**Pathways to Sustainability**: responding to different aspects of incertitude

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The recent establishing of the Sustainable Development Goals (SDGs) offers welcome recognition for the inconvenient complexities, pluralities and indeterminacies of Sustainability. What is most crucially recognised in this framework, is the need to resist powerful pressures to reduce debate to narrow – apparently simple – technical policy considerations. What is highlighted instead, is the need for vibrant, irredicibly political, spaces, within which to negotiate the complex interactions of possibilities, responsibilities, rights and accountabilities.

Following the seminal early intervention of the Brundtland Commission, what is crucial about this ongoing Sustainable Development discourse, is that it retains an essential focus on active participation in democratic struggle, driven by otherwise marginalised hopes and aspirations of the most vulnerable and marginalised people. Faithful to its founding imperatives in emancipatory collective action by international social movements, the vision of Sustainability codified in the SDGs, recognises that all kinds of associated knowledges (including science itself) can be shaped and pervaded by political pressures and the imprints of power.

Yet elsewhere in contemporary global high-level discourse around Sustainability, the trend is rather different. Influential agendas around ‘Anthropocene Planetary Boundaries’ and ‘Earth Systems Management’ highlight the supposedly rigid determinacies of ‘planetary control variables’. The emphasis is increasingly on ‘non-negotiable’ imperatives, brooking ‘absolutely no uncertainty’. Here, agency lies more with narrow scientific analysis and expert processes, often paying only lip-service to the importance of divergent perspectives, interests and knowledges. Recent reports from the IPCC illustrate how incumbent patterns of interests can divert this kind of discourse away progressive social transformation and towards technocratic planetary geo-engineering.

This warping of global Sustainability debates is not only anti-progressive, but profoundly unscientific. It ignores the crucial fact that the principal drivers of robustness in scientific knowledge emerge from unique (if highly imperfect) institutions and practices that foster tolerance for plurality in knowledge production – and the need to challenge power. As the seventeenth century motto of the British Royal Society has it (increasingly ironically) “nullius in verba” – ‘not on authority’. In particular (and in principle), the robustness of science rests in constant striving for transparent and rigorous attention to **uncertainties**, respect for **ambiguities** resulting from divergent perspectives – and recognition for the ever-present potentialities of all that remains **unknown**.

Where these qualities become neglected, science itself risks compromising on its distinctive founding aspirations. There are dangers that under-challenged unconditional expert discourse may merge with other forms of political or religious doctrine in which suppression of uncertainties, ambiguities and unknowns serve simply to justify expedient policy interpretations and entrench incumbent interests. This is a particular danger around conventional approaches to ‘evidence based’ ‘risk governance’, in which supposedly irrational ‘public perceptions’ are repeatedly contrasted with ‘sound scientific’ realities, and strategies claimed to be simply ‘pro-technology’. This denies space for crucial debates over the crucial importance of **alternative** pathways to Sustainability.

This talk will outline the contribution that can be made towards resisting these pressures, by some pragmatic frameworks, methods and practices in the production of knowledge for Sustainability. These can help catalyse and provoke space for the more vigorous questioning and challenge of incumbent interests. In particular, attention will focus on a simple matrix for distinguishing and exploring the contrasting aspects of incertitude in any given setting: risk, uncertainty, ambiguity, ignorance. By acknowledging the irredicibly plural and conditional nature of knowledges bearing on Sustainability, space can be opened up for more robust and transparent explorations of how divergent perspectives and interests yield contrasting prescriptions. By attending to the resulting greater diversity of methods and ‘solutions’, tensions can be reconciled – and synergies harnessed – between imperatives for scientific rigour and democratic vigour in transformations towards Sustainability.