**Social Models as Dynamic Theories: How to Increase the Impact of Social and Political Sciences**

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**SUPPLEMENTARY MATERIAL**

1. Endnotes

2. Practitioner notes

3. Avenues for Experiment: discussion and suggestions for how to develop and test this hypothesis

4. References

**1. Endnotes**

1. line 141: In *Usable Knowledge: Social Science and Social Problem Solving,* Charles Lindblom and David Cohen lamented “the relatively thoughtless wastefulness” of much social research that is “a positive obstruction to social problem solving” (Lindblom & Cohen 1979: 86). In 1998 America’s Social Science Research Council reported that “social sciences face serious threats. From dwindling federal funding to public mistrust in institutions to widespread scepticism about data, the infrastructure supporting the social sciences is shifting in ways that threaten to undercut research and knowledge production.” (SSRC [*To Secure Knowledge Task Force*](https://www.ssrc.org/to-secure-knowledge/)). The eminent sociologist Jonathan Turner observed that research “has become increasingly an end in itself without reference to the accumulation of knowledge or to the theoretical cumulation that comes with systematic tests of theories” (2001*:* 105). In *Making Social Science Matter,* Bent Flyvbjerg presented a detailed critique of “Why social science has failed as a science”, citing a wide range of social scientists to argue that the current paradigm has failed. We need to “transform social science from what is fast becoming a sterile academic activity, which is undertaken mostly for its own sake and in increasing isolation from a society on which it has little effect and from which it gets little appreciation” (2001: 166). Five years later, in *The Production of Knowledge: The Challenge of Social Science Research,* William Starbuck wrote “Hundreds of thousands of talented researchers are producing little of lasting value” because they are focused on producing journal articles rather than knowledge (2006: 5, 142). This problem is compounded by the inability to replicate many social science experiments and the fact that papers on non-replicable findings are cited more than replicable ones (Serra-Garcia and Gneezy 2021). Colin Elman and collaborators address a wide range of systemic problems within academic social science in *The Production of Knowledge: Enhancing Progress in Social Science* (2020). They propose reforms of “the system within which studies are produced and vetted”, recognising that “the blame lies primarily with institutions rather than with individuals” (p3-5), but do not consider the futility of much research. By contrast, Jonathan Turner argues that the tendency of some sociology departments to promote an ideologically-oriented activist discipline contributes to its loss of relevance (2019).

In [*The Impact of The Social Sciences: How academics and their research make a difference*](https://uk.sagepub.com/sites/default/files/upm-binaries/59598_Bastow__Impact_of_the_social_sciences.pdf)*,* Bastow, Dunleavy and Tinkler asked “why social science research and insights have been scantily adopted in business, and have been less influential than one might expect in government and civil society; and why the public prestige and government funding of the social sciences lags so far behind that of the ‘physical’ sciences” (2014: xii). They showed that social science research is more likely to be confined within the academic realm than STEM subjects and offer practical advice on how human-centred disciplines can put more effort into public engagement and scale their efforts.

2. Line 361: Elections can be traced to ancient Rome, Greece and even earlier (Keane 2009). Modern welfare states were modelled on the German system of social insurance introduced by Bismarck’s Health Insurance Bill (1883), statutory accident insurance (1884) and pensions (1889), reforms based on the mutual-aid societies created by craft guilds of the late Middle Ages, including their principles of solidarity, subsidiarity, and co-determination. These craft guilds had in turn formalised the mutual aid and solidarity that enabled neolithic communities to survive and spread over millennia. Bismarck’s motivation may have been to strengthen the newly unified German state (in 1871), to keep the economy going, and stave-off demands for more radical socialist alternatives, but he used a tried and tested ancient model to create a new one that other nations adapted. Another example is the way the Chinese leader Deng Xiaoping exhorted Communist Party cadres to learn from Singapore’s model of development, which combined entrepreneurship, foreign investment, a strong state, one party rule, and subtle repression to accelerate economic growth (Buckley 2015). China’s rulers also learnt from the fall of the Soviet Union that relaxing political control could lead to chaos and decline. Underlying the modern Chinese state are principles and practices crafted over millennia of imperial rule and warring states (Creel 1983; Elleman 2019; Fitzgerald 1956; Lee 2000).

People experiment and adapt institutions to meet changing conditions and beliefs according to their understanding, power and ability. Whenever a government creates a post or department to meet a newly perceived need, they modify their model. When they change their way of doing something, by establishing social insurance, suppressing or opening markets, putting services out to tender, or setting up citizens assemblies, they adapt old models or develop new ones.

3. line 401: Congregations facilitate social cohesion, mutual support, personal relationships and transmission of beliefs, although actual beliefs vary greatly. Modern universities continue structures and symbols from ancient Jewish yeshiva and Christian seminaries, along with their ceremonies, graduation gowns and doctorates. Similarly, many structures of government from mediaeval England, Tsarist Russia, and Imperial China persist in their modern successors, although their language and theories about government have changed radically. Imperial Britain provided a model of parliamentary democracy for many former colonies, which now work together on new models of international cooperation through the Commonwealth and United Nations. Meanwhile, the once warring states of Europe are experimenting with another model of transnational cooperation, building on older models of law, states, diplomacy, currency, and representative assemblies. The European Union in turn is a model for the African Union (Babarinde 2007).

4. line 777: Such snapshot stories include Archimedes’ *eureka* in the bath, the earth moves round the sun, Newton’s apple, humans’ descent from apes. In politics slogans such as ‘Homes fit for Heroes’ (Lloyd George after WWI in 1919), ‘Make America Great Again’ (Trump in 2016), ‘Take Back Control’ (Brexit in 2016), or ‘Net Zero’ (climate change) are micro stories used to build public support for larger narratives. Complex political or economic ideas are often reduced to short stories or slogans, such as class struggle (Marxism), let markets decide and competition drive progress (neoliberalism) or ‘my country right or wrong’ (nationalism). Religious prophets promote their message through parables.

5. line1244: Numerous studies highlight the erosion of democratic norms over recent decades. According to the Economist’s 2024 [Democracy Index](https://www.economist.com/graphic-detail/2024/02/14/four-lessons-from-the-2023-democracy-index), just 8% of the world’s people live in a 'full democracy'. The United States has become more authoritarian and nationalistic (Halper & Clark 2005; Lieven 2012; Levitsky & Ziblatt 2019). Almost two thirds of the world’s population (71%) live under authoritarian rule according to the V-Dem’s [Democracy Report 2024](https://v-dem.net/documents/43/v-dem_dr2024_lowres.pdf), up from 48% ten years ago. Many people no longer feel democracy works for them and dissatisfaction is widespread (see [Global Satisfaction with Democracy 2020](https://www.cam.ac.uk/stories/dissatisfactiondemocracy); [Wike et al](https://www.pewresearch.org/global/2019/04/29/many-across-the-globe-are-dissatisfied-with-how-democracy-is-working/) 2019). Most citizens have much less influence than wealthy minorities who fund candidates, parties, pressure groups, think tanks, media and research to support their interests and manipulate the public. Defective voting systems give power to political leaders who neither represent the majority nor respect pluralism, debate and compromise on which democratic politics depend.

6. line1275: It is possible to identify regularities and general principles, but many features are context specific and not applicable to all societies at all times. Thus the nature and purpose of a handshake, an army or even a capitalist system vary widely from place to place. Capitalism in China, Germany and the USA are very different from each other. Although McDonald’s is one of the most tightly controlled models in the world, outlets in Taiwan differ from those in Texas. A manager from one context might not understand the social norms, relationships and unspoken assumptions in another. These differences are often the source of innovations like the Big Mac, Happy Meal toys, and McVegan..

Networks, systemic, deep and physical levels have a different quality from other institutions, but they are also replicated or adapted like other models. There may be a case for academic analysis of structures (e.g. Abrutyn 2009, 2014), but the experiments and analysis that matter are those conducted by leaders, advisers and activists who work on real-time models. Each one is a unique combination of collective knowledge in action at a particular time and place, from mini models like Alcoholics Anonymous (1935) and feminist consciousness raising groups (1968), to systemic models like markets, states, the internet and financial deregulation legislated for by UK Prime Minister Thatcher in 1986 and US President Ronald Reagan (1981-89). Academics may advocate for and influence particular models, such as the economists John Maynard Keynes (1936), Friedrich Hayek (1941; 1944) and Milton Friedman (1962; 1980), but real-time experiments are conducted by policy makers and practitioners who adapt existing models or create new ones. Social and political scientists can play a useful and sometimes influential role by providing advice based on evidence and theory to create better real-time models, but outcomes are always the result of many people interacting like a parallelogram of forces.

7. line 1491: Other models include cooperatives, the [Buurtzorg](https://www.buurtzorg.com/about-us/buurtzorgmodel/) model of public service (Hegedüs et al. 2022), or the [Toyota production system](https://global.toyota/en/company/vision-and-philosophy/production-system/) (Ohno 1988; Shih 2022; Womack et al 1990), networks (e.g. Castells 2000, 2005, 2006). The concept of McDonaldization illustrates how a mental model can provide insights yet blind scholars to complexities of reality (Alexander 2023).

8. line 1573: Most academic institutions and disciplines have codes of conduct. *Nature* published an [Editorial](https://www.nature.com/articles/d41586-022-01607-0) (2022) on ethics, citing several frameworks and the importance of both “beneficence (a moral obligation to act for the benefit of others) and non-maleficence (a duty to avoid harm)”, with [additional guidelines](https://www.nature.com/nature-portfolio/editorial-policies/ethics-and-biosecurity) on respect for dignity and rights (2022). Wherever possible, people affected by social research should be able to review or participate in

The UK [Academy of Social Sciences and other Learned Societies](https://acss.org.uk/wp-content/uploads//Developing-Generic-Ethics-Principles-for-Social-Science-Research-2015.pdf) has five principles:

1. Social science is fundamental to a democratic society and should be inclusive of different interests, values, funders, methods and perspectives.

2. All social science should respect the privacy, autonomy, diversity, values, and dignity of individuals, groups and communities.

3. All social science should be conducted with integrity throughout, employing the most appropriate methods for the research purpose.

4. All social scientists should act with regard to their social responsibilities in conducting and disseminating their research.

5. All social science should aim to maximise benefit and minimise harm.

The American Sociological Association’s [Code of Ethics](https://www.asanet.org/wp-content/uploads/savvy/images/asa/docs/pdf/CodeofEthics.pdf) (1999) is long and detailed.

The overarching ethical principles for EU-funded research include (2021):

1. respecting human dignity and integrity
2. ensuring honesty and transparency towards research subjects
3. respecting individual autonomy and obtaining free and informed consent (as well as assent whenever relevant)
4. protecting vulnerable individuals
5. ensuring privacy and confidentiality
6. promoting justice and inclusiveness
7. minimising harm and maximising benefit
8. sharing the benefits with disadvantaged populations, especially if the research is in developing countries
9. respecting and protecting the environment and future generations.

**2. Practitioner Notes and Guidance**

**What’s new?** This paper develops the idea that institutions and patterns of behaviour can be treated as social experiments, established by Donald Campbell (Dunn 1998: 44), Achterbergh and Vriens (2010)and others. It proposes that social models are ‘dynamic theories’ which practitioners, policymakers, citizens and researchers can use to achieve better outcomes and solve social problems better. If accepted, this could lead to a major shift in social science to helping people solve social problems.

**How it can be used:** Practitioners can use observation, reflective practice and social research methods to systematically improve institutions and behaviours that constitute society. The paper’s arguments could persuade academic social researchers to use their skills, knowledge and access to research funding to help develop institutions into exemplary ***dynamic*** models in areas of work and develop universities as centres for advanced learning and innovation to improve democratic processes and the human condition.

**The Dynamic Method in Social Science**

The concept of institutions as dynamic social theories suggests a method for scholars to help people meet their needs and solve problems better using twelve sets of questions as a guide. The starting point is to focus on an area of social life or problem that matters to people and use the first four questions to create a vision of the desired outcome with the people affected, then use the following questions to learn from the best models and methods relevant to a particular situation. If existing institution(s) are the best available, the task is to improve them then share the lessons so that others can learn: If not, the task is to experiment with new ways of doing things. In practice solving any problem is likely to involve a blend of existing and new ways of doing things.

This method focuses on empirical, experiential and experimental work in a real-time social context, working with actually existing social relationships and institutions in context, drawing on concepts, theories, history and methods from many disciplines to understand and improve social reality. Ideas, concepts and mental models should assist understanding and action but not drive it. This approach to social science is based on the development of practical wisdom (*phronesis*) through observation, method, measurement, action and feedback in real time (OMMAF).

This outline is a hypothesis to be tested by studying existing models of social innovation and by helping people improve social outcomes. A key question is whether dynamic social science can be done within universities or whether academic drift and incentives would stifle it, so that it would be more effective within independent agencies, business, government or hybrid institutions. Alternatively, the setting may be less important than the people who develop it and the processes they use.

1. **Pay attention to purpose and context**
2. **What matters? -** What social problems matter most, particularly for people with the least power and resources to deal with them or that have the most serious impact on human wellbeing now or in the foreseeable future? These questions help to focus on areas to address at a macro level within society more broadly or at a micro level, when looking at behaviour or processes within an organisation.
3. **Actors and stakeholders:** who is directly affected by this area of social life or problem? Who is included, ignored or excluded? What impact does the issue or problem have on different groups? How important is it for them to solve specific problems? What power (agency) do they have? How are they involved in finding and agreeing on a solution, if at all? And who has the most power to advance or block innovation. Most problems have many stakeholders with different and often conflicting interests. Understanding different interests is critical to solving problems, which is easier if interests can be aligned and almost impossible if they are opposed. These questions inform the ‘democratic method’ as a core principle of advanced social science.

A secondary but equally important set of questions is, who are the indirect stakeholders, including policymakers, research centres and scholars working on it: they may be allies or adversaries, with different agendas that can influence what happens.

1. **Sponsor:** Who will support work on this, what power do they have, what are their interests in it, and what is the relationship with other actors? - Social research may be sponsored by a powerholder, such as leaders, owners, regulators or a government agency, or by challengers, such as staff, users or communities. Or it may be sponsored by a funder or research body, whose only power is publication and influence through power holders or challengers.

Sponsorship is the key to effective social research, since it determines whether and how findings are used. Pure academic sponsorship may lead to excellent findings that are a complete waste of effort, while sponsorship by a government agency may be hijacked for partisan purposes, sabotaged by political rivals or buried by inertia. Aligning sponsorship with stakeholders and the potential to put findings into practice is therefore essential for success.

1. **Outcomes**: what do people (stakeholders) want? What purposes do they have? - People often want multiple and sometimes incompatible outcomes. As Flyvbjerg wrote, “the purpose of social science is … to contribute to society’s practical rationality in elucidating where we are, where we want to go, and what is desirable according to diverse sets of values and interests” (2001: 167) Clarity of purpose is important, as well as openness to the possibility of unintended outcomes, alternative ways of achieving the desired results, or the need to find compromise solutions to address different interests.

**B. Learn from organisational models**

1. **Models:** where are these outcomes being achieved better, if anywhere? What examples (models) are there of people achieving the desired outcomes, in part or whole? What lessons can be learnt from history, or even prehistory or other species? How have people avoided, overcome or solved similar problems? What can be learnt from them? What behaviours are already achieving what people want and what small steps could they do to achieve more?

This uses the solution focus method developed by Jackson and McKergow (2024) This stage could also involve synthesising research evidence, conducting research to evaluate and compare outcomes of existing models, or piloting new ways of doing things.

1. **Organisation:** How are the better models organised? What is the contribution of its physical infrastructure, norms, processes, templates, power structures, systems, beliefs, theories, stories, symbols or other details that make it work? What form of organisation would work best in your particular context?
2. **Circumstances or context:** What are the conditions or circumstances for these models to work? All models depend on specific conditions, including the environment, cultures, and social conditions, which may not be transferable. What are the circumstances in which you are trying to improve things?
3. **Approach:** What theory of change, strategy and methods are used by the best of these models to achieve results? - This is a key detail from question 6. The approach may be implicit or explicit. It may include methods that those involved may not be aware of or methods that are assumed to work but contribute little or nothing. Then ask what approach would work best in your particular context?

Organisations use many different methods to achieve their aims, depending on their purpose, history and context.

1. **Learning & development:** How does the organisation learn? This means looking at what it measures, how it evaluates what it is doing, how this feeds back into decision-making and behaviour at all levels, and what training and development its members do. It means asking what are the explicit and implicit measures used to achieve its results? Many organisations use symbolic metrics that have little real impact, or unconscious ones that do. How does it evaluate measures of internal processes and external impact? How does it review its work and impact? How can institutions you work with develop their organisational learning?
2. **Accountability:** What are its internal and external accountability mechanisms, including accountability to wider society through its democratic processes? How effective are they? Do they help people meet their needs or make it more difficult to achieve them? Some existing measures of accountability impose compliance and conformity to rules that make it more difficult to achieve desirable outcomes.

**C. Guiding ideas**

1. **Mental models:** What assumptions, beliefs, and theories inform their actions? To what extent do they contribute to achieving their outcomes? How compatible and applicable are they to your circumstances? Mental models need to be understood in terms of their meaning and implications for behaviour rather than the words or language used, since what is said often does not match what is done.
2. **Stories:** Finally, how does it use stories, symbols and slogans? Are they effective and do they help or hinder stakeholders from getting the results they want? What stories would work best in your particular context? What stories will help to share best practice, so that others can learn from them?

In many ways this is how societies develop, except that they are largely driven by people with the power to decide the desired outcomes, purpose, direction, beliefs and methods of whatever institutions they control. They may have relatively crude measures of evaluation, such as “will it keep me and my kind in power, meet our needs and achieve our ambitions?”

These 12 steps aim to help scholars to work collaboratively with citizens, practitioners and policymakers to improve or create better real-time social models that meet their needs and aspirations better. Like the scientific method, the bedrock is observation and experiment: what is really happening? What do people want? What works to bring about outcomes people want and need? It rests on practical wisdom (phronesis), which often means political ability in the broadest sense. In most cases, not party politics, but everyday institutional politics. Social research methods, analysis and conceptual theories play a part, as one strand among many in humanity’s effort to live well and create a good society for all.

**Learning from reflective practitioners**

Practitioners and scholars in many fields offer a wide range of methods and lessons, including:

* Solution focus, developed by Jackson and McKergow (2024)
* Action science, developed by Chris Argyris, Robert Putnam and others (1983)
* Economics of the [common good framework](https://marianamazzucato.substack.com/p/why-we-need-an-economics-grounded), in which different agencies work towards collective goals guided by five key principles: (1) purpose and directionality; (2) co-creation and participation; (3) collective learning and knowledge-sharing; (4) access for all and reward-sharing; and (5) transparency and accountability (Mazzucato 2023).
* Project leadership as demonstrated by Bent Flyvbjerg (Flyvbjerg and Gardner 2023)
* [Systems thinking](https://deming.org/about-us/our-aim-vision-and-values/), developed by WE Deming (2000)
* Learning organisations, developed by Peter Senge and others (Senge 1990; Senge et al 1994)

The challenge is to develop models of learning that enable people to develop behaviours, skills, knowledge and values they need to make society work better at whatever level they are working, including modern apprenticeships, placements, project-learning, the Conceive- Design-Implement-Operate (CDIO) pedagogy and other methods explored in the following sections.

**3. Avenues for experiment**

The following sections outline different ways in which scholars can test this hypothesis through their own real-time models of teaching, research and service to see if this approach has more impact on real world outcomes than prioritising research for publication, citation and academic league tables.

**Outline**

These include the following ten areas for action:

1. Change academic research **incentives** to reward contributions to society above publication and citation. Instead of looking for “gaps in the literature”, researchers would **engage with the public, practitioners and policy makers** to seek problems crying out to be solved. Independent scrutiny by peers and publication can play a useful role, but they have become a massive distraction.
2. Improve real world impact by embedding more systematic evaluation and reflection into institutional practice, including that of higher education teaching, research and service.
3. Increase the **importance of teaching** in higher education to develop practical wisdom as well as knowledge. Course programmes are undervalued forms of knowledge and social models that often have more impact and influence than published papers. Study circles, professional development, online learning, podcasts, public radio and even television offer additional channels to promote learning.
4. Foster citizens’ social science to enhance sociological competence, political ability, economic understanding and organisational learning, increasing problem solving abilities.
5. Involve citizens in setting research priorities, as well as how it is conducted and used.
6. Launch research-action missions at scale to help people address big problems.
7. Improve public access and use of research evidence by citizens, practitioners, and policy makers.
8. Improve the flow of reliable knowledge, to challenge misinformation and dis-information, and consider diverse sources of evidence, perspectives and analysis.
9. Support institutional development through communities of practice, centres of excellence, continuing professional development, and other measures for different types of institutions.
10. Provide nonpartisan support for citizens and policymakers to **improve democratic governance** at all levels, to protect freedoms and ensure that processes for collective deliberation and decision-making are open, honest, accountable, equitable, inclusive and effective.

**Reflections on models of practice in social and political science**

Individual students and society make substantial investments of time and money into our dominant models of higher education and research, which are increasingly questioned by governments and challenged by alternative models for the production and acquisition of knowledge. The following reflections outline some of the issues and examples of models to improve on current practices.

**3.1 Turn the ivory tower into a lighthouse**

Many of our institutions do not meet people’s needs well. Too many people suffer due to difficult social conditions and inadequate institutions. If people could learn from the best social arrangements in conditions similar to their own, the world would be better for everyone. Social and political science produce a great deal of knowledge about how to improve conditions that is not used and often in an unusable form. Producing knowledge in forms that can be used could turn the ivory towers of academia into lighthouses to guide people through turbulent times.

The biggest obstacles to change are incentives to prioritise research over teaching, publication over application, and scholarship over practical research. The eminent social scientist Henry W. Riecken observed: “The prestige which most social scientists attach to academic social science may or may not be justified but it is a fact. The low status of applied work is probably undeserved, but it too is a fact” (1969). More recently Stoker and Evans noted “Social scientists in universities, in particular, in most Western countries, have professional and career incentives to focus on research that does not have a strong applied dimension.” (2016: 16). This is reinforced by “the structure of rewards - based primarily upon publication in top journals and presses” (Elman et al 2020: 5).

**Box 3.1: Models for improving academic social science**

Changing academic incentives, to reward real outcomes above publication and citation, would refocus and revitalise intellectual endeavour. Instead of looking for “gaps in the literature”, researchers would seek problems crying out to be solved and work with practitioners, policymakers and the public to learn from the best models, improve existing ones, or create new models to solve them. Professional associations would give awards for the most improved social models and the best models for solving particular problems. Academic conferences would share lessons from models of practice, methods of evaluation, and systems for improvement.

The effects of changing academic incentives could be tested empirically by comparing the originality, influence and impact of teams in similar fields which prioritise publication and research with those that prioritise teaching and support for practitioners, unconstrained by publication pressures, retrospectively analysing outcomes over five, ten or more years. This may be difficult, with many caveats and qualifications, but an honest self-assessment exercise by academics looking at actual impact - not citations or [altimetrics](https://en.wikipedia.org/wiki/Altmetrics), but real change in the world - would be a useful start (see 3.2 Evaluate real world impact).

Part of the problem is that the term ‘applied’ presumes theory proceeds action. Applied social science is better understood as the use of research methods and concepts in context. This means observation, listening, questioning, dialogue, thinking about practice and a “philosophy of engagement” (Flyvbjerg et al 2012: 285-6). Many applied disciplines have a great deal of experience, insights and methods for working on social models as living experiments and ‘dynamic theories’, such as public administration and policy, operational management, problem-centred research, public sociology, social psychology, urban studies, John Dewey’s practical epistemologies, Lewin’s action research, Action Science (Argyris et al,1985), Boyer and Rice’s New American Scholarship (Boyer 1990; Rice 1991), Campbell’s ‘experimenting society’, Burawoy’s public sociology (2021) Flyverbjerg’s phronetic sciences (2001, 2012), and many more.

The shift in perspective may be challenging, but it will have at least three major benefits - students appreciate courses that are relevant, practical and connected to the real world (e.g. O’Neill & Short 2023); the public want universities to teach, research local and international issues, and engage with communities (e.g. Civic University Commission 2000; Gavazzi and Gee 2021); and the satisfaction of making a difference. Publication has a role in this context, to provide a record and reflections on real world experiments, to share lessons of what worked and what didn’t work; and to tell stories about models, methods and what matters. Three small steps out of the publication treadmill would be for course programmes and research projects to 1) state how they can help people solve problems, 2) provide guidance on how their fundings can be applied, and 3) communicate this through practitioner networks and relevant media. The following sections explore more ambitious models transforming social science.

**END BOX 3.1**

**3.2 Evaluate and reward real world impact**

Higher education is an experiment in how to transmit and produce knowledge that is losing credibility (Bunch 2022; Gavazzi & Gee 2021; Heller 2022; Newfield 2018; Washburn 2005). One way to address this is to increase the real-world benefits of teaching and research by helping people to solve social problems better. This requires more searching systematic evaluation to be embedded into institutional practice. Higher education is assessed by rather crude metrics - demand from students and employers, student surveys, assessment for degree classification, the prestige bestowed by generations of graduates in leadership positions and league tables. These are good for marketing, but insufficient for sustained improvement. The UK’s controversial [Research Excellence Framework](https://www.ref.ac.uk/) (REF) and [Teaching Excellence Framework](https://www.officeforstudents.org.uk/advice-and-guidance/the-tef/about-the-tef/) (TEF) are steps in this direction, but they are about providing a “signal of a provider's excellence”, more Trip Adviser than models of research method.

**BOX 3.2 Models for improving impact of research, teaching and learning**

It is difficult to measure the impact of research, unless it is linked with policy and practice. In [*Whose Bright Idea Was That? How Think Tanks Measure Their Effectiveness and Impact*](https://gppi.net/2023/10/12/how-think-tanks-measure-their-effectiveness-and-impact)*,* Sarah Bressan and Wade Hoxtell of the Global Public Policy Institute (GPPI) develop a framework for achieving and measuring effectiveness and impact of think tanks, which offer insights from a study of diverse think tank models (Bressan and Hoxtell 2023). For scholars, *The Impactful Academic: Building a Research Career That Makes a Difference* offers researchers and academic institutions extensive insights into how their work can contribute to society (Kelly 2022). Health promotion is one area in which there are many tried and tested models for measuring impact (Rootman et al 2001).

Teaching offers significant opportunities for impact, with the potential to transform the lives of learners who in turn serve and transform society through their work. Every learning activity, lesson, course, programme and school is a social model, with potential to improve. Models of evaluation include Kirkpatrick's Four Levels (Kirkpatrick 1993; 2016) and alternatives (Tamkin et al. 2002; Torney‐Purta et al 2015).

There is a substantial literature on assessment (Secolsky and Denison 2017) and evaluation of higher education systems (Cao et al 2022; Cowen 1996), but this tends to focus on conventional measures of employment, publications, patients and university rankings rather than social improvement. Models of participatory evaluation are more useful (see for example Organizing Engagement’s [Participatory Action Research and Evaluation](https://organizingengagement.org/models/participatory-action-research-and-evaluation/) and Cousins and Whitmore 1998).

**3.3 The importance of teaching and development of practical wisdom**

Academic incentives also need to recognise the value of teaching. Equipping people with the knowledge, skills, behaviours and values to improve real-time social models and make a difference is potentially the most valuable contribution higher education can make.

To improve real-time social models, people need to develop practical wisdom (phronesis), the blend of experience, skill, knowledge and insight acquired by working alongside experienced practitioners. This is the essence of learning a craft, profession or vocation, described by Dreyfus’s five stage model of skill acquisition (Dreyfus 1986; 2004) as well as Schön’s model of the reflective practitioner (1983). Dreyfus challenges the rational fallacies of academic training and advocates the integration of higher levels of learning such as “context, judgement, practice, trial and error, experience, common sense, intuition and bodily sensation” (Flyvbjerg 2001: 23).

A diagram of skill acquisition

Description automatically generated with medium confidence

**Fig 5 Visual summary of Dreyfus Model** (adapted from Florian Wiesweg. Advanced expert and Advocate added by this author on right).

Fig 5 shows the Dreyfus model with two additional stages - Advanced Expert and Advocate or Influencer, which recognise the roles experienced practitioners play through teaching, leadership, setting standards, and shaping policy. These are critical skills for social problem solving, which can be learnt and developed to improve real-time social models. The implications for our models of higher education are that they would benefit from offering more opportunities for project-based learning, service learning, degree apprenticeships, practitioner research, and professors of practice, to support learning through all seven stages. Collective problem solving requires political skills, whether in a community, organisation or government, which in genuine democratic societies is a shared responsibility of all citizens. Political skills are the opposite of ideologically driven social science criticised by Turner (2019), and essential for democracy to work well.

Another potential model for teaching practical social and political science is the Conceive- Design-Implement-Operate (CDIO) pedagogy, developed by MIT for engineering education. This approach teaches how to tackle challenges through teamwork, emphasising active learning, communication, collaboration, and teamwork. Students use the CDIO approach throughout their degree to develop technical and professional skills needed to succeed. It is structured around four key phases - **Conceive**: define needs, consider technology, strategy and regulations, the develop concepts, techniques and plans. **Design**: create a design, plans, drawings, and algorithms to describe what will be implemented. **Implement:** transform the design into a product, process, or system, which includes testing and validation. **Operate:** use the product or process to deliver the intended value, which includes maintaining, evolving, and retiring the system or process. There are challenges about adapting this model to political science education, but it encourages learners to explore implicit values and reflect on real-world impacts of policies, as well as more tangible learning outcomes (Kenyon 2023).

**3.4 Support citizens’ social science**

Lindblom and Cohen’s observation that much of the world’s problem solving is through ordinary knowledge and interactive problem solving should encourage professional social scientists to develop models of inquiry that work with citizens.

**BOX 3.4 Models of citizens’ social science**

There is a well-developed body of experience and models on which to build, following Kurt Lewin’s participatory action research (PAR), Robert Chambers’ Participatory Rural Appraisal (PRA) and Participatory Learning and Action (PLA). Resources Centres such as [Participatory Methods](https://www.participatorymethods.org/page/about-participatory-methods) hub at Sussex University’s Institute of Development Studies, [Community Based Research Canada](https://www.communityresearchcanada.ca/organizational-members) at Laurier University, the [Citizen Science Academy](https://www.ucl.ac.uk/bartlett/igp/research/ucl-citizen-science-academy?utm_source=openaccessgov&utm_medium=affiliate&utm_campaign=117269_ben_bartlett&utm_content=profile) at University College London (UCL), and many more (Albert et al 2021; Fischer et al 2021; Tauginienė et al 2020; Woodcraft 2024). APSA’s [Institute for Civically Engaged Research](https://connect.apsanet.org/icer/mission/) (ICER) provides political scientists with training to conduct ethical and rigorous civically engaged research and hosts a [directory of 80 centres](https://web.apsanet.org/teachingcivicengagement/additional-teaching-resources/civic-engagement-centers-and-institutes/) across the USA.In addition, digital platforms such as [Spotteron](https://www.spotteron.net/citizen-science-app-features/custom-citizen-science-apps) provide interactive tools for citizen science, user engagement, and online communities.

**END BOX**

**3.5 Involve citizens in setting research priorities**

Most research priorities are set through a combination of scholars’ interests and funders’ priorities, including businesses, foundations, government agencies, and the military. Citizens rarely have a say in strategic research priorities or local academic projects, although some funders and research institutions are developing models of citizen involvement.

**BOX 3.5 Models for involving citizens in setting research priorities**

There are many models of practice in community development, development cooperation (international aid), and health (e.g. Manafò et al 2018; Pratt 2021a,b; Bamberger et al 2019). The European Union aims to put citizen engagement ‘at the heart of its agenda for research and innovation’ (see [EU Missions & citizen engagement activities](https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/eu-missions-citizen-engagement-activities_en)). The UK’s Economic & Social Research Council (ESRC) aims to “harness the power of social science to drive change that makes a difference to all our lives, improving outcomes for individuals, society and the economy” by addressing the “most pressing societal challenges, whether local, national or international in scale and scope” (ESRC 2022), with little reference to public engagement. Ben Shneiderman provides a profound insightful model in [*The New ABCs of Research: Achieving Breakthrough Collaborations*](http://www.cs.umd.edu/hcil/newabcs/) (2016), with a guide for researchers and manifesto for “changing the university echo system”, summarised in Fig 6 with an additional step by this author (See [video](https://youtu.be/bR3p7oHVn2Q) summary: <https://www.cs.umd.edu/hcil/newabcs/>) *A diagram of a scientific research

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**Fig. 6 The New ABCs of Research: Achieving Breakthrough Collaborations**, from Ben Shneiderman (2016) with an additional step from solutions and theories to better social models.

**END BOX 3. 4**

Unless funders and researchers make a determined effort to involve the public in setting research priorities, universities will continue to benefit business, governments and scholars rather than the wider public, perpetuating social polarisation.

**3.6 Launch research-action missions at scale**

While humanity faces huge challenges and governments lead large unscientific social experiments, most academic social research is a cottage industry of discreet projects with little influence on practice. Some researchers recognise that big problems require ambitious research programmes to develop better models for solving specific problems.

**BOX 3.6 Models of research-action missions**

The most famous models of research missions are mainly in the natural sciences - the Manhattan Project to develop the atom bomb, NASA’s Apollo moonshot, and more recently the global effort to vaccines for Covid19. There are many smaller social research missions, such as:

* The [Abdul Latif Jameel Poverty Action Lab](https://www.povertyactionlab.org/) (J-PAL) at MIT, founded by Abhijit Banerjee and Esther Duflo, aims to reduce poverty by developing policy informed by evidence from random controlled trials by a network of 900 researchers at universities around the world.
* Arizona State University’s [Global Institute of Sustainability and Innovation](https://sustainability.asu.edu/) hub of sustainability research initiatives, aiming to lead by example and contributor to over 30 local and global [collaborative networks](https://sustainability.asu.edu/partnerships/) aimed at reaching hundreds of millions of people to bring about sustainability at scale
* The [Atlas Network](https://www.atlasnetwork.org/) of scholars and practitioners works with almost 500 think tanks in over 100 countries to “drive change in ideas, culture, and policy; remove barriers to opportunities; and empower individuals to live a life of choice”.
* [Centre for Effective Global Action](https://cega.berkeley.edu/) (CEGA) at the University of California, Berkeley, does empirical research about the impacts of economic and social development programs to inform policymakers and practitioners.
* UCL’s [Institute for Innovation & Public Purpose (IIPP)](https://www.ucl.ac.uk/bartlett/public-purpose/) conducts interdisciplinary research on how the public realm (state agencies) can create sustainable, inclusive wealth, developing Mariana Mazzucato’s work on *The Entrepreneurial State* (2015), *Mission Economy* (2021) and economics of the common good (2023). The Institute has a [Mission-Oriented Policy Hub](https://www.ucl.ac.uk/bartlett/public-purpose/research/mission-oriented-policy-hub) and works with a wide range of partners to create new tools and thinking to tackle societal challenges, using a ‘mission map’ to break down grand challenges into sectoral investments and numerous specific projects (2021: 111-124).
* The [Doughnut Economics Action Lab](https://doughnuteconomics.org/) (DEAL), founded by economist [Kate Raworth](https://www.kateraworth.com/), aims to create new economic models that enable everyone to meet their needs within ecological limits (Raworth 2012, 2017), based on nine planetary boundaries set out by Rockström et al (2009). DAEL works with an emerging community of practitioners across three levels of transformational change: 1) reframing economic narratives, 2) influencing strategic policy, and 3) innovating to co-create tools and methods to “make new economic possibilities visible and inspire others to act” - in other words, create demonstration models.

Each of these is a ‘dynamic theory’ or hypothesis of how to do impactful social research at scale. Mazzucato’s missions are based on high-level strategic decisions to make cross-sectoral investments in a portfolio of bottom-up innovation, while DEAL’s strategic approach (Fig.7) is based on Geels’s multi-level social change process (2002: 1263; 2011: 28). This involves co-creating successful niche innovations (models of practice) while seeking to influence mainstream institutions (“socio-technical regime”) and narratives over time. DEAL’s approach shows the interaction of models at different levels over time, from mini to supra, using different kinds of mental model (graphics, policies, scenarios, stories, theories) to integrate knowledge from many disciplines to inform numerous social experiments based on understanding power dynamics and institutional landscapes.

A diagram of a diagram

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**Fig. 7: DEAL's approach to socio-economic transformation,** based on Geels’ “multi-level perspective on socio-technical transitions” (2002: 1263; 2011: 28)

Both Mazzucato and Rawthorn base their real-time models on respect for evidence, integrating research findings and everyday knowledge to help society address major challenges.

These models are modest compared with research programmes in medicine, pharmaceuticals, space exploration, CERN’s particle physics, IPCC’s coordination of climate research, and big tech companies. Social sciences have an equally strong case for big, ambitious research programmes to develop more effective solutions to problems with citizens.

**END BOX 3.6**

The EU’s Horizon research programme has adopted five Missions, informed by Mazzucato’s work, but the world has many more social problems to solve. Instead of producing more papers and books about poverty, inequality, discrimination, decay of democracy and other issues, universities could collaborate to develop more concerned action-research missions to help people solve problems better.

**3.7 Improve public access to research evidence**

Another way to improve the impact of social science is to create better models for synthesising and sharing evidence for practitioners, policy makers and citizens to use.

**BOX 3.7 Models for access to synthesise of research evidence**

There are a growing number of models and guides from which to learn and improve provision. In some cases the application trails ambition

For example, Cornell University’s [Guide to Evidence Synthesis](https://guides.library.cornell.edu/evidence-synthesis/openaccess) provides an overview, guidance and links to resources to improve systematic search of scholarly literature. Many sectors are creating centres to increase access to the best available evidence when and where it is needed. Gough and White analysed 14 research portals to identify [criteria for standards](https://www.homelessnessimpact.org/news/evidence-standards-in-web-based-research-portals) in evidence portals (2018).

The American Social Science Research Council (SSRC) has a suite of [knowledge platforms](https://www.ssrc.org/how-we-work/knowledge-platforms-and-reports/) and reports cataloguing evidence-based policy solutions, including

* Measure of America on the distribution of [well-being in the United States](https://measureofamerica.org/), with tools to understand issues of health, education, and living standards and develop policy solutions.
* [Conflict Prevention and Peace Forum](https://www.ssrc.org/programs/cppf/), to support the United Nations and member states.
* [Jail Data Initiative](https://jaildatainitiative.org/) to better understand the causes and consequences of jail incarceration
* [Just Tech](https://just-tech.ssrc.org/) to advance social, political, and economic rights, curated into [research fields](https://just-tech.ssrc.org/research-fields/)
* [MediaWell](https://mediawell.ssrc.org/) on technological solutions to advance a public interest internet.
* [Research AMP](https://ramp.ssrc.org/about/) is a customizable free open-source knowledge platform for research teams to share and synthesise evidence for use by decision makers, journalists and the public

The most advanced portals are in health, such as the [Cochrane Collaborations,](https://www.cochrane.org/) the UK’s National Institute for Health and Care Excellence (NICE) and the [WHO Evidence Informed Policy Network](https://www.who.int/initiatives/evidence-informed-policy-network). Agencies with a wider remit include the [Global Commission on Evidence to Address Societal Challenges](https://www.mcmasterforum.org/networks/evidence-commission), [Campbell Collaboration](https://www.campbellcollaboration.org/) (named after Donald Campbell, mentioned above), [International Initiative for Impact Evaluation](https://www.3ieimpact.org/) (3ie) of evidence to improve the lives of the poor in low- and middle-income countries, and other [evidence portals and databases](https://www.campbellcollaboration.org/evidence-portals.html). For some issues there are a proliferation of portals, such as climate (e.g. run by the [NDC Partnership](https://ndcpartnership.org/about-us), [Massachusetts Institute of Technology (MIT)](https://climate.mit.edu/about), [UK government](https://climate-change.data.gov.uk/about), [World Bank](https://climateknowledgeportal.worldbank.org/), and many others.

India’s Foundation For Advancing Science And Technology (FAST) is developing a research ecosystem for science and technology based on the model of [India Stack](https://indiastack.org/), a unified software platform connecting the whole population (Aggarwal et al 2024). In the UK, CAPE (Capabilities in Academic Engagement), UPEN ([Universities Policy Engagement Network](https://www.upen.ac.uk/)), policy fellowships; the [Scottish Policy and Research Exchange](https://spre.scot/about-us/) (SPRE), [Wales Centre for Public Policy](https://www.wcpp.org.uk/), and [Local Policy Innovation Partnerships](https://www.birmingham.ac.uk/research/city-redi/lpiphub) (LPIP), provide policy engagement expertise to increase the use of research-based evidence.

**END BOX 3.7**

Research shows that “Evidence networks play a crucial role in developing, sharing, and implementing high-quality research for policy” (Garavito et al 2023) but actually connecting policymakers with relevant evidence requires an institutional process and skills, as recommended by Laura Perna and MaryEllen McGuire (McGuire and Perna 2023). Alazmi (2023) also provides an extensive review of the literature on closing the gap between research and policymaking.

Improving real-time models of evidence portals should be a priority for collaboration between research institutions, higher education, policy makers and civil society, building on existing models to provide people with access to reliable knowledge to help solve problems. Better models are emerging through:

1. Institutions collaborating and leading on different policy areas. Eventually every issue, region, nation or local area will have at least one dedicated evidence hub, connecting, synthesising, and evaluating relevant knowledge, engaging with practitioners, policymakers and the public to make it usable.
2. Funders involving citizens, practitioners, and policymakers in the design and oversight of evidence hubs, not just academics, including the global south, not just the west.
3. Public agencies using knowledge and learning strategies to meet the needs of different sectors (e.g. business, campaigners, NGOs, policy makers, youth etc), and engage with groups who may not have access to relevant knowledge, like the NDC Partnership [Knowledge and Learning Strategy](https://ndcpartnership.org/sites/default/files/2023-09/knowledgelearningstrategy.pdf) for climate.

Accessible evidence hubs are models of how researchers can share knowledge as a public good to support learning and development everywhere, but they are not enough on their own.

**3.8 Improve the flow of knowledge**

As well as better models for synthesising research evidence, these hypotheses imply that we need better models of education and dissemination so that people can use knowledge better. At a time when knowledge and innovation are central to political economy, this is essential for humanity to flourish. Corporate intangible assets – such as R&D, intellectual property, brands, software, databases, organisational assets and skills - were estimated to be worth USD 61.9 trillion in 2023, 60% of global GDP ([WIPO 2024](https://www.wipo.int/global_innovation_index/en/gii-insights-blog/2024/corporate-intangible-assets.html); [Statista](https://www.statista.com/statistics/268750/global-gross-domestic-product-gdp/) 2024). The value of knowledge in universities, the public sector and civil society, however measured, is almost certainly much greater but not used as purposefully, so that its benefits are likely to be proportionally less.

Developing better models needs to start from understanding what different groups of people need and want, as well as how they currently get and use information.

**BOX 3.8: Models for improving the flow of knowledge from research**

The production of knowledge is largely funded by the public, as consumers and taxpayers, but most people do not get reliable knowledge to understand and influence society to meet their needs. As nonpartisan, independent institutions with academic freedom to decide priorities, universities could offer citizens access to knowledge to balance the powerful corporations, government agencies, and political parties vying, and sometimes lying, to govern on their behalf as outlined in 1.1. A few universities do this on a small scale, but there is still an urgent need for nonpartisan education and research for citizens to shape their own destiny. The internet, public radio, and online courses have dramatically increased access to knowledge, but what is often missing are opportunities for people to find, discuss, study, and apply relevant knowledge in a particular context.

There are many models on which to draw, mostly outside traditional higher education. Perhaps the most effective were the Scandinavian Folk High Schools and study circles. They had a formative role in the development of Scandinavia’s social democratic nation states (Nordvall 2009) and two centuries of remarkable economic and political development (Schön 2008). These models were adapted in other countries on a smaller scale, such as Highlander in Tennessee, which still provides education and research to support people’s efforts to “take collective action to shape their own destiny" (Duncan 2005: 9; Horton, 1989; Toiviainen 1995), and [Everyday Democracy](https://everyday-democracy.org/), formerly the Study Circles Resource Center. Social movements are also developing new models of learning, blending online and in-person training, not all of which is evidence-based.

Policymakers are better served. Stoker and Evans’ handbook of *Evidence-based policy making in the social sciences* provides an accessible guide to methods, including storytelling, visual methods, big data, and co-design with citizens (2016). Bastow et al’s insightful analysis includes a graphic overview of the flows of social science research in Fig 8, based on Boyer’s four forms of scholarship - Discovery, Integration (of new and existing knowledge), Application (practical problem solving), and Teaching, here labelled Renewal (Boyer 1990; Rice 1991). This is a scholar-centred model, from university disciplines through intermediary institutions (labelled “impacts interface”) to wider society. This author has added (in blue) the myriad institutions through which knowledge percolates into use plus a loop identifying social problems, often weak, from business, citizens, and government agencies for researchers to work on.

A diagram of a problem

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**Fig. 8. Visualising the flow and potential impacts of social science research** (Source:Dunleavy and Tinkler (2014), in Bastow et al 2014: 25). Institutions and the blue arrow added on the right.

The diagram does not show the scale of the four forms of scholarship, nor the volume of research with each sector, but government and business have the largest share, followed by some growth in research for NGOs. Unaffiliated citizens and community groups have almost no access to research evidence or support. This matters.

**END BOX 3.8**

University extramural education, outreach, Campus Compact, and civic engagement offer other models. But the key routes for putting knowledge into use are the institutions that engage people where they work, learn, shop and socialise.

**3.9 Support institutional development**

Providing better access to evidence is futile if institutions are unable to apply it, so scholars and practitioners need to improve models of support for professional practice and institutional development. This is sometimes provided through evidence hubs such as those listed in 3.3, but more commonly through communities of practice, centres of excellence, continuing professional development, consultancies, external regulation, inspection, and special measures for inadequate institutions.

**BOX 3.9 Models of support for institutional development**

Business has many models for institutional development, including franchises, ‘learning organisations’ and consultancies, not all of which are effective (cf Mazzucato and Collington 2023). The public sector also has models at local, national and global levels, within sectors and across issues, such as:

* Global public policy networks (GPPNs), convened by international organisations, such as the [Global Water Partnership Organisation](https://www.gwp.org/) (GWPO), or academic-led initiatives like the [Mission-Oriented Innovation Network](https://www.ucl.ac.uk/bartlett/public-purpose/partnerships/mission-oriented-innovation-network-moin) (MOIN) convened by University College London.
* “What works” centres that share practice in different sectors (Bardach 2020; Biesta 2007;Bretschneider *et al* 2004; Veselý 2011).
* Research-practice partnerships, a collaborative approach to knowledge production to improve a practice area such as social care (Boaz et al 2023), education (Coburn et al 2013; Henrick et al 2017; McGeown 2023), health (Ovretveit et al 2014), nursing (Benner 1984) etc.
* Peer-support, such as self-improving school-led system (SISS), which in the UK include [teaching school hubs](https://tshc.org.uk/find-your-local-teaching-school-hub/), the [Research Schools Network](https://researchschool.org.uk/), the London Challenge, and [Evidence Based Educatio](https://evidencebased.education/great-teaching-toolkit/)n.

Inspection, league tables, consumer choice (‘marketisation’), collective ownership (cooperatives) are also promoted as alternative models for improving institutions.

**END BOX 3.9**

The implication of this paper is that organisational development needs to be embedded in institutions themselves, stimulated through external challenge and support. Learning through observation, practice, training and storytelling is more influential than research papers. Papers can provide insights, lessons and signposts, but can never capture the complexity of a working model.

**BOX 3.10 Models for strengthening democracy**

Democratic freedoms create a fertile environment for scientific inquiry and innovation. Comparative studies such as *Why Nations Fail: The Origins of Power, Prosperity, and Poverty* (2012) by Daron Acemoglu and James Robinson provide compelling evidence for the benefits of certain institutional arrangements for good governance, largely associated with liberal democracy. In [*Political Science and the Democratic Method: How Higher Education Can Strengthen Democracy at Scale*](https://preprints.apsanet.org/engage/apsa/article-details/61528d4487a02d567a4b2561) Alexander (2021) outlines models of higher education that aim to strengthen democracy at different levels, from classroom practice to international networks, suggesting that universities could become ‘agencies for democracy’ in the spirit of John Dewey’s Laboratory School and *Democracy and Education* (1916). Initiatives such as [Particepedia](https://participedia.net/), the OECD [Reinforcing Democracy Initiative](https://www.oecd.org/governance/reinforcing-democracy/), IDEA’s [Global State of Democracy Initiative](https://www.idea.int/gsod/gsod), the EU’s [Competence Centre on Participatory and Deliberative Democracy](https://knowledge4policy.ec.europa.eu/participatory-democracy/about_en), launched in 2021, and [Team Europe Democracy Initiative](https://capacity4dev.europa.eu/resources/team-europe-tracker/partner-countries/global/team-europe-democracy-ted_en) (TED), Civicus [Digital Democracy Initiative](https://digitaldemocracyinitiative.net/), and many others aim to increase evidence-based support for democracy worldwide.

**Conclusion to Supplementary Material: Make social science matter**

Aristotle saw the purpose of education and politics as fostering a good life for citizens and happiness generally. He considered politics to be an ethical craft that helps people deal with uncertainty and create a polity that enables people to live well, emphasising practical wisdom (*phronesis*), a blend of experience, knowledge and skill in the moment. Modern social science has often been divided between the ambition to be a value-free, data-driven science and a mission for social improvement. The London School of Economics (LSE) was founded by social reformers in 1895 to contribute to 'the betterment of society' through research and education. More recently Lindblom observed that “In no nation does social problem-solving work as well as would seem possible. Problems, threats, and missed opportunities abound” (1990: vii). Turner argued that sociology must show how it can solve real-world problems and develop as a practical discipline (Turner 1998, 2001, 2019), saying “most of us are interested in sociology for its uses, for how it can help others, for how it can make a difference, and for how it can make the world better. … but it must be practice that is theoretically informed. When we let ideologies, narrow experiences, personal biases, intellectual commitments to narrow theoretical perspectives, and overuse of certain methodologies dominate our activities as practitioners, we can do positive harm” (Turner 2001: 119). In *Making Social Science Matter,* Flyvbjerg called on social science to “take up problems that matter to the local, national, and global communities in which we live, and we must do it in ways that matter; we must focus on issues of values and power like great social scientists have advocated … Finally we must effectively communicate the results of our research to fellow citizens. If we do this, we may successfully transform social science from what is fast becoming a sterile academic activity, … to an activity done in public, for the public, sometimes to clarify, sometimes to intervene, sometimes to generate new perspectives, … in short, arrive at a social science that matters.” (2001: 166). A follow-up volume, *Real Social Science: Applied Phronesis*, presents a collection of case studies to show that “this alternative social science has much promise” (Flyvbjerg et al 2012: 11). Case studies draw general lessons from specific social models. A key finding is the importance of tension points - “power relations that are particularly susceptible to problematization and thus to change, because they are fraught with dubious practices, contestable knowledge and potential conflict” (288).

The prevailing model of higher education is a volcano of tensions, straining under the pressures of student debt, declining income, casualisation of faculty, unreplicable research, plagiarism, competition from artificial intelligence, devaluation of degrees in job markets, and the vast gulf between the wealthy elite universities that dominate academic league tables and the majority of higher education institutions. Perhaps the most acute tensions come from polarisation between people without credentials and university-educated professionals who run most institutions, from corporations, government agencies, and mainstream media to nonprofits.

These tensions create opportunities for pragmatic, empirical, human-centred, pluralistic social scientists to redesign our models for the production and use of knowledge to help people solve problems better. Knowledge and the ability to use it are critical for humanity’s survival. It is not enough for scholars to analyse problems or even devise solutions if they have no effect. Improving the ability of institutions to solve problems and meet people’s needs could become the central purpose of social and political sciences, just as improving people’s health is the central purpose of medicine.

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