Chapter 16
Old Age Is An Incurable Disease—or Is It?

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16.1 Introduction

For a long time in the existence of the human race, getting old was not such a self-evident part of life as it is today, since many people died young. Nevertheless, dreams of immortality and eternal youth have always been around, and people have always looked for 'a cure for aging' or 'the fountain of youth'. It has been one of the great advances of the 20th century that the average life expectancy, at least in Western countries, has increased tremendously, from as low 25 years in suburbs of industrial towns in the 19th century to around 80 years today (Jones and Whitaker 2009). This advance has been mainly due to improvements in sanitation and the successful combating of infectious disease through vaccination and medication, which have led to a reduction in childhood mortality. Moreover, due to better treatment methods a number of diseases that used to be deadly have now turned into chronic diseases, like certain forms of cancer, or AIDS—people no longer die from them but grow old with them.

What is new in the quest for longer lives, however, is that since the second half of the 20th century aspects of *aging itself* have increasingly become the object of biomedical interventions. A movement of anti-aging medicine has started to emerge. One of the first biomedical interventions that can be placed under the banner of anti-aging medicine is the hormone replacement therapy for postmenopausal women that has been popular since the 1960's (Lucke et al. 2009). Other phenomena that used to be seen as inevitable aspects of aging have also come under medical supervision: brittle bones became osteoporosis (officially a disease since 1994); forgetfulness became mild cognitive impairment (Scully 2004; Whitehouse and Juengst 2005).

A central and hotly debated issue in the context of anti-aging medicine and anti-aging research is whether aging is a normal and natural process, or whether aging is a disease that should be treated or cured (Vincent et al. 2008; Kampf and Botelho

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2009). While some emphasize that aging is a process closely *associated* with certain diseases, others go even further and claim that aging itself is a disease, a pathological and abnormal process—it has even been argued that aging and even death are 'unnatural' and should be overcome (Caplan 2004). This is, by the way, not a completely new view: 2000 years ago already, Seneca declared that "old age is an incurable disease". Others contest this and say that aging is normal and natural. 'Aging' was even voted the number one non-disease in a poll by the British Medical Journal in 2002 (Smith 2002).

The aim of this contribution is to clarify the discussion about the question of whether aging is normal or pathological, a disease or not, by analysing the different perspectives and different concepts involved. I will first show that it is important how the relationship between aging and disease is framed, because this influences ethical and policy debates about aging and about interventions in aging. I will then suggest that the conceptual triad of disease-illness-sickness can help us to better understand the controversies around the question of whether aging is a disease or a natural process, pathological or normal, and whether medicalization of aging is desirable or not. I will conclude that the fundamental issue of whether we *ought to accept* the current biological fact of life (i.e. that our bodies age), or should try to intervene in the aging process, remains a fundamentally normative question, that is not solved by appealing to concepts of health and disease. Rather, this normative question returns within the different conceptualizations of disease, as I will show.

16.2 Is Aging Pathological—and why does that Matter?

Currently, there is a world-wide movement of anti-aging medicine, represented for example by the American Association for Anti-Aging Medicine (A4M), that advocates the use of biomedical knowledge and technologies to intervene in the aging process and to try to slow, stop or even reverse it (Kampf and Bothelo 2009). This anti-aging movement consists of mainly commercially motivated and sometimes questionable businesses of rejuvenation therapies, dietary supplements, anti-wrinkle treatments and the like. Though they claim to base their interventions on the latest scientific discoveries, academic scientists mostly shy away from this 'anti-aging enterprise'. It has been extensively documented how the academic community of biogerontologists, who study the fundamental mechanisms of aging and age-related diseases, have been struggling to draw clear boundaries between these 'quacks' with their this 'snake-oil selling business' and their own 'serious and legitimate' science (Fishman et al. 2008; Vincent 2009; Olhansky et al. 2002; Binstock 2004).

Biogerontologists also have also felt the need to distance themselves from far-reaching aspirations, like considerably increasing the maximal human lifespan or attempting to stop aging altogether. According to popular opinion, as well as the opinion of funding agencies, aging is a natural process and intervening in aging is therefore seen as suspect. Intervening in the aging process is quickly associated with reckless and overconfident attempts to secure eternal youth, deny death, and aim

for immortality. As such, it raises concerns that are familiar from the discussion between transhumanists and bioconservatives about the desirability and justifiability of human enhancement. It is often said that enhancements are wrong because they intervene in nature, or because they alter human nature or affect human dignity. Other appeal to the 'playing God' argument, or warn against hubris and the illusion of total control and mastery. In general intervening in a 'natural' process such as aging is not met with much approval and biogerontologists therefore repeatedly stress that their aim is not to fight death, but that they merely hold the legitimate medical aims of healthy aging, compressing morbidity, and increasing the health span (i.e. the period of healthy life). They do not aim for life extension, let alone immortality (Post and Binstock 2004).

One way to make aging itself a legitimate goal for intervention is to stress its association with disease. Even if aging itself is not claimed to be a disease, it is said to be 'characterized by a broad spectrum of disease' (Gems 2011) or 'a process that creates so much susceptibility to disease that it can be approached by researchers with therapeutic intent' (Post 2004). In this endeavour, the biogerontologists encounter opposition from sociogerontologists, who claim that the strong emphasis on the biological processes of aging, its association with disease and the efforts to intervene in the aging process constitute a form of medicalization and biologisation of aging and old age. Such a framing of aging does not do justice to reality, they claim, and reinforced negative stereotypes of aging and the elderly. Therefore sociogerontologists generally resist the framing of aging in terms of pathology and disease.

16.2.1 Treatment or Enhancement

The question of whether aging is a disease or not is therefore, first of all, important because it shapes how interventions in the aging process are looked at. If aging is understood as a disease, interventions to stop or slow down the aging process will be understood as medical treatment. If aging itself is a disease, it is a legitimate target for medical intervention. If, on the other hand, aging is understood as normal and natural, interventions to slow or stop aging will be characterized as enhancements, interventions that go beyond therapy. As mentioned, a significant part of the public holds the assumption that treatment is always good, whereas enhancement is morally suspect. Diseases ought to be treated, but natural states or process should not be meddled with—at least, this is what many people intuitively believe. This distinction may not hold on closer scrutiny, and many ethicists agree that the legitimization of interventions does not depend (exclusively) on their status of treatment or enhancement—enhancements that are not treatments can also be legitimate or even morally obligatory in some cases (e.g. Schermer and Bolt 2011). However, this does not take away from the fact that moral assumptions about the wrongness of intervening in natural and normal states or processes strongly influence public debate and opinion. It does matter how interventions are framed, and what language is used.

Moreover, if interventions in aging can be labelled as treatment, this will have important financial consequences. Researchers will find it easier to get funding, pharmaceutical and other companies will be able to develop and market products that slow, stop or reverse aging and healthcare insurance will have to cover such interventions. Since FDA approval is essential to bring medication on the market and such approval is only possible if the product is indicated for a classified disease, aging must be classified as disease in order for product that directly intervene in aging to count as medication and be sold and reimbursed as medical treatment.

Finally, if aging itself would be considered a disease, it would be drawn further into the medical domain, as something that doctors should intervene in because they have an obligation to treat disease. This is something that is resisted by some, as unjustified or undesirable medicalization of aging.

16.2.2 Medicalization of Aging

Medicalization is a complex term that is often used in a pejorative sense. According to Peter Conrad medicalization can be defined as: "The process in which we are coming to see problems in medical terms, using medical language to describe problems, adopting a medical framework to 'treat' them" (Conrad 1992, p. 209).

Medicalization can refer, first, to the factual increase of medical attention and medical interventions in many domains in life. In this sense, to say that aging and old age are becoming more and more medicalized, means that more medical attention is paid to older people, their health is more closely monitored and more treatments are prescribed to them. This increase in medical attention can have favourable effects on health and well-being of elderly. While it used to be too often the case that elderly peoples symptoms or complaints were ignored because they were thought to just belong naturally to old age, nowadays diseases of old age are taken much more seriously (Ebrahim 2002). Increased medical attention can also have negative effects, however, like side-effects, risks of polypharmacy, and increased iatrogenic damage. Only when the over-all effects of the increased medical attention would be negative, is would be justified to say that medicalization in this sense was bad. Making up a balance between the positive and negative effects of medical interference in aging and old age is important but falls outside the scope of this contribution.

Here, I am primarily concerned with the notion of medicalization that emphasizes the conceptual and linguistic dimensions; as Conrad's definition points out: We are coming to see problems, like aging, in medical terms and increasingly use medical terms like 'disease' to describe them. The critique that has been voiced against this form of medicalization is that a normal human experience, a normal life process, is being turned into something pathological. Especially sociogerontologists have resisted this idea, for several reasons. First, the identification of aging with pathology and disease may have a negative impact on both the public image of elderly people and on their self-image. The more aging itself is seen as disease, the more negative the public view of aging and elderly people will become, is their fear. This may have

repercussions for the way in which elderly people are treated, the opportunities they are given et cetera. Moreover, the medicalization of aging promotes a reductionist view on aging, stressing only the negative sides of physical and mental decline and to ignore other aspects of aging. As John Vincent puts it:" The focus on biological failure sets up a cultural construction of old age which generates and prolongs its low esteem [. . . .] Striving for an ever-longer lifespan represents a denial of old age as a valued final part of the life course, and allocates old people to a cultural category characterized by redundancy and despair" (Vincent 2009, pp. 682–683).

So, in summary, the question whether aging is a disease matters because the way in which the relationship between aging and disease is understood influences ethical and policy debates about aging and about interventions in aging. In the following section, I will introduce a conceptual model, the triad disease-illness-sickness, to help clarify the different views on the question of whether aging is pathological or normal and natural.

16.3 The Triad Disease-Illness-Sickness

The triad of disease, illness and sickness stems from medical sociology and is meant to clarify the different perspectives that one can take on the complex phenomenon that 'non-health' is. The concepts of disease, illness and sickness "reflect the professional, personal and social perspectives and concern biological, phenomenological, and behavioural phenomena, respectively" (Hofmann 2002, p. 657). Andrew Twaddle was the first to use this triad in 1967 and has later elaborated it and defended it against critique. He gives the following definitions of the three concepts:

- Disease is a health problem that consists of a physiological malfunction that results in an actual or potential reduction in physical capacities and/or reduced life expectancy.
- Illness is a subjectively interpreted undesirable state of health. It consists of subjective feeling states (e.g., pain, weakness), perceptions of the adequacy of their bodily functioning, and/or feelings of competence
- Sickness is a social identity. It is the poor health or the health problem(s) of an individual defined by others with reference to the social activity of that individual (Twaddle 1994).

These definitions are briefly summarized by Hofmann, who explains that "disease is negative bodily occurrences as conceived of by the medical profession. Illness is negative bodily occurrences as conceived of by the person himself. Correspondingly, sickness is negative bodily occurrences as conceived of by the society and/or its institutions. Occurrences here means process, state or event" (Hofmann 2002, p. 657). For the purpose of this contribution, I am not concerned with the exact definitions or their possible alternative formulations or refinements, nor will I discuss the critique and counter arguments that have been exchanged over this conceptual triad. For present purposes, it is especially important to understand the three different

perspectives that are expressed by these different concepts. As Hofmann has argued, the triad has explanatory abilities and can be fruitful for a discussion on difficult and controversial cases, regardless of the strictness of definitions (Hofmann 2002).

The triad can be used as a framework to explain certain controversies concerning the status of specific occurrences of non-health, such as aging. In general, controversies arise when a condition is not neatly covered by all three concepts from the triad, but only two, or even only one of them, apply. The paradigm case in which disease, illness and sickness all apply simultaneously is as follows: A person feels ill, for example because he has a sore throat and aching head, and therefore goes to see a doctor who diagnoses a disease, say, influenza. The person is can then legitimately take a few days off from work and stay in bed: He has been attributed the status of sick by society.

However, the concepts of disease, illness and sickness do not always apply at the same time for a given case or situation. There are cases that are conceived of as both disease and sickness, but not illness, like certain pre-symptomatic conditions. Various forms of predictive screening and testing, like breast cancer screening or neonatal screening, create such cases. The conditions tested for, liked breast cancer or congenital hypothyroidism, are considered to be diseases by the medical profession and constitute physiological malfunctions. Society recognizes these conditions and treats them as sickness by granting resources and setting up institutions for testing and treatment. The persons who are tested do not, however, experience any illness. They are a-symptomatic, as it is called from a medical perspective—they feel normal and healthy, not ill. Another example of a controversial situation is chronic fatigue syndrome (CFS). Here patients clearly feel ill and experience many complaints and symptoms, but from a medical perspective it is difficult to define as a disease, since there is no clear physiological malfunction. Society—at least in the Netherlands[1]—has clearly been confused by this situation and has been wavering between granting CFS patients the status of 'sick' or not.

At this point it is very important to notice that disease, illness and sickness are not static concepts. What counts as disease, illness or sickness may change over time, due to new discoveries and insights, and the borders between the concepts are not sharp but rather blurred. One reason for this is that the spheres of disease, illness and sickness are not independent of each other. The attribution of social status (sickness) is of course not fully independent of the conception of disease as understood by the medical profession. Likewise, the subjective experience of illness is influenced by the way both society and the medical profession understand and respond to ones complaints.[2] Another reason for the dynamics of the triad is that

[1] In the Netherlands, over the years social benefit institutions have on and off considered CFS as a grounds for sickness benefits. At one point in time (2005), the Minister of health officially declared CFS not to be a sickness, but was called back by Parliament decided by a voting that CFS was a sickness. Later on again, in 2010, the Ministry declared CFS a non-disease once again.

[2] For example: infertility did not use to be a sickness, but now qualifies for economic support because it has become treatable as a disease. Moreover, this changes the experience of being infertile form 'bad luck' or 'God's command' to an experience of illness. Another example that the experience of illness can be influences by the social status of an ailment is whiplash. When neck- and back aches

what is understood as disease by the medical profession change over time. This is influenced significantly by new scientific and technological developments, like research into the biological mechanisms of aging. The push towards understanding aging as pathological, a disease, comes mainly from the increased knowledge and understanding of the physiological and functional mechanisms of aging.

Part of the controversies around the status of aging can, I believe, be explained by the fact that aging is a perfect example of a case in which the three concepts of the triad do not easily coincide. The situation is even more complicated though, because even from within each perspective (the biomedical, the subjective and the societal); it is not crystal-clear whether aging is a disease, illness or sickness, respectively, as will be discussed in the following sections.

16.4 Aging as Disease

First we turn to the question whether aging is a normal or a pathological biological process; is it, from a biomedical perspective, a disease? Opinions among biogerontologists are divided on this point. On the one hand are the so-called dichotomists who wish to make a sharp distinction between normal and pathological aging, whereas on the other hand continuists claim that the two are inseparable (Blumenthal 2003).

From a biomedical point of view, which solely looks at biological functioning, there is something to be said for the claim that aging itself is a form of disease. Gerbrand Izaks and Rudi Westendorp, who are both physicians and biomedical researchers, claim that many doctors mistakenly belief that aging is not a disease and that they wrongfully attempt to separate pathological aging from normal aging. They state that normal aging cannot be separated from pathological aging: "Aging is the accumulation of damage to somatic cells, leading to cellular dysfunction, and culminates in organ dysfunction and an increased vulnerability to death" (Izaks and Westendorp 2003, p. 6). They conclude that "a similar process is causing aging and disease in the latter part of life. Therefore, in our opinion, normal aging cannot be separated from pathological processes causing disease later in life. As a consequence, we think that making a distinction between normal aging and pathological aging should be avoided" (Izaks and Westendorp 2003, p. 5).

The authors do not explicate or define their concept or theory of disease, but they implicitly seem to depend upon a Boorse-like idea of disease, one in which normal biological functioning is paramount. However, they reject the idea of statistical normality linked to a reference class, as it is used in Christopher Boorse's well-known biostatistical theory of health. Boorse defines disease as an internal state which reduces one or more species typical functional abilities. What counts as normal functional ability is determined by looking at the typical statistical distribution of

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after accidents are labeled as 'whiplash' and qualify for reimbursement under an insurance scheme, patients may report and experience more illness than when they do not stand to gain anything from it.

a biological function among a reference class, which means that normal biological functioning must be defined relative to sex and age (Boorse 1977, 1997). Boorse therefore does make a difference between normal and pathological aging. Certain functions may decline with aging, but if they decline in most elderly people, it is statistically normal for the reference class and therefore not pathological. One of Boorse's reasons for holding on to the idea of an age-related reference class is that he wants to maintain a notion of development. He sees the life-cycle of development, maturation and physical decline as biologically normal.[3] The famous biogerontologist Hayflick—also a dichotomist—supports Boorse's view that we should accept the biological lifecycle as the norm. He says: "The goal of arresting the aging process might be viewed in the same light that we view the arrest of our physical or mental development in childhood—as a serious pathology" (Hayflick 2000, p. 269). Eric Juengst has argued that this is not a very convincing argument because arresting childhood development cannot be equated with arresting aging; while most people would agree that developing into a mature human being is desirable, because it opens up possibilities, the same is not true for aging (Juengst 2004).

Interestingly, Izaks and Westendorp reject the Boorsian idea of an age-related reference class, and take young adults to be the reference for all. They state that "it is not appropriate to use old-age-specific normal values. The decision whether a body function of an elderly patient is impaired or not must be based on the same normal values that are used in young adults [. . . .] there is no good reason why the normal values for functions in young adults are not applied in adults at all ages" (Izaks und Westendorp 2003, p. 5). They point out that for elderly people, functional levels below those of young people are often associated with higher mortality and should therefore be considered abnormal.

So here, at the heart of the biological concept of disease, lies a normative controversy: What is the standard of 'normality' that we choose: The optimal functioning of young bodies, or functioning relative to others of the same age? Should we accept it as normal that biological functioning in older people declines (because it statistically does so, and we can give an evolutionary explanation for it), or should we resist it and consider it abnormal (because it leads to higher mortality and is therefore undesirable)? Whether or not aging is considered a disease ultimately depends on such normative choices.

16.4.1 Aging and Disease as Continuous Processes

As mentioned earlier, conceptions of disease are not static and the biomedical understanding of disease is changing with the advances of science. Such changes are also

[3] Since Boorse starts from an evolutionary approach, he sees survival and reproduction as the main goals of all life-forms (including human life). From this point of view survival after the reproductive age may be deemed less important and therefore decline and death after reproductive age are not abnormal and should not be called 'disease'.

important to understand the relation between aging and disease. Current biomedical research in genomics, molecular biology or systems biology is influencing the way in which disease is understood within the biomedical community. More specifically, these types of research are bringing the process character of disease more and more forcefully to our attention. Whereas most traditional theories on the concepts of health and disease appear to understand disease as rather fixed state or entity, genomics- and systems biology-research now contribute to the development of a cascade model of disease, it has been argued. "Molecular changes are supposed to cause further changes, e.g. on the tissue level, then on the level of organs etc., and ultimately lead to symptoms and complaints" (Boenink 2010, p. 17). The cascade model thus implies that "one small step in intracellular processes leads to another, in a stream that with each subsequent step becomes more difficult to stop" (Boenink 2010, p. 17). This view on disease is very similar to the view on aging as it is developing in biogerontology. The biogerontology field is promoting a view of aging as a molecular and genetic process that starts early in life and continues to build up damage to cells and organs (Fishman et al. 2008). The leading idea in biogerontology is that damage and repair are continually present from an early age on, eventually causing an accumulation of damage in cells and tissues, which leads to functional decline over time and eventually to death. The process of aging is thus continuously present throughout life.

Whereas a traditional problem with definitions of disease was to decide how many symptoms should be present to make a diagnosis, or how much deviance from normal values should count as disease, the question now becomes at what point in the process of molecular and intra-cellular changes one can start to talk about disease. The traditional problem was how to draw the line between a state X that is a disease, and a similar state X' that is not. How high must blood pressure be to count as hypertension? How low the bone mineral density to count as osteoporosis? How many memory problems count as MCI or dementia?

However, when we start to look at aging and disease as essentially the same kind of processes, processes that develop over time, as in the cascade model, a new difficulty is added: The question of when—at what moment in time—disease begins. At which moment in time does aging become a disease? The more we know about the start of molecular and intracellular processes early in life, it appears, the more states will become 'disease'.

The developments sketched above make it likely that with further advances in biomedical science the boundaries between aging and disease processes will be blurred further and aging will increasingly be seen not as something associated with old age, but as a disease process that starts early in life and is continuously present. An important consequence of this change in view is that the notion of disease gets disconnected from that of illness. Bio-physiological processes that we call disease no longer necessarily occur simultaneously with symptoms and complaints. Sociologist Nikolas Rose (2007) calls these new states pre- or proto-diseases, a term indicating that they differ from old-fashioned disease partly because they are symptom-free and thus not directly connected to illness. This development does explain part of the unease that underlies accusations of unnecessary medicalization: People are called

diseased—and may be eligible for treatment—while they do not feel ill and have no signs or symptoms. This might engender the feeling that treatments are given without good reason, and makes it difficult for people to check whether a treatment is actually working since there are no subjective signs by which this could be measured. Suspicion and distrust of 'the medical complex' may be the result.

16.5 Aging as Illness

We now turn to the next question: Whether aging can be conceived of as an illness. Is aging, from a subjective perspective, something that leads to pain, or weakness, or malfunctioning? I think that in most cases it does, though this may not always be equally serious or disruptive. Even so-called minor ailments associated with age, however, such as mild memory decline, loss of hearing, stiff muscles or bad eyesight, may give rise to subjectively experienced illness.

A very interesting an ethically relevant point here is how the experience of illness is formed and influenced by our expectations of what is normal and natural, and by our ability to adapt. Many people consider certain ailments to be 'normal' at a certain age. When people start to become farsighted at a certain age, and need their first pair of reading glasses, do they consider this an illness, or as a normal sign of aging? When it starts happening more and more often that you cannot remember a name, or find the right words, does that mean you has a memory disorder, or are you just getting old? As discussed by Govert den Hartogh in Chap. 10 in certain weary-of-life cases, where a person requests assisted suicide or euthanasia, it is contested whether the person in question is suffering from disease and illness, or 'merely' from the ailments of old age. Although the illness (not being well) is generally recognized in such cases, it is considered to be caused by normal aging, and not by disease. The distinction between disease and illness has far-reaching consequences here. It is clear, however, that aging whether seen as disease or not, can cause serious illness.

A theory of health in which the subjective perspective is considered to be fundamental, is the holistic theory of health and illness developed by Lennart Nordenfelt (1995, 1998). According to this theory, health means being in a physical and mental state which is such that one in able to realize all one's vital goals. "A is completely healthy if, and only if, A has the ability, given standard circumstances, to reach all his or her vital goals" (Nordenfelt 2007, p. 7). Ill-health in this perspective is not being able to realize one's vital goals, due to physical or mental impairments. The emphasis is on the subjective dimension of illness, on the disability or functional impairments one experiences in relation to one's goals and aspirations. In this sense, getting older will often lead to an experience of ill health, because aging often comes with physical or mental impairments that prohibit the attainment of certain goals. For example, after menopause a woman is no longer able to bear children. If she always wanted to have children, but for some reason has remained childless, it will now be impossible for her to attain this vital goal in her life. If an athlete's goal is

to excel in his sport, at a certain age he will find he cannot do so anymore and will have to give up. In short, aging can prohibit the realization of vital goals.

According to Nordenfelt (1995), however, aging is not an illness because as one gets older, one adapts ones vital goals. If you do not expect to see as well, remember as much, or run as fast as you used to, you can adapt your standards and start to pursue different goals. In this way, one can grow older without experiencing much illness. This is what many people actually do: Many elderly people report they are healthy and happy, despite objective disabilities or chronic diseases (Strawbridge et al. 2002). Nordenfelt's notion of health also emphasizes the ability to adapt to circumstances and live a healthy life despite disability or impairment. A recently proposed conception of health as "the ability to adapt and to self-manage" also stresses this element (Huber et al. 2011).

Aging is not experienced as illness by many people and the ailments of old age are apparently quite easily accepted as something that just 'belongs to life'. Now it may be very prudent to adapt ones standards and goals to ones abilities, in order to remain happy and satisfied with life. A prudential reasons, however, is not a normative one. One could challenge the idea of adaptation to aging by asking whether one ought to do so. It may be wise to accept ones ailments and impairments and to lower ones standards, but ought one? Should one adapt ones vital goals to ones age and (reduced) abilities? Here again there is a normative tension at the heart of the theory, for whether aging implies illness is partly dependent upon the question whether we should accept it as normal that certain functions decline with age and adjust our goals and expectations accordingly. The answer to this question may partly depend on our actual capacities for intervening in the aging process; according to Nordenfelt "the major (pragmatic) reason for a distinction between old age and disease seems to be that old age is the inevitable fate of all human beings. In the long run, for reasons of principle, senility cannot be cured" (1995, p. 112). This implies that if senility could be cured, or slowed down—as some biogerontologists belief will become the case—it would make sense to start considering the declining abilities of old age as pathological, as form of illness.[4]

Even if we had these powers to intervene in aging, however, one might still argue that it is more natural or more befitting a good human life, to accept decline and to adapt ones expectations and vital goals. Such an argument would imply a normative claim about human nature, however, that would be difficult to defend (Buchanan 2009).

In sum, whether aging is an illness partly depends upon the factual question of whether people do experience it as such. But for another part it also depends upon a normative question, which comes sharply into focus only once we presume that we can and will develop the technological powers to intervene in aging. That question is, should one accept, and adapt to, the impairments and ailments that come with aging, or may one legitimately reject and resist them?

[4] I thank Hans-Jörg Ehni for bringing this point to my attention.

16.6 Aging as Sickness

Finally, we turn to the last component of the triad and ask whether aging is a sickness. It is in the social sphere that labelling aging in terms of pathology encounters most resistance. Socio-gerontologists have claimed that aging should not be understood merely in terms of illness and disease, but as a much broader and much more meaningful aspect of life.

The classical sick-role as described by sociologist Talcott Parsons (1951) implies an entitlement to support, an excuse for inability and an exemption from work or other tasks, and the responsibility to comply with therapy and get well again, in order to be able to resume the normal social role (Hofmann 2002). Sickness counts as an excusing condition: You are not to blame for it, and you are not to blame for being temporarily unable to fulfil certain (social) tasks, roles and requirements, both in public and private life.

There are some similarities between the sick role and the role of elderly people in our society, as Seneca already pointed out: "It may be urged many old man are so feeble that they can perform no function that duty or indeed any position in life demands. True, but that is not peculiar to old age: Generally it is a characteristic of ill health. . . old age is an incurable disease". In most contemporary Western societies, the incapacities and frailties that come with aging and old age are socially recognized as reasons for financial support, and they are recognized as a reason to be exempted from the duty to work. So, old age gives rise to some of the same social exemptions and privileges as sickness. An important difference is that we do expect sick people to do their best to get well again and comply with the doctor's orders, whereas we do not expect old people to grow young again. We do expect elderly people to live healthy lives and take good care of their health related lifestyle, however (see Chap. 18, this volume). Old age gives rise to some of the same social consequences as sickness.

However, as socio-gerontologists have rightly pointed out aging as a social process encompasses a lot more than just disability, dependence or exemption from work. From a social perspective, aging should not be reduced to biological aging. Getting older and being old have social meanings and are connected with specific social roles, tasks and expectations. From a social perspective, aging is also a matter of accumulated experiences, of shifts in relationships, of changes in responsibilities. Both in work and in private life people take up new roles when they age, like being a mentor for younger employees or becoming a grandparent. In social terms aging, growing older, is a normal or natural process, in the sense that is happens to everyone (at least in the West). Growing older is also embedded in our ideas about the human life cycle and about specific stages of life. As it is phrased in a report of the President's Council on Bioethics: "Aging is not just about old age. It is a crucial part of the nearly lifelong process by which we reach old age . . . . its product is . . . . the life cycle itself: The form and contour of our life experienced in time"(President's Council 2003, p. 208).

Over the past decades, social gerontologists and others have promoted the emancipation of elderly and worked to fight ageism. This movement has stood up for

the idea that elderly people have their own social roles and social importance; that they are not merely burdensome, frail and demented. The critique on medicalization from this perspective is mainly a critique on reductionism, on seeing aging only in terms of ill health, disease, frailty, dependence and illness, and forgetting other social meanings of aging. One of the characteristics of aging may be that it is accompanied by physical and mental decline, by impairments; but this is not all there is to aging when seen from a social perspective. Elderly people have their own social roles and these should not be reduced to or equated with the sick-role. These are good reasons, I think, to resist turning aging into sickness. Aging may be a disease and may cause illness, but it is not a sickness—aging is aging.

There are reasons to resist turning aging into sickness, and calling aging a disease or emphasizing the related experiences of illness may make this more difficult. However, it is an empirical question whether conceptualizing aging as biological disease will eventually change our social view of the elderly. Moreover, this also depends on whether or not we'll be able to intervene in the aging process. If we call the biological aging process (senescence), a disease it does not necessarily follow that we should confine elderly people to a sick role. Successful medical interventions have already changed social roles of elderly in our society. Elderly people probably have more capacities than they used to have in previous centuries, and fulfil a greater diversity of roles. The difference we can make nowadays between the young old, middle old and oldest old testifies of this. People in their sixties can play different social roles now than they did before, partly because of successes of medicine and healthcare. Intervening in the biological aging process—if we will ever be able to—will probably have an enormous impact on the social role of aging. Instead of pushing elderly people into a sick role, it may as well liberate them and create new roles (the active senior, the post-retirement volunteer et cetera).

16.7 Conclusion

The conceptual triad disease-illness-sickness can help us to better understand the controversies around the question of whether aging is pathological, or normal and natural. By incorporating the biomedical, subjective and social perspectives, the triad brings to light the complex phenomenon that aging is. Part of the controversies around the question of whether aging is a disease can be explained by the incongruence between the three concepts of the triad disease-illness-sickness, and by understanding how changes in conceptualization in one domain affect the others. Especially the critique of medicalization can be explained.

One aspect of medicalization is that new biomedical research into aging mechanisms promotes an understanding of the aging process as 'disease' and thus clears the way for prevention and interventions long before there is an actual experience of illness. This leads to interventions in apparently healthy people and to labelling all elderly people as diseased. This framing of aging as disease also opens the door to

research funding and reimbursement of medical costs which may—in the end—be beneficial for elderly.

Another aspect is that once aging comes to be understood as a disease, this tends to turn aging into sickness as well. This may be considered undesirable because it narrows our view on what aging is, makes us lose sight of broader social meanings of aging and old age and stigmatizes elderly people as ill and incapacitated. Framing aging as *essentially* a disease is therefore undesirable, because it has undesirable social consequences.

The underlying normative question remains, however. Ought we to accept the loss of biological function and associated loss of abilities to fulfil our goals? Ought we to adapt our personal aspirations and our social roles to this? Or should we try to further develop our biomedical knowledge and technological powers to avoid or postpone this loss?

We are not going to find the answers to these questions by appealing to notions of health and disease. First, because even if we would agree that aging was or was not pathological, this still would not answer the question of what to do about it in a satisfactory manner. The fact that present practices of research funding or healthcare insurance tend to leap from biomedical labels of 'disease' or 'non-disease' to normative conclusions about obligations and prohibitions does not make for a convincing argument. We need normative reasoning to draw normative conclusions. Second, because in this contribution I hope to have shown that there lies a normative controversy within the different conceptions of disease and illness themselves. The fundamental issue of whether we ought to accept the current biological fact of life (i.e. that our bodies age), or should try to intervene in the aging process, remains a fundamentally normative question, that is not solved by appealing to concepts of health and disease. Rather, this question is reflected in the different conceptualizations of disease and illness. This controversy ultimately depends on a deep seated difference in attitude towards life, a difference in views of 'the good life' and in views about human nature. On one side there is an attitude of acceptance and adaptation to (inevitable) facts of human life, which leads to acceptance of aging as a normal (not pathological) part of life. On the other side there an attitude of rejection of and resistance to the boundaries set by our biology, leading to the view that aging is pathological.[5]

Should we try to cure aging? If biogerontologists continue to label the aging process as a disease process and if they develop effective interventions to slow down that process, this is likely to have effects on our experience of old age as well as on the social appreciation of elderly. Intervening in the biological processes of aging will also affect, and require changes in, the way we are used to looking at and dealing with getting older in the personal as well as the social domain.

[5] There is a parallel here with the two frames that Erik Parens has distinguished in the enhancement debate, the gratitude and the creativity frameworks (Parens 2005).

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