

## **Measuring Intergenerational Justice for Public Policy**

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## Abstract:

We review dominant approaches to evaluate the intergenerational justice of public policies. We distinguish between justice over complete lives (for which we analyze birth cohorts), and at a given moment in time (for which we study age groups). We note that it is not *prima facie* problematic if at one given point in time different age groups receive an unequal treatment from the state. But if such inequalities are perpetuated across different birth cohorts over the entire life cycle, then this does point to intergenerational inequities.

## 1. Introduction

Population aging – widespread across rich democracies – has led to a renewed popular and academic interest in the notion of justice between generations (Tremmel 2009; Vanhuyse and Goerres 2012). Applied to public policy, this notion leads to questions of the long-term affordability of public programmes, such as healthcare and pensions, and more generally the persistence of current consumption patterns. These policy problems have been exacerbated as a result of the changing age composition of society through the second demographic transition, which is characterised by the combination of low fertility and increasing life expectancy (Gál/Monostori 2016, 3). The political economy literature dealing with public policies for different generations puts forward three main propositions: (1) currently older generations receive more overall public transfers than generations that were old in past decades (Kotlikoff and Burns 2012); (2) older persons receive more on average than children (e.g. Vanhuyse 2013; 2014) and (3) in several countries the ratio of public resources that go to the elderly has increased relatively to the amount of resources going to young people (Kershaw 2018; Preston 1984). Some observers assume that the key intermediary mechanism for these fiscal cost developments is political participation: the larger share of elderly voters that comes with population aging tends to mobilize politically and electorally proportionately more than younger age groups in pursuit of their policy interests. This then leads to fears of ‘grey power’, ‘gerontocracy’ (Sinn and Uebelmesser 2002), grey ‘electoral majorities’ (Sanderson and Scherbov 2007) or ‘pro-elderly bias’ (Tepe and Vanhuyse 2009; 2010). Some even speak of ‘generational storms’ or ‘clashes’ (Kotlikoff and Burns 2012). In terms of (not) benefiting from the welfare state, some scholars call the post-Baby Boomers a ‘disadvantaged’ (Green 2017) or ‘precarious’ (Bessant/Farthing/Watts 2017) generation. Clearly, population aging makes sober and informed analysis of the intergenerational justice of public policies both urgent and timely.

The aim of this chapter is to examine issues of public spending across generations in a way that combines economics (and the literature on economic indicators in particular) with normative

accounts of justice. Theories of intergenerational justice have to specify who (recipients) should get how much (pattern or scope) of what (currency or distribuendum) by whom (providers).

With regard to recipients and providers, two different concepts of 'generation' are relevant (see e.g. Tremmel 2009, ch. 3; Goerres and Vanhuysse 2012; Schokkaert and van Parijs 2003). First, when we want to evaluate intergenerational justice over *complete lives*, we need the concept of (*birth*) *cohorts*. These are groups of people who were born in the same year or narrow range of years (e.g. 1970-1975). Cohort members, by virtue of aging together at the same period in history have shared distinct economic experiences and have thus benefited or been harmed ('scarred') by specific public policies but also by external events outside the ambit of public policy (such as deep recessions for the worse or technological progress for the better).<sup>1</sup> Second, when we want to make a snapshot analysis of intergenerational justice at a *given moment* in time, *age groups* combine people of the same (narrow) age bracket at a particular moment. Age group members find themselves in the same stage in the lifecycle, which is politically relevant because public policies tend to institutionalize the life course, proscribing and inhibiting certain behaviors. People never leave their generational cohort but they wander from one age group to another (short of dying).

With regard to the patterns of justice, we explore two intuitive yardstick principles of justice: direct and indirect reciprocity. The difference is best explained when we look at the relationship between (familial) generations before the welfare state came into being. The directly reciprocal generational contract is the implicit expectation that parents will care for their children until they are old enough to care for themselves, and children will support their parents, in turn, when their parents can no longer support themselves. Here, the exchange happens between the same generational cohorts but while they are in different age groups.

To conceptualize indirect reciprocity, imagine in pre-welfare-state times the members of three age groups walking together. The daughter accompanies her mother and her grandmother as they embark on a ritual journey intended to end with the grandmother's voluntary death. The girl takes pity on her grandmother and convinces her mother to promise to care for the old woman until her natural death in exchange for a promise from the girl to do the same for her mother when the time comes. Here, the exchange does not happen between the same generational cohorts. The creditor generation cannot be paid back by the (then) deceased debtor generation. As the (previous) middle generation has become the debtor generation, the obligation is passed on the next generation (now the middle generation).

A moral intuition driving our analysis of intergenerational justice is that it is not *prima facie* problematic that at one given point in time different age groups receive an unequal treatment from

the state. But if, such inequalities are perpetuated across different birth cohorts over the entire life cycle, then we do end up with intergenerational inequities.

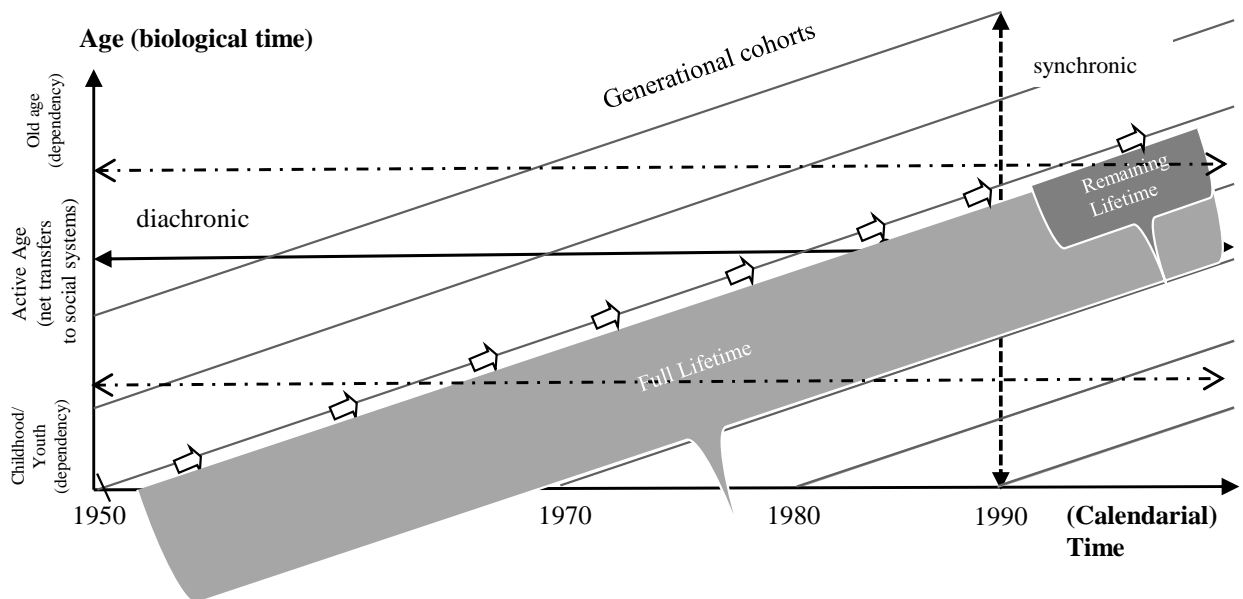
We do not intend to put forward a full theory of intergenerational justice here (for overviews, see Tremmel 2009; Gosseries/Meyer 2009). Note that we do not discuss currencies of intergenerational justice outside the realm of public spending in cash and kind.<sup>2</sup> We limit our discussion to financial resource transfers between age groups and between cohorts that come with a public policy which is, in turn, influenced by demographic change.

This chapter is structured as follows. Section 2 outlines the lexis diagram, a heuristic tool that serves to illustrate and thereby to explain the comparisons between ‘generations’ (age groups and cohorts) that underlie most metrics for intergenerational justice with regard to the domain of public policy. Section 3 exemplifies the age group approach, with a focus on the “elderly-bias indicator of social spending” (*EBiSS*) as one prominent synchronic metric to measure justice between age groups for public policy. Section 4 supplements this with a discussion of “generational accounting” as a metric for the diachronic comparison of cohorts. Section 5 connects the empirical findings with the normative debate about intergenerational justice. The chapter argues that there are strong empirical indications that the Baby Boomer cohorts are unfairly treating younger generations both in terms of the age group metric (such as in Italy, Japan, and Poland) and the cohort metric (such as in France, Italy, and Spain). We conclude with some reform proposals in section 6.

## **2. Comparing Generations**

Obviously, all methods and indices measuring intergenerational justice draw comparisons between providing generations and recipient generations, but distinct notions of “generation” are sometimes mixed up. The complexity of comparing generations can be illustrated by a Lexis diagram, a two-dimensional diagram showing the relationship between periods and cohorts.

Figure 1: Lexis diagram



In the Lexis diagram, the vertical axis shows the age of cohorts, and the horizontal axis shows the flow of time. The diagonal line that starts above the birth year of a certain cohort represents its life course. For instance, the cohort born in 1950 is symbolised by the diagonal line that starts in that year; this cohort is 10 years old in 1960, 20 years old in 1970, and so on. Comparisons can either be drawn between people of different ages at a certain point in time (age group comparisons), or of the same age at different points in time (cohort comparisons). The dotted vertical line above the year 1990 represents a synchronic comparison, a ‘snapshot’, between people that were ‘young’ and ‘old’ in the year 1990. ‘Young’ and ‘old’ can designate different age intervals, for instance ‘old’ can designate ‘all people currently between 65-90 years of age’. Often, the age brackets that are of interest are established by legal requirements in a society, such as the legal retirement age. But the object of analysis can also be a single year age group (such as all people 80 years of age at the time of the snapshot). For instance, if we are interested in the wealth distribution by age in a specific country, we look at the wealth distribution of people in their twenties, thirties, forties, fifties and so on at time  $t_0$  (e.g. in the year 2010). A diachronic comparison, by contrast, compares people of the same age at different points in time. For instance, if the question at hand is whether people in their twenties were wealthier or less wealthy in different decades (2000er, 1990er, 1980er and so on), one must apply a diachronic comparison.

A sophisticated form of a diachronic comparison is a comparison of life courses of (at least) two generations (Tremmel 2009). A life course analysis in itself is a longitudinal study. It either

analyzes a specific part of the life course (often: the lifetime that has already passed), or the full life course. Consider the cohort born in 1950 in the lexis diagram. As these individuals move through time they can be subjected to a life course analysis. However, as long as this life course analysis is not compared with the life course analysis of another cohort, say the 1960-born cohort, we have just a longitudinal study in which individuals are monitored over a relatively long period of time, but not a comparison between generations.

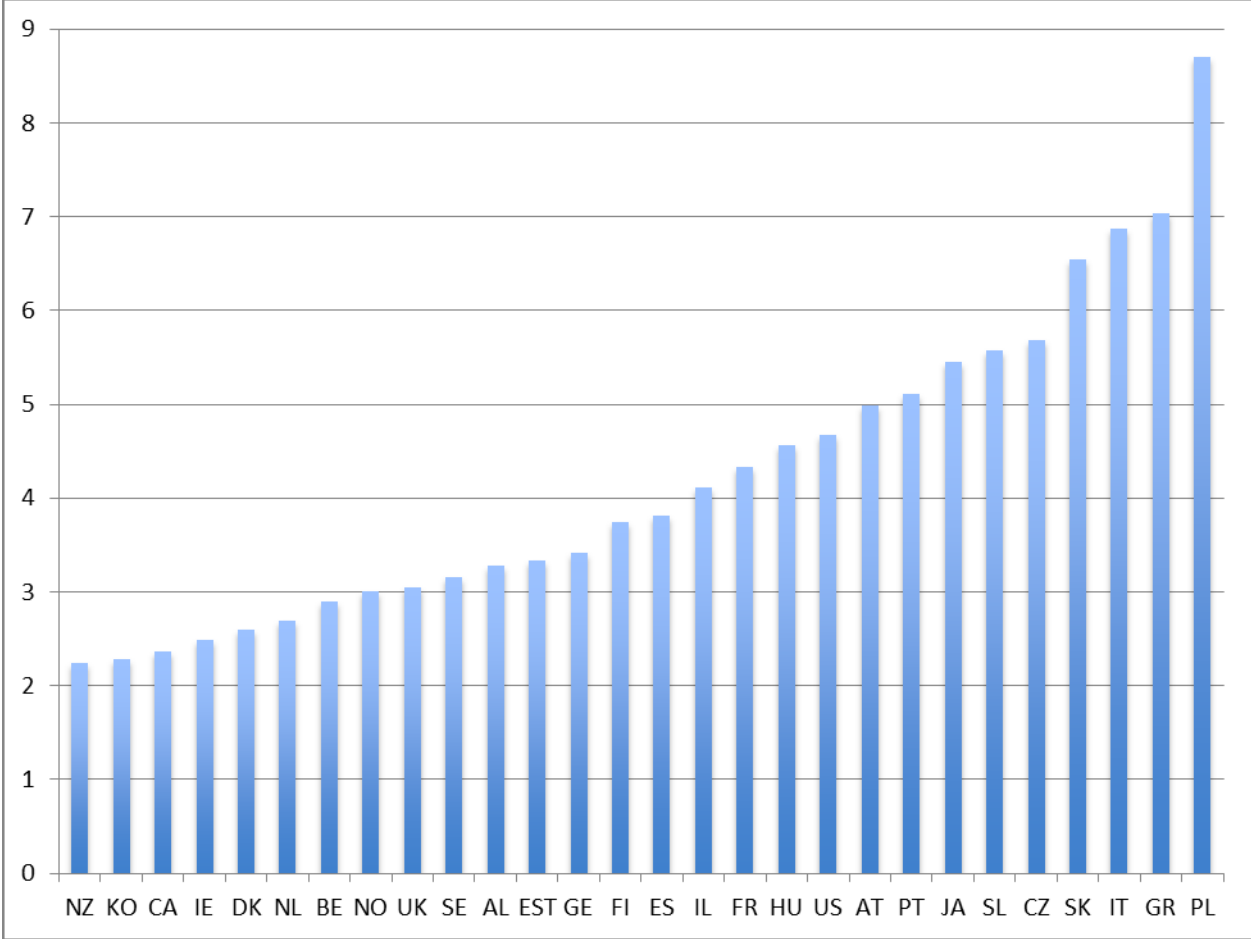
### 3. The *EBiSS* as measure of age-group justice

The overall pro-elderly bias in social spending (henceforth *EBiSS*) is a pragmatic and empirical metric to compare age groups with regard to public policy transfers across 29 OECD countries (Vanhuyse 2013).<sup>3</sup> The analysis is synchronic (an internationally comparable snapshot of how different *age groups* are treated at one point in time), not diachronic (it does not follow cohorts over time). The unit of analysis is countries. The recipients are both the elderly and the non-elderly (in relation to each other); the providers are all tax-payers including future tax-payers if social expenditures are partly financed by borrowing. The methodology and data presented here stems from Vanhuyse 2013 (for previous such approaches, see e.g. Lynch 2006; Tepe and Vanhuyse 2010). On the *elderly*-oriented spending side, the *EBiSS* numerator includes old-age-related benefits in cash and in kind, survivors' benefits in cash and in kind, disability pensions, occupational injury and disease-related pensions, and early retirement for labor market reasons. On the *nonelderly*-spending side, the *EBiSS* denominator includes family benefits in cash and in kind, active labor market programs, income maintenance cash benefits, unemployment compensation and severance pay cash benefits, and all education spending. To control for demographic structure, the resulting elderly/nonelderly social spending ratio has been adjusted by means of each country's old-age support ratio (the number of persons aged 20–64 over the number of persons aged 65 or more).<sup>4</sup> Since public health spending, a major elderly-oriented spending item everywhere, has not been incorporated into these *EBiSS* calculations, the *EBiSS* as defined here almost certainly *underestimates* the pro-elderly bias of welfare state spending.

As Figure 1 shows, the least pro-elderly biased welfare states in the years following the global economic crisis were New Zealand, South Korea, Canada, Ireland, and Denmark. The rest of Europe is more strongly represented at the other end of the spectrum. EU member states occupy eight of the ten highest *EBiSS* positions. Poland was the most pro-elderly-biased welfare state in the sample. The Polish welfare state spent on average 8.7 times as much on each elderly Pole as it spent on each nonelderly Pole in the late 2000s. Following at some distance, Greece and Italy (*EBiSS*

values around 7), Slovakia (around 6.5), then Czech Republic, Slovenia and Japan (around 5.5), were all positioned on the high-EBiSS side of the spectrum as well.

**Figure 2. Elderly Bias Indicator of Social Spending (EBiSS), 2009-2010 or latest**



**Source:** P. Vanhuyse's computations following Vanhuyse (2013). Data from the OECD Social Expenditure Database. [https://stats.oecd.org/Index.aspx?DataSetCode=SOCX\\_AGG](https://stats.oecd.org/Index.aspx?DataSetCode=SOCX_AGG).

The connection between demographic structure and pro-elderly policy bias is spurious. Figure 1 shows that of the OECD's four demographically oldest societies, Italy and Japan had a high level of pro-elderly social spending bias at the end of the 2000s, with values of respectively around 7 and 5.5. But Germany and Sweden, also demographically old societies, showed relatively low pro-elderly bias, with EBiSS values of respectively around 3.5 and 3. Conversely, the Irish and Belgian welfare states spent respectively 2.5 and three times as much on average per each elderly citizen as per nonelderly citizen, even though Ireland was a demographically young society, whereas Belgium was a much older society. In the demographically old Greece, the state spent seven times more for every elderly Greek as it spent for every non-elderly Greek. But in comparably old Sweden, the state spent only three times more.

Demography is *not* destiny as regards the pro-elderly bias of European welfare states. Instead, it is policy choices as determined by longstanding governance cultures that drive *EBiSS* patterns. Together with three Southern countries (Greece, Italy, and Portugal), Slovenia, the Czech Republic, Slovakia and (especially) Poland (which, around 2009-2010, still counts as a ‘young-to-middle-aged’ society), have the most pro-elderly biased welfare states according to the *EBiSS* measure. This can be explained largely as a result of legacies of early post-communist transition, such as the need to compensate pensioners for the loss of their savings through (hyper-)inflation in the early 1990s, ‘familializing’ state approaches towards mothers and children, and policy-induced, historically unprecedented exit into early and disability pensions.<sup>5</sup>

Of course, *EBiSS* figures refer purely to *public* spending efforts. Working-age groups spend very significant time and financial resources caring for both older and, much less visibly, younger generations within family settings. Once one includes also private cash and, most crucially, time transfers in addition to public policies, conclusions differ radically. Gal et al. (2018) show that European welfare states, as welfare *states*, are indeed pro-elderly biased: public policies predominantly serve the elderly today. But at the same time, European societies, as *societies*, transfer more than twice as many resources on average to each child as to each older person, because families transfer resources too, notably cash and time. In line with pro-elderly welfare studies (Lynch 2006; Tepe and Vanhuysse 2010; Vanhuysse 2013), and the results in Figure 1, older Europeans (defined as those who are net resource-dependent in later life) are found to receive on average more than twice as much in net public transfers as children (defined as those who are net resource-dependent in early life): 37 percent of the average prime-earnings income in their country, compared to 15 percent for children. But Gal et al. (2018) show that limiting the analysis of intergenerational resource transfers to public transfers alone seriously misinforms about actual resources received during resource-dependent life stages. If private cash transfers are also taken into account, the picture changes significantly. And more importantly still, if in a third step we expand our currency of justice in public policy and now add transfers of unpaid labour (time), the original proportions are quite simply *inverted*. Public transfer data on their own might by and large be satisfactory for snapshot evaluations of the age group justice of policies (what *states* do). But this indicates the importance of estimating also the value of what families accomplish in cash and non-cash resource transfers, if the aim is to obtain a complete picture of what age groups give each other within *societies*. Europe is a continent of ‘pro-elderly welfare states *and* strongly child-oriented families’ (Gal et al. 2018). Whereas children receive less than 40% of what older people receive in public transfers alone, children receive almost two-and-a-half times *more* when all transfers are combined (Gal et al. 2018). The observation that families, not states, are the main source of

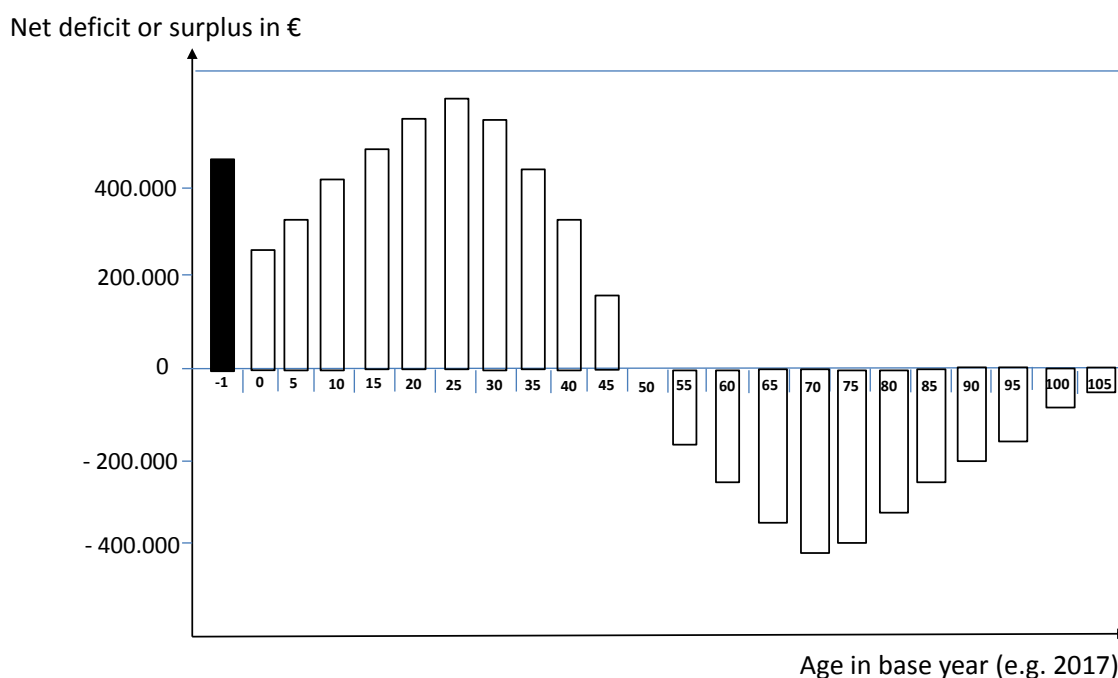


transfers for children in Europe today shifts us from an intergenerational to an intragenerational perspective, as it brings class (and gender) back in. In the (comparative) absence of universal state provision for children, richer families (women) will be able to spend many more resources per capita on their own children than poorer families (Gal et al. 2018). The recent social investment and early human capital paradigm in social policy thus still has much scope for further research in order to complement these massive family investments made in children and compensate for class inequalities and diverging destinies based on the accident of birth (Vanhuysse 2015b).

#### **4. Fiscal deficit accounting as a metric for cohort justice**

In this section, the second meaning of the notion ‘generation’ – *cohorts* – comes to the fore. One often employed method for justice between cohorts<sup>6</sup> is fiscal gap accounting, developed in the early 1990s (Auerbach et al 1991, 1994; Blanchard et al 1990; Blanchard 1993) to analyse the fiscal treatment of current and future cohorts. The name of this method (or ensemble of methods) is still disputed.<sup>7</sup>In, the distinction between explicit and implicit debt is key. The indicators traditionally used in national budgeting, such as annual public deficit or total public debt, only refer to the current year or the results of past development. They are ‘past-looking’. Measuring the explicit debt is measuring fiscal policy in a narrow sense. In contrast, ‘fiscal gap accounting’ aims to measure the fiscal public policy (e.g. public pension policy or public health policy) in a broader sense. Fiscal gap accounting first determines how many taxes, social security contributions, levies, and fees each average individual of today’s cohorts will pay to the state in each year of its remaining lifetime. Secondly, it calculates the transfers (e. g. pension scheme, health insurance benefits, nursing care insurance benefits, children’s benefits, welfare support, public education services, public goods) each individual will receive from the state in the years of his statistically remaining lifespan. Thirdly, the balance between payments and transfers is calculated for each cohort.

Fig. 3: Cohort accounts for remaining lifetime and for entire lifetime (exemplary)



Source: J Tremmel

No sound comparison can be drawn between the presently living cohorts (transparent bars) because a seventy-year-old will obviously receive more money from the state than he will pay in his remaining lifetime, because he is already a pensioner. Instead, this method relies on comparing the net transfer payments of a newly-born child to those of an average individual that will be born in the future (black bar) as both agents' accounts are observed over their entire lifecycle. In a second step, these profiles (often not only age, but also gender-specific) are extrapolated into the future, using a constant annual real growth rate and a discount rate. The projection of future net tax payments for cohort members is then multiplied in a third step with the number of cohort members: the higher the number of net contributors and the lower the number of net recipients in the demographic structure of a country, the better ceteris paribus the long-term financial situation of this country. Financial stability translates into a sustainable situation in which there will be future benefits for future citizens of the country in question. This method can thus measure fiscal sustainability on the macro level.<sup>8</sup>

As illustrated in the Lexis diagram, it is the comparison between full life cycles of different cohorts that matters for judgements about cohort justice. If, in such a full life cycle perspective, the future individual will pay more (or less), the financial policy is called 'fiscally unsustainable' (or sustainable) in the economic literature.<sup>9</sup>

Figure 4 displays some recent findings from the EU Sustainability Ranking 2017 (Peters/Raffelhüsch/Reeker 2018). Regarding the long-term perspectives of the public budgets of

the EU Member States almost all countries have an implicit deficit (in addition to their explicit debt) in % of their GDP.

Fig. 4: *International Comparison of Public Debt (in % of GDP) in 2017*

		Explicit debt	Implicit debt	Total debt
1	Croatia	83	-95	-12
2	Bulgaria	29	35	64
3	Sweden	42	43	85
4	Latvia	41	59	99
5	Denmark	38	67	105
6	Portugal	130	-7	123
7	Italy	132	-2	130
8	Estonia	9	134	144
9	Germany	68	78	146
10	Poland	54	103	157
11	Czech Republic	37	141	177
12	Malta	58	140	198
13	Hungary	74	133	206
14	France	97	153	249
15	Austria	84	177	260
16	Slovak Republic	52	228	280
17	Cyprus	107	181	288
18	Lithuania	40	248	288
19	The United Kingdom	88	210	298
20	The Netherlands	62	247	309
21	Greece	181	145	326
22	Finland	63	342	406
23	Romania	38	380	417
24	Belgium	106	383	489
25	Slovenia	79	412	490
26	Spain	99	520	619
27	Ireland	73	624	697
28	Luxembourg	21	895	915

Source: Peters/Raffelhüschchen/Reeker 2018, Ehrbare Staaten? Update 2018. Die Nachhaltigkeit der öffentlichen Finanzen in Europa, p. 20 (data from European Commission reports and their own computations).

Available at: <https://www.stiftung-marktwirtschaft.de/wirtschaft/themen/generationenbilanz.html>

A comparison between 2017 and 2016 is interesting. Estonia, for instance, cut down its implicit debt by more than three quarters within one year, from 134% of GDP to 29%. Malta and Cyprus roughly halved their implicit debts as well. In Sweden, for instance, it went the other way around with a sharp increase from 43% of GDP to 155%. Methodologically, this shows that ‘implicit debt’ is a much more volatile indicator than ‘explicit debt’.

Fiscal gap accounting leads to important insights with regard to intergenerational justice of public policy. This relatively new metric adds the forward-looking perspective (and the concrete amounts) of the ‘implicit national debts’. But, of course, fiscal gap accounting has (like every method) its own limitations. Methodologically, proponents of fiscal gap accounting tend to assume that the persons alive in the base year will enjoy the advantages of the current financial policy all their lives, despite the fiscal gap, while succeeding generations will start closing that gap, which they deem fiscally unsustainable (intertemporal budget restriction of the state, for a formal illustration see Benz and Fetzer 2006, 370). According to this theoretical premise, cohorts that are currently close to dead are able to ‘escape’ from this system without penalty, while future generations inevitably will have to pay the price. But the next generation can, in theory and practice, pass on its debts to the second-next. Thereby the next generation is just as well off in terms of implicit debt as their predecessors that created the debt. This ‘game’ is quite different from a chain letter game or Ponzi game<sup>10</sup> as these fraudulent games always fail because eventually the later buyers are the last buyers. But there will always be a following generation, as far as we know.<sup>11</sup>

## 5. Age group and cohort inequalities in comparison

As noted above, one widely shared assumption in theories of intergenerational justice is that it is not *prima facie* problematic that at one given point in time different age groups receive an unequal treatment from the state (see e.g. Daniels 1988; Schokkaert and van Parijs 2003). But if, even after taking into account socio-economic controls and reasonable income growth over time, such inequalities are perpetuated across different birth cohorts over the entire life cycle, then we end up with intergenerational inequities. In other words, age group inequalities are not necessarily objectionable (although McKerlie 2013 and Bidadanure 2016 have argued that age group inequalities should not be excessive, otherwise ‘relational equality’ would get lost), while inequalities over the entire life cycle between birth cohorts are *prima facie* objectionable. If they occur there will be generations (in the sense of cohorts) that take advantage of other generations.

What insights do methods like the EBiSS and Fiscal Gap Accounting add to this view? As stated by Figure 1, Poland, Greece, Italy Slovakia and the Czech Republic have high EBiSS levels. These states spend on average between 5.5 and 8.5 times as much on every elderly citizen as on every non-elderly one. Now, those who are old now were once young and those who are now young will once be old. As long as a specific EBiSS value stays relatively stable over time, it need not necessarily create inequalities between people’s complete lives, as everyone belongs in turn to each of the age groups. Rather, we would have a case of welfare states based on ‘Spartan-childhoods for luxury-old-age’ tradeoffs for all cohorts in, say, Poland or Greece. Thus there would be no *prima facie* intergenerational injustice *if* and only if every successive Polish cohort could count on roughly the same EBiSS value as in the future.<sup>12</sup> If, however, as seems more likely than not given recent policy developments in both countries, today’s young or working-aged Greeks and Poles will later be confronted with a significantly lower EBiSS, then we would have a strong indication of intergenerational injustice.

Age group measures like the EBiSS are most informative if they cover a long time horizon and if the analysis is repeated often. If those countries that have a high EBiSS in 2010 had a low one 40 years ago, age group inequality would turn into cohort injustice, for this meant nothing else than that people that were in their twenties and thirties in 1970 (that is: forty years ago) profited a lot from state benefits in *all* stages of their lives.

Cross-country studies are still missing although the methodology is evolving (see Birnbaum et al. 2017). One of the few country studies on how different generations have fared under the social welfare policies of governments since the 1930s is David Thomson's (1991) who argues that in New Zealand, "the big winners (...) have been (...) those born between about 1920 and 1945. Throughout their lives they will make contributions which cover only a fraction of the benefits." (Thomson 1991, p. 3).

Especially in view of recent and near-future expected demographic aging developments, it would stretch the limits of credibility to argue that the high Polish, Greek or Italian EBiSS values truly reflect democratically desired 'Spartan childhood for luxury old age' tradeoffs, *and* that such values have been – and will remain – relatively stable over time. There is growing evidence that, even after taking into account socio-economic controls and reasonable income growth over time, such inequalities are not balanced over the entire life cycle for succeeding cohorts, especially for countries in Southern and continental Europe such as Spain, Italy, and France. In these countries, even after taking into account reasonable income growth over time for all cohorts, the Baby Boom generation born after World War II has been significantly better off in terms of post-tax-and-transfer disposable income than cohorts born both beforehand and afterward (Chauvel and Schröder 2014; see also Chauvel 2010). We then end up with lucky and unlucky generations – or insider and outsider cohorts – within the same country. This would be a violation of the ethical principle of *indirect reciprocity*.

As it happens, mounting evidence indicates that younger age groups today increasingly doubt the intergenerational equity of current social policy patterns – with good reason. For instance, Sabbagh and Vanhuyse (2010) study more than two thousand undergraduate university students from eight democracies across four worlds of welfare, using the fair balance of benefits *relative* to contributions yardstick set out above. They find that young adults aged 18-35 were systematically perceived to get a worse deal of rights and obligations from the welfare state than either older working-age adults or the elderly (Sabbagh and Vanhuyse 2010). Moreover, in all European countries, public transfers already tend to flow from non-elderly to elderly groups today (Lee and Mason 2011; Gal et al 2018).

We now turn to the inequalities between cohorts that are measured by generational accounts – and the question if they create injustices. At first glance, high implicit debts (>500 % of GDP) seem utterly unfair. But one must not forget that intergenerational justice verdicts cannot be derived

from the look at only one cohort-generation. A present cohort with a high implicit debt might seem to have a deplorable fiscal lot, but if previous and succeeding cohorts have had and will have a similar implicit debt, one cannot say that the present generation is treated unfairly. This is probably the main conceptual difference to the concept of ‘sustainability’ which establishes an absolute standard.<sup>13</sup> From the correct statement that countries like Ireland have a problem with their fiscal sustainability one cannot infer that one new-born Irish person is treated unfairly with regard to previously born Irish persons. Of course, this does not justify the reverse conclusion that cohort injustices do not exist in Europe. In certain countries and certain sectors, these injustices undoubtedly exist. In Germany, for instance, the younger cohort’s yield out of their mandatory contributions to the pay-as-you-go pension scheme will be significantly lower than that of earlier generations (Tremmel 2009, 32).

#### 6. **Early human capital investment and other policy reform proposals**

Combating the inherent ‘presentist’ bias of voters and politicians in democracies is needed to safeguard the opportunities of future generations in aging welfare states (Boston 2016; Ricoy-Gonzalez and Gosseries 2016; Vanhuyse 2015b, Tremmel 2015). On the policy supply side, seemingly ‘obvious’ measures that merit a new look in light of this perspective include fiscal and social security benefits or credits to reward family members for raising children and caring for the elderly (often expending substantial private cost for societal benefit), the adjustment of official pension ages and pension benefits to rising life expectancy, and ecologically motivated tax frameworks such as carbon taxes and phasing out nuclear energy.

There is a particularly strong case for mobilizing political coalitions for spending more on high quality *early childhood* education and similar social investment policies that increase the human capital of the smaller-sized younger generations in aging societies, and thus bolster the fiscal basis of their welfare states in the process (Francesconi and Heckman 2016; Heckman 2013; Vanhuyse 2015b). Such investments are a way to boost the skill levels of young people preparing to enter future labor markets. They are a readily available way to marry economic efficiency (in the form of very high social returns throughout the later lifecycle) with intergenerational justice (in the form of leveling the playing field for all citizens across barriers of class and cohort). As Folbre (1994) puts it, children are significant *public* goods, predominantly privately paid for. More precisely, children are *deliberately socialized* goods whose future benefits are rival and excludable (Olsaretti 2013). Parents bear the lion’s share of the cost of raising their own children – in cash and time, both directly and in terms of opportunities foregone. These costs are in part socially imposed by ever-stronger legal obligations for continuity of adequate care (Alstott 2004). Yet, to the extent

that children subsequently become productive tax and social security paying adults, they create positive externalities that benefit all of society (Gal et al. 2018). They will finance, for instance, future public pension and health and longterm care benefits, all of which will also benefit non-parents.<sup>1</sup>

In other words, children's future benefits are heavily socialized, but their current costs only marginally so. The resources involved in raising children need to be increasingly socialized to safeguard the sustainability of aging welfare states. Asset-based predistributive policies such as stakeholder grants or baby bonds, to be set up by government for each newborn baby and potentially topped up by parents, which could be made accessible with compound interest rates upon reaching legal voting age, are one example of an intergenerationally progressive policy (Ackerman and Alstott 1999). What such proposals have in common is the idea that they might partly counter the often high pro-elderly bias of public spending in favor of the currently elderly in a way that would be more explicitly youth-oriented and comparatively cheap (possibly even longterm self-financing) from a macro-fiscal perspective.

Against the backdrop of the growing numerical weight of pensioner-voters, could changes in voting schemes create room for intergenerational justice with regard to public policy? Different proposals have been discussed. For instance, proposals for (proxy) voting rights for parents (Demeny 1986, 1987; van Parijs 1998) extend the scope of the franchise. Specifically, they suggest giving each parent (or caretaker) one half extra vote, to be used on behalf of each under-age child until that child reaches legal voting age (for empirical effects of this changed voting scheme, see Goerres and Tiemann 2009; Vanhuysse 2013; 2014). Opponents see advocacy voting rights for parents as a violation of the fundamental normative principle of democracies: one-person-one-vote. But proponents note that children are persons too, that democratically no longer capable very sick or very old persons are not systematically disfranchised either, and that proxy votes would reward parents for the public good they produce for society in raising children.

Many opponents of parental proxy voting argue for a general lowering of the minimum voting age as an alternative. They point to the fact that young adults and older children can hold different political opinions and thus prefer different parties than their parents. Tremmel and Wilhelm (2015) advocate a 'flexible voting age' building on the willingness of minors to participate in elections. This proposal takes into account that babies, little children and many younger adolescents have no interest in political participation anyway. The 'flexible voting age'-proposal contains a need for adolescents to register in voting lists and must thus strictly distinguished from proposals that come

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<sup>1</sup> For an analysis of the ethics of child-rearing and families, see Gheaus in this volume.

under the name of ‘voting from birth on’ or ‘voting age zero’. Lowering the voting age is a worldwide trend that can be monitored since the advent of modern democracies in the 18th century, and it is likely to continue in the future.

## 7. Conclusion

We end by noting that there is a remarkable asymmetry in the socialization of intergenerational transfers in modern societies. Working-age people pay taxes and social security contributions to institutionalize care for older persons *as a generation*. But they invest significant amounts of private resources in cash and in time to raise *their own* children, often with large social returns (Gal et al. 2018). This key socialization asymmetry has important implications for both inter- and intra-generational justice in pro-elderly welfare states that are simultaneously child-oriented societies. Pro-elderly *policy* constellations may derive from rational (as opposed to strongly egoistic) reasoning by the electorally key group of older voters. These voters, as (grand)parents, may correctly assume that they are more reliable and more concentrated sources of resource transfers to their *own* (grand)children than the state (which, by definition, also favors other people’s (grand)children). And the fact that it is families, not states, who shoulder the major burden of investing in children-as-public-goods in Europe shows why policies are needed to combat intragenerational problems of class.

Equality-of-opportunity enhancing policies such as early human capital investment in particular seem a promising way forward. They are doubly progressive on the outcome side, in that they also especially likely to boost the cognitive and non-cognitive skills of *young* children born in *disadvantaged* families (Vanhuysse 2015a). Current policy constellations in many countries seem to put a heavy and disproportionate burden especially on the *poorest members* of the younger generations, because they do not receive as many public resources as the poorest members of the older generation and their parents and grandparents cannot transfer as many private resources as can wealthier parents and grandparents (Gal et al. 2018). Significant early human capital investment policies are thus also a way to marry inter- and intra-generational justice.

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## ENDNOTES

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<sup>1</sup> One factor that also impacts the wellbeing of a current generation is the size of it in relation to the size of the predecessor generation, see Easterlin 1980.

<sup>2</sup> Theories of justice that are designed for other policy areas, say environmental policy or education policy, will have other currencies; but these are different debates in which we do not ter here. We do not make the claim that monetary units/indicators are the most adequate currency for all conceptions of justice ; only that they are an adequate currency for conceptions of intergenerational justice within the realm of public policy (without denying that monetary transfers impact important policy goalssuch as wellbeing, quality of life, and human capabilities). On the adequate equalisandum in theories of egalitarian justice, see Otsuka 2011.

<sup>3</sup> The EBISS is one dimension within Vanhuysse's four-dimensional Intergenerational Justice Index, see Vanhuysse (2013, 2015a). Another example of the 'assessing impact' approach is Leach et al. (2016).

<sup>4</sup> A hypothetical construct illustrates this aspect of the EBISS: in country A, the population at t1 is divided evenly in elderly and non-elderly citizens. Public expenditure is likewise distributed evenly between these two groups. The value of the EBISS is therefore 1. Between t1 and t2, the population of country A ages and at t2, elderly people make up two thirds and non-elderly people just one third. If public expenditure is distributed with the same ratio (two thirds for the elderly, one third for the non-elderly), the EBISS does not change. It remains at 1. But if the elderly who are now a political majority, get more than two thirds of public expenditure, the EBISS will rise above 1.

<sup>5</sup> For instance, in the first seven years of democracy alone, literally hundreds of thousands of working-age Hungarians and Poles, but not Czechs, were incentivized to exit into early and disability pensions by means of more generous and better protected pension benefits relative to 'younger' programs such as unemployment and family benefits (Vanhuysse 2006).

<sup>6</sup> In the terminology of Tremmel (2009), 'justice between age groups' is synonymous to 'temporal generational justice'. Justice between ensembles of circa 80 successive birth cohorts (exact number is determined by the average life expectancy in a country) is synonymous to 'intertemporal generational justice'.

<sup>7</sup> Out of the three possible umbrella terms – fiscal gap accounting, fiscal sustainability accounting, generational accounting – we generally use the first term.

<sup>8</sup> Benz and Fetzer (2006), p. 372: "In contrast, the OECD method employs two different ways of projecting revenues and expenditures. The first projection method, used for all revenues and for so-called non-age-specific expenditures, increases these aggregates at the same rate as is employed for the GDP, which necessitates an additional GDP projection. The second projection method, applied to all future age-specific expenditures, varies between different studies, along with which of the expenditures are assumed to be age-specific."

<sup>9</sup> It is worth noting that fiscal gap accounting is an umbrella term that encompasses quite diverging methods (for an overview, see Benz and Fetzer 2006). One method rests on the methodological assumption that all cohorts currently alive are entirely exempted from helping eliminate a country's fiscal gap. They assume an infinite time horizon. Often, the term 'generational accounting' (or classical generational accounting) is reserved for this method, see Raffelhüschen 1999; Bonin 2001. Another method reflects the increase of contributions/reduction of transfers by/to currently living cohorts in order to leave no deficit behind that needs to be paid by future generations. Here, *the presently living generations alone* balance the account. A third indicator assumes the currently living *and* future generations together will close the fiscal gap. The time horizon cannot be infinite here, but the choice of a certain number of years is quite arbitrary. The European Commission reports' period under review extends until the year 2060.

When it comes to calculate the fiscal gap for a specific social system in a specific country, the devil lies in the details.

For instance, some approaches take into account that statutory pay-as-you-go schemes have a yearly adjustment of contributions before restoring the fiscal deficit [surplus]; some take account of the fact that some national laws establish an upper ceiling for contributions, etc.

<sup>10</sup> A Ponzi game is an investment operation in which the operator generates returns for the first investors through revenue paid by succeeding investors, rather than from legitimate business activities. It is considered a fraudulent scheme as the agent (an individual or a corporation) offers very high short-term returns for early investors that cannot be sustained for later investors.

<sup>11</sup> It could also be argued that proponents of fiscal gap accounting need to show that governments are really unable to run permanent primary deficits without breaking the intertemporal budget constraint. The point that 'the markets' will penalize countries with high fiscal deficits still needs to be made: For instance, the US federal government has a massive fiscal gap, roughly \$200 trillion, but it still has a good rating from the rating agencies. Another methodological limitation of fiscal gap accounting is that the financial policy, the demographic and the economic situation in the base year are assumed to be constant over the projection horizon. Setting the key input variables of the base year as representational is risky – and usually counterfactual. While demography is quite stable, public policy legislation sees significant changes almost in every legislature. A comparative analysis in several consecutive base years is necessary to

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reduce this methodological problem. In the European Union, fiscal gap measures are calculated every three years for all its member states (European Commission 2015).

<sup>12</sup> For elaborations on this argument, see e.g. Daniels 1988; McKerlie 2013; Bidadanure 2016.

<sup>13</sup> The well-known sustainability definition issued by the Brundtland Commission demands that present needs of present people be satisfied. The needs of future people are a secondary, auxiliary condition. This makes sustainability a 'sufficientarian' account of intergenerational justice. While relational accounts of intergenerational justice compare the state of one generation to another generation in order to arrive at justice statements, a 'sufficientarian' (=non-relational) account of intergenerational justice forgos any comparisons between two or more different generations.