

# **Pluses and minuses of living to 150 for individuals and society**

**Future challenges of informatics**

**Name: Matej Pavla**  
**UCO: 418138**

## 0. Introduction

In this essay I will discuss about pros and cons of longevity. Mainly I will focus on case when people would live two to three times more than it is now.

Possibility of living longer would impact every aspect of human life. From one's family life, through his education and work life to his retirement. But life of individual would not be the only thing changing. There would be new possibilities in science but also new dangers to society. For that reason this paper will be divided into 2 parts: Pros and Cons of longevity for society and Pros and Cons of longevity for individuals.

I will discuss long life impact to individuals first, since in my opinion, that's where change would begin: starting from change in personal life, to family life, to changes in whole society. But since society changes would retroactively cause changes in lives of individuals, I will talk about individuals in second part too.

That's roughly all about paper content and organization. At last I would like to mention, that opinions in this essay will mainly be my speculations, since there are no (known to me) real longevity issues in present, or history of mankind, I can compare to. Maybe I will use some observations from Japan, where they have problems about quite many citizens living 100 to 110 years.

# 1. Pros and cons of longevity for individuals

Longevity would impact every part of human life. Even newborn child would have its childhood different than children today. Education, career, retirement age, all aspects of life of human would have to undergo changes. Maybe even new phase of life would be defined - something like “late professional career” or “preretirement”, between professional career life and retirement. In this chapter I will discuss about this and more. I will try to keep content chronologically ordered, starting from chapter 1.1: Childhood, to chapter 1.5: Retirement.

## 1.1 Childhood

Maybe at first glance, there is no reason for longevity to apply changes to early human life. Yes, the lifespan would be longer, which directly affects length of professional career or retirement age, but how does that impact childhood? But upon closer look, we realize that change would have to come.

Take for instance, base of almost every human life - a family. At early life, a family is almost everything children have. Siblings, parents, grandparents, sometimes for a while maybe even grand grandparents - all these relatives affect child from its birth. Three generations of people, every one of them with different amount of experience, different opinions, different ways of life, helps to form child’s future opinions, hobbies and interests.

This is roughly current situation; it is what we are used to. But what would happen with arrival of longevity? Suddenly there could be five to six living generations in a family, compared to current three. That means not only grandparents but grand grandparents or even grand grand parents would have chance to spend portion of their time with a new child in their family.

Of course, it would not be that straightforward. There is only limited amount of people, with which a person can form ties with. That means, that maybe we would have bigger families, but that itself does not mean that they will be as close as families are today. Five generation gap between a longest living member and a newborn is pretty huge, so is amount of people in such family-tree. So it is highly possible that, like today, we don’t usually keep tight bonds with our cousin’s cousins, in age of longevity grand grand grandparents

would not keep tight bonds with their grand grand grandchildren. Also, and this is more of a society issue, which I will discuss in second part of this paper, it would be possible that amount of children for parents would be regulated due to danger of congestion.

Last but not least, year gap between generations could also get bigger, if there would be no rush in founding family, and methods of prolonging life would allow safe birth of child in advanced years. But same as above, we will discuss about this later in this paper.

But still, even if it was only one generation more that it is today, I think we can safely presume that it can apply unpredictable effect in human life. Same as today, there are things which you can only learn from your peers, things your parents teach you, and things your grandparents tell you, during age of longevity you will have possibility to gain something more, wisdoms which only over 100 hundred years old experienced relative can give you.

So to sum things up, I mentioned that child would have more generation of relatives to possibly affect its growth but in the same time, living members of one family would probably not be as tight as it is today. But as a result, I think we can safely state, that in an age of longevity, child would have certainly bigger variety of people affecting them differently that it is today, which would lead to unpredictable, yet significant, changes in human life.

## **1.2 Education**

In education there are 2 factors to consider: finances and length of study. Because of longer life span, there is possibility that people would have more time to spend studying, but how to finance the studies? For these reasons two solutions offers themselves: total length of study prolongs or it shrinks. That's why I will divide this chapter into two parts, in the first I will discuss reasons why should study period be prolonged and in the second part I will discuss the opposite.

So why should be one's study period prolonged during age of longevity? There is at least one simple reason: if we would live longer, we can afford spending more time studying and then be more effective in professional life, both for well being of society (if one would work for example in area of

research) or for well being of one's future employer. So there is possibility that people with doctor's degree would be seen much more often, since it would be better for both sides - for employee (with better education one would have better career growth opportunities and salary) as well as for employer (quality employees make quality company).

But there is also opposite side to that. Education cost money, working people pay taxes so young people can work and older people can retire. But what will happen when people will live 150 years? Would they be able to work after e.g. 80 years of their lives? Or will they have to retire at 60 and then live another about 90 years in retirement? Longevity does not strictly means that 100 years old people would be mentally fresh enough to work. Maybe our bodies would be strong enough, but what about our minds? Will they keep up? Or we would do something about them too? There are a lot of questions, but there is possibility that education period would have to be shortened because there would be no money to finance it. Maybe universities will disappear and companies will train fresh graduates for themselves. And what about a research? Since it depends strongly on universities' students would this area suffer too?

Maybe neither of it would happen. Maybe we will find some other ways to achieve good and quality education which utilizes power of longevity. There may be a lot of ways but they would have to exist in area bounded by extremes I discussed in this chapter.

### **1.3 Career life and family founding**

In current circumstances this represents period of human life from approximately 20<sup>th</sup> to 60<sup>th</sup> year of life. It starts after studying is finished and ends with retirement leave. This is period when people usually work and found a family. In age of longevity these bounds can be a little different, so let's discuss about it in this chapter.

One thing is almost for certain and should not change compared to situation nowadays. That is, that work life should take the most time compared to other periods of human life. It is not only for well being of society but even for well being of individual. Good and stable career not only provides satisfaction and self-realization which are needed for healthy lifestyle, but also

provides certain assurances such as provision for old age. The same goes for family life. These are things that should not change during age of longevity, but there can be a change in how we do them.

First thing, career. One has to find a good and stable work position to help him pursue his dreams, such as founding a family, become great scientist, etc. We don't know what will longevity bring, but there is a possibility that we would be able to slow some processes of aging, in this case, possibility of having a child after 50<sup>th</sup> year of life or so. This is highly speculative, but if people would be able to have children in such advanced age, that gives them enough time to focus on career before starting a family. We can see such phenomenon nowadays, but due to risk of having a baby after 35-40<sup>th</sup> year or so, people with dream of having family are forced to lay career aside and found family. So I think, if this process could be delayed, it will become a trend, in significantly bigger measure than it is today.

Second thing is also connected to specifics of process of longevity. I already mentioned it, it's a problem of how our mind would adapt to longevity. Since if our longevity would be build on prolonging life by putting artificial parts to our body, or some nanotechnology that rebuilds some damaged parts in our inside, it is possible that our body will be capable of long life, but what about our mind? We can see it nowadays, for example starting programmers produce better results until age of 35-40, and after his age their output gradually degrades. If we would be able to keep our brain sharp in advanced age a lot of possibilities would open. Take for example brilliant scientist of history, if they were given more time, we can't even imagine all the things that would be possible today. On the other hand, what if people would be able to live long, but would not be able to do work in advanced age? In that case new problems would arise, like if one retires in 80, where we would take money to finance 70 years of retirement? Is it possible that new processes will arise, to prevent damage caused by stress from work maybe people will work 4 days a week instead of 5, maybe 10 months a year instead of 12, so they have time to refresh and be able to stay in working phase of their life a little longer?

## **1.4 “Preretirement”**

As quotes suggest, this is something that I came up with and named. In current age we don't actually see something like preretirement. We work and then we retire. So what is between? Is there something? Why did I even insert this chapter?

The reason behind that has something to do about what I discussed in previous chapter. What if people would not be able to work after those mentioned 80 years of life. Or maybe they could work, but not so intensively and on not so complicated tasks. Of course, even today, this varies from person to person, but even so, there can be something for them to do. So my idea is, in this period of their life, people could do something less tense, work less hours a day, help community, or work for charity or for some non-profit organization. Leave behind their old carrier and start preparing for retirement. In this case, people would still help community, where country would have to spend money otherwise, so they will help with public finances (which could be in danger because of financing long retirements) and at the same time they would have more free time, which they need in such advanced age.

## **1.5 Retirement**

This (last) phase of human in age of longevity should by most similar to one we experience today. Maybe apart from bigger family, where one can anticipate birth of his grand grand grandson and the fact, that this part should take place 50 - 70 years later in human lifespan than it is in current age.

So in this period people would use their free time to relax, as it is today, they could work but would not be obligated to by law, take retired, spend time with their families, etc.

Maybe, mainly in this phase, but not only, people could experience some problems when adapting to new era. We can see it even nowadays; young people are not understood by old people, and vice versa. Both are products of different generations where things are done differently, have different believes, have different lifestyles. Also today the age gap is much smaller, it could get two to tree times bigger in age of longevity, which could make the process significantly harder and real problem could arise.

## **2. Pros and cons of longevity for society**

Part of content of this chapter will be based upon observations in first chapter. I will discuss in deeper things concerning whole society I roughly dashed down in first part of the essay. In essence I will try to derive what problems could potentially emerge with arrival of longevity and also I will mention some positive impacts to society.

### **2.1 Longevity in Japan**

Maybe this can be a place to start. Japan people have longest average lifespan in the world – 86 years for women and 79 for men [1]. Of course it is still just a half of lifespan of 150 years we talk about in this paper, but even though, we can already see some dangers arising for Japanese society.

The biggest problem Japanese bumped into is financing of pensions. In their country it is connected to another problem of less people being born. But we can still use their observations for our essay, since if longevity comes, there will be huge boom of many people getting older and the situation would be the same. In addition, we don't know whether people would be able to work in advanced years. Current pension of old people in Japan is not enough to cover basic living costs. So do Japanese fight this problem? How? They do but not so successfully yet. And only couple of things they use could be also applied in our case. For example, one of their solutions is to support children. They tried to push ahead a law, according to which, children would get 260 000 yen a month every month until high school (It is almost as much as pension of old couple in Japan [2]). Of course, in near terms it would add to their financing problems, but in longer terms it could potentially raise amount of children being born. But would this be a viable option in age of longevity? Yes, maybe there would be more people to work for older people, but as time will flow, they will get older too, and if trend of more children being born would continue, there is huge risk of hitting wall on other side, which is danger of congestion, overcrowded cities, etc. But this is not the only solution they came up with; they also tried to motivate people to work by companies awarding lifetime-employment. This could be viable option in age of longevity, but we can easily run across another



problem already mentioned in this paper – would we be able to keep working until really advanced age of nearly 150 years? Would longevity allow it? Another solution was about allowing more immigrants to come working in Japan. But this also turned out to be double-edged sword, since acceptance of immigrants from Japan people is not so easy. Moreover, could this be applicable in age of longevity, where this technology would be globally available? Or, and another question raises, would the technology be globally available? Or it would be like today, when there are countries where we can't even establish stable health care? In that case, maybe prosperous countries would potentially accept working immigrants, who would work for their aging people, but would that really solve a problem? Or just create new one?

## **2.2 Good side of longevity**

So far in this chapter it looks like longevity would bring only problems to humanity. But is there a good side of it too? There might be some positives for individual, which I already discussed in first chapter, but what about the society? Can longevity bring something bigger, then just certain benefits to individuals?

Let's for a while forget about dark side of things and try to name, what good can come with longevity. The easiest observation is the fact that people would live longer, which is desired by almost every individual, and since society consists of individuals, this can be the first positive.

Education would cost relatively less money, since compared to nowadays, when people study almost 20 years and work about 40 in age of longevity it would be possible that they study 20 years (maybe a bit more) but work for 100 years.

Next thing, accelerated advances in science - today, when a really bright student is born, he has to first study for more than 20 years, until he gets to know everything there is to know in some scientific area. Then he has another 40 years, or maybe a bit more if his health is well, to take advantage of education and produce results. Also, there are times when such scientist finds himself in blind alley after years of research. But in age of longevity, he would have at least two more times the time he has now, which will allow him to leverage his abilities even greater.

Wiser society. Sure, this statement can sound a little jovial, but let's take a closer look on the matter. There are two main factors, which make people wise: intelligence and experience. Since in era of longevity, society will compound from averagely older people, that means more experienced people and for that reason I think that average level of wisdom would have to arise as well.

Maybe, when people realize that they will be on earth for a very long time, they will be more considerate to subjects of global climate or water pollution subjects and that would make them more responsible. We live in very hectic times, where people usually don't have enough time, they have to make money so they can earn for living for their families, and then they have to recuperate and start the process over again. But in age of longevity, it would be possible, when people would be given more time, they would use more of their time for benefits of environment. For example they can do it in "preretirement" phase, which I discussed in first chapter.

It is hard to say ahead, but it can be expected, that with longevity a huge progress in medicine would come too, since it is likely that processes which would bring us longevity are very tight with ability to heal or replace failing parts in our body. So I think we can denote it as a positive of longevity that diseases would be much less common.

### **2.3 Dangers of longevity**

Everything has dark side to it and longevity is not an exception. I already spoke about dangers of longevity in many chapters of this paper. There were some of them talking about dangers to society, which I will try to sum up in this chapter, and then add some new observations.

Finances. Those seem to be main problem, not just today but in age of longevity too. There are at least two major question concerning money. How would we finance pensions of people on such long retirements, which would be possible with longevity? How would we finance process of making a human live long? If these two problems would stay unsolved, they could evolve to even bigger trouble, and not just financial, later on.

It is very unlikely that everybody would be given the gift of longevity for free. It is much more probable, that longevity would be kind of a privilege, such as for example health care is today. There are still countries where health care is scarce; there are differences between amount and quality of health care you get, depending on how much money you have. What if it would be the same with longevity? There would be individuals who live up to 150 years and there would be people who die at 60, but could be easily saved if they have access to the technology. And this can be a nest for problems that could rise. Wouldn't such situation deepen differences between rich and poor people or countries? What if new conflicts would arise? People would go in huge debts in fear of death; they would have their lives saved, but then be unable to pay for it. Would it be morally viable, to deny this technology to people who do not have enough money to afford it? Of course not, but who would finance it then? Today, we have some solutions or programs to provide health care to people with less money, but we are still far from desired situation. But still, if we could use what we learned from our past, ergo apply these processes for longevity issues too, and make it in time, it could be a good start and maybe we could prevent worst scenarios to happen.

But even if we have financing of longevity technology down, what about finances of pensions for such long retirements? I already mentioned this couple of times in this book, so I will just sum it up here. In age of longevity, we probably would not be able to afford to keep some establishments like they are today. By these establishments I mean things like people working for 40 years and then retire in 60 or so. There should be no way we could afford to finance such almost 100 years of retirement. Things would have to change, maybe in way I already discussed earlier in this paper.

Of course, there could be a lot of unpredictable scenarios; I mentioned some I could think of, comparing age of longevity to some issues of current era. So message of this subchapter should be such that, it is important to discuss subjects like dangers of longevity, because the more issues we could think of ahead, the more counter-measures we can apply in time to prevent horrible situations.

### **3. Summary**

As title of this paper suggest, I discussed about pros and cons of longevity, in regard to individual as well as in regard to whole society. I did it in a way of thinking about situations which could arise with arrival of longevity, and what kind of problems and positives they could bring. I got inspired with some phenomenon of current age, e.g. accessibility of health care, longevity issues in Japan, but I also came up with some issues we did not yet experience.

This paper is not strictly divided to parts in subject of pros and cons. That is because every positive can bring negatives with it, and every negative can be solved in way that its effects are, at least partly, negated. That's why I decided for different kind of content decomposition, like dividing chapter to human life periods in first chapter, or providing scenarios in second chapter, and then I discussed about pros and cons in given context.

As a result of this essay I would like to say, that in my opinion it is a good thing to pursue the goal of longevity, but at same time we should spend as much time considering all the problems in can bring, so we could apply correct counter-measures soon enough, to lower the risks and to the get the best of it.

## References

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[2] - [http://www.ipe.com/asia/longevity-risk-becomes-a-critical-issue-for-japan\\_47129.php#.UcLGevIM-hg](http://www.ipe.com/asia/longevity-risk-becomes-a-critical-issue-for-japan_47129.php#.UcLGevIM-hg)