A Case for Interdisciplinarity

Claire Heffernan
Claire.heffernan@lidc.bloomsbury.ac.uk
• London International Development Centre
• Risk and Resilience Hub, School of Veterinary Sciences, University of Bristol
• Livestock Development Group, University of Reading

• Hardin, C.A (1955). A classic example of interdisciplinary research. *Nursing Research.*


Interdisciplinary
Trans-disciplinary
Multi-disciplinary
Meta-disciplinary
Cross-disciplinary
Anti-disciplinary
Infra-disciplinary
Interdisciplinarity

A process of answering a question [or] solving a problem...that is too broad or complex to be dealt with adequately by a single discipline...it integrates disciplinary insights through the construction of a comprehensive perspective.

(Klein and Newell, 1998)
The Benefits

• Better understanding of the parameters of the issue/problem/constraint
• Unpacking complexity
• Fostering/sparking innovation
Tame vs. Wicked Problems

(Rittel and Webber, 1973)
Mapping Knowledge

http://idr.gatech.edu
The Literature (AMR)
AMR & Animal Agriculture
US Broiler Production

- 1950s: 1 million broiler producers (580 Million birds)
- 2007: 27,000 producers (9 Billion birds)
- 750 million cubic feet of litter
- 90% of poultry litter in US used as fertiliser
Poultry Litter

Manure, Feathers, Micro-organisms, Antibiotic residue, Heavy metals
Chesapeake Bay
Urban Nairobi

- Informal Settlements
- Dumps: human and livestock scavenging
- Water Pollution: pharmaceutical waste, heavy metal, agricultural waste, human solid waste,
- Riparian agricultural production
- Slaughter house waste
Knowledge Production

Discovery vs. Challenge-led
Interdisciplinarians...

[Are able to] integrate the best elements of disciplinary insights in order to generate a more comprehensive and nuanced appreciation of an issue.

(Szostak, 2012)
As a simple fact, interdisciplinarity responds to the failure of expertise to live up to its own hype.

(Fuller and Collier, 2004)