

# HS 312 – Introduction to Science and Technology Studies

Lecture 10  
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# Risk as an Umbrella Term

Hazard	Possibility that something (e.g. technology) causes undesirable effects
Risk	Specification of a hazard, usually in terms of probabilities and consequences
Uncertainty	Situation in which hazards are known but cannot be expressed as risks due to a lack of knowledge
Ignorance	Situation in which hazards are unknown
Indeterminacy	Consequences (hazards) are causally open, for example because they depend on user or operator behaviour
Ambiguity	Situation in which there are different disagreeing perspectives on the nature and the (un)desirability of a hazard

# Boundary work

- Issue of epistemic authority
- Boundary mandates that some people do not have the authority
- Source of authority for science – rationality, connection to nature/technology/policy
- But it is a result of an effective boundary work – successful effort to define science in terms of rationality
- People, methods, qualifications are used for charting boundaries

# Summary

- Unless flexibly interpreted, norms do not describe the behaviour of scientists
- But the flexibility means that norms do not do explanatory or analytic work
- The idea that science is a unified institution with an overarching goal is contested
- Could an overarching goal for science have any effect on the actions of individual scientists?
- Critics suggest that science is better understood as the combined product of scientists acting to pursue their own goals
- Merton's norms are ideological resources for moral economy of science, and serve as organizational myth

# Sources

- Sismondo Sergio (2010). Questioning Functionalism in the Sociology of Science. Chapter 3, in *An Introduction to Science and Technology Studies*; second edition: Blackwell Publishing, Oxford UK.
- Harry Collins and Trevor Pinch (1998). A new window on the universe – the nondetection of gravitational waves. Chapter 5, in *The Golem: what you should know about science*; second edition: Cambridge University Press, Cambridge UK.

Thank you