

**Proposal for a Special Session on
„Joint Production: thermodynamics, economics, and ethics”
at the ISEE-Conference, Montreal, 11-14 July 2004**

Organizers:

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Motivation:

Joint production is suggested as one of the conceptual foundations of ecological economics. Joint production means that several outputs necessarily emerge together from a single productive activity. An example is the refining of crude oil, in which gasoline, kerosene, light heating oil and other mineral oil products are produced; however, harmful sulphurous wastes and carbon dioxide emissions are also necessarily generated. The notion of joint production springs immediately from the application of thermodynamics, and has a long history in economic analysis. Considerations of joint production give rise to philosophical concerns relating to responsibility (ethics) and knowledge (epistemology). The concept of joint production is easily comprehensible, and is also constitutive and supportive of a range of concepts current in ecological economic thought.

Outline (Presentations and Presenters):

1. Thermodynamics of joint production – The engineer’s view
(*Jakob de Swaan Arons*, Delft University of Technology, The Netherlands, and Tsinghua University, Beijing, China)
2. Ambivalence of joint products – Secondary resources, limits to substitution and costly disposal
(*Stefan Baumgärtner*, University of Heidelberg, Germany)
3. Joint production and the evolution of ecological economic systems over time
(*Johannes Schiller*, UFZ – Centre for Environmental Research, Leipzig, Germany)
4. Investment, capital accumulation, and structural change with joint production of consumption and environmental pollution
(*Ralph Winkler*, Keele University, UK)
5. The ethics of joint production – Responsibility for unintended and unforeseen by-products
(*Malte Faber/Thomas Petersen*, University of Heidelberg, Germany)

[All contributors have confirmed their intention to make a contribution as listed here.]