

# Technological Ambiguity & the Wassenaar Arrangement

Samuel A. Evans

New College  
University of Oxford

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## Abstract

International cooperation on export controls for technology is based on three assumptions, that it is possible: to know against whom controls should be directed; to control the international transfer of technology; and to define the items to be controlled. These assumptions paint a very hierarchical framing of one of the central problems in export controls: dual-use technology. This hierarchical framing has been in continual contention with a competitive framing that views the problem as the marketability of technology. This thesis analyses historical and contemporary debates between these two framings of the problem of dual-use technology, focusing on the multilateral Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies. Using a framework of concepts from Science & Technology Studies and the theory of sociocultural viability, I analyse the Arrangement as a classification system, where political, economic, and social debates are codified in the lists of controlled items, which then structure future debates. How a technology is (not) defined, I argue, depends as much on the particular set of social relations in which the technology is enacted as on any tangible aspects the technology may have.

The hierarchical framing is currently hegemonic within Wassenaar, and I show how actors that express this framing use several strategies in resolving anomalies that arise concerning the classification of dual-use technology. These strategies have had mixed success, and I show how they have adequately resolved some cases (e.g. quantum cryptography), while other areas have proved much more difficult (e.g. focal plane arrays and computers). With the development of controls on intangible technology transfers, a third, egalitarian framing is arising, and I argue that initial steps have already been taken to incorporate this framing with the discourse on dual-use technology. However, the rise of this framing also calls into question the fundamental assumption of export controls that technology is excludable, and therefore definable.