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Bartolini, Stefano and Sarracino, Francesco

University of Siena, National Institute of Statistics and Economic Studies (STATEC)

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Happier and Sustainable. Possibilities for a post-growth society

Stefano Bartolini¹ and Francesco Sarracino²

Abstract

Empirical evidence suggests that achieving sustainability requires reducing economic growth, not just greening it. This conclusion often leads to ecological pessimism, based on two beliefs. The first is that there is a human tendency to unlimited expansion; the second is that lack of consensus makes limiting growth politically unfeasible. We challenge both beliefs. The decline of fertility and per-capita income growth provide reasons to expect decreasing human pressure on ecosystems. Moreover, the lack of a clear alternative to growth as a means to increase well-being creates the widespread perception of a trade-off between sustainability and current well-being. This hinders the consensus to the policy of limits to growth. Drawing on a large literature on happiness, social capital and other topics, we argue that policies for social capital can decouple well-being from economic growth. Indeed, the crisis of social capital experienced by much of the world's population is at the origin of the current unsustainable growth of the world economy. Declining social capital leads the economies to excessive growth, because people seek economic affluence to compensate for the emotional distress and collective disempowerment caused by poor social capital. We then suggest policies that, by promoting social capital, would expand well-being, and shift the economy to a more sustainable path characterized by slower economic growth. Such set of proposals is more politically viable than the current agenda of limits to growth and reconcile sustainability and well-being.

Key-words: sustainability; social relations; subjective well-being; economic growth.

¹ University of Siena, Department of Economics and Statistics, University of Siena, Italy stefano.bartolini@unisi.it

² National Institute of Statistics and Economic Studies (STATEC), Research Division, Luxembourg, Grand Duchy of Luxembourg. Francesco.Sarracino@statec.etat.lu

1. Introduction

The biosphere is in trouble and tackling ecological crises cannot be postponed any further. On this, there is growing agreement among policy makers, scientists and the public. Disagreements arise about the solutions: on one hand, techno-optimists argue that the solution is to adopt technologies with low environmental impact; on the other hand, eco-pessimists accept that green technologies are part of the solution, but they should be combined with limits to economic growth. Eco-pessimists hold that the anthropic pressure on ecosystems will remain unsustainable if the economy and the population continue to grow, notwithstanding green technological progress.

This latter view generally leads to pessimistic conclusions about the feasibility of a sustainable economy. Pessimism originates from two widespread beliefs: the first is that humankind tends to unlimited expansion; the second is that limiting growth is politically impossible. Indeed, the policy of limits to growth has never gathered wide consensus: economic growth is the priority of political parties' agendas and of public concerns, and a turnaround does not seem realistic in the near future. Therefore, the idea that limiting growth is crucial for sustainability easily translates into ecological pessimism.

In this paper, we challenge both beliefs. Available evidence does not support the claim that green technologies may decouple economic growth from increasing pressure on ecosystems. This is the subject of section 2. However, this does not authorize ecological pessimism. Empirically well-founded expectations of declining population and slow-down of per-capita income growth over the next decades belie the belief in a human tendency to permanent expansion (section 3). In section 4, we suggest that ecologism could overcome its political impotence if it adopted a policy agenda pursuing sustainability through the expansion of well-being. This agenda stems from the explanation of the current unsustainable growth of the world economy provided by defensive growth theory. Defensive growth stresses the damages to social and environmental capital generated by the growth process and argues that they boost private consumption, work hours and economic growth. This further harms social and environmental assets, thus feeding back growth in a self-reinforcing loop. This growth is *defensive* because it stems from the attempts of individuals to defend themselves from the decline in the quality of the social and environmental context in which they live.

Such a self-reinforcing loop creates formidable consumers and workers because people's ability to enjoy life depends increasingly on what they buy. By promoting well-being through policies for social capital we suggest that it is possible to break the vicious circle of defensive growth and decouple well-being from consumption, thus favoring the acceptability of growth reduction. Section 4 also reviews the evidence supporting the predictions of defensive growth models, and discusses the role of advertisement and corporate influence on politics in preventing collective actions. In section 5, we provide some concrete examples of policies for social capital, as a first step towards increasing happiness and empowering

collective action. In particular, we discuss possible reforms of urban planning, teaching methods, and advertisement regulation. Section 6 summarizes our argument and concludes.

2. The Great Acceleration

The contrast between techno-optimism and eco-pessimism runs through the entire scientific and political history of the debate on environmental issues. Techno-optimists used various slogans, such as sustainable development, environmental Kuznets curve and, more recently, green growth to put forward the idea that continued economic expansion is compatible with the planet's ecology, as technological change will allow us to absolutely decouple economic growth from resource use and carbon emissions. By contrast, eco-pessimists argue that absolute decoupling is impossible on a global scale. There is evidence that anthropic pressure on the environment grows more slowly than Gross Domestic Product (GDP) (relative decoupling), but no evidence suggests that absolute decoupling is possible (Hickel and Kallis 2020, Wiedmann et al. 2015, Parrique et al. 2019, Dyrstad et al. 2019).

These criticisms are rooted in the idea of *limits to growth*, a concept which arose from the studies that laid the foundations of ecologism (Meadows et al. 1972, Georgescu-Roegen 1993). Such studies indicated the enormous growth of economies in the last two centuries as the origin of unsustainability - besides the adoption of industrial technologies. This is what came later to be known as the Great Acceleration (Steffen et al. 2015). This label refers to the upsurge of per-capita income and population, which began with the Industrial Revolution and took off after WWII.

It is estimated that around the year 1000 there were more than 300 million people in the world. By 1800 the population counted about one billion individuals: it took about 800 years to triple the population. By 1959 the world population amounted to 3 billion people: this time it took just over 150 years to triple the world population. By the end of the century, the population had more than doubled in less than fifty years.

Throughout the pre-industrial era, the population grew slowly because humanity was in the first phase of its demography, in which high mortality tends to compensate for high fertility. In the last two centuries we entered the second phase, in which fertility remained high but mortality collapsed, allowing the demographic take-off. Mortality plummeted because the Industrial Revolution initiated an increase in per-capita income that brought improvements in hygiene, food and health standards.

Although it characterizes only a short period of human history, the Great Acceleration managed to take critical ecosystems on the edge of breakdown. The context of the Great Acceleration provides robust empirical support against techno-optimist claims. In fact, absolute decoupling of GDP from the total use of natural resources is an illusion on a global scale, and the transition to green technologies is as much necessary for sustainability as it is far from being sufficient. The reason is that, even with highly efficient

production processes, we still need material inputs. Once we hit the ceiling of efficiency, additional growth requires new resources.

Unfortunately, the political history of ecology does not warrant optimism about the possibility of doing what is necessary: limiting growth. Thus, pessimism spreads among ecologists, as most people seem to remain “blind to the wisdom of limitations” and indifferent to the necessity of “scaling down and pulling back.” (Crist 2019). The 'collapsology', popular in France, predicts the collapse of civilization (Servigne and Stevens 2015). Influential ecologists suggest to give up the fight against climate change: optimism hurts because it leads us to throw money and energy into a lost cause. Better to give up and dedicate our resources to something in which we can succeed (Franzen 2019).

3. Good news

3.1 Declining fertility

The good news is that the XXI century could look very different from the two preceding ones. Most of the world already moved out of the second phase of demographics and transitioned into the third one, characterized by low levels of both fertility and mortality. In the third phase the population tends to age and to decline because the fertility rate (the average number of children per woman) falls below the replacement level, the number necessary to keep the population constant (which is estimated around 2.1 children per woman).

The list of countries where the population is already in steady decline (net of immigration) includes Western countries, Japan, South Korea, Eastern Europe and Russia. More importantly, in many of the world's most populated developing countries the population decline is about to start, as fertility is already below or rapidly approaching the replacement level. This holds for China and India as well, which together host over a third of the world's population and used to be the demographic challenge of the world. Table 1 illustrates the drop of fertility rate in 10 developing countries that, together, make up half of the world's population.

Tab. 1. Fertility rates in 10 big developing countries, 1960-2018

Countries	Fertility rates by year				Population 2018 (millions)
	2018	1999	1979	1960	
Brazil	1,7	2,3	4,1	6	209,5
Mexico	2,1	2,7	5	6,8	127,5
China	1,7	1,6	2,8	5,8	1.393
India	2,2	3,8	4,9	5,9	1.353
Indonesia	2,3	2,5	4,6	5,6	268
Vietnam	2	2,1	5,2	6,3	95,5
Thailand	1,5	1,7	3,6	6,1	69,5
Malaysia	2	2,9	4,1	6,4	31,5
Iran	2,1	2,1	6,4	6,9	82
South Africa	2,4	2,8	5	6	58
World	2,4	2,7	3,8	5	7592

Source: World Bank, <https://data.worldbank.org/indicator/SP.DYN.TFRT.IN>,
<https://data.worldbank.org/indicator/SP.POP.TOTL>

The data reported in Table 1 start in the 1960s, when fertility peaked in the listed countries. . The trends are similar to those of Western countries or Japan, where the population decline has already begun: fertility sharply declines and stabilizes below or around the replacement level. The only countries where fertility did not decline after 1999 are those where the average woman had already 2.1 children or less (China, Thailand, Vietnam and Iran). When fertility is high, its decline can be very rapid. China went from over 6 children per woman to less than 3 in 11 years (1968-1978), and Iran in 10 years (1986-1995).

Once fertility rates fall below the replacement level, the number of births does not fall immediately because it takes time for the age structure of the population to change and the population to start declining. For example, in China the population continued to increase for decades after the fertility rate fell below the replacement level, because the past population boom created a young population with a

large stock of women in reproductive age. However, the peak of Chinese population is close (forecasted between 2022 and 2025).³ If Chinese fertility follows the Japanese one, at the end of the 21st century the Chinese population will halve, compared to current levels (Bricker and Ibbitson 2019).

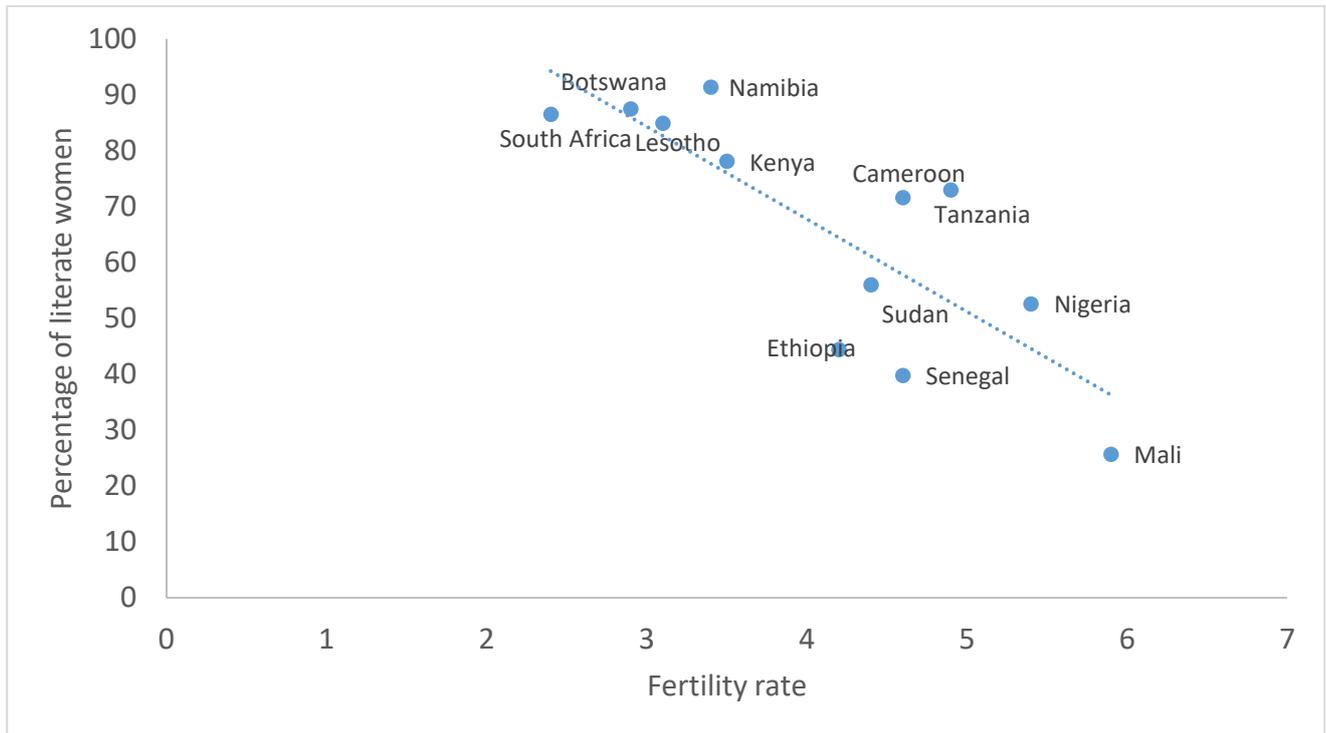
Education empowers women, and has a powerful influence on fertility reduction. The increase in global women's literacy rate (from 58% in 1960 to 83% in 2018) is the most important single factor explaining the drop in the world fertility rate (from 5 in 1960 to 2.4 in 2018). Women's education drove the fertility to collapse everywhere, including Islamic countries, from Morocco to Iran.

Only Sub-Saharan Africa remains the core of an explosive fertility. However, there are reasons for optimism: in South Africa, a country with high rates of female education, the average number of children per woman is 2.4. In neighboring countries, such as Botswana, Lesotho and Swaziland, the average is around 3 children. The big challenge remains Nigeria, with more than 200 million people, where each woman has on average more than 5 children. The difference between two extremes of African fertility, Nigeria and South-Africa, mirrors their difference in women literacy rate (54% in Nigeria and 86.5% in South Africa in 2018). In Africa the maps of high fertility and poor female education almost perfectly overlap, as can be seen in figure 1.

The world population decline is an undisputed forecast; what is up for debate is when this will happen. United Nations expects the population to start diminishing at the end of the century, when the world population will reach the peak of 11 billion. However, others believe that the UN underestimates the decline in fertility and place the inflection point at mid-century (Bricker and Ibbitson 2019). Lutz and KC (2014) estimate that the world population will never reach 11 billion if the progress of women's education is taken into account. Population will peak around 2070, with about 9 billion people. By the end of the century, the population will have already returned to today's levels.

³ <https://www.bloomberg.com/news/articles/2021-05-11/china-s-population-continues-to-grow-even-as-births-plummet>, <https://www.bloomberg.com/news/articles/2021-04-29/china-s-population-may-peak-next-year-state-media-says>

Figure 1. Women's literacy rate and fertility rate in 12 African countries



Source. Women literacy rate: Literacy rate, adult female (% of females ages 15 and above) | Data (worldbank.org). Fertility rate: <https://data.worldbank.org/indicator/SP.DYN.TFRT.IN>

Note. The correlation between the two variables is -0.81. Female literacy refers to 2018 or the closest observation.

3.2 Secular stagnation

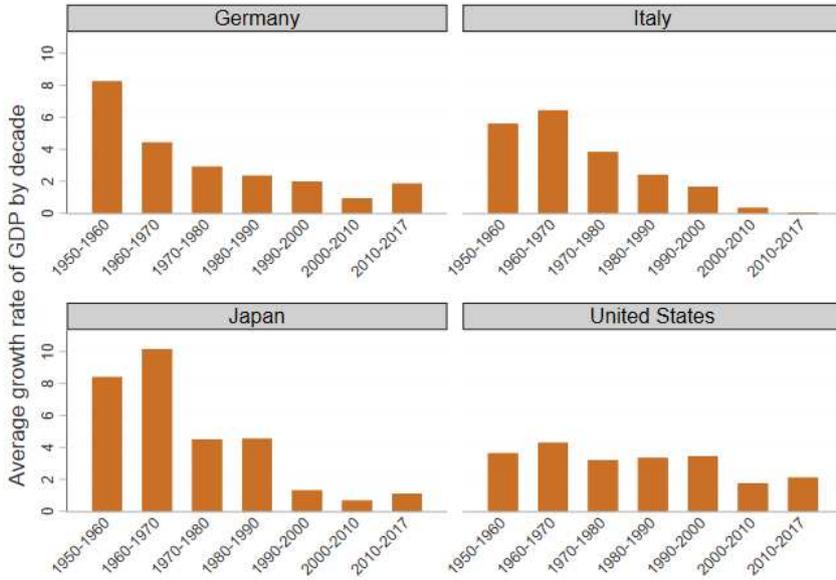
Vigorous economic growth is a distant memory in industrial countries. The average growth rates per decade of both total and per capita GDP have decreased since the 1950s (Figures 2 and 3). Since the 1980s they have generally fallen below 2%. After 40 years of sluggish growth, economists realized that industrial economies entered a phase of *secular stagnation*, i.e. slow growth over the long-term (Teulings and Baldwin, 2014).

Stagnation concerns both total and per capita GDP. Moreover, evidence from industrial countries shows that an aging population consumes on average less than a young one, despite the increase in consumption of certain goods and services, such as health care. This suggests that population aging will further slowdown the dynamics of per capita GDP.⁴⁴ The growth deceleration involves developing countries as

⁴⁴ https://www.unecce.org/fileadmin/DAM/pau/docs/age/2009/Policy_briefs/Policy-brief-Old_persons.pdf

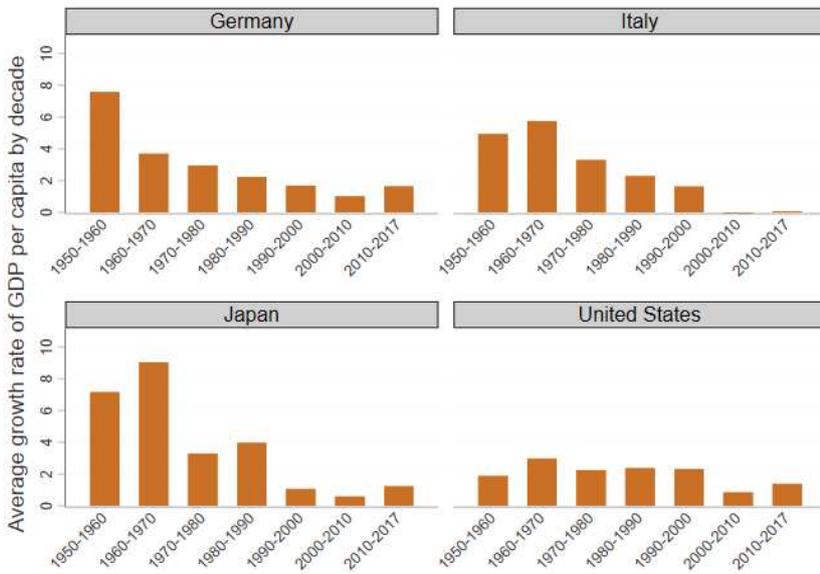
well. The growth rates of the Chinese economy in recent years (around 6-7%) dwarf western ones, but they are far below those of the roaring 1990s.

Figure 2. Total GDP growth rates in four industrial countries. Averages by decade 1950-2017



Source: Penn World Tables.

Figure 3. Per capita GDP growth rates in four industrial countries. Averages by decade 1950-2017.



Source: Penn World Tables.

3.3 The Great Deceleration

Summarizing, the decline in fertility began in industrial countries and extended to developing ones over the past half century; industrial economies exhibited slow economic growth, and developing countries seemed headed towards a similar future. Such trends are stable enough to indicate a future Great Deceleration: declining population and the stagnation of per-capita income will probably deflate the global economy. Despite uncertainties on the date, human expansion on Earth – whose beginning dates back to the appearance of our species - is likely to peak within decades.

This is breaking news for sustainability because degrowth (negative economic growth) would gradually relieve the human pressure on the environment, especially if it is accompanied by a transition to green technologies. The future we see now is far more reassuring for sustainability than the one visible a few decades ago, when the context suggested that the population naturally tended to expand in the absence of Malthusian constraints.

The problem is that deceleration may still need too much time to take place. In the meanwhile, the risk of collapse of crucial ecosystems grows (Rockstrom et al. 2009), alongside with the global economy (about 3% GDP yearly growth) and the population (about 220,000 people per day, which means 80 million per year). In short, even if the end of the Great Acceleration is within reach, sustainability requires a faster transition to degrowth than the system has shown so far.

4. The paradox of ecologist impotence

According to a 2020 survey spanning 50 countries and covering 56% of the world's population, two-thirds of respondents think that climate change is a “global emergency”.⁵ This majority is the result of a decades-long increase in the public awareness of global warming and other ecological crises. Documentaries and books on eco-friendly practices and lifestyles have gained popularity. Each new generation seems to give increasing priority to ecological issues. However, the growing cultural influence of ecologism did not result in increasing political influence. The limited success of green parties in the 2019 European parliament polls does not overturn the evidence that ecology received low priority in the political history of the West.

This is the paradox of ecologist political impotence: a widening gap between growing cultural influence and persistent political weakness. It is such a gap that motivates ecologists’ growing pessimism, many of whom surrendered to the idea that an effective eco-friendly change will gather political support only after a huge catastrophe.

⁵ [The Peoples' Climate Vote | UNDP](#)

Pessimism is understandable, but not justified for several reasons. Despite the fact that curbing growth is currently political utopia, supporting the deceleration of the economy is much easier than imposing it. Most importantly, the consensus to economic growth may be surprisingly fragile if an alternative to growth as a means to improve lives emerged. In the rest of the paper we argue that this is exactly what is happening: a huge body of research on happiness and social capital suggests how to improve lives independently from economic growth.

4.1 Why ecologism failed

Why a widely acknowledged problem, such as the ecological one, did not translate so far into large consensus to green policies? We argue that there is something wrong in the policy agenda and in the political message of ecologism, which debunks its potential consensus. Both agenda and message derive from the traditional environmentalist explanation of unsustainability: current generations do not take into account the long-term costs of their affluence. The reason is the low importance that a humanity obsessed by its own standards attributes to the living standards of future generations. In economists' jargon, unsustainability results from people having high rates of time preference or high discount rates of the distant future (Bromley 1998, Pearce et al., 1990).

According to this view, there exists a trade-off between the well-being of present and future generations. To protect the future, present generations must consume less; sacrifices are necessary. The policy implication is that the protection of the environment requires limits: to pollution, production, hours of work, types of food, travels, building materials, fabrics, etc. Such a view does not offer an alternative to growth; it simply proposes giving up the growth project.

Here is where the political weakness of ecologism originates: less consumption is unattractive because it equates leading grim, unhappy existences. The idea that growth is the way to greater happiness as well as the cure-all therapy for social problems - from unemployment to crime and cultural backwardness - occupies a prominent place in our culture. How could the quality of life be improved without economic growth? What is progress in the absence of economic growth? The political weakness of ecologism is grounded on the vagueness of the answer to such questions.

Eco-friendly reforms presented as sacrifices appear expensive. Additionally, reforms are characterized by great uncertainty in the results and the timing of the risks they seek to avoid. This uncertainty raises doubts about whether a green turn should be a priority, and predisposes to postponing costly reforms for the sake of other socio-economic issues. Thus, the uncertain perceptions of the proximity and dimensions of a possible catastrophe limit the support to green reforms.

The political message of ecologism is problematic as well. Communication to be effective must arise positive emotions. The problem of ecologist communication is precisely its emotional impact. In the absence of an alternative project to growth, the ecologist message sounds threatening for two reasons:

first, the threat of ecological disasters motivates the need for change; second, the policies advocated for sustainability sentence current generations to a present of sacrifices. It also sounds preachy - because people are those to blame for ecological decay - and pauperistic, as it emphasizes the need for current sacrifices for the sake of the future. In short, the ecological message is depressive, as it evokes only negative emotions.

In sum, both the ecologist agenda and political communication follow from the traditional explanation of the ecological crises. Therein originates their scant appeal. In the next section we provide a different explanation for unsustainability, which may lead to more appealing agenda and message.

4.2 At the roots of the ecological crises: long work hours

In 1930 Keynes predicted that the average Briton's work week would drop to 15 hours within a century. Almost a century later, the working week in Britain is around 40 hours. In no industrial economy work hours fell as dramatically as Keynes predicted. This has huge implications for the ecology. Had been fulfilled, people would work almost two-thirds less than they currently do, their incomes would be just over a third of current ones, and industrial economies would be almost two-thirds smaller. Both pollution and the use of energy and materials would be enormously lower, compared to current levels. In other words, the environmental crisis is strictly connected to the crisis of leisure: the ecological crisis would not exist if current leisure time were as abundant as Keynes expected. Unsustainability is the other side of an overworked world.

Predictions à la Keynes were common in his day. Indeed, the exhausting work hours from which all European industrial revolutions started had been dwindling up to Keynes time. The decrease in hours worked lasted half century after Keynes's prediction. The debates on the problems of the forthcoming "leisure society" were still vibrant in 1970s. But in the 1980s leisure disappeared from public debate and unions' agendas, and working hours stopped decreasing in Europe and began to increase in the United States (Rogerson 2008, Stiglitz 2008). These trends remained unchanged since then. In sum, Keynes's secular prediction turned out to be more or less accurate for the first 50 years, but failed over the following 40 years.

The history of work time in the industrial age suggests two things: the first is that industrialization can produce time as well as goods; for most of its two centuries of history it did so. The second is that this is not an ineluctable destiny, contrary to what Keynes thought. Thus, to explain the current ecological crisis, it is essential to understand why the long lasting decline in work hours stopped since the 1980s.

The arguments of those who, until the 1970s, predicted an increase in free time were reasonable. Industrialization would guarantee enormous productivity gains to the benefit of wages, thus progressively freeing workers from need. Since need was the master of time, this process would be paralleled by the

liberation from work of substantial portions of time. Once released from the pressures of poverty, time would be increasingly allocated to enjoy life, such as cultivate personal interests and relationships.

In essence, the decrease of the importance of money in people's lives would drive the increase in free time. According to Keynes, there were cultural obstacles to this change because "we have been trained too long to strive and not to enjoy." For this reason, the society that he imagined one century later would adopt very different values from the society of his time: "the accumulation of wealth" will be "no longer of high social importance" and will be considered one of "the most distasteful of human qualities".

Keynes's and his contemporaries' misprediction did not concern the immense increase in productivity they expected for the following century, which actually occurred. The error concerned the implication that productivity gains would increase free time beyond consumption, as happened for more than a century. Instead, in the last 40 years only production and consumption have increased, but not leisure. The expected decline in the importance of money in people's lives has not occurred. In other words, today's societies have expanded their production capacities as expected, but have chosen a mix of leisure and consumption that is much more unbalanced towards consumption than imagined a century ago. Why? The reason is intuitive if one thinks of the society envisioned by Keynes, in which money would have lost its importance: people currently work long hours because money is still at the top of their concerns. In the next section we suggest a possible explanation.

4.3 Defensive growth

Keynes had in mind the traditional description of economic growth as an expanding cake from which everyone gets a larger slice. This view implies that economic growth is always beneficial to well-being. Over time, however, it has become increasingly clear that some of the cherries on the cake are toxic. Mounting warnings about ecological crises and the decline of social capital document the pervasive negative externalities produced by economic growth, and the related expansion of market activity. In economics, negative externalities indicate the negative impact of economic activity on common goods, such as environmental and social ones.

Defensive growth models argue that growth-related negative externalities fuel the growth process itself. Individuals' attempts to defend themselves from the effects of toxic cherries favor the growth of the cake (Bartolini and Bonatti 2003, 2008a; Antoci and Bartolini 2004). The reason is that negative externalities reduce well-being and induce people to purchase on the marketplace substitutes to compensate for the decline of environmental and social assets. The increase in the demand for substitutes, and the high workload necessary to finance them, stimulate economic growth, further fueling negative externalities. Hence, defensive growth is the result of a self-feeding, vicious circle in which economic expansion is the cause and consequence of its harmful effects on environment, society and, ultimately, well-being.

Defensive growth is based on the idea that social capital – defined as “networks together with shared norms, values and understandings, that facilitate cooperation within or among groups” (OECD, 2001, p.41) – provides individuals with free goods and services that can be replaced with private goods available on the market. For instance, care-givers are a solution for the elderly when they are alone and ill; baby-sitters are necessary to look after children if they are alone; home entertainment makes pleasant evenings at home when people are lonely or the city is too dangerous to be out at night; alarm systems, security doors and private guards protect people’s possessions; companies pour considerable resources to monitor employees’ work activity, or to write sophisticated contracts to prevent opportunistic behaviors. The same holds for environmental quality. Vacations in pristine environments provide the clean air, seas and rivers that we miss in our cities; triple glazing is a defense against noise; if water is polluted, people can install filters; expenditure for pollution abatement, treatment of illnesses caused by pollution, and emergencies/reconstruction after extreme climate events are a direct response to environmental decay.

Previous examples constitute what Hirsh (1976) referred to as defensive expenditures: spending aimed at defending from negative externalities. Markets provide many private solutions to the decay of commons, such as social or natural assets. In brief, having more can make up for sharing less.

Moreover, poverty of social capital and a high priority of money in people's lives can be linked by mechanisms of psychological compensation, as suggested by many social psychologists. In social psychology the priority that people attach to material possessions is called degree of materialism (Kasser 2002). Two aspects of possession are important to materialistic individuals: what they own and what others own. The latter is relevant because of social comparisons. Social comparisons refer to people’s tendency to “keep up with the Joneses”, i.e. to compare with self-relevant individuals – those who form the so-called reference group. Social comparisons hamper well-being: the better-off are people in the reference group, the worse an individual feels.

Using a longitudinal sample of individuals, Pieters (2013) provides evidence that materialism and loneliness are intertwined over time. Importantly, loneliness contributes more to materialism than the other way around. Experimental evidence confirms the negative impact of materialism on social capital. In one experiment, subjects treated with unscrambled words enticing money behaved in less helpful and generous ways than subjects who received unscrambled neutral words (Vohs, Mead and Goode, 2006). In another experiment, people exposed to images of luxury consumer goods were less interested in relational activities than those who viewed neutral images (Bauer et al. 2012).

Advertising plays a central role in promoting the substitution of common with private goods. Ads build an idealized identity, which - through consumption, status or success - reassures individuals distressed by the lack of fulfilling relationships. Advertising promises a purchasable solution as a fix to afraid, lonely, and insecure people. It does so by associating positive feelings, such as love, to goods that in reality do

not share any emotion. Whether real or illusory – as the promise of advertisement - the role of money as a private defense against common decay is at the root of defensive growth.

Defensive growth entails a substitution process in which market goods and services progressively replace declining non-market sources of well-being. Keynes focused on the bright side of growth, namely that luxury goods for one generation become standard goods for the next one and basic needs afterwards. The dark side of defensive growth is that goods that were free for one generation become scarce and costly for the next one, and luxury goods thereafter. Pristine environment, a dense network of daily face-to-face interactions, a social fabric of neighborhoods and companionship for children and the elderly, safe public spaces, or simply human curiosity are examples of goods that have become scarcer across generations.

Defensive growth suggests that Keynes missed the toxic cherries of the growth cake. Defensive expenditures entail high work effort and stimulate a formidable appetite for money even in affluent societies. The reason is that what people can or cannot do depends increasingly on their possessions. By amplifying the need to consume, the decay of commons fuels growth and gives way to increasing negative externalities. Such growth is fueled by its own destructive power; it is the result of a self-feeding loop in which growing economic affluence is the flip side of increasing environmental and social poverty. Degradation of commons counters private prosperity, and results in the contrast typical of the “affluent society” (Galbraith, 1958).

When growth is defensive, the declining quality of environment and relationships, as well as the high workload, offset the positive effects of growing income for well-being. Haste and unhappiness are two sides of the same coin: people work hard when what they privately own constitutes their defense against common decay. This decay explains why greater economic prosperity may not lead to greater well-being. An economic cake that grows because a larger slice is allocated to cure the effects of its toxic cherries does not benefit happiness. In other words, defensive growth constitutes an explanation to the renowned Easterlin paradox, i.e. the lack of association between economic growth and subjective well-being in the long run. When growth is defensive, negative externalities offset the positive contribution of growing income to well-being.

Defensive growth theory has been subject to empirical scrutiny in recent years, and the results support its predictions. In the remaining of present section, we review the supporting evidence.

4.4 Money as compensation for poor relationships

A key assumption of defensive growth models entails the role of money as a compensation for the decay of commons. If we focus on social capital as an example of common, this assumption implies that income and well-being should be more strongly associated in individuals with poor relationships, than in individuals with a rich social life. In the economists’ language, this amounts to assume that social

capital and income are substitutes in the utility functions of individuals.⁶ This hypothesis has recently been tested using survey data covering more than 500,000 respondents from various datasets (German Socio-Economic Panel, European Social Survey, European Union Survey on Income and Living Conditions, and World Values Survey/European Value Study) (Bartolini et al., 2019).

The study analyzes the way social capital affects the relationship between subjective well-being and two forms of income: absolute and reference. Absolute income indicates one's purchasing power. Reference income is a frequently used measure of social comparisons. It is defined as the average income of the reference group, i.e. the Joneses one compares with. This description emphasizes the relative dimension of social comparisons, in that they depend on one's income compared to the average income of her reference group.

Results show that social capital affects the association of wellbeing with both forms of income (absolute and reference). The impact of absolute income on well-being halves when individuals are socially engaged, compared to socially isolated individuals. This means that roughly 50% of absolute income has a defensive nature, meaning that its importance for well-being doubles for those who experience relational poverty. However, 100% of social comparisons are defensive: their importance completely cancels out for individuals with a rich social life, whose well-being is unrelated to whether the Joneses are more or less well off. Isolated people are the most concerned about how much more or less they earn compared to others. This suggests that people engage in the race for position as compensation for poor relationships.

The same finding holds at aggregated level, either nationally or regionally (see figure 4). The figure shows the cross-country negative association between an index of social capital and the life satisfaction gap between rich and poor people – a measure of the distribution of well-being among income groups. The difference between the life satisfaction of rich and poor people is lower in countries and regions where the share of socially active individuals is greater, compared to countries with lower shares. For instance, on the left hand side of the scatterplot of figure 4 there are countries, such as Serbia and Bulgaria, where the share of people with high social capital is low. These countries, however, are also characterized by large differences (more than 2.5 points on a 0-10 scale) in life satisfaction between rich and poor people (reported on the y-axis). On the contrary, the life satisfaction gap is less than one in countries such as Switzerland, Iceland or Netherlands, where the share of people with high social capital is high. This finding is independent from a country's level of income inequality or GDP per capita. Regression results show that, holding constant the Gini index of the income distribution, and GDP per capita, the

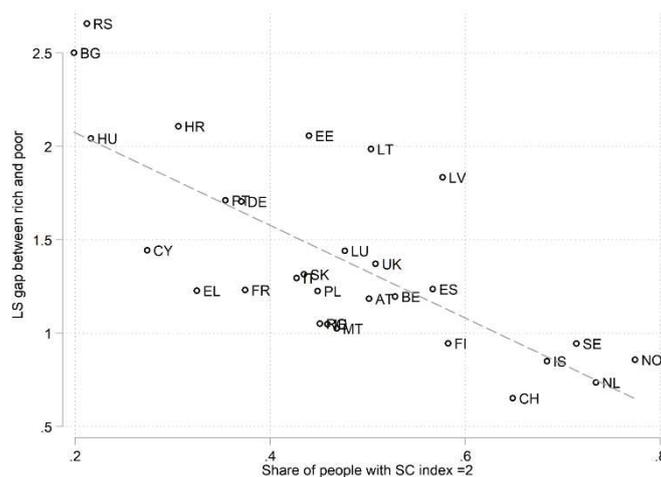
⁶ Conversely, if social capital and income were complements, the well-being of individuals with more social capital should be more dependent on their income, compared to individuals with less social capital.

life satisfaction gap between income groups is smaller in countries and regions where social capital is higher.

The cross-country result mirrors the micro findings described above. In fact, since social capital strongly moderates the extent to which money buys happiness, income disparities translate into strong well-being disparities in poor social contexts. Instead, in socially rich countries the difference in well-being between income groups shrinks.

These findings are consistent with the view that increasing relational poverty boosts the importance of money in people's lives. In the next sections, we provide evidence indicating that this may be a good description of what happened in many countries over the past 40 years.

Figure 4. Life satisfaction gap between rich and poor people is smaller in countries with a rich social life than elsewhere (29 European countries; data EU-SILC 2013.)



Note: Social capital is measured as the share of respondents with a social capital index = 2. The social capital index has a maximum score of 2 if a person trusts others and meets friends at least once per month. Life satisfaction ranges on a 0 to 10 scale, where largest scores stand for higher life satisfaction. We define rich and poor people as respondents belonging to the top and bottom income quintile, respectively. Aggregated data are computed from individual data using sample weights.

Source: Bartolini et al., 2019, *European Survey on Income and Living Conditions*.

4.5 The flip side of economic success

According to the predictions of defensive growth theory, the consequences of a social capital crisis range from depressing well-being to amplifying the importance of money (both relative and absolute) in people's lives, which boosts hours worked and GDP. Evidence from countries that have been the main protagonists of economic growth over recent decades is compatible with the idea that a substantial part of their growth has been defensive. This is the case of the United States, the fastest growing, big industrial

country, and of China and India - the Asian economic miracles. These countries share a striking decline in their social capital and show all the consequences predicted by the theory of defensive growth.

Chronic loneliness has reached epidemic proportions in the US. In 2004, a quarter of Americans reported to have no one they could discuss confidential matters with. This share was 2.5 times lower 30 years before (McPhearson et al. 2006). In 1980, one out of five American over 44 years old reported to be lonely, in 2010 they were one out of three. Nearly half of them indicated that their loneliness had persisted for 6 years or more (Wilson and Moulton 2010). As for other age groups, 80% of under 18 years old and 40% of over 65 report feeling lonely (Berguno et al. 2004, Pinquart and Sorensen 2001, Weeks 1994).

Increasing divorces, paralleled by declining marriages, interpersonal trust, strength of family and neighborhood ties, associational activity, solidarity, integrity, indicate a decay of social and affective connections among Americans (Gould and Hijzen 201, Putnam 2000, Bartolini et al. 2013). China and India seem to exhibit similar patterns of social capital decline. Loneliness and divorces spread and interpersonal trust, associational activity, and civic behavior declined (Bartolini and Sarracino 2015, Zang and Zhao 2017, Vasudeva 2019).

The increasing trend of work hours in the US since the 1980s is a widely debated peculiarity among industrial countries, where hours worked were generally stable or slightly declining over the same period (Prescott 2004, see also Alesina et al. 2005 and Stiglitz 2008, Schor 1992; Aguiar and Hurst 2007). As for China and India, reliable long time series on working hours are lacking, but there is little doubt that they have reached exhausting levels. Most companies in both countries adopt the 996 system (from 9:00 am to 9:00 pm, 6 days per week; i.e. 72 hours per week) (Hruby 2018, Huang 2019).

The long work hours in the Asian giants are linked to the gold rush experienced by their citizens. China and India place first and second in the world ranking of the population share reporting to measure their success by the things they own (71% and 58% respectively). China ranks world first also in the share of citizens reporting to “feel under a lot of pressure to be successful and make money” (68%). The US rank first among western countries.⁷ These records result from a decades-long rise in materialism in these countries (Luo 2015; Twenge and Kasser 2013, Bartolini and Sarracino 2015). As for well-being, these three countries share a long-term deterioration of subjective measures of well-being, as we discuss in the following section.

To the best of our knowledge, there is no other explanation beyond defensive growth of the long-term coexistence of social capital decline, high growth, decrease in happiness, long work hours and soaring materialism.

⁷ https://www.ipsos.com/sites/default/files/news_and_polls/2013-12/6359.pdf

4.6 Defensive growth and the Easterlin paradox

Two key elements of defensive growth concern the factors that affect well-being. On one side, defensive growth models assume that social capital has a major impact on well-being; on the other, they predict that growth of per-capita income will not ultimately increase well-being. Both aspects have been extensively investigated. Many studies document the positive association between social capital and subjective well-being across individuals, countries and regions (Helliwell and Aknin 2018 for a review).

As for the relationship between growth and subjective well-being, in a famous article published in 1974, Richard Easterlin first clarified that subjective well-being in the US stagnated over time, despite substantial economic growth. More recent evidence showed that, in the long run, economic growth is not associated with greater subjective well-being across countries (Easterlin and Angelescu 2009). This result, commonly known as the “Easterlin paradox,” has been strongly criticized and underwent extensive scrutiny (Stevenson and Wolfers 2008a; Sacks et al. 2010; Veenhoven and Vergunst, 2014); however, some more recent studies have corroborated its existence (Easterlin et al. 2010; Mikucka et al. 2017). Additionally, Beja (2014) argues that even if the trends of subjective well-being and economic growth are statistically related, the magnitude is too small for growth to have a meaningful impact on subjective well-being.

Social capital plays a much greater role than GDP in shaping the evolution of subjective well-being over time. Time series regressions from large samples of countries document that the relationship between GDP and subjective well-being is significant over the short term, but weakens with the length of the time span considered. The reverse holds for social capital, whose relationship with subjective well-being strengthens over time (Bartolini and Sarracino 2014). Moreover, Mikucka et al. (2017) show that changes in GDP are related to changes in subjective well-being only in countries where trust is non-declining, and income inequality is not increasing.

Besides cross-country studies exploiting repeated time-series observations, a number of scholars analyzed the within countries relationship between growth and well-being over time. These studies find that the decline of social capital contributes to explaining the drop of subjective well-being in the US, China and India. Between 1990 and 2007 in China, with the economy growing by a roaring average yearly rate of about 10%, average life satisfaction declined by about 7%. Brockmann et al. (2009), Easterlin et al. (2012), Easterlin et al. (2017) and Bartolini and Sarracino (2015) discuss potential explanations for the striking Chinese version of the Easterlin paradox. Each article agrees that social comparisons, fueled by increasing income inequality, hampered well-being. Moreover, Easterlin and colleagues (2012 and 2017) emphasize the depressive role of rising unemployment that is coupled with the loss in income and job-related safety nets. In addition, Bartolini and Sarracino (2015) estimate that nearly 19% of the life satisfaction loss in China is predicted by the erosion of social capital which paralleled the economic take-off. Moreover, they

find that 35,3% of well-being loss is predicted by changes in preferences. In particular, both absolute and relative income became more important for life satisfaction while social capital lost importance, partly reflecting the spread of materialism among Chinese people. The coefficient of absolute income in 2007 was 7 times greater than in 1990, while the coefficient of comparison income doubled. Data collected after 2007 indicate a possible recovery of well-being. Esterlin et al. (2017) and Morgan and Wang (2018) suggest that such a recovery may be driven by improvements in trust, employment, and the social safety net.

In the US, happiness significantly declined since the 1970s (Blanchflower and Oswald 2004, Stevenson and Wolfers 2008, Sachs 2017). Bartolini et al. 2013 show that such decline is largely predicted by declining social capital and strong social comparisons. In India life satisfaction dropped by 10% from 2006 to 2017 (Graham et al. 2018). Our preliminary calculations suggest that, similarly to the US, the main predictors of the Indian version of the Easterlin paradox are the decline in social capital and soaring social comparisons.

Summarizing, defensive growth emphasizes the role of social comparisons in debunking the potential of economic growth to increase well-being, which is in line with most scholars' findings. However, in the context of defensive growth, the growing importance of social comparisons is the other side of the coin of declining social capital, the driving force of the erosion of well-being.

4.7 Economic growth and social capital

Social capital, and in particular trust in others, is often seen as a catalyst of economic interactions -- making them safer and cheaper -- and, therefore, enhancing growth (Arrow, 1972). However, the economic literature neglected the relationship between economic growth and social capital over time. Only a few studies have explored this relationship and documented that economic growth and social capital are negatively correlated over time (Helliwell, 1996; Putnam, 2000; Sarracino, 2012; Roth, 2009; Sarracino, 2013).

In particular, Sarracino (2013) used three proxies of social capital (trust in others, share of people involved in associational activities, and an index of civic cooperation) to document that economic growth correlates negatively with the accumulation of social capital over time (see Table 1). The author studied the association between long-term trends (at least 10 years) of various measures of social capital, and GDP per capita.⁸ Results indicate that economic growth correlates negatively with group membership (-

⁸ Data are sourced from the World Values Survey – European Values Study integrated dataset, whereas GDP per capita is drawn from World Development Indicators. Data cover 32 countries in case of trust and civic cooperation, and 31 countries in case of group membership.

0.25, significant at 5%), trust in others (-0.25, significant at 5%) and civic cooperation (-0.29, significant at 5%). These results hold also in case of longer (at least 15 years) or shorter (at least 5 years) time periods. Some exploratory tests suggest that the negative relationship between economic growth and social capital could be due to rising income inequality: in the 50% of countries in which inequality grows the most, the trends of social capital are negatively correlated with economic growth, whereas for the remaining countries the same relationship is non-significant. This finding is consistent with the literature emphasizing the negative impact of high inequality on social capital (Alesina and La Ferrara 2006; Bjørnskov 2006; Costa and Kahn 2003; Knack and Keefer 1997).

The concurrence of rapid growth and erosion of social capital is puzzling for mainstream economics, which sees social capital as a catalyst of economic activity (Knack and Keefer 1997; Helliwell and Putnam 1995; Guiso et al. 2006; Algan and Cahuc 2013; Alesina and Giuliano 2015). Defensive growth theory reconciles this seemingly paradoxical result by clarifying that rapid growth can be a consequence of declining social capital, and vice versa. This explanation is compatible with the hypothesis that social capital contributed to economic prosperity at the onset of economic take-off in the West. Subsequently, however, economic growth became more and more defensive, in particular in the US, where the erosion of social capital fuelled growth.

4.8 The tragedy of collective impotence

When it comes to sustainability, the conflict between private affluence and common poverty – at the core of defensive growth – takes place in the distant future. The negative externalities produced by current economic activity deplete the resources available to future generations. According to the traditional environmentalist explanation, this happens because of the high discount rate of the distant future or, in other words, because current generations attach little importance to the living standards of future ones. This amounts to saying that current generations consider the depletion of the future as a reasonable price to pay for current prosperity. Put bluntly, people currently alive care little if the ship they are traveling on is the Titanic, as long as the crash with the iceberg will occur when they will be no longer on board. What really matters is that currently the food on board is good and the orchestra plays great music.

Defensive growth provides a different explanation for unsustainability. In defensive growth models the lower the discount rate, i.e. the more current generations care for future ones, the more the economy sets on an unsustainable growth path - from both the environmental and social point of view. The reason for this apparent paradox is that in a world in which well-being depends on things that can be bought and on things that nobody sells, only the former can be accumulated privately. Commons, by contrast, can only be accumulated through collective action. In these conditions, the only reasonable strategy that an individual has to protect her descendants from future common decay is to accumulate (and leave them) the only possible asset she has control on: private goods. However, the hoarding of private wealth feeds

growth and negative externalities, resulting in an unsustainable future. Thus, the greater the current concern for future generations, the worse the future conditions will be.

In these circumstances, the dynamics of the economic system do not reflect individuals' time preferences. People would prefer a less aggressive economic system towards the commons, but this is a collective construction, beyond their control. Thus, their uncoordinated, private efforts to defend their descendants from collective, future decay end up worsening such decay. Unsustainability results from individuals having only a private defense from future collective degradation: an "every man for himself" strategy. The richest have the best chance to get through. After all, everyone knows that when the Titanic sinks the wealthiest are the best placed to be rescued.

Two critical hypotheses of defensive growth drive this conclusion. The first is that individuals are aware that the economic system threatens sustainability. There is little doubt that public awareness of ecological crises increased over time, leading to a vast majority of the world public who defines climate change as a global emergency.⁹ Similarly, there is little doubt that the spread of ecological concerns is associated to rampant pessimism. More than 70% percent of Italians and 65% of French people agree with the statement that "civilization as we know will collapse in the years to come"; 56% of Brits and 52% of Americans share this view; Germans are last in the ranking of pessimism: only 39%. As if to say that in the most optimistic country in the West, nearly 4 out of 10 people expect the collapse of civilization in foreseeable times. Among Italians under 35 this percentage is 85%. At the top of the list of reasons indicated for the collapse of civilization is a series of environmental and social disasters.¹⁰

The second crucial assumption of defensive growth is that collective action is not an option: the only possibility is to act individually. This assumption mirrors the evidence of a sharp, long-term decline of confidence in politics characterizing industrial countries. The political system, indeed, constitutes the main form of institutionalized collective action. In the 1960s, 80% of Americans trusted the federal government all the time or most of the time.¹¹ This portion dropped to 20% in recent years. In the 1970s, 40% of Americans trusted the Congress; 40 years later, only 10% does (Bartolini et al., 2013; Lipset and Schneider, 1983; Putnam, 2000). Similar trends are observed in Western Europe and Australia (Papadakis, 1999). The collapse of confidence in political systems in industrial societies is undisputed, and it is strictly related to pessimism about the future (Bartolini and Sarracino, 2018).

Summarizing, two key conditions underlying defensive growth - pessimistic expectations about the distant future and extensive distrust in politics - plausibly mimic the current features of industrial

⁹ [The Peoples' Climate Vote | UNDP](#)

¹⁰ <https://jean-jaures.org/nos-productions/la-france-patrie-de-la-collapsologie>

¹¹ Pew Research Center <https://www.people-press.org/2019/04/11/public-trust-in-government-1958-2019/>

societies. The implication is that an economy can be unsustainable because current generations are trying to defend future ones, and not the contrary – as assumed by mainstream explanations. The feeling of collective disempowerment produces the paradoxical result of worsening the conditions of future generations in an attempt to protect them. Unsustainability appears as a tragedy of collective impotence that results from the hunt for a private exit strategy from collective problems.

4.9 Do people care about future generations?

In addition to the two discussed in the previous section, there is a third condition that in defensive growth models generates an unsustainable economy over the long-term: individuals care about future generations. In fact, the lower the discount rate of the distant future, the more the economy evolves in an unsustainable way.

How much do people care about future generations? The answer is very controversial. Preferences over the very long-term are essential to assess the amount of resources that current generations are willing to allocate to the prevention or mitigation of future environmental crises. Economists' views on this matter diverge radically, as shown by the debate raised by the Stern Review (Stern 2007). The review's claim for immediate action to reduce global warming is based on the assumption of a very low level of the discount rate of the distant future. Stern argue that discounting the future in the very long-term implies ethical considerations concerning the very survival of our species that are not involved when considering a future within the life span of current generations. His conclusion is that future standards of living are just as important as current ones. On this basis, the review claims that the expected benefits of deep and urgent reductions in CO₂ emissions outweigh their costs.

Weitzman (2007), Nordhaus (2006) and others have considered Stern's as an extreme assumption about time preference, which amplifies the benefits of deep cuts in greenhouse gas emissions. Most of the criticism focuses on the high discount rate revealed by financial markets, which suggests that the future is far less important to people than Stern assumed.

However, the preferences revealed by financial markets are not a good source of information on societal evaluation of the distant future. While private markets provide reliable information on how much a society values time within a generation, there is no rate of return on private capital over a time horizon that affects future generations. The few estimates of the discount rate on private markets for very long horizons (100 or more years), conclude that it is much lower than implied by most economic analyzes (Giglio et al. 2014).

A number of researchers have tried to overcome the limitations of *revealed preferences* by estimating the long-term discount rate through questionnaires. They ask respondents how much money they would be willing to pay to avoid a complex series of more or less degraded scenarios that affect various horizons of the distant future (Layton and Brown 2000, Atkinson et al. 2009). The main limitation of this approach,

called *stated preferences*, is that the answers to these questions can be guided by the respondents' desire to "buy moral satisfaction" (Kahneman and Knetsch, 1992). In real life, individuals could make far less generous choices towards future generations than stated in the interviews, once facing concrete trade-offs between present and future well-being.

Furthermore, evaluating the trade-offs between present and future scenarios presented in the questionnaires is cognitively demanding and respondents may be reluctant to make the effort to provide answers that accurately reflect their preferences. The conclusion is that neither revealed nor stated preferences provide reliable information on societal evaluation of the distant future. This lack of information is at the root of the extreme divergence of opinions on the matter.

Recently an alternative approach has been developed to collect information on the importance of the distant future, called *derived preferences*. This approach uses information on individuals' expectations about the future of the next generations and estimates how they affect current subjective well-being (Bartolini and Sarracino 2018). The authors investigated seven national and international survey datasets, with more than 500.000 observations from all over the world. They tracked respondents' well-being and their expectations about a distant future, and they found that those who feel that humanity's future is bleak are less happy than those who see a bright future. The magnitude of the coefficient is comparable, in absolute value, to the ones of other well-known correlates of well-being, such as getting married or unemployed. The use of instrumental variables to take into account the possible endogeneity of the relationship confirms the strong negative impact of a pessimistic view of the future on current subjective well-being.

This result suggests that people care about future generations. After all, it is not a rosy or gloomy expectation that makes the difference for people who are uninterested in the future, and for whom their lifespan is the only concern. If individuals attach little importance to the living conditions of next generations, their expectations about the future - whatever they may be - should have little or no influence on their present subjective well-being. If, on the other hand, people care about the distant future, their expectations should have a significant impact on well-being. The idea of a distant future filled with disasters would depress their happiness, and vice versa.

In conclusion, derived preferences inform about how much people care for future generations by estimating the impact of future expectations on current well-being. This approach overcomes the limitations of the two sources of information on time preferences used so far, revealed and stated preferences, and suggests that people's vision of the distant future is an important ingredient of their well-being.

4.10 Unsustainability as a systemic failure

The explanation of unsustainability provided by defensive growth is different and incompatible with that provided by the ecologist tradition, based on intertemporal greed of current generations. It denies both the assumptions on which the latter is based : i) the behavior of economic systems reflects the importance that current generations attach to the distant future; ii) greater consumption increases individuals' well-being.

Defensive growth focuses on the role of money as a private defense against current decline of the commons and fears of future decline. Money thus takes on a double function: it defends individuals today and it will defend their descendants. This amplifies their efforts to make money. These efforts generate long work hours and economic growth, which in turn worsens the conditions of present and future commons, feeding back the mechanism. The rush to private protection is therefore the problem and not the solution. Environmental destruction is just one of the dark faces of a society that pursue money as compensation for the distress it creates. An economy of anxious individuals who compete to escape and allow their descendants escape collective degradation is an economy that produces the outcome that people are trying to escape. The feeling of collective disempowerment is a pillar of this process.

4.11 Postdemocracy

The analysis provided so far has an innovative implication with respect to the ecological tradition: rebuilding trust in the political system is crucial for sustainability. Declining trust in politics may mirror a declining capacity of Western political systems to reflect the interests of the majority of citizens. Influential political scientist define contemporary political systems as 'post-democracies', suggesting that the growing influence of economic elites in political decision-making has caused a regression to a pre-democratic situation, where exercise of political power was restricted to closed elites (Crouch, 2004).

Gilens and Page (2014) brought impressive quantitative evidence of postdemocracy in the US. Using survey data on the opinions of different groups of American citizens about almost 2000 policy issues collected over decades, they document that economic elites and groups representing economic interests have a substantial impact on American political decisions, while average citizens and mass-based interest groups have little or no influence. When the majority of citizens disagree with the economic elites they generally lose, a situation that can be better described as oligarchy than as democracy. They emphasize that the influence of big business on policies has been increasing since the 1980s.

A study on Germany echoes these conclusions. Since the 1980s, policies of all governments have protected major economic interests (Elsasser et al. 2018). Similarly, Vauchez and France (2017) have reconstructed the revolving door between public service and private interests that dominates French politics.

The growing influence of big business on politics had profound effects on policies, such as fiscal ones. In OECD countries, the highest rate of income tax fell from 66% to 42% from 1981 to 2010 (Forster et al. 2014). In the same period, the average corporate income tax declined from 47% to 25% from 1981 to 2010 and the dividend tax from 75% to 42% (Bastagli et al. 2012).

The debate on how to get out of this crisis of democracy is huge, especially in the United States, and is characterized by a wide variety of proposals. Regarding the financing of political campaigns for instance, proposals range from a publicly funded voucher available to every citizen for anonymous donation to chosen campaigns (Ackerman and Ayres 2008), to banning all campaign contributions from for-profit organizations.¹²

Such varied proposals suggest that democracy can and should be innovated to reduce the disproportionate influence of corporations on policies. The success of these reforms is crucial for collective empowerment, which in turn is the condition to escape the tragedy of collective impotence that leads to unsustainability.

5. Policies for social capital

Quantitative evidence and successful implementations suggest that public policies for social capital are possible. Some notable examples concern urban planning, schooling and advertising regulation. Urban planning plays an important role in the creation of social capital. Since cities first existed, social relationships have always been created in common spaces, such as streets and squares. The advent of cars worsened the quality of common space, hampering its relational function. Cars are dangerous for pedestrians, they pollute and tend to invade sidewalks. Promoting high residential density, walkability, pedestrian areas, parks, introducing car restrictions, extending public transport and cycling paths, would relieve the pressure of cars on urban space, and enhance social capital. New Urbanism, an urban design movement, argues that this urban planning can increase people's opportunities for casual interactions (encounters, conversations, exchange of favors) (Kim and Kaplan 2004, Lund 2003, Rogers et al., 2011) and to establish social relations. These urban reforms benefit the neighborhoods' social fabric, facilitates people's engagement in neighborhood-related activities, and fosters sense of community.

Similar ideas inform urban planning in many northern European cities, which have become examples of urban organization worldwide. This planning benefits the population in general but in particular individuals with reduced mobility, such as the elderly and children, by providing relational opportunities to people whose connections depend largely on the availability of a social fabric at walking distance. In contemporary cities, elderly and children face a high risk of social isolation (Berguno et al. 2004, Pinquart

¹² This proposal has been made by the Occupy Wall Street movement.

https://en.wikipedia.org/wiki/Campaign_finance_reform_in_the_United_States#cite_note-53

and Sorensen 2001, Weeks 1994). The share of students reaching their schools by foot collapsed (McDonald 2007, Hillman et al. 1990), as well as children's 'radius of activity' - the area in their neighborhood where children are free to roam unsupervised (Gaster 1991). The decline of children's mobility and independence is a feature of the industrial world, with strong consequences on relational deprivation, and children's social skills. The same holds for elderly people who have little opportunities for autonomous social interactions in modern cities. This advocates for creating safe and walkable spaces where people, especially children and elderly, can move autonomously.

Teaching practices are another field of intervention to promote the development of children's social skills. Various studies documented that adopting participatory teaching practices contributes to the development of several dimensions of students' social capital, including cooperation with others, participation in associations, trust in institutions, and involvement in civil society (Algan et al. 2011). Participatory teaching promotes participation, cooperation and mutual understanding by making students work together on common projects; classrooms are student-centered classrooms, meaning that the key relationship is between the students, while teachers facilitate and steer the discussion. Participatory practices differ from vertical (or traditional) teaching, which are primarily characterized by a vertical relationship between teacher and students: the teacher lectures and asks questions, and students listen and take notes or read textbooks. The relevant point of the evidence by Algan and colleagues is that social capital can be acquired through the practice of cooperation and this can be "taught". Participatory teaching is increasingly integrated in the education system of various northern European countries (Brulè and Veenhoven 2014), and inform teaching methods such as the Montessori one – a century-old schooling system (Biswas-Diener 2011). A study by Lillard and Else-Quest (2006) documents that Montessori education is better suited to promote social and academic skills than traditional education.

Other negative effects on social capital and social comparisons are related to the soaring marketing pressure, which affects especially children and teenagers. Over the last forty years, advertising turned increasingly towards children and teenagers. Schor (2004) documented that in the early 2000s the total spending on advertising targeting children in the United States was 150 times the amount spent in 1983. Since the 1970s, a number of studies documented a positive association between childhood materialism and exposure to advertising (Goldberg and Gorn 1978, Pollay 1986, Buijzen and Valkenburg 2003, Schor 2004, Nairn et al. 2007). Advertising fosters social comparisons, by enticing feelings of exclusion in those who do not buy certain products, thus boosting people's need to consume (Schor 2004). Children are particularly vulnerable to such messages because their identity is still in formation, and this makes them more sensitive to issues of identity and belonging. From the point of view of adults, children's materialism is associated to family conflict, less generosity and more anti-social behaviors

(Buijzen and Valkenburg 2003, Nairn et al. 2007, Cohen and Cohen 1996, Kasser and Ryan 1993, Kasser 2005).

As the awareness of the harm produced by mounting commercial pressure on young people rose, various western countries introduced regulation of advertising. For instance, since 1990 Sweden banned television advertising aimed at children below 12 years of age. Norway and Greece forbid advertisement targeting small children. Austria and Flanders (Belgium) did the same by banning advertising targeting children before, during or after children's TV programs. Greece also banned advertising of children's toys between 7am and 10pm. New Zealand forbid advertising of junk food. Several countries – including Australia, Canada, and Great Britain – put in place strong regulation authorities, who pay considerable attention at controlling children's media and their exposure to advertising (Lisosky 2001, Caron and Hwang 2014). Regulating advertising would directly benefit adults too, as their identity is also vulnerable and social comparisons are widespread in the adult population.

These examples suggest that it would be possible to introduce some policies for social capital at a relatively low cost in exchange of benefits for well-being, the environment and even public budgets. Epidemiological studies showed that greater levels of social capital and well-being, and weaker social comparisons predict substantial reductions in morbidity, and thus in healthcare spending (Hawkey and Cacioppo 2010, Kawachi et al. 1997). Policies for social capital developed because of the raising awareness of their positive relation with well-being, health, social cohesion and economic prosperity. Additionally, social capital improves people's resilience to adverse life events such as being discriminated, sick or unemployed (Helliwell et al. 2016).

6. Conclusion: the weakness of a growth society without growth

Two contrasting views dominate the debate on how to address ecological crises. On one hand, techno-optimists emphasize the role of technological change as the key to green growth, i.e. economic growth with declining environmental impact. On the other hand, eco-pessimists maintain that sustainability is not achievable without compressing production and consumption, as green technologies would not suffice.

Data supports the eco-pessimist claim: there is no evidence that technological change may decouple economic growth from increasing pressure on ecosystems. However, this does not mean that pessimism about perspectives for sustainability is justified. Eco-pessimism originates from two widespread beliefs that we challenge: the first is that there is a human tendency to unlimited expansion; the second is that limiting growth is politically impossible.

The first belief is flawed in the light of the long-term tendency of economies to downsize, as a consequence of shrinking population and secular stagnation of per-capita income. The problem with the

second belief is cultural: the consensus for the politics of growth is nurtured by the widely held association between material affluence and happiness. In this light, the limitation of consumption implies sacrificing the well-being of current generations for the sake of future ones. In other words, the inability of ecologism to answer the question on how quality of life could progress in the absence of economic growth sentenced sustainability to equate grim lives. Were a plausible answer provided, the political potential of ecologism would expand.

Drawing on a large literature on happiness, social capital and other topics, this chapter suggests that a possible answer is centered on policies for common goods. The starting point is to acknowledge that what we share, including our ability to act collectively, is critical to well-being. This implies steering away from the pattern of the last 40 years, during which economic priorities dominated the way societies were organized. The idea underlying such a pattern is that well-being depends fundamentally on what we own, while common goods have no importance. Margaret Thatcher epitomized this idea when she claimed that "there is no such thing as society; there are only individuals."

This model of social organization caused the negative externalities to take-off, feeding work hours and growth, and belying Keynes forecast of a future leisure affluence. Were Keynes prediction fulfilled, current levels of economic activity would be much lower and we would not be on the brink of ecological disaster. But one century ago Keynes could not predict that the social fabric of cities would be destroyed by cars and housing speculation; that schooling would continue to train to strive and acquire, rather than to enjoy and share; that the media would be used to manipulate people, and not as means for cultural and personal development; that the political system would protect huge economic interests, whose success is grounded on the imposition of high costs to the society; that loneliness would become a mass experience; that the pollution burden would grow so much to raise spending against pollution damages; that soaring inequality would inflate individuals' need for continuous reassurance that they are not ending on the wrong side of the divide between winners and losers; and that such reassurance would be embodied in consumption.

In short, Keynes's prediction went wrong because, while the problem of the scarcity of private goods was being solved, new scarcities of commons were being created. In fact, Keynes focused only on the effects of the accumulation of private goods, neglecting the decumulation of shared goods, especially in the form of relationships. This decumulation has given money its disproportionate charm, because negative externalities have created costly lives. The affluent society envisaged a century ago would have caused the collapse of the importance of money in people's lives and choices. Instead, current industrial societies are affluent only as far as private goods are concerned.

The choice of the last 40 years of organizing social life based on the obsessive stimulation of competition and possession for the sake of growth is presenting the bill: deterioration of social capital, happiness,

values and the use of time, besides an out-of-control ecological crisis. The tiny rates of economic growth obtained by growth-oriented social organization suggest that if society were shaped by the new priorities of social capital and well-being, this would probably result in negative economic growth.

Of course, such a priority shift implies substantial social, political cultural and economic change. But it may be possible because consensus to the growth priority is potentially fragile. After all, current 'growth society without growth' is burdened by costs that overwhelm its benefits: it suffers the relational and environmental decay, and the inequality of a growth-oriented society, without getting the benefits of growth.

Above all, an alternative agenda for improving quality of life could erode the consensus to growth. The reduction of growth would be politically more viable if it originated from improvements in the quality of shared life, rather than from a sacrifice to be made in the name of future generations. According to most of the ecologist tradition, sustainability entails the permanent limitation of the irresponsible human tendency to permanent expansion and inter-temporal greed. The problem is that an agenda based on contrasting the human nature is hardly politically attractive.

The ecologist agenda suggested here proposes to improve quality of life by decoupling it from consumption. The changes required for sustainability do not sentence people to leading unhappy lives. According to this view, there is no inter-generational trade-off in happiness, i.e. there is no conflict between current well-being and sustainability. The environmentalist agenda would change if it embraced the message that sharing is a key to happiness and sustainability, and could be more widely endorsed. Such an agenda would focus on expanding well-being, rather than limiting economic activity, thanks to policies that promote sociability, cooperation, and empowerment.

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