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Positive ageing: A conceptual framework*

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With longevity (75 years plus and still increasing) now commonly achievable, the new challenge for individuals and society is less concerned with adding more *years* to life, though that remains important, and more with adding *life* to years. To explore the quality of long life more fully, a concept broader than healthy ageing or active ageing is needed. For this purpose, the present article describes a framework of Positive Ageing, also known as Successful Ageing, which views the quality of long life as comprising good *health*, physical and cognitive *functional independence*, and meaningful *engagement with life*. Narrowly defined, it refers to old people ageing well in all these aspects. More broadly defined, it refers to ageing well from *midlife* on. The framework also identifiesvariables that may affect the process of ageing positively. These variables include the *social-cognitive styles* of control, humour and future-time perspective on the one hand, and on the other hand, *resources* based on finance, social network and lifestyle.

key words : logevity, positive ageing,independence, engagement with life,of life

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Issues of ageing have been around since antiquity. Many of those issues, such as physical and cognitive declines associated with old age, the search for anti-ageing drugs, social security provisions for the aged and so forth, have persisted (Parkin, 1995). Far from being tired topics, ageing issues are of interest and relevance today as much as in the past, if not more. What is new, though, is that the demographic and medical contexts of ageing have changed so abruptly and extensively in recent years that ageing issues now affect the general population instead of a select few who manage to live much longer than others. The new challenge has less to do with adding ever more years to life, important though that is, and more with adding life to years. The shift of attention from prolonging life *per se* to enhancing the quality of life even in old age manifests itself in the quest for positive or successful ageing, beyond merely ageing normally. Below, we delineate *what* is positive ageing and *why*some people but not others may age particularly well.

The literature on ageing research (e.g., Binstock & George, 1996) shows three trends. Earlier research, comprising single-disciplinary efforts mostly in biomedical sciences, has given way to multi-disciplinary collaborations involving the social sciences. This trend is reflected in the rise of gerontology in contradistinction to geriatrics. Second, whereas ageing has traditionally been linked solely to late adulthood, ageing in and from *midlife* on has gained increasing recognition. Third, although research has been preoccupied with problems associated with old age in the past, and will continue to be so for treatment and cure, there is now a greater need for research to understand the vast majority of humans who, despite the wear and tear associated with long years of living, remain relatively healthy and will be able to continue *flourishing and living independently* in old age with no or only minimal (and hence inexpensive) assistance.

The positive ageing framework proposed herein embraces the trends above and is furthermore grounded in recent theoretical developments. It addresses two broad issues: the 'what' and 'how' of positive ageing. In essence, we will argue that the 'what' of positive ageing can be seen as a desirable state in terms of the quality of life, whereas 'how' do some people but not others age well can be understood in terms of psycho-social processes based on resources and social-cognitive styles that facilitate positive ageing against age-related declines.

Positive ageing as a desirable state

The philosophical underpinning of what positive ageing is can be expressed by the Chinese precept of 盡天年: Live our lives to the fullness of each and every year that heaven has vested in us. Positive ageing, in its narrow sense, is to 盡天年 while in old age. A broader, life-course term of reference is to 盡天年until old age, and to continue doing so in old age. That is, to live positively *until* and *in* old age, from midlife or (better still) young age.

As positive ageing is concerned with optimising the quality of life, what is positive about itcan be gleaned from the quality of life literature. The latter is huge but a representative work is the World Health Organisation assessment of quality of life, which has identified 24 facets of quality of life from research carried out in several regional centres (e.g., WHOQOL Group, 1998; see also Cummins, 1999). These facets can be grouped under six or fewer domains for assessment purposes, namely, physical capacity, psychological state, social relationships, environment, life of independence, and spirituality. The last two domains can be subsumed under physical capacity and psychological state, respectively, on the basis of confirmatory factor analysis, to produce a parsimonious four-domain conceptual framework.

Given the broad consensus on quality of life domains as represented by WHOQOL, a reasonable expectation is that models of what positive ageing is, divergent as they may be, should overlap around most, if not all, of the four domains. The first three domains converge with the three-component model of 'Successful Aging' developed by the interdisciplinary *MacArthur Research Program in Aging* (e.g., Rowe & Kahn, 1987, 1998). One component of successful ageing is a state of robust health that minimizes illness and disability risks ("Avoiding Disease"). The second is an adequate level of cognitive and physical functioning for maintaining unaided independent living for as long as possible. The third is an active engagement with life through work (not necessarily for pay) and social participation. WHOQOL's domain of environment, important though it is to the quality of life in general (because it makes a difference to safety, transport, accessibility to services and leisure facilities, and so forth), is not deemed to be a person-oriented component of successful ageing. Studies carried out in Hong Kong (Chi & Boey, 1994) and Taiwan (Hsu & Chang, 2004) have converged in support of the three broad components of successful ageing.

Positive ageing as a process

Thus far we have looked at positive ageing as a desirable state in terms of the quality of life that can be achieved in varying degrees during a person's life course. Next we turn to a discussion of processes that are conducive to positive ageing.

Old age takes its toll on our body, our mind, and our social network. It also makes the subjective awareness of mortality more salient or imminent by impressing on us that the years vested in us by heaven are running out. Finally, old age is a marker for ageist discriminatory practices some of which may be detrimental to ageing well. These negative factors are some of the roadblocks to positive ageing. From this perspective, processes of ageing well are those that remove or mitigate the roadblocksby strengthening individual resilience and adapting social institutions to cater for the needs of longevity and population ageing. Two classes of process are therefore needed, psycho-social processes that deal with individual

resilience and adaptability, and political-economic processes that deal with social change. For present purposes we shall limit our review to psycho-social processes.

To further focus the present review, we shall mention only in passing theories that have been influential but in our view are no longer leading current research on positive ageing. Chief among these are disengagement and activity theories. The former considers that ageing normally involves a reduction in social roles and activities. According to this view, disengagement from the burden of social roles is not only a well-deserved rest from past toil, it is also conducive to ageing well in the face of physical, mental and social network decline (e.g., Cumming & Henry, 1961). Against this, activity theorists have argued that the psycho-social void created by the loss of roles is detrimental to health and quality of life, and that ageing well involves finding suitable role substitutes and maintaining activities (e.g., Neugarten, Havighurst, & Tobin, 1968).

Empirically, the truth is somewhat in the middle, as disengagement and activity are good for different people (e.g., Musick, Herzog, & House, 1999). Further, insofar as theoretical development goes, the concern now is not so much with activities or roles *per se*, or the lack of them, but with their regularity (e.g., Glass, de Leon, Marottoli, & Berkman, 1999), continuity (e.g., Atchley, 1989) and impacts on self-efficacy andpersonal control (e.g., Herzog, Franks, Markus, & Holmberg, 1998). In the discussion below we shall have occasion to revisit these latter concepts.

Selection, optimization and compensation (SOC)

Over the life course, the trajectory of developmental outcomes centres first on growth for gaining higher levels of outcomes or functioning, and then on the maintenance or recovery of outcomes/functioning that has been achieved but by now are at risk of decline or being lost. When maintenance or recovery is no longer possible, development will centre on the management of loss. The gain-loss ratio varies over the life course, but regardless of the specific period of the life course, successful development(ageing included) can be thought of as the conjoint maximization of gains and minimization of losses through the interplay of three processes: selection, optimization and compensation (SOC for short, see Baltes & Baltes, 1990). Intended as a "metatheory "of human development, the heuristic value of SOC for understanding processes of successful ageing beyond usual ageing can best be seen in conjunction with a theoretical consideration of the "architecture of human ontogeny."

The "architecture of human ontogeny," according to Baltes (1997), becomes more and more *incomplete* with old age as a result of, first, the age-related deterioration of genetic-based plasticity and biological potential. To compensate for this deterioration, culture-based support has to increase, but this in turn places burden on the social-cultural system of support for the aged. Further,

because of longevity, the negative life-course trajectory of biological functioning now covers more years and its corresponding need for cultural compensation will have to rise. As a result, the social-cultural support system is overstretched and its relative effectiveness to provide intervention wanes. Thus both biologically and culturally, the architecture of human ontogeny is "incomplete." SOC offers a heuristic way of understanding how individuals may transcend, or at least reduce, the incompleteness that is in them (their biological make-up) and around them (their cultural milieu) through *selective optimization with compensation*. Specifically, selection deals with goals (e.g., adjust or narrow goals to suit ability), optimization with goal-relevant means (e.g., expand or practise existing skills), whereas compensation is an adaptive response to the loss of a goal-relevant means or adaptation to the loss (e.g., acquire new skills).

Empirical evidence indicates that individuals who use SOC effectively experience ageing more positively as measured by such outcomes as positive emotions, subjective well-being and absence of feelings of loneliness (e.g., Freund & Baltes, 1998). It should be noted, however, that given age-related declines, optimization cannot take place in a vacuum without selection and compensation. As Baltes (1997) has concluded, "… with age, because of the basic architecture of the life course, selection and compensation become increasingly important to maintain adequate levels of functioning and permit advances in select domains of functioning" (p. 373). In this sense, instead of thinking SOC as three components on *a par* with each other, it would be more useful to consider optimization as a general mechanism for positive ageing, aided by selection and compensation. The fundamental question becomes: "How are selection and compensation regulated and managed to optimize development over the life course?" This brings us to the important processes of self-regulation and life-course control.

Self-regulation and life-course control

In a major attempt to formulate a life-course developmental framework for understanding ageing and other age-focused development such as child development, Baltes, Lindenberger, and Staudinger (1998) rectify a cognitive bias in the architecture of human ontology that we have discussed earlier. The negative trajectory of biological functioning over the life course, debilitating as it is to cognitive functioning, has relatively little adverse effect on *self* and *personality*. The latter remain relatively stable throughout adulthood and may adapt to new demands of ageing rather than succumb to them. Therefore, they may "serve a lifelong orchestrating function with regard to the activation and allocation of internal and external resources … (and) the management of gains and losses during ontogeny." (Baltes *et al.,* 1998, p. 1112) In short, individuals have in their possession a "general purpose" resource made up of self definitions and personality for orchestrating the optimization of development, in much the same way as *fluid intelligence* can be considered as a general purpose cognitive resource for optimizingintellectual development in old age to

compensate for the decline in crystallized intelligence.

The adaptational power of self and personality, in turn, is based primarily on the availability of a rich variety of "self-regulatory mechanisms," as evidenced by the positive correlation between variety of self-regulation mechanisms and well-being (Baltes *et al.,* 1998). This is an important demonstration of the link between SOC and self-regulation, a process of considerable significance to the understanding of human development and ageing.

Self-regulation is fundamental to human functioning (Carver & Scheier, 1998). A person develops self-regulation through the process of internalization, in which behavioural regulation by external factors (e.g., parental authority) is transformed into regulation by internal factors (e.g., belief in filial piety that becomes self-motivating upon internalization). Corresponding to this internalization of behavioural regulation, the person develops the ability to delay short-term gratification and resist temptation for greater long-term gains, as well as the formation of a sense of self-efficacy and self-confidence in producing desirable outcomes and avoiding undesirable ones (Kim, 2005; Skinner & Connell, 1986). With increasing age and associated real-life experiences, self-regulation becomes more flexible to match external and internal changes. Thus, through their life-long experiences older adults learn to favour accommodative over assimilative coping when confronted by failure, in contrast to younger adults' rigid adherence to assimilative coping even if it no longer works (Brandstadter & Renner, 1990). In a similar vein, the maturation of "wisdom" and "humour" through life-long experiences further enriches the repertoire of self-regulation ability. It is this richer variety of self-regulation processes that provides the flexibility and motivation required for selective optimization with compensation (Baltes *et al.,* 1998).

Given the fundamental importance of self-regulation, a deeper understanding of self-regulation processes and their application to ageing is in order. That brings us to a consideration of theories of life-course control. Ageing puts adults at risk of losing power and control over their selves and their immediate environment, a situation not unlike that of a helpless infant. The process of positive ageing therefore has to counter this *infanticization of adults*. The life-course control theory offers a way of understanding such a process.

Schulz and Heckhausen (1996) make a distinction between primary and secondary control, and postulate that whenever possible, people prefer to exert primary control over their external environment by changing it to conform to their own wishes (similar to assimilative coping). Failing that, people would swim with the current rather than against it, by directing control inward to modify or re-prioritize their own needs and goals, that is, through the use of secondary control (similar to accommodative coping). Both action and cognition are co-present in primary as in secondary control, but action directed outward to engage the external world is more predominant in primary control whereas cognitive-affective processes directed inward

within the individual is more characteristic of secondary control.

Of the two types of control, primary control is said to be more preferred and has greater adaptive value. The primacy of primary control, according to Schultz and Heckhausen (1996, p. 708), is because "Without engaging the external world, the developmental potential of the organism cannot be realized." Despite its exaggerated (Eurocentric) assumption of the primacy of primary over secondary control (see, for example, Clark-Plaskie & Lachman, 1999; Ng, 1998), life-coursecontrol theory has the potential of incorporating current thinking about positive ageing. For example, assimilative and accommodative coping strategies, which we have discussed earlier, roughly correspond to primary and secondary control, respectively.

A Model of Positive Ageing

Our discussion of positive ageing processes thus far points to a model of humans as an optimizing, controlling, and self-regulating social being constrained by an incomplete "architecture of human ontogeny." This insight, along with specific processes that are often intertwined (selection, compensation, primary and secondary control, internalization, and so

forth), represents a major convergence of some of the most influential thinking on ageing in recent years. The stage is set for attempts to pull the various strands together. Below we explore two relevant issues and then propose a model of positive ageing.

What motivates an individual to age positively and not just normally?

A range of answers, from individualism to social connectedness, can be gleaned from the literature. Control theorists, as we have noted, propose that the motivation to age positively stems from the desire to retain primary control over the external environment for as long as possible (Schultz & Heckhausen, 1996). This is a modern version of rugged individualism since antiquity, articulated so vividly by the Greek philosopher Cicero over two millennia ago:

> *Ita enim senectus honesta est, si se ipsa defendit, si ius suum retinet, si nemini emancipata est, si usque ad ultimum spititum dominatur in suos.*
>
> *Age will only be respected if it fights for itself, maintains its own rights, avoids dependence, and asserts control over its own sphere for as long as life lasts.*
>
> (Cited from Parkin, 1995)

At the opposite end is Erikson's well-known concept of generativity, which locates the positive ageing motive in social connectedness and the re-creation of the generational cycle (Erikson, Erikson, & Kivnick, 1986). The two proposed motives, so very different from each other on the surface, are not mutually exclusive and may co-exist in the same individual to provide dual motivations for positive ageing.

Another way of thinking about motivation is in

terms of the Theory of Socioemotional Selectivity (Carstensen, Isaacowitz, & Charles, 1999), according to which perceived endings prompt older people to prioritise emotionally *meaningful* goals that can be realized within the short time remaining in life, over knowledge-related goals such as those preferred by younger people for shoring up information and social connections that would optimise or expand their future. Thus, for example, older adults may forego peripheral, less close partners but retain emotionally close partners. When this happens, what appears on the surface as a loss in social network may in fact be a process of optimization through socioemotional selection that is highly adaptive to ageing. Although emotional support (as in Terror Management Theory) and meaning (as in Socio-emotional Selectivity Theory) are conceptually distinguishable and can indeed be tested separately in experiments (e.g., Fung & Carstensen, 2003), in reality they are intertwined outcomes of perceived endings. It is plausible, then, that perceived closeness to life's end may motivate people to engage in processes of positive ageing, just as the desire for generativity would.

What factors may enhance positive ageing?

To address this question, we first reverse the incomplete "architecture of human ontogeny" and ask: What developmental gains may old age maintain or expand further, and how such gains may enhance positive ageing?

In the cognitive domain, where developmental decline is the norm, exceptions to the norm in the form of stability or even growth in old agehave been found in specific areas. Thus, specific aspects of crystallized intelligencesuch as vocabulary, general information, and appraisals of social dilemma situations do not decline and may indeed increase until very old age (Schaie, 1994). Related to crystallized intelligence, *wisdom* peaks in middle adulthood (Labouvie-Vief, 1990) or even earlier (Baltes & Staudinger, 2000), and thereafter remains robust at least until about the age of sixty years. Self definitions and personality, as noted above, are relatively stable from adulthood onward and specific aspects of them such as self-acceptance, flexibility in self definition, and optimism, once developed, may continue to replenish the adaptational capacity in old age (e.g., Ryff & Keyes, 1995). Thus there are developmental assets, "inherited"from a younger age and maintained or expanded in old age, that an individual can call up and use to push back the constraint of ontogenetic incompleteness. Three of those assets, henceforth referred to as social-cognitive styles, will concern us here.

The use of secondary control strategies to complement primary control strategies for coping with life events would be a relevant social-cognitive style for reasons alreadymentioned above. *Future time perspective* and *humour* are the other two styles.

Future time perspective has a motivational and a social-cognitive component. These two components have different functions that require separate analyses. Perceived closeness to life's end, according

to the Theory of Socioemotional Selectivity, would motivate individuals to optimize their remaining lives. This does not mean, of course, that a shorter future time perspectivewill automatically translate into positive ageing, only that it will motivate individuals to do so. The social-cognitive component of a person's future time perspective refers to his or her beliefs in what can or cannot be changed for good in the time remaining. These beliefs represent a general philosophical outlook on life, and are based on life-long experiences in contrast to the relatively more sudden realization of impending mortality that underpins the motivational component. People who have developed a positive outlook on life, are optimistic of their future and able to maintain a sense of self-efficacy regardless of the perceived length of time remaining in life, would bemore likely to have aged well better than their counterpart who have a less positive future time perspective.

With regard to humour, its developmental trajectory is not well understood but is likely to increase in old age (e.g., Labouvie-Vief, 1990). Humour elicits both laughter, a positive behavioural response that offsets the adverse psychosomatic effects of stress, and mirth, a positive emotionthat enhances perceptual flexibility and detachment from the worry of immediate problems (Wooten, 1996). Directed outward, humour provides an escape route from adverse treatment by others while safeguarding the latter's face, thus helping to maintain primary control. For example, older people in nursing homes used humour to avoid being addressed as babies by nurses without threatening the carer's face (Ryan, Kennaley, Pratt, & Shumovich, 2000). Humour can also be directed toward to the self in the form of downward social comparison to make one feel better than comparison others and to maintain self-esteem in the face of objective decline in abilities, thereby retaining secondary control (Heckhausen & Brim, 1997; Solomon, 1996). In short, since humour can be a powerful tool of emotional self-regulation first for protecting self from stress and ageist discrimination, and second for conserving long-term relationships, it may be called upon in the service of positive ageing although existing research has not paid much attention to it.

Social-cognitive styles alone would be insufficient for ageing well. Ageing well needs money, friends and family, and just as important, a life-style of positive living (diets, exercises, balance between work and recreation, hobbies, and so forth). Money (or more accurately, financial security), social network and life-style can be seen as resources for ageing well.

The literature surrounding each of the three resources is huge (see, for example, Blieszmar & Bedford, 1996; Chow, 2001; Rowe & Kahn, 1998; Schaie & Schooler, 1998; Schwarz, Trommsdorff, Kim, & Park, 2006 Sung, 1995; Woo, 2000; World Bank, 1994). Without overworking them in this review, three issues need addressing. First, by linking these resources with the social-cognitive styles mentioned above, it will allow researchers see positive ageing as both an individual, interpersonal, cultural and economic issue. Second, whilst the

resources have often been selected individually as the focus of research, their conjoint study is rare and hence their comparative or combined contributions to positive ageing remain uncharted. Third, current research on resource has concentrated on resource availability, without attempting to integrate availability with the use and cultivation of resources. This fragmentation is problematic. For example, social network availability does not automatically imply that it would be used fully,if at all, and it would be necessary to also find out how much effort a person is spending on cultivating the network to replenish losses due to the death or migration of significant others. In short, it would be worthwhile for research to attend to life-style, social network and finance for comparative purposes, and overcome the problem of fragmentation.

A schematic representation of the Positive Ageing Model

Positive ageing as a normative desirable state can be conceptualized in terms of measurable outcomes in health (avoiding disease), physical and cognitive functioning for independent living, and engagement with life. Two separate studies involving over 25 focus groups of middle-aged and older Chinese in Hong Kong have converged on identifying the same three broad components as constituting the contents of positive ageing, although the actual labels may differ (Cheung *et al.,* 2002; Chong, Ng, Woo, & Kwan, 2006). Positive ageing will be affected by the availability, use, and cultivation of resources, principally those of finance, social network, and life-style. Social-cognitive styles, inherited from life-long developmental gains, will also affect positive ageing. Figure 1 represents the main features of the theoretical model along with background demographic variables.

(Figure 1) A model of positive ageing

To test the model, questionnaire items measuring each positive ageing component were administered to 2970 Chinese adults in Hong Kong between the age of 40 and 74 years in 2004. Exploratory factor analysis affirmed the health and functioning components, but indicated that the engagement with life component should be differentiated into two. Over 70 percent of the participants were re-tested a year later to provide longitudinal data for confirmatory factor analysis, the results of which replicated satisfactorily the 4-component factorial structure (Ng, Woo, Kwan, Chong, & Lai, 2006). More detailed data analyses are in progress to test the hypothesized effects of social-cognitive and resource variables on positive ageing.

Conclusions

Population ageing and increasing longevity are global issues with strong local relevance. Not all countries are well positioned to take advantage of the opportunities afforded by longevity, or to avert problems arising from it or from rapid population ageing. There are parts of the world, many in the Asia-Pacific region, and more still in under- or undeveloped localities within acountry, that have been overtaken by rapid population aging and longevity happening ahead of the development of resources and social institutions to match those changes (Kendig, 2004). Some are sleep walking into the situation unprepared with insufficient socio-economic development or, to make things worse, ageing policies.

To age positively in health, functional independence, and life engagement is a normatively desirable goal for both individuals and society alike. Longer lives now available to the general population carries the opportunity as well as the obligation of living lives to the full, of discovering new realms of possibilities in older age, and of enhancing the resourcefulness of individuals and their families to adapt to the new era of longevity rather than becoming a burden or liability. All this calls for raising the image of ageing and for backing this up with theories and evidence-based information for ageing well. Just as important, ageing research has a role to play in the development of educational, retirement, and other relevant public policies to bring about social and cultural changes for empowering positive ageing. It is in this spirit that ageing research should give priority to uncovering effective and new ways of living quality of life for longer years. The model of positive ageing presented herein is an attempt in this direction.

The three-component view of positive ageing, expanded to a four-component model based on evidence thus far, seems to have some ecological validity covering the United States (Depp & Jeste, 2006), Taiwan (Hsu & Chang, 2004) and Hong Kong (Cheung *et al.,* 2002; Chi & Boey, 1994 Chong *et al.,* 2006). Clearly this represents only a very limited part of humanity, and there are bound to be other components important to positive ageing but have not yet been included in the model. Prime candidates would be positive spirituality (e.g., Crowther, Parker, Achenbaum, Larimore, & Koenig, 2002) and positive

self-stereotypes (e.g., Levy, 2003). Variations over time are also likely. For example, post-WWII baby-boomers who have enjoyed relative prosperity and peace so far, and can expect to live long lives in relatively good health, may view positive ageing differently from their forebears who have seen harsher times. The point here is not the irrelevance of positive aging per se, but what kind of positive aging would give the optimal fit with local situations and local aspirations. It is here that both indigenous research and cross-cultural comparison would be indispensable for the fuller understanding of positive ageing and its potentials. As more and more Asia-Pacific nations move to centre stage in world affairs, their long-term performancein their new international roles depends in part on how well they can harness the immense human resources afforded by the older sector of their population.

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