

Lecture by Josephine Stein, Workshop 18 October 2005: Science and security through international cooperation: Europe in a globalising world

Josephine Stein is a Principal Research Fellow in Innovation Studies at the University of East London in England. Her main research interests concern the interplay between science, technology and democracy, including global knowledge dynamics; science, international relations and security; expert-lay interactions in S&T-related civic affairs; computer ethics; and sustainable technological innovation. She holds a PhD in Mechanical Engineering from MIT, where she was also a Departmental Instructor. Other experience includes working as a cryogenic/aerospace engineer designing cooling systems for spaceborne sensors at the NASA Jet Propulsion Laboratory, Pasadena, California, and working at the General Atomic Company in San Diego on nuclear power engineering/design.

Her career in S&T policy analysis has included working for the US Congress, with the European Commission, at the Royal Society and in academia, and she has provided consultancy for the OECD and various national and international S&T organisations. She has directed numerous studies for the European Commission, the European Parliament, the Economic and Social Research Council (UK) and the National Science Foundation (USA). She has lectured, given academic talks and briefings to policymakers in sixteen countries, and has published in half a dozen languages. She has written, co-edited or contributed to fifteen books and has published numerous reports, academic and conference papers and shorter works for the popular press. She was the guest editor of the December 2002 issue of *Science and Public Policy* on "Globalisation, science, technology and policy" and is the European Editor of *World Review of Science, Technology and Sustainable Development*.

Abstract

Science and security through international cooperation: Europe in a globalising world

The 21st century is characterised by increasing global interdependency and global insecurity brought about by a combination of certain impacts of the networked political economy and the "collision of civilizations". Insecurity emerges as much from societal changes related to scientific

and technological developments as to new types of vulnerabilities to human aggression. This lecture identifies some of the principal threats to European security and analyses how science and technology can be enlisted to promote genuine security within and beyond European borders. The emphasis is on international cooperation and policies designed to address both human and technological aspects of sustainable development.

The proposals outlined in this lecture derive from European Union experience of security building strategies based on cooperation, including in research, while critically appraising more recent moves towards the Europeanisation of more traditional approaches to maintaining security associated with the nation state, such as military capacity and border control. The argument is made that such traditional approaches are increasingly irrelevant in an age in which the mobility of people, ideas, trade in both goods and services, finance, and production have made territorial defense superfluous.

The greatest insecurities facing European society now derive less from external threats from hostile nations than from the byproducts of modernism: a "risk society" in which industrial environmental hazards, the vagaries of the labour market and the impacts of the information age threaten health, employment security, privacy and community, often in indirect and insidious ways. Security is also threatened by the "internalisation of colonialism". Pluralistic societies have developed in Europe through patterns of migration, in which "conflicts" arise locally from different economic, social and religious realities of people living in close proximity.

Globalisation processes and interdependencies have extended the geographical basis for "a destiny henceforward shared" that was the impetus behind the establishment of the European Community half a century ago. European security now depends upon extending the regime it has itself so effectively applied internally to cooperation with external partners, including forms of S&T cooperation that have been demonstrably successful in building prosperity and harmony within the European Union.