



DST-NRF Centre of Excellence in
Scientometrics and Science,
Technology and Innovation Policy

Socially-engaged Scholarship in the 21st Century: Some Challenges for Science, Technology, and Innovation Studies

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Outline

- Introduction to our Contemporary Conjuncture: *Common, Combined but Uneven*
- Planetary Boundaries
- Transitioning towards a Planetary Civilisation through Global Citizenship?
- Towards Socially-engaged Scholarship
- Conclusions
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Our Contemporary Conjuncture: Common, Combined and Uneven

- 4.55 billion years of geophysical development leading to the Anthropocene
- A Planet of 7.4 Billion People variously segmented by social categories and divided into 193 UN Member and 54 non-Member States (Countries)
- “The integrative force of global production, finance and technology has qualitatively changed social relations along with culture, politics and the way we see the world and ourselves. Globalisation, as a mode of accumulation and wealth has achieved a hegemonic position but its social structure and nationally defined characteristics continue to be formed...” (Harris: 2007)



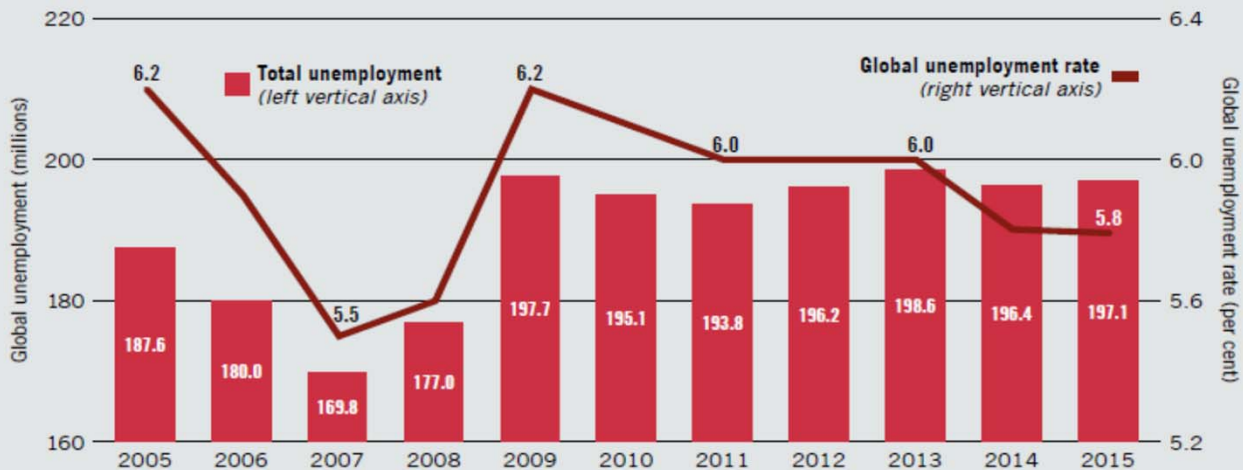
Globalisation Effects

- Global economy *grows unevenly* (Financialisation)
- **Under-employment** expands
- **Poverty** persists
- **Inequality** increases
- **Ecological** degradation deepens



Global Un- and Under-employment

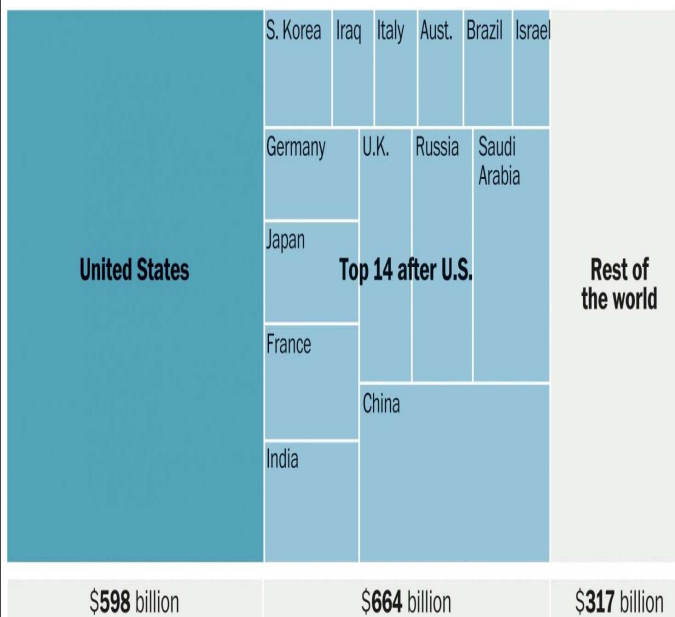
Global unemployment rate and total unemployment, 2005–15



(Source: ILO: 2016)



Military Expenditures 2015

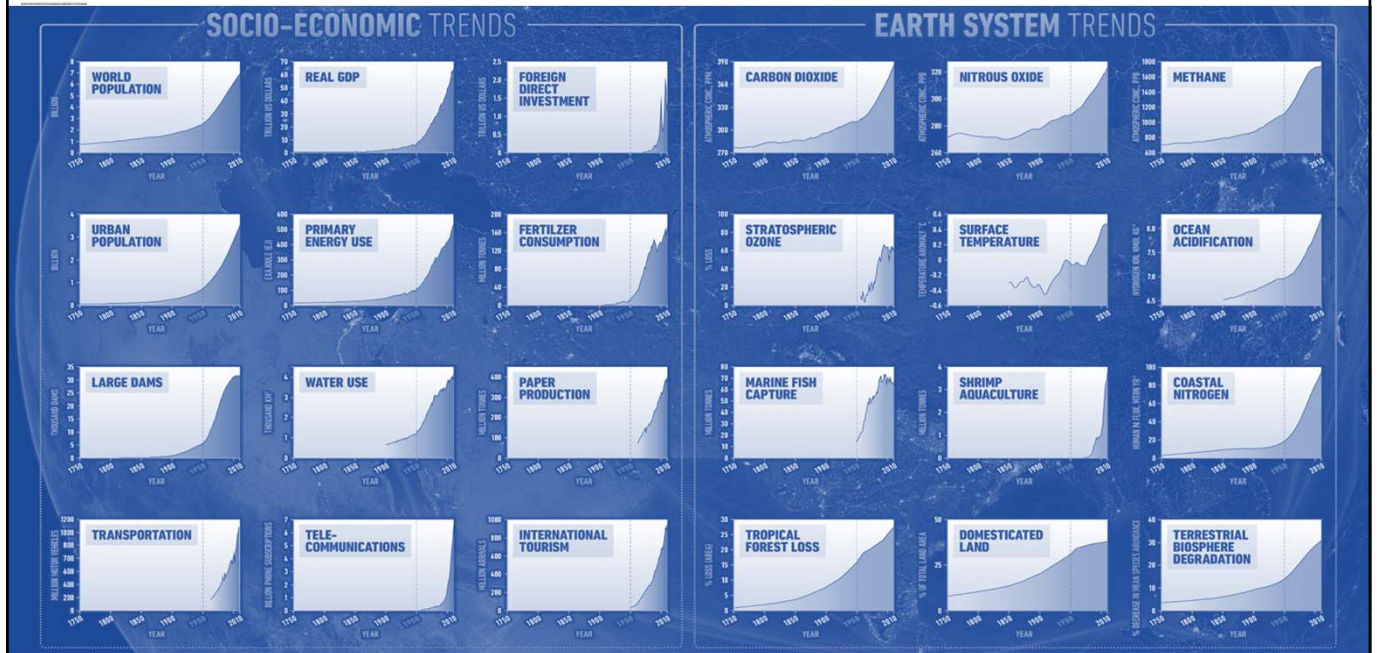


“Access to military-relevant high technologies is growing and this levelling of the technological playing field presents governments with a challenge not just to keep pace with the latest technology and monitor its proliferation but also cope with the blurred boundaries between civil and military technologies and offensive and defensive military systems. ... **Western military technological superiority, a core assumption of the past two decades, is eroding**”

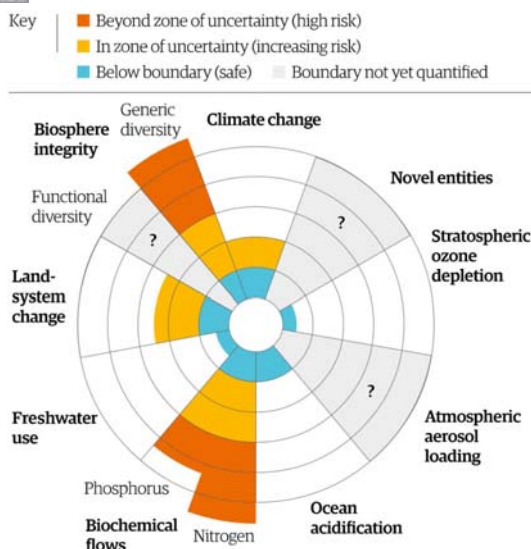
(Chipman: 2016)



The Anthropocene



Planetary Boundaries



- “Transgressing a boundary increases the risk that human activities could inadvertently drive the Earth System into a much less hospitable state, damaging efforts to reduce poverty and leading to a deterioration of human wellbeing in many parts of the world, including wealthy countries”
(Steffen et al: 2015)



The Spectre of Post-capitalism ...

“Given that we are decades into the info-tech era, it is startling that – as Oxford maths professor J. Doyne Farmer points out – there are no models that capture economic complexity in the way computers are used to simulate weather, population, epidemics or traffic flows. In addition, capitalist planning and modelling are typically unaccountable: by the time a major infrastructure project starts delivering results, ten or twenty years after its impact was first predicted, there is no person or organization still around to draw conclusions. Thus, most **economic modelling under market capitalism is actually close to speculation**. So one of the most radical – and necessary – measures we could take is to **create a global institute or network for simulating the long-term transition beyond capitalism. It would start by attempting to construct an accurate simulation of economies as they exist today**. Its work would be Open Source: anybody could use it, anybody could suggest improvements and the outputs would be available to all”

Mason, Paul (2015) Post-Capitalism: A Guide to Our Future, Penguin, London.



Sustainable Development Goals (Post-2015 UN Development Agenda)



“Science plays an important role for sustainable development from informing the formulation of evidence-based targets and indicators, to assessing progress, testing solutions, and identifying emerging risks and opportunities. In recent decades, Earth-system research has provided critical inputs into our understanding of the interlinkages and interdependencies between natural and social systems which can support integrated policy-planning, monitoring and review at different scales”

ICSU, ISSC (2015): Review of the Sustainable Development Goals: The Science Perspective. Paris: International Council for Science.



Grand challenges for science and society to solve by 2050

- “Scientists have long known the global ecosystem is under duress from human impacts that, if they continued unabated, would damage Earth’s life support systems, people, and other species irretrievably by the middle of this century. Solutions are at hand, but only if scientists and others in academia are more proactive in communicating relevant discoveries and working with all sectors of mainstream society to turn around six destructive trends: climate change, ecosystem destruction, extinctions, pollution, overpopulation and overconsumption, and spill-over of diseases”

Elementa: Science of the Anthropocene: A mission-driven, non-profit collaborative, trans-disciplinary, open-access journal committed to the facilitation of collaborative, peer-reviewed research



Transitioning towards a Planetary Civilisation through Global Citizenship

- “Perhaps the key theme in the story of the 21st century will be how humanity addresses multiple threats to the stability of the planetary social-ecological system” (Gerst et al: 2014: 124)
- “What has changed fundamentally after the financial crisis is the fact that capitalism, the system legitimating most aspects of our modern economic science (and corresponding academic positions), has decisively lost its comfort zone” (Müller: 2014: 1)
- Need/ Demand for the establishment of an integrated developmental agenda that encompasses both “more viable and inclusive national development strategies and changes in the global economic system to accommodate and support them” (UNCTAD: 2013)



Ironies of our times ...

- One of the ironies of contemporary social science is that a particular and narrow conception of science has come to dominate social research. That conception gives emphasis to the procedural logic of research by making statistical and procedural problems paramount to the conduct of research. This view eliminates from scrutiny the social movements and values that underlie research methods and which give definition to the researcher as a particular social type.
- As a result, the possibilities of social sciences are at best limited, and at worst mystifying of the very human conditions that the methods of science were invented to illuminate.

(Popkewitz: 1984: 2)



The Death of Universities?

- “Since Margaret Thatcher, the role of academia has been to service the status quo, not challenge it in the name of justice, tradition, imagination, human welfare, the free play of the mind or alternative visions of the future. ...
- “... there is no university without humane inquiry, which means that universities and advanced capitalism are fundamentally incompatible”

(Eagleton: 2010)



Academic Research and Social Policy Analysis

- “The activity of producing new ideas, or new interpretations of old ideas, adding to the body of human understanding, expanding the horizons of such understanding and taking understanding to a higher level of clarity and the modes and methods of doing so through the process of engagement in the production and dissemination of knowledge”
- “they try to see problems from the perspective of the decision maker, but with a set of intellectual, analytical and research tools that the politician or senior civil servant may not possess. They are ... at the elbow of the decision makers, or if not in government, then serving the ‘government in opposition’ or some think tank or interest group which hopes to staff the next administration”

(Trow: 1988)



Ripe for Rupture

- “Instead of leading people to the barricades, instead of addressing the most urgent issues our world is now facing, official philosophers are fighting amongst themselves for tenures, offering their brains and bodies to the Empire. At best, they are endlessly recycling each other, spoiling millions of pages of paper with footnotes, comparing conclusions made by Derrida and Nietzsche, hopelessly stuck at exhausted ideas of Kant and Hegel. At worst, they are out-rightly evil – making still relevant revolutionary philosophical concepts totally incomprehensible, attacking them, and even disappearing them from the face of the Earth”

(Vltchek: 2016)



Models of Social Policy Research

- Percolation

- ‘research somehow ... influences policy indirectly, by entering into the consciousness of the actors and shaping their choice of policy alternatives’

- Political

- ‘the intentional use of research by political decision makers to strengthen an argument, to justify the taking of unpopular decisions’.

(Trow: 1988)



Policy Intellectuals and Policy Analysts

- “undertake research ‘according to the paradigms’ of their graduate studies, operate at a high level of specialization (and consequently do not deal with ‘global problems’), and there are few limitations on which policy issues they might choose to investigate.
- ‘serve the client’, through ‘interdisciplinary’ work on issues constrained by a defined problematic or ‘circumscribed policy areas’ rather than through freely chosen theories, and without any peer review system

(Motala: 2007)



Critical Social Policy Analysis

- Critical social policy analysis must seek better understandings of the social phenomena of rising elite power, political privilege and social marginalization, both as new forms of imperial dominion and political control through unequal trade and financial regimes and as self-serving opportunism (Motala: 2007: 96)
- Understand the context in which social policies are applied as conjunctural to the broader developmental challenges which face such developing states and societies
- Critique must be clear and unambiguous, reflective and analytical, stating its underlying assumptions and values, clarifying its ideological standpoint, and based on careful study of the facts and good empirical evidence without being empiricist



(Sokal, Alan: 1996) redux

- CFP: “This panel addresses absences—the gaps, silences, and remains within the construction of knowledge and ignorance—in order to contribute to an ongoing STS dialogue; one that has roots in Bloor’s “sociology of error” to more recent work in agnotology (Proctor and Scheibinger) and in residues (Bowker and Star). From feminist and postcolonial theory, we have learned to be continually vigilant about the dynamics and non-dynamics in knowledge construction and application. This panel addresses these negations, unseen crevices, deletions, and leftovers from multiple perspectives. Its aims to identify and theorize some of those areas that demand our vigilance in order to broaden and provide systematic ways to understand how absences and gaps are a continual part of social interactions and our STS studies. Interested Presenters: Please send us a brief abstract and title of your talk with your name, email and affiliation. We would like contributions no later than 15 January to compile and submit the session

2010 Panel sponsored by the Society for Social Studies of Science and the Japanese Society for Science and Technology Studies”

“I admit I had no idea what any of this meant, but I took that as a challenge. So I wrote a few hundred words of complete nonsense and in January 2010 submitted it to the panel organizers under the title, ‘Music, Religion, Politics, and Everyday Life: The Tensions of Utopianism and Pragmatism in Movements for Change.’”

Peter Dreier: E.P. Clapp Distinguished Professor of Politics, Politics, Urban and Environmental Policy

Dreier, Peter. 2016. Academic Drive! Report: Confessing my sins and exposing my academic hoax. Prospect Blog, 22 February.

(Source: Singal: 2016)



Socially Engaged Scholarship

- *Scholarship that engages the university in the production of knowledge through its co-construction with the communities of the university*
- Reflect on the
 - social value and uses of knowledge
 - responsibilities of public bodies and intellectuals
 - relationship between knowledge, power and the dominance of ideological positions in and through research
- provide systematic, analytical and sustained reflection and critique of the nature of public policies and their implications for and effects on society as a whole, or on social classes, groups or communities
- “our work must unambiguously contribute to the social goal of a democratic, informed and thinking citizenry, an objective which does not pretend to adopt a ‘neutral’ approach to research” (Motala: 2007: 94)



Conclusions

- Ensuring sustainable development on a global scale may entail at least three simultaneous actions:
 - robust and radical appraisals of the contemporary mode of production, its political economy and its mobilisation of forces of production;
 - innovation which deliberately generates opportunities to transcend precariousness generated by the hegemonic mode of production; and
 - alternative framings for redressing the metabolic rift and living sustainably within the planet’s ecological thresholds.



Bertrand Arthur William Russell

3rd Earl Russell, OM, FRS (1872 – 1970).

- *The Ten Commandments that, as a teacher, I should wish to promulgate, might be set forth as follows:*
 1. Do not feel absolutely certain of anything;
 2. Do not think it worthwhile to proceed by concealing evidence, for the evidence is sure to come to light;
 3. Never try to discourage thinking for you are sure to succeed;
 4. When you meet with opposition, even if it should be from your husband or your children, endeavour to overcome it by argument and not by authority, for a victory dependent upon authority is unreal and illusory;
 5. Have no respect for the authority of others, for there are always contrary authorities to be found;
 6. Do not use power to suppress opinions you think pernicious, for if you do the opinions will suppress you;
 7. Do not fear to be eccentric in opinion, for every opinion now accepted was once eccentric;
 8. Find more pleasure in intelligent dissent than in passive agreement, for, if you value intelligence as you should, the former implies a deeper agreement than the latter;
 9. Be scrupulously truthful, even if the truth is inconvenient, for it is more inconvenient when you try to conceal it;
 10. Do not feel envious of the happiness of those who live in a fool's paradise, for only a fool will think that it is happiness.

(Russell: 1951: The Best Answer to Fanaticism: Liberalism)



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**dankie*enkosi*ke a leboga*ke a leboha*
*ndi a livhuha*ndza khensa*
*ngiyabonga*ngiyathokoza*thank you**

Obrigado

Спасибо

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