

New Voices Conference 2006
Technology and International Relations
Outcomes Report

On 25 May 2006, the Lowy Institute for International Policy hosted its third annual *New Voices* conference. The *New Voices* initiative is part of the Institute's outreach efforts and serves three main goals: to introduce the Institute and some of the bigger questions it grapples with to a new audience; to provide engaged early-career people from a variety of backgrounds with a platform to express their insights and ideas on important issues of international policy; and to facilitate professional cross-pollination.

New Voices themes emanate directly from the mandate of the Lowy Institute, which is to analyse in a practical, policy-relevant manner Australia's place in the world and the global challenges and opportunities facing different groups in Australia. *New Voices 2005's* theme of binding the world together focused on global challenges and opportunities. *New Voices 2006* focused more specifically on how technological development affects international relations, with sessions on information technology, intellectual property, the technology gap and energy technology.

The diverse session topics reflect the diversity of the participants, who hailed from the private sector, government, public policy organisations, the media, the armed services, and the creative arts. Many participants had professional interests in one or more of the sessions. Discussion was consistently accessible but also detailed, specific and sophisticated, so that participants derived benefits at various levels of professional exposure. During the course of the conference several common themes emerged which linked the sessions together. This report is structured around those themes and the four session topics. Its contents are derived exclusively from participants' contributions, but are not attributed to any individual or organisation.

The Lowy Institute would like to thank the sponsors of *New Voices 2006*: Deacons Lawyers, 3M and Chevron. Without their generous support it would not have been possible to host such a well-subscribed conference. Thanks are due also to those who made presentations to the conference or who chaired one of the session panels. The high standard of discussion throughout the day was due largely to their efforts.



Conference Outcomes

The internet has been both a driver and a product of globalisation, breaking down barriers to the exchange of information within and between states. It has changed the way we do business in commerce and government alike. Ready access to information has expanded greatly the number of stakeholders in the public and private spheres, both complicating and clarifying the process of policymaking and adding diverse imperatives to profit-making businesses. The range of information technologies has increased general efficiency dramatically, aiding economic growth and prosperity.

One of the internet's defining characteristics is the freedom its users enjoy. The positive effects of that freedom are many and deep, but there can also be negative consequences, such as the facilitation of child pornography, illegal gambling and cyber crime, which require intervention and control. The system of domain name addresses provides ready access points at which authorities can attempt to regulate the flow of information, but it is neither technically watertight nor politically uncontroversial, particularly where disparities exist between the imperatives of different states. How should Australia respond to Chinese government restrictions on internet traffic containing key words such as "democracy", or the fact that during the Iraq War America was able to block all internet traffic routed to Iraq's country domain name?

The dominant internet-based system of organising global electronic information exchange – the world wide web – is supported by a hierarchy of root servers culminating in a single server in the United States. Domain names are registered and regulated by a corporation overseen by the US Government. Some other countries and international bodies have expressed the desire to remove control of the world wide web to an international space reflecting its international nature, but the United States evidently sees too many risks in taking that course. While an international form of governance may be more democratic it is also much less likely to work efficiently. Hence, a mismatch exists between the web's global, democratic nature and its unilateral, authoritarian governance.

Emerging information technologies will require equally innovative regulatory regimes as the traditional telecommunications landscape changes rapidly. The ability of states to control cultural goods through mechanisms like local content quotas is close to zero in a world where television can be streamed through the internet from anywhere. Current regulatory regimes are largely technology-neutral; it will be necessary to take account of the effects of specific technologies as they come on line.



The sustainable development of new technology relies to a large degree on systems enforcing intellectual property (IP) rights, and yet additional mechanisms are required to reflect the realities of some contemporary technologies. For example, it is virtually impossible to protect IP in digital format, even with sophisticated encryption systems. One alternative approach centres on the prosecution rather than prevention of digital theft, whereby techniques like watermarking can help identify the source of stolen material. Another approach is to remove the incentives for theft altogether by engaging in maximal distribution at low unit profit.

Open source agreements are another way in which IP issues can be addressed. Most often applied to software development, the open source concept is a voluntary licensing system overlaying conventional intellectual property law where it benefits both producers and users. The open source usage of new technologies makes them analogous to physical objects: once purchased, owners are free to do whatever they want with them, with the general commercial effect of reducing unit prices. Open source licensing systems can be voluntarily applied wherever intellectual property is protected by law.

More broadly, IP protection is an important issue in international trade, particularly between states with significant differences in income. On one hand, the suspension of commercial returns on IP rights can deliver basic humanitarian benefits where they are most needed in the developing world – through the generic production of patented medicines, for example. On the other hand, without a reasonable degree of protection for IP the incentives for innovation decline and beneficial products might never be developed. The Trade Related Aspects of Intellectual Property (TRIPS) agreement is a vehicle for compromise between these two positions in international trade agreements.

Despite the existence of TRIPS, the fact remains that trade agreements tend to favour the stronger party. In exchange for specific access to large, rich markets, developing countries will often enact stronger domestic IP laws which then apply generally in that jurisdiction. IP rights are also stronger in the hands of stronger parties – litigation is expensive and there is a huge difference between rights and enforcement. Disparities in size and strength apply to pairs of developed countries as well. In the case of the Australia-United States Free Trade Agreement, the transparency and dispute settlement systems will have consequences for IP issues, though the wording makes it unclear exactly how much power the US will have to affect Australian IP legislation.

As both a driver and product of wealth, new technologies are more often developed and used in wealthy countries, causing a 'technology gap' between the rich and poor worlds. It is generally seen as beneficial if technology can be transferred to close this gap, but several



classes of problem complicate the process. To a degree the solutions to those problems are the solutions to development disparities generally, where the effective uptake of technology relies upon the same structural and institutional preconditions that are necessary for effective economic development. Because IP regimes can limit the transfer of proprietary technologies, governments should be careful to consider development issues in international trade agreements.

Information technology disparity – the ‘digital divide’ – helps to illustrate some of these problems. How useful is the internet to the illiterate or non-English speaking, or to those without access to a computer? And what use is a computer where there are no consistent power or telephone connections, or where the cost of exploiting existing connections is prohibitive? In general, the solutions to these sorts of problems are best developed locally rather than imposed from abroad, particularly where technologies are transferred primarily on a development assistance rather than a commercial basis. If the local conditions for promulgating, servicing and adapting technology transferred from the developed world are not taken into account, those transfers are much more likely to fail.

The means by which global inequalities might be addressed generally promote accelerated economic growth, and yet the greatest contemporary global problem – climate change – seems certain to be exacerbated by it. Technology has brought us wealth; can it also provide the means to mitigate its negative externalities? The most likely answer, depending on the right mixture of science, economics and global politics, is that it can do so at a cost that will be reasonable to some but much less so to others.

Current fossil fuel power generation technologies cause greenhouse emissions, but because they produce power more cheaply than alternative technologies they are integral to current levels of consumption. That is partly because traditional fossil fuel power generation enjoys vast economies of scale, but there is also an efficiency inherent in using non-renewable resources which would be hard to match even if alternative sources produced an equal amount of power. If climate change is to be addressed, therefore, consumers (and governments) must be willing to trade efficiency for lower emissions. To that end, an argument can be made for introducing a moral dimension to the business of power generation. To use a common analogy, child labour may be economically efficient but it is also morally unacceptable.

International agreements which mandate carbon caps are one way to address the problem, but they must be widely subscribed to be effective. A contrary argument – embodied in the Kyoto Protocol – is that developing countries should not have to restrict their own emissions while they are still so much poorer than developed countries. An alternative approach,



embodied by the Asia Pacific Partnership for Clean Development and Climate (AP6), eschews caps and targets and relies instead on investment in technology to reduce emissions from fossil fuel power plants and promote alternative energy generation. Neither arrangement seems likely to have much effect on greenhouse emissions in the short to medium term.

Nuclear energy is the only extant form of power generation that might provide economically viable competition to fossil fuels in the medium term, but is subject to a series of problems centred on perceptions of safety and its intimate relationship with nuclear weapons. While there is strong evidence that civilian nuclear reactors can be operated (and their waste managed) safely, there is no doubt that control of the full nuclear fuel cycle infers the nascent ability to produce weapons grade uranium, which in turn can dramatically alter the equations of international power politics. The current international mechanism for mitigating those concerns, the Nuclear Non-proliferation Treaty (NPT), is unreliable at best. However, that is not necessarily an argument against nuclear power generation as many countries already have that capability. The answer probably lies in a system of international uranium export safeguards.



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