Using philosophy to improve Dutch climate change and sustainability policies

LSE philosophers encouraged the Dutch government to adopt novel approaches for sustainability and predicting climate change.

What was the problem?

The work described here harnesses philosophy to help the Dutch Government respond to two environmental challenges. The first concerns how to encourage environmentally sustainable behaviour rather than rely on enforcement through regulation and taxation. The Netherlands has to date been relatively more averse to the potential application of, and moral scope for, behavioural policies than countries such as the UK and Germany.

The second challenge is how to model predictions of future climate change. Politicians must act long before sufficient empirical evidence has accumulated to support climate predictions, so how can these crucial decisions be based on proper evidence?

Increasingly, the climate predictions used by policymakers are fine-grained probabilistic predictions, specifying the probabilities that certain specific local conditions will occur. State-of-the-art climate models turn uncertainty about parameters and initial conditions into predictions about probable outcomes. The probabilities are then offered to policymakers and the general public as decision-relevant information.

The UK's climate policy is almost entirely based on such probabilities, which are gaining international favour too. But are governments using the right approach to model how and to what effect our climate is changing?

What did we do?

LSE Professor of Philosophy Luc Bovens developed his ideas on environmental sustainability through a novel exploration of the much-acclaimed 'nudge' theory developed by American academics Richard H. Thaler (Chicago) and Cass R. Sunstein (Harvard), which Bovens was the first to discuss in the framework of moral philosophy. Nudge theory maintains that positive reinforcement and indirect suggestions influence behaviour more effectively than direct enforcement.

Soon after their work appeared in 2008, Bovens laid out a set of conditions to determine what constitutes a 'nudge' and examined the many variables that help to determine when a nudge is morally permissible.

Several years later he extended the discussion of nudges into behavioural policies in areas of environmental and domestic sustainability, including recycling, food waste, domestic energy usage and transport. He laid out ethical considerations when implementing such policies, dealing in particular with the imposition of new risks, threats to vulnerable groups and violations of privacy and truthfulness. This investigation produced a number of recommendations concerning the duties of – and caveats for – government when instituting behavioural policies in the area of sustainability.

In a parallel development, the LSE's Climate Modelling Group (CMG) was formed in 2009 when Professor of Philosophy Roman Frigg and Professor of Statistics Leonard Smith started collaborating on a project investigating the validity of climate predictions used to provide evidence for policy decisions. (Smith and Frigg are now Director and Co-Director of the LSE Centre for the Analysis of Time Series.)

They concluded that probabilities are the wrong tool to capture uncertainties in climate models. In such models two problems collide, chaos and model error, with the result that probabilities thrown up by the models may have little connection with the real world.

Instead, CMG recommended that climate scientists should use model-based reasoning to formulate different plausible scenarios, which should then form the basis for policymaking and for public information programmes. Scenario-based approaches display a higher level of scientific sincerity and accountability, and better convey the severity of the situation to citizens and politicians.

The link between Bovens' work on risk in the context of sustainability and Frigg's work on the validity of climate change predictions came through their joint membership in LSE's Grantham Research Institute on Climate Change and the Environment, which has fostered conversations and connections between their respective research projects.

What happened?

Nudge policies work best when they are not fully transparent. Bovens has nonetheless successfully argued that the use of nudges in policymaking should be public knowledge, and that attentive citizens should be able to recognise a 'nudge' when one is implemented. This insight was endorsed by the UK House of Lords *Behaviour Change Report*, which draws on Bovens' work, and by the Dutch Council for the Environment and Infrastructure, to whom Bovens made recommendations.

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The Dutch Council for the Environment and Infrastructure subsequently incorporated Bovens' recommendations into its own advice to the Dutch Government and Parliament on sustainable behavioural patterns and on what governments may and should do to stimulate more environmentally sustainable behaviour among citizens. Informed by Bovens, the Dutch Council's recommendations set out how behavioural policies might work in the Netherlands, both practically and morally. Such policies respect freedom by leaving choices open and they stimulate the search for creative local solutions.

A key conduit for Professor Frigg's influence on Dutch Government policy was Professor Arthur Petersen, Chief Scientist of the PBL Netherlands Environmental Assessment Agency (2011-14) and a member of the Advisory Board to the Royal Netherlands Meteorological Institute. Now at University College London, Petersen was Visiting Professor at LSE from 2009-14.

In 2011–12, Petersen approached CMG for advice on what kinds of evidence should form the basis of future climate policy decisions. Should the Institute adopt a probabilistic approach or should it follow a scenario-based approach? This issue was equally pressing in the UK where the government was funding a large-scale project giving decision-makers probabilistic forecasts for a range of key weather variables.

Through his interaction with CMG, Petersen became convinced of the perils of probabilistic climate predictions, and he had a crucial influence on an Advisory Board report to the Royal Netherlands Meteorological Institute. Despite considerable pressure to adopt the now-fashionable probabilistic approach to forecasting, the Institute favoured scenario-based planning. This has now been embodied in the Dutch government's Delta Programme geared towards preparing the Dutch lowlands to adapt to climate change.

Ideas are born and developed in context, in a spirit of mutual enrichment. Without claiming exclusive one-way influence, the fertile collaboration between Frigg and Andersen and between professors and researchers at LSE's Grantham Research Institute on Climate Change and the Environment, have demonstrated the potential for practical outcomes from philosophical reasoning.

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