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I LOVE YOU – investing for intergenerational wellbeing

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In *The Faith of a Heretic* (1961), Chapter X on Morality, German philosopher Walter Kaufman proposes four cardinal virtues as a foundation for answering the following questions: How are we to live? By what standards should we judge ourselves? For what virtues should we strive?

His four cardinal virtues are: "humbition" (a made-up word referring to a fusion of humility and ambition), love, courage, and honesty.

It is the second one of these (*love*) that is the centre of our interest, as it relates to public policy. Kaufman gives the word a very specific meaning. As Wes Cecil, the producer and narrator of the series *Forgotten Thinkers*, interprets it, "I love you" for Kaufman means: I want you to live the life that you want to live. I will be as happy as you, if you do; and as unhappy as you, if you don't.

How would we design, govern, implement, and evaluate public policy, if it were based on our love for future generations, true to the meaning that Kaufman gives to: "I love you"?

We have no idea what future generations will value and how they will want to live. Nor do we wish to prescribe how they should choose to live – so long as, that is, they do not prevent others from living the lives they value. We want to prepare and look after the "wellbeing garden" (the broader ecosystems) that will provide them with the opportunities and capabilities to *survive* and *thrive* – i.e. flourish in safety. As Walter Benjamin expressed it, "We want to liberate the future from its deformation in the present" (Wellmon 2020).

Wellbeing and justice

Wellbeing is about the ability of individuals and communities to live the lives they value – now and in the future (i.e. it is about their human rights). It would be extremely unjust to prevent the enjoyment of valued lives. Preventing such injustice across generations would be the primary focus of a public policy that has intergenerational wellbeing as its objective.

There is a rich variety of possible lives, conditioned by personal circumstances, including capabilities, opportunities, and preferences, as well as cultures, religions, political arrangements, geographical surroundings, and so on. Nevertheless, there is considerable evidence to suggest a set of common contributors to wellbeing across humanity (Figure 1 – OECD 2020, p. 21).

Figure 1 OECD Well-being Framework



These common contributors to current wellbeing, listed in the upper left-hand side of the Figure, can be classified under the categories, *material conditions* (income and wealth, work and job quality, housing) and *quality of life* (health, knowledge and skills, environment quality, subjective well-being, safety, work-life balance, social connections, civic engagement).

At the bottom-left of the Figure are a set of capital stocks that represent the sources of future wellbeing: natural capital, economic capital, human capital, social capital. Brief descriptions of these can be found in New Zealand Treasury (2019).

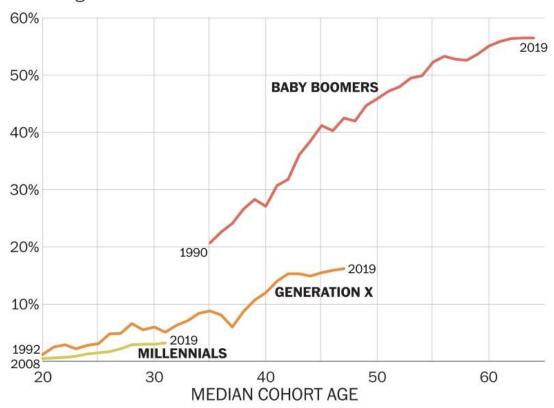
In the context of intergenerational wellbeing, if we do wish to liberate the future from its deformation in the present, we need to achieve two outcomes through public policy. First, preserve the resources for future wellbeing. Second, decouple the opportunities and capabilities (i.e. substantive freedoms) (Sen 1999, 2009) of future generations from the specific circumstances into which they are born.

The growing disparity across generations, in their access to material sources of wellbeing such as income and wealth (including housing), has been well documented (Ingraham 2019, Wolf 2018). Figure 2 provides an example referring to the growing disparity of wealth across generations in the USA (Ingraham 2019).

Figure 2 Intergenerational Wealth Distribution

Intergenerational wealth

Share of national wealth owned by each generation, by median cohort age



Source: Federal Reserve Distributional Accounts Chart adapted from Gray Kimbrough THE WASHINGTON POST

As Ingraham explains, "baby boomers – those born between 1946 and 1964 – collectively owned 21 percent of the nation's wealth by the time their generation hit a median age of 35 in 1990. Generation X (born from 1965 to 1980) came of age during the era of wage stagnation and growing inequality ushered in by the 1970s and '80s.

When the typical Gen Xer reached 35 in 2008, his or her share of the nation's wealth was just 9 percent, less than half that of boomers at a comparable point in life. Millennials haven't hit the 35 mark yet – that won't happen until about 2023 – but their financial situation is relatively dire. They own just 3.2 percent of the nation's wealth. To catch up to Gen Xers, they'd need to triple their wealth in just four years. To reach boomers, their net worth would need a sevenfold jump."

In terms of sources of future wellbeing, there are emerging concerns on a much wider front than simply material sources: "Looking forward, there is no room for complacency. As storm clouds gather on the horizon, mainly from environmental and social challenges, all OECD countries need to take action if they are to maintain today's well-being for future generations.

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"Nearly two-thirds of people in OECD countries are exposed to dangerous levels of air pollution. ... Reductions in greenhouse gas emissions (GHG) in the OECD are far from sufficient to meet climate policy goals and, in almost half of OECD countries, more species are at risk of extinction. Household debt in almost two-thirds of the OECD exceeds annual household disposable income and has deepened in a third of member states since 2010.

"While trust in government has improved by 3 percentage points on average since 2010, less than half of the population across OECD countries trust their institutions, and only 1 in 3 people feel they have a say in what the government does. Women hold just one-third of all seats in OECD parliaments, and hence, inclusive decision-making remains a distant goal.

"Overall, recent advances in well-being have not been matched by improvements in the resources needed to sustain well-being over time. From financial insecurity in households, through to climate change, biodiversity loss and threats to how democratic institutions perform their functions, we need to look beyond maximising well-being today. Ensuring continued prosperity for people and the planet will require bold and strategic investments in the resources that underpin well-being in the longer run" (OECD 2020, p. 17).

On the second outcome, about decoupling the opportunities and capabilities (i.e. substantive freedoms) of future generations from the specific circumstances into which they are born, the distinction that is often made between equity and equality (McCloskey, 2014) may not be that useful in an intergenerational context. Today's outcomes determine tomorrow's opportunities: "Inequality of outcome among today's generation is the source of the unfair advantage received by the next generation. If we are concerned about equality of opportunity tomorrow, we need to be concerned about inequality of outcome today" (Atkinson, 2015, p.12). The less wealth you start with the less you are likely to accumulate in the rest of your life (Ingraham 2019).

As Rajan (2020) puts it, "Inequality is a real problem today, but it is the inequality of opportunity, of access to capabilities, of place, not just of incomes and wealth. Higher spending and thus taxes may be necessary, not to punish the rich but to help the left-behind find new opportunity. This requires fresh policies not discredited old ones."

A radically different approach to public policy

Our public policy platform is the concept of "love" that we introduced at the beginning. The objective of public policy is to make it possible for individuals and communities to live the kinds of lives they value, in the present and into the future - without compromising others' rights to do the same. This is what individual and community wellbeing is all about.

We agree with Layard and O'Donnell (2015). After quoting Thomas Jefferson ("The care of human life and happiness [...] is the only legitimate object of good government"), they go on to write, "What should be the goal of public policy? We agree with Thomas Jefferson. What matters is the quality of life, as people themselves experience it. And the best judge of each person's life is that same person. Is she happy with her life; is she satisfied? In a democracy that should be the criterion for good policy" (*ibid.*, p. 77).

There are multiple layers of public policy. Our focus is on the design and implementation of public policy at a *system* level – as it relates to the "large world" (as Kay and King 2020 refer to it). We explore and provide an answer to the questions: how do we create the (natural, social, and economic) environment (*opportunities*) where the pursuit of valued lives is possible; and then, support the acquisition of the *capabilities* that enable the pursuit of these valued lives.

In this setting, there are six critical justifications underpinning our call for a radically different approach to public policy. First, wellbeing is *multi-dimensional*. Second, wellbeing is *intergenerational*. Third, both the various dimensions and sources of wellbeing are strongly *interdependent*. Fourth, individual lives are lived in *social settings*. Fifth, the "large world" in which our social life is imbedded is *radically (or fundamentally) uncertain* (Kay and King 2020). Sixth, both individual and social lives are dominated by *adaptive complexity and reflexivity* (Arthur 2014, Soros 2003).

Multi-dimensionality and Interdependence

There is a very rich literature on both the meaning and sources of wellbeing (Adler and Fleurbaey 2016). Although there is considerable debate on these matters, everyone agrees that the sources of wellbeing are diverse (Figure 1), interconnected, and complex (Figure 3) (Reid 2019).

Figure 3 Diverse and Interconnected Sources of Human Wellbeing



Wellbeing is a state of mind that reflects a set of complex relationships between material, relational, and subjective domains. This interplay must be understood as firmly located in society and shaped by social, economic, political, cultural, and psychological processes (Gough *et al.* 2007, McGregor 2007, White 2010).

Improving wellbeing requires as much focus on the processes followed as they do on the outcomes being sought; indeed desired outcomes cannot be achieved on an enduring basis unless the processes followed are genuinely inclusive.

Social context

The list of domains of wellbeing in Figure 1 relates to individual wellbeing. Needless to say, individual lives are lived in social settings. There are strong interdependencies between individual and community wellbeing.

Societies, communities, and individuals have a very strong sense of the way they wish to live their lives. Kay and King (2020) refer to these as "reference narratives". The major systemic risk that public policy needs to concern itself with is the threat to these narratives. If we can give individuals and communities an assurance that their preferred way of living will be protected, that provides a platform for exploration, creativity, and human flourishing.

In addition, as Helliwell (2019) reports, social sources of well-being, especially those delivered in person, are of even greater importance for subjective wellbeing (one of the domains of individual wellbeing listed in Figure 1) than previously thought. In recent *World Happiness Reports* (Helliwell *et al* 2019), six factors have been found to explain three-quarters of the differences in average life evaluations among countries and over time: GDP per capita; healthy life expectancy; and an additional four that can be conceptualised as "social factors" (having someone to count on in times of trouble; a sense of freedom to make life choices; generosity; and trustworthy environment, as proxied by the absence of corruption in business and government).

In short, if our purpose is to improve human lives, as people wish to live their lives, then we need to place a lot of emphasis on the health and wellbeing of the communities in which those lives are lived.

Radical uncertainty

We are trying to improve lives in a world dominated by *radical uncertainty* (Kay and King 2020; King 2016, Chapter 4) and *adaptive complexity* (Arthur 2014). In this type of world, which is the real world we are living in, there are no buttons to push to generate well-defined outcomes. By way of example, which button would you push to "solve" a mental health problem?

Under radical (or fundamental) uncertainty, with the set of possible states of the world and/or their probabilities unknown, optimisation at a public policy level (in the "large world") becomes impossible. We simply do not know what the future will look like, although we may have a broad idea of the types of catastrophes our natural environment, society, and economy may be exposed to.

Adaptive complexity

Under *adaptive complexity*, particularly in a social context, actions and outcomes cannot be separated – there is "reflexivity": there are no external (exogenous) social or economic facts that are independent of our actions. Individuals' actions and interactions with others influence the social and economic outcomes that emerge, which in turn lead to reactions, and on it goes (Soros, 2003).

One of the main teachings of complexity economics is that creative ideas are primarily generated bottom up, not top down – through interactions and cross-fertilisations of ideas promulgated by human contacts via various means. A critical role for the policy maker is that of supporting and connecting. Creativity remains the source of innovation, technological progress, and prosperity under all frameworks – how we encourage and support it is the point of difference. Think of a landscaper instead of an architect – the focus is on creating the right ecosystems for people, communities, and ideas to flourish.

The primary consequences of these justifications, for the approach to public policy that we are advocating, are as follows. The *multi-dimensional* aspect of wellbeing affects both the framing and the assessment of public policy. The focus on *intergenerational* wellbeing has a major influence on how the policy approach is governed and implementation is funded. *Interdependence* affects the prioritisation of both public policies and supporting investments. *Radical uncertainty* shifts the focus of public policy from searching for "optimal solutions" to investing towards building resilience. *Complexity, reflexivity*, and the emphasis on *social settings* all affect the implementation of public policy, and the nature of effective policy interventions, with a critical focus on inclusivity.

Wellbeing garden

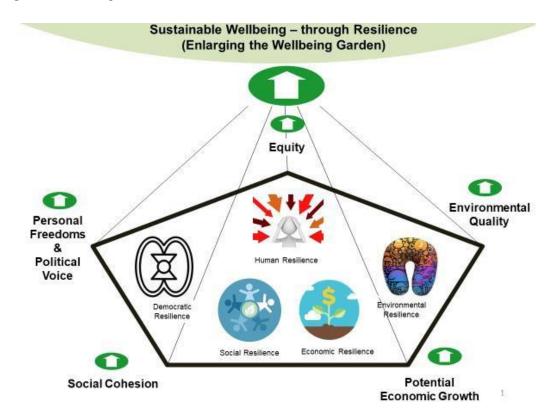
The framing of a wellbeing-focused public policy is grounded in the following concepts and principles.

First, wellbeing is associated with the capabilities and opportunities of individuals and communities to live the lives they value. Second, we respect the rights of individuals and communities to choose how they wish to live. Third, valued lives are diverse, and are history, time, culture dependent. Fourth, lives are lived in social settings. Fifth, we want everyone to live the lives they value – provided they respect others' rights to do the same. Sixth, everyone includes future generations.

Figure 4 conceptualises the primary purpose of a wellbeing-focused public policy as the enlargement of the "wellbeing garden" in which social life takes place, now and into the future. The key dimensions ("corners") of the perimeter of that garden are: environmental quality, potential economic growth (i.e. material sources of wellbeing), social cohesion, personal freedoms and political voice, and equity. These are the key dimensions of the social and individual "reference narratives". They are the systemic outcomes that public policy needs to deliver.

These outcomes provide the environment (natural, social, political, and economic environment) which makes the pursuit of valued lives possible (i.e. the *opportunities*). The key focus of the strategy would be to invest towards building systemic resilience to potential threats to the key dimensions of the way we wish to live – to our "reference narratives". The components of systemic resilience that sit in the middle of Figure 4 provide individuals and communities with the *capabilities* to pursue their valued lives. They represent the foundations of sustainable collective wellbeing – and they are strongly interdependent.

Figure 4 Wellbeing Garden



Resilience as a platform for sustained prosperity

In a world of fundamental uncertainty, the pursuit of the policy objective of intergenerational wellbeing requires investments in building resilience to systemic risks to our preferred way of living – to our reference narratives. Thus achieving *systemic resilience* emerges as a critical output of public policy. Resilience provides the critical bridge to the sustainability of wellbeing across generations.

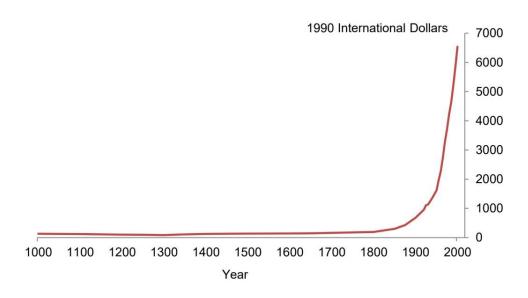
The garden of Figure 4 can be enlarged through appropriate (in terms of quantum, quality, and composition) investments. In summary, investing in *Social resilience* delivers social cohesion. *Human resilience* provides a major platform for equity. *Democratic resilience* underpins the protection of individual freedom and political voice. *Economic and financial resilience* enhances potential economic growth. *Environmental resilience* helps sustain environmental quality.

Resilience can be usefully defined as the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events (National Research Council, 2012).

In an intergenerational context, systemic resilience has three distinct but complementary attributes – one is shock-absorbing (*surviving*) capacity (following, e.g., earthquakes; financial-system or social disruptions); a second is *adaptability* following shocks; a third is creativity and inventiveness, or *thriving* (which are critical ingredients of adaptability) – underpinned by individual freedoms and social cohesion. A system may show resilience to major systemic shocks not necessarily by returning exactly to its previous state following a shock, but instead by finding different ways to carry out essential functions; that is, by adapting.

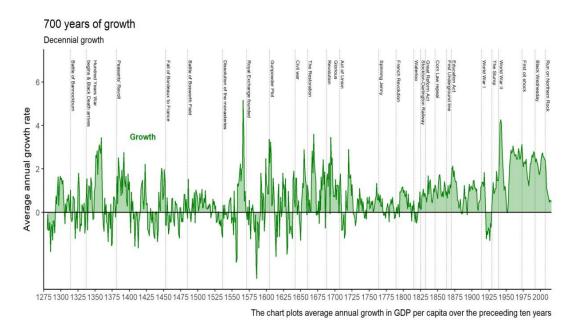
Haldane (2018), partly based on the work of Broadberry and Wallis (2017), provides a very powerful and persuasive example of the interface between resilience, institutions, public policy, and wellbeing over a long period of time covering hundreds of years. The underlying narrative is summarised in Figures 5 and 6.

Figure 5 Real GDP per head since 1000 AD



Sources: De Long (1998).

Figure 6 Real GDP per head since 1000 AD



Sources: Broadberry and Wallis (2017) and Bank calculations.

Under this revised narrative, the sustained growth in human prosperity since the Industrial Revolution turns out to be not exclusively an economic growth story underpinned by innovation and productivity growth – the standard narrative, but also a resilience story. Growth spurts were ever present for at least a thousand years. Deliberately created social institutions (including schooling, health services, social welfare) that protected humanity from the potential negative effects of contractionary periods owing to war, disease, economic catastrophes, and others, over the period since the Industrial Revolution, made a huge difference.

One key insight of Mazzucato's work (2013, 2015) is the role of the public sector as the initial (pioneering) investor and ecosystem creator in providing a platform for systemic resilience. This provides the fertile and profitable ground for the private sector, NGOs and others to invest it — and to flourish. As Mazzucato points out, most of the radical, revolutionary innovations that have fuelled the dynamics of capitalism - from railroads to the Internet, to modern-day nanotechnology and pharmaceuticals - trace the most courageous, early and capital-intensive 'entrepreneurial' investments back to the State.

Governing for intergenerational wellbeing

In a world dominated by radical (or fundamental) uncertainty and adaptive complexity, a public policy that aspires to deliver sustainable (across generations) wellbeing as its primary *outcome*, needs to be supported by governance arrangements that can deliver five critical *outputs*: a long-term focus in policy making; inclusive decision-making mechanisms that aggregate the wisdom, expertise, and experiences of all stakeholders; institutions that enable and encourage (and indeed mandate) an integrated environmental, social, and economic approach to public policy; a suitable supporting funding infrastructure; and adaptive time consistency (i.e. ongoing alignment of public policy with collective wellbeing, as the preferences of society evolve over time).

Long-term focus in policy making

Assuming there is political will, the governance steps to be followed are clear – and are each being implemented somewhere in the world (OECD, 2019). They are very much aligned with the steps advocated by Wallace (2019) – see also Boston (2017 a, b), Boston *et al* (2019), Warren (2019).

We need a clear separation of the short-term (three-four year) management role of Government, from the long-term stewardship role of Parliament. Parliament specifies intergenerational wellbeing as the core objective of public policy. It also sets the long-term (environmental, social, and economic) objectives (and associated targets) aligned with shared and sustainable wellbeing.

Parliament does so under advice from an independent office for wellbeing (IOW) – directly accountable to Parliament. A multi-party Parliamentary Governance Group (PGG) acts as the governance group for the IOW. IOW's advice is informed by input from a *What Works Wellbeing* network of NGOs, local and regional government representatives, academics, and so on, working collaboratively to generate policy informing information based on engagements with communities, other sources of data, and research – very much based on the UK model (Hey 2019).

A dedicated investment manager for each long-term outcome (say, child poverty), and reporting to the IOW, plays the public sector stewardship role. Cost-Benefit Analyses, using wellbeing as the currency, provides the main analytical tool for the interactions between these investment managers and the IOW. [See Adler and Fleurbaey 2016, Fujiwara and Dolan (2016), Frijter *et al.* (2019), Jara and Schokkaert (2016).]

Parliament also legislates that the government will set short-term targets, as part of its annual Budget each year, towards achieving the long-term targets it sets, and will provide a report on how it is progressing against those targets.

Finally, Parliament ensures, through appropriate collaborations with local Councils, that regional and local voices are reflected in setting wellbeing objectives and priorities. Where it is deemed appropriate by the IOW that the delivery of a certain long-term outcome requires substantive community ownership and participation in the achievement of that outcome, a community-based manager and budget holder (typically part of local / regional government), accountable to the IOW, is established.

Funding

There is a critical nexus between finance and sustained development, which provides not only a critical bridge between long-term development and finance, but also a distinctive role for public policy. Innovation-supporting investment needs a long-term commitment, supported by "patient finance", as well as an appetite for risk-taking in the face of "radical uncertainty". This is especially the case when we are referring to transformative ecosystem investments, such as those supporting "green growth", nanotechnology, biotechnology, and so on. These are the circumstances when the state needs to lead (and has historically done so); only then does the private sector (including venture capital) follow (Mazzucato and Wray 2015; Mazzucato and Perez 2014; Mazzucato and Semienuk 2018).

The State's share of long-term investments in ecosystems will be eventually funded through taxes or levies (Pay as You Go – PAYGO) or "Social Insurance" (i.e. public saving in various forms to fund future needs and contingencies) – Save as You Go (SAYGO). If the real return on capital is higher than the real growth rate of the economy, which it typically is, funding long-term investment expenditures via SAYGO is intergenerationally more efficient and equitable than doing so via PAYGO (Piketty 2018). This should be complemented by a gradual and well-managed switch from a progressive income to a progressive consumption tax, aimed to encourage long-term saving and investing (Metcalf 1973).

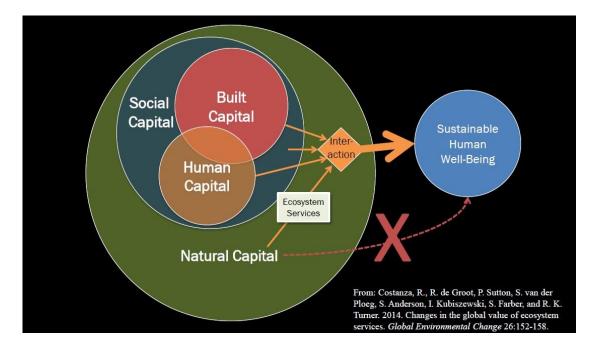
Integrated approach to sustainability

Unless an integrated environmental, social, and economic policy framework is adopted, taking into account the critical interdependencies between the associated ecosystems, a public policy that is focused on intergenerational wellbeing cannot achieve its objective. Human lives are lived in social settings, and society is embedded in a natural environment.

Figure 7 attempts to capture two main ideas. First, the interactions between various types of capital in generating sustained wellbeing. As Costanza *et al.* (2017), where we have borrowed this figure from, emphasise, it is the complex interactions between these various forms of capital assets that affect human wellbeing. Built capital and human capital are embedded in society, which is in turn embedded in the rest of nature.

Second, "sustainability" refers to the sustainability of human wellbeing, not necessarily to the sustainability (or preservation) of any particular form of natural capital. We should allow for the possibility of substitutability of various types of natural and other forms of capital in generating human wellbeing.

Figure 7 Sustainable Human Wellbeing



Adaptive time consistency

"Time consistent policies are not policies that are never changed, but policies where any changes required by new circumstances are consistent with maintaining the original purposes of the policy. They are important for the socially desirable performance of the private and public sectors. This is because they provide stability that enables individuals and the state to plan for the future" (Evans *et al.* 2013, p. ii).

Democratic institutions are critical in helping us resolve tensions through public reasoning and deliberation (see Bertram and Terry 2013; Sen 2009; Walzer 1983). It is the democratic process, in the form of representative democracy, supported by appropriate institutions, that provides the forces that push towards an alignment of collective action (implemented through the government as our agent) with evolving private and communal interests (i.e., government action is endogenous). This ensures time consistency.

Inclusive processes as a requirement for sustainable wellbeing

One of the critical outputs that wellbeing-focused governance arrangements need to deliver is *inclusive* decision-making mechanisms that aggregate the wisdom, expertise, and experiences of all stakeholders to inform the end-to-end policy approach. "Policies aimed to improve people's quality of life need to include their experiences, aspirations, and priorities" (Reid 2019, p. 44). This provides the crucial link between the *participatory* and *capabilities* approaches to public policy.

The foundations of such a policy would include (Scott, 1998): a recognition of the limits of what we are likely to know about a complex and functioning order; a recognition that individuals and communities will respond and adapt to whatever changes are put in place; the contributions to resilience of social, natural, regional diversity; the indispensable role of practical knowledge, informal processes and improvisation in the face of unpredictability; an appreciation of the complementary roles of "the centre" and the local/regional communities; and, in that very context, the advantage that "the centre" has in seeing the big picture, identifying trends early, and intervening in a timely fashion in epidemics.

This type of policy framework embraces localism, encouragement of experimentation at local level, small steps in implementation, reversibility and fast failures, and planning on surprises. It is built around the benefits of decentralisation and emergence. Collective wellbeing is pursued not by searching for investment levers that will enhance well-defined social outcomes, but rather by making it easier for people to pursue the varied lives they value, with no pre-defined desired social outcomes.

Rajan (2019) describes localism as, "the process of decentralising power to the local level so that people feel more empowered in their communities. The community, rather than the nation, will become a possible vehicle for ethnic cohesiveness and cultural continuity" (p. 285). The underlying principle is that of *subsidiarity* – "powers should stay at the most decentralised level consistent with their effective use" (p. 285).

Localism is not a panacea for well-balanced collective decisions (Olson 1965), but it is an integral part of a well-designed and governed, integrated and inclusive process.

Assessment: how do we know if policy is effective

Where intergenerational wellbeing is the objective of public policy, there needs to be an assessment specifically targeted at evaluating whether public policy is creating the platform for sustainable intergenerational wellbeing. Good public policies, in this specific context, are those that expand or enlarge the "wellbeing garden".

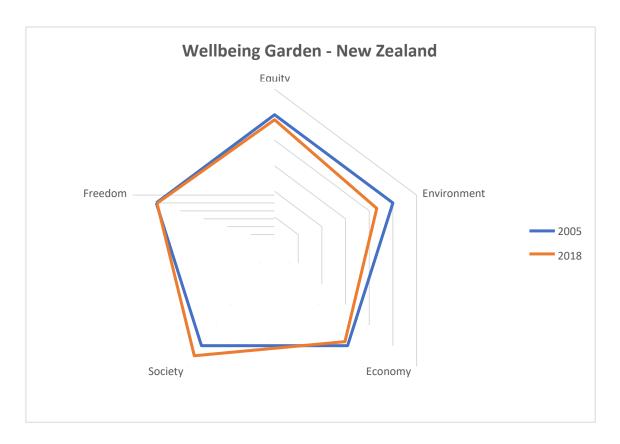
Figure 8, which uses New Zealand data simply because we happen to live here, should be seen as illustrative only, since the underlying data is pretty weak. That is why we have deliberately provided only two representations of the frontier, based roughly on data for the periods 2005 and 2018. Treating 2005 as the base (index no = 100), we have simply represented the 2018 data as a deviation (a ratio in this case) of the same (or corresponding) measure from that base.

- The Equity dimension of the wellbeing frontier conceptually represents widespread access to all forms of wealth. We have used the data presented in one of the reports to the Tax Working Group (IRD and NZ Treasury 2018) on wealth inequality – using a wealth Gini coefficient as a measure.
- The *Environmental Quality* measure is from Wendling *et al.* (2018) based on their *Environmental Performance Index*. The index covers 24 performance indicators across 10 "issue categories" covering environmental health and ecosystem vitality. New Zealand's ranking went from 1 to 17 between 2006 and 2018 and its performance index went from 88.0 to 76.0 (although the authors warn that, because of changes in index-construction methodology, these two numbers are not strictly comparable).

- The Economy represents the potential growth rate of the economy and is sourced from the OECD Databases <u>OECD Data</u>; <u>OECD Statistics</u>).
- The Society dimension represents social cohesion and is proxied by survey-based "generalised trust" data, obtained from Ortiz-Ospina and Roser (2016)
- The *Freedom* measure is based on the *The Human Freedom Index* constructed by Vásquez and Porčnik (2019).

Figure 8 Evolution of the New Zealand Wellbeing Garden

	Equity	Environment	Economy	Society	Freedom
2005	100	100	100	100	100
2018	96	86	96	110	99



Broadly speaking, based on the evidence and data presented in this section, we can conclude that there are stresses building on New Zealand's wellbeing frontier. These stresses are centred on the natural environment and equity. If these stresses are not addressed, they have the potential to create pressure on social cohesion and potential economic growth as well. From a public policy perspective, these are the main sources of concern about the strength of the platform for intergenerationally sustainable wellbeing.

If required for policy analysis and prioritisation, the total "size" of the wellbeing garden can be calculated by multiplying the measures of each the five domains: $WG = Eq \ x \ En \ x \ Ec \ x \ So \ x$ Fr. "Viable" policy interventions can then be prioritised by ranking their impact on the ratio of

the change in the size of the frontier to the cost of the intervention (some sort of benefit/cost analysis). We would do this in comparing only "viable" policy interventions – i.e. those that extend or leave unchanged each of the five dimensions of the wellbeing frontier.

Prioritisation: what would we prioritise and why

Martin and Pindyck (2015) pose the following question: faced with numerous potential catastrophes, with uncertainties surrounding occurrences and timings, which should society attempt to avert? Of course, we can also ask the question in a positive way: faced with numerous investment opportunities at a system level, which should society prioritise?

In answering this question, we need to keep in mind the policy objective of improving wellbeing on a sustainable basis across generations. In this context, the priorities identified and discussed below have been influenced by two important pieces of information.

First are the stresses, on the wellbeing frontier, that were identified above. In the case of New Zealand, they happen to centre on the natural environment and equity; other countries will have their own circumstances. If these are not attended to with some degree of urgency, they will also start putting pressure on the other key dimensions of the wellbeing frontier, such as social cohesion. On the flip side, if they are dealt with adequately, and in the right manner, they will have positive benefits for the other dimensions of wellbeing, such as potential economic growth.

The second important influence on the policy priorities advocated below are the interdependencies between the various dimensions of systemic resilience that sit in the middle of Figure 4. Such interdependencies are at the centre of our modelling work (see Karacaoglu *et al.*, 2019). They help us prioritise potential policy interventions aimed at expanding the wellbeing garden.

Given where we are right now in New Zealand, we suggest that the top two priorities of a public policy that has intergenerational wellbeing as its primary objective, should be: a universal and comprehensive "leave no one behind" strategy, complemented by environment-friendly investments that build resilience to systemic risks to the natural environment while also creating sustained, high quality, employment.

Giving top priority to a "leave no one behind" strategy would make a positive contribution to all five dimensions of systemic resilience that sit in the middle of Figure 4. Broadening the availability of opportunities and capabilities helps reduce inequity and increase social cohesion. Through that channel, it increases potential economic growth, as well as increasing social and economic resilience. It also directly reduces environmental degradation and increases environmental resilience because poverty is one of the biggest enemies of the natural environment.

A "leave no one behind" strategy makes everyone a stakeholder in society. It does so by giving everyone access to education, healthcare, and housing. By giving everyone who is capable of working, an employment opportunity. By making sure that everyone has a minimum level of adequate income. By looking after those who cannot look after themselves. By making sure that everyone has a voice in matters that affect them. This ensures that every citizen is "invested" in their country. Every citizen would then be intensely interested in how

the country is feeling and do their best for the wellbeing of the country at large – because when the country is doing well, everyone does well.

"Many current social problems are rooted in our neglect of the democratic process. The solution isn't to dribble out enough crumbs to keep people at home, distracted, and otherwise pacified. Rather, we need to rejuvenate democratic politics, boost civic involvement, and seek collective solutions. Only with a mobilized, politically active society can we build the institutions we need for shared prosperity in the future, while protecting the most disadvantaged among us" (Acemoglu, 2019).

A "leave no one behind strategy" needs to be concurrently focused on reducing suffering, while increasing opportunities and capabilities to pursue valued lives. For the current adult population, this needs to be delivered through training and employment opportunities as the top priority, and conditional cash support if the employment option is not available. Care also involves, in-kind support as required viz health and housing. For the young generation, the most effective and enduring way of showing care is to invest in them — in their education, health, and housing.

Access to assets also provides a source of opportunities and capabilities for the young. In this vein, Smith (2018) argues for asset-based assistance for high-risk children. Having identified children who are at high risk of future poverty ("wards of the state"), we would provide them with a reasonably generous cash endowment at the age of 18, so that they have the foundation for a positive start to their adult lives. What purposes this asset can be used for (such as education and skilling) would be strictly prescribed.

Poverty-reducing (or opportunity increasing) measures provide examples of policy interventions that have multiple benefits. These are the ideal types of interventions when we are dealing with multi-dimensional and mutually dependent environmental, social, and economic systems.

Breunig and Majeed (2016) provide empirical evidence in support of their policy advice to, "reduce inequality by attacking poverty rather than by redistributing income," on the basis that this has a wider positive impact on wellbeing through its positive impact on potential economic growth, the quality of institutions, and social cohesion.

A "give and care" system (to paraphrase Banajee and Duflo's (2019) "Cash and Care" proposal) needs to be based on a strong partnership between central government, local and regional government, and communities. This is where the "localism" discussion and the governance proposals developed earlier also become critically important. There needs to be a lot of investment in building capability in communities (through major local and regional government involvement).

Poverty reduction positively influences wellbeing through several, mutually- reinforcing, channels. It is good for the environment because poor people do not have the choices to consume environment-friendly products. It is also good for social cohesion because poverty is a source of all kinds of social tensions. Through these impacts, it then creates a series of second-round positive influences on wellbeing (including social and environmental resilience). The complementary "clean environment" strategies would be implemented through a combination of taxes, regulations, and subsidies (including research and development

subsidies) to encourage the switch of both production and consumption towards cleaner technology and products.

This can be achieved with the help of policies that simultaneously support the switch of production towards the use of "clean" technology (through a combination of subsidies and taxes), while concurrently (through R&D support and related measures) encouraging investment in (and thereby increased supply of) human capital in the form of skilled labour and scientists who can work with "clean" technology (Acemoglu *et al.*, 2012).

The specific sets or combinations of investments that will achieve the desired outcomes, and the distinctive role of public policy (including public investments) in creating the required ecosystems to support these investments, will be determined by a cooperative process between the various stakeholders. This process needs to involve, in a spirit of genuine partnership, central and local governments, the scientific community, the private and public business sectors, NGOs, and representatives of various disciplines, ethnicities, and genders. Harnessing the collective imagination and wisdom of all these stakeholders, in prioritising the long-term investments as well as agreeing on a division of labour between them is a critical role for governance.

The underlying narrative supporting this strategy package, including the inclusive processes to be followed, needs to be extremely well communicated and widely accepted if there is to be any chance of it being tried – let alone tried for long enough to work. What we are talking about is a massive transformative change in the way we govern. It will require a commitment across several generations. This will not be achieved unless we have a shared narrative. The reasoning and evidence supporting various facets of this narrative are extremely well developed in Acemoglu and Robinson (2019), Banerjee and Duflo (2011; 2019), and Rajan (2019).

Reason for hope - circular wellbeing

Let us end where we started. How are we to live? By what standards should we judge ourselves? For what virtues should we strive?

So far we addressed these questions through the lens of public policy. But what about individual behaviour? Public policy cannot achieve its objectives unless human behaviour is aligned with these objectives. For example, if we each live lives that damage the natural environment, we cannot maintain or enhance *environmental quality*. If we each refuse to live in harmony with those from other backgrounds and cultures, we cannot achieve *social cohesion* in aggregate, and so on.

So, what kind of individual behaviour and actions would be fully aligned with expanding the aggregate (collective) wellbeing garden?

Look after yourself – invest in yourself – in your own health, education and so on. Be fair in dealing with others. Minimise your activities that harm the natural environment. Work hard. Build networks and social connections. Do not hurt others. Enjoy your freedom - and passionately protect the freedoms of everyone else.

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There is good news. *The Science of Wellbeing* suggests that, if we do live our lives on the basis of these principles, we will also achieve individual wellbeing – through enhanced resilience (Santos, 2020).

We have here the recipe for *circular wellbeing*. Pursue a life that is fully aligned with expanding the social wellbeing garden, and you will have achieved personal wellbeing. Everybody, including unborn generations, wins.

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