

ResIST:
Researching Inequality through
Science and Technology
Atlanta Conference on S&T Policy, 2006

JamesMartinInstitute
for science and
civilization

Peter Healey
James Martin Institute for Science and Civilization
University of Oxford

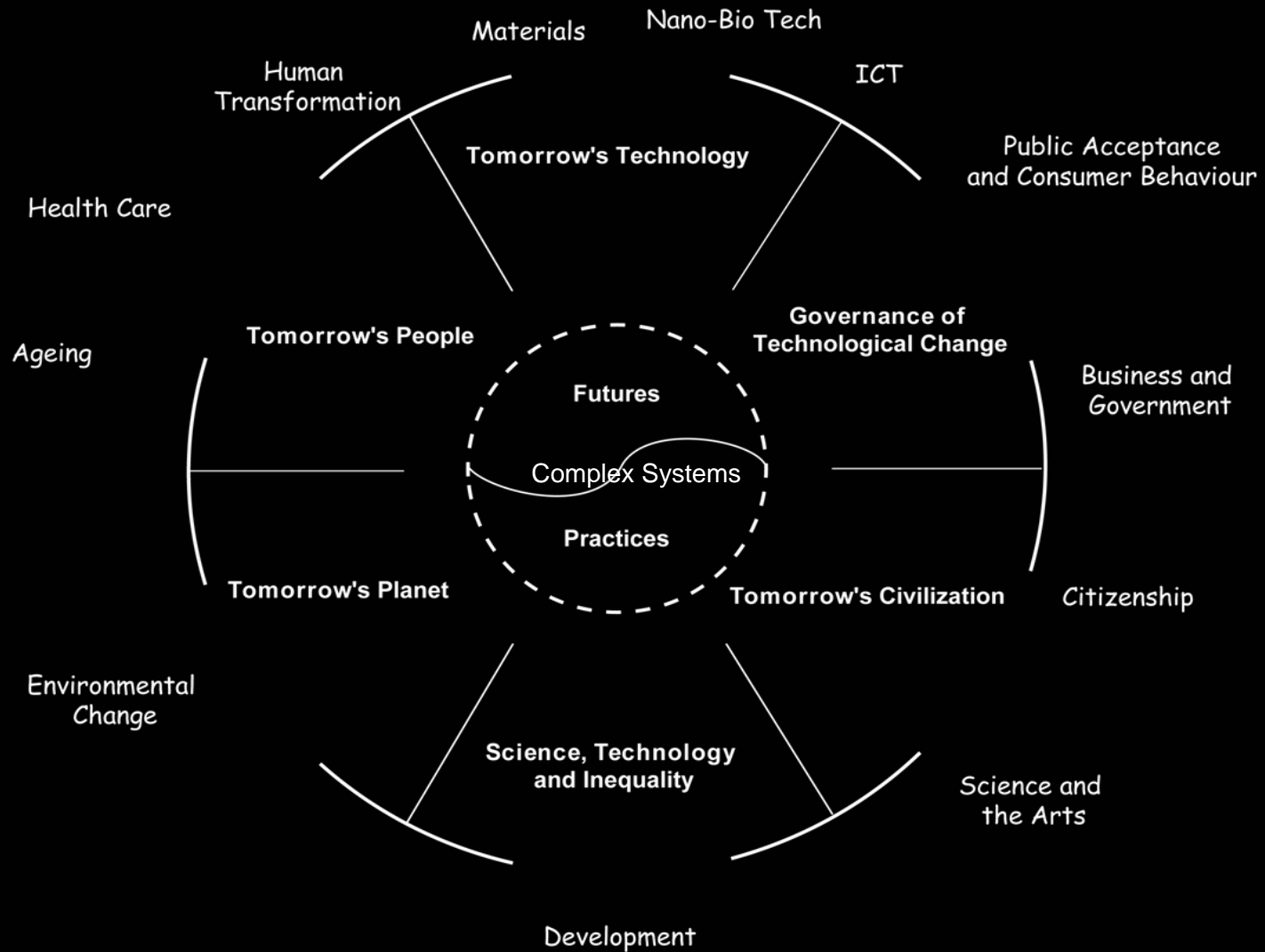
The James Martin Institute for Science & Civilization and the 21st Century School

- JM Institute founded May 2004
- Part of 21st Century School founded June 2005 – 11 institutes/programmes
- Share
 - Our Benefactor
 - Multidisciplinary attack on C21's obdurate problems

The JMI Mission

- THE JAMES MARTIN INSTITUTE FOR SCIENCE AND CIVILIZATION WILL IDENTIFY SCIENCE AND TECHNOLOGY ISSUES CRITICAL IN SHAPING THE FUTURE OF WORLD CIVILIZATION
- IT WILL CONDUCT RESEARCH TO HELP HUMANITY TO SHAPE A BRIGHTER FUTURE FOR ITSELF AND THE NATURAL ENVIRONMENT ON WHICH IT DEPENDS
- IT WILL INFLUENCE THE COURSE OF TECHNOLOGICAL AND SOCIAL CHANGE THROUGH THE ENGAGEMENT OF HIGHEST QUALITY SCHOLARSHIP WITH KEY DECISION MAKERS IN BUSINESS, GOVERNMENT AND CIVIL SOCIETY
- ITS FELLOWSHIP PROGRAMME WILL BRING TOGETHER LEADING SCHOLARS AND PRACTITIONERS AROUND THE WORLD
- ITS SYMPOSIUM WILL BECOME A WORLD FORUM ON SCIENCE AND CIVILIZATION ITS TEACHING PROGRAMME WILL TRAIN FUTURE GENERATIONS OF WORLD LEADERS

The Martin Institute Mandala



ResIST

- Background collaboration at Stellenbosch September 2003 including Susan Cozzens, Peter Healey, Johann Mouton and Arie Rip
- CAPE Framework drawing strongly on Cozzens et al on three dimensions of inequality
- ESRC UK development grant Jan-April 2005
- Proposal for €1.6 m submitted April 2005
- Decision September 2005 for €1.3 m over 3 years
- Research 1 April 2006 - 31 March 2009
- Kick-off meeting in Oxford June 2006

Why Inequality?

- We recognise that inequality is a complex and multidimensional issue
- We don't start with the proposition that inequality is always bad and the obligation to remediate it is always an overwhelming social obligation
- However, we do believe that major inequalities are a significant cause of personal unhappiness, social injustice and political instability
- Because of this there is an obligation to scrutinise all governance systems & look at scope for more socially inclusive policies

Why S&T?

- The most pervasive and obdurate sources of social distribution are enshrined and entrenched in S&T systems
- Because of their entrenchment these sources are often seen as technical and thus overlooked & seen to be beyond the scope of social science analysis
- Wide range of reasons in current world to address all the bases of inequality

Why now?

- The Global knowledge economy gives such issues more general salience
- Specific emerging technologies may accelerate inequalities and raise the spectre of sociotechnical or - at the extreme - biological speciation
- Research policy space opening up for consideration of these issues with debates about the failure of the UN, of the Bretton Woods institutions, of the WTO Doha round, and - in Europe - of the Lisbon agenda & Constitution

What is the basic ResIST stance?

- ResIST aims to understand processes that contribute to the increase of inequalities *through* S&T but also which contribute to the mitigation of inequalities *through* S&T
- ResIST wants to root its work in affected communities

Challenge 1: The Influence of Policy Contexts & the scope for change

- How do policy contexts for key S&T processes affect the production and distribution of knowledge resources, and what is the scope for alternative framings and policies? ResIST will analyse
 - Existing policies for the knowledge economy
 - Inequalities in the knowledge economy
 - Inequalities in S&T policies - national, European & global
 - » Intellectual property rights (WTO, WIPO)
 - » International Institutions (World Bank, UN agencies, International NGOs)
 - and undertake policy synthesis to determine the scope for change

Challenge 2: Building Capacity in the context of Global Scientific Mobility

ResIST will examine scientific flows between the UK, Germany, Turkey and South Africa and undertake case studies of two world regional magnets - the UK in relation to Europe and South Africa in relation to Africa - in order to understand

- Degree of European dependence
- The quality and characteristics of flows (who, what stage of careers, investments made, skills generated and who underwrites the costs)
- Retention, settlement and propensity to return
- Policies and costs intended to underwrite return and resettlement
- Mobilisation of the diaspora in situ - a real option?

Challenge 3: Articulating New Accountability Systems

- Accountability systems embody normative assumptions about the purposes and uses of S&T
- The boundaries between alternative systems and conventional policy and practice are an important site of contestation in scientific governance and one where any reconfiguring of interests can take place
- ResIST will look at the construction of alternative accountability systems in two contexts:
 - » experimental initiatives in capacity building and priority setting with the aim of remediating inequality and/or democratising science
 - » redistributive issues associated with the design, development, access to and use of mundane, everyday technologies
 - textile lifecycles
 - electronic waste lifecycles
 - vaccines

Challenge 4: Assessing the Distribution of New Technologies

- New technologies often lead to new industries which in turn disrupt existing patterns of trade and employment
- One argument is that in this process, knowledge-holding individuals and societies are more likely to be winners and resource-based livelihoods and societies are likely to be losers
- ResIST will develop tools for the prospective assessment of the distributional effects of new technologies through three routes

- » Employment and wages
- » Lowering of costs of basic goods
- » Improving public services

looking at examples from three 'platform technologies' identified as crucial for development by the Millennium Development Project: Biotechnology, ICTs, & Nanotechnology

Challenge 0 (horizontal): Assessing and integrating our work into research policy in Europe & in/with developing countries

- Involve policymakers and practitioners in focusing the project & identifying and implementing options developed in it. In particular the WP will test the opportunity to develop and apply tools to assess:
 - S&T policy options to develop greater social inclusiveness, in Europe, as well as in developing countries;
 - the possible distributional impacts of research programmes (such as in FP7)

ResIST world regions

- Europe: EU15, EU+10, and Candidate States
- Southern Africa
- Latin America & the Caribbean
- Working on proposal to consolidate existing links and fund additional partners in China, India and Bangladesh

Frameworks of analysis: Types of inequality (Cozzens and colleagues)

- Distributional inequality
- Structural inequality
- Representational inequality
 - What relations between these?
 - If inequality is affected what are the causes and processes?
 - What do these suggest for the design of new accountability systems?

Frameworks of analysis: Modes of S&T governance (Hagendijk/Kallerud and STAGE)

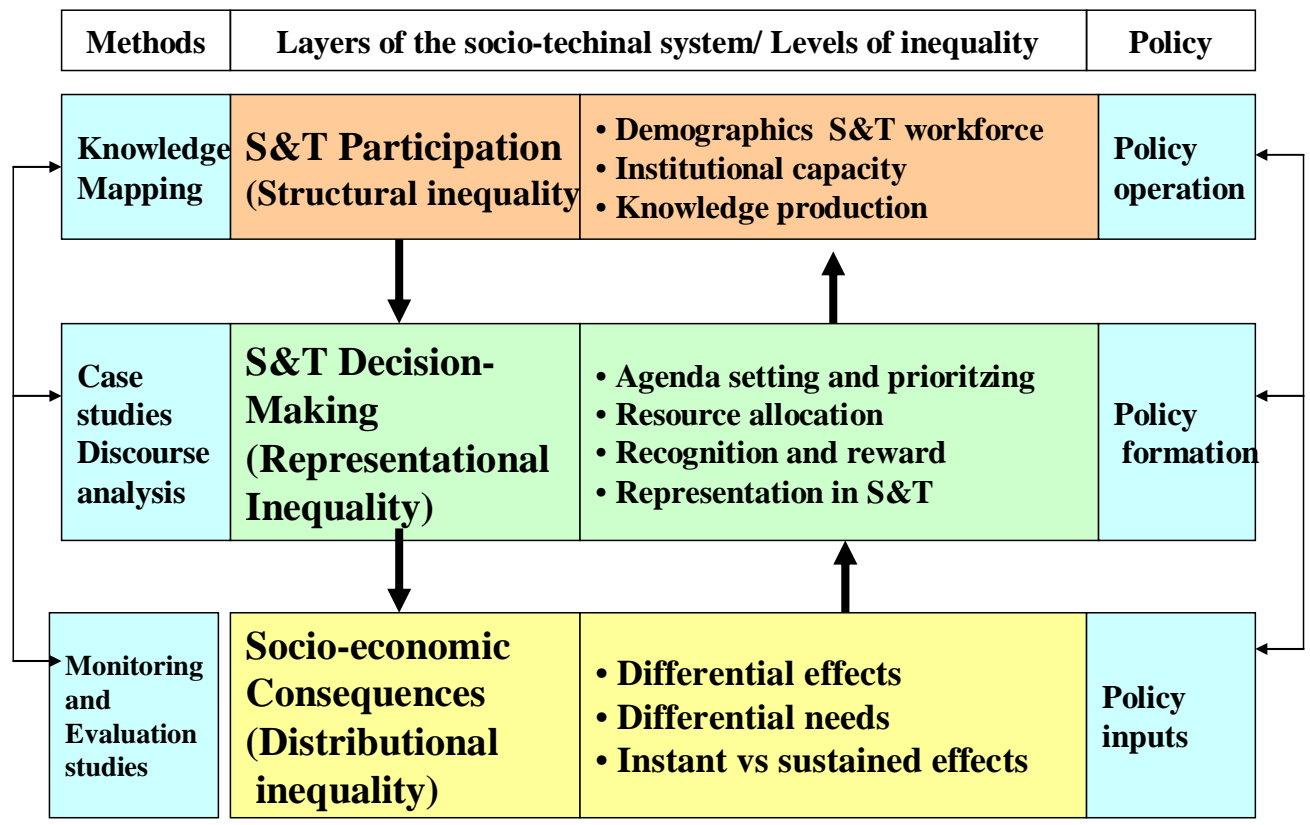
- Discretionary
- Educational
- Deliberative
- Corporatist
- Market
- Agonistic
 - Assumptions/processes
 - Characteristic outcomes
 - Challenges to existing systems

Frameworks of analysis: Technology characteristics

- Health hazards/resource use in production & use
- Ethical disrupters
- Opportunity scope
 - Restrictions and reward in IPR
 - Products/knowledge for development?
 - Mobilise & build skills and capacities?
 - Platforms for production and growth?

Putting the picture together - where we start(ed) from

Figure 1
Inequality in S&T



ResIST Futures

- Increased capacity for S,T & I studies in target world regions
- Work to articulate/ assess alternative development paths reflecting local knowledge and social priorities
- Engaging heterogeneous interests and actors in 'strategic intelligence'
- Payoffs for European countries in:
 - More inclusive & 'tuneable' S&T policy
 - Developing global markets & security
 - Learning from the South - allowing Europe to re-discover new innovation models reflecting its own needs and priorities

ResIST - how you can help

- Initial Kick-off meeting includes workshop to situate ResIST research and plan our usage of concepts and methods: from lunchtime 20 June to lunchtime 21 June 2006. Most likely venue Oxford but virtual presence on the internet - video/or audio stream, opportunity to contribute to discussion in real time and through discussion boards
- European, Southern African and Latin American/Caribbean user oriented workshops in November 2006 - help us to map the stakeholders and locate cases. Plan these also to be online
- 'Open Architecture' - ResIST as a base - pleased to have complementary independent studies related to our agenda
- www.martininstitute.ox.ac.uk/jmi/research

ResIST team

- James Martin Institute for Science and Civilization,
University of Oxford, UK
Steve Woolgar, Steve Rayner, Peter Healey, Dan Neyland, Jerry Ravetz
- University of Leeds, UK
Louise Ackers, Bryony Gill
- NIFU STEP, Norway
Egil Kallerud, Aris Kaloudis
- Universiteit van Amsterdam
Rob Hagendijk
- CES, Universidade de Coimbra, Portugal
João Nunes, Tiago Santos Pereira, Marisa Matias
- University of Malta, Malta
Jennifer Cassingena Harper, Noel Zarb-Adami
- METUTECH, Turkey
Sirin Elci, Ihsan Sezal, Fuat Berk Kirli
- Universidade Eduardo Mondlane, Mozambique
Lídia Brito
- CREST, Stellenbosch University, South Africa
Johann Mouton, Frank Teng-Zeng, Nelius Boshoff
- ISI Fraunhofer Gesellschaft, Germany
Stefan Kuhlmann, Vivien Lo
- TPAC, Georgia Tech, United States
Susan Cozzens