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Epilogue

To sum up: avoiding unsustainable futures

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Abstract

An analytical summary of the discussions on the European Societal Bill follows that ‘unacceptable futures’ can be avoided.

The papers in this Special Issue of Futures have tried to unfold the many faces of the Societal Bill, that is the behaviours, and their financial counterpart, of the social groups more effected by expected demographic changes. We did so in particular by focusing on modelling strategies that translate parameterised behaviours into economic flows through the channel of institutional arrangements currently operating in European societies, i.e. eligibility conditions and tax and benefits formulae. As for the last point one must not forget that certain behaviours respond strategically to certain eligibility conditions.

Our aim in this paper is to conclude on the implications of the previous analysis. These implications are quite varied and they will be summarised at different levels. Despite a certain pessimistic stance occasionally used here in order to emphasise the consequences of doing nothing, we want to argue that prompt societal adaptation can be a way to avoid what we will latter call “unacceptable futures”.

In a way, what we do in this chapter is not a full futures analysis for we mainly explore the “trends” scenario rather than anticipate alternative, and more acceptable, futures. However, we will say something about alternatives latter on. For the time being, let us set the scenario of the “unacceptable futures” in order to ascertain the order of magnitude of the challenge ahead and the need for action.

Societal adaptation is obviously the key word for action. Individuals, by nature, will always try to counter those developments that hit them worst and institutional and administrative arrangements should facilitate this while assuring social compatibility. The fuel for the engine of change—individual action—will always be there but the engine itself must change so as to select the best behaviours by creating the right incentives. Welfare enhancing institutional innovation thus goes well beyond mere financial balancing of the Societal Bill. If well

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designed, it will also imply financial soundness. The latter however can be obtained without the former. But without institutional innovation and behavioural change the financial soundness of the Societal Bill would hardly make us better off.

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1. Demography and societal change: what drives what?

Society consists of a group of individuals, the population, which we very often picture like a rather static entity. In particular, economic models are often based on a rather inflexible representative agent assumption. Even when the heterogeneity and diversity of a population is acknowledged the changing composition is often ignored. The consequence is a tendency to overlook the interaction between composition of the population and the societal change trends. This holds for many different aspects of composition, e.g. ethnicity, education, urban-rural, cultural, linguistic etc. The demographic composition of the population with respect to gender, age and household composition has some special consequences.

For futures studies the age composition is of special importance and the age-cohort approach is always relevant. At the level of the nation or above, gender composition rarely changes much, excepting, of course, major wars. The changes in household composition are important but difficult to foresee. The age distribution is, however, an inertial structure that does not easily change radically. After all, we all get exactly one year older for every year that goes by. Thus, although there is a high degree of uncertainty in fertility forecasts and migration forecasts as well as for mortality, these inflows and outflows to the population take a long time to affect the general age distribution in a noticeable way.

Over the life cycle the resources commanded by an age group change in a predictable way. Human capital as well as income, real and financial wealth are accumulated up to a middle age that can be shifting a bit in timing but statistically will be somewhere around 50 years of age in an industrial society. At the same time demand for services and goods will also shift in a broadly predictable manner from early childhood, adolescence, family formation ages, etc. up to retirement. This predictability—fundamentally based on the biological life cycle and the economic restrictions of scarce resources—opens the opportunity to exploit this inertia for making forecasts on economic development with reasonable accuracy for at least 10–20 years ahead. Of course, future research often attempts to consider longer-term futures, alternative possible scenarios for fundamental structural changes in life styles. In the papers prepared for this Special Issue of *Futures*, we have remained, however, in the more constrained policy futures of the next decade.

When discussing the Societal Bill of ageing in Europe this is important from two aspects. First, the bill itself is strongly dependent on the age structure. Social expenses are highly concentrated among the young and the old, and paid for by the working population in between. Thus, the Societal Bill is to a very large extent a question of intertemporal transfers between generations. Second, the age structure effects on general macroeconomic trends are very important, and thus to a large

extent determine the capacity for paying the bill. Empirical evidence as well as theoretical considerations imply that the ageing process of Europe not only will tend to increase the Societal Bill by increasing demand for health care and care for the elderly but also will undermine the potential to sustain these services at the current level.

Most obvious is that the labour supply per dependent person will tend to decrease radically in the future. There is, however, good reason to believe that productivity change also will be depressed. Demand will shift from goods to services with—at least historically—lower productivity growth. A labour market with excess labour demand will tend to decrease the willingness to invest in education for the individual. A considerably less experienced labour force with less education per person is thus a likely scenario some 20 years ahead.

This gloomy perspective is, of course, not ordained by fate. Although inertial, the age distribution itself reacts to economic and social change. The incentives for family formation and migration depend not only on economic conditions but also social attitudes are important. Both these factors can be and are affected by appropriate family and migration policies. Moreover, the mechanisms transmitting age effects to the economy can be modified. For example a scarcity of young people is likely to diminish incentives for education by making it easier to obtain a well-paid employment without it. Such an outcome can be prevented by increasing subsidies for higher education or by implementing labour market institutions that increase wage differentiation.

Also, the feedback from the economy into demography can be modified. Higher education, for example, in general makes it advantageous to postpone children until later in the career. From a social point of view this tends to decrease fertility since fecundity decreases quite strongly with age. It also increases the cost of parental insurance because of higher opportunity costs. It might therefore be a case for social intervention to make it easier to combine children and education.

What is important is to realise that it takes time, a long time to change the direction of demographic change. Up to a horizon of 10–20 years the demographic structure is more or less predetermined. The economy and the demographic situation interact in many intricate ways and research is still in its infancy when it comes to appreciate the aggregate outcome of this interaction. Against the background of the almost certain radical ageing process in Europe and considering how slowly these processes can be turned around, it is urgent to learn more about them if we intend to meet the social challenges of the coming “Senior Society”.

The political debate around demographic issues and policy connected with these issues is a very sensitive field. Precisely because fertility goals raise unpleasant memories of past totalitarian regimes and because immigration raises heated feelings about national identity it is a necessity to learn more about the choices we need to make in order to meet the future ageing of Europe.

2. Unsustainable futures

Were the worst previous analyses to materialise, society and individuals would clearly be trapped in a situation where little margin would be left for manoeuvre

and at which serious malfunctioning of the economic and social processes would take place. This would hamper the wellbeing of virtually every individual either by burdening excessively those of economically active age or by exposing those in dependency status to poverty. Current arrangements may thus become unsustainable if nothing is done and, in a way, this is an unacceptable future. Social and individual adaptation should follow any diagnostic about future scenarios deemed by a sufficient majority to be unsustainable.

As a consequence of smaller new cohorts entering the labour market, labour shortages may generalise in sectors and geographical areas and ultimately across the economy. This, in turn, would induce a wide array of effects. Pressure on wages, increased wage inequality, and a changing pattern of income distribution. The need to substitute capital for labour will produce faster obsolescence of productive capital and more intense renewal of plants, machinery and systems, that is, more creative destruction potentially hazardous for certain workers, firms and regions. Human resources management methods, labour histories and careers and training would also face considerable changes. Workers unable to adapt swiftly to this environment could amount to millions in advanced nations.

One factor that plays a critical role in the above process is productivity. On the one hand, an older labour force is more experienced and may boost productivity in mature industries. On the other hand, the implementation of new technologies that require a different education rapidly makes such experience obsolete and leads to a demand for recently educated labour, i.e. younger workers which will be increasingly scarce in the future. Here lies indeed one of the most challenging aspects of ageing. If nothing is done the Societal Bill would more likely become unsustainable. New equipment, systems and protocols, especially in sophisticated services and manufacturing, require a more flexible and mobile labour force, more likely to be found among the young. In any case the retirement of the older labour will spell widespread labour shortages and falling productivity growth, unless an inflow of qualified labour rejuvenates and maintains the labour force.

And yet, productivity growth that keeps the economic dynamism of society would not necessarily solve the Societal Bill sustainability problem if expenditure is over-indexed with it, as it tends to happen for certain benefits. This is a serious problem in itself and in as much as this feature of the Welfare State creates perverse incentives against active participation and towards increased dependency.

Increased tax burdens are an undesirable consequence of ageing if financial sustainability of the Societal Bill is to be assured in a no-adaptation scenario. Tax or contribution rates should increase considerably in order to maintain benefit levels as ageing worsens the ratio of contributors to beneficiaries. Alternatively, benefits should be cut dramatically in order to prevent tax rates to increase. The prospect of ageing dependency ratios doubling in many advanced countries by 2050 implies doubling tax rates or halving benefit levels.

The overall burden shows distinctive and additional features as one goes into the detail of the Societal Bill. This burden, on the other hand, does not get expressed only in money terms but also in social and individual unhappiness and distress. In the health sector, the demand for long-term care by a larger and older population

will considerably increase. It is not just health care that will be demanded, but care for dependent persons, especially the very old. Pension arrangements would most likely suffer as ageing progresses if their present formulae are kept unchanged. Worst would be the chance that very old people could face poverty as their dependency increases. Under current retirement and work arrangements, individuals and families should face serious compatibility problems. Large life spans after 65 just watching television does not seem to be the best one can do to keep in good mental and physical shape. At the aggregate scale, precious excess capacity from idle individuals would be lost forever just because their availability does not find “productive” uses.

Unsustainability due to ageing can also be approached from the angle of risk shifting between age groups, or between insurers and insurance holders, workers and firms, etc. This risk shifting may be even acted through political processes and implemented via the tax-benefits system or discretionary regulation. Politics will be affected as the age of the median voter rises by 10, 12 or more years in the most advanced countries in the next decades. Thus even if decided under majority voting, the above mentioned reforms will not let everybody be unaffected, exacerbating age differences and damaging social cohesion.

When looked at in a comprehensive way, all these futures are indeed not only unsustainable but also unacceptable.

3. Societal adaptation and new lifestyles

But the future is not written. While an extrapolation of trends of the components of the Societal Bill may lead to socially unacceptable situations, there remains freedom of action that can change these trends. This is exactly the sense of futures research: assisting the societal agents in their continuous decision-making process.

When looking at possible ways of avoiding a financial crisis of the Societal Bill in Europe within the next two decades, two lines of approach are possible: at micro-level, that is at the level of individual or household decision-making, and at the meso-level, that is at the level of social structures and institutional decision-making. Both levels permanently interact: human beings shape their social environment while social environment constraints human behaviour. However, for purposes of analysis, it is useful to deal separately with them.

3.1. Change in individual and household behaviours

The Societal Bill and its financial consequences depend on the number of individuals (households) and of their socio-demographic characteristics (such as age, occupation, educational level, health conditions, etc.)

One line of thought considers that in order to decrease the financing costs of the Societal Bill it is necessary to reverse the trend for increasing average ageing of the population, and to enhance the share of working population. In this context, higher fertility rates and workers immigration may be part of the answer.

Fertility is the result of individual decisions, but—if needed—economic subsidies

may be used to stimulate it; immigration of course, can be stimulated or restrained by appropriate policies. Both types of policies call upon some form of paternalistic Government that decides what is ethical for individuals or households.

But even without these specific policies, it is not obvious that the ageing trend would continue. Fertility rates do change for causes that are difficult to establish from past experience, as they are highly dependent on the context. Economic factors (e.g. the unemployment rate or women's labour participation rate) do certainly play a role, as well as other cultural components of life styles.

Immigration is also dependent on the economic conditions in the emigration countries, but obviously socio-cultural considerations play an essential role in the immigration countries, and it is clear that an evolution towards a multicultural society in Europe could also rather radically change current immigration trends.

With or without specific policies, there is some degree of uncertainty about the future evolution of the structure of European population, but it is clear that conventional wisdom tends to attribute a very high probability to the continuation of current demographic trends: ageing is here to stay.

3.2. Socio-economic and institutional change

At the meso level, alternative futures have to be considered for social and economic structures and institutional development, when looking at possible ways of avoiding the expected financial crisis of the Societal Bill.

First we may consider changes in the area of work mainly as a consequence of the diffusion of the Information or Knowledge Society. The traditional form of work of the Industrial Society, with mostly instrumental salaried jobs that could be provided and obtained in given quantities in so-called labour markets (with contractual relations concerning work schedules, holidays, retirement, etc.) is losing importance progressively. The new workers are less instrumental, their activity is better identified by the nature of their product, they can operate in extremely flexible time and space environments, and, they are continuously learning by doing in a creative process. It may very well happen—as already shown by some trends—that this new nature of work could be closely connected to continuous education and that the social reasons for transferring the totality of the working population into retirement (leisure) at a certain age could become obsolete. Alternatives such as those of a permanent mix of education, work, leisure, with an increase of workers able to fully exploit the possibilities of this mix, should be given consideration.

Large components of the Societal Bill are closely linked to the three steps life cycle (from education to work, and from work to retirement) that is characteristic of industrial organisations, but are less well adapted to the information and knowledge age. Managing self-employment, self-education and self-leisure or retirement is a great challenge for the economy and for the social systems, but could substantially change the size and characteristics of the Societal Bill, changing the nature of unemployment benefits and pensions, and changing the requirements for education and probably even for health.

Secondly, it is quite obvious that drastic—even if not yet very probable—changes

in life styles and economic and social organisation implies the development of new institutions. The basic issue stays in the expected relation between individual responsibility and social welfare. The change from instrumental work to work-as-a-product is to be directly associated with an increase of individual responsibility. But at the same time, an increase in the level of individual risks and the obvious fact that the value differences in the products of work, are necessarily greater than those between instrumental workers, places upon society an increasing need for social welfare.

Choices ought to be made and can be made; different levels of private–public partnerships can be introduced in the provision of the Societal Bill, probably taking advantage of the increasing individual responsibility, and at the same time accepting the public good character of social welfare.

The way-out from the financial crisis of the Societal Bill is to be found in a re-design of socio-economic systems and especially of the role of the market versus non-market activities. In this process of re-design the alternatives are infinite, and experience of trial-and-error policies are available in all European countries.

The cultural value of diversity that is at the heart of Europe could justify many solutions to the Societal Bill problem, but exploratory modelling and futures research can help to identify the options that are, on expert opinion, more suitable for sustainability of the socio-economic systems. This is the greatest challenge that inspires the new research agenda for modellers and futurists in general.

4. A new research agenda

The new research agenda involves scenarios, data and models. This combination is not new, but the overall research strategy, the meaning of each component, and the nature of collaboration may be.

4.1. Scenarios

By a scenario we mean the narration of the plot for a play about the future. A number of different story lines need to be developed. This is difficult, as there are many players and a large repertoire of actions. The process involves identifying the players, introducing trends for the behaviour of each player, and then conceiving the alternative behaviours that break with the trends. Then one writes the story.

This interpretation of a scenario contrasts with the familiar practice of designating high, medium and low values for a handful of model parameters. The development of the story line requires vision and imagination as well as structure and discipline. This work requires a dialogue that includes individuals other than those with the technical skills to build models or collect data.

Some scenario concepts are:

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Morocco as Miami: new kinds of labour arrangements, where the elderly from the

rich countries go to countries with hot climates and low-cost labour for retirement and care

Marked changes in household composition: for example, the large-scale development of housing units designed for multiple single-person households that want to maintain their privacy and at the same time share significant public spaces

Early retirement from full time work coupled with extended part-time work and lifelong learning

Productivity enhancing methods for an aged labour force

Alternative ways of paying for the Societal Bill (time is also money).

The need to develop scenarios can call forth an interdisciplinary dialogue among social scientists and historians. The same groups can play a vital role in interpreting the results of models that analyse the implications of the scenarios.

4.2. *Modelling strategy*

We began by describing our interpretation of scenarios because these are the expression of the story we want to explore. However, the overall strategy sets boundaries and provides structure for scenario development. We are calling for a work style that involves either division of labour and collaboration. The division of labour permits the exercise of expertise while the collaboration assures that the scenarios can be represented by the data and the variables and parameters in the model and that the model logic reflects the relationships as conceived by the scenario builders.

A key common decision regards the identity of the players—in other words, the units of social analysis, or the institutions (in the language of the social accounting matrix). We recommend units of social significance: notably different categories of households, government agencies and programs, corporations, non-governmental organisations.

The availability of data, or the collection of data expressly for a particular analysis, is of crucial importance. In this issue we have discussed in some detail the conception of social accounting matrices that quantify major activities of the players of interest for scenarios about social welfare.

4.3. *Models*

Once we have a set of scenarios, why do we need a model? The main motivation is to quantify trends described in a scenario and to investigate the interactions among trends that may reinforce or offset each other.

There is no shortage of existing models, mainly economic models, which can claim to take on some aspects of the questions of interest. A few distinctions among model types may be useful.

A research model is different from a production model. The latter will be relatively well documented and, because it is widely used, develops a constituency specialised in its particular characteristics. These potential advantages come with the loss of flexibility of the model itself and of these interested in using it. The production

model is better suited to well-defined, repetitive tasks—such as the annual labour force projections of the Bureau of Labour Statistics in the US—than to exploration of the kind of scenarios described above.

All models require assumptions that are vast simplifications of reality. Some models are correlation based and typically have a high ratio of endogenous to exogenous variables. This feature is convenient for covering a lot of conceptual ground but better for replicating the past and anticipating periods of little change. Structural models, whose equations are based on logical relationships, are more successful in exploring scenarios about the future provided that these structural relationships change in ways that are described in the scenario. The simplest structural model that can hope to take on big-picture scenarios in terms of underlying detail is the adding-up model.

4.4. *From bills to pills*

Unsustainable futures are not acceptable. Or rather, they will not be accepted by society as they unfold before us and/or coming generations. Anticipative action however is crucial to avoid traps and the accumulation of dead-weight loss that would cost society large amount of resources and wastage. Individuals and firms would always adapt more or less swiftly to their respective environments, but global compatibility has to be assured and exclusion avoided. And yet, before that, individual action has to be facilitated through flexible institutional change that must also overcome resistance to it from corporate quarters and interest groups.

The Societal Bill must not be an unbearable burden nor the consequence of a biased intergenerational contract but the counterpart of productive arrangements among generations were individual responsibility, smart regulations, programmes for genuine equality of opportunities and market solutions do a balanced part of the job. Will we find the master formula for this “societal pill” or panacea? Part of the answer lies in interdisciplinary work, but a genuine one, not simply putting together, in a collective book, some chapters written by different practitioners from different disciplines. By that, we mean a joint effort to understand the complex nature of human and social affairs in given quarters be they pensions, health, work or leisure. We also mean by that synthetic diagnosis about given problems and their likely solutions. Interdisciplinary work must provide analysis for governments, firms and individuals not only telling them about the consequences of current behaviours but also deploying before them new avenues, ways and means to be explored as individual and collective action unfolds.

The above sections form not only a research agenda. Their contents define also the terms of reference of a call for research we are launching from these pages *Futures* has kindly put at our disposal. We invite your comments on all the papers in this issue and on this concluding chapter in particular.