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Aging as disease?

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There might be a reason why the word "end" can mean both the final period of a human life and the goal we seek to achieve. It is the end in both senses that gives meaning to our lives – the end as the goal and the end as old age. "Before long the end / Of the beginning / Begins to bend / To the beginning", writes Samuel Menashe in his poem "The Living End" [1]. I ask myself: Where is the end? Is it still far away in the future and therefore not yet relevant? Or is the end also here in the present, always relevant when we ask ourselves what we live for? I prefer the latter. Not even the beginning of my life lies only in the past. We can ask ourselves: can we make a new start which makes our human life authentic, responsible? Some opportunities to make a start that could make a difference for others and ourselves were perhaps in the past. But other opportunities are coming. Hence, age and the ethical quality of time have to do with each other. The quality of aging is related to the quality of the present, even if we are not yet "old".

I could go on in this vein. But I'd rather turn to medicine and medicine's attitude to aging. Let us compare gerontology and anti-aging medicine. The traditional approach of gerontology to life's final period has been to view aging as an inevitable life process to be distinguished from agerelated diseases. Geriatric medicine addresses the diseases, not aging as such. The philosophical question which is raised by the so-called "anti-aging medicine" is: if medicine treats senescence as something pathological, what difference does it make? Aging then becomes the disease and the former geriatric "diseases" (such as osteoporosis and dementia) turn into symptoms. Targeting senescence would clearly be the more efficient strategy, because a plethora of geriatric "diseases" would then collapse into one. However, as Gaia Barazzetti and Massimo Reichlin show in their ethical paper published in this issue [2], the significance of the medicalisation and geneticisation of senescence by anti-aging medicine goes far beyond medicine itself. It also touches on anthropology, ethics and biopolitics. The systematic extension of human lifespan (or "health-span") affects intergenerational relationships and raises tricky issues of distributive justice. It is not just another normal step forward in medical progress, such as the discovery that several disparate symptoms actually belong to one disease, or perhaps to mutations in one essential gene.

The difference between a biological cause, such as the mutation in a gene or the malfunctioning of a protein, and a life-process such as aging, is manifest. The gene and the protein are parts of the biological organism, whereas aging is a part of life as a lived process: life as we live it. Both aspects belong to embodiment. Life1 is life as biological functions; life2 is life as a project, a biography. If contents of life1 and life2 are reshuffled and reinterpreted, quite a radical change in the perception of human life can follow. The deeper implications of life extension strategies might therefore not be trivial.

There is also a strategic consideration. By redefining aging as the underlying disease-generating factor causing symptomatic diseases [3], anti-aging medicine is transferred from the controversial realm of "enhancement" or "lifeextension medicine" to the well-accepted realm of "therapy". This move has obvious implications when discussing the desirability of such measures. If something is a disease, medical research can safely assume that it is not only permissible but also desirable to be able to cure it. If it is an enhancement, the question remains open. It might be desirable or it might not. Enhancement, in the first place, is just a quantitative term: to enhance x is to add to, exaggerate, or increase x in some respect. To enhance life-span is adding extra years to it; this is not the same as improving it. Some enhancements may improve, others not. Barazzetti and Reichlin mention possible life-extending interventions as different from each other as caloric restriction (a healthy dietary mea-sure) and genetic engineering techniques. Defining enhancement as "improvement" would beg the question of which one is actually beneficial [4] and this question may indeed be the key ethical issue that needs to be discussed [5] on at least two levels: (i) In what directions would enhancements be improvements? And (ii) for whom is an enhancement an improvement, for the patient or for others? To whom will the consequences of anti-aging measures be beneficial and to whom burdensome? No patient is an island. Other individuals will be affected too: by costs, by changes in family structures, by transnational in-

It is not even clear whether everybody would *like* to live longer, certainly not under all circumstances. Neither is it clear how much everybody should *wish* to stay juvenile and what efforts should be made to keep juvenility longer. There is also a strong cultural bias in Western societies

Editorial Swiss Med Wkly. 2011;141:w13186

against old age and in favour of juvenility, and this might interfere with the wish for health and well-being.

The terminology "life-span" or "health-span" frequently used in anti-aging medicine is revealing. The underlying image of human life must be a linear one: a temporal span. It starts with development, childhood and adolescence, and continues, until gradually decline and decay kick in. Decline is of course negative. But there is another image of life: the human life as a cycle, where senescence has its ends in itself, its own merits, its own tasks and challenges. It is not just seen negatively as the late stage of life where the risk of diseases grows. Reframing aging as the target of biomedical interventions is therefore not a purely medical move.

Life extension drugs (the scientifically validated versions of snake oil) will, as soon as they become available, certainly find a market. Their promise is too irresistible. But what concrete measures are really in the best interests of the aging individual? Some may be. But I would be highly reluctant to claim that the equation between health-span extension and the ethical vision of a good life is a simple one. There is much more to be said about the ethics of antiaging medicine, and much more research to be done on the philosophical, ethical, cultural, political and in particular the social implications. Barazzetti and Reichlin look at the consequences for health care systems, assuming that many patients will gladly accept such measures if they are provided, safely and affordably. This is the providers' perspective. Further questions may be raised: what are the ethics of the decisions that will need to be taken by the patients? What are their moral dilemmas? (Medical ethics has focused on the provider perspective and has neglected the patients' ethical perspectives.) What of the obligations we all have as potentially elderly, actually or potentially disabled people – obligations to others and to ourselves? What are the implications of anti-aging medicine for the doctors' and patients' self-understanding, identity and virtues? And what of the quality of the personal relationships within society in relation to quality of life in more advanced age? What of the expectations of the elderly that others may legitimately have?

The problem of the "quality of aging" would perhaps be a good umbrella term, a caption for critical, interdisciplinary, empirically informed bioethics research on aging.

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