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For immediate release

Social factors matter in technological innovation

Action groups like Greenpeace influenced the adoption of a chlorine bleaching process in paper making that was inferior to the alternative elemental chlorine free paper making process. The adoption of the QWERTY-keyboard was not just a productivity enhancing invention, but was also introduced to increase control over the workers and lower wages. Those two examples show that innovation is a process in which political and social factors matter.

These are among many technological innovations analysed by Andreas Reinstaller, a PhD candidate at UNU-MERIT -- a joint research and training centre of United Nations University, and Maastricht University in the Netherlands. Reinstaller's research examined the role played by status groups, political groups and power relations in technology choices. Reinstaller will defend his thesis at Maastricht University on 14 December 2006.

A detailed re-examination of the famous case study on the introduction of the QWERTY-keyboard for typewriters shows that it was not introduced purely to increase productivity. The new keyboard simplified administrative work so that it could be divided up differently. Part of the work could now be done by less trained personnel, which put downward pressure on wages for administrative workers.

Reinstaller also analyses how status groups influence consumer patterns. Industrialization in the 18th and 19th century led to a larger upper class with more disposable income. This in turn contributed to an upsurge in consumption and the birth of consumerism as we know it, as the lower classes tried to emulate the consumption patterns of the well to do.

In recent times, special interest groups have successfully adopted public campaigns to disseminate their ideas and visions to the greater public. In some cases, this has led to significant behavioural changes among consumers, who through their demands and choices have managed to affect downstream decisions about which technologies should be adopted, even when these are economically (and technically) inferior to alternatives. Reinstaller cites the case of Greenpeace, which was able to create such a frenzy among Swedish and German consumers that a third of all Swedish and even some Finnish pulp mills switched to totally chlorine free (tcf) bleaching. This despite the fact that it was less developed technologically and therefore more expensive than the alternative elemental chlorine free process, which was cheaper, more technically advanced, and from an environmental point of view almost identical to tcf. Reinstaller argues that Greenpeace ultimately succeeded in influencing producers to opt for the less economically viable choice. The situation in the US, where the lobby group had less influence, was quite different.

Through these and other examples Reinstaller demonstrates that the adoption of new products and new technologies is not always a matter of better technological performance, but one where social competition and power relations clearly play a role.

Andreas Reinstaller will defend his PhD thesis titled “Social structures and the innovation process: Their role in the demand of firms and consumers,” on Thursday 14 December 2006 14.00 hrs at the Aula, Minderbroedersberg 4-6, Maastricht.

A summary of the dissertation is available at:

http://www.merit.unu.edu/seminars/docs/20061214_reinstaller.pdf

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About UNU-MERIT

(United Nations University – Maastricht Economic and social Research and training Centre on Innovation and Technology)

UNU-MERIT is a joint research and training centre of United Nations University, based in Tokyo, Japan, and the University of Maastricht in The Netherlands. It integrates the former UNU-Institute for New Technologies (UNU-INTECH) and the Maastricht Economic Research Institute on Innovation and Technology (MERIT).

UNU-MERIT provides insights into the social, political and economic contexts within which innovation and technological change is created, adapted, selected, diffused, and improved upon. The Institute’s research and training programmes address a broad range of relevant policy questions dealing with the national and international governance of innovation, intellectual property protection, and knowledge creation and diffusion.

United Nations University (UNU) is an international community of scholars engaged in research, postgraduate training and the dissemination of knowledge aimed at resolving the pressing global problems of human survival, development and welfare, in line with the purposes and principles of the Charter of the United Nations.

Established in 1976, Universiteit Maastricht (Maastricht University) is the youngest university in the Netherlands. It has gained a reputation at home and abroad for its unique “Problem-based learning” approach. Approximately 12,000 students and 3,250 staff currently study and work within the University’s seven faculties.