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Call for reforming our democracies: rejuvenating the median voter

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Abstract

Aging populations threaten the future of Western societies and their democratic systems. An aging electorate leads to policies dominated by fear (of death), hindering important social reforms. This article describes this phenomenon from a political philosophy and behavioral psychology perspective and proposes a solution based on a new interpretation of social contract theory. Specifically, I propose the down-weighting of ballots of older voters by their remaining lifespans. I conclude with a discussion of the justice and the fairness of my proposal from the perspective of political philosophy and public economics.

Keywords: median voter, social contract, aging population, voting

Call for reforming our democracies: rejuvenating the median voter

Introduction

Industrialized countries are now facing a new and challenging phenomenon: the aging of their populations. This aging of the population implies an aging median voter¹, the voter who splits the electorate into one younger and another equally large older half: the US American median voter was 47.5 years of age in the November 2016 presidential election and the German one 52 years of age during the last national election in 2017.² In consequence, politics in these countries increasingly addresses the preferences and worldviews of the older voters and neglects those of the younger voters, impeding important political and economic reforms necessary for a good future of society. This contribution to the debate analyzes this phenomenon from a political philosophy and behavioral psychology view and provides a statistical solution based on the idea of remaining life expectancy: introducing vote weights by remaining lifetime. This article also provides a philosophical discussion of the relations such a reform bears to considerations of justice and fairness.

The natural population's age structure throughout human history had been characterized by what can be called a 'pyramid': a broad base formed by younger people, and a small thin peak formed by the oldest in society. Prior to the onset of industrialization, wealthy people died at the age of 60–65 years, while ordinary people 'retired' around their mid-forties: for illustration, in the early Roman republic male citizens were considered physically unfit for military service by the age of 45. By the age of 40 many people were already enjoying the play with their grandchildren.

Since the beginnings of industrialization and continuing after the Second World War, in most western societies life expectancy has been constantly rising, now resting somewhere between 70–80. Combined with continuously low fertility rates of less than 2, the share of older people has been growing while the share of younger people has been dwindling. Since the beginning of the twentieth century, the so-called 'population age pyramid' has been in a process of changing its shape, now coming to resemble a rejuvenating column with a bulb-shaped capital. As the population ages, so too does the electorate. For example, the

¹ The median voter can be understood as some kind of representative voter: In a symmetric or normal distribution, the median coincides with the mean (statistical average). However, in a left skewed distribution like in an aging population (where the bulk of people is between 40 and 70 years old with a long left thin tail representing younger people), the statistical average age of voters underestimates the true degree of aging of the electorate, which is more accurately represented by the median age.

² See File (2016) for the USA and for Germany the personal communication with the German Bundeswahlleiter on the 7th of April 2021.

median voter of the USA was 47.5 years of age (in 2016), in Germany 52 years of age (in 2017), and in Switzerland even 56 years of age (in 2015).³

Aging populations and the social contract

For analyzing the phenomenon of aging populations, four arguments and perspectives are developed: first, a politico-philosophical perspective that social contract theory implicitly assumes a young age of the founding population, and that the design of the social contract itself suits better younger citizens than older ones. Third, an ethical perspective is presented that relates to the futurity entailed in politics and policy-making. Fourth and lastly, it is argued that an aging electorate poses a threat to the economic-social wellbeing of society through certain behavioral patterns.

The perspective of social contract theory

The first argument claims that social contract theory of the sixteenth and seventeenth centuries is based on the implicit image of young healthy male humans making such an agreement. Classical social contract theory is a politico-philosophical theory of state-formation: rational individuals consent to common rules of a peaceful coexistence. The social contract is a mutual agreement that stipulates certain rights and obligations for those who agree to it (classical are the works by Hobbes 1647, Locke 1689 and Rousseau 1755/1762). For example, Thomas Hobbes's pre-contractual state of nature, the *bellum omnium contra omnes* (war of all against all) must have already killed most older people by the time the young survivors decided to agree to a contract of self-organization, with the aim of providing safety and security and protecting them against warlords. Similarly, the philosopher Jean-Jacques Rousseau, who had a more benevolent view of the true character of human beings, proposed in his pedagogical treatise *Emile* (1762)⁴ that the young grown-up man should, after some traveling throughout Europe, choose a country (state) of his liking, immigrate to it, settle down and become a member of the society therein: According to Rousseau such a man joins an already existing social contract, and this only once in his life through immigration, at a rather young age, prior to starting a family. Also, even though not counted among the classical social contract theorists, already the 2500 year-old model of *polis* (city state) formation by Aristotle is based on the implicit assumption of young age of its new members: in his work *Politika* he describes the state as a society based on the bonds of mutual friendships among its individual citizens, assumedly having been established during common military service. This makes the state a natural outgrowth of some comradeship-in-arms developed through sharing the same tent, dining table and fate on the battlefield.

Nowadays many older citizens appear to strongly believe in a life-long constitutional right to influence political decision-making because of their past merits, specifically because of their economic or child-upbringing activities long

³ For Switzerland, see Andreas Müller (2015), "Auf dem Weg zur Gerontokratie?". See also footnote 2.

⁴ "Emile, or On Education" (1762). In the same treatise he describes the education of a girl, which aims at making her a perfect companion of a man, being dominated by the man by 'natural law'.

in the past. In contrast, in pre-modern societies it had been customary that the older generation stepped back and gave way to their younger descendants: For example, in the rural part of the Black Forest the farmer parents used to move out of the large farmhouses into a smaller shack nearby to signal to the public that the eldest son or daughter, just in their twenties, had now taken over the farming business – a custom that continues to this day. Such customs of withdrawal from political service at old age are backed up by social contract theory, as the social contract, the mutual agreement between the convening persons who decide to found a state, stipulates rights and duties that relate to the *future* and *not* to the past – with the words of Hobbes, the social contract is unlike a sales contract but a pact, with contractual obligations that relate to the *future*. From the concept developed by Locke that the social contract is an agreement that is renewed every minute and second by its consenting citizens follows the more that the individual's past does not have an impact on granting her political rights.

Underlying the social contract as pact and mutual agreement is the crucial principle of reciprocity: This *do-ut-des* principle implies that each citizen who has self-subjected herself under this contract is granted the (immediately active) right to vote because she promises to show a certain contract-abiding behavior in the future (e.g. tax payments, military service)⁵, and to actively support the future peaceful and lawful cohabitation with her fellow citizens under government rule, which she has just helped establishing. Based on Locke one may concede: Through each democratic election the state is constituted anew – vote and voice is given to those only who can make the credible promise of contributions to its *future* existence. To conclude, it follows from social contract theory that political rights are *never* some kind of prize for good behavior in the past, but for future contributions, excluding most old people.

Also the designs of the hypothesized social contracts appear to be more congruent with the abilities of young people rather than those of old people. For example, stipulated obligations such as 'doing military service' or 'paying taxes' clearly favor the physically strong and economically productive, that is the young rather than the old and feeble. Failing to meet contractual obligations equals, at least in the long run, a unilateral termination of contract:⁶ Any individual who neglects or refuses to fulfill her contractual duties abandons society and ceases to be a member of it (she loses her citizenship). In that view, given that according to this tradition political rights are conditional on, and established through, the social contract many older citizens become automatically excluded. Older people are usually neither economically productive nor fit for military service. This interpretation of the social contract mechanism is supported by historical practice, for example by how in the Greek city states the exertion of political rights was organized, wherein political rights were not given unconditionally, as

⁵ This promise regarding future behavior forms the 'loyalty' element of the social contract that is missing in ordinary sales contracts, as Hobbes correctly observes.

⁶ According to John Locke (1689) the citizen may also terminate the social contract through emigration. As complement, J.-J. Rousseau (1762) stresses that immigration entails accepting the social contract that rules the target country.

some sort of birth right, but were bound to the willingness and ability of the single citizen to protect the city state and its community with her own life. Young Greek men had to undergo a two-year course of military training, spend a substantial amount of money on suitable armory and be prepared to go to war at any time; this readiness to fight was crucial for the survival of the city, as quarrels between Greek cities for tributes and political hegemony took place on almost a daily basis. By contrast, modern concepts of political rights view them as birth rights stipulated by the constitution, which are largely unconditional in nature and thus independent of physical abilities or the age of the adult. As we have analyzed, however, social contract theory and the implicit conditioning of the political right on certain civic obligations imply the unspoken truth that politics and policy-making is meant for younger people rather than older ones.

In conclusion, the first argument is that we have reasons to believe that the act of state formation as hypothesized by political philosophers had been imagined as collective action by *young people* rather than older ones, implying the promise of reciprocal activities of the contractors that may take place in the *future*. Thus, the implicit assumption in classical social contract theories appears to be of a specific age of the founders of a state, specifically with such theorists making an implicit argument for a younger age of the politically active population; hypothesizing such implicit assumption is congruent with the social reality of these pre-modern times, where individuals aged 60 were considered to have reached a high age. However, such a societal setting does not correspond any more to the social reality and life experiences of the twenty-first century, as we have illustrated in the beginning.

Politics is about the future

The second argument relates to politics as such, which is about shaping the future of a society: Based on Bodins (1576) and Ciceros definition of state (polis) as 'res publica'⁷, I would like to define politics as the collective action of all members of this state to make informed decisions about its institutional settings (laws, etc.) for making possible a peaceful cohabitation of its members, their thriving and prospering; the very first collective action of any society is that of its establishment and creation, by means of a social contract. While the previous discussion of social contract theory as such has revealed a strong linkage of politics with the existence of younger age groups in society – as next step, we take an ethical perspective while focusing on the element of 'futurity' in politics and policy-making.

Political decisions take their effects in the future, some in the near future, some in the far-away future. It is only logical to demand that those who bear the future consequences of such decisions should also be the ones actually making the decision. In any society it is the young people who have an actual future in this society – consequently, is this their right to shape their own future.

⁷ Cicero's famous definition can be found in *De re publica* I, 25, Jean Bodin's in *Les six livres de la République* I, 1. Both authors stress the well-being of the collectivity as aim of the state and the role of institutions to achieve it. See also footnote 17.

The older a person becomes, the shorter her expected time span left, in general and also specific life situations. It is a biological fact that the short remaining lifespan of an older person limits her expected future in the society she lives in. Our current democratic rules of voting imply, however, that in the extreme, an old person destined to die the day after election day might still shape a society she will not live to see, and will possibly even exert a pivotal influence: in political theory, the pivotal voter is the one voter who decides the outcome of the election. Viewed from an ethical perspective, the social contract not only implies that younger citizens have political rights, but even more that they have the obligation to take on political responsibility for their own future, through a decision-making procedure freed from paternalization (domination) by older citizens whose near-death reaches beyond the scope covered by the social contract, that prevents them from being part of that far-away future the political decisions and the social contract are about. In consequence, we can make the ethical demand that older persons should have less of a say (or no say at all) in political decision-making, as long as such collective choices relate to some far-distant future of society.

The aging median voter and policy outcomes

Besides the aspects of social contract theory and ethics for analyzing the phenomenon of an aging electorate, there are also practical politico-economic considerations to bear in mind, particularly for party programs and democratic election outcomes, and through this for society as such. This is the third line of arguments presented here.

Our modern democracies apply the rule of one-man-one-vote for all adults likewise; thus, ageing societies, which organize themselves by this democratic principle, also have ageing median voters. We recall that the median voter is the one pivotal voter who is decisive for the election results, who determines the winner when choosing between two alternatives. The politico-economic models of democratic choice by Downs (1957) and Hotelling (1929) make the prediction that if voters are ranked according to their political preferences on a linear left-right spectrum, parties from either ending point will attempt to become attractive for the pivotal median voter: it follows that party programs will try to specifically address the median voter's preferences; the same phenomenon is observable in a candidate's election (Black, 1948). As the median voter ages, party programs will be altered and adjusted accordingly, and candidates will run for office whose political message meets the specific wishes and preferences of the senior median voter – that is rather to the liking of older voters than to the liking of younger voters.

Why do the phenomena of an aging society and an elderly median voter pose a problem to society as a whole, taking into account our politico-economic reality? What would be the counterfactual scenario? The counterfactual world would be a situation in which a change in population age structure had no effect whatsoever on policy outcomes; expressed differently, in the counterfactual world people's political choices would be detached from age. Classical economic models of human behavior largely neglect the aspect of time: they view preferences as not

being dependent on age or limited lifespan. Only in investment-consumption choices does the aspect of futurity come to play some role. An elderly median voter poses a problem to society since her preferences and behavior differ largely from those of a less aged voter.

Indeed, our own life experience, that is our communal empirical knowledge, tells us that old people weigh decisions differently and behave differently compared to young people. Social sciences and psychology support this impression with both theory and empirics: Most importantly, old people are less willing to bear risks and they are afraid of changes in life, of new technology, of new challenges, of new experiences, of investments in new forms of production (see Lerner et al., 2021)⁸. Psychologically speaking, old people are short of *fluid cognitive ability* (Cattelle 1963) that permits swift adaptation to new and novel things.⁹ Economically speaking, old people manifest a high degree of risk aversion – investments are not undertaken unless their returns are abnormally high, so that ordinary risky enterprises promising only an average return are overlooked¹⁰. Many old people develop lexicographic preferences for a good health – in their view, a bad health state brings them closer to death. Therefore, old people strictly prefer health protection over supporting other sectors of society, at the expense of the welfare of those other sectors, such as e.g. education.¹¹ In addition, many old people develop anxiety disorders that keep them away from admitting even small changes to their daily routines. Old people are, by virtue of their age, in their consumption phase of life, making them prefer larger pension spending at the expense e.g. of education spending.¹² As a consequence, for old people it is completely rational to refuse social, economic or technological changes that might put their consumption plans at risk, that is, they will oppose political reforms involving large costs and postpone necessary but costly technological changes as long as they can. In the social sciences such behavior is called *status quo bias*. Caused by the diminishing of their remaining lifetime, older people exert a sort of impatience: they demand positive effects of political reforms to manifest during their (remaining) lifetime and not in some far-away future; big political reform projects are rather split into small steps that can be easily overlooked rather than being carried out in one large but riskier leap – from a financial perspective, however, the overall costs of many small reforms exceeds that of the one big leap.¹³ Economically speaking, older people's preferences are shaped by a larger intertemporal discount factor. Last but not least, as older

⁸ Lerner, Li and Weber (2021) show that sadness, anxiety and depression - all more often occurring in old people - lead to a higher intertemporal discount factor, generating impatience, creating a present-time bias. Sadder and older people also have less optimism bias regarding their abilities (e.g. to adapt), making them less risk-taking.

⁹ The peak of fluid cognitive ability is between 20 and 25 or 34 years, depending on type. For a summary of various empirical studies and the calculated age peaks see Desjardins and Warnke (2012).

¹⁰ For example, older CEOs are less likely to make acquisitions, see Yim (2013).

¹¹ The biologist Kirkwood (2002) argues that, by nature, longevity requires investments in somatic maintenance that must compete against investments in growth and reproduction.

¹² According to Meier and Sprenger (2010) present-biased preferences (as of old people) lead to substantially higher amounts of credit card debts in order to finance present-time consumption.

¹³ See Loewenstein and Prelec (1992) for the reverse relationship between life expectancy and patience regarding the more profitable outcome that lies farther away in the future.

people are close to retirement or already retired, they will assess all policy proposals with their (expected) pension benefit payments as sole point of evaluation.

By contrast, younger people take more risks, are more idealistic with respect to their choices, prefer the big reform leap over some mini-reforms, exhibit more patience, and are willing to invest time and money in a better but possibly far-away future. It is the young and idealistic who were the driving factors of the French Revolution, for the US Civil Rights movement, and who introduced new technology into society. What counts most is that it is the younger generation who puts into question those societal structures older people take for granted. In general, it is the young people who are the driving factors for necessary change, who make society advance.

Let me provide a few examples to illustrate my claim of a poor influence of an elderly median voter on policy outcomes. First, there is the issue of impending climate change – its consequences will be borne by the younger generation in the future (in 30 or 50 years), long after the death of today's older generation. A policy oriented towards an aging median voter avoids addressing or seriously engaging with the phenomenon of climate change. As a result, the young generation, forming the minority of any ballot, takes to the street (e.g., the 'Fridays-for-future' movement). Second, there are the polls about Brexit, the decision upon Great Britain's departure from the EU. The majority for leaving rested in the hands of the 45+ generation, while the younger preferred to remain.¹⁴ The older voters, forming the majority of the electorate, successfully blocked a professional future of younger Brits within continental Europe, and damaged the prospects for the British economy. The final and last example relates to the current lockdown policies to combat the spread of the novel Coronavirus, and the vaccination policies that followed (at the time of writing the Coronavirus had proved to be the deadliest for people older than 70, not really posing a health threat to most young people). Policies focusing on the future of society would have prioritized the economically productive classes and the well-being of children; for example, by vaccinating first the 30-to 50-year olds, the pillars of the economy and the mothers and fathers of school children. Instead, our politicians have decided to protect the 70 and 80-year-olds to bestow upon them a few more years to live, jeopardizing the well-being of society in the further-away future.

The roots for this generational gap in preferences are better understood from a more general philosophical and psychological viewpoint: this old-age-specific conservatism in thoughts and actions can be seen as a manifestation of their fear of impending death. According to the Greek philosopher *Heraclitus*, life is perpetual movement, implying that life is shaped by permanent change: '*panta rhei*' – everything is always in some process of transformation. Death is nothing but a form of transition from one stage to another stage of life; in real life, multiple transitions, that is to say multiple 'deaths', take place on a daily basis.

¹⁴ Brexit votes by age group in: "Which way did you vote in the Brexit referendum?", provided by Statistica.com, <https://www.statista.com/statistics/520954/brexit-votes-by-age/>

Based on my personal experience, most old people want the world to stay as it is; obviously, they prefer a world without change, a static world. Why is this the case? In the eyes of older people, any change implies a *memento mori* – it reminds them of their own mortality. Not admitting change in their everyday life, in their reality that surrounds them, is a way of holding on to life, a life that is literally melting away. In the extreme, their denial of death but also their fear of death transforms into a fear of the unknown and of the unforeseeable dynamics of life. Expressed differently, for old people opposing change in society is a manifestation of their self-deception, a manifestation of their denial of their own mortality. Based on *Heraclitus*, one may argue that denying the transformative dynamics of life implies denying life itself. A person who unhealthily holds on to the *status quo* is, philosophically speaking, on the level of her *psyche* already dead.

From these arguments it should hopefully be obvious that the future well-being of society is at stake if the younger generation is paternalized by the older one. The problem of an aging electorate does not lie in the fact of aging as such, but rather in the fact that the preferences of an older median voter are different from the preferences of a younger one, resulting in the procrastination of necessary reforms for a habitable future, resulting in some dispirited wait-and-see-policy. It is obvious that the flexibility of younger people, their ability to adapt and to create innovative solutions, is more suitable for addressing a changing environment and new societal challenges.

Brief summary of the theory basis

To sum up, we have departed from political philosophy and found that the most prominent myths of the founding of the state implicitly assume younger (male) agents, reflecting the social reality of their pre-modern world. We also found that the notion of ‘politics’ in the sense of filling existing social contracts with life through policy-making implies a strong focus on the future of society. From an ethical perspective only those who have some future in society should also be in charge of deciding about the future of it – that is the younger generation. Empirical evidence from the social sciences and psychology suggests that there is a generational gap between the preferences of the older and younger people, and that the preferences of the latter are most likely better-suited to ensuring the well-being of society in the future.

A technical solution for a societal problem

To remedy the ills of this generational gap I propose a simple but effective solution: the weighting of a citizen’s vote by her remaining lifespan, applying the tools of statistics.

Let me illustrate this proposal with an example: assuming an average lifespan of 80 years and a minimum voting age of 18, the young voter’s vote will count

100%, whereas the voter aged 80 years (or older) gets a remaining 1%. That is to say that one hundred 80-year-old voters' votes altogether count as much as one single vote of an 18-year-old; alternatively, more than two votes of 50-year-old citizens, or three votes of 60-year-old citizens, are needed to counterbalance the vote of a single young voter. This implies the following: the older citizens still exert political power in elections, but they lose this influence gradually as they age, mirroring the shrinking time horizon of their personal future in the society they live in.

The discounting of votes could be organized in a linear fashion – consequently, each additional life year leads to a smaller weighting of the ballot. In our example of an expected lifespan of 80 years, the weighting factor would be reduced by approximately 1.61 percentage points per year lived, calculated as 100 percentage points divided by 62 life years (80 (maximum age) – 18 (minimum age)). Alternatively, one could also imagine weights by age brackets: e.g., a 100%-weighting for those aged 20 to 30 years, a 70%-weighting for those aged 30 to 40 years, 60%-weighting for those aged 40 to 50 years, and so forth.

The following table provides an overview of the weighting factors for various ages. Assumed is a life expectancy of 80 years.

Voter's Age	Weighting factor	Calculation
18	100%	$(80 18) \times 1.61\%$
20	96.6%	$(80 20) \times 1.61\%$
30	80.5%	$(80 30) \times 1.61\%$
40	64.5%	$(80 40) \times 1.61\%$
50	48.3%	$(80 50) \times 1.61\%$
60	32.25%	$(80 60) \times 1.61\%$
70	16.1%	$(80 70) \times 1.61\%$
79	1.61%	$(80 79) \times 1.61\%$
80	1%*	$(80 80) \times 1.61\%^*$
85	1 %*	
90	1 %*	
etc.	etc.	

* in place of 0% or less the formula would yield.

Rejuvenating the median voter happens by applying these discriminatory weights presented above: The traditional one-man-one-vote rule in democracies translates into each voter (or vote) being given the equal weight of 100%. In general, as a discount factor by age is applied, that is as the weights for the older voters decrease and the weights for the younger voters increase, the weighted mean becomes smaller than the unweighted mean. While the classical median voter splits the electorate into two equal-sized halves, the rejuvenated median voter splits the weighted electorate accordingly. In the unweighted, original distribution of voters the rejuvenated, the weighted median lies to the left of the unweighted median. This rejuvenation of the median is the result of the

application of age-specific weights. This method of statistical rejuvenation works irrespective of the actual age structure of the underlying unweighted population.

A question of justice and fairness

Unequal treatment of equals: Athens and beyond

Is it fair for the ballots cast by older voters to get down-weighted? Let us make a first attempt of providing an answer by stepping back and looking into the city state Athens around c. 500 BCE, our role model of democracy. 'One man – one vote' – this arch principle of democracy originates from the first democratic political system we have written evidence of: the city of Athens c. 500 BCE. The Greeks called this principle *isonomia*, '*isos*' meaning 'equal' and '*nomos*' meaning 'law': today our interpretation of *isonomia* focuses more on the equality before the law, that is an absence of discrimination in treatment by the government and administration. However, in the Greek city-states of those times it bore rather the meaning of equal rights to political participation for all full citizens. This idea of equality in political rights manifested not only in the *ekklesia*, the people's assembly that initiated and passed laws through popular votes, but also in the way the Athenians organized elections for political office: they preferred an impartial lottery machine selecting among the citizenry, to ensure every citizen had the same probability to be elected. So far the well-known narrative of equal political rights for all citizens in Athens.

However, *isonomia* was never realized in full but applied unequally: it was not considered a basic right but granted under certain conditions. In Athens and in many other Greek city states which developed democratic or semi-democratic (republic) political systems, full citizenship was no birthright but had to be earned. Every man who acquired political rights, particularly the right to vote, had to complete a two-year lasting military training, pay for his own equipment and be ready to serve in the people's militia in any war. Undertaking military training was also the (sole) means for immigrants to gain citizenship of a befriended Greek city state. This duty to serve terminated, approximately, around the mid-forties.¹⁵ In consequence; full citizenship was not granted to every man: those who were not able to serve in the army were not admitted to the *ekklesia*: the poor without means to finance their arms and weaponry, the mentally or physically disabled (the blind, the physically impaired), the tradesmen and craftsmen who had decided not to undergo the two years of full-time military training for personal reasons. The Greek word 'idiot' originates from this context: it denotes 'private person', that is a 'selfish person' and, respectively, someone, who minds only his private affairs but does not care about any political responsibility as a citizen or the wellbeing of the society he lives in. To conclude,

¹⁵ In the early Roman Republic, which copied much of its political system from the surrounding Greek and Etruscan cities, the maximum age for military service in times of war was 46. In these times, many people from the middle and lower classes died around that age; the famous philosophers and upper class citizens Plotinus and Aristotle (who lived in late and early antiquity), died both in their early sixties.

while we hail Greek democracy for having invented the principle of equal rights and treatment for all citizens alike, we also find that full citizenship was de facto restricted to the healthy and younger (male) citizens, excluding e.g., feeble grandparents.

In antiquity contemporaries did not consider this unequal treatment of equals unfair, but rather as just: According to Aristotle, who explains his theory of justice in his famous *Nicomachean Ethics*, goods are justly and fairly distributed among the people by basing the distribution on (relative) individual merit and worth. Following his view, immaterial goods such as political rights and political positions should also be distributed according to merit. Military service grants political rights, while the older citizens' inability to serve the city state in times of war merits the withdrawal of those political rights during times of peace. In antiquity, the legal system and the distribution of privileges either were thought to have originated from the world of the gods itself,¹⁶ or, as described in the metaphysics of Plato's *Politeia*, to mirror the divine order (the *logos*). Thus, in these pre-modern times it was out of the question to challenge the fairness of excluding older full citizens from political participation.

In our present time the maxim of 'one man – one vote' forms the basis of Western democracies. In the German constitution (*Grundgesetz*), for example, the principle of equality of votes is seen as some sort of fundamental right, having almost the same ranking as a human right.¹⁷ It is thought to provide the basis for fair elections in a democracy ('general, direct, free, equal and secret ballot'). The principle of the 'equal ballot' is seen as a special case of the principle of non-discrimination that also translates into the equality of citizens before the law. While modern legal scholars treat the principles of the 'equal vote' and 'equality before the law' as manifestations of the same underlying general 'anti-discrimination imperative', both principles have their roots in different strands of history. The equal vote, as described above, originates from the first democracies on Greek soil. The idea of equality before the law, however, originated rather in the era preceding the French Revolution, when the emerging bourgeoisie demanded the abolition of aristocratic privileges, in particular those relating to trade and taxation: the followers of early liberalism demanded a space of freedom in which the wealth-holding *citoyen* could thrive and flourish. The principle of equality before the law implies also the transition from an absolute monarchy (in which the despotic king could claim 'L'état c'est moi', indicating 'the law is me') to a constitutional monarchy, in which the ruling body is subject to the constitution like every other citizen. This makes the principle of equality before the law a basis for forming a republic, in which the law has the highest authority, which should not be confounded with the principle of equal vote that is the fundament of a democracy: it was the Roman politician Marcus Tullius Cicero

¹⁶ Dike was the goddess of justice and Demeter the goddess of agriculture. According to Greek mythology, Demeter had taught the world not only agriculture but also rules for the peaceful cohabitation among the farmers. The Swiss political philosopher Jean-Jacques Rousseau picked up this idea and made the related problem of distributing scarce land, alongside the need for property protection, the origins for the social contract and the development of a political system.

¹⁷ Legal scholars categorize the right to vote as "grundrechtsgleiches Recht", that is a right equal to a fundamental right (see Pieroth and Schlink, 1994).

who was the first to define the republic as a congregation of people unified in their voluntary subjugation under the rule of law (see *De re publica*, I, 25). Democracy is the way government is legitimized (and democracy is a form of people's self-government), while the republic as *res publica* is a form of political and legal organization that focuses on people's well-being, as Jean Bodin (1576) has stressed. (Admittedly, both notions became more and more blurred in the twenty-first century, since every functional democracy must necessarily be a republic, but not vice versa).¹⁸

This line of argumentation outlined above allows us to keep the principle of equality before the law while at the same time adjusting the classic principle of 'one man – one vote' to reflect the new social reality of an rapidly aging population.

Modern theories of justice I: Rawls and Hobbes

So once again we must ask: is it just and fair to discount votes according to voter age? A modern politico-philosophical approach to deriving principles of justice within the context of state-formation and constitution-building is that developed by the philosopher John Rawls. In his groundbreaking book *A Theory of Justice* (1971) he applies the idea of a social contract to a hypothetical state: a situation prior to contractors' births. It is this 'veil of ignorance' which makes Rawls' approach so genial; in contrast, the traditional, early-modern visions of the social contract developed by Hobbes, Locke, Rousseau, and others, assumed that this contract had been concluded by actual individuals in an actual situation, who, by the time of making the agreement, were already in a specific economic and biological state – the political philosophy of the eighteenth-century blurred the differences between actual history, construed past based on hypotheses and hypothetical but ahistorical situation. Instead, John Rawls' truly hypothetical pre-birth state in which principles of justice for a not-yet-existing future society are agreed upon allows for a view free of personal circumstances and contingent selfishness. This point should be dwelt upon further with regard to our specific question, as to the fairness of the discounting proposal outlined above.

In a Hobbesian state of nature, at the moment of the social contract's formulation, the assumed rationality of the agents means that older persons (should they have survived the war-of-all-against-all) would have never agreed to a down-weighting of their votes compared to the votes of younger co-contractors. Within the rational choice tendency of thinking in political philosophy and economics, the rational behavior of agents implies that only those choices are made that are to one's own benefit or, at least, not to one's disbenefit – choices must improve one's position on the well-being scale (utility level) or, at least, not downgrade it. In the Hobbesian state of nature, the social contract is founded by its 'weak' inhabitants with the aim of protecting

¹⁸ The notion 'republic' is not well defined. 'Res publica (lat.)' means 'the public cause'. I follow the definition by Jean Bodin, who defined the republic as political and legal organization of households, subject to a common law, oriented toward people's well-being, the 'commonwealth' or 'common good' (Bodin, 1576).

themselves against despotic warlords and single strong warriors, to provide safety and security for its co-contractors; it is obvious that in this pseudo-historical situation, founding a state improves the situation of for all its members and thus is in line with the principle of rationality. The same rationale also implies that if wealth positions were known prior to the negotiations then no agreement on wealth redistribution policies could be achieved (as this would lower the wealth positions of the richer members of society). As a consequence, according to the Hobbesian version of the social contract, the basic principles agreed on provide some ordo-liberal framework for economic activity but no aspect of a welfare state (such as income redistribution) whatsoever. As a consequence, if we applied the idea of a Hobbesian pre-state world to our question of discounting votes by age, no older rational agent would agree to such a proposal and no successful social contract would include such a stipulation.

The revolutionary aspect of John Rawls's social contract theory lies in making the assumption of the so-called 'veil of ignorance': the socio-economic position the single individual will later hold in the to-be-founded-society is unknown at the time the social contract is negotiated – unknown to herself and to the co-contractors. Under this veil of ignorance any individual will be more likely to agree to the principle of social mobility and merit-based accession to positions of power; in such a hypothetical pre-birth state, any individual would not agree to privileges based on birth or class but would rather agree to the principle of equality before the law. Given the individual's ignorance of her future wealth position in society she would also likely disapprove of any voting system based on social class, tax payments to the state or size of property – ruling out most early-modern voting systems such as e.g., the Prussian or French class-based variants of the eighteenth century, but also the democratic elections of Athens c. 500 BCE, which excluded the needy (and women). The 'veil of ignorance' hypothesis therefore justifies any non-discrimination by society with respect to gender, race, ethnicity, income, education, and so forth leading to a modern state based on republic principles.

Discounting votes by age, however, and this is my personal view, would not contradict the spirit of social contract theory as developed by Rawls. This is why: The veil of ignorance relates to features and facets of human life that cannot be altered (not without huge costs) or that, if they were to change, would not do so for all humans alike, and not in both directions or with the same probability. For example, it is almost impossible to alter biological facts like one's ethnic background or one's sex, or to alter social facts like one's mother tongue or one's upbringing. Regarding an individual's wealth position, one is more likely to become poor after having been rich than to become rich when having started out from a low-wealth position. In contrast, physical aging is structurally different: it is by nature non-discriminatory as every human experiences it (unless one dies at young age). Statistically speaking, in any developed country every member of society will once be young, later be middle-aged, then be old aged, and finally die. Highlighting again the fairness difference between economic position and life stage (age): Vote weighting by age is fair as, statistically speaking, every member of society runs through the life stages from young to old; in contrast, not

everybody will go through the stages from rich to poor or vice versa, which would make a vote weighting by tax paid or property appear unjust.

To conclude, in accordance with Rawls' concept of the veil of ignorance, vote discounting by (remaining) life years can be considered both just and fair – not with respect to a specific single election but when looked at over a lifetime, that is over the many elections one can participate in: as every citizen grows older over time, she will enjoy a smaller discount factor when young and suffer a larger one in old age. Since in the hypothetical pre-birth state nobody will know how long she will actually live (when born), every contractor should agree to a linear discounting of the vote by some statistical average life expectancy (calculated on basis of the population); tools of statistics provide the best solution to achieve a fair but non-discriminatory discount factor applicable to all voters in case single life expectancies are unknown.

Modern theories of justice II: principles of public economics

The justice aspect of vote discounting by age should also be analyzed and evaluated from the perspective of public economics, as taxation and legislation are intertwined: the political philosopher Jean Bodin (1576) has linked the power to legislate with the power to tax through calling them the two core manifestations of sovereignty. In our times levying taxes is essential for the well-functioning of any state, and particularly in democracies the fairness of the tax system is considered an important aspect of good governance. Levying some sort of taxes and fees has a long tradition in human history, having been practiced by Babylonian kings and Egyptian pharaohs for millennia; consequently, the experience of mankind with taxation dates back much longer than their experience with democratic voting systems since the times of ancient Athens. As we will see, the fairness of the tax system can be seen as mirroring the fairness of the voting system: classical social contract theory tells us that 'paying taxes' and 'voting' both are intertwined, as paying taxes is a citizen's duty, while the right to vote is its reciprocal reflection as citizen's right.

Over the centuries two basic principles of taxation have been developed: the traditional 'equivalence principle' and the modern 'performance principle'. The oldest tax is the capitation tax or poll tax, a lump sum levied per head, independent of age, income, wealth, or property. The capitation tax was often justified as some fee for being exempted from military service: for example, the Roman Empire levied this tax on every free man for not serving in the Roman (professional) army – consequently, the poll tax was not applied to women, children, slaves, or strangers.¹⁹ This poll tax follows the so-called equivalence principle: as every citizen receives the identical amount of benefit (security provision by the state or exemption from military service) every citizen has to pay the identical amount of tax. The equivalence principle in taxation can be seen as an application of the more general non-discrimination principle, which, as we

¹⁹ The poll tax also reflects the idea that the composition of the group founding a state: free men, excluding women, children slaves, or strangers.

have explained above, also translates into the principle of equality of votes in a political system.

Taxation in a modern economy, meanwhile, follows the so-called 'performance principle'. Accordingly, the volume of an individual's tax payment depends on her performance in the labor market: the better an individual's performance, the larger her tax payment. The performance principle is usually complemented by the principles of 'vertical equality' and of 'horizontal equality': Vertical equal treatment implies that people with a higher income should pay more taxes than those with a lower income, while the horizontal equal treatment demands that people with an identically high income should bear the identical tax burden. The underlying idea is to treat equal persons (or incomes) as equals and to treat unequal persons (or incomes) as not equal – a principle already formulated in Aristotle's *Nicomachean Ethics*. In our modern economies, most personal taxes are organized according to this performance principle; for example, any tax with a fixed percentage of the tax base follows the performance principle.²⁰

The poll tax ties, as indicated by its name, suffrage to tax payment. This poll tax had to be borne by every male citizen and was thought to follow the same justice principle as the political vote: 'one man – one vote' translates into 'one man – one lump sum payment'. Scholars of modern public finance, however, view such poll taxes and the underlying equivalence principle as socially unjust: Relative to an individual's income, the tax burden of a poorer person is much larger than that of a rich person, when looked at and expressed as a percentage of income.²¹ The same critique can be applied analogously to the democratic arch principle of one-man-one-vote: Drawing the analogies 'income – lifetime budget' and 'capitation tax – one vote per citizen', then, in relation to remaining lifetime, the unweighted vote of a younger person has far less value than that of an older person, if measured as 'percentage' of remaining life years. In consequence, the same injustice generated by the poll tax with respect to varying income levels can be observed analogously for political vote with respect to varying remaining lifetime – when treating each vote as equal-weighted in political decision-making. To conclude, the equality principle that we hail in politics for its fairness and justice – this same principle we discard in the field of taxation because of its unfairness and injustice. When drawing the appropriate analogies between taxation and legislation, the traditional one-man-one-vote principle appears equally unjust, calling for an application of some sort of 'performance principle' in the field of political rights: the weighting of votes according to lifetime 'budget'.

To sum up, when discussing the weighting of votes by remaining lifetime from the viewpoints of justice and fairness aspects, classical social contract theory would not allow for it, with negotiating individuals knowing their biological age.

²⁰ Income taxes are exemplary for the performance principle: they are even disproportionately rising in income (so-called progressive income taxation).

²¹ In Antiquity many wealthy individuals could buy themselves out of military service, which the poor person could not afford to do, risking her life on the battlefield. At this time this discriminatory practice was an accepted social fact, which was not placed in question.

In contrast, Rawls' concept of veil of ignorance in the situation of social contract negotiations helps finding arguments in favor of the discounting of votes by voters' age. In support, the very first republic constitutions in antiquity also applied the idea of unequal treatment of equals in practice, even if, on paper, they had invented the *isonomia*. Economic theories of fairness developed to evaluate taxation systems can be applied in analogy: the modern concept of 'performance principle' equally supports the political reform proposed in this paper, the proposal to downweigh older persons' votes.

Concluding remarks

Western democracies face worldwide competition with more dictatorial political systems: they are competing against China, largest country of the world and economic superpower, an autocratic one-party system, whose political leaders rule in the traditions of enlightenment combined with absolutism. While autocratic political systems ruled by an enlightened ruler are able to produce swift responses to a changing environment and new societal challenges, democracies may fail as the median voter mechanism binds party programs and candidates to the wishes of an elderly electorate, an electorate that is under the impression of imminent death and that prefers to maintain the status quo above all else. This situation of an aging electorate in combination with this worldwide political and economic competition may force our democracies to adopt autocratic elements themselves. For example, there are Turkey and Russia, who have left the path of democracy some time ago, with a dictatorial president in power, muzzling free journalists and opposition members, cudgeling worried protesters. There is also the United States, whose presidential system is on the verge of developing into a pseudo-autocratic habitus, at least under the influence of ex-president Trump.

Democratic states, particularly those situated in Western Europe, appear to stand there solid as a rock, thriving from a colorful multi-party system and a living culture of public debate. Despite this success, they, like the rest of the industrialized world, suffer from the same illness and threat to their stability: the aging of society. The political reform that I have proposed in this paper may make representative democracies (but also forms of direct legislation) competitive again in the contest for a better and more effective political system.

Epilogue: What my mother says

When writing this paper, I circulated a preliminary version among friends and peers, as well as amongst those in their 70s and 80s, from my mother's generation, asking for comments. The general reaction to my proposal to downweigh older persons' votes was the following: in contrast to philanthropic expectations, the older readers revealed a stubborn unwillingness to give up some of their political power – irrespective of their personal political background. So did a friend who is a voter of the Communist Party, so did my mother, a freelance artist and classical Green Party voter, and, less surprisingly, so

too did all voters of conservative or centrist parties. Some reactions culminated in a harsh refusal, without even having read the paper ("I disapprove of this idea in general and do not even want to spend time discussing it"), expressed by both a female litterateur and a male lawyer, both retired (73 years and 83 years of age). This general rejection of my idea ran through all genders, professions, and political ideologies – the only characteristics these opponents have in common is their old age and their socio-economic state of being in or close to retirement.

One typical counterargument relates to the inaptness of young voters to assess and evaluate situations and to make rational decisions. My mother argues that young voters were heteronomous - that is not independent enough in their thinking, following fashions and trends, and also often still financially dependent on their parents. Young voters looked for the pie-in-the-sky instead of accepting harsh and bitter reality. One person even told me that she did not take anybody serious who was not at least 50 years old (she is aged 73).

Here is my reply:

- Well, legal scholars at some point arrived at a consensus that from the age of 18 a person is considered grown-up enough to make rational political decisions. Should the right to vote rather start at the age of 50? When then, is somebody actually grown-up? Life experience keeps us educating, so from that perspective one is never grown-up, maybe at the time of her death.
- Well, it is exactly this 'pie-in-the-sky'-attitude of young voters that can initiate important changes in society, leading to important adjustments to a changing environment. And it is exactly this call for 'accepting the reality' of the old voters and their refusal to admit alternatives (the so-called status quo bias and conservatism) that provides a societal problem, that makes a society sclerotic.

Some of my older readers argued that they knew many examples of old people who were highly creative and intellectually flexible. The power to innovate was not negatively influenced by the aging of the physical body: the human brain did not show signs of age. In addition, so runs the argument, elderly persons provide valuable professional and life experience for a balanced weighing of the pros and cons of alternatives, while the young acted too emotionally. My mother argued that a good education prevents a person from becoming risk averse.

- Well, this paper has examined average behavior, and average behavior is based on the mass of people. Single exceptions are possible, but they form a marginally small minority. In fact, even my leftist mother shows signs of strong old-age-conservatism that I have never considered possible. It is this mass of senior citizens that has to relinquish some of their political influence because of their inflexibility in thinking.
- Whilst I agree that some old people's life experience and expertise is of high value for society, this does not necessarily provide a valid counterargument to my political proposal. The valuable knowledge of older people can be

diffused through public channels and media (thus influencing the voting behavior of the young), and old people can work as advisors for the government and in commissions of experts. In addition, in modern states the deficits in controlling emotions of younger voters are counterbalanced by administrative procedures and regulated decision-making processes.

- Risk aversion and status quo bias are, in my view, a direct effect of biological aging in the sense of having a reduced remaining lifespan. As described above, the fewer the years left to live, the more difficult it becomes to correct mistakes and bad turns taken in life. My mother is here in a state of self-deception and illusion: her behavior is strongly risk averse and change-refusing while at the same time she thinks of herself as very open-minded and rather risk-friendly.

Some older readers expressed the fear that if older voters were 'disenfranchised', state pensions and retirement benefits would not remain secure. The older readers expressed a fear of being economically exploited by the younger generation.

- It is interesting that older readers here present as dystopia a reversed reflection of what is actually taking place right now, namely the exploitation of the middle-aged and the younger people by the older generation. This could be viewed as older readers' implicit plea of guilt...
- I agree that the economic-financial basis of older voters and retired people must be safeguarded and secured, the solution could be an amendment to the constitution that is protected by the requirement of supermajority.

The final counterargument relates to that of political candidates versus party programs. Some readers argued that a rejuvenation of the electorate would not help if the pre-reform candidates continued to run for office or kept representing the same pre-reform old-fashioned solutions.

- Well, the median voter theorem applies here: parties select those candidates whom they presume to have the highest likelihood of winning; as the electorate becomes younger, parties will respond, and new and dissimilar candidates will be chosen who will reflect the rejuvenated median voter's preferences. From a principal agent theory perspective I would like to argue that the principal chooses an agent – a party or candidate – of her liking; in case the principal rejuvenates, her chosen agent will become a different one.

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