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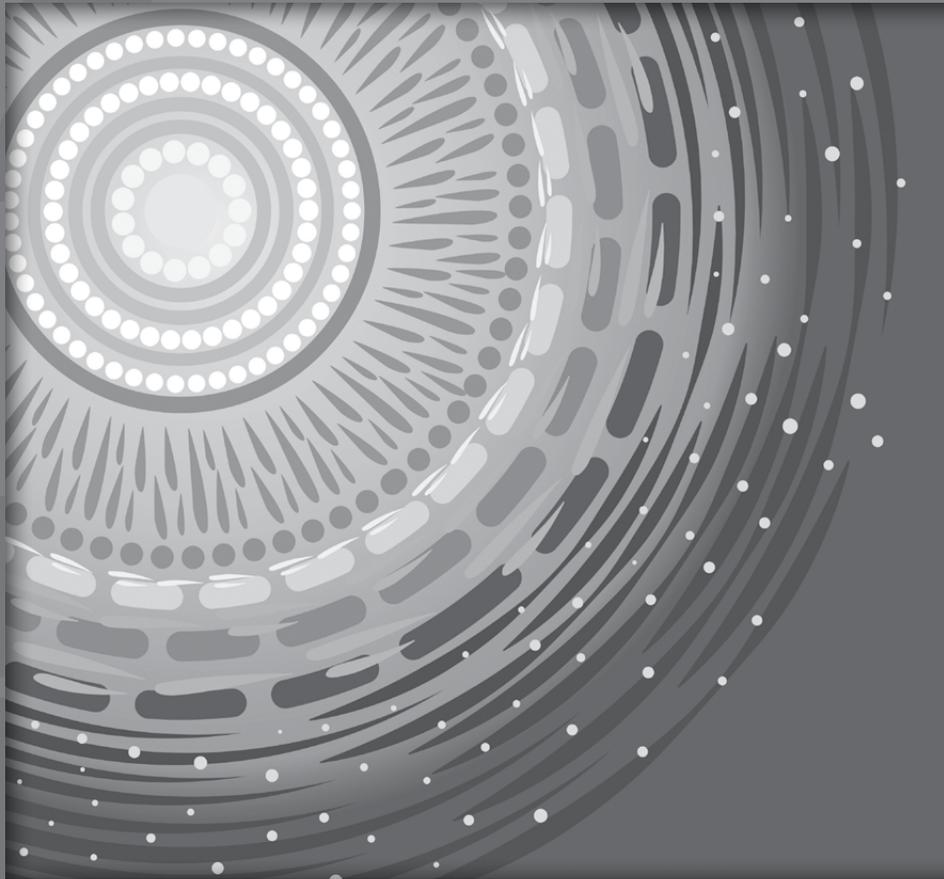
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Foreword



I am pleased to introduce the sixth issue of the Journal of Behavioral Economics and Social Systems.

Several articles in this edition explore the development of a more sustainable model of economic development to ensure our democratic structures and commercial processes reflect our values and protect our future.

The siloed nature of our governance structures makes it impossible to manage conflicting priorities in a single centralised approach. Discrete departments in companies and governments are tasked with their sphere of responsibility – be it sales or social security – and so inevitably act to promote and protect that interest, sometimes at the expense of the administration, corporation, or even nation.

Unfortunately, this neat fragmentation of administrative responsibility does not reflect the complex, interconnected nature of the real world. The effects of industry are felt in agriculture and transport, for example, through the impacts of climate change, while social, health and education policies may stoke or undermine economic success.

People live 'holistic' lives, touched by the decisions of every department and sector. The free-market process and democratic structures which theoretically aggregate and balance our interactions now lag behind a worrying range of ever more urgent needs and challenges.

Siloed departments have strong financial and institutional incentives to avoid collaboration, lest that reduce their budget or policy freedom, despite the overall detriment that causes to outcomes. When financial input rather than concrete outputs measure achievement, and the avoidance of failure advances more careers than risks innovative success, it is little wonder that governments see problems as issues to be postponed or managed rather than tackled and solved.

Rigid boundaries do not align with real life, so our organisations and governments lack the flexibility and overall vision to respond to fast-changing circumstances. The “First Track” processes which channel communication within and between these siloes encourage compliance, rather than creativity, and circumscribe, rather than encourage, constructive engagement. Siloes may allow individual actors to evade their collective responsibility when failure inevitably results, but in the long term – be it a company, a government or a planetary species – we are all in this together.

The Second Track encourages a broader cross-section of stakeholders and experts to contribute their thoughts and experience to explore issues from every angle. Solutions that evolve from a pool of knowledge are more likely to reflect current real-world conditions, escape the bonds of ideological presuppositions, and achieve the life-force they will need to succeed.

I therefore commend Prof Peter Söderbaum’s paper on sustainable economic development and his call for a new language in economics education as a counterweight to narrow neo-classical doctrine. I invite readers to absorb and offer their own opinions on the many other insights in this edition of *BESS* alongside the articles on everyday human interactions, neurological decision making and behavioural economics in previous issues.

These topics are of academic interest and directly relevant to our increasingly imperilled political, social and natural world. Our current form of democracy is endangered on several fronts, not least because our current economic model is losing

a social license and public legitimacy by ignoring its social inequalities and environmental effects.

Karl Marx thought the revolution would inevitably follow an increasing polarisation of wealth and power between the elite and the masses, but that threat was nullified in the West by a hundred and fifty years of broad economic, democratic and social progress for society. The failure of current politicians to address the glaring gulf between a super-wealthy, technologically powerful elite and a population losing hope of secure employment and affordable housing, medicine and education demand urgent attention.

Marx argued that economic relations are crucial, while his post-modern descendants view power dynamics between identity groups as society’s motive force. Both critiques contain a grain of truth but ignore other factors, from intrinsic human biology through individual effort and responsibility to higher virtues and interpersonal relationships.

Whatever human complexities temper the influence of money and power, the fact remains that a house left unattended will inevitably fall into disrepair before being swept away to its very foundations and replaced by something new. If our experience of modern architecture is any guide, that replacement is not always for the better.

Democracy has to evolve more quickly to maintain its ability to enrich and empower people and nations, and retooling our system of economic value, exchange and education – alongside adopting Second Track approaches to broaden and deepen decision-making – is perhaps the best way to ensure the best of our culture is retained, rather than lost, in the deluge.



Peter Fritz AO

Sydney, October 2023

Editorial column



This issue was in production when Australians went to the polls in a national referendum on the Indigenous Voice to Parliament. Debates about the proposed change and its implications for the future of Australia have been a mainstay of traditional news, social media and public conversations since the idea was first proposed in the 2017 Uluru Statement from the Heart.

While the defeat of the Voice referendum on 14 October will no doubt be the subject of deep analysis, reflection and discussion for years to come, *BESS*[®] authors continue to explore how the self-governing practices found in Indigenous societies can inform our modern governance structures to protect and share the wellbeing of humanity and the environment we depend upon.

I therefore commend the article on *Polycentric self-governance and Indigenous knowledge* by Dr Shann Turnbull, Prof Natalie P. Stoianoff and Prof Anne Poelina, discussing how principles underlying Australian Indigenous governance can be embedded into organisational entities, building on Elinor Ostrom's principles for sustainable governance of a common pool of resources.

This form of polycentric self-governance can aggregate the voices of minorities representing local environments up to a global level and contribute to social sustainability. The authors use case studies, systems science and biomimicry to analyse polycentric self-governance and ways organisations can adopt it for the benefit and wellbeing of all stakeholders.

The issue of sustainability is also at the heart of our opening article by Prof Peter Söderbaum. In *Conceptual framework and language for sustainability politics*, he questions the traditional neoclassical economic paradigm, arguing that despite its importance to the current political-economic system, it is failing to react to broader societal challenges, including global economic development. He proposes ecological economics as a new conceptual framework and language of discourse to shift our focus towards sustainable development and strengthen democracy.

New forms of economic and political models to deal with social and environmental consequences of unchecked growth are also the subject of *Money changes everything* by Peter Fritz AO and Nicholas Mallory. They argue that reimagining our concept of value is the key to reshaping the global economy to promote long-term sustainability ahead of short-term consumption. If people worldwide are to enjoy the fruits of humanity's progress, we must shift our collective ingenuity towards doing more with less and healing the living planet we all depend upon.

These challenges also require new decision-making frameworks, as Alison Sheehy highlights in her summary of ideas and recommendations from the Nobel Prize Dialogue Sydney 2023 Virtual Event. Held in June, the dialogue brought together over one hundred and forty participants worldwide to discuss *The Future of Decision Making: From Personal Choice to Planetary Impact*. Participants

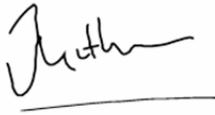
considered the implications of artificial intelligence for democratic processes and new ways to engage the public in decision-making. Co-host Global Access Partners will now establish a second track taskforce to examine ways to incorporate long-term thinking into democratic decision-making, particularly in the Australasia context. Our Editorial Board is following these developments with keen interest and hopes to report on the outcomes of the Taskforce's work in due course.

The challenges facing democracy include the growing gap between the expectations of voters and their perceived satisfaction with the performance of politicians and government institutions. Fergus Neilson builds on his dissertation on *Narrowing the trust divide* by interviewing current and former Australian politicians. He argues that if liberal democracies are to resist their current adversaries, they should acknowledge this Trust Divide, understand its causes, recognise its risks, and implement reforms to restore voter trust and institutional performance.

Finally, I am pleased to introduce the articles written by two international academic teams, both touching on second-track processes.

Prof Arvind Singhal from the US and Dr Erik Bjurström from Sweden suggest that behavioural economists interested in solving wicked problems should leverage positive deviance – an approach for spreading innovations by identifying positive outliers' novel and effective practices. In their article *Advancing behavioural economics through positive deviance: Attending to the microworld of second-track processes*, they contend that positive deviance is a vital part of problem-solving in second-track processes through the conversation, coordination and collaboration, which links multiple stakeholders with diverse lived realities, agendas and constraints.

In Towards Society 5.0: Enabling the European Commission's Policy Brief Towards a sustainable, human-centric and resilient European Industry, Danish business academics Prof Christian Nielsen and Prof Jacob Brix propose a 'society transition model' to ease the shift towards the EU's vision of Industry 5.0 and the broader idea of a super-intelligent, data-driven Society 5.0. This systematic, second-track, bottom-up method model has already been tested in the Danish region of Aalborg.

A handwritten signature in black ink, appearing to read 'J Guthrie', written over a horizontal line.

Prof James Guthrie AM
Editor-in-Chief
Sydney, October 2023

Contents

- 13 ARTICLE
Conceptual framework and language for sustainability politics
Prof Peter Söderbaum
- 23 ARTICLE
Advancing behavioural economics through positive deviance: Attending to the microworld of second-track processes
Prof Arvind Singhal & Dr Erik Bjurström
- 39 ARTICLE
Narrowing the trust divide
Fergus Neilson
- 62 ARTICLE
Polycentric self-governance and Indigenous knowledge
Dr Shann Turnbull, Prof Natalie P. Stoianoff & Prof Anne Poelina
- 83 RESEARCH NOTE
Towards Society 5.0: Enabling the European Commission's Policy Brief 'Towards a sustainable, human-centric and resilient European Industry'
Prof Christian Nielsen & Prof Jacob Brix
- 92 RESEARCH NOTE
'Money changes everything': New forms of economic and political models
Peter Fritz AO & Nicholas Mallory
- 103 RESEARCH NOTE
'The Future of Decision Making': Nobel Prize Dialogue Sydney 2023 Virtual Event
Alison Sheehy
- 108 **List of contributors**
- 112 **BESS® Guidelines for contributors**
- 114 **BESS® Editorial Board**
- 116 **BESS® Style Guide**

ARTICLE

Conceptual framework and language for sustainability politics

Prof Peter Söderbaum

Economics must shift its focus from markets and monetary impacts to the non-monetary perspective to avoid irreversible ecological damage. Professor Emeritus Peter Söderbaum from Mälardalen University proposes a conceptual framework of ecological economics aimed at encouraging sustainable development and strengthening democracy through a political-economics perspective.

Introduction

Development trends around the world are unsustainable. It can be argued that mainstream neoclassical economics is part of this problem and that to shift towards sustainability we need to reconsider neoclassical economics. This paper will focus on economics and management science as taught in universities and the school system. It does so because the way economics is taught in education environments legitimises prevalent unsustainable development trends amongst societal actors. Discussing current approaches to economics education forms a basis for developing alternative perspectives in economics.

Mainstream neoclassical economics as a paradigm and ideological orientation

Neoclassical economics has become an established and institutionalised paradigm. This paradigm is perhaps best described in introductory textbooks used in university economics teaching for example Gregory Mankiw's *Economics*.¹ This neoclassical perspective positions individuals and firms as the key actors in the economy, who form a relationship

1. Mankiw, 2011

in which they are connected in markets for commodities, labour and capital. As consumer, the individual is assumed to maximise their utility of alternative combinations of commodities within the scope of their financial budget constraint. Firms maximise profits in monetary terms and markets are understood mechanistically to balance supply (from firms) and demand (from consumers). Performance at the economic level is measured in GDP-terms and the efficiency of investments in infrastructure, such as energy or roads, is evaluated through a specific kind of cost-benefit analysis (CBA).

This neoclassical paradigm is undoubtedly helpful for some purposes. For example, it is useful for understanding inflation and a possible recession in the economy and to consider alternatives in terms of monetary policy. Furthermore, neoclassical theory and method can be extended to cover environmental issues. Taxes, charges, prohibitions and even 'markets for pollution permits' are possible instruments in "neoclassical environmental economics". However, is this enough to address the big challenges we are facing, such as climate change, biodiversity loss, air pollution, land loss and water pollution? Or do we need a new economics paradigm as an alternative or complement to the neoclassical perspective?

Ecological economics as paradigm and ideological orientation

Neoclassical economics is not a neutral paradigm. In economics "values are always with us" to cite Gunnar Myrdal, one of the early winners of the so-called Nobel prize in economics.² In economics education and research decisions are taken from a viewpoint where values (or, in my language 'ideological orientation') play a role. Tanja von Egan-Krieger³ refers to the "illusion of value-neutrality", which she regards as valid for

orthodoxy as well as heterodox schools of thought in economics. Neither the neoclassical mainstream nor its alternatives can claim value-neutrality. Instead, we must uncover the values or ideological orientation built into each paradigm and discuss their relevance.

In ideological terms, neoclassical economics can be described as 'economics for growth in GDP-terms, for profits in business and maximum satisfaction (utility) of the consumer'. This ideological orientation is supported by many citizens, politicians and political parties. The kind of ecological economics proposed in this paper on the other hand can be described as 'economics for sustainable development'. Our interest is developing a conceptual framework and language for sustainability politics. While sustainable development is often associated with Green political parties and an ambition 'to Green' our political economic systems, it is more than that, requiring a fundamental change. That is, while neoclassical economics supports the present political-economic system, sustainable development challenges it.

First, we must define 'sustainable development'. The concept has been widely discussed and has become institutionalised at the United Nations level. In preparation for the first United Nations conference "on the Human Environment" in Stockholm in 1972, General Secretary Maurice Strong commissioned a report by Barbara Ward and René Dubos entitled *Only One Earth. The Care and Maintenance of a Small Planet*.⁴ At that stage, the 'environment' rather than 'sustainable development' was the key concept. A report from the World Commission on Environment and Development⁵ later coined and defined sustainable development in the book *Our Common Future*. It is recommended that our activities and decision-making should have a global perspective, thinking

2. Myrdal, 1978, p. 778

3. Von Egan-Krieger, 2014

4. Ward and Dubos, 1972

of our impact on those living in other parts of the world and future generations. In 2015 the United Nations established no less than 17 Sustainable Development Goals (SDGs) with sub-targets and a 2030 Agenda for Change.⁶ While the SDGs allow for GDP-growth (number 8 of the 17 SDGs), the 2030 Agenda can be regarded as a shift in emphasis from monetary concepts and analysis toward multidimensional thinking. The SDGs are underpinned by three considerations:

- Sustainable development and ecological economics should be understood in ethical and ideological terms. The idea is to broaden our views about development⁷
- Sustainable development is a complex and multi-faceted concept where multidimensional analysis is preferred to one-dimensional analysis in monetary terms
- Inertia issues, for example path dependence, resilience and irreversibility, are at the heart of sustainability performance analysis.

Sustainable development can then be formulated as “ecological imperatives for public policy”. In 1982, I suggested the following principles for choice in decision situations at the regional level:⁸

1. Alternatives with negative long-run impacts upon living conditions *within the region* should be avoided,
2. Alternatives with negative long-run impacts *in other regions* (and globally) should be avoided,
3. Alternatives that involve *risks* of considerable negative long-run impacts upon living conditions should be avoided,
4. If no alternative remains, *research and development* or other search activities should be initiated.

As an example, the issue of whether Sweden should build additional nuclear reactors to respond to an increasing demand for energy is currently hotly debated. In this case the above list of imperatives tells us that nuclear energy is unsustainable according to the three first criteria. Negative long-term impacts follow from each step, from mining of uranium, energy production and storage of radioactive material. Nuclear accidents are possible as in the Fukushima disaster in Japan.⁹ Current events make clear that war is possible even in Europe and that protection of reactor sites can be a problem. As suggested by point 3 above, a precautionary principle appears relevant.¹⁰ There are other energy sources, such as waterpower, solar energy and wind energy, the impact profiles of which are significantly less negative from a sustainability point of view.

The concepts of paradigm and ‘paradigm coexistence’ in relation to social science

In economics, the concept of a paradigm is attributed to its use in physics and other natural sciences. This conceptualization of a paradigm claims there is only one true paradigm at a time but that there can be a ‘paradigm-shift’ in the sense that the original paradigm is replaced by a new and improved one. The concept of ‘paradigm-shift’ goes back to the writings of Thomas Kuhn¹¹ and is connected with the ideas that science is neutral.

However, an alternative conceptualization sees each paradigm as specific in value or ideological terms, and two or more paradigms connected with different ideological orientations may coexist.¹² They may compete or be regarded as complementary. One paradigm may be dominant

5. World Commission on Environment and Development, 1987

6. United Nations, 2015

7. Söderbaum 2021; Crawford and Abdulai, 2021

8. Söderbaum, 1982

9. Oshima *et al.*, 2021

10. Harremoes *et al.*, 2002

11. Kuhn, 1970

12. Söderbaum, 2000, pp.29–31

at a point in time, but this can change, creating a 'paradigm-shift' in a different sense.

Even our way of defining or understanding 'paradigm' can be reconsidered. Natural sciences rely mainly on the testing of hypotheses in experimental situations. Knowledge should be 'evidence-based'. While there is a role for this kind of analysis also in social sciences, a limitation to evidence-based research in social science would be dysfunctional. General statements about how all individuals behave, for example that individuals maximise utility, are limiting.

This essay's 'paradigm' is primarily understood as 'conceptual framework and language'. Testing hypotheses within the scope of a traditional conceptual framework and language may not be enough when new challenges appear, such as climate change, biodiversity loss and pollution of soil, air and water, or in more general terms, sustainability issues. In this situation we may need a new paradigm (or new paradigms) in terms of conceptual framework and language that can help in understanding these issues.

Steps in this direction, that explore new ideas about individuals, organisations and markets beyond those offered in neoclassical economics are outlined in this paper.

An alternative definition of economics

According to a traditional neoclassical view, economics is about "optimal allocation of scarce resources". Quantification in one-dimensional terms is at the heart of this definition, and the monetary dimension is emphasised. However, this view of economics is but one way of defining the subject. Söderbaum¹³ defines economics as "multidimensional management of limited resources in a democratic society".

Söderbaum's definition represents a move away from one-dimensional monetary analysis, so-called

"monetary reductionism", toward multidimensional thinking and analysis. Sustainable development is regarded as a multidimensional phenomenon, not easily reduceable to one dimension, monetary or otherwise. There are a range of impacts, and each kind of impact should be understood by its own terms; environmental impacts should be described in environmental terms, health impacts in health terms and social impacts in social terms.

Furthermore, non-monetary impacts are as economical as financial impacts. We are inculcated to think of economics mainly in monetary terms, in which impacts are framed by terms such as 'cost' and 'benefit', regardless of whether they are monetary and/or non-monetary. As suggested in Table I there are 'non-monetary costs' and 'non-monetary benefits' ('b' and 'd' respectively) just as there are monetary costs and benefits. The importance of specific impacts and of the combination of expected impacts connected with an alternative is a matter of an actor's ideological orientation.

TABLE I: Categories of impacts in impact studies

	Monetary	Non-monetary
Cost	'a'	'b'
Benefit	'c'	'd'

Söderbaum's¹⁴ definition also suggests a move away from one single way of valuing each impact towards accepting the imperatives of a democratic society. Democracy is about listening to many voices. In a decision situation, competing ideological orientations is usually relevant. There is a choice among ideological orientations just as there is a choice among alternatives. Furthermore, any preference ordering among alternatives considered is conditional upon ideological orientation.

In the neoclassical perspective, 'democracy' and 'ideology' or 'ideological orientation' play a

13. Söderbaum, 2018, p. 13

14. Söderbaum, 2018

peripheral role. These words are absent from the glossary and subject index in Gregory Mankiw's previously mentioned textbook.¹⁵

Ideological orientation, ideology and democracy as key concepts

The concepts of 'ideology' and 'ideological orientation' may appear foreign to economists and economics. As part of a division of labour when university research and education is concerned, democracy and ideology may be regarded as belonging to political science. Nevertheless, economics is a political science. The idea of economics as neutral in value terms has been abandoned.¹⁶

Not all economists have been reluctant to use the word 'ideology'. I have found three who regard ideology as an essential and unavoidable concept in economics. Joan Robinson¹⁷ points to the similarity between the ideology built into the discipline of economics and the dominant ideology in public discourse:

In the general mass of notions and sentiments that make up an ideology those concerned with economic life play a large part, and economics itself (that is the subject as it is taught in universities and evening classes and pronounced upon in leading articles) has always been partly a vehicle for the ruling ideology of each period as well as partly a method of scientific investigation.

In his book on institutional change, Douglass North¹⁸ defines ideology in the following way:

By ideology I mean the subjective perceptions (models, theories) all people possess to explain the world around them. Whether at the microlevel of individual relationships

or at the macrolevel of organised ideologies providing integrated explanations of the past and the present, such as communism or religion, the theories individuals construct are colored by normative views of how the world should be organised.

The third example is Thomas Piketty's book *Capital and Ideology* where ideology is defined as follows:¹⁹

I use "ideology" in a positive and constructive sense to refer to a set of a priori plausible ideas and discourses describing how society should be structured. An ideology has social, economic and political dimensions. It is an attempt to respond to a broad set of questions concerning the desirable or ideal organisation of society. Given the complexity of the issues, it should be obvious that no ideology could ever command full and total assent: ideological conflict and disagreement are inherent in the very notion of ideology. Nevertheless, every society must attempt to answer questions about how it should be organised, usually on the basis of its own historical experience but sometimes also on the experiences of other societies. Individuals will usually also feel called on to form opinions of their own on these fundamental existential issues, however vague or unsatisfactory they may be.

Ideology can be understood as a means-ends philosophy for individuals as well as for collectives, such as organisations of different kinds, including political parties. Ideologies are about "fundamental existential issues", as mentioned by Piketty, but also have a role in everyday decision-making. When referring to such commonplace situations for example walking on the street, reference to 'ideological orientation' is preferable to 'ideology'.

15. Mankiw, 2011

16. Actually, "political economics" was the terminology used until about 1870. The attempt to present economics in more neutral terms is here regarded as a failure.

17. Robinson, 1962, p. 1

18. North, 1992, p. 23, italics in original

19. Piketty, 2020, pp. 3–4

A proposed conceptual framework and language

Hence, economics is always 'political economics'. The actors or agents in the economy are political actors and they are part of a democratic society. Therefore, an individual is referred to as a Political-economic Person (PEP) and an organisation as a Political-economic Organisation (PEO).

- A **political-economic person** is an actor guided by their ideological orientation
- A **political-economic organisation** is an actor guided by its ideological orientation or mission

Reference to ideological orientation or mission means that broader ethical or ideological issues are potentially part of the picture. Simplifications that all individuals are exclusively concerned about their income in monetary terms and purchasing power while organisations are exclusively focused on monetary profits are thus downplayed.²⁰ We are not looking for statements about how all individuals (organisations) behave but rather differences in behaviour between actors and within an actor category.²¹ Our interest in sustainability furthermore means that we want to know how the behaviour of a specific actor changes over time. Can economic analysis be carried out in ways that make individuals and organisations seriously consider 'social responsibility' or 'sustainable development'?

In a functioning democracy, individuals and organisations are encouraged to participate in public dialogue. As Mary Clark²² argued, these actors do not react mechanistically like billiard balls to government policy instruments, rather they participate as actors and potential policymakers. The behaviour of PEPs and PEOs is a matter of social psychology and cultural studies with concepts

such as role, relationship, identity, cognition, affection, attitude, trust, goodwill, dissonance etc. Such concepts are mainly missing from neoclassical economics textbooks.

PEPs and PEOs interact through social and physical **relationships and networks, markets** being a subcategory of relationships and networks. The functioning of networks is often a matter of **trust**. Actor A may trust another actor B (or the network of which B is part). Such a positive attitude may influence the initiation and fulfilment of transactions between A and B.²³ An actor can participate in a few networks, which can hinder or facilitate desired performance following the actor's ideological orientation or mission.

Network thinking implies that the border between an individual (organisation) and their environment becomes less clear or more uncertain than in neoclassical theory and conventional accounting practices. *No Business is an Island*²⁴ is the thought-provoking title of a book that encapsulates the idea that ideological orientation and consequent behaviour of an actor A is not only a matter of exploitation but may include a willingness to support other actors or networks B, C and D.

The emphasis in neoclassical economics upon optimal solutions concerning private and public investment projects is replaced in the proposed framework with an ambition to **illuminate a decision situation in a many-sided way concerning ideological orientation, alternatives of choice and impacts**—such a view being more compatible with democracy. Looking for one optimal solution means that only one ideological orientation is considered and can, therefore, be considered as a case of manipulation. Why should all politicians and other actors rely on one ideological orientation such as the one built into CBA?

20. Monetary or financial analysis and calculation is certainly still important in our present political-economic system. Such analysis should, however, be regarded as 'partial economic analysis'. Non-monetary impacts are other parts of our multidimensional idea of economics.

21. Söderbaum, 1991

22. Clark, 2002, pp. 6--8

23. Ford, 1990

24. Håkansson and Snehota, 2017

In an analysis that is 'many-sided' in the above sense, **conclusions** will be **conditional** in relation to each ideological orientation considered. The order of preference among alternatives considered will differ, for example, between an ideology emphasising traditional monetary criteria (such as GDP growth and profits in business) and ideologies aiming at sustainability.

The impacts of each alternative are described in **multidimensional profile** terms, and decision-making (or an actor's position at a point in time about an issue) is regarded as **'matching'** their specific ideological orientation with the expected (multidimensional) impact profile of each alternative considered. An alternative may be more or less compatible with the ideological orientation of an actor.

Decision-making is furthermore regarded as a **multiple-stage process**. As previously argued, considering the different kinds of inertia, irreversibility included, is essential when planning for sustainability. Will implementing one alternative lead to irreversible losses in future living conditions? Are there alternatives that are instead connected with minor degradation of the future natural resource base or perhaps improvements in future conditions?

Some approaches are more compatible with democracy and sustainable development. **Positional Analysis** (PA)²⁵ builds on the conceptual framework already presented and can broadly be described as ideologically open and multidimensional ('e' in Table 2), while neoclassical CBA is ideologically closed and one-dimensional (category 'h' in Table 2). Other approaches than these two mentioned above are relevant in sustainability studies, for example Environmental Impact Statements (EIS) and Social Impact Statements (SIE). They are both multidimensional, but each is limited to a specific kind of impact.

TABLE 2: Classification of approaches to decision-making

	Ideologically open	Ideologically closed
Multi-dimensional	'e'	'f'
One-dimensional	'g'	'h'

Positional Analysis²⁶ has mainly been applied at the public level, but is also relevant for private decisions at the levels of individuals, groups and organisations.

The behaviour of individuals and organisations is often said to be accepted by many and institutionalised. The concept of **institution** relates to **habits of thought and habits of behaviour**. Inertia is at the heart of institutions, but there is also room for more or less radical institutional change. Mainstream economists have accepted mainly the existing institutional framework and the **political-economic system** just as they support the mainstream economic paradigm. They may also support modifications of mainstream institutions. However, radical institutional change must be considered in relation to climate change and other sustainability challenges.

The business corporation as an institution exists and is supported in nations such as Sweden or in the European Union (EU) and also by actors belonging to the establishment. Nevertheless, even corporations may fail. In *The Social Costs of Private Enterprise*,²⁷ William Kapp warned of the tendencies to limit attention to monetary dimension. In an article,²⁸ he later argued as follows:

Thus, a system of decision-making, operating in accordance with the principle of investment for profit, cannot be expected to proceed in any other way but to try to reduce its costs whenever possible by shifting them to the shoulders of others or to society at large.

25. Brown *et al.*, 2017

26. See 21

27. Kapp, 1950

28. Kapp, 1970, p. 18

Others have followed, for instance Joel Bakan²⁹ wrote the book *The Corporation. The pathological pursuit of profit and power* arguing that all business corporations are dangerous entities. However, here I take a step back to suggest that corporations need to be scrutinised concerning climate change and other sustainability issues. Accounting systems limited to monetary impacts are no longer enough.³⁰

Examples of institutional challenges

Institutions in the sense of habits of thought and habits of behaviour, change over time. At issue is if changes in a specific domain represent improvements or degradation from a sustainability point of view. Actors may together institutionalise specific standardisation schemes, for example Corporate Social Responsibility or Fair Trade. Such systems have been active for some time with some—but not enough progress—made. We need to go further, to consider government intervention in terms of laws regulating business organisations at national and international levels. Any law or other regulation that limits performance indicators to the monetary dimension has to be reconsidered.

University economics and management science departments are critical in paving the way for new laws regulating business. Yet, actors inside and outside the university defend business-as-usual and maintain the present monopoly for neoclassical economics. Ideas of education and research as being neutral, and objective are comforting but what we need now is disruption in the form of an open analysis compatible with democracy. Organisations for heterodox economics and transdisciplinary approaches are needed. Each university needs to present its response to the problem of climate change and other sustainability issues.

The “Bank of Sweden Prize in Economics in Memory of Alfred Nobel” is a related field where

institutional change is also needed. This award is not part of the original Nobel prizes but is financed separately by the Bank of Sweden. In recent years the award has become an instrument defending and strengthening the neoclassical monopoly. While this argument is undoubtedly a subjective judgement, it simply reiterates my point that “values are always with us”.

Political-economic systems are not limited to the national level. Existing global institutions, such as the World Bank, International Monetary Fund and the World Trade Organisation must be rethought and the neoclassical doctrines that these organizations are based on must be scrutinized. The so-called Bridgetown Initiative advocates this in the present 2022 climate change negotiations of COP27. Financial support to make this change is undoubtedly needed.

Concluding comments on sustainability politics

In this essay, a redefinition of economics has been proposed as well as a few concepts. Individuals are understood as political economic persons, organisations as political-economic organisations and so on. The overriding idea is to use a conceptual framework that places individuals (organisations) in a position to act. We need individuals who are concerned and engaged in democracy and society who can take even little steps away from the neoclassical understanding of the behaviour of individuals.

Positional Analysis has similarly been suggested as an approach to decision-making that is more compatible with democracy. The concepts of ideology and ideological orientation need to be brought into economics. The central role of various forms of inertia (path dependence, irreversibility etc.) in relation to sustainability has been stressed. We need to move economics from its focus on markets and monetary impacts where all kinds

29. Bakan, 2004

30. Bebbington et al., 2007

of impacts can be traded against each other, to the non-monetary perspective, where issues of irreversibility become visible.

We now need “action” rather than “talk” concerning climate change and other sustainability challenges. But to make change happen we need to shift the focus toward issues of paradigm and ideology in a way that is multidimensional. We have permitted neoclassical economics and neoliberalism as ideology to dominate. That a specific version of a market perspective dominates cannot be allowed to continue in a democratic society. Other ideological orientations must be represented.

Will conceptual struggles as outlined here move us away from unsustainable development trends? Together these concepts and ideas represent access to a different language in economics as part of a pluralist perspective. It can contribute to a discourse that shapes mainstream perspectives to acknowledge sustainability issues. In a democracy this is an issue for continued dialogue.

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ARTICLE

Advancing behavioural economics through positive deviance: Attending to the microworld of second-track processes

Prof Arvind Singhal & Dr Erik Bjurström

Positive deviance diffuses innovation by identifying the novel and effective practices of positive outliers—those who have solved the problem against all odds. Innovation researchers Prof Arvind Singhal and Dr Erik Bjurström argue that positive deviance is a vital component of problem-solving in second track processes, achieved through conversation, coordination and collaboration among stakeholders given their lived realities, agendas and constraints.

“The task is ... not so much to see what no one has yet seen; but to think what nobody has yet thought, about that which everybody sees.”

– Erwin Schrodinger

Introduction

The Sufi tale of the mystical character Nasruddin, a smuggler known for his hundreds of disguises, sees him arrive each day without fail at the customs checkpoint leading a herd of donkeys. Each time the customs inspector feverishly turns the donkeys' baskets upside down to check for contraband, hoping to catch out Nasruddin; every time he finds nothing. Years pass, and Nasruddin's legend grows while the inspector becomes more frustrated. Decades later, with both enjoying their retirement, their paths cross.

The inspector says, “Tell me, Nasruddin, what were you smuggling?”

“Donkeys,” says Nasruddin.

What prevented the customs officer from seeing the donkeys? Might the answer lie in the “bounded rationality” of an expert's mind or

1. March and Simon, 1958; Burke, 1954/1984; Czarniawska, 2004; Mack and Rock, 1998

their “trained incapacity,” and their “inattentional blindness”! The customs officer’s frame—guided by specific cognitions, selective perceptions, and interpretations of what constitutes contraband—specified the boundaries of what was visible or invisible. The baskets that held the contraband were visible; the donkeys were not.²

We contend that the parable of Nasruddin’s donkeys is also a warning to behavioural economists, especially those who interrogate the role of social cognition in solving complex, wicked problems: *That often, the solutions to highly intractable problems are part of our actual lived experience, yet remain invisible in plain sight.* What the customs inspector’s story tells us is that to discover “invisible” solutions requires new mindsets—a special type of social cognition that is more nuanced in its understanding of human behaviour in decision making and social life.

We contend that Positive Deviance (PD), an approach to addressing wicked social problems, highlights a way forward. The premise of PD is that innovative and simple local solutions (i) exist with positive deviants—“unusual suspects” and “ingenious outliers”, who have solved a problem with no extra resources and often against all odds, (2) do not need to be formulated by experts, but rather found among ordinary people, and (3) are hidden in plain sight and are waiting to be discovered, validated, disseminated and implemented for social justice and sustainable change.

In this article, we interrogate the PD approach around two broad propositions of interest to behavioural economists. First, we propose that PD represents a vital condition of problem-solving using *Second Track Processes*, emphasizing conversation, coordination, and collaboration among multiple stakeholders, each accompanied by their lived realities, agendas and constraints.

Second, we contend that the PD approach allows us to focus our attention on *the microworld of human interaction*—the local context where life is authentically thrashed out by partners and participants amidst complexity. In this microworld, the validity of the innovation in question is negotiated, inferred, and decided by community members, not directed by technical and topical experts.

Positive Deviance: The Microworld of Second Track Processes

Positive Deviance (PD) is an approach for spreading innovations and may thus be understood against the backdrop of the study of diffusion of innovations, that is, the classical study of how ideas, objects and practices that are perceived as new spread in a social system.³ Diffusion studies demonstrate a predictable, over time, pattern for how most innovations spread – the familiar S-shaped cumulative curve of adoption. Correspondingly, innovativeness, that is, how early an adopter is relative to others tends to follow a normal distribution bell curve, beginning with innovators and early adopters, reaching a critical mass, and rounding off with late adopters and laggards. The origin of diffusion theory is the observation that the decision to adopt new farming technologies is not just a rational economic decision, but rather the consequence of a communication process.⁴

Diffusion research shows that human behaviours and cognitions are influenced by social networks, opinion leaders and context dependent non-economic factors. While marketers, policymakers and social change agents try to accelerate diffusion processes, the dissemination and implementation of new knowledge remains a challenge—the uptake is often uncertain, generally unsustainable, and usually accompanied by unintended

2. Singhal and Bjurström, 2015

3. Rogers, 2003; Rogers and Singhal, 1996; Singhal et al., 1999; Singhal and Dearing, 2006; Dearing and Singhal, 2020

4. Kim et al., 2007; Singhal, 2012

consequences. When successfully implemented, the adoption of new knowledge and practices tends to increase productivity, efficiency, and social value. In economic terms, we see a shift upwards in the welfare curve. While this upward shift is a dream for policymakers, all too often, it remains an unrealised dream. Time and again, engineered solutions to wicked problems and implementation challenges fail to deliver as anticipated. In fact, often they make matters worse. In complex environments, it is difficult to foresee consequences within a specific population from the outside, at a distance. A pre-occupation with problem analysis creates blinders that render invisible the solutions in plain view (akin to Nasruddin's donkeys).

In contrast, the PD approach shows how second track processes can be initiated in the microworlds of everyday life, amplifying Rorty's⁵ observation that only deans and librarians need worry about boundaries between academic disciplines – that is, designing career paths or where books are shelved. Gigerenzer also emphasised that the study of human cognition and decision making should favour a real-world problem-solving orientation, not a narrow focus, limited by discipline boundaries.⁶

What distinguishes PD is its topical problem-solving focus and the way it questions, challenges and transforms social cognitions underlying *First Track Processes* that reify a worldview of human rationality in economic thinking and an accompanying fealty to subject matter experts, as well as a reliance on distant managerial control. As we will detail in a later section, PD looks for what works locally, rather than trying to solve others' problems at a distance. In doing so it creates the conditions for the validity of new ideas

and practices to be negotiated locally, rather than imposing them from the outside with claims of universal validity. Unlike the standard practice of science, PD is not looking for the general and normal in a standard bell-curve but instead for the deviants at the positive end of the problem-solving spectrum: those who have managed to find solutions to wicked problems and, remarkably, against all odds.

Second Track Processes as a Broadening of Behavioural Economics

In contrast to traditional economic thinking, second track processes emphasise collaboration and constructive consensus to solve wicked problems⁷ in complex adaptive social systems, and they do so by evoking a special type of social cognition.⁸ Second track processes are supported both by diverse practical field-based experiences and research that questions axiomatic assumptions of economic theory, favouring more nuanced accounts of human behaviour in decision making and social life. Increasingly, economics is viewed as a behavioural science, opening the door for reinterpreting its achievements outside the formal economic domain, and inviting a broader discussion on how it pertains to understanding human behaviour. Interestingly, in commenting on the notion of “nudging”,⁹ Kotler¹⁰ argues that marketing is the original behavioural economics—after all, it has nurtured a century-long fascination with the “irrational” behaviour of consumers, and how to modify it, as also its application in the domain of social marketing. In a similar vein, the 2019 Nobel Laureates Banerjee, Duflo and Kremer's large-scale study on using “gossip” to lessen poverty mirrors the tradition of diffusion of innovations.¹¹

5. Rorty, 2022

6. Gigerenzer, 2008

7. Fritz, 2019

8. Massingham, 2019

9. Thaler and Sunstein, 2008

10. Kotler, 2020

11. Kim *et al.*, 2020

Interest in second track processes goes beyond conceptions of irrationality, nudging, and social marketing. While Herbert Simon's (who pioneered behavioural economics) notion of "bounded rationality" has mainly been interpreted as a negative, one may argue that selective attention is useful in that it allows for expertise and professionalism and, more generally, a way to organise knowledge.¹² As Gigerenzer¹³ elaborated, rationality must be judged in relation to context as the two blades of a scissor: if the context does not allow for analysis and prediction, formal rules of rational decision making cannot help. Rather, real world situations may well resemble the challenges in decision making faced by a baseball player trying to catch the ball. The catcher's task is not so much to predict a complex trajectory; it is about being in the right place as the ball descends, employing the simple heuristics of keeping the angle constant while adjusting one's speed. In essence, different kinds of logic and cognition may be involved in human decision making depending on the context.¹⁴ March and Olsen,¹⁵ for instance, highlight the "logic of appropriateness" as being a way to understanding human decision making. Bruner¹⁶ emphasises how "a narrative mode of cognition" influences emergent understandings of peoples' identity, interests, and behaviours.

The interest in second track processes also goes beyond ontological underpinnings and philosophy of science as embedded in simply theorising. Its concerns are deeply immersed in practice, implementation and change. Simon's notion of bounded rationality—a consequence of the limited span for human attention—emphasises a practical policymaking perspective in explaining the usefulness of science. In an information-

rich world, the lack of human attention may be problematic for those in the higher echelons of organisations and governments; in a highly lawful world, science may avoid information overload by reducing redundancy in predicting one fact from another, that is, "replacing unordered masses of brute facts with tidy statements of orderly relations from which these facts can be inferred".¹⁷ Even though the benefits of reducing redundancy may be self-evident, drawbacks remain. In recent decades, certain sociologists (often referred as "practice theorists") have doubted whether human behaviour can be understood as mere instances of general theory and whether Simon's fealty to parsimony paints too meagre a picture¹⁸ of the context and interactions to fully reveal the intelligibility of human action.¹⁹

The practical interest in second track processes to spur real world improvements by implementing scientific findings hold value for practitioners of social change, equity and justice. Implementation challenges are as old as the field of economics itself. Notably, when mercantilism was replaced in the late 18th century by the first school of political economy, the main reference point for French physiocrats was agricultural production. Consequently, the focus of governments and civic associations was to promote economic development through science and technology to boost agricultural production. Detailed bookkeeping emerged to monitor the interplay of agricultural inputs, throughput activities, and outputs. It is no coincidence that the early diffusion of innovation studies in the early 20th century centered on farming innovations to boost agricultural production, that is, adoption of new seeds, fertilisers and pesticides, as also new

12. Ocasio, 1997

13. Gigerenzer, 2008

14. Kahneman and Twersky, 1979

15. March and Olsen, 2013

16. Bruner, 1986

17. Simon, 1971, p. 45

18. Schatzki, 2005

19. Czarniawska, 2004

cropping practices. The study of the diffusion of hybrid seed corn in the US is considered a classic as it provided overwhelming evidence about the non-economic influences on farmers' economic decisions.²⁰ These findings—that adoption was largely a communication and social process—were substantiated in dozens of studies of educational, health and marketing innovations, inspiring Rogers'²¹ general theory of diffusion of innovations.

The simple lesson was that even in domains where science and technology can reduce facts to tidy statements about correlations and efficiency, adoption of such new knowledge and practices is a communicative, complex, and messy process. Innovation and adoption occur in a real-life microworld where the environment is not fully controlled (as in a laboratory). The validity of the innovation in question is negotiated, inferred, and decided by community members, not directed by technical and topical experts.

The microworlds of how innovations are generated and spread

While the spread of innovations and implementation of change is ordinarily discussed from a societal perspective of policy and innovation systems, we propose an alternative perspective, that is, an understanding of the microworld of innovation as cultivated by human interaction. Aligned with the views of pragmatist philosopher John Dewey, who viewed his classrooms as his laboratory, these microworlds of innovation may be understood as natural or quasi experiments. While the environment is not fully controlled (as in a laboratory), it is fully authentic in terms of participants, context, and complexity. The purpose of attending to the microworld of innovations is not to generate a general theory by disregarding contextual factors, but rather the opposite—to recontextualise and put general knowledge of

technical nature into a specific practical and social context—that is, to explore the validity of innovations in real life settings and contexts. In line with Dewey's thought, Putnam.²² emphasised that validity should be judged in relation to a specific community including its values Rorty²³ was emphatic, whatever technical knowledge and correlations may say, members within a specific community should be the ones to decide what to do with themselves.

These aspects of authenticity, validity and values become even more crucial when grappling with wicked problems where expert solutions and decontextualised best practices tend to make things worse. When dealing with wicked problems in complex environments a high degree of uncertainty exists about whether or not generalised patterns of correlations can be established and acknowledged as general theory. However, viewing innovations from the microworlds of local interactions may not produce normality but rather generate "abnormal" solutions and more authentic innovation through context-specific entrepreneurship. The parable of Nasruddin's donkeys reminds us that often solutions to wicked problems already exist but are hidden from view. These innovative local solutions may need to be discovered internally by community members, and once established may need conversations, coordination and collaboration among stakeholders to spread (as detailed in the next section on the practice of Positive Deviance). The validity of new knowledge may be negotiated locally by community members with respect to their own values and authentic context. This perspective on the spread of innovations by paying attention to microworlds is the very opposite of trying to impose analytical solutions and decontextualised theories on any specific community. The world is replete with well-intentioned attempts to push square pegs into

20. Ryan and Gross, 1943

21. Rogers, 1962

22. Putnam, 2004

23. Rorty, 2000

round holes. By considering the perspective of the community and its values in how innovations are discovered, disseminated, and implemented, PD goes beyond the “push” aspects of social marketing or the notion of simple “nudging”.

This interest in microworlds of innovation is shared by certain latter-day sociologists and social psychologists, particularly practice theorists.²⁴ Practice theorists are interested in the long-standing problem in philosophy of social science of explaining human behaviour as either governed by structures or free agents or both.²⁵ In this quest, microworlds of everyday life have become important for studying not only individual behaviour, decision making and biases, but also for understanding how societal and institutional structures influence everyday decisions—and vice versa. Here the argument is straightforward: if macro-level phenomena such as societal and institutional structures matter, their role should become most evident in micro situations. As it turns out, humans are boundedly rational, that is, rational within the bounds of their span of attention, but also skillful actors who can use institutionalised roles and expectations in their presentation of self and the legitimisation of their actions. That is, people “may play the same hand differently according to their skill and the flow of the game”.²⁶ As tactical games play out in the microworld of interactions, and negotiations settle participants’ roles and expectations, such interchanges can take on concrete structural properties. Schatzki²⁷ refers to them as teleoaffective structures, that is, shared beliefs and feelings about end goals. As Ahrens and

Chapman²⁸ explain: a key point is not the formal structural practice arrangement that manifests itself, for example, as a detailed accounting or financial reporting system, but what transpires because of their use in terms of structures of intentionality, that is, the feelings generated as part of the residue of interactions.

This understanding of what happens in the microworld of interactions, and especially what it takes to establish social order (formal or informal), can be elucidated by Herbert Simon’s notion of human behaviour and engineering design.²⁹ You and Hands³⁰ described this move in subsequent versions of Simon’s work—from rigorous, scientific, and systematic design methods where design activities are the subject of scientific investigation, to more reflective practice and the exploration of plurality in design activities.³¹ The implication is that when confronting social challenges and wicked problems, social engineering may look for what works in specific contexts while at the same time interrogating its validity in others. Here innovation is sometimes a conscious solution and sometimes rather a practice variation.³²

In the following section, we establish that Positive Deviance represents an approach to solving wicked complex problems by identifying existing efficacious practice variations (innovations) in low resource settings, and then disseminating and implementing them for wider societal adoption.³³ We do so by discussing how the PD approach was first put in practice in a real-world setting, Vietnam, to address the wickedly complex and intractable problem of childhood malnutrition.

24. Schatzki, 2005

25. Czarniawska, 2004

26. Whittington, 2006, p. 615

27. Schatzki, 2005

28. Ahrens and Chapman, 2007

29. Simon, 1971

30. You and Hands, 2019

31. You and Hands, 2019

32. c.f. Lounsbury, 2008

33. Singhal, 2010, 2011; Singhal and Svenkerud, 2018, 2019; Dearing and Singhal, 2020

Positive deviance in practice

In 1990, the husband and wife team of Jerry and Monique Sternin, director and assistant director, respectively, with Save the Children, took on a huge challenge in Vietnam where some 65% of the country's children under the age of five were malnourished. They were tasked by Vietnamese officials to demonstrate sustainable results in six months. Pressed for time and resources, preoccupied with meeting the sustainability directive, and being in no position to import evidence-based nutrition innovations from the outside and mobilise an army of change agents, opinion leaders and aides from the inside, the Sternins wondered if the concept of Positive Deviance, codified previously by Tufts University nutrition professor Marian Zeitlin, might hold promise. Zeitlin and her colleagues were investigating why some children in resource-poor households in developing countries were better nourished than others.³⁴ Being well-nourished in a resource-poor microworld meant these households were doing something right that others were not doing.

The Sternins began by selecting four village communities in Quong Xuong District, south of Hanoi, for a nutrition survey. Some 2,000 children under the age of five were weighed by local health officials and volunteers, mapping their socio-demographics, and plotting their growth charts. The Sternins then posed a question to determine the presence of positive deviants: *are there any well-nourished children who come from very, very poor families?* The local officials scrutinised their data charts and noted: "Yes! Yes! and Yes!"

Later, Jerry recalled the "shock of recognition" that washed over the faces of local health officials when they realised this. Although there were only a few (about 1%) positive deviants did exist. They were

"deviants" because they were statistical outliers, and "positive" because they had avoided the wicked problem of malnutrition against all odds.

Through a process of community-led self-discovery, it became evident that the PD families were practising a few simple, efficacious uncommon behaviours. Family members collected tiny shrimps and crabs from paddy fields, and greens of sweet potato plants from their gardens, and added them to their children's meals. These foods are rich in protein and minerals. Further, PD caregivers fed their children smaller meals three to four times a day, rather than the customary two big meals twice a day, leading to better assimilation and absorption of nutrients. Additionally, they practised hand hygiene and actively fed their children. Feeding children actively deviated from the normative practice of simply placing food in front of children, which led to spillage and wastage.³⁵

Once these efficacious innovative practices were identified, the next logical step was disseminating and implementing these practices among mothers whose children were malnourished. Interestingly, even though the wisdom to solve the problem was local and self-discovered by the community members, and the required resources—shrimps and crabs and sweet potato shoots—were accessible to all, just telling people about these PD practices and convincing them to adopt them led to dismal results. Prevailing cultural norms intervened. Community members considered the small shrimps and crabs from the paddy fields to be duck food, and believed the crustaceans were unsuitable for their children to handle and consume. Many mothers were skeptical about feeding their children four smaller meals, notwithstanding that children have relatively small stomachs, meaning that it is optimal to ingest smaller more frequent meals. In diffusion of innovations parlance, telling and persuading people about efficacious indigenous

34. Zeitlin et al., 1990

35. Pascale and Sternin, 2005; Pascale et al., 2010

practices did not substantially move potential adopters on their innovation-decision continuum: from knowledge to attitude change, to practice, to confirmation maintenance, and continuance. After some trial and error, and guided by local elders, the dissemination and implementation strategy was gradually flipped. Instead of pursuing the traditional knowledge-attitude-practice (KAP) route, they decided to follow PAK (practice-attitude-knowledge).³⁶ This practicing of the newly-discovered wisdom—what Massingham refers to as the “doing process of using the new knowledge”³⁷—created the enabling conditions to gradually internalise the innovation through its use.

A two-week nutrition program was designed in each of the four intervention villages. Caregivers whose children were malnourished were asked to forage for shrimps, crabs, and sweet potato greens. The focus was not on information transfer, but on action, practice and more practice.³⁸ Non-PD caregivers of malnourished children learned how to cook new recipes with others using the foraged ingredients. As part of engaging the community in monitoring its own progress, mothers weighed the children before feeding them. No food was spilled or wasted as the children were actively fed. Upon returning home, the non-PD caregivers were encouraged to actively feed their children three or four small meals a day instead of the traditional two big meals. Such feeding and monitoring continued throughout the two-week period of internalising new practices. The outcome was that caregivers could see their children becoming noticeably healthier. Practising the PD behaviours repeatedly, and in a community of peers, shifted negative attitudes, overcoming skepticism and intensifying the diffusion effect. Through the power of social networks and opinion

leaders, a small subset of potential adopters created the conditions for others to attend to, consider, adopt, implement, and maintain the newly discovered nutrition practices.³⁹

The dissemination process began with the project first expanding to another 10 adjacent communities. Word of mouth about the community cooking sessions (through visits by community leaders, health volunteers and ordinary citizens) spread to neighbouring communities, accompanied by a buzz about how malnourished children were being transformed into energetic and active beings. These conversations sparked curiosity and an openness in these adjacent villages toward new nutrition practices. If a peer mother could address her child’s malnutrition, so could they. The social proof was right there. Notably, this dissemination process was not simply information transfer—that is, persuading people to blindly import solutions from the four original communities. Rather, over the next several months, self-selected members from these 10 communities engaged in a process of self-discovering the PD behaviours in their own communities. Research showed that malnutrition decreased by an amazing 85% in the first 14 PD communities.⁴⁰

The Vietnam PD program was scaled up by building a living university around these 14 PD communities. Over the next seven years, teams from other communities with high rates of malnutrition spent up to two weeks directly experiencing the essential steps of the PD process in these 14 communities, and then implemented the PD program in their own community. Through this lateral village-by-village expansion radiating outward, the PD intervention spread nationally. The equivalent of shrimps and crabs and sweet potato greens

36. Singhal and Svenkerud, 2019

37. Massingham, 2019, p. 35

38. Pascale *et al.*, 2010

39. Dearing and Singhal, 2020

40. Pascale *et al.*, 2010

41. Pascale *et al.*, 2010; Singhal and Svenkerud, 2018

could be groundnuts and radish greens, or snails and soyabean curd. The important point here is honouring local wisdom, resources, and context in identifying innovative practices. Remarkably, the process of self-discovery in a local community was found to be as important as the actual behaviours that were uncovered.⁴¹

The Vietnam PD case has been well researched and documented, spurring dozens of scientific studies. The 2002 Supplement Issue of the *Food and Nutrition Bulletin* published over a dozen peer-reviewed articles on the application of PD in Vietnam, plus editorials and commentaries.⁴² Over 2.2 million people improved their nutritional status, including over 500,000 children.⁴³ A study, conducted four years after the program ended, showed that older children and their younger siblings in PD communities continued to be better nourished, demonstrating the acceptability, affordability and sustainability of the PD intervention.⁴⁴ While the sibling effect represented a deeply gratifying indicator of an entire generation of Vietnamese children benefitting from the PD nutrition program, even more gratifying was the documentation of the grandma effect. In 2016, on the 25-year anniversary of the initiation of the PD project, several of the original Save the Children staff who worked with the Sternins returned to Thanh Hoa province to meet with former health volunteers, cadre officials and community members. Not surprisingly, many of the mothers who participated in the PD project in the 1990s were now grandmothers, and most

provided gripping testimonies of the enduring legacy of the PD program.

Post-Vietnam, the PD approach to identifying, disseminating and implementing efficacious innovative practices from the inside-out has been employed in over 50 countries to address a wide variety of wickedly complex problems, including decreasing neo-natal and maternal mortality,⁴⁵ cutting down the spread of hospital-acquired infections,⁴⁶ reintegrating returned child soldiers,⁴⁷ reducing school dropouts,⁴⁸ decreasing childhood obesity,⁴⁹ enhancing female entrepreneurship in rural areas,⁵⁰ reducing childhood injuries and accidents among children,⁵¹ and reducing female genital cutting, sex trafficking and other intractable issues.⁵²

What positive deviance is *not* and *is*

From our interrogation of the PD approach, it is important to distill what PD *is not* and *is*. It is not a tool for marketing or policy implementation of any specific product or innovation. The diffusion of innovation theory follows the path of a specific innovation on its journey through a social system. This is also the salesman's or policymaker's perspective when pushing an idea, a product or a concept on a society, in communities and among individuals.

PD is also *not* a management concept. While management as a term is ambiguous and may cover a vast territory, from command-and-control to issues of culture, it does imply a managerial attitude, that is, strategy implementation through

42. *Food and Nutrition Bulletin*, Volume 23, Issue 4

43. Pascale *et al.*, 2010

44. Mackintosh *et al.*, 2002

45. Singhal *et al.*, 2021

46. Singhal *et al.*, 2010; 2014; Singhal and Dura, 2017; Cohen *et al.*, 2019, 2020, 2022

47. Singhal and Dura, 2009

48. Singhal, 2013

49. Foster *et al.*, 2018

50. Jain *et al.*, 2019

51. Gesser-Edelsburg *et al.*, 2021

52. Singhal, 2023

planning and measuring, or more informal shaping of values and organisational culture through leadership. The managerial attitude is historically shaped around the notion of unity of command or *authority*—with its DNA residing in military practices and through the founders of management (e.g., Fayol). Taylor criticised the implicit motivational theory behind the command logic, referring to its consequences as soldiering, that is, doing as little as possible voluntarily without force or coercion. Furthermore, Taylor argued that external economic rewards were insufficient for improving efficiency as the fundamental problem was not to, as Hammer and Champy put it, “speed up the mess”, but to instead introduce new ways of doing things, thus highlighting the *technocratic* stance of his “scientific management”.⁵³

Nor is PD a method with predictive outcomes. Prediction is a management concept and manifests in advancement of material wealth through increased productivity and efficiency through increasing control over nature. Prediction relies on the ability to establish known relations between cause and effect, and to do so in a systematised, decontextualised way as is mostly the case with science. Scientific methods allow for routinisation of behaviour and the establishment of routines to solve standardised problems. This scientific bent is central in the education of professionals in different realms, albeit sometimes implicitly overstated, particularly in professions dealing with the complexities of society. Long-term consequences of human activity, social challenges and wicked problems reveal the misplaced belief in scientific methods based on predictive models that lack assumed validity. The difference in status between sciences representing predictive domains on the one hand, and those grappling with complexity on the other, may also say something about the fundamental ontology of at least western societies: that stability is seen as nobler than

change.⁵⁴ This belief goes back to the mechanical metaphors of early science, in turn mapping itself upon the Platonian notion of the universe as a rational place and attempting to provide explanations even in the realm of abstraction.

Rather, PD is a living practice—a communal real-world exploration premised on the belief that in every community there exist individuals or groups whose uncommon behaviours and strategies enable them to find better solutions to problems relative to their peers against all odds and without extra resources. As a practice, PD changes over time and across contexts. Consequently, it does not rely on an abstract, eternal formula of how to solve problems. Instead, PD does what it does in any specific context in space and time; it works by striving to improve human conditions *through* mobilisation of the immediate community.

Nonetheless, the PD approach has certain traits and attributes that can broadly be explicated as the so-called six PD “D” steps. These steps, generalised from the Vietnam malnutrition case (Table 1), are neither prescriptive nor sequential, and at best provide a roadmap for PD’s search for determining outliers and the discovery of their innovative practice variations. For PD, the starting point is the latent or unarticulated needs of an unmobilised local community in its actual context and practices. PD reverses the dominant logic and starts by asking the community what they believe are the problems to be addressed, inviting a variety of partners, stakeholders, and citizens. At its core, PD believes in the premise of the community ownership of the problem. It eschews the term “buy-in”, which has a colonial subtext. This willingness to have conversations, to listen deeply and to only proceed when the community is ready introduces qualities into the interaction that shape the community itself and its capacity to mobilise action.

53. Hammer and Champy, 1993

54. Tsoukas and Chia, 2002

TABLE 1: The 6 “D” Steps of the Positive Deviance Process in the Vietnam Case

6 “Ds” of PD	Illustrations from Vietnam Case
1. Define the problem	Some 65% of children in Vietnam were malnourished.
2. Determine the existence of statistical outliers	2,000 children were weighed by health volunteers and community members; some children from very poor families were well-nourished and their locations were plotted on a map.
3. Discover uncommon but replicable behaviours and practices	Community-led self-discovery involved interviews and observations in discovering PD behaviours and strategies: What were PD families doing that other families were not?
4. Design intervention	A two-week action-based nutrition program was designed and implemented; PD caregivers taught non-PD caregivers their strategies; non-PD caregivers practised the new recipes and PD behaviours.
5. Discern effectiveness	Feeding and monitoring continued; caregiver families could see a progressive weight gain in their children during the intervention.
6. Disseminate	The project expanded to 10 adjacent communities. Malnutrition decreased by 85% in the 14 PD communities. Over time, the PD intervention spread nationally to 298 communes, helping 2.2 million people (including 500,000 children). Four years later, a study confirmed the children’s and their siblings’ sustained nutrition status.

Adapted from: Singhal and Bjurström, 2015

PD reflects a belief in progress through change in the concrete world rather than in any abstract world of ideas. As such PD echoes insights that followed the early Enlightenment: that of a concretely emergent world and alongside it an interest in what’s new rather than what’s true. In this sense, it looks for exceptions and change rather than normality and permanence.

In so doing, PD changes the point of reference for the notion of validity in line with American pragmatism. Notably, it embraces an ethical dimension of validity, asking whether a change in our practice is *morally acceptable* rather than if it is true only in terms of correspondence between a formal depiction and the world it intends to represent. Having said that, PD is *not* about philosophy, but takes a pragmatic attitude

to philosophical issues: what matters is whether philosophy—or any other tradition of thinking—makes a difference in our ability to address the needs of a community and that community’s ability to improve life conditions in a morally acceptable way through emergence and change.

This means that PD is not a fixed formula for how to resolve problems. Rather, PD is distinguishable from other approaches through its tradition and ways of working. There is no way of knowing how this practice will emerge in a local context. While it would be tempting to define PD once and for all, it would basically contradict its basic emphasis on concrete practice in all of its contexts, as well as continuous emergence and innovation in the social world. We believe that our resistance to define PD and thereby turn it into an abstraction

is of pedagogical value: as PD is not defined, it becomes clear that PD is not about words, but rather about *worlds*.⁵⁵

While PD cannot and thus should not be defined, thereby turning into an abstraction, PD and its parts and dimensions can certainly be analysed in different ways. The above claims of a less than well-ordered and emergent world already mean a positioning on a fundamental ontological and epistemological level. Furthermore, this positioning has primarily to do with the domain where PD makes its claims, the domain of human progress. This does not deny the value of science in establishing correlations that may also be useful for PD endeavours. However, the positioning of PD highlights that such claims imply ontological and epistemological convictions that are sometimes taken for granted and claimed without reflection.

Essentially, there is no contradiction between using scientific data for finding inspiration on how to solve problems in PD practices. PD may use whatever tools and data that may be practical and morally defensible. The starting point in Vietnam was compiling the growth charts of all children under the age of five to determine their nutritional status, and then only was it possible to determine the presence of positive deviants. What differs from purely scientific endeavours is that PD is underpinned by the belief that problem solving is an unending endeavour and that validity with reference to any specific community is also a moving target.

In its broadest sense, PD may be classified within the family of design approaches that sees everybody as a designer,⁵⁶ that is, people shape their lives and environments through artefacts and their mere being. The value is placed here on people's direct experiences, echoing William James' (1890) basic definition of "attention" in his founding of psychology as a discipline: "Everyone

knows what attention is".⁵⁷ This direct reference to the lived experience is a common trait also for thinkers like Dewey ("flow of experience"), Freire ("critical consciousness") and Wittgenstein ("language games") in their search for the role of communication in problem-solving. This also implies issues of knowledge and power, in line with Rorty's question of what to do with ourselves. PD facilitates such reflective and problem-solving practices by looking for "what is new", directly referring to the actual, lived local experience.

Conclusion

PD attests to how microworld interactions may change the lives of individuals and communities, not through best practices or by reinventing the wheel, but rather by looking for unusual examples of local, contextualised innovation and adapting them for implementation in other settings. In so doing, PD borrows aspects from science and more unusual applications of the scientific method.

First, as any PD endeavour is open-ended, every project must qualify as some experiment, albeit a natural experiment, not a controlled one. The experiment takes place in a real-life setting for authenticity, with community members as co-creating subjects rather than mere objects of intervention or study. Second, PD is data-driven, based on reliable data that can be collected in any specific setting to guide the identification of positive deviants and then going the next step to discover their uncommon and effective practices. Third, while the experiment is done for the sake of solving wicked local problems, it may also generate more generalisable solutions in a way that the method not only identifies the positive deviants and discovers their innovative practices, but actively promotes the diffusion and adaptation of these practice variations by testing their validity in the social and practical context of other communities.

55. c.f. Rorty, 1989

56. Potter, 1969

57. William James, 1890

As such, PD finds itself on a continuum of more traditionally scientific methods and approaches serving the purpose of the diffusion of innovations. It does so by overcoming the non-economic obstacles to economic decisions about adopting innovative behaviour that increase well-being at no extra cost. Hence, what starts with traditional science in controlled but less authentic experiments and theorisation moves on to natural experiments, diffusion processes of negotiation in the microworlds of second-track processes, and acts of entrepreneurship driving such processes.

Eventually, those interested in human behaviour and social cognition must ask themselves what they are interested in—to describe normality or to do better. We contend that PD creates the conditions for collaborating partners to integrate their knowledge to self-discover new knowledge and innovative solutions to wicked problems and fashion the mechanisms to disseminate and implement them.

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ARTICLE

Narrowing the Trust Divide

Fergus Neilson

Mistrust between elected politicians and the electorate continues to widen, undermining faith in democracy itself. Political science scholar and University College London graduate Fergus Neilson presents proposals from political professionals and voters to narrow the “trust divide” and improve the internal resilience of western liberal democracy.

Reality and implications of a widening Trust Divide

The Trust Divide defines the gap between voters' expectations of, and their perceived satisfaction with, the performance of politicians and government institutions. It is held as axiomatic that the narrower the Divide, the healthier the democracy; because trust is absolutely crucial to a government's ability to govern effectively,¹ and most prosperous societies are invariably held together by a tight-knit social fabric of trust and cooperation.²

Some academics suggest that tracking trust and satisfaction in politicians and government shows little more than trendless fluctuation rather than long-term decline.³ However, it is hard to dismiss the decline revealed by two Australian surveys. In 2007, 86 per cent of citizens were satisfied with the way their democracy was working⁴ but by 2017 that had dropped to 41 per cent.⁵ Nor should it be possible to ignore the long-term trend in Britain, as measured by using time-series data from repeated

1. Baxter, 2021

2. Putnam *et al.*, 1993

3. Norris, 2011; Merkel, 2014; O'Neill, 2018

4. Bean *et al.*, 2017

5. Evans *et al.*, 2019

survey data and multiple poll series that reveals a steady increase in political discontentment; up from 46 per cent in 1966 to 60 per cent in 2016.⁶

This is not to suggest that democracy is broken nor that it has reached an end-state. And, although democracy is under pressure, it does contain the seeds of its own resurgence.⁷ Not the least because 74 per cent of Australians believe that democracy is preferable to any other kind of government.⁸ Recovery, however, will be dependent on narrowing the Trust Divide between the dissatisfaction of democratic electorates and the self-satisfaction of elected parliamentarians.

The writer's concerns are endorsed by academic and other sources stating reasons for the decline in trust and highlighting the risk to liberal democracy posed by further decline. Academics and other commentators also propose a range of reforms aimed at reinforcing democracy against the dangers it faces, from illiberal democracy overseas and, at home, the election of poor leaders, particularly ones that threaten to erode the liberal aspects of western democracy.⁹

In this context, research employing multiple methodologies¹⁰ was applied to quantify satisfaction with the state of democracy today and confirm the extent to which trust in politics and government institutions has declined over the past decade. The first round of research involved face-to-face, Zoom and mobile phone interviews with Australian politicians (n=23); followed by an initial voter survey of (primarily urban) social, business and educational contacts across the Anglosphere (Australia, United Kingdom and the United States) (n=151); and a second survey of (primarily rural) Queenslanders (n=37).¹¹

Survey results suggest that low levels of voter satisfaction with democracy and declining levels of trust in government should give all politicians considerable pause for thought.

The research process also aimed at generating suggestions for political and institutional reforms intended to narrow the Trust Divide. To this end, a follow-up survey was sent by email to all previously interviewed public figures and all individuals who responded to the initial voter surveys. Recipients were requested to score (by Importance and Implementability) 20 primary reform initiatives derived from respondent proposals in the initial voter surveys. These primary reform initiatives were focused on building the operational efficiency and resilience of democracy. Scoring against Importance and Implementability generated two reform matrices (see tables 8 and 9) that allowed explicit comparisons between Australian and British perspectives on the matter.¹²

The overriding conclusion from respondent feedback is that the continued robust good health of liberal democracy depends on narrowing the Trust Divide.

That, in turn, will be dependent on maintaining the integrity of government institutions and on reinforcing their continued ability to operate independently in the face of executive creep by aspirant autocrats and their useful idiots.

Stating the Case across the Anglosphere

The writer cast a wide net beyond the requisite academic literature review to include public figure interviews, voter surveys, international commentariat and contemporary mainstream media coverage. These all confirm the widening of a Trust Divide and conclude that this widening

6. Jennings *et al.*, 2017

7. Levitsky and Way, 2016; Economist, 2020

8. Kassam, 2022

9. Plattner, 2017

10. Putnam *et al.*, 1993

11. See Supplementary material

12. See Supplementary material

poses risks for the future stability and strength of liberal democracy.

Doubts have been expressed as to the validity of surveys in tracking changing levels of trust, with claims that they only show fluctuation; but, over time, often show little evidence of decline.¹³ While Schmitter,¹⁴ has criticised reporting by *Freedom House*,¹⁵ by stating that such surveys could overstate the case.

However, the USA's *National Election Survey*, as reported by the Pew Research Centre, shows that under Presidents Eisenhower and Kennedy, around 75 per cent of the surveyed population expressed trust in their government, with an intermediate peak of 50 per cent early in the George Bush presidency (after 9/11) and a drop-off to 25 per cent under Clinton. The most recent research reveals that only two-in-ten Americans say they trust the government in Washington to do what is right.¹⁶

The long-standing *Australian Electoral Study* also shows that satisfaction with democracy is at its lowest level (59 per cent) since the constitutional crisis of the 1970s and that trust in government has reached its lowest level on record, with just 25 per cent believing that people in government can be trusted.¹⁷ It has also suggested, if current trends continue, that by 2025 less than 10 per cent of the Australian population could be expected to trust politicians and political institutions.¹⁸

Trust is also at historically low levels in the United Kingdom. In 1973, the *Edelman Trust Barometer*¹⁹

showed that 48 per cent of those surveyed thought that the British system of government worked well or extremely well. Twenty-five years later, that figure had halved to 24 per cent.²⁰ More recently, the *British Social Attitudes Survey* in 2019 suggested that only 15 per cent of respondents said they trust the government either most of the time or just about always.²¹ That is the lowest recorded level in over 40 years.

Identified causes of the decline in trust

In a world beset by climate change, mass migration, COVID-19, superpower rivalry, emergent despotism, growing social polarisation and slowing economic growth,²² it is hard to pinpoint the most potent driver of the evident decline of trust in and satisfaction with politicians and government. However, relevant literature identifies three broad causes: economic malaise; disillusion with politics, politicians and institutional performance; and the resultant social and intellectual polarisation.

The first broad cause, economic malaise and the associated widening opportunity gulf between the haves and have-nots, can be linked to concern with slowing economic growth, the uneven distribution of its benefits, declining employment prospects (now and in the future) and the stagnation of living standards.²³ Suffering from all four, the voting public has become disenchanted with established mainstream parties and increasingly attracted to populist rhetoric.²⁴ Piketty even suggests that unless capitalism is reformed, the democratic order itself will be threatened.²⁵

13. O'Neill, 2018

14. Schmitter, 2016

15. Repucci, 2020; Repucci and Slipowitz, 2021

16. Pew, 2022

17. Cameron and McAllister, 2019

18. Evans, 2019

19. Edelman, 2021

20. Seldon, 2009

21. Sugue, 2020

22. Grayling, 2017; Keane, 2020

23. Mounk and Foa, 2018; Kershaw, 2019; Taylor, 2019

24. Tormey, 2016

25. Piketty, 2014

Disillusion is driven by a decline in the performance of democracies and a distrust of politicians who have failed to keep their promises²⁶ and who seem open to all forms of corruption, including sleaze, expenses scandals, second jobs and inappropriate lobbying. Inevitably, years of deteriorating standards of behaviour on both sides of politics have led to declining levels of trust in our politicians and lowering levels of respect for our leaders.²⁷ And, as stated bluntly by Jennings *et al.*, the most intense points of citizen disillusionment with the political class reside in perceptions of its flawed character and its bias to the protection of its own interests and those of the already rich and powerful.²⁸

The risk of state capture by corporate interests also remains an issue, as highlighted by Hellman and Schankerman,²⁹ *Citizens United v. Federal Election Commission* (2010), and recent exposure of Uber's lobbying activity across the European Union.³⁰ All of which contribute to the widely held belief that court systems no longer treat everyone fairly and that elections bring little change.³¹

In the United Kingdom, disillusion is growing with the executive branch's overt pursuit of quasi-presidential power. This includes favouring the chumocracy, undermining the courts, co-opting the House of Lords, widening the coverage of the Official Secrets Act and limiting the rights of free assembly and protest.³²

This widespread disillusion, amplified by a 24-hour news cycle³³ and the echo chamber of social media, seems to have magnified social and intellectual

polarisation between hyper-partisan and mutually antagonistic groups at all levels. There is less and less space for compromise in the face of: a steady drift to populism;³⁴ intransigence between groups within society (e.g., Leavers vs Remainers); partisanship and division within government;³⁵ and disconnect between the governed and the government itself.

In the United States nothing could emphasise this polarisation more than: the executive capture and politicisation of the Supreme Court;³⁶ gridlock in Congress (vetocracy); and the reality that the preferences of the average American appear to have only a miniscule, near-zero statistically non-significant impact upon public policy.³⁷ All these factors contributing to the decomposition of society and the heightening of distrust and division within western liberal democracy.³⁸

Risks that a widening Trust Divide poses for liberal democracy

It should come as no surprise that public trust and mutual respect are at rock bottom when almost half the Australian population think that corruption is commonplace and that 94 per cent are of the strong view that politicians should resign if they lie, while 89 per cent are resigned to the fact that politicians are both likely to lie and likely to get away with it.³⁹

Thus, it would be hard to argue with the general principle that a public more distrustful of, less interested in, and less committed to democratic

26. John *et al.*, 2019

27. O'Mahoney, 2020

28. Jennings *et al.*, 2016

29. Hellman and Schankerman, 2000

30. Lewis *et al.*, 2022

31. Wike *et al.*, 2019

32. Helm *et al.*, 2021; Smyth, 2021; Taylor, 2021

33. Tingle, 2015

34. Gidron and Hall, 2017; Margalit, 2019

35. Carothers and O'Donohue, 2019

36. Reich, 2022

37. Gilens and Page, 2014

38. Fukuyama, 2020

39. Crabb, 2021

systems would be giving oxygen to groups that are hostile to democracy.⁴⁰ Weakening trust erodes civic engagement and conventional forms of political participation (voter registration and turnout), potentially impacting the peaceful transition of power after free and fair elections. Weakening trust then impacts the stability and quality of democracy, and will create space for the rise of authoritarian-populist forces.⁴¹ While the growing mistrust of government is associated with an increased support for populist political candidates,⁴² further delegitimising mainstream politics and undermining the independence of government institutions.

Growing levels of citizen distrust may also accelerate the bias of politicians towards short-termism⁴³ making it increasingly difficult for governments to deliver economic growth, social progress and procedural fairness;⁴⁴ and harder still for them to achieve the consensus required to solve problems such as regional inequality and climate change.

Has anything actually changed?

Perhaps it has ever been thus. We have been warned that when large numbers of people feel disenfranchised and disconnected from each other, from dominant social institutions and parliamentary government more generally, they become easy prey to populism, then autocracy and finally dictatorship. What happened to Germany⁴⁵ in the 1930s, as well as to Turkey⁴⁶ and Poland⁴⁷ in the

early twenty-first century, and is now underway in Modi's India, could well happen to the United States if Trump is re-elected in 2024.

The need for reform to assuage the evident dangers

Politicians are invariably trapped between the Scylla of belief in the essence of democracy and Charybdis, the urge to retain power. However, if the dangers outlined above genuine, then so is the need for reform.

If most individual politicians are temporary phenomena (both good and bad) bent on re-election and the electorate is an unreliable source of rational opinion;⁴⁸ then focus should turn to highlighting the role of institutions as rule-enforcing mechanisms that keep society from falling apart. With the expectation that these institutions are⁴⁹ willing to evolve alongside change in social values, and to stand above, and unequivocally independent from, political ideology. It is the resilience and cooperation of institutions at the heart of democracy that operationalises the checks that ensure the balance required in a stable society.

The writer suggests, however, that many reform proposals from academic literature are too generic. Prescriptions to rebuild trust with better government⁵⁰ by supporting principles of democratic integrity,⁵¹ adopting a mechanism by which parliamentarians can genuinely listen to and engage with Australians,⁵² enhancing the

40. Triffitt, 2019

41. Stoker *et al.*, 2018

42. Koerth and Thomson-DeVaux, 2021

43. Marsh and Miller, 2012; Bohn, 2018

44. Quilter-Pinner *et al.*, 2021

45. Arendt, 2017

46. Temelkuran, 2019

47. Applebaum, 2020

48. Zaller and Feldman, 1992

49. Elster, 1989

50. OECD, 2017

51. Evans *et al.*, 2019

52. Pickering and Niemeyer, 2020

competence of public servants,⁵³ or promote the growth of a vibrant civil society⁵⁴ are unlikely to resonate with a disenchanted voting public. Nor do they have any clear route to implementation.

Rather, it is bounded, digestible and (feasibly) implementable reforms that could work at narrowing the Trust Divide. Such reforms could include: ensuring better disclosure of political funding;⁵⁵ creating a comprehensive legislative plan to fight corruption;⁵⁶ limiting Supreme Court terms to 18 years;⁵⁷ requiring compulsory education in the democratic way of government;⁵⁸ and repealing Section 230 (US *Communications Decency Act* 1996) to ensure that social media networks are legally responsible for the content of posts.

All of them reforms that the voting public is more likely to understand are aimed at making democracy work more effectively on behalf of those being governed, rather than benefitting the governing.

Data collection and research methodologies

As noted, the starting hypothesis in this research is that a widening Trust Divide between the elected and electorate threatens liberal democracy. Several different methodologies were aimed at testing the extent to which there was genuine public and political concern with that divide, the extent to which it has widened over the last ten years, and the level of support on each side of the debate (the elected and electorate) for reforms aimed at narrowing the divide.

It is emphasised that the writer's research was directed at both sides of the issue – the views of politicians as well as the views of voters – by applying a different research methodology to each.

Between July and October 2021, 23 current and former Australian politicians participated in long-form interviews. An initial voter survey was sent by email during the third week of May 2022 to 574 social, business and educational contacts. A second voter survey was distributed by email and Facebook in early June 2022 to the Queensland contacts of an Australian social scientist teaching at James Cook University in Townsville. The two voter surveys generated a total of 188 completed responses.

A follow-up survey requested feedback from the 23 public figure respondents and all 151 of those who had participated in the initial voter survey (time constraints prohibited inclusion of the Queenslanders); with a total of 87 individuals responding in full. The follow-up survey permitted the scoring by Importance and Implementability of 20 primary reform initiatives aimed at narrowing the Trust Divide.

Public figure interviews – current and former Australian politicians

Unsolicited email does not appear to be the best way to access Australian federal politicians. A total of 225 emails generated just two responses, one suggesting that “you read my book, which you can buy on Amazon” and the other declining the opportunity to talk.

A second approach (snowballing⁵⁹) depended on the willingness of personal contacts in Australia to ask current or former politicians of their acquaintance if they might be willing to talk about the Trust Divide with a mature-age postgraduate student. Of 33 politicians contacted by these intermediaries, 23 agreed to talk and the resulting interviews were transcribed into an 80,000-word anonymised research resource.

53. Stoker *et al.*, 2018

54. Chalmers, 2013

55. Grattan, 2018

56. Brown *et al.*, 2020

57. Packer, 2020

58. Dennis, 2018

59. See Supplementary material

TABLE 1: Synopsis of public figure coverage

Party	Coalition	Labor	Other	Total
Interviewees	9	8	6	23
Level	Federal	State	Other	Total
Interviewees	9	8	6	23
Role	Minister	Backbench	Other	Total
Interviewees	12	5	6	23

Although the interviews were weighted to male and former politicians (70 per cent each),⁶⁰ the mix of party, level and parliamentary role was considered sufficiently evenly balanced to validate the process used and the conclusions drawn from it.

All 23 public figure interviews were structured around the following three questions:

- **Question 1:** What specific actions and initiatives, aimed at changing the behaviour of our politicians and the performance of political institutions, do you think would have the most immediate impact on building trust between politicians and voters?
- **Question 2:** What specific actions and initiatives, aimed at building the participation of Australian

voters in the political process, do you think would have the most immediate impact on closing the Trust Divide between voters and our parliamentarians?

- **Question 3:** On a scale of 1 to 5 (where 1 = totally dissatisfied and 5 = totally satisfied) please score your satisfaction with democracy as it currently operates in Australia.

Voter survey questionnaire – initial and second survey feedback

The initial voter survey questionnaire was emailed to 574 personal social and business contacts, including high school alumni and UCL postgraduate political science students. Survey response rate was 26.3 per cent. See table 2 following.

TABLE 2: Initial voter survey response rates

Respondent category	Catchment	Requests	Responses	Returns %
Social and business contacts	Australia	260	87	33.46
High school alumni ⁶¹	United Kingdom	180	34	18.89
Social contacts	United Kingdom	59	20	33.90
UCL postgraduate students	Various	52	2	3.85
Social contacts	North America	23	8	34.78
Totals		574	151	26.31

60. Female representation in Australia's current parliament: 38 per cent in the House of Representatives and 57 per cent in the Senate

61. High school alumni all spent at least one school term of their secondary school education coincident with that of the writer

Using the Qualtrics Survey Maker, a second Voter Survey was issued by email and Facebook to 380 (primarily rural) Queensland contacts. Although response rates were significantly lower, at under 10 per cent, than for the initial Voter Survey, the Queensland contacts added much-needed gender and age balance with 78 per cent female and other, and 41 per cent aged between 18 and 45.

Both voter survey questionnaires included three discrete elements. First, five questions about voting behaviour, trust in government and satisfaction with democracy as it currently operates. Second, an open-ended request for suggestions on reform. Finally, five contextual questions relating to respondent home country, age, work status, gender and highest education level achieved.⁶²

Follow-up survey – scoring 20 primary reform initiatives

Participants in the initial voter survey proposed 537 individual suggestions for change. These were culled (for duplication and ambiguity), before categorisation and grouping into 20 primary reform initiatives. The follow-up survey was then issued to all 23 public figure interviewees and to 151 initial voter survey respondents. All 174 were requested to score the 20 primary reform initiatives against Importance and Implementability. Of the 174 recipients of the follow-up survey, 87 returned completed scoring forms. See table 3 following.

TABLE 3: Follow-up survey response rates

Respondent category	Recipients	Responses	Rate %
Australian social and business	87	44	50.58
United Kingdom social and alumni	54	30	55.56
North America	10	6	60.00
Australian public figures	23	7	30.44
Totals	174	87	50.00

62. See Supplementary material

Respondent scoring on Importance and Implementability then drove construction of two reform matrices (one each for Australia and the United Kingdom), allowing a relative prioritising of 20 primary reform initiatives aimed at narrowing the Trust Divide (see Tables 8 and 9).

Public figure concerns with the existence and widening of a Trust Divide

No participant in the public figure interviews downplayed the significance of the Trust Divide. Of the 23 interviewees, 13 were explicit in their concern that a widening Trust Divide posed a real threat to liberal democracy. Some of their verbatim comments follow. Transcripts of all 23 interviews are held as an anonymised 80,000-word research resource.

Current Federal Minister

“We are in a weird period. With COVID-19, people have now found that they need to trust in government. Last year, trust in government did improve. Last year, we probably had the highest level of trust in government that we have seen in a long time. But now, we are in the process of seeing that come crashing down. Because some of those things designed to improve the levels of trust ultimately do not.”

Former Federal Minister

“That goes back to my point about the breakdown of trust. If people don’t think they can trust our politicians to lead and the institutions of government to do the right thing, they will look elsewhere for security.”

Former Federal Minister and Party Whip

“I think the broader issue is that the institutions that make up the fabric of Western societies are being constantly eroded over the passage of time. These institutions are being challenged by society, with a lot of that challenge coming through the fifth estate. (Interviewer interjection: *You mean social media?*) Yes, and as a consequence, trust is diminishing. In this more complex world, where I believe citizens are being overloaded with information, they retreat back to their own small community or their own family unit as the source of trust. (Interviewer interjection: *And does that put Western liberal democracies at risk?*) Yes, it does. Absolutely. And this is where the challenge lies.”

Former State Minister

“You may be disappointed by the lack of profundity in my analysis. But at the same time, I think the Trust Divide has got a lot wider over the last 20 years. Now people think the only way to become a successful politician is to leave the major parties, because you will build more direct trust with the community by being outside the majors.”

Current State Backbencher

“I am coming from a point of view where I accept there is a Trust Divide. I also acknowledge that it is getting worse. But, for me, that means getting closer to the community. I think being closer to community is what will bridge your Trust Divide and start putting more faith back into community politics.”

It would be fair to conclude that a sampling of current and former Australian politicians reveals concerns about the reality and potential widening of the Trust Divide, as well as a belief that this widening divide poses real risks to the ongoing health of liberal democracy.

Public figure proposals for narrowing the Trust Divide

The seven highest priority reform initiatives identified through the public figure interview process were not significantly different from those highlighted in literature search and by voter survey respondents. However, it is revealing to note that the four highest priority items identified by public figure interviewees were all aimed at enhancing public participation, not at changing the behaviour of politicians: enhance mechanisms for community engagement; curtail influence of social and other media; widen the pool of potential candidates; and introduce politics/civics into secondary education

Other lower priority reforms suggested during the public figure interviews included: modify the influence and access of lobbyists; support codes of conduct and anti-corruption initiatives; widen the membership of significant parties; increase the support for women in parliament; and introduce processes that drive greater consensus between parties.

Public figure satisfaction with democracy

The public figure interviewees scored satisfaction with democracy in Australia at an average of 3.4 out of 5 (where 1 = totally dissatisfied and 5 = totally satisfied). This is a better result than the initial voter survey respondent score of 3.0, as generated by 87 mostly male (77 per cent), middle-class, and older (66 per cent aged sixty and over) social and business contacts. The 37 Queensland contacts, 78 per cent of whom identified as female or other, recorded the same satisfaction score (3.0) as the Australian social and business contacts. Which makes it clear that Australians are more satisfied with the state of their democracy than British and North American respondents (scoring just 2.5). See table 4 following.

TABLE 4: Relative ranking of satisfaction with democracy

Score on satisfaction with democracy: where 1 = totally dissatisfied and 5 = totally satisfied

Respondent category	Respondents	Satisfaction
Australian public figures	23	3.39
Australian social and business contacts	87	3.03
Queensland contacts	37	3.00
High school alumni (UK)	34	2.51
United Kingdom social contacts	20	2.54
North America social contacts	10	2.50
Total/Average	211	2.90

The Australian government has changed since the public figure interviews were recorded. And with that change it might be expected that opinions on the operation of democracy have also changed for the better. Particularly as the federal election in May 2022 has shown that it is possible for a working democracy to deliver a peaceful transition of government. It would seem that mutual toleration and organisational restraint, as well as the soft guardrails of democracy can and do still play a stabilising role.⁶³

A selection of relevant commentary from public figure interviewees on satisfaction with democracy is included below. Note that the satisfaction with democracy scores (out of 5) are as nominated by each of the individual respondents during the interview process.

Current Federal Senator

Score 4.9 (out of 5). “I think Australia is an incredibly strong democratic nation. I would score 5.0 but there are always ways in which we can improve.”

Former Mayor of a Sydney suburban municipality

Score 4.5. “The Australian system of federal government has proven to work very well in comparison with other Western democracies. And it is heartening, for the first time in many years, that the NSW ICAC⁶⁴ and the Courts have done their job. Clearly demonstrating that the system now works well.”

Current State Backbencher

Score 3.5. “I think our democracy is far better functioning than many other countries, but I do think we need to work on it. We have taken a backward step in terms of people’s satisfaction with democracy and trust in politicians. I am concerned about that because of the instability that it creates within our political processes.”

Former State Minister

Score 4.9. “Australia has been and is enormously successful. No riots. Tiny demonstrations. And 95 per cent voter turnout. The most amazing thing is the wide acceptance that we have an elected government that we can vote out if and when they don’t perform.”

Former Federal Minister

“Our constitution and our political arrangements score a 4.8. However, the way we are working them is probably a 3 out of 5. I think the dangers to the future are massive. I would still sound a warning bell because I think we are sleepwalking and need to be woken up.”

63. Levitsky and Ziblatt, 2019

64. NSW ICAC = New South Wales Independent Commission Against Corruption

Current Federal Shadow Minister

“Out of 5, we would be a 3. We are still a functioning democracy, even if there are many horrible aspects to it. Furthermore, we can still get our message out, even if the media landscape has become much, much more difficult for us.”

Former Federal Party Leader

“Oh, it’s just a 1. Depressingly, depressingly hopeless. It is depressingly hopeless because, for the first time in my life, I see nothing left to protect. Everywhere you look, the remedies have been taken out of our hands, and I have never felt more powerless as a citizen.”

It is clear, from an admittedly small sample and with one notable exception, that the interviewed public figures were reasonably satisfied with the state of democracy in Australia. Although it is also clear that they were acutely aware of problems and risks that need addressing now and in the future.

Analysis and findings from voter survey questionnaires

The social capital that comes from more than 50 years of education, a career in business and residence across the Anglosphere made

it possible to access over 570 social, business, school and university contacts. Remarkably, 151 (26.5 per cent) of the initial voter survey contacts responded voluntarily to an unsolicited request to participate in “a brief survey on democracy”. A further 37 responses were generated from 380 Queensland recipients of the second voter survey, giving a combined dataset of 188 respondents.

In spite of modest respondent numbers (n=188), the case is made that the maturity and educational levels of survey respondents make up for the raw numbers generated. Specifically, because the survey was not just about the numbers, it was also about asking survey respondents to generate suggestions for changing the way that politicians and parliaments work. Specifically, suggestions for change that you [the respondent] believe will enhance the degree to which you would trust the system. See table 5 below.

However, several questions linger as to the validity of any online survey. Are the responses sufficient to achieve statistical significance? Is the dataset close to representing society (in this case, the Anglosphere) as a whole? Moreover, might not the relative simplicity of the questions, the open-ended answer required for some of them, and even the biases of the writer (in unconscious highlighting

TABLE 5: Educational achievement of voter survey respondents

Respondents with graduate or postgraduate qualifications as their highest educational level

Catchment	Respondents	Graduate +	Percentage
Australia social and business	87	73	83.91
Queensland contacts	37	31	83.78
United Kingdom social contacts	20	15	75.00
High school alumni (UK)	34	26	76.47
North America social contacts	10	10	100.0
Totals	188	155	82.44

of priority issues) undermine the validity of the process? Particularly as the dataset might also be considered silo-trapped by its insufficient reach beyond the writer's comfort zone, social circle and status.⁶⁵

The dataset may also be considered flawed by its gender weighting and cohort distribution, as female and other respondents account for only just over a third of returns. While the bias towards Baby-Boomers,⁶⁶ (61 percent) reflects both my own age and the declining interest of Millennials and Gen Xers in mainstream politics.⁶⁷

In a rebuttal to these concerns, the writer highlights three factors. Firstly, the educational level of the respondents. Secondly the ambiguity surrounding sample sizing. If the *Edelman Trust Barometer* considers 1,150 respondents in a population of 1.4 billion as sufficient to assess China's community trust level,⁶⁸ then 188 respondents to the voter survey could be statistically sufficient. And thirdly, although low on numbers, the North American responses gave useful insight into a society where liberal democracy faces its greatest threats. Therefore, the writer would argue that the survey process, reach and response were sufficient to purpose.

Variations in voter satisfaction and voting stability

The voter survey sought responses on the level of trust in the respondent's respective national governments. There is a noticeable difference between the satisfaction levels recorded by each of the different party affiliation groups, with

conservatives showing higher levels of satisfaction with democracy (3.1) than left-leaning voters (2.3).

This satisfaction gap (between right and left) is reflected in voting behaviour. Conservative voters in Australia and in Britain stated a lower inclination to change their vote, with only 19 per cent of conservatives reporting a preparedness to switch, compared to voters for the mainstream Left (Australian Labor/UK Labour) at 26 per cent.

Voter trust in government and supporting institutions

Central to the voter surveys was quantification of the extent to which citizens across the Anglosphere trusted their respective governments and institutions of government. To this end, respondents were asked two questions:⁶⁹

- What is **your level of trust** in your national government **today**? Where 1 = very low and 5 = very high? and
- Has **your level of trust** in your national government **changed** over the past 10 years? Where minus 2 = much lower, 0 = not changed and plus 2 = much higher?

It would seem clear that trust in government has declined across the Anglosphere and is now defined as Low or Very Low by 53.5 per cent of voter survey respondents. Only 15.5 per cent of all respondents expressed a trust score of High or Very High. In Australia, just 18.6 per cent of 124 respondents scored their trust in government as High or Very High; and it was only Queenslanders who scored Very High.

65. Hennick et al., 2011

66. See Norris and Inglehart, 2019: Baby Boomers born 1946/64, Generation Xers 1965/79, and Millennials 1980/96

67. Blais and Rubenson, 2013

68. Edelman, 2021

69. See Supplementary material

TABLE 6: Voter trust in government

Average levels recorded by voter survey respondents

Trust level in national government: where 1 = very low and 5 = very high

Trust change over past decade: where minus 2 = much lower and plus 2 = much higher

Catchment	The current level of trust where 3 = undecided	Change over the past 10 years where 0 = unchanged
North America	3.00	(0.90)
Queensland contacts	2.76	(0.65)
Australia social and business	2.45	(0.95)
High school alumni	2.16	(1.15)
United Kingdom social contacts	2.10	(1.05)

The potential for reform

The two voter surveys confirm the findings of academia, credible polling and the international commentariat as to the poor state of trust in and satisfaction with governments across most liberal democracies; and the extent to which levels of trust and satisfaction are on the decline. The issue that lingers is what can be done to rectify the matter.

The voter surveys therefore requested respondents to suggest reform proposals that a government (with a solid majority or open to bi-partisan cooperation) could implement and, having done so, feasibly raise the level of voter trust in government and its supporting institutions. Voter suggestions for reform were generated using an open-ended and unstructured enquiry format.

Out of 151 initial voter survey respondents (Australian, UK and US social and business contacts), only 11 declined to make suggestions on reform. These respondents put forward a total of 537 individual suggestions for reform that were culled down to 310 after review and evaluation. These, in turn, were grouped by common attributes into the 20 primary reform initiatives as listed in table 7 following.

Personal judgement was applied when grouping 310 individual respondent proposals into 20 primary reform initiatives. Buthe and Jacobs, warn against the risk of allowing personal values and expectations to affect the prioritising of respondent suggestions for change.⁷⁰ However, as caution was used to minimise the risk of overweighting toward such biases and although risks remain, they are arguably within acceptable limits.

Grouping the respondent suggestions into 20 initiative categories was necessary to identify coherent reforms potentially adoptable on a bipartisan basis and unambiguously aimed at rectifying any backsliding in the effectiveness and appeal of liberal democracy.

The 20 primary reform initiatives selected for ranking against Importance and Implementability are not seen as statements of ideological party policy targeted at winning votes in marginal seats. Rather, they represent reforms considered by voter survey and public figure respondents as being capable of narrowing the Trust Divide and strengthening liberal democracy against threats from autocracy abroad and the growing appeal of populism at home. Thereby making democracy more likely to be trusted and supported by the voting public in the future.

70. Buthe and Jacobs, 2015

TABLE 7: Primary reform initiatives circulated for scoring in the follow-up survey

Nos = number of individual reform suggestions grouped into each primary reform initiative

PR = Proportional representation and *FPTP* = First past the post

Twenty primary reform initiatives	Nos
Reform the electoral system (in the UK to PR and in Australia to FPTP)	36
Introduce effective controls over corruption in politics and government	27
Raise the quality standard of candidates for office	24
Require more transparency in government processes	22
Apply more explicit limits on and declaration of all political donations	21
Lift the level of parliamentary behaviour and performance	18
Reform a range of parliamentary rules	15
Introduce forms of direct democracy , or at least greater levels of citizen input	15
Pursue a more representative balance in parliament	15
Extend fixed parliamentary terms	14
Reform membership and role of the Upper House	14
Reform media ownership and coverage	12
De-politicise the Australian Public Service/UK Civil Service	9
Require voter education in politics, government and ethics	8
Apply stricter limits on lobbyist access and influence	7
Place more emphasis on future focused planning and policy	7
Apply same rules for truth in political advertising as applied to private sector	6
Facilitate ease of access to voting	6
Consider greater degree of regional devolution	6
Apply limitations on access and influence in post- parliamentary careers	6

Scoring 20 primary reform initiatives by Importance and Implementability

The 20 primary reform initiatives aimed at narrowing the Trust Divide were presented for respondent scoring in the follow-up survey. Respondents to the follow-up survey (n=87) assigned two scores (for Importance and Implementability) against each of the 20 primary

reform initiatives, with scoring for Importance and Implementability defined as follows:

- **Importance (X axis)** of each reform initiative in building barriers against resurgent illiberalism and autocracy, where a score of 1 = initiative would have little beneficial influence (in the short term) and 5 = initiative would make a fundamental difference; and

- **Implementability (Y axis)** of each reform initiative in the context of current political and social circumstances, where a score of 1 = initiative has little chance of being implemented in the short or medium term and 5 = implementation feasible within one parliamentary term.

Note that scoring from North American (n=6) and Australian public figure (n=7) respondents was not used in Reform Matrix construction.

The reform matrix and its implications for policy setting

Results from the follow-up survey created a hierarchy of feasible reforms and allowed construction of reform matrices for Australian (n=44 with response rate 50.6 per cent) and British respondents (n=30 with response rate 55.6 per cent). See table 8 and 9 following. Both reform matrices suggest the possibility that a mainstream party seeking to re-build trust with its constituents might focus on:

- adopting manifesto statements that, **in the Short-Term Commit to Implement & Maintain** reform initiatives located in the high/right quadrant of the reform matrices;
- working towards reforms intended to **Rebuild Trust Over the Medium Term** that are contained within the low/right quadrant; and
- future-proofing democracy with planning for programmes that **Fortify the Institutions Over the Longer Term**.

Despite some differences, it is worth noting that Australian and British respondents both place high emphasis (**Implement & Maintain**) on the need for anti-corruption initiatives, greater transparency on donations and the enhanced facilitation of voting.

Country-to-country coincidence on reforms with applicability to the medium terms (**Rebuild Trust**) included limitations on lobbyist access, the requirement for truth in political advertising, the need for greater transparency in policy decision-making, and on slowing the revolving door in post-ministerial careers. Australian respondents also favoured the retention of longer parliamentary terms. While British respondents placed a higher emphasis on limiting the whip, applying better criteria for candidate selection and reforming the upper house.

Australian and British respondents both place electoral reform in the mid-range of scoring on both axes; but the Australians showed interest in conversion to full First Past the Post, while British respondents expressed support for a move to Proportional Representation. It would seem that the grass is always greener in other pastures.

Regional devolution, education in politics, citizen participation, stricter candidate selection criteria, electoral system reform and quotas were all acknowledged as being longer-term issues.

Both respondent groups acknowledged, consciously or unconsciously, the need to reinforce the integrity and independence of institutions charged with operations at the heart of liberal democracy. This includes the performance and behaviour of parliamentarians themselves.

Survey response amplified the importance of integrity and independence within those government institutions responsible for enforcing codes of conduct, dealing with corrupt behaviour, managing elections, tracking donations and curtailing the influence of lobbyists, and even reviewing the evolution of democracy as it seeks to keep up with social, economic and political change.

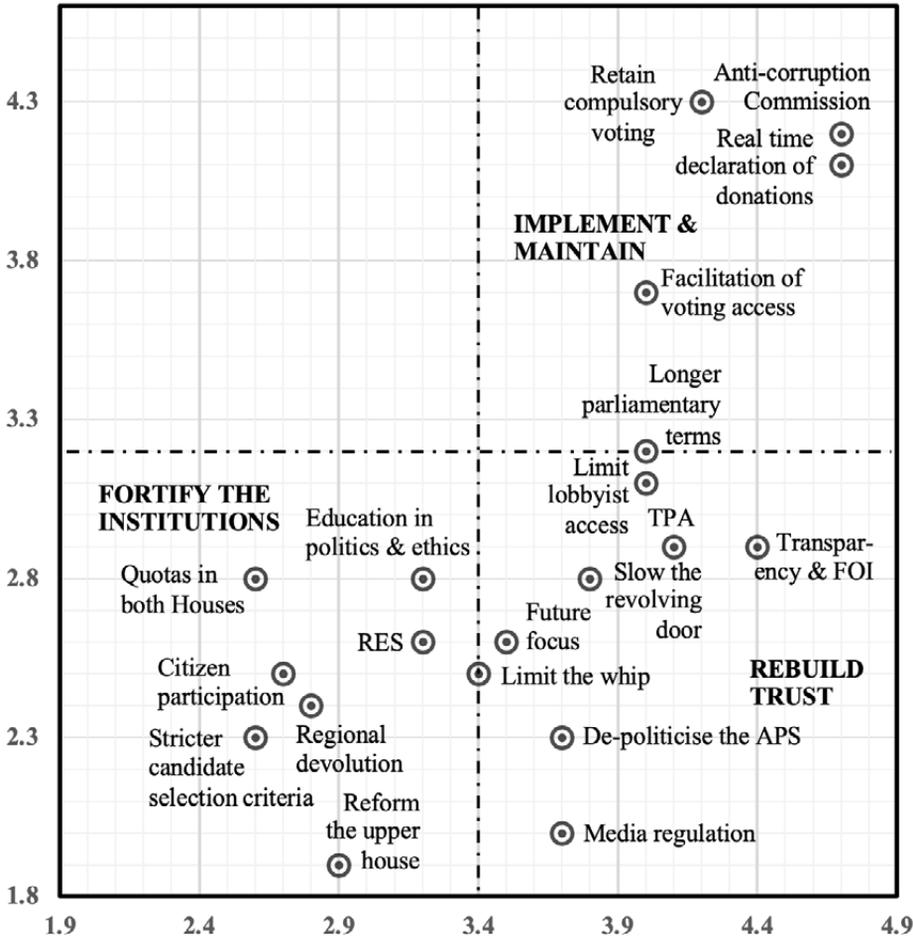
Notably, however, British respondents overall scored lower than Australians on the Importance of reforms and on the prospects for Implementability.

TABLE 8 Reform Matrix – Australia⁷¹

n=44

Y-axis – Implementability

Where 1 = challenging and 5 = achievable



X-axis – Importance

Where 1 = optional and 5 = crucial

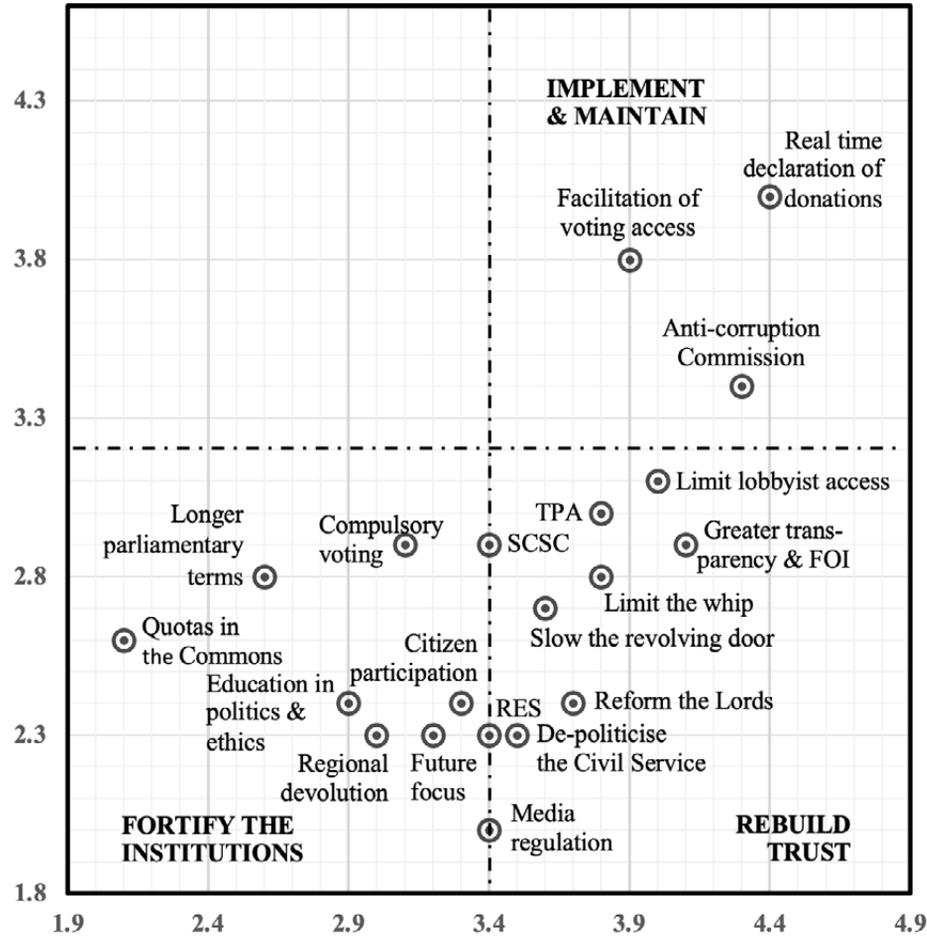
71. FOI = Freedom of information; RES = Reform the electoral system (move to full FPTP); TPA = Truth in political advertising; APS = Australian Public Service

TABLE 9 Reform Matrix – United Kingdom⁷²

n=30

Y-axis – Implementability

Where 1 = challenging and 5 = achievable



X-axis – Importance

Where 1 = optional and 5 = crucial

72. RES = Reform the electoral system (move to PR); FOI = Freedom of information; TPA = Truth in political advertising; and SCSC = Stricter candidate selection criteria

Public figure policy positioning

Australian public figure respondents also highlighted some of the reforms identified by voters to the follow-up survey. Although the sample was small ($n=7$ out of 23), public figure respondents did assign high scores to the Importance of: extending parliamentary terms (4.6 out of 5); establishing (what is now) the National Anti-Corruption Commission (NACC) (4.4); requiring more significant control over, and real-time reporting on, donations (4.3); retaining compulsory voting (4.3); and introducing compulsory education in politics and ethics during the final two years of high school (4.0).

The widest gaps between Australian public figures and Australian voters in scoring for Importance were on the need for better access to voting (digital voting), the level of attention to be paid to the future (climate change), support for legislation on truth in political advertising, and better control over the revolving door in post-ministerial careers. All were scored high by voters and low by the public figure respondents.

Conclusions

Reform proposals put forward by the voter survey respondents, their broad coincidence with open-ended responses from the public figure respondents, and their scoring for Importance and Implementation in the follow-up survey should not, however, be seen as a menu of solutions. Rather, they are a pointer for thinking by mainstream parties seeking to re-engage with an increasingly untrusting and dissatisfied public. The voter's voice is clear, but are the elected, outside a small group of independent thinkers, willing to listen?

The 20th century saw democracy spread across the developed and developing world. Herre and Roser reporting an increase from 14 countries out of 55 (25 per cent) qualifying as such in 1900 to 119 out of 193 (62 per cent) in 2021.⁷³ However, over the past 30 years, trust in governments and the expressed level of satisfaction with democracy have been in evident decline. Furthermore, since the GFC in 2008 the picture is one of considerable disruption and a tendency to overlook or fail to attend to the principles of democratic government and parliamentary integrity.

Over barely six weeks for example, from late June and into August 2022, the US Supreme Court again demonstrated the determination of constitutional originalists to overturn precedent and put religion ahead of government.⁷⁴ Dominic Raab (former UK justice secretary and deputy PM) was reported to be proposing further curbs on judicial independence and oversight.⁷⁵ Joe Manchin exposed the extent to which corrupt money can be used to hold democratic government to ransom.⁷⁶ While Scott Morrison (former Australian PM 2018/22), urged a Pentecostal congregation in Perth to put their faith in God, for: "We trust in Him. We don't trust in governments. And we don't trust in the United Nations, thank goodness".⁷⁷

On a more positive note, Australia's new Labor government committed to rectifying board stacking at the Australian Broadcasting Corporation and Australia's Administrative Appeals Tribunal,⁷⁸ and to establishing the National Anti-Corruption Commission (NACC). It has also signalled possible changes that would require truth in political advertising, place caps on campaign contributions and enforce tougher disclosure provisions on the sources of campaigns donations.⁷⁹ While the

73. Herre and Roser, 2021

74. Greenhouse, 2022; Paul, 2022

75. Siddique, 2022

76. Krugman, 2022

77. Parkes-Hupton, 2022

78. Knaus, 2020

79. Clark, 2022

Queensland premier recently announced strict limitations on lobbyists' access to state government departments and politicians.⁸⁰

Regardless, the starting hypothesis stands: that the decline in trust and widening of the Trust Divide are evident and pose genuine risks to liberal democracies. It is also clear from the research that voters, academics and many politicians all acknowledge this reality and agree that much must be done to rectify some of democracy's more apparent flaws.

However, resistance remains present and powerful. As stated by one of the public figure interviewees

“I am deeply opposed to nearly all of your voters’ reform suggestions. Most of them would, if enacted, dramatically reduce the sovereignty of parliament, and place it in a subservient position to some sort of council of experts.”

Thus, it would seem that opposition from embedded power may still hinder the prospects for reform. In marked contrast, however, voter survey respondents highlighted the need for changes to ensure the continued independence and integrity of those institutions charged with responsibility for, at the very least, elections, political donations, corruption control, limitations on lobbyist access, enforcing truth in political advertising and ensuring higher levels of transparency on government decision-making. It should also be emphasised that the permanence of these reforms cannot be guaranteed unless judicial independence is ensured.

If liberal democracy is to overcome its current tribulations, it is advised that reforms be directed at rebuilding the strength of government institutions at the heart of democracy,⁸¹ and that the necessary reforms be introduced within the short term. The liberal West can no longer pay long-term lip service

to open-ended statements in anodyne support of restoring trust in democracy. This is, and always has been, a meaningless and empty promise that is just too easy to pass on to the next incumbent.

However, until our politicians acknowledge that their re-election prospects are, at least in part, dependent on a revival of trust in democracy and the continued independence of those institutions that underpin democracy, it will remain ever thus.

Supplementary material

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80. McKenna, 2022

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ARTICLE

Polycentric self-governance and Indigenous knowledge

Dr Shann Turnbull, Prof Natalie P. Stoianoff & Prof Anne Poelina

Vincent and Elinor Ostrom defined polycentricity as a complex form of governance with multiple, semi-autonomous centres of decision making. Australian researchers Dr Shann Turnbull, Prof Natalie Stoianoff and Prof Anne Poelina explore how the polycentric self-governance of Australian Indigenous societies can inform modern governance and safeguard the wellbeing of humanity and natural ecosystems.

Introduction

This article's main aim is to discuss research exploring how the self-governing practices found in Indigenous societies, biota and modern organisations can be embedded into the constitutions of legal entities to protect and share the well-being of humanity, biota and the planet. It highlights the potential for organisations to become a locally controlled common pool resource (CPR)¹ that protects local bioregions. Ultimately, it outlines how turning upside-down the top-down exploitive power structures of society can enrich democracy through stakeholder self-governance² that protects and nurtures the community, biota, and the environment.³

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1. Ostrom, 2009b
 2. Turnbull, 1994, 2000a
 3. Turnbull, 2023

We are particularly interested in local culturally determined self-governance for Australian Indigenous communities and how the traditional practices of Indigenous people and communities can be adapted to fill a modern knowledge gap.⁴ This article proposes that all citizens need to work together to reinstate and reinvent the self-governing processes that respect a wide variety of individuals, their totems, moieties, skin, clans, tribes, with local communities, geology, landforms, water resources, sub-regions, and the bioregional components of our planet Earth, described as Gaia (the Earth goddess, from whom the world was born, bringing calm to an otherwise chaotic universe). Polycentric self-governance (PSG) through all these levels could bypass existing political arrangements, rendering markets and the state redundant, as suggested by Ostrom (2009b).⁵ We aim to understand Indigenous Australians' ideas of self-governance to call for a total reset of modern institutions in the face of emerging existential risks to humanity and our planet.

Polycentric Governance and First Law

Ostrom's design principles were established for CPRs that did not possess property rights. Her Nobel Prize citation stated: "It was long unanimously held among economists that natural resources that their users collectively used would be over-exploited and destroyed in the long-term" (Nobel Prize Facts 2009)⁶ Hardin (1968) describes this concept as the "tragedy of the commons".⁷ Ostrom identified eight design principles for CPR management, as outlined in Table 1.⁸

TABLE 1: Ostrom's Design Principles for CPR Management

1. Clearly defining the group boundaries (and effective exclusion of external un-entitled parties) and the contents of the common pool resource (CPR).
2. The appropriation and provision of common resources that are adapted to local conditions.
3. Collective-choice arrangements that allow most resource appropriators to participate in the decision-making process.
4. Effective monitoring by monitors who are part of or accountable to the appropriators.
5. A scale of graduated sanctions for resource appropriators who violate community rules.
6. Mechanisms of conflict resolution that are cheap and of easy access.
7. Self-determination of the community recognised by higher-level authorities.
8. In the case of larger CPRs, an organisation in the form of multiple layers of nested enterprises, with small local CPRs at the base level.

These principles have since been modified and expanded to include several additional variables believed to affect the success of self-organised governance systems, including effective communication, internal trust and reciprocity, and the nature of the resource system.⁹ Further modified by Wilson *et al.* (2013) (Table 2),¹⁰ the number of issues raised makes it essential that their implementation is subject to continuous testing and review for each specific situation.

4. Turnbull and Poelina, 2022; Unuigbo, 2023

5. Ostrom, 2009b

6. Nobel Prize Facts 2009. <https://www.nobelprize.org/prizes/economic-sciences/2009/ostrom/facts/>

7. Hardin, 1968

8. Ostrom, 1990

9. Poteete and Ostrom, 2010

10. Wilson *et al.*, 2013

TABLE 2: Modified Ostrom's Design Principles for CPR Management¹¹

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1. User boundaries: Clear and locally understood boundaries exist between legitimate users and nonusers.
Resource boundaries: clear boundaries that separate a specific common-pool resource from a larger social-ecological system.

 2. Congruence with local conditions: appropriation and provision rules are congruent with local social and environmental conditions.
Appropriation and provision: appropriation rules are congruent with provision rules; the distribution of costs is proportional to the distribution of benefits.

 3. Collective-choice arrangements: most individuals affected by a resource regime are authorised to participate in making and modifying its rules.

 4. Monitoring users: individuals who are accountable to or who are the users monitor the appropriation and provision levels of the users.
Monitoring the resource: individuals who are accountable to or who are the users monitor the condition of the resource.

 5. Graduated sanctions: sanctions for rule violations start very low but become more robust if a user repeatedly violates a rule.

 6. Conflict-resolution mechanisms: rapid, low-cost local arenas exist to resolve conflicts among users or officials.

 7. Minimal recognition of rights: the rights of local users to make their own rules are recognised by the Government.

 8. Nested enterprises: when a common-pool resource is closely connected to a larger social-ecological system, governance activities are organised in multiple nested layers.

Ostrom and her co-researchers developed a comprehensive social-ecological systems (SES) framework, encompassing the evolving theory of common-pool resources and collective self-governance.¹² Here, we consider this in the context of Australia's First Nations Peoples to develop insights into how to protect, nurture and exchange unique local resources with other global localities.

The framework incorporates all voices from each location in a way that is consistent with what would be described today as stakeholder feedback or a Second Track.¹³ It conceptualises how voices from each location are needed to

protect and nurture the wellbeing of local flora and fauna and meet the concerns of constituent language groups responsible for nurturing their respective bioregions. This framework could be formalised as a body that encourages voices for all – Indigenous or otherwise – at each multi-bioregional level. It would aim to safeguard a rich diversity of self-governing local communities as envisaged by Turnbull (1980)¹⁴ and provide a bottom-up means to encourage support and dissent through each level of governance up to a global level. Research on wellbeing frameworks has been led in recent times by the work of the

11. Wilson *et al.*, 2013

12. Ostrom, 2009

13. Fritz, 2019, 2021

14. Turnbull, 1980, pp. 109–147

Organisation for Economic Co-operation and Development (OECD, 2020) with the Australian Government conducting its own investigations on measuring wellbeing (Australian Government 2022). For an analysis of well-being frameworks and their suitability for Australia's First Nations Peoples see Sangha *et al* (2023).

First Law owneship

Place is significant for PSG from an Indigenous perspective. Indigenous Australians consider themselves interconnected with Country.¹⁵ Indigenous Australians see themselves as being of the land,¹⁶ with which comes the obligations of an owner¹⁷ under their First Law¹⁸ to care for their environment. The words 'custodian' or 'steward' of land are inadequate, given the non-negotiable intimate relationship of Indigenous People being of the land. These words also imply an inadequate and incomplete agency that overlooks the origin of Indigenous Australians, their obligations to their ancestors who created them and their environment, and how they relate to each other and to visitors to Country.

Indigenous Australians have sustained themselves for at least 65,000 years. Their environment has been subject to major variations over time and by location; hence, the eight design principles identified by Ostrom¹⁹ are consistent with the traditional practices of Australia's First Nations Peoples; they are also subject to their First Law having been determined by the form and geology of their Country and its fauna and flora.

Knowing the language – know the land

Before colonisation, there were around one million First Nations Peoples in Australia in a land area comparable to Europe or the US.²⁰ While all First Nations Peoples shared a common Dreamtime creation story, it was spoken in hundreds of languages and dialects and knowing a homeland meant knowing its language.²¹ This also meant that it was usual for some First Nations Peoples to be multilingual.

For humanity, sustainability is possible in entirely different environments, but location matters according to how each region is endowed with resources and how each region of the planet is governed. Managing these resources in a way that is sustainable, humanity must be governed by nature as practised by Indigenous Australians according to their First Law.²² This requires modern societies to turn upside down their dominant top-down power structures to create what Campbell (2022) describes as a Total Reset.²³ Turnbull (2002a) describes it as an ecological architecture and ecological governance because it mimics the architecture of biota.²⁴

Governance grounded by and for bioregions

Each bioregion has its unique features, so humanity in each region needs to behave and govern its regions differently. As Indigenous languages are lost,²⁵ so is our knowledge of how to care for Country. To update our knowledge and reinvent ways to protect and nurture each unique region of Australia, we have no alternative but to devise

15. Country is capitalised as it is respected as a living entity and in a deep relationship with Indigenous Australians, see RiverOfLife *et al.*, 2020a, 2020b, 2021; Nursey-Bray *et al.*, 2020

16. Turnbull, 1980, p. 56

17. Turnbull, 1980, pp. 163, 164; Turnbull, 1986

18. Redvers *et al.*, 2020

19. Ostrom, 2009b

20. Gough, 2011

21. Turnbull and Poelina, 2022, p. 27

22. Campbell, 2022, Guthrie *et al.*, 2022, Turnbull and Poelina, 2022, Turnbull, 2014c, 2023, Guthrie and Turnbull, 2019

23. Campbell, 2022

24. Turnbull, 2002a; Turnbull and Myers, 2017

25. See <https://www.commonground.org.au/article/indigenous-languages-avoiding-a-silent-future#:~:text=250%20First%20Languages%20were%20spoken,First%20Languages%20are%20still%20spoken.>

synthetic governing relationships between humans and their bioregion by (a) custom designing the governance architecture at each location and (b) educating governance architects to custom design governing relationships.

We recommend that incorporated bodies work as agents of change to achieve a total reset. The advantage of introducing incorporated bodies is that they can be custom-designed to become grounded in the local environment. Over time, their involvement could be phased out as citizens become committed to sustainable behaviour like First Nations Peoples.

System science reasons considered below support the need for a total reset. For Indigenous Australians, this would involve self-determination as espoused by the *United Nations Declaration on the Rights of Indigenous Peoples 2007* and more recently in the *Indigenous Voice Co-design Process – Final Report to the Australian Government July 2021*.²⁶ However, there have been numerous recommendations for Indigenous self-determination, including reports dating back to 1980, such as the *Economic Development of Aboriginal Communities in the Northern Territory*²⁷ and, more recently, the *Empowered Communities: Empowered Peoples Design Report*.²⁸

The most recent Australian proposal seeks only a Voice to Parliament and the executive Government. This proposal will be put to the Australian people at a referendum on 14 October 2023. The National Indigenous Australian Agency's recommendation for a Voice to Parliament and the executive Government is intended to encompass

the ability of “[l]ocal and regional Voices [to] provide advice to all levels of government to influence policy and programs, and advise the non-government sector and business”.²⁹ The NIAA recommends a plurality of voices because the Voice to Parliament and the executive should not be construed literally as a single voice. This misconception has prompted Indigenous leaders of the No Campaign to argue against the referendum proposal because “A single voice cannot speak for Indigenous Australians”.³⁰ The NIAA recommendations recognise that obtaining different voices is essential to govern separate locations according to their characteristics if a total reset is to be achieved. Hence the need “for a system-wide approach where the 2 parts of the Indigenous Voice – Local & Regional Voices and the National Voice – complement and support each other to ensure the best outcomes”.³¹

A new way to govern³²

The “question... how exactly the Voice process will collect the input of local and regional Voices and transfer them to federal parliament”³³ cannot be answered in the context of traditional forms of democratic Government that perpetuate dictatorships of the majority. Instead, a total reset based on polycentric self-governance (PSG) can foster inclusive participation of many voices. It requires introducing a bottom-up stakeholder form of ecological governance described below.³⁴

Bottom-up governance introduces a multiplicity of what Fritz (2019) describes as a second track.³⁵ This fulfils the monitoring role Ostrom (2009b) identified as a requirement for achieving

26. NIAA, 2021

27. Turnbull, 1980, p. 3

28. Empowered Communities, 2015

29. Allam, 2022

30. <https://thewest.com.au/opinion/warren-mundine-indigenous-australia-cannot-be-spoken-for-by-a-single-voice-c-8096954>

31. NIAA 2021, p. 214

32. Turnbull, 2002a

33. Thorburn *et al.*, 2023 citing Larkin, 2021

34. Christakis, 2014; Turnbull, 1994, 2000a, 2002a, 2014a, 2020a, 2020b

35. Fritz, 2019

self-governance without markets or state.³⁶ The Garuwanga Project provides a valuable example of a bottom-up or grassroots approach to governance in the context of establishing a competent authority to protect Indigenous knowledge.³⁷ The tiered approach espoused by the Garuwanga Project recognises the importance of local and regional competent authorities as the key decision makers, with the national competent authority providing a reporting and supporting role.³⁸

PSG allows many local voices to aggregate with kindred minority interests upward through all higher levels to a global perspective. It promotes local self-sufficient, self-governing circular

economies with micro-democratic organisational structures promoting equity and self-reliance, like traditional Indigenous societies. To create higher levels, the federation of lower levels of organisations follows the principle of subsidiary function (PSF). PSF states that no higher-level organisation should undertake any activity that can be better achieved at a lower level.³⁹

An outline of how Australian minority voices can be heard from different neighbourhoods up through to various levels to be recognised and aggregated with others to a global level, according to the principle of PSF, is indicated in Table 3.

TABLE 3: Australian architecture of polycentric self-governance (PSG)⁴⁰

The Australian component of Earth and water-centred bottom-up governance by Gaia		
Level	Localities	Organisational Form
6	Global	Global federations of PSG incorporated organisations by types of 5 host climate regions and other attributes.
5	Shared water basins	Incorporated and unincorporated PSG associations were federating lower levels within climate types and 13 water basins.
4	Bioregions	89 incorporated and unincorporated PSG associations federating 419 sub-regions.
3	Sub-regions Suburbs/towns	419 incorporated and unincorporated lower-level PSG entities.
2	<i>Language groups/Tribes</i>	<i>Unincorporated</i> , Incorporated, Corporate, and non-profit PSGs.
1	Neighbourhoods <i>Clans/ moiety/Skin/Totems</i>	<i>Unincorporated</i> , Incorporated Associations, Non-profit corps. Locally controlled investor-stakeholder endowment corporations continuously re-birthing providing a universal dividend to all citizens as achieved in Alaska. ⁴¹

36. Ostrom, 2009b

37. Stoianoff *et al.*, 2022

38. Stoianoff *et al.*, 2022, see in particular Chapter 7, section 7.1.3

39. Pius XI, 1931; Schumacher, 1973, p. 204; Pirson and Turnbull, 2017; Turnbull, and Guthrie, 2019

40. This table draws on Campbell, 2022 by reversing centralized top-down governance institutions while not involving political structures, consistent with PSG existing without "markets or state" Ostrom, 2009b

41. <https://pfd.alaska.gov/payments/tax-information#:~:text=The%202022%20Permanent%20Fund%20Dividend,Identification%20number%20is%2092%2D6001185.>

The principles of Ostrom (2009a) underpins Table 3.⁴² Ostrom's field research was not concerned with the higher level of coordinating organisations or how minority voices could be recognised and aggregated with others through higher levels, as shown in Table 3. This is important to provide an Indigenous Voice whether or not the proposal to change the Australian constitution is accepted.

In seeking to manage climate change, Ostrom (2009a) proposed a polycentric approach at various levels with active local oversight of local, regional, and national stakeholders. Ostrom noted that:

Building a strong commitment to find ways of reducing individual emissions is an important element for coping with this problem, and having others also take responsibility can be more effectively undertaken in small- to medium-scale governance units that are linked together through information networks and monitoring at all levels.⁴³

Voices also need to be shared to promote trade, investment and safeguards on crucial scarce global resources. Indigenous Australians exchanged items across a territory as large as the US or Europe.⁴⁴

The organisational scope of this article is limited to the foundational first two levels in Table 3, which includes Indigenous practices highlighted in **bold italics**. Suggestions for global arrangements were presented in the first Global Brain

Workshop.⁴⁵ The territorial scope of this article is limited to Australia.

Polycentric Self-Governance Literature and Examples

Frameworks for considering micro self-sufficiency and self-governance in contemporary society that also follow the PSF are presented in various studies.⁴⁶ A literature review of self-governance is presented in the Appendix of Turnbull (2022b).⁴⁷ A vision of a total reset is provided by Turnbull (2018),⁴⁸ with details in Table 1 of Turnbull (2015).⁴⁹

Ostrom (1993, 1998a, b, 2009b)⁵⁰ and colleagues Wilson *et al.* (2013)⁵¹ have considered the contributions already made by Indigenous societies worldwide in filling the modern knowledge gap. As the first political scientist to win a Nobel prize in economics, Ostrom described the self-governing design rules as polycentric governance. This is a political scientist's description of what has been described as a compound board,⁵² distributed decision-making,⁵³ or what others refer to as network governance.⁵⁴ This article applies Ostrom's revised design rules to transform incorporated entities into a CPR that benefits all stakeholders.

Barkin and Napoletano (2023) documented how traditional Indigenous practices can be adapted to promote local self-sufficiency and self-management for around a third of the population of Mexico.⁵⁵ This was because of civil war settled by negotiations between the Government and

42. Ostrom, 2009a.

43. Ostrom 2009a, Abstract.to Policy Research Working Paper 5095

44. <https://blog.qm.qld.gov.au/2012/05/16/indigenous-science-australia-had-ancient-trade-routes-too-2/>

45. <http://pespmc1.vub.ac.be/Conf/GB-0.html>

46. Morehouse, 1997; Turnbull, 1980, pp. 109-147; Barkin, 2022; Turnbull and Myers, 2017; Lucio and Barkin, 2022

47. Turnbull, 2022b

48. Turnbull, 2018

49. Turnbull, 2015, p. 18

50. Ostrom, 1993, 1998a, b, 2009b

51. Wilson *et al.*, 2013

52. Turnbull, 2000b, p. 27

53. Kelso *et al.*, 2013

54. Craven *et al.*, 1996; Nohira and Eccles, 1992; Pirson and Turnbull, 2011, 2012, 2015, 2017; Turnbull, 2000a, 2002a, 2014c, 2020a, 2020b, 2022a; Turnbull and Pirson, 2012, 2019

55. Barkin and Napoletano, 2023

the Zapatista National Liberation Army (EZLN) in 1996. The Mexican Constitution was amended to make the country a multicultural nation with autonomous regional Indigenous governments. As Mexico had a population of around 129 million in 2022, around 43 million Mexicans have adopted traditional practices. This significantly exceeds the total population of Australia of 26 million. The land area of Mexico is only a quarter of the size of Australia. In Mexico, there are 68 Indigenous languages with 364 variants.

Modern significant business examples of PSG are the stakeholder-controlled Visa Inc. in the US,⁵⁶ The John Lewis Partnership in the UK,⁵⁷ and the Mondragón⁵⁸ cooperative system in Spain.⁵⁹ They have proved their competitiveness and resilience by surviving business cycles for over half a century. They have also shown that no changes in private law are required. Many civic organisations have survived and thrived with PSG promoting engagement with their members. Professional associations and Rotary clubs are examples. The following section explains why.

Methodology

A science of governance was established by introducing bytes as the unit of analysis.⁶⁰ Bytes describe data. Data is physically represented by patterns in matter or energy that make a difference. No changes in the social constructs of information, knowledge and wisdom can arise without the transaction of bytes.⁶¹ Transaction Byte Analysis (TBA) provides an instrumental basis for evaluating, comparing, and designing

human organisations independently of the level of technology that may be employed.⁶² Any transaction of bytes involves perturbations in energy and matter. Minimising bytes economise energy and matter to minimise the energy or matter required to sustain biota and organisations.

TBA creates a methodology that subsumes and extends the science of cybernetics. Instead of being limited to “the control and communication in the animal and the machine”,⁶³ TBA becomes the science of control, communication and decision-making within and between any biota and devices. TBA explains why nature uses DNA to store and reproduce life’s complexity. DNA creates a process for amplifying the creation and regulation of complexity by *indirect* means.⁶⁴ To simplify and amplify complexity, we introduce our innovation of using incorporated organisations as *indirect* agents for introducing a total reset.

Our brains reveal the cost of resources in transacting data: “The brain makes up only 2 percent of our body weight, but it consumes 20 percent of the oxygen we breathe and 20 percent of the energy we consume”.⁶⁵ Our brains reduce data overload by introducing distributed decision making. This removes the need for a Chief Executive Officer neuron.⁶⁶ TBA explains why polycentric decision-making networks in our brains or polycentric governed organisations obtain competitive advantages in data processing. It also improves resilience by introducing redundancy in data processing capabilities. TBA also explains why management scholarship focused on leadership is dysfunctional in mimicking nature. All biota, by

56. Hock, 1999

57. Turnbull, 2000b, pp. 190-198

58. Mondragón is nested network of, 200 multi-stakeholder owned and controlled cooperatives that were founded in, 1957 around the Spanish town of Mondragon that now has over 80,000 members.

59. Turnbull, 1995, 2000b, pp. 199-225; Whyte and Whyte, 1988

60. Turnbull, 2000b, p. 83

61. Turnbull, 2005

62. Turnbull, 2005

63. Wiener, 1948

64. Ashby, 1956, p. 265

65. NLM, 2007

66. Kurzweil, 1999, p. 89

necessity, must become self-governing to survive their creation in dynamic, unknowable, complex environments until they can reproduce. A defining feature of distributed decision-making in biota is that each decentralised decision-making centre can act independently of others. Hence, this is known as ecological governance, distinguishing it from hybrid networks that lack autonomy or become a component of a command-and-control hierarchy. Ecological governance replaces regulators with empowered stakeholders to protect themselves. This occurs in nature. In modern society, it means, in effect, “privatising” regulation.⁶⁷ A related defining feature of ecological governance is that different control centres exhibit contrary ~ commentary Yin ~ Yang like behaviour now described as “Tensegrity”. This is demonstrated in human behaviour. We can be competitive ~ cooperative, trusting ~ suspicious, selfish ~ altruistic, etc. In this way, Tensegrity introduces checks and balances to promote self-regulation.

Such contrary ~ complementary behaviour exists in the physical world. Fuller (1961) coined Tensegrity by combining Tension and Integrity to describe physical structures created by combining materials with contrary ~ complementary characteristics like geodesic domes.⁶⁸ Schumacher (1973) and Ostrom (2009) described Tensegrity with different words.⁶⁹ Schumacher used the word antimony, while Ostrom described a context of competing stakeholders cooperating. Meanwhile, Hock (1999) combined the words “chaos” and “order” to create the word chaordic.⁷⁰ Hock founded the credit card organisation VISA Inc. in

1970. It adopted PSG, with Hock (1999) explaining that the organisation possessed: “multiple boards of directors within a single entity, none of which can be considered superior or inferior as each has irrevocable authority and autonomy over a geographical or functional area ... No part knew the whole and the whole does not know all the parts, and none had any need to” because they were self-governing.⁷¹ In this way, both complexity and data overload in executives were reduced.

Tensegrity creates the greatest strength in biological and physical structures with the least materials.⁷² In social systems, Tensegrity can be used to increase the reliability of communications, control and decision-making while minimising the energy and matter required within the system.⁷³

Analysis

Choice of legal entities

Five types of possibly relevant Australian legal structures are set out in Table 4.⁷⁴ This table was constructed for the Garuwanga Project, which focused on identifying the most appropriate legal structures for a competent authority to administer a legal regime tasked with protecting Indigenous knowledge in Australia to benefit Indigenous Australians.⁷⁵ For parsimony, the table omits the Australian innovation of No-Liability (NL) corporations⁷⁶ and incorporated limited liability partnerships available in each state jurisdiction.⁷⁷ Following Australian law, all options assume unitary top-down control and thereby do not provide for PSG without modification.

67. Turnbull, 2008b, 2019, 2021

68. Fuller, 1961

69. Turnbull, 2020b

70. Hock, 1999

71. Hock, 1999, p. 191

72. Ingber, 1998, p. 32, Muresan, 2014

73. Turnbull, 2000b, p. 134, 2022b

74. Stoianoff *et al.*, 2022

75. Stoianoff *et al.*, 2022

76. <https://asic.gov.au/about-asic/contact-us/complaints-about-companies-organisations-or-people/using-limited-no-liability-or-proprietary-in-a-name/>

77. <https://business.gov.au/planning/business-structures-and-types/business-structures/partnership#:~:text=Incorporated%20Limited%20Partnership%20LP%20%2D,general%20partner%20with%20unlimited%20liability.>

TABLE 4: Potentially relevant Australian incorporated entities.⁷⁸

	Proprietary Company	Public Company limited by Shares	Public Company limited by Guarantee	Incorporated Association	Registered Co-operative	CATSI Corporation
Management structure	Board of Directors 1+ directors	Board of Directors 3+ directors 1 secretary	Board of Directors 3–12 directors 1 secretary	Management committee in most states 3+ committee members	Board of directors 3+ directors	Board of Directors 3–12 directors
Area of operation	Australia wide	Australia wide	Australia-wide	State of registration	Australia wide	Australia wide
Administration	ASIC	ASIC	ASIC	Fair Trading	Fair Trading	ORIC (3)
Legislation	<i>Corporations Act 2001 (Cth)</i>	<i>Corporations Act 2001 (Cth)</i>	<i>Corporations Act 2001 (Cth)</i>	<i>Associations Incorporation Act 2009 (NSW) or equivalent in other States</i>	<i>Co-Operatives National Law (CNL) (Uniform State-based legislation).</i>	<i>Corporations (Aboriginal and Torres Strait Islanders) Act 2006 (Cth) + regulations</i>
Members	1 + No more than 50 non-employee shareholders	1 +	1 +	5 +	5+	5 + 51% must be indigenous
Limitation on trading	Nil	Nil	Nil	Depends on Fair Trading policy	Nil	Nil
Personal offers of shares/equity	Yes	Yes	No	No.	Co-op with share capital only (individuals taking up shares must become “active” members)	No
Public offers of shares/equity	Yes – subject to maximum	Yes	No	No	Yes, but difficult	No
Charity registration and tax concessions	Rarely granted.	Rarely granted.	Needs appropriate purpose and provisions in Constitution	Needs appropriate purpose and provisions in Constitution.	Co-ops without shares with appropriate purpose and provisions in Constitution.	Needs appropriate purpose and provisions in Constitution

78. Indigenous Knowledge Forum, 2018, Table 3, p. 17

An especially egregious option is the far-right column-headed CATSI corporation. This refers to the Corporations (Aboriginal and Torres Strait Islander) Act 2006 (Cth). It replaced the Aboriginal Councils and Associations Act 1976 (Cth). Section 69.35 of the Act allows the Registrar to change an Aboriginal and Torres Strait Islander corporation's constitution in certain circumstances. While those circumstances relate to dealing with actions contrary to the interests of the members as a whole or oppressive to one or more members, this indicates the failings of the CATSI regime to achieve self-determination for a CATSI corporation's members by requiring an external power to rectify internal conduct.

Private corporations in the first column, cooperatives in the fifth column and CATSI corporation are not likely to be relevant to becoming a CPR because they each deny the interests of stakeholder citizens in ways that can be more simply overcome with public companies in the second and third columns and incorporated associations in the fourth column.

NL corporations were created to facilitate funding high-risk mining ventures in the middle of the 19th century. This purpose is no longer acceptable in the 21st century, which needs to recycle non-replaceable minerals. This law should be amended to be fit for funding technology that can sustain people and the planet eternally. State and Territory laws create incorporated associations, so their operations are limited to their jurisdictions.⁷⁹ There are limitations on trading imposed on incorporated associations, which are created for the benefit of the membership collectively, not for individual benefit. Accordingly, an incorporated association needs to specify the objects of the association and cannot trade to secure pecuniary gain for its members. The one exception to

this prohibition to operate for the pecuniary benefit of its members is the Northern Territory incorporated trading association. Like cooperatives, it is practical to create incorporated associations without a lawyer. However, to introduce PSG, custom-designed constitutions are required that introduce the novelties outlined below. Few lawyers, governance experts or businesspeople would be familiar with the innovations of PSG. This leaves the way open for any interested persons from any culture to develop the art and practices of becoming a self-governance architect.

Selection and association of legal forms

A review of Indigenous language groups and bioregions reveals that quite a few cross state borders. However, the use of incorporated associations is restricted to individual state jurisdictions. A CATSI corporation is not so limited, nor are corporations or unincorporated organisations or associations. This means that organisations in level 1 of Table 3 could, in practice, take on one of three forms: (1) unincorporated association, (2) incorporated association, or (3) a corporation. A mix of entities could populate level 2 of Table 3. Several organisations in level 3 of Table 3 would be limited to 419 sub-bioregions. Criteria for introducing PSG into the three types of organisations in levels 1 and 2 are suggested below. They include non-profit social PSG organisations and business enterprises in the form of locally owned and controlled ecological endowment firms. Ecological endowment firms promote sustainable circular local economies with a universal well-being dividend to reduce the size and cost of Government.⁸⁰

However, it should be noted that, while an unincorporated association has the capacity for registration as a charity under the *Australian Charities and Not-for-profits Commission Act*

79. Associations Incorporation Act 1991 (ACT); Associations Incorporation Act 2009 (NSW) and Associations Incorporation Regulation 2022 (NSW); Associations Act 2003 (NT); Associations Incorporation Act 1981 (QLD); Associations Incorporation Act 1985 (SA); Associations Incorporation Act 1964 (TAS); Associations Incorporation Reform Act 2012 (Victoria); Associations Incorporation Act 2015 (WA).

80. Turnbull, 2022a

2012, the association is not a separate legal entity from the members. As a result, each member has limited liability for the association's debts and defaults to the level of their subscription, since the unincorporated association cannot enter into contracts in its own name, or own land, or employ people, or sue or be sued: *Bradley Egg Farm v Clifford* [1943] 2 All E.R. 378, 378; *Carlton Cricket & Football Social Club v Joseph* [1970] VR 487, 499. Rather, the association's committee members stand in as the 'surrogate for the association' and become personally liable under such contracts or breaches: Fletcher (1979); see also *Peckham v Moore* [1975] 1 NSWLR 353. This is an important consideration when determining choice of legal structure.

While the scope of this article is limited to levels 1 and 2 of Table 3, the need to consider bioregions and water basins is included to highlight how humanity is dependent on bottom-up governance by Gaia. There are 13 major water basins in Australia.⁸¹ Four water basins are larger than one million square kilometres. Notably, the largest basin in central Australia, does not discharge into any ocean, only the Great Artesian basin. The smallest of the four largest basins is the Murray-Darling system, which includes the town of Brewarrina on the Barwon River. At least six Aboriginal communities competing for access to fish collaborated in maintaining and utilising fish traps at this location from the last Ice Age. The traps could be the oldest known human construction. They are also the oldest known example of PSG of CPR.

Design Criteria for PSG Architecture

Ostrom design principles for unincorporated organisations

The dual role of communicating upward and downward contrary viewpoints is illustrated through nature – for example, the cell structure

of trees. As the seasons change, Tensegrity allows the flows of energy and material up and down the tree to change as best required for its survival in its ecosystem.⁸² Ingber (1998) identified that the contrary behaviour of cells arises from the mechanics of how single cells in trees (or of any other biota) can change their activities according to physical stresses. Our social systems need to mimic this self-regulatory and self-governing process in nature.⁸³

The ability of an individual minority to be heard in contemporary, traditional Indigenous society was demonstrated on Groote Eylandt in 1977. This was reported in the 1980 Australian Government report, *Economic Development of Aboriginal Communities in the Northern Territory*.⁸⁴ At the Annual General Meeting of the Groote Eylandt Aboriginal Trust Fund Inc., in attendance were over 100 Aboriginal people, with only one individual who was not. The minority member, Gerry Blitner, had pitched for funds to acquire a vehicle to provide the first taxi service on Groote Eylandt. This was approved on the condition that it was a loan to be repaid rather than a grant because it was a business. Unlike most company directors, Blitner voted against the motion for receiving the loan because of his conflict of interest! Conflicting viewpoints between different clans and the non-clan members arose. All viewpoints were treated with respect, discussed, negotiated and resolved. PSG was illustrated at the most basic group level. Resolving tensions created by conflicting viewpoints also illustrates how Tensegrity creates integrity in decision-making.

Local unincorporated and incorporated PSG organisations will need second and higher levels of PSGs to give direct voices to their constituent stakeholders up to and down from a global level created by PSF.

81. https://en.wikipedia.org/wiki/List_of_drainage_basins_of_Australia

82. Wohlleben, 2016

83. Ingber, 1998

84. Turnbull, 1980, p. 14

As part of the analysis of legal structures undertaken in the Garuwanga Project referred to above, it was necessary to identify criteria for evaluating the various options available to form a competent authority that the Australian federal or state governments did not control. To this end, the Garuwanga Project embarked upon the development of governance principles that would assist in such an evaluation:

... the processes, structures and institutions (formal and informal) through which a group, community or society makes decisions, distributes and exercises authority and power, determines strategic goals, organises corporate, group and individual behaviour, develops rules and assigns responsibility.⁸⁵

In exploring governance principles, the Garuwanga Project considered the Indigenous Governance Toolkit developed by the Australian Indigenous Governance Institute, which explained that Indigenous governance is a networked form of governance focused on the concept of effective or legitimate governance as distinct from good governance.⁸⁶ Some common Indigenous principles of governance were identified by the Centre for Aboriginal Economic Policy Research at ANU, including networked governance models, nodal networks and gendered realms of leadership, governance systems arising out of locally dispersed regionalism and 'bottom-up' federalism, subsidiarity and mutual responsibility as the bases for clarification and distribution of roles, powers and decision making across social groups and

networks, cultural geographies of governance, and an emphasis on internal relationships and shared connections as the foundation for determining the 'self' in self-governance, group membership and representation.⁸⁷ However, to inform the identification of appropriate legal structures for the competent authority, the Garuwanga Project developed its own governance principles and applied them to various legal structures before coming to its conclusions. Those principles are outlined in both the Discussion Paper⁸⁸ and the Final Report⁸⁹ of the Garuwanga Project and demonstrate the value of PSG.

Reformatting Ostrom's PSG design principles for incorporated entities

Incorporated entities may create property rights. These were not envisaged in Ostrom's design principles established for CPRs. A reformatting of Ostrom design principles is required to introduce the idea of an incorporated entity becoming a CPR, with all corporate stakeholders participating in the control architecture of CPRs,⁹⁰ the natural laws of system science that recognise the biological processes for achieving self-regulation and self-governance,⁹¹ the concept of Tensegrity⁹² not required in the context of Ostrom's field studies that inherently involved competition with cooperation for access to CPRs,⁹³ and a size limitation in the number of individuals.⁹⁴

To introduce Tensegrity, each individual or group needs to (a) share at least one agreed type of common interest and (b) become subject to challenge by other individuals and

85. Dodson and Smith, 2003, p. 1

86. Stoianoff *et al.*, 2022, p. 63

87. Hunt *et al.*, 2008, p. 21

88. Indigenous Knowledge Forum, 2018, pp. 33-35

89. Stoianoff *et al.*, 2022, pp. 64-65

90. Turnbull, 2000a, 2020b, 2022a

91. Turnbull, 2002b, 2008a

92. Schumacher (1973) used the word "antimony" while Hock (1999) coined the word "Chaord" by combining the words "Chaos" and "Order". Without using the word "Tensegrity" Mathews (1996) described its paradoxical characteristics as a defining characteristic of Holons and Holarchies.

93. Turnbull, 2022b

94. see Turnbull, 1973, 1975, 2000a, 2002a, 2014a, b; Whyte and Whyte, 1988, p. 259

groups with other types of shared common interests. Each agreed type of common interest, individual or group, must possess internal decision-making processes to provide contrary ~ supplementary challenge ~ support for common interests.⁹⁵ Mathews described autonomous entities that possessed paradoxical

contrary ~ complementary behaviours like centralisation ~ decentralisation, bottom-up ~ top-down, autonomous ~ integrated, order ~ ambiguity, and behaviours as holons.⁹⁶ He described networks of holons as a holarchy that likewise possessed a similar behaviour but he did not use the word "Tensegrity".

TABLE 5: Reformatted design principles for incorporated CPRs

1. Stakeholder boundaries	Stakeholders of each CPR define a requisite variety ⁹⁷ of common interest groups (Holons). The holon may be a single individual with at least one common interest with CPR. However, this is on condition that a requisite variety of alternative contrary ~ complementary individuals or groups/holons are also recognised.
2. Stakeholder decision making	Is autonomous within each group according to local social and environmental conditions. This includes the power to modify their own rules of decision-making consistent with the PSF but subject to negotiation with external interests who, in turn, need to be made aware of and recognise the autonomously determined rules.
3. Monitoring	Various stakeholders need to become responsible for monitoring how the CPR affects them, the environment and other stakeholders that may become a concern to them.
4. Sanctions	Each group will negotiate graduated sanctions for intergroup rule violators within and with other groups.
5. Dispute resolution	Groups to establish accessible, low-cost means for dispute resolution within the group and between groups. The Garuwanga Project describes an Australian Indigenous example.
6. Governing scale	Groups with at least one commonality form nested tiers from the lowest level up to the entire interconnected system.
7. Governing complexity	Groups of groups become separate decision-making entities in a hierarchy of holons on the condition that there is a "requisite variety" (Ashby 1962: 206) of other such group collectives with a requisite variety of contrary ~ complementary interests.
8. Systemic governance	Group collectives follow each of the design principles for individuals or groups.
9. Size limitation	When a group size grows beyond the human scale, it divides into two independent groups, one becoming the supplier or a customer of the other to reproduce Tensegrity in the next higher level of the holarchy.

95. Mathews, 1996, p. 41

96. A Holon is an autonomous unit of a complex system like a human in an organisation that has dual characteristics such as being a whole, and also a part, while possessing dual interdependent paradoxical behaviour described as "Tensegrity".

97. Ashby 1962, p 206.

By mimicking the architecture of nature, ecological governance removes 20 “toxic problems of hierarchies”.⁹⁸ This also establishes a basis to govern *complexity* to achieve RDP-7 by introducing PSG to reinforce the efficacy of the other RDPs. The size limitation of RDP-9 can be achieved as illustrated in the stakeholder-governed cooperatives of Mondragón. To keep to human scale, they would follow the process of an amoeba that divides into two. With Mondragón enterprises, this process involved one firm becoming the supplier or customer of the other.⁹⁹ The new firms would then establish a second-level entity to manage a group of entities. Mondragón extended *systemic governance* (RDP-8) from a second to a third level by federating groups into a Mondragón Corporación Cooperativa (MCC).¹⁰⁰ The MCC General Meeting provides direct feedback from minority voices from its stakeholders.

Polycentric governance allows the voices of minority stakeholders to become united with similar common interest minorities at higher levels to a global level. This has practical significance, as in the case of the Arabana people.¹⁰¹ Many Arabana people, whose homelands are in the Lake Eyre basin of South Australia, were recruited to work on establishing the railway from Adelaide to Alice Springs in the Northern Territory. Polycentric governance would allow the minority voices of Arabana people in South Australia to be reunited from second and third-level incorporated PSG entities or corporations. While corporate entities could be used at any level, they become essential to federate common interests across state borders that could arise from level three upwards in Table 1.

Both incorporated associations and corporations can stifle adaption to changing environmental conditions and demographics. To encourage

continuous adaption and “learning by doing”, it is proposed that the life of incorporated bodies be limited to force cyclic re-birthing. In this way, incorporated bodies can more closely follow the processes found in living bodies to discover successful adaptations. This creates an efficient way to build a locally owned and controlled circular economy to promote long-term sustainability.

Separating powers also allows different skill sets, knowledge and interests to be more appropriately allocated. As well as systemically providing inclusive voices, removing conflicts of interest and simplifying complexity, diverse views are achieved to counter groupthink.¹⁰² The board of governors would generally be limited to three individuals, one retiring each year. Re-election could be permitted after two years to provide power-sharing opportunities and continuously establish fresh relationships and diversity. Gender change could likewise be required for each election to facilitate equality, new relationships and diversity. This would be subject to cultural laws in the case of Indigenous-incorporated associations or corporations.

The role of a board of governors is as guardians of the integrity and inclusivity of the association or corporation and to manage conflicts of interest. They would take on the role of an audit committee, whether an external one was appointed. Governors would nominate and control any auditors or other advisors desired by the management committee/directors or members. Governors would not nominate management committee members/directors but, with a unanimous vote, could disqualify nominees who introduced operating conflicts and were subject to traditional avoidance relationships.¹⁰³ Governors would have the power to veto any remuneration

98. see Table 3 of Turnbull and Poelina, 2022, p. 26

99. Turnbull, 1994

100. Turnbull, 1994; Turnbull and Poelina, 2022, p. 28

101. Nursey-Bray *et al.*, 2020

102. Fink, 2018

103. Turnbull, 1980, p. 164

or benefits bestowed to any association or corporate member. Members could overturn any such veto by calling a meeting of all members.

The committee of management/directors would be required to establish boards of external stakeholders such as suppliers, employees, contractors, customers, agents and host communities on such terms and conditions as approved by the board of governors. Members of the association/corporation could also establish multiple advisory boards representing various sub-groups of members as may be approved by the governors or members. Minutes of all advisory boards would be publicly available unless the governors approved otherwise. General meetings of members would be convened by the governors, with the chair being nominated at the general meeting unless a council of stakeholder boards exist to nominate the chair who is not conflicted.

The meeting of members would decide the number of members of the management committee or board and would ordinarily be between five and seven members. Members would be allowed to nominate alternates as may be accepted by the board of governors. Accumulative voting would be used to elect management committee members/directors to encourage the representatives of minority voices. Accumulative voting provides each constituent member as many votes as vacancies to be filled on the management committee/board. Each constituent can accumulate two or more votes for anyone and more individuals to frustrate the dictatorships of a majority. Governors may introduce the need for only men to nominate and elect women and only women to nominate and elect men.

A detailed description may be desired on the public record to provide a rich multiplicity of stakeholder voices to promote comprehensive self-governance. Indigenous constituents could include gender,

totems, skin, moiety, clan, tribal, ownership and language affiliations with unique capabilities or status as a youth, a parent or grandparent. This would facilitate the establishment of common interest voices, allow them to be aggregated through higher-level organisations, and allow traditional avoidance relationships to become recognised. In culturally mixed communities, work experience, trade and professional qualifications and marital status could provide a basis for establishing diverse types of stakeholder common interest voices.

Concluding remarks

This article has identified how Australian Indigenous knowledge and practices can be protected and shared by becoming embedded into organisational entities. To achieve this aim, we have described how Ostrom's revised design principles can be reformatted into corporate constitutions to mimic an ecological form of governance practised by Indigenous Australians. In this way, our article establishes a research and practice agenda for designing contextually specific forms of ecologically governed entities and testing their efficacy.

Our contribution to knowledge is in identifying how the self-governing practices of Indigenous Australians are consistent with the laws of nature. This means that the science of governance¹⁰⁴ can be applied to reinvent and adapt the lost wisdom of Indigenous Australians. Specifically, we identified how the design of self-governing corporate constitutions needs to introduce Tensegrity and the law of requisite variety.

We also introduced the innovation of how polycentric governed corporate entities can be transformed into a CPR. In this way, corporations can become agents to counter climate change and the degradation of the environment, including biodiversity, locally on a global basis.

104. Turnbull, 2008a

An immediate political contribution of our article is to show how polycentric entities can be used to avoid the dictatorship of the majority. We identified the need to change the current approach of suggesting that there is only one voice to many. This is required to match the rich diversity of Australian bioregions and how they require protection and nurturing in different ways.

In doing so, we call for a Total Reset of modern institutions if humanity is to survive and thrive in the face of emerging existential risks. Our contribution is to outline the required operational practices and provide an agenda for research and implementation.

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Towards Society 5.0: Enabling the European Commission's Policy Brief 'Towards a Sustainable, human-centric and resilient European Industry'

Prof Christian Nielsen & Prof Jacob Brix

The concept of Society 5.0 – a superintelligent society of humans, nature and technology in sustainable balance – was launched in Japan in 2016. Danish business academics Prof Christian Nielsen and Prof Jacob Brix propose a systematic, second track, bottom-up 'society transition model' to ease the shift towards this next stage of society.

Introduction

The European Commission published an highly relevant policy brief¹ entitled: 'Industry 5.0: Towards a sustainable, human-centric and resilient European Industry'. The vision elaborated in the policy brief is to recognise the following:

“the power of industry to achieve societal goals beyond jobs and growth, to become a resilient provider of prosperity, by making production respect the boundaries of our planet and placing the well-being of the industry worker at the centre of the production process.” (...) “by having a research and innovation drive the transition to a sustainable, human-centric and resilient European industry (...) that moves from solely shareholder value to stakeholder value for all concerned.”²

Although the degree of the managerial and organisational implications stemming from realising such a vision would naturally be determined by the individual organisation, local community, or region, such an idea would significantly affect the existing

1. Breque *et al.*, 2021

2. Breque *et al.*, 2021, pp. 3–4

routines and ways of working for established companies and organisations in all sectors. With this research note, our agenda is to propose how the transition towards Industry 5.0 and a more encompassing Society 5.0 can occur in practice.

Unlike prior contributions such as Japan Cabinet Office³ and Breque *et al.*,⁴ which start from the policy level and aim downward, this research note inverts the lens. It takes the point of departure in what local actors from different sectors can do to start materialising a Society 5.0 vision. We propose the 'Society Transition Model (STM)', a systematic, second track-based, bottom-up method that can be used in the early phases of initiating the transition towards a Society 5.0. STM is validated by a case study of how a bottom-up process was undertaken towards a Society 5.0 in the city and region of Aalborg, Denmark.

Differences between Industry 5.0 and Society 5.0

Inspired by Huang *et al.*,⁵ it is essential to clarify the key differences between the two constructs, Industry 5.0 and Society 5.0 since they are co-emerging and gaining traction separately. The European Commission's policy brief recognises that Industry 5.0 is an open and evolving construct that can be defined as follows:

“Industry 5.0 recognises the power of industry to achieve societal goals beyond jobs and growth to become a resilient provider of prosperity by making production respect the boundaries of our planet and placing the well-being of the industry worker at the centre of the production process.”⁶

By comparison, Society 5.0 is “A human-centred society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space”.⁷ Central to Society 5.0 is creating a balance between economic development and solving societal issues. In Society 5.0, the metaverse is envisioned to play a crucial role in creating more value and better lives by exploiting the advantages of mixing citizens' physical and digital lives. The similarities between the two constructs are, e.g., the importance of human-centeredness and the resolution of societal and social problems. However, Industry 5.0 narrowly focuses on the industrial worker and Society 5.0 on citizens in general. Both constructs emphasise the parallel development of technological and social innovation instead of focusing too much on technology and too little on humans, as in Industry 4.0 and Society 4.0.⁸ We also see a difference in the pace within which the two areas have evolved. Society 1.0 started thousands of years ago with the hunter-gatherer society and is now in the Society 4.0 stage (information society) with the potential to move onwards to Society 5.0 (the super smart society).

In several parts of the world, we stand on the edge of a transition towards society 5.0, which makes new promises, i.e., to solve significant societal challenges in combination with an increase in wealth. Industry 1.0 to 4.0 and towards 5.0 has taken a shorter time, starting its evolution within the industrial society (Society 3.0). Both concepts agree on 'human centricity'; however, while Industry 5.0 focuses solely on the industrial worker, Society 5.0 holds a much broader perspective on citizens.

3. Japan Cabinet Office, 2016

4. Breque *et al.*, 2021

5. Huang *et al.*, 2022

6. Breque *et al.*, 2021, p. 14

7. Japan Cabinet Office, 2016

8. Gershenfeld *et al.*, 2017

Why Society 5.0 and 'not only' Industry 5.0

While the Commission's policy brief takes a manufacturing company perspective, we stress the importance of broadening this approach towards a larger systemic view by tapping into the local, regional and national ecosystems. Our logic is that if we detach the broader society from industry, we risk missing out on significant social and technological innovation opportunities. We are not alone in sharing this view: "Industry is an integral part of society. The revolution of the industry will push the development of society. Also, the transformation of society will promote the next industrial revolution."⁹

New societal movements typically emerge as a response to solving the problems created within the existing societal form.¹⁰ The outcomes and potentials associated with Society 5.0 include, e.g., improving citizens' health and well-being, attracting and retaining talent and ensuring long-term prosperity – with resilience and sustainability as core themes. That is, we are currently moving towards a super-smart and human-centred society. Therefore, stakeholders in a region are bound to find it relevant to push for such a transition and proactively work towards it instead of ignoring it. There is a distinct advantage in taking an 'act-and-see' approach instead of a 'wait-and-see' approach.¹¹ The point is that now is the time to grab the social aspects of innovation and let both technological- and social innovation co-evolve much closer and better than we have seen until now. With increasing attention towards the seamless mix of cyberspace and physical space, we already see the metaverse as a technology that turns data into things and things into data to create value and higher standards of living.¹²

Conditions for success

The second track concept is inspired by principles of international diplomacy and conflict resolution, emphasising a focus on the common problem rather than the similarity of the involved stakeholders.¹³ The participants' relationship with the problem, rather than with each other, makes collaboration effective. Shaping the collaborative environment is crucial, not in terms of matchmaking between partners but rather in terms of all participants being connected to the same third parties and the problem at hand. This creates mechanisms that, over time, transform both individual and group cognition, establishing a common understanding of the problem. Thus, the mental models that facilitate collaboration do not depend on a perfect exchange but encourage sharing without expecting payback. Second track processes embrace higher levels of complexity and can transcend apparent paradoxes in societal development.

Essential conditions for success in such a second track-based collaborative effort identified in the 'collective impact' literature¹⁴ and inter-organisational learning and co-production models.¹⁵ Kania and Kramer¹⁶ recognise five characteristics of successful collective impact:

1. Create a common agenda, including a common understanding of the problem and a joint approach to solving it through agreed-upon actions.
2. Develop a shared measurement system with indicators on different levels that are used consistently by all actors to create alignment and hold each other accountable.

9. Huang *et al.* 2022, p.427

10. e.g. OECD, 2011

11. Ross *et al.*, 2018

12. Gershenfeld *et al.*, 2017; Nielsen & Brix, 2023

13. Bjurström *et al.*, 2020

14. Kania and Kramer, 2011

15. cf. Brix *et al.*, 2021

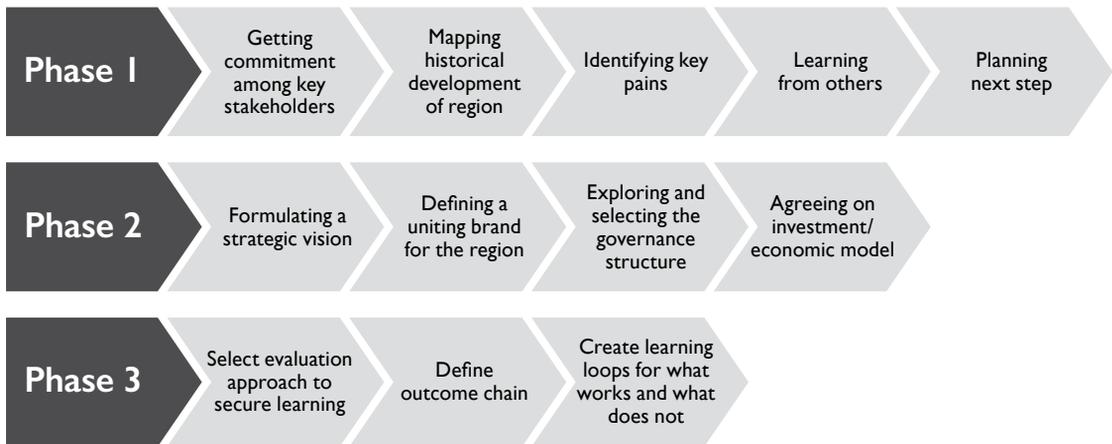
16. Kania and Kramer, 2011

3. Creating a plan of action with mutually reinforcing activities allows all stakeholders to make their efforts fit the schedule. The point is that uncoordinated movements by isolated organisations will deliver different results than coordinated actions.
4. Creating trust among actors through continuous communication. Creating a shared vocabulary is essential, and the organisations’ CxO level leaders must participate, not skip meetings or send lower-level delegates. Here we can add having a pay-it-forward attitude.
5. Creating a backbone organisation is critical. This organisation’s responsibility is coordinating and supporting the program-level infrastructure, such as facilitation, project management, data collection and reporting, logistics and administrative details.

A Society Transition Model (STM)

In this light, we propose that the transition towards Society 5.0 can be enacted in three different phases, each with distinct steps that take the initiative from a fuzzy ambition towards activities that can be evaluated formatively to create new knowledge relevant to learning and development.¹⁷ Breque *et al.*¹⁸ policy brief explain the visions and expected outcomes of working towards industry (and society) 5.0, and they summarise the ‘next steps’ on national and international policy levels. This research note identifies and unfolds concrete actions that actors can take as first steps on a local and regional level in establishing a Society 5.0 movement. We hence approach the society 5.0 movement with an empowerment line of thinking by developing a systematic model for local actors on how to take action here and now, so they can ‘act and see’, instead of waiting for new national policies to be created.

FIGURE I: Society Transition Model (STM)



Source: Authors’ development

17. Brix *et al.*, 2020

18. Breque *et al.*, 2021

The Society Transition Model (STM) is explained in more detail.

Phase 1 – Initiating a Society 5.0 movement

1. Getting commitment among key decision-makers to explore the opportunity of one's city/local area/region concerning Society 5.0
2. Mapping the historical development of the city/areas/region's stages of development to understand the critical transformational success factors of that region
3. Identifying key 'pains' for the region and building a coalition of actors with decision-mandate from the public, private and third sectors.
4. Learning from others: reflecting on what could work well and less well back home
5. Planning: what should happen next?

In this respect, two important questions arise: 1) How do we secure a forward-looking governance structure where stakeholders are responsible for the common goal? and 2) how do we ensure that momentum is created and maintained in such an organisation to sustain the action? Having gone through the preliminary exploratory work, the project group will enter a second phase of the Society 5.0 project, devising a plan for moving the Society 5.0 transition forward.

Phase 2 – Devising a plan for moving the Society 5.0 transition forward

- Formulating a strategic vision. Such a strategic vision should be formulated by including major stakeholders and considering students, citizens and the organisations that wish to participate. This should be a high-level vision reaching out towards a 2050 horizon. It should provide a basis from which the following tasks can evolve.
- Defining a uniting brand that can be communicated to promote the region.

- Exploring and selecting the best-fitted governance structure to coordinate activities and ensure critical stakeholders' communication, activities and participation.
- Agreeing on an investment/economic model for enabling and maintaining the transition to Society 5.0. Investments can be in monetary resources, human resources, technology, and relevant workplace access.

Phase 3 – Making it work through continuous evaluation

Inspired by Brix *et al.*,¹⁹ we find three characteristics relevant to the identification and selection of evaluation methodologies of Society 5.0. These are:

1. Many stakeholders are involved in the process (e.g., public, private and third-sector organisations, as well as the general public, such as citizens, users and alike).
2. The activities representing Society 5.0 emerge and change over time and can merge and divide.
3. The activities representing Society 5.0 are not limited to one particular context (e.g., organisation) but take place as sequences of interactions and simultaneous interactions occurring in different contexts, e.g., across organisational boundaries.

Because of these characteristics, it is possible to frame Society 5.0 as a complex social phenomenon – a 'wicked problem'. This implies that it is impossible to infer context-independent causal relationships between activities and effects/outcomes. For purposes of evaluation, this means that methodologies within the range of 'contribution analyses' are relevant to use, for example, 'theory-based evaluation' and 'contribution stories'. Because of the high degree of complexity, it is not possible to distil 'ultimate truths'.

19. Brix *et al.*, 2020

Rather evaluators and stakeholders interested in the results of the evaluation will have to accept that evaluators only can bring to light contributions stories that will have to be regarded as a satisfactory conclusion concerning the extent and reasons why a given activity – or range of activities – has led to shared outcomes. This evaluation approach can be used to support the learning required to make progress and identify 'what works and what does not' in the collaboration. In this way, the formative approach to evaluation becomes a way to operationalise the second track process.

The case of Aalborg's "AA 5.0 movement"

This research note complements existing policy briefs by reporting on a process and distilling the mechanisms that generated the outputs and outcomes that made the City/region of Aalborg what it is today. Doing so sheds light on the process, barriers and opportunities in the transition towards a Society 5.0 style. In the following, we present a short case study of Aalborg's experiences following the STM logic.

Phase I: Initiating the movement

A group of forward-looking decision-makers led by the Mayor of Aalborg, the Rector of Aalborg University and the CEO of the Port of Aalborg took the initiative to discuss the prospects of the region of Northern Jutland, in which Aalborg is the central city. The promises associated with Society 5.0²⁰ intrigued the group. A commitment was made to explore the opportunities and barriers related to Aalborg's potential transition to a Society 5.0 region.

In the early stages, this group consisted mainly of representatives from municipal institutions, Aalborg University, and infrastructure providers. An output

of the first range of meetings was producing a book that provided a historical and economic account of the Aalborg region's development – from earlier societal stages to the present day.²¹ This mapping aimed to create insight into the characteristics of Aalborg's growth and prosperity successes and created, at the same time, a well-founded, transparent, and explicit account of the current state of affairs in the region. We argue that this is an essential foundation to build when searching to transition from a society of 4.0 towards 5.0.²²

Simultaneous to the production of the book "The Town by the Fjord",²³ a project group representing a concentration of the involved stakeholders formulated a Memorandum and a short-form pamphlet²⁴ to identify the critical plans and to describe the sense of urgency. This work helped build a guiding coalition for the project under the working title "AA 5.0". The university, the municipality, and an infrastructure provider invested in project-leader capacity in this project group.

One of the key learnings from the Memorandum was that Aalborg historically had been successful when it reached out for knowledge and resources beyond the Danish borders. Therefore, the first formal activity for the group was to complete a study trip to learn from others and gain inspiration from outside of Denmark. Regional and international experts were contacted, and a study trip was planned to Eindhoven in the Netherlands to visit the already implemented organisation *Brainport Eindhoven* which in many ways represents a region that qualifies as a Society 5.0 under rapid development. A broad stakeholder group was invited to the study trip, including sports clubs, public institutions, companies, and regional investment organisations. Visits were made to public, private and third-sector organisations to learn from their insights and experiences.

20. Japan Cabinet Office, 2016

21. Nielsen *et al.*, 2023

22. Huang *et al.*, 2022

23. Nielsen, 2022

24. Manifest AA 5.0, 2022

Following the study trip, Aalborg University invited the participants to a follow-up workshop to reflect on key learning points and map and understand the participants' perceptions, views and impressions of Brainport Eindhoven. In addition, the workshop's purpose was to provide input, making it possible to devise a plan for moving forward toward planning the next step.

Phase 2: Devising a plan

The project group's suggestion for the first task in this second phase is to formulate a strategic vision for Aalborg and to create a committed coalition to invest in this vision. Such a strategic vision should be formulated by including major stakeholders and considering students, citizens and the organisations that wish to participate. This should be a high-level vision reaching out towards a 2050 horizon. It should provide a basis from which the following tasks can evolve. Hereafter a second task is to define a uniting brand communicated to promote the region. Parallel to this task, the founding members must explore and select the best-fitted governance structure to coordinate activities and ensure critical stakeholders' communication, activities and participation. Finally, a critical task would be to agree on an investment and economic model for enabling and maintaining the transition to AA 5.0. Investments can be in monetary resources, human resources, technology, and relevant workplace access.

Aalborg needs investment money to move technology projects across the 'valley of death'. Here we have a distinct weakness in comparison to other parts of Denmark. We need a much more open dialogue among investment-related organisations, investors, technology-developing organisations and supporting business research institutions to ensure that investments and knowledge about such investment processes remain within the region.

It is also crucial for our future prosperity that investments in research and development (R&D) are improved. Respondents argued that Danish companies invest 2,5% of dividends in R&D, compared to an average of 6% in European companies. This allegation was attempted to be proven by studying Eurostat data; this was without closure. While Denmark indeed is lagging behind nations such as Germany, the US and several Asian countries on R&D investments, the level was not alarming when compared to similar European countries. It was also found essential that local companies were willing to invest in their R&D and research with other organisations and the university. There was evidence of a lower R&D investment ratio in Northern Jutland compared to the rest of Denmark. This would need to be addressed to relevant politicians and regional business organisations. Among additional pertinent questions to discuss going forward:

- Are Aalborg-based companies good enough at paying it forward and housing start-ups in symbiosis-like relationships?
- Are Aalborg-based companies good enough at investing in research in terms of funding PhDs?
- Are Aalborg-based companies good enough at employing the talents being educated locally, hence keeping talent in the region?

The companies participating in the second phase of this movement unanimously articulated worries about the ability to attract and build the right competencies and skills for the future work market. The discussions pointed towards creating jobs, creating tech/knowledge-based start-ups with scalability potential, attracting investments to create growth, enhancing international collaboration, attracting global talent with their families, and retaining them in the region.

Using McGuire's²⁵ network management framework, it is evident that the second track process needs to be lifted into a broader societal

25. McGuire, 2015

sphere for collective success to be achieved. However, before framing and activating citizens, a brand and governance structure needs to be in place to secure that the mobilising and synthesising phases can take place. Mobilising is concerned with creating support for the networks' activities from internal and external stakeholders, establishing and maintaining the legitimacy of the network, and using incentives to keep stakeholders motivated. Synthesising is also essential because it creates conditions for network participants to collaborate and reach their goals by helping build relationships and interactions among members.

Phase 3: Evaluation and learning

Once the second phase has been completed, there is an important job in operationalising the outcome chain of the AA 5.0 project and ensuring that the actors participating in this movement towards Society 5.0 in Aalborg agree on 'what is important' and 'why'.

Conclusions

This research note aimed to illustrate how the transition towards Society 5.0 could take place in practice and, in that sense, answer the enabling part of the European Commission's Policy Brief 'Industry 5.0: Towards a sustainable, human-centric and resilient European Industry'.

The policy brief designates that a future-state sustainable, human-centric and resilient European society must move from solely shareholder value to stakeholder value for all concerned. This means value creation must satisfy all relevant stakeholders in the Penta-helix (Manifest AA 5.0, 2022). Therefore, we propose that moving towards Society 5.0 can be supported by second track processes using the Society Transition Model (STM).

Besides the reported case study from Aalborg, our empirical probing has identified similar transitions in the Eindhoven region in the Netherlands and

Philadelphia, USA. These bottom-up initiatives represent initiatives where people from different sectors collaborate to create private and public value, which implies a human-centric approach to ecosystem innovation and collaborative governance.²⁶ Interestingly, Society 5.0 success depends on a solid regional and societally oriented university where local companies are willing to invest in R&D capacity and co-creation/co-research with academics and students (EUA, 2021). Should a region be interested in embarking upon a Society 5.0 transition, our experiences here indicate that it is necessary to create a backbone organisation whose objective is to support and help enable the societal developments that will take place – this acting both as a facilitator and an orchestrator to create an effective governance model.

The AA 5.0 project team identified several other concerns regarding initiating such an action group. However, clarifying the necessary investment to kick off the project is crucial to an embarkment. In addition, we need to ask what should be invested by companies and what should be invested by public institutions. In Eindhoven, each municipality pays a fee per inhabitant to Brainport Eindhoven, and companies invest in the Brainport Eindhoven organisation with money and allocate staff. The companies in Eindhoven are willing to keep investing from year to year, so they testify that Brainport Eindhoven gives them value for money, although not with a direct ROI calculation from year to year. In other words, they are willing to "pay it forward". Therefore, the question to local, regional and national decision-makers is: are we ready to initiate your community's transition towards a 5.0-version, or would you rather 'wait-and-see'?

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26. Brix and Antonsen, 2022; Klitgaard, 2023

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RESEARCH NOTE

‘Money changes everything’: New forms of economic and political models

Peter Fritz AO & Nicholas Mallory

Reimagining our concept of value is the key to reshaping the global economy to promote long-term sustainability ahead of short-term consumption. Entrepreneur Fritz AO and writer Nicholas Mallory argue that for humanity to have a future, we must partner with the planet to aid its recovery.

“Money changes everything”

– Cyndi Lauper

The Price of Money

When Lucile Randon died in January 2023 at the ripe old age of 118, she was officially the world’s oldest person. At her birth, she shared the world with less than two billion people, but, over the course of just one human lifetime, that population has ballooned passed eight billion.¹ The rampant growth of human technology, industrialisation and globalisation which facilitated this population explosion was just as astonishing but cost the rapid depletion of Earth’s resources and severe degradation of the biosphere.

The 21st century must therefore see technological, social and economic change as astonishing as its predecessor, if people around the world are to enjoy the fruits of humanity’s progress, rather than suffer its social and environmental consequences. These developments will have to take a new direction, as we shift our collective ingenuity from pursuing unchecked growth and expansion towards

1. World Economic Forum, 2022

doing more with less and healing the living planet we all depend upon.

Such calls have been made before in terms of global poverty and migration, climate change, waste and pollution, habitat loss and wildlife extinction, but the short-term interests of politicians and businesspeople have always worked against efforts to protect the long-term health of the planet.

For instance, *Our Common Future*,² a report by the World Commission published in 1987, called for international development to safeguard the environment, arguing the economy should be retooled to meet current needs without compromising the opportunity for future generations to meet theirs. This call to arms was ignored by politics and commercial interests alike, and the last thirty years have seen resource consumption, land clearing, carbon emissions, pollution and ecological degradation accelerate rather than decline.

The 20th century saw the scale of environmental destruction gather pace in capitalist economies driven by private profit and developing nations eager to exploit their natural resources. The entire planet now exemplifies the infamous ‘tragedy of the commons’, in which self-interested exploitation of shared resources degrades or destroys that resource for others and future generations. For humanity to have a future, we must partner with the planet to aid its recovery, rather than continuing the plunder.

The type of mass-scale “natural” disasters, which once propelled the plots of science fiction films, are now everyday news, as people reap the bitter harvest of man’s rampant exploitation of the Earth. As scientific evidence and activist exhortations have failed to persuade boardrooms and bureaucracies to rethink their priorities, a solution which uses the market – rather than working against it – must be tried, with the motivating factor behind the

problems we face – money itself – turned into a tool for progress rather than profit.

If future resource conflicts, climate disruption and ecological breakdown are to be averted, then concrete measures rather than conference reports are required. We all know what must be done, what we need is the key to turn knowledge into action. The time for piecemeal measures has passed, and so the ever more urgent transition towards a socially just, economically rational, and ecologically sustainable global society will require a fundamental retooling of the underlying economic norms and assumptions which created the crisis that we face today.

Economic theory is not the inviolable natural law its practitioners and beneficiaries assume it to be, and just as a host of social norms have been turned on their heads in living memory, so the human construct of economics itself must be transformed into the engine of a cleaner, fairer and more stable future. This will require a rethinking of the nature of money itself.

The Currency of Hope

Money replaced barter in human economic interactions when settlements based on agriculture supplanted hunter-gather tribes. It has taken many forms through the ages, from cowrie shells through golden coins to flickers on a computer screen, but has always comprised a store of value, unit of account, and a medium of exchange. Money is the lifeblood of economic transactions, but it also produces a host of social and ecological problems, as the valuation of assets and products is based on their costs of production and profit margins, rather than their actual cost to society and the environment.

Measures to incorporate the cost of ‘externalities’ into the prices paid for raw materials, products and services would expose their actual costs – to

2. World Commission on Environment and Development, 1987

the planet and ourselves. This would encourage consumers to favour less harmful products, and for producers to innovate new ways to reduce their environmental impact, as more damaging goods would now be more expensive, rather than cheaper, than more sustainable alternatives. Rather than relying on goodwill and altruism, the adoption of 'true cost accounting' would channel our economy's drive to maximise profit and utility towards producing more sustainable goods more efficiently, rather than rewarding destructive environmental and exploitative labour practices.

Reimagining our concept of value is therefore the key to reshaping the global economy to promote long-term sustainability ahead of short-term consumption. Human ingenuity can solve the problems we face through the mechanism of free markets, but only if the value of goods and services reflects their impact on the Earth as well as a company's balance sheet. Technologies, designs and systems already exist to reduce our impact on the planet, but a new type of economy is also required to incentivise and reward their widespread adoption.

Paradigm shifts tend to occur between generations, rather than within them,³ and so the way economics is taught in schools and universities will also have to change to fit new circumstances. Economics must embrace sustainability if it is to retain its relevance in a world where profit must take its place alongside other, more pressing priorities. The economics syllabus of tomorrow will discuss environmental impacts, social justice and circular production as fundamental tenets, rather than optional extras.

Many drastic, expensive, or wide-scale schemes have been proposed to preserve the environment or promote social justice, but all are opposed by commercial and political decision makers on that basis. Anyone who has reached a position of power within the current system is loath to change it, and

so the best approach is to gradually steer human nature, political inertia and commercial interests in a new direction.

Rethinking the role and nature of money would allow the market to evolve and deploy the most efficient solutions to our current and future social and environmental problems in a dynamic, innovative and endlessly flexible way.

Authoritarian states have no interest in ecological or social issues, as their only goal is to maintain power, and their only weapon is force, but apart from North Korea, they do trade in the global economy. Democratic states do translate public concerns into policy, but the relentless churn of ministers and governments often sees the ideas of the previous regimes dropped or downplayed before they pay off properly. Politicians had a poor record in picking industrial "winners" anyway, and there is no reason to believe they will be any more successful in terms of environmental action.

The market is therefore the best way to pool the ideas, energy and priorities of the entire population to generate cost- and resource-efficient solutions by ensuring prices reflect the genuine costs of production, rather than merely their commercial value. This will entrench the drive towards environmental sustainability and social justice into every process and interaction in the economy as a matter of course, whether particular governments, companies or consumers have an interest in these issues. We must work with the system we have today but retool it to produce the results we need tomorrow.

The status quo is not an option. Admittedly, as cheap and accessible resources are depleted and fossil fuel emissions are constrained to slow climate change, the current monetary system will begin to encourage more efficient use of resources as the price of inputs soars. However, they still ignore the spiralling costs of externalities, and so fail to

3. Mcleod, 2023

encourage more environmental solutions through the price mechanism to an adequate degree. The economy cannot remain alienated from the real world which supports it; indeed, its own survival demands the urgent adoption of more environmentally friendly products and systems.

Retooling money and accounting to reflect true, rather than merely commercial, value, will not remove inflation, inequality, monopoly power or crime – indeed, carbon credit fraud⁴ nets far more revenue than bank heists these days. However environmental degradation, climate change, and labour exploitation and insecurity threaten the future fabric of society itself and will not be tackled unless their full impact is properly accounted for in our society's economic interactions.

These reforms cannot be imposed by dictate, but they can be encouraged by public sector adoption, voluntary industry agreements, investor and consumer pressure, and legislation to “make polluters pay”. They will succeed by outperforming and therefore gradually supplanting their traditional forebears, although change may come more quickly than anyone thinks. We have seen dizzying transformations in many sectors in recent years, driven by globalisation, digitisation and online connectivity. Seismic shifts are not only possible but are enthusiastically embraced by the public, producers and investors when they deliver more value for everyone involved.

The concept of utility must now be expanded if we truly value our planet and want our descendants to thrive, rather than merely survive, in the future. Rather than working for the economy, we must reshape our thinking to ensure the economy works for us. Economic theory should be our tool, rather than our master, and politics should be a way to maximise public wellbeing, rather than promote the individual ambition of its professional class. This can all be achieved by the adoption of measures to ensure prices reflect environmental and social costs as well as profit margins and production costs.

The Business of Progress

Corporations, or more accurately the boards, managers, workers, and shareholders which sustain them, have a personal stake in the status quo and will dig in to defend it. Cigarette companies denied the health toll of tobacco for decades and fossil fuel firms fought the science of climate change with well-funded public relations campaigns devised by the same advertising firms which now trumpet their environmental aspirations.

However, executives have a responsibility to sustain their companies over time as well as maximise immediate profit, and so must consider environmental as well as financial sustainability in an age when irreversible tipping points are being reached. They also rely on a liveable planet, and profits will tumble if natural resources run out. A sustainable agricultural sector, for example, needs healthy soils and a predictable and equitable climate without a string of ‘once in a century’ floods, fires and drought. Farmers who once opposed any controls on land clearing, water extraction or carbon emissions now understand that yields will depend on better environmental stewardship, and working in partnership with the natural world, rather than attempting dominion over it.

Through most of history, companies did not pay the full costs of production, or pass them on to their customers, as the cost of ‘externalities’ such as pollution or work-related diseases was ignored and so borne by society overall. Firms which churned out disposable goods without environmental safeguards and paid the minimum wage could offer lower prices than competitors, generating greater sales and profits for owners and shareholders. In recent decades, manufacturing and its externalities have been outsourced en masse to China and developing Asian nations with lower wages and environmental standards than the West, reducing costs and exporting the ‘externalities’ as well.

4. Morton 2022

A fairer, more rational system necessitates the social and ecological externalities of production being accurately and independently assessed and then borne by the business itself to drive innovation and efficiencies to produce the lowest priced goods by inflicting the least – rather than the most – harm on workers and environment.

Turning ideas into realities

This idea dates back decades, and was always dismissed as wishful thinking, but several trends are now driving governments, companies and consumers around the world to not only accept 'true cost accounting' in theory but embrace it in practice.

Modern technology, from blockchain and bar codes to satellite observation, enables tracking of natural resources through international supply chains, allowing environmental externalities to be accurately measured and assessed in real time. Atmospheric and water pollution can now be monitored and ascribed to individual factories and firms, for example, allowing its impact to be incorporated into new forms of environmental accounting and awarded an accurate monetary value.

The extent, exploitation and value of common natural resources – from wild fish stocks to native vegetation and clean air and water – can now be calculated to allow individuals and companies which exploit or damage them to be charged accordingly. This monitoring and charging create an incentive for such companies to reduce waste, improve efficiency, develop alternatives and innovate to create new ways of operating which cause less environmental damage and therefore reduce their costs and prices.

Consumer demand for 'environmentally sustainable products' is also growing every year, and better monitoring can hold companies to account if green claims fall short of the reality. Progress is being made in terms of sustainable woods, responsible fishing and reducing plastic pollution, although such

problems are far from solved. Industries, activists and government regulators are agreeing an ever more comprehensive range of robust indices to assess overall and individual performance, with consumer-facing ratings for product sustainability forcing companies to insist on higher standards all the way down their global value chains.

Furthermore, private investors and pension funds which once pursued private profit regardless of its common cost are now seeing the reputational and commercial value of more socially responsible investing. Progress in each of these domains encourages further change in the others, and a critical mass of academic, popular, political and commercial opinion is changing attitudes and practices more quickly than even the most optimistic advocates hoped for.

Over time, the long-sought convergence of short-term commercial drives and long-term common good in the economy should become an increasingly powerful and eventually unstoppable phenomenon, like a snowball rolling downhill, as change moves from the impossible to the desirable through the possible to the inevitable.

The economic theories taught in schools and universities, the measures we use to ascribe and exchange value, and the democratic institutions we rely on to regulate market failure must all evolve at the same time to keep pace with these transitions. A new language of sustainability must replace the worn-out lexicon of profit at all costs, new accounting methods must inculcate social and environmental costs alongside those of land, labour and capital, and politicians must hold each other accountable to the interests of future generations, as well as current voters at the ballot box.

True Cost Accounting

Modern mechanised technology can clear vast tracts of forest or ransack seas of fish, allowing no time for stocks and vegetation to recover. However vast they once seemed, natural resources are manifestly not infinite and therefore, in any

rational economic system, cannot be free. There are no such things as 'externalities' on a planet we all share when these costs are borne by everyone. The exploitation of finite resources by one actor at modern industrial and global scales denies their bounty to others, and to future generations, and so the adoption of "true cost accounting" offers a concrete and actionable first step towards a more sustainable business culture.

The value of such assets must be presented in terms accountants can factor into balance sheets and business strategies. Indeed, the former World Bank president Robert Zoellick argued that 'the natural wealth of nations should be a capital asset, valued in combination with its financial capital, manufactured capital, and human capital' at the 2010 Convention on Biological Diversity⁵ in Nagoya in Japan, as ascribing a value to the natural world offers an argument to protect it in the language that investors, financiers and companies understand.

This task is eased by online tools such as Artificial Intelligence for Ecosystem Services (ARIES),⁶ developed by the Gund Institute for Ecological Economics⁷ with funding from the US National Science Foundation,⁸ which can calculate the value of natural ecosystems on local, regional, national and global scales.

For example, the collapse of bee colonies⁹ around the world, and a broader 'insect-apocalypse' caused by pesticides, intensive agriculture and habitat loss threatens the viability of global agriculture as well as natural ecosystems. The United Nations Environment Programme¹⁰ estimates the value of animal and insect pollination at \$200 billion a year,¹¹ given that a third of global food production

depends upon it. A decade ago, the World Bank's annual *Changing Wealth of Nations* report¹² estimated the planet's natural resources, from the remnant wilderness of forests, rivers and wetlands to farm and grazing lands, the minerals, oil and coal under the ground, and the fish in the seas to be worth an eye-watering \$44 trillion dollars, with almost \$30 trillion of this mammoth total in developing nations.

Jonathon Porritt's *Capitalism as if the World Matters*¹³ made the argument for retooling capitalism to address, rather than exacerbate, ecological collapse in 2005 and offered a 'five capitals' model for expanding the traditional concept of wealth creation to acknowledge the value of these natural assets and encourage the economy to embrace environmental sustainability and broader social goals.

He argued that all firms rely on five types of capital to produce their goods and services and so have an interest to protect and improve their stocks of each asset, rather than exhaust them. As well as financial resources and the traditional notion of capital in terms of tools and buildings, he stressed the importance of natural capital – any resource or energy used to produce goods and services; human capital – including people's health and motivation as well as knowledge and skills; and social capital – in terms of strong institutions and positive civic relationships.

Societies which consume these resources faster than they can be replenished are clearly unsustainable, and while education, for example, can improve human capital, some aspects of natural capital are irreplaceable once destroyed.

5. Secretariat of the Convention on Biological Diversity, 2011

6. ARIES, 2021

7. <https://www.uvm.edu/gund>

8. <https://www.nsf.gov/>

9. Zissu, 2022

10. <https://www.unep.org/>

11. Food and Agriculture Organisation of the United Nations, 2016

12. World Bank, 2021

13. Porritt, 2007

Porritt also offered twelve characteristics for a sustainable society, including living within nature's capacity to regenerate and recovery, individual health and wellbeing, trusted and accessible forms of governance, knowledge-driven manufacturing, and a financial system which "accurately represents the value of natural, human, social and manufactured capital".¹⁴

Companies will only incorporate these ideas into their accounting practices when they offer opportunities for added value – or are forced by their shareholders, investors and customers. As we have seen, the increasing power of environmentally concerned consumers and "socially responsible" investors is already driving environmental sustainability, social justice and corporate governance practices into companies which once paid no regard to such ideas. The pressure is also becoming more sophisticated, as simple ESG policies which ban investment in particular types of firms can be highly counter-productive. The cause of freedom, for example, is not served by a refusal to invest in Western defence firms, nor are better mining techniques helped by spurning innovative start-ups.

However, forward-thinking company executives are also beginning to acknowledge that their energy use, carbon emissions, working conditions and supply chain management practices will affect their reputation, recruitment, sales and long-term commercial sustainability. Firms which consider these issues and reduce their risks will tend to be more prepared and resilient when the economic consequences of social disruption and environmental collapse begin to hit home. Such firms must also be more transparent about their practices than their rivals, shedding light on problems which otherwise may have festered unseen.

Socially conscious investment funds have matched or outperformed the market in recent years as a result. The MSCI KLD Social 400 Index¹⁵ (formerly the Domini Social Index) has consistently generated higher returns than Wall Street's S&P 500 on both an actual and a risk-adjusted basis by replacing companies which ignore these issues with comparable firms with better ESG records. These firms also tend to be younger, more dynamic, and more in tune with modern consumer sentiments than those they replace and generate more growth as a result. Far from losing out for moral reasons, investors can prosper by favouring ESG metrics over traditional cash flows, revenue and profit figures.

Executives always want to minimise their exposure to risk, and it is no longer possible to pump untreated effluent into rivers, exploit vulnerable workers or source endangered woods and fish without social media blackening that company's name or incurring expensive lawsuits.

In the end, commerce is about human interaction, rather than spreadsheets and percentages, and company leaders interested in environmental, social and governance issues tend to attract and retain better management teams, which in turn boosts their bottom line in every other aspect. This, more than any idealistic vision of saving the environment, explains why ESG assets may hit \$53 trillion by 2025, a third of global AUM.¹⁶ While older investors and executives may still see ESG issues as a distraction, cost and box-ticking exercise, a new generation recognise their importance.

Classical economic theory assumes perfect knowledge and rational decision making, but flaws in our thinking processes still hamper progress to our goals. Most of us still prioritise the short-term needs of our hundred-member tribe, rather than the long-term interests of our species and our dependence on all others, but a reformed market

14. Ibid.

15. MSCI KLD 400 Social Index (USD), <https://www.msci.com/documents/10199/904492e6-527e-4d64-9904-c710bf1533c6>

16. Bloomberg, 2021

mechanism can compensate for our individual blinkers. When adjusted for the actual cost of what we do, price signals will do the thinking for us.

Diversifying decision making and embracing mutually beneficial partnerships in commercial sectors – through proven approaches such as Global Access Partners' Second Track process – will allow fresh voices to channel fresh ideas, challenge old prejudices and dismantle ingrained group think, and a larger voice for civil society through such forums will impress the need for a wider set of priorities.

This long-term perspective can encourage a focus on modern technology. Every innovative technology is expensive to produce and may be outperformed by older methods – a good horse was far more practical than the first car, but over time many innovative technologies not only replace their forebears but create new, unforeseen and enormously lucrative industries.

Companies which eschew the future are turning their back on the best and most certain growth opportunities there are. Electric vehicle fleets, for example, will soon replace internal combustion engines by force of law in many countries, but already offer a better deal in terms of operating costs and higher up-time. A host of new technologies, from clean energy to precision agriculture using fewer pesticides, plant and lab proteins to AI systems monitoring, offer forward thinking firms a potential bonanza.

If long-established – dare we say old fashioned – metrics such as ROI and IRR are no longer fit for purpose because they misrepresent true costs, ignore externalities and over-emphasise the discount rate, then they should be rejected, as firms which take a long-term view and invest in research and development have significantly higher revenue and market valuation growth than their competitors.

We must work and think in terms of systems, rather than silos, to solve the problems we face – another point emphasised by the Second Track method. Rather than view employee wages as a mere cost to reduce in isolation, for example, by shedding staff, casualising contracts and degrading conditions, a more far-sighted manager values the intangible benefits which investment in the workforce accrues, and its greater long-term value to the company's bottom line. It is firms which attract and retain talent, rather than pare costs to the bone, which are best placed to prosper in dynamic market conditions.

Choosing the sustainable, net-positive path is not only common sense, but business sense. Systemic thinking not only takes responsibility for 'external' costs to manage them for internal benefits, but helps build the strong company values, employee engagement and positive spirit which will see it through tough times.

Political stewardship must see the world in similar terms. The economic cost to the United States of wheat-belt droughts, east coast hurricanes and flooded or roasted cities necessitates its recommitment to limiting climate change for practical as well as ethical reasons. Homo sapiens has changed the world through its actions but can change it again for the better if we abandon the negative, win-lose mindset and take a broader "net positive" view on the value of investments to reduce existential risks, tackle systems challenges and work with others in the value chain to benefit all stakeholders.

Value Chain Indices (VCIs)

The value chain indices, for example, permit direct comparisons to be made between products throughout their often-complex journeys through international supply chains, from raw materials to finished goods and, eventually, discarded refuse.

Developed and agreed by stakeholders throughout an industry, properly formulated VCIs are based on independent, objective data on land, water, energy, carbon, pollution and social welfare impacts throughout a product's life cycle.

The Sustainability Consortium,¹⁷ for example, encourages diverse companies, universities and government organisations to agree methodologies to extract lifecycle data from their supply chains to reveal impact hotspots. The indices they generate can then be used to weigh different impacts against each other and so prioritise action in the most pressing areas.

VCIs are replacing the plethora of standalone standards and certifications previously used in industries to ensure the sustainability of parts of a supply chain, such as responsibly sourced fish or wood products. Value chain indices offer a comprehensive index for an entire industry which can be applied consistently across most or all firms in a sector over time to track relative performance.

The true dollar value of ecosystem impacts, and resources can be integrated into VCIs to become increasingly informative tools for investors. They will offer a dependable proxy for banks to use when calculating credit risks, for example, increasing the amount of investment funding offered to more progressive firms as they offer lower risk than their competitors. Such indices will also guide consumer choices in more reliable ways than the plethora of misleading or information-light eco-labels slapped on by many retailers. Uniform energy star ratings, for example, are widely trusted and used by buyers of white goods, and similar environment and workers' rights ratings will follow, doubtless offering access to apps offering extra detail which customers can browse with mobile phones.

As these indices become voluntary global standards for major producers in various industries, political policy makers will use them to inform regulation which mandates the inclusion of external costs in the prices of products and services across a suite of social and environmental issues.

This in turn would encourage the development of circular economies, in which innovators reduce external costs – and so reduce consumer prices – by designing out waste and pollution, building more durable and repairable products, recycling waste into new products and using renewable materials and energy.

In the future, our descendants will wonder why those who fought to save the planet had to justify their stance, while those who continued the assault on their children's future saw no reason to change. The cost of inaction is now far higher than the cost of action, but true cost accounting, value chain indices, and closer cooperation across silos and throughout supply chains are innovating ways to reduce inputs and costs, reduce rather than shirk responsibility for 'externalities'.

True prices make moral markets

So, new accounting procedures which incorporate the costs of 'externalities' into prices will use the same market forces which now encourage the exploitation of human and natural resources to favour companies which minimise harm. The majority of price-sensitive consumers hunting for the best quality at the lowest price will encourage innovation and efficiency in the cause of social and environmental responsibility just as the minority of socially conscious consumers already do.

Companies which currently ignore or pay lip service to these issues will be forced to innovate and insist on higher standards throughout their supply chain, and the twin but formerly antagonistic imperatives of profit making and sustainability will pull in the same direction.

17. <https://sustainabilityconsortium.org/>

The Second Track Solution

As noted in this paper, the economic and democratic drivers of this process can be accelerated by a range of cross-sector, multidisciplinary forums, alliances and movements. Global Access Partners' Second Track engagements, in which experts and stakeholders from diverse sectors meet in a private capacity to discuss issues of common concern, agree recommendations and work to implement these ideas themselves as well as share them with decision makers, offer a proven engine for the generation, dissemination and deployment of positive measures.

Such groups broaden and enrich the understanding of all concerned, revealing new areas of mutual interest. They unlock more creative thought processes within our brains, sparking fresh ideas which individuals alone could not have envisioned. They also ensure more concrete outcomes, disseminating and implementing these ideas through new networks connecting otherwise siloed or even antagonistic sectors.

Every age thinks its norms and functions to be natural, inevitable, and the highest expression of human ingenuity, yet each is overtaken in its turn, as new ideas and challenges emerge, interact and develop. If we want a better future, or any future at all, then new ways of thinking are not an indulgence, but a necessity and, if history is any guide, also an inevitability.

Progressive campaigners have long realised that changing the language in which an idea is discussed is a giant step towards winning the argument. In similar fashion, the language and terms in which economics and politics is practised must be reimagined to ensure that a better set of outcomes are achieved.

As Peter Söderbaum argues in his paper on "A New Language of Sustainability," a fresh way to discuss economics and management will empower and mainstream the changes outlined above. Economics must broaden its horizons to encompass a wider set of goals and parameters, just as accounting and prices must acknowledge externalities as well as input costs. Economics must evolve to optimise the allocation of scarce resources in terms of environmental sustainability as well as classical supply and demand, and "move away from one-dimensional monetary analysis, so called "monetary reductionism," toward multidimensional thinking and analysis as "non-monetary impacts are as 'economic' as financial impacts".

Rapid social change, like economic upheaval, is increasingly common, given the influence which social media and other forms of instant, ubiquitous communication have on our lives. Deeply engrained attitudes towards women's and gay rights, for example, have been transformed in less than a generation.

Public pressure for change can be substantiated through philanthropic research funding to gain credibility with decision makers. Alfred Nobel devoted his dynamite fortune to his Nobel Prizes, the Rockefeller Foundation was funded by oil, and Bill Gates has used his fortune to tackle malaria and other global problems. A new generation of tech billionaires will in turn tire of their superyachts and turn their minds to personal legacy through global change, and we must encourage them to use their resources to transform the economic system which produced them.

Transformations in economics and politics will also open fresh career paths, consulting opportunities and whole new industries, in turn creating a new cadre of professionals with a personal stake in promoting an alternative set of goals which also

benefit others. Over time, as generations and their embedded attitudes age out, and new generations replace them, what was once the radical alternative will become the accepted status quo, and people will look back and wonder how the strange beliefs of the past were ever adopted.

The future remains ours to make, and if we fail, we have no-one to blame but ourselves. As Pëtr Kropotkin wrote in 'Fields, Factories and Workshops' a century ago: "Such is the future – already possible, already realisable; such is the present – already condemned and about to disappear. And what prevents us from turning our backs to this present and from marching towards that future, or, at least, making the first steps towards it, is not the "failure of science," but first our crass cupidity – the cupidity of the man who killed the hen that was laying golden eggs – and then our laziness of mind – that mental cowardice so carefully nurtured in the past."¹⁸

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18. Kropotkin, 1912

RESEARCH NOTE

‘The Future of Decision Making’: Nobel Prize Dialogue Sydney 2023 Virtual Event

Alison Sheehy

National decision-making systems were not designed to deal with the global scope or complexity of the existential threats facing the world today. Understanding and improving the way we make decisions could help address these pressing global issues more effectively. GAP Project Manager Alison Sheehy outlines the ideas and recommendations from the Nobel Prize Dialogue Sydney 2023 Virtual Event.¹

A diverse, multidisciplinary group of participants, including Nobel laureates, university students and senior figures from industry, government and academia, met online on 16 June 2023 to discuss ‘The Future of Decision Making: From Personal Choice to Planetary Impact’.

The Nobel Prize Dialogue Sydney Virtual Event,² organised by Nobel Prize Outreach AB in partnership with Global Access Partners (GAP), considered the implications of artificial intelligence (AI) for democratic processes and new ways to engage the public in decision-making, given the long-term existential challenges of climate change and technological disruptions.

In her opening comments, GAP Co-Founder and Managing Director **Catherine Fritz-Kalish** hoped that wiser and more effective decisions would flow from new combinations of data-driven insights, technology’s transformative power, and the collective intelligence of diverse human perspectives in the future. **Laura Sprechmann**, CEO of Nobel Prize Outreach AB, underlined the

1. <https://globalaccesspartners.org/nobel-prize-dialogue-sydney-2023-virtual-event2/>

2. Nobel Prize Outreach AB extends the reach of the Nobel Prize to millions of people around the world through inspirational events, digital media and special exhibitions and activities related to the legacy of Alfred Nobel and the achievements of Nobel laureates. Its Nobel Prize Dialogues are open, cross-disciplinary forums that aim to deepen the dialogue between the scientific community and the rest of society. They bring together Nobel laureates, world-leading scientists, policy makers, youth and thought leaders in a conversation about complex, grand challenges of today.

need for robust and resilient democracies to make evidence-based decisions to confront complex problems such as climate change.

Keynote Speaker **Prof Brian Schmidt AC**, Vice-Chancellor and President of The Australian National University (ANU) and a 2011 Nobel Laureate in Physics, argued a further doubling of the world's population will not be sustainable. Though human fertility tends to decline as education and income increase, disparities in wealth and demographics, over-consumption of resources, pollution, climate change and environmental degradation now threaten to fuel famine, conflict and mass migration. Ageing populations in developed nations may also erode living standards, as fewer workers are called upon to support more older people, prompting social resentment and political instability.

Prof Schmidt noted the power of previous inventions, such as nuclear technology, to generate both progress and peril and suggested that new developments in AI will be used for both the benefit and detriment of humanity. AI-controlled drones could dominate future battlefields, while generative AI could flood democratic societies with massive disinformation or help terrorists produce lethal biological pathogens.

Recent events, from the COVID-19 pandemic to Russia's invasion of Ukraine, have highlighted the vulnerabilities of a prosperous, globally connected world to economic and social disruption. Future climate, environmental and technological shocks, global population trends, and increasing geopolitical competition threaten to destabilise the international order.

Prof Schmidt called for improvements in collective decision-making and the use of technology to improve life rather than destroy it. Decision-makers must focus on the long-term common good of humanity rather than short-term political

and national advantage. Accelerating technological developments, for example, could ease the transition to a low-carbon economy that could still produce the food, energy and services the world's growing population needs.

Emphasising the complex neuroscience behind decision-making and human thought, **Baroness Prof Susan Greenfield CBE** argued that humanity's capacity for real-life experience remains the root of fundamental understanding despite the development of internet-trained AI. Effective problem-solving requires a combination of fluid intelligence – the ability to learn, assess and navigate new situations – and the crystallised intelligence of accumulated knowledge that can be recalled as required. People build an increasingly rich frame of reference throughout their lives and continue to learn thanks to the human brain's plasticity.

Human decision-making is also shaped by the body's endocrine, immune and central nervous systems, as well as our social environment. Termed 'somatic markers' by neuroscientist Antonio Damasio,³ neurochemicals are unconsciously released in response to stress or emotions and help shape our thoughts and memories in ways computers cannot replicate.

Prof Greenfield explored the nature of decision-making in different contexts – from the instinctive 'freeze, flight or fight' reaction in response to immediate danger to long-term life plans – to further differentiate human and machine decision-making in terms of their essential nature and calculative capacity.

Prof Saul Perlmutter, Professor of Physics at the University of California Berkeley and a 2011 Nobel Laureate in Physics, offered three practical pathways to help societies deliberate and decide collective actions more effectively. First, he stressed the need to teach all school students the principles

3. Damasio, A.R. (1996), "The somatic marker hypothesis and the possible functions of the prefrontal cortex", *Philosophical Transactions of the Royal Society B: Biological Sciences*, vol. 351, no. 1346, pp. 1413-1420, <https://pubmed.ncbi.nlm.nih.gov/8941953/>

of scientific thinking, regardless of their area of study. If we want to be more capable of evidence-based societal deliberation and decision-making in the next twenty years than we are today, we must ensure every young person knows the vocabulary of ideas and approaches to think through problems that scientists deploy.

Second, the extensive research already undertaken to understand how citizens can effectively deliberate together stressed the effectiveness of the 'deliberative polling' model. Such forums involve a statistically representative sample of citizens, rather than a self-selected group, who interact with a panel of experts on specific issues. These citizens then form small groups for moderated deliberations that are punctuated by opportunities for the groups to engage the experts with new questions rather than passively receiving information from them.

Finally, he warned of the risk that our broken mode of social deliberation poses to the functioning of democracies. The current media landscape, fragmented across the internet, cable news, social media, and traditional sources, appears to be particularly damaging to our collective ability to think together and take productive advantage of our differences. Therefore, he challenged social scientists, non-profit organisations and the major digital platforms themselves to examine and reshape the media landscape to bring people together rather than drive them apart.

In the discussion time that followed the first session, the results of a participant poll revealed great concern for the current state of democracy. Participants also suggested additional ways of including a broader range of people in collective decision-making, as some degree of consensus on beneficial social goals is a necessary precursor of success. Given the rapid development of AI capacities that could eventually surpass and overwhelm human intelligence, a definition of intelligence is also required.

Echoing this sentiment and stressing the exciting potential of AI, **Lee Hickin**, Microsoft's Chief Technology Officer in Australia and New Zealand, traced the delicate path technology companies must tread between innovation, commercialisation and social responsibility in deploying AI.

Though AI can create a brighter, more inclusive future and spur economic growth, he accepted the need for corporate responsibility in its deployment and a degree of regulation for the public good. Major technology companies must balance their corporate responsibility to maximise revenue for shareholders with their civic duty to curb the potential harm misuse of innovative technologies may cause.

In common with other Thought Leaders at the Dialogue, Mr Hickin saw humanity's misuse of generative AI as a more significant threat than misaligned or malignant artificial general intelligence in the future. He backed mechanisms to control access to the technology, although he admitted that AI is set to enter and change every aspect of society.

Distinguished Professor Genevieve Bell AO, Director of the ANU School of Cybernetics, then explored the history and importance of systems thinking in technology, democracy and decision-making.

A small group of scientists began the investigation of artificial intelligence as a Dartmouth Summer Research Project in 1956 when creating machines that could simulate human cognition was thought to be a comparatively simple problem. In contrast to cybernetics, in which people, technology and the environment mutually interact in a state of constant feedback, the concept of AI excludes humans and the environment from the equation. It has made enormous strides in recent years, with even more significant developments promised for the future.

The transformative role of technology in humanity's future is now being debated regarding AI's potential effects on global economies, democracies and

social systems. Prof. Bell outlined her work over the last seven years to establish a new branch of engineering to manage AI systems and bring them safely, responsibly and sustainably to scale. She has also worked to build the new vocabulary required to discuss these innovations and argued that analysing problems in terms of systems rather than merely components offers a powerful way to engage with the world.

Rather than limiting our debate to AI, we should embrace cybernetics to think about systems that incorporate people, technology and culture and chart the relationships and dynamics between them. Prof Bell urged consideration of the broader aspects of people's relationship with technology and emphasised the need for continued human agency in shaping a fairer, more sustainable future for all.

In the subsequent discussion, participants explored additional facets of AI and warned against fatalism, as humanity could still retain control of the technology if we choose to exercise it. AI should not be seen as an existential threat, as its potential power to become a master rather than a servant is not yet a *fait accompli*. Several participants lamented the failure of traditional corporate, political and scientific decision-making to respond with enough urgency to the climate emergency, and novel approaches could improve the situation.

Dr Per Espen Stoknes, Co-Director of the Centre for Sustainability and Energy at the BI Norwegian Business School, drew on his experience as a psychologist and economist to explain why humans tend to focus on the short-term personal costs rather than the long-term collective benefits of acting on issues like climate change.

Most people feel that crisis on a global scale is psychologically distant from them and recoil from doom-laden warnings about climate change in favour of personal anecdotes about the weather. It is easier for people to rationalise the dissonance between their carbon-heavy lifestyle and their children's prospects of a warmer world than to change their day-to-day behaviour. Rather than

accept the need for action, many people have taught themselves to tune out climate-related news, and so 'climate denial' is less a political position than an unspoken social agreement to pretend the problem does not exist.

Dr Stoknes itemised barriers to action regarding distance, doom, dissonance, denial and identity. The human brain evolved over millennia to prioritise social acceptability over individual judgement or abstract truth, as exclusion from the tribe meant death for most of human history. People, therefore, care more about the actions and opinions of their family, neighbours and circle of friends than academic or media sources of influence and information.

The media offers a constant barrage of unwelcome news with few solutions rather than solution-rich discussion that tends to foster more social engagement. Groups campaigning for climate action should reframe the climate challenge in terms of the incredible economic and social opportunities low-carbon solutions can generate rather than repetitive portents of doom.

Evidence alone will not make people think long-term nor guarantee lasting engagement, but people will modify their behaviour when conducive conditions are put in place. While individual actions and attitudes will not solve climate change alone, they are necessary to build grassroots support for structural change in government and business.

In closing the final session, **Dr Ian Watt AC**, Chair of the International Centre for Democratic Partnerships (ICDP), offered his thoughts on the processes and principles that generate good government decision-making.

Dr Watt drew on his years in the Australian Public Service to reassure participants that governments of all political persuasions want to make good decisions but accepted that every policy option is a trade-off between various competing interests and factors that can sway their final choice. Evidence-based public policy usually pays political dividends, but even the best decisions can misfire, so political

decisions should only be judged by the facts known at the time, without the benefit of hindsight, given the distorting effect of changing circumstances.

Furthermore, decisions are only as good as their implementation, and poor delivery can mean promising ideas produce few concrete outcomes or even adverse results. Delivery tends to be improved by a robust review process conducted by the Public Service and officially released to uncover areas of underperformance that can be reiterated and improved. Such transparency builds accountability, encouraging better decision-making, as poor choices can be traced back to their instigators. Merely having rules about best practices does not mean they will be respected, but when governments realise their electoral success depends upon making good decisions, they are more likely to be made.

In the final discussion session, participants were invited to suggest fresh engagement models to help society tackle wicked problems such as climate change, reduce political and social polarisation, and encourage young people to get and stay involved in political processes. They agreed that taking environmental sustainability and personal wellbeing into account when assessing progress alongside financial results would help policymakers adopt more holistic policies and shift priorities from immediate gratification and personal gain towards caring for the needs of future generations.

The Hon Cr Philip Ruddock AO, Mayor of Hornsby, and a former Federal Cabinet Minister agreed the public has a right to participate in decision-making and that people are more likely to accept tough but necessary political decisions if they feel they have been consulted. In closing, **Peter Fritz AO**, Group Managing Director of TCG and Chairman of GAP, suggested establishing several GAP Taskforces to define a rational collective approach to decision-making and develop complementary democratic frameworks supported by modern technology such as AI and sentiment analysis.

The complete list of recommendations from the Dialogue is detailed below.

Recommendations

New frameworks for decision making: long-term thinking for the greatest benefit to humanity

1. Explore novel ways to include long-term thinking and intergenerational challenges in democratic decision-making processes.

Opportunity: Establish a GAP Taskforce to consider successful approaches to incorporating long-term thinking in democratic decision making, particularly in the Australasia context, and develop new frameworks for more inclusive, rational and long-term collective decision making to deal with pressing global issues.

Strengthening democracies for the common good

2. Investigate how participatory democracy processes – such as deliberative polling or citizens' assemblies – can be used to navigate complex and contentious issues and how AI and other technologies can support participatory processes.

Opportunity: Establish a GAP Taskforce to evaluate successful models of participatory democracy processes and identify where these models might be applied in Australia and the Australasia region and how new technologies such as generative AI can support them.

Critical thinking education for all

3. Encourage the teaching of the principles of scientific thinking to all school students, regardless of their area of study, to encourage rational inquiry and enable informative debate.

Opportunity: Establish an Australian pilot of the Nobel Prize Outreach's high school programme *Scientific Thinking for All: A Toolkit*.

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DR SHANN TURNBULL is the founding principal of the International Institute for Self-governance and a Founding Life Fellow of the Australian Institute of Company Directors, responsible for including the provisions for divisional self-governance in AICD's constitution. After a Harvard MBA, Shann became a serial entrepreneur, establishing over a dozen firms, including two public mutual funds and three publicly traded corporations. He became a founding author/presenter of the first educational qualification in the world for company directors. The United Nations published a summary of his 1975 book *Democratising the Wealth of Nations*. He was invited to Prague in 1990-91 and Beijing in 1991 to advise on stakeholder privatisation. He authored Australian Parliamentary reports on Aboriginal self-determination in 1977-78. His 2001 PhD from Macquarie University created a methodology to establish the science of governance of any specie and introduced the self-governing concept of Tensegrity. Dr Turnbull is a prolific author on using the self-governing practices of biota to reform the theories and practices of capitalism.

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We welcome submissions that deal with a transdisciplinary social sciences approach, especially psychology, or use experimental methods of inquiry. Contributions in behavioural economics, experimental economics, economic psychology, social cognition, social networks, and judgment and decision making are especially welcome.

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We have three broad categories for contributors:

1. **Articles:** this is original research and should include methodology and references. This may be conceptual or empirical research; the latter requires discussion of methodology to the extent that someone could replicate it. These will be blind peer reviewed. 9,000 words max.

2. **Research notes:** this is the original work of the author or others bringing academic work into a format for general readership. This should be rigorous but does not need to comply with the academic standards of articles. Referencing should be minimal. These will be reviewed by the Editorial team. 4,000 words max.
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Submit manuscripts to the editor at editor@globalaccesspartners.org

Please use Times Roman 12-point font. The document should be double spaced throughout; place page numbers in the bottom-right corner; and leave top and side margins of at least 2.5cm.

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An abstract of no more than 200 words and the title of the work go on page 2. The abstract should address the five BESS[®] qualities

1. Topic
2. Evidence
3. Originality
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BESS® uses only three levels of headings. Use Word-heading 1, 2 & 3 function.

Don't skip steps: no second-level headings before you use a first-level heading, for instance.

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Data and Sample [2nd level]

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Length

Articles should be a maximum of 9,000 words.

Research notes should be a maximum of 4,000 words

Essays should be a maximum of 2,000 words.

Structure

Articles should follow this paper structure (1st level headings only listed here):

1. Introduction
2. Literature review
3. Methodology
4. Findings
5. Discussion
6. Conclusion
7. References

Research notes should follow this paper structure (1st level headings only listed here):

1. Topic: what is the idea?
2. Significance: why is this important?
3. Innovation: what is new?

4. Relevance: why do managers need to know about it?
5. Application: how can this idea be applied?
6. Credibility: what should we trust this idea? (build on previous knowledge or experience)
7. Track record: where is the evidence? (case study or other)

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Footnotes

Use footnotes placed on their respective pages (not endnotes).

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The preferred format for regular tables is Microsoft Word; however, Acrobat PDF is also acceptable. Note that a straight Excel file is not currently an acceptable format. Excel files should be converted to a Word or PDF document before being uploaded.

Tables should be formatted as follows. Arrange the data so that columns of like material read down, not across. The headings should be sufficiently clear so that the meaning of the data is understandable without reference to the text. Tables should have titles and sufficient experimental detail in a legend immediately following the title to be understandable without reference to the text. Each column in a table must have a heading, and

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Insert Table 2 about here

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