing the interdisciplinary field of ageing. While the more medically orientated parts of the field were balanced between an individualistic, person-centred emphasis on care and prevention and population-focused cohort studies, approaches from the psychology of ageing added an interest in the lived experiences of ageing individuals (Keller, Leventhal, & Larson, 1989) and a focus on life satisfaction and an ageing individual's own definitions of successful ageing (Fisher, 1992). Perhaps unsurprisingly, the psychological approach to ageing put less emphasis on – and sometimes criticised – the use of physiologic measures as the most relevant criteria for success (Keller et al., 1989; Wong, 1989; cf. also Garfein & Herzog, 1995). Instead, psychologists and psychologically-inspired researchers from other areas stressed the importance of "adaptation, self-acceptance, productivity and activity, optimizing life

[4] Epidemiological theories have since conceptualised this problematic in terms of (the difficult distinction between) 'critical periods', 'sensitive periods' and/or 'accumulation' (cf. Kuh, Ben Shlomo, Lynch, Hallqvist, & Power, 2003).

expectancy, independence or autonomy, positive relations with others, having a purpose in life, and personal growth" (Fisher, 1992: 201).

As exemplified by the addition of "active engagement" to Rowe and Kahn's conceptual framework, these perspectives also increasingly extended into the medical and public health-orientated segments of the field, wherein differences between the sciences' understanding of successful ageing and among the elderly people themselves were at times increasingly problematised — resulting in the tentative inclusion of patient perspectives in definitions and research setups. Discrepancies between self-ratings and the physical criteria for success left the impression that physical measurements could no longer stand alone, and some researchers thus started to compare the different research criteria for success (e.g., those formulated in Rowe & Kahn, 1997; Baltes & Baltes, 1989, 1991; or Butler & Gleason, 1985) with the self-rating of elderly people — having an explicit aim to improve the concept and be able to differentiate "older persons on quality of life outcomes" (Strawbridge, Wallhagen, & Cohen, 2002: 728).

One important interpretation of successful ageing came from psychologist Paul B. Baltes, based at the Max Planck Institute for Human Development in Berlin. Starting in the late 1980s, Baltes (co-)authored several articles and an anthology on the subject (e.g., Baltes, 2006; Baltes & Baltes, 1989; Baltes & Baltes, 1991; Baltes, 1991; Baltes & Smith, 2003; Smith & Baltes, 1997; see also Barr, 1993: 272). A substantial part of this work was done while Baltes was a leading researcher for the Berlin Aging Study, which began in 1990 and is currently still running (Berlin Aging Study website). Baltes' research group had close contact with psychologists David Featherman and John R. Nesselroade from the MacArthur Study on Successful Aging group, who regularly visited the Berlin group; a few years after the studies began, the two groups held a joint meeting in Berlin to compare results, strategies, ideas, etc. (personal email correspondence with John Rowe; 18 January 2011). Nesselroade also wrote Baltes' obituary in *American Psychologist*, which referred to him as probably the most influential developmental psychologist on the international scene at the time of his death (Nesselroade, 2007).

In their earliest work, Baltes and Baltes (1989) took Rowe and Kahn's concept as a point of departure for their own theory about successful ageing. As suggested by the title, "Optimierung durch Selektion und Kompensation. Ein psychologishes Modell erfolgreichen Alterns"[5], this work proposed an approach to successful ageing that was based on "optimizing ageing through compensation and selection". This paper introduced six central hypotheses about ageing; specifically, that: 1) it is possible to make a distinction between normal, pathological and 'optimal' ageing; 2) ageing is a heterogeneous process; 3) individuals build up reserve capacities during development, created by learning, etc.; 4) there is an age-related limit to cognitive strength and width; 5) with age, an individual's balance of gains and losses tips more towards losses than gains; and 6) an individual's concept of self remains stable throughout the ageing process (Baltes & Baltes, 1989: 88–93). In a revised English version of this article, Paul Baltes split the fourth point into two, adding more details about differences in "cognitive mechanics" (the neurophysiological architecture of the brain) and "cognitive pragmatics" (knowledge-based software) in human cognition.[6] In this view, any intellectual performance involved both cognitive mechanics and pragmatics, but the cognitive mechanics had age-related limitations (even though cognitive reserves could be built up). This made the cognitive pragmatics important for performance as well as for the potential to compensate for a loss in cognitive mechanics (Baltes, 1991: 844–847).

Compared with Rowe and Kahn's framework – which, to put it simply, viewed biology as something moderated by environmental and lifestyle factors, and argued for lifestyle interventions (viewing the ageing person from 'outside') – Baltes focused on limits and possibilities within (the brain of) individuals, and argued for optimisation and the prevention of age-related decline through gaining knowledge about the possible compensation abilities related to cognition (a view from 'inside'). For Baltes' version of successful ageing – and from the point of view of the ageing person – the important issue became how an individual could best adapt to the bodily and mental changes in the later part of life, rather than seeking to avoid physical and mental functional decline altogether. In this view, the use of lifelong learning and new technologies were endorsed as means to develop abilities to compensate for declining capabilities, but not to directly maintain these capabilities (e.g., Baltes, 1991: 847). As with Rowe and Kahn's work, the psychological approaches did not necessarily construct a dichotomy between the physical and the social/psychological aspects of ageing; rather, these aspects were considered to be interwoven and the conditions of ageing were considered multicausal. But whereas Rowe and Kahn's framework emphasised the plasticity and malleability of bodily systems – in an 'it's never too late' approach – Baltes' reconfiguration of the concept of successful ageing took bodily decline and decreased plasticity over time as a premise for interventions that would promote successful (optimised) ageing.

Just like Rowe and Kahn's publications, Baltes' directly influenced several other researchers who subsequently embraced the concept of successful ageing within the field of psychology (e.g. Lang & Tesch-Römer, 1993; Abraham & Hansson, 1995[7]) — although there were also publications from the field of psychology that referred only to Rowe and Kahn's article (e.g., Satlin, 1994), just as there were gerontologists who, inspired by Baltes and Baltes (1991), emphasised the psychological aspects of ageing (e.g., Garfein & Herzog, 1995). Again, a central debate centred on how to operationalise the concept in order to classify, measure and quantify the perceived components of successful ageing (such as 'social engagement' and 'quality of life') (Lang & Tesch-Römer, 1993), or how to use qualitative approaches that focused on individual experiences, understandings of successful ageing and life satisfaction.

[5] In English: Optimisation through selection and compensation: a psychological model for successful ageing (our translation).

[6] Today, this is sometimes referred to as 'fluid' or 'crystallized' intelligence.

[7] Although published in gerontological journals, the authors themselves have a background in psychology.

Ageing in a life-course perspective

Another often-cited reconfiguration of successful ageing came from the Max Planck Institute for Human Development in Berlin, where Jutta Heckhausen – in co-operation with Richard Schulz from the University of Pittsburgh – combined Baltes' and Rowe and Kahn's conceptualisations with a life-course perspective (Schulz & Heckhausen, 1996). The life-course perspective was another popular scientific concept and methodology that emerged in the latter half of the 20th century, in particular gaining ground within the field of ageing research at the time of Schulz and Heckhausen's article (Elder, Johnson, & Crosnoe, 2003: 3–19; see also Holstein & Gubrium, 2000: 5–27). While effectively gathering support for the concepts of plasticity and heterogeneity, it also grappled with the difficult relation between individual lives and social structures. From this perspective, successful ageing was defined as the optimisation of human development over the life course, and Schulz and Heckhausen argued that this should be measured by what they termed "absolute and measurable performance criteria" (Schulz & Heckhausen, 1996: 711). These criteria were to be defined within a broad range of categories: "physical, … cognitive, intellectual, affective, and creative functioning, and social relations" (ibid.: 705) and were to be evaluated in relation to an individual's "contextual opportunities" (ibid.: 711), i.e. the genetic and socio-cultural context of the individual.

From this standpoint, Schulz and Heckhausen suggested that ageing was a result of a life-course development that formed a bell curve in terms of the acquisition and deterioration of skills that may be gained or lost with age. Furthermore, the relative height and length of a given individual's bell curve would be the result of how the constraints of genetic and socio-cultural factors interact with the individual's strategies and resources. In this understanding, success thus depended on a person's use of strategies that maximised his/her control over constraining biological and socio-cultural factors. With reference to Baltes and Baltes' earlier work, developing these strategies necessitated seeking out or being introduced to a wealth of opportunities; being selective about one's genetic and socio-cultural opportunities; learning to compensate, cope, and manage trade-offs; and building up "reserves of resilience to draw upon" (Schulz & Heckhausen, 1996: 705, 711).

With their context-dependent criteria for success, Schulz and Heckhausen's conceptualisation seemed to sidestep some of the early criticism of Rowe and Kahn's framework for a priori excluding impaired or socio-economically challenged individuals from being labelled successful (cf. ibid.: 712; Minkler, 1990). At the same time (referring to Rowe and Kahn), they clearly emphasised "physical functioning and the absence of impairment or disability as criteria for successful aging" (ibid.: 711). Furthermore, we would add, this definition still depended on the difficult issue of determining a given individual's genetic and social opportunities and range of potential; who would know what opportunities were passed up or the kinds of potential unfulfilled — i.e., whether or not someone had achieved successful ageing?

As with other areas of ageing research, the life-course approach did not contain just one perspective or definition of successful ageing; rather, it had multiple uses and made many different conclusions possible. For instance, in their utilisation of the life-course perspective, Margret Baltes and Laura Carstensen cautioned against putting too much emphasis on structural factors, depicting individuals as onlookers to their own ageing processes or viewing success only in terms of material productivity. Instead, they pointed out, different people or groups could have different definitions of successful ageing with different criteria and different norms attached (Baltes & Carstensen, 1996: 202). Although they themselves stressed generativity, self-development, integrity and social engagement as components of 'successful ageing', they argued that ageing researchers should avoid trying to define (measurable) criteria of *what* successful ageing is, and instead look at the (psychological) processes involved in *how* humans maintain feelings of health, life satisfaction, happiness or autonomy. For Baltes and Carstensen, the question 'what is successful ageing?' was variable across contexts, but the 'how to achieve' a given culture's notion of success was considered to be universal and independent of the criteria used (ibid.: 201). And, as in the earlier work by Baltes and Baltes, Baltes and Carstensen suggested that the "metamodel" framework of "selective optimization with compensation" could be a way to understand how to 'do' successful ageing (ibid.: 208–209).

These differences in uses, approaches, definitions and emphases – together with the interdisciplinary overlaps and co-operations – paint a picture of the complexity of this field. In general terms, the life-course perspective, like most of the other medical – or public health – orientated approaches, aimed to enable an individual's control over his/her future life course, whereas psychologically-orientated ageing researchers were more focused on managing – or coping with – the present. When examined more specifically, though, such distinctions were not easily made, as coping strategies were also viewed from a life-course perspective, and managing the present was considered to be a tool for controlling one's future life course.

Contested categories and critical gerontology

All these discussions were in one way or the other based on another important practical and conceptual distinction that was increasingly emphasised within ageing research since the 1970s: the distinction between chronological age and biological age/functional ability (Neugarten & Hagestad, 1976). In the successful ageing literature in particular, even when something as relatively simple as the chronological age of an individual was used to separate cohorts into manageable categories, such categorisations were simultaneously recognised as problematic because of the heterogeneous nature of human development over time. Although 'chronological age' was useful for some statistical purposes, the aspects of human development in which researchers throughout the field were interested soon required other terms to describe and understand individual developments — and to point out the differences between normal, pathological and successful ageing.

The term 'biological age' became a popular way to describe an individual's physical fitness against a statistical

norm, based on chronological age. Likewise, social and psychological research introduced new categorisations of the later life stages that were based on functional abilities; a distinction between the 'third age' and 'fourth age' was coined by historian Peter Laslett (1991) who, together with psychologist Bernice Neugarten (1974), was also first credited with making a similar distinction between 'young–old' and 'old–old' (Baltes & Smith, 2003: 124). These distinctions did not refer to chronological age, but to 'phenotypic expressions', i.e., to a variety of changeable mental and physical expressions related to ageing. Here, young–old referred to the part of a life course in which an individual was still 'doing well', while old–old was characterised by losses. Relating physical changes to the social and psychological dimensions of ageing, Baltes, for example, critically argued that increased longevity also increased the risk of entering a fourth age filled with social loss — particularly loss of dignity (ibid.: 128). This, however, seemed to inadvertently make a strong association between the quality of life and the functional and social abilities of elderly people.

In this way, the issue of such categorisations related to another concern within the field of ageing research during this period: namely, the problem of how to avoid stereotyping, stigmatising and discriminating against elderly people. As mentioned earlier, Rowe and Kahn also addressed this issue, although they did not entirely evade it. Other ageing researchers quickly pointed to the implicit contrast between 'successful ageing' and 'ageing with disability', which both excluded people with lifelong disabilities from achieving "success" (Berkman et al., 1993: 1138) and had the potential to reinforce prejudice against disabled elders (Minkler, 1990: 247). Furthermore, attempts were made within successful-ageing research to avoid the stereotype of relating 'productivity' to the category 'young', and viewing the 'old' as dependent and unproductive (e.g., Glass et al., 1995, using data from Berkman et al., 1993). As sociologist of ageing Ion Hendricks remarked: "there is a world of difference hovering in the labels we often treat as individual characteristics — race, gender, class, and so on" (Hendricks, 1996: 142). Such perspectives highlighted the importance of the definition and extent of the conceptual framework to the treatment and social status of ageing individuals — and to the emerging paradox of sometimes unintentionally producing negative consequences by having too much emphasis on 'good health' and 'productivity'.

Again, these perspectives followed an emerging trend within the field of ageing research. Simultaneous with certain developments – such as the expanded scope of biomedicine and a greater emphasis on heterogeneity, life-course perspectives and the social and psychological influences on ageing – a critical branch of the field also arose, which is sometimes called 'critical gerontology' (see, e.g., Baars, 1991; Cole, Achenbaum, Jakobi, & Kastenbaum, 1993; Minkler, 1996; Minkler & Estes, 1999). This term encompassed researchers from a variety of backgrounds whose common interest lay in applying a critical approach to the production of scientific knowledge — as well as the norms, values and power relations involved in the construction of social categories and identities related to ageing.

Meredith Minkler was one of the first and most persistent critical gerontologists to voice her criticism of the concept of successful ageing (e.g., Minkler, 1990, 1996; Holstein & Minkler, 2003; cf. also Hendricks, 2008). Aside from the aforementioned exclusion of disability, Minkler further argued that the conceptual framework's emphasis on what was viewed as modifiable lifestyle factors inevitably placed the responsibility for 'success' on elderly people themselves; this created a risk that they would be blamed for having a disability that may have resulted from a lack of available health-care services and/or inadequate social policies (Minkler, 1990: 247). This argument may be reminiscent of James Goodwin's critique (cf. above), except that Minkler did not argue for unrecognised natural causes, but rather unrecognised inequality and social-structure causes. Furthermore, she emphasised that such views of ageing could impact both the care and treatment of older people as well as affect funding and research priorities. Instead, she argued that viewing ageing as a process including both positive and negative ageing would "better meet the needs of our increasingly diverse elderly population, and hence of society as a whole" (ibid.: 256).

Minkler's critique was not only aimed at 'successful ageing' but also other related concepts, such as the 'compression of morbidity' thesis (Fries, 1980), and at the general biomedicalisation of ageing, i.e. the expanding practices and understandings of ageing as a biomedical problem (Estes & Binney, 1989)[8]; in Minkler's opinion, these reinforced a view of ageing as a process that consisted of "downward sloping lines" via its emphasis on, for example, the clinical/biomedical basis for both the 'problem' of ageing and its amelioration (Minkler, 1990: 246; see also Moriera & Palladino, 2009). Likewise, Thomas Cole criticised Rowe and Kahn's conceptualisation and its implied biomedical view of 'good old age', asserting that "the dominant biomedical ideal of 'successful aging' … simply acknowledges the diversity hidden within the category of 'normal' aging and then uncritically reasserts the old wish for maximum physiological functioning as the criterion of success. By this criterion, however, we are all destined to live in fear of failure" (Cole, 1992: 238). As Cole further points out, in the historical context of ageing in America, the potential 'failure' of successful ageing retains an unspoken religious message of sin: "we can never know whether we will be healthy enough to be 'saved'" (ibid.).

When criticising the 'successful ageing' framework, other critical gerontologists did not always address Rowe and Kahn's original paper, but often referred to it in more general terms or, in some instances, to Rowe and Kahn (1998) (see, e.g., Calasanti & Slevin, 2001; Calasanti & King, 2005; Calasanti, Slevin, & King, 2006). The critical voices often found the concept of successful ageing too preoccupied with health, while lacking attentiveness to structural inequality or the views of the elderly themselves, or attention to "the realities of decline and death" (Cole, 1992: 238; cf. Goodwin, above). The downside of using the term 'success', it seemed, was that it inevitably dragged 'failure' along with it — with

[8] "'Medicalization' describes a process by which [formerly] nonmedical problems become defined and treated as medical problems, usually in terms of illness and disorders" (Conrad, 2007: 4).

consequences for how ageing was viewed by society, within ageing research and among individuals.

These critical perspectives on research within the frame of successful-ageing (and related phenomena) did not just argue against the wide-spread notion of ageing as a problematic condition; importantly, and in line with Rowe and Kahn's original argument, the critiques were related to the notion that concepts and understandings of ageing fundamentally shape how research is conducted and what kind of scientific knowledge is produced. However, for Minkler and Cole, this notion was not limited to a question of looking at ageing in terms of heterogeneity instead of averages, but was framed as a wider argument against a one-sided representation of ageing through biomedical knowledge production. Understood as a practice that was also political, normative, and with concrete consequences for the lives and social policy of ageing individuals, ageing research was considered to be in need of critical reflection and serious attention to multiple research perspectives.

Conclusion

In this article, we have shown how the concept of 'successful ageing' was received in a wide variety of different disciplines that deal with ageing. Many of the contributors (critically or otherwise) to past debates about successful ageing are today considered to be leading scholars within the field of ageing research. Even if the material accounted for here only represents a fragment of the entire audience for this particular concept, the outline that has emerged illustrates the richness of perspectives as well as the important issues and debates within the field.

In and of itself, 'successful ageing' is an interdisciplinary concept; it touches upon issues that overlap or transcend disciplinary boundaries, such as the ontology of ageing, the values ascribed to ageing, and the overall goals and methods of ageing research. As we have demonstrated above, debates about the optimisation or decline of ageing are related to ideas about the range of the ageing process, and to what extent this process can be understood as a fundamentally intrinsic process or as a process constituted by the influence of extrinsic factors. This ontological discussion has been particularly evident in the geriatric and biogerontological disciplines, where it can be characterised as a dividing factor in the debates, and where it has had clear implications for the perceptions of how malleable the ageing process may be; this, in turn, has had consequences for how the options for intervention into the process has been perceived. Similarly, discussions about what successful ageing is and how it can be achieved illustrate the differences in valorising various aspects of ageing — in particular, by questioning how much emphasis should be put on the (medical) criteria for physical and mental functioning relative to the lived experiences and self-reported quality of life of elderly people themselves.

Instead of biological determinism, an emphasis on social–biological interactions has made the plasticity of the ageing body a paramount issue in the discussions about 'successful ageing'. Bringing together life-course perspectives, developmental psychology and gerontological experiences of heterogeneity has produced an understanding of ageing as an indeterminate, heterogeneous and multicausal process. Simultaneously, this perspective has drawn wider attention to the factors and pathways that might lead to the various conditions associated with ageing; leading both psychologists and gerontologists to include and emphasise the social and personal conceptualisations and understandings of ageing as factors in the ageing process.

In this regard, the categories of the social and the biological, and ageing itself – as well as the boundaries of the academic disciplines involved – have been continually crossed, debated and challenged, facilitating an ongoing conversation between researchers from different disciplinary backgrounds who have, in various ways, adopted or reacted to the methods or critiques from other segments of the field. The subject of ageing and discussions about what good – or successful – ageing is have not been easily settled but instead appeared inescapably complex and entangled; different approaches and questions have produced different results, emphasising different aspects of the human lives that become the subject/object of investigation and intervention. Although disciplinary trends can be identified, the material and discussions did not express incommensurable scientific paradigms but rather differences in values and ontologies that were entangled with – but not necessarily determined by – the disciplinary background of the researchers involved. Because of the apparent impossibility to separate biology from lifestyle or environmental influences, ageing has been a moving target throughout this short history; a slippery, context-dependent process.

At the same time, certain disciplinary trends and differences did appear in the material we examined. In general, geriatrics and biogerontology emphasised a distinction between normal, pathological or successful *functioning*, whereas social and psychological approaches emphasised the personal *strategies* necessary to deal with the changes that come with ageing. These disciplinary differences can certainly complement each other, but they also reveal dissimilarities in the perceived importance of different aspects of the ageing phenomenon; where one part of the discussion has been about understandings of *ageing*, there is another discussion concerning how to understand *success* in the same material.

On one level, these discussions seem to encompass many of the most pressing concerns and issues in biomedicine today. Successful ageing could be seen as a paradigmatic case of what Nikolas Rose has called "the politics of life itself": as something with which to manage and govern the messy life processes of self or others, the concept touches upon ideals of autonomy and independence; anxieties about decline and disease, and the wish to avoid them; biomedicalisation and the optimisation of individuals and populations; and neo-liberal ideals about replacing welfare dependency with active self-entrepreneurship (Rose, 2007; Petersen, 1996). But as the examples presented in this article herein also show, the norms and approaches involved in different areas of ageing research have the potential to lead to very different health-promoting practices, allocations of resources and inclusion/exclusion practices in relation to successful ageing.

To give just one more example, the central difference between Rowe and Kahn (1987) and Baltes and Baltes (1989, 1991) did not seem to be about distinctions between their

ontologies of ageing (they all considered the ageing process as something highly influenced by extrinsic factors) or a disagreement about the need to optimise and empower the individual in order to achieve 'success'; rather, they differed by having different criteria for what was considered to be success. The assumption that a high level of functioning was a prerequisite for successful ageing demanded approaches and interventions that were very different from the focus on coping strategies and life satisfaction, or the critical scholars' emphasis on including disability in the conceptualisations and practices of ageing research. Even without explicitly adding the 'policy level' of ageing research to this account, the short history of 'successful ageing' we have presented here illustrates the political concerns and consequences of this important topic; hopefully, it also contributes to a better understanding of this specific, and growing, academic field.

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