

Complexity, Imperfection and the Future of Public Policy

Gabriele Bammer





Population ageing

Gun control **Global warming** **Killer bacteria**
Education crisis **Boat People** **Stockmarket crash**
Sustainability **Rising hospital costs**
Organised crime
Terrorism **Biodiversity loss**



value conflicts

ambiguity

uncertainty

constraints

ripple effect

contradictory solutions

unintended adverse consequences

unpleasant surprises



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IMPERFECT SOLUTIONS

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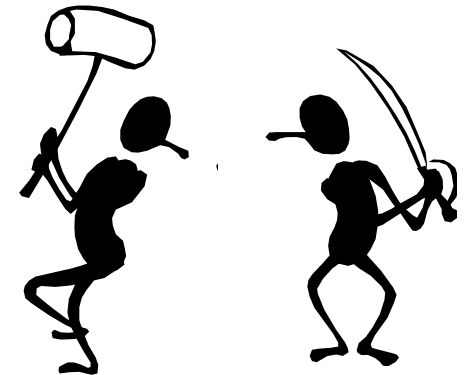
contradictory solutions

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IMPERFECT SOLUTIONS

- increased political risk
- danger of politics trumping good policy
- risk of poor governance



What could or should universities do
to support
strong democratic governance
and effective public policy?



Complex real-world problems

Horn, R. E. and Weber, R. P. (2007), *New Tools For Resolving Wicked Problems: Mess Mapping and Resolution Mapping Processes*.
http://www.strategykinetics.com/files/New_Tools_For_Resolving_Wicked_Problems.pdf

Connected to other problems



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Numerous possible intervention points
Consequences difficult to imagine



Complex real-world problems	What good at	
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Kulla's Ripple by Tim Spellman

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Points of leverage... 1

1. Capture knowledge developed by politicians and public servants

Points of leverage... 2

1. Capture knowledge developed by politicians and public servants
2. Link currently fragmented knowledge

Points of leverage... 3

1. Capture knowledge developed by politicians and public servants
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 - existing approaches to complexity

Points of leverage... 4

1. Capture knowledge developed by politicians and public servants
2. Link currently fragmented knowledge
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 - problem-based experience

Points of leverage... 5

1. Capture knowledge developed by politicians and public servants
2. Link currently fragmented knowledge
 - existing approaches to complexity
 - problem-based experience
 - existing insights on fundamental topics

Overcome fragmentation... in existing approaches to complexity

interdisciplinarity management science integrated assessment
adaptive management implementation science multidisciplinary
complexity science modelling and simulation policy science impact evaluation
system dynamics sustainability science systems thinking
public engagement action research ecological economics decision sciences
team science theory of change project management post-normal science
systemic intervention transdisciplinarity operations research
mode 2 coalition theory cybernetics Integration and Implementation Sciences (I2S)

Link research communities ... 1



Interdisciplinary Communities

Link research communities ... 2



Interdisciplinary Communities



System Dynamics Communities

Link research communities ... 3



Interdisciplinary Communities



System Dynamics Communities



Implementation Science
Communities

Fragmented research
communities

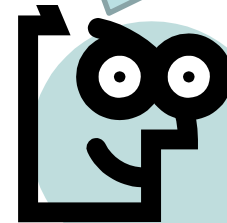
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Fragmented resources

Organise repositories...



Undocumented
evidence and
experience



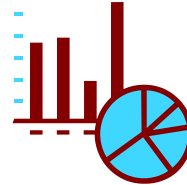
Points of leverage...

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2. Link currently fragmented knowledge
 - existing approaches to complexity
 - **problem-based experience**
 - existing insights on fundamental topics

Existing insights on fundamental concepts...

UNCERTAINTY

STATISTICS - probability theory



Music – essential for creativity



History – moral dimension

Intelligence – gaps or overload



Art – certainty and uncertainty are a continuum, not opposites

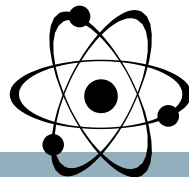


Complexity - irreducible

Futures – unknown unknowns

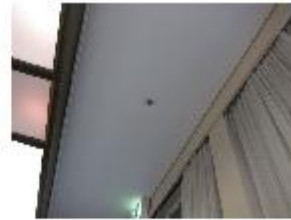


Religion – desirable vs fundamentalism

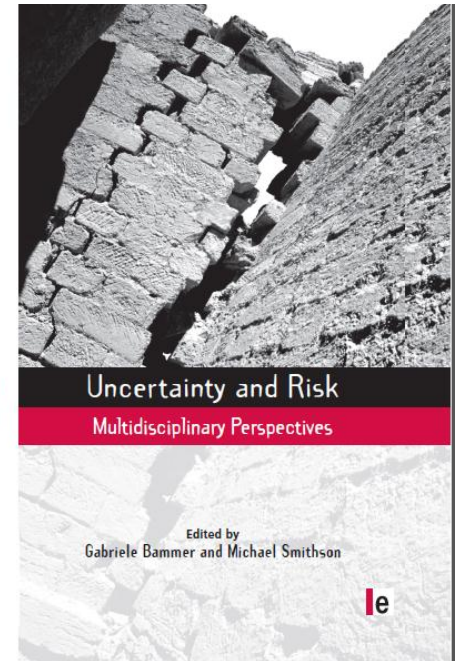


Existing insights on fundamental concepts...

CHANGE



interdisciplinarity management science integrated
 adaptive management implementation science multidisciplinary
 complexity science modelling and simulation policy science impact
 system dynamics sustainability science systems thinking
 public engagement action research ecological economics decision
 team science theory of change project management post-normal
 systemic intervention transdisciplinarity operations
 management cybernetics Integration and Implementation

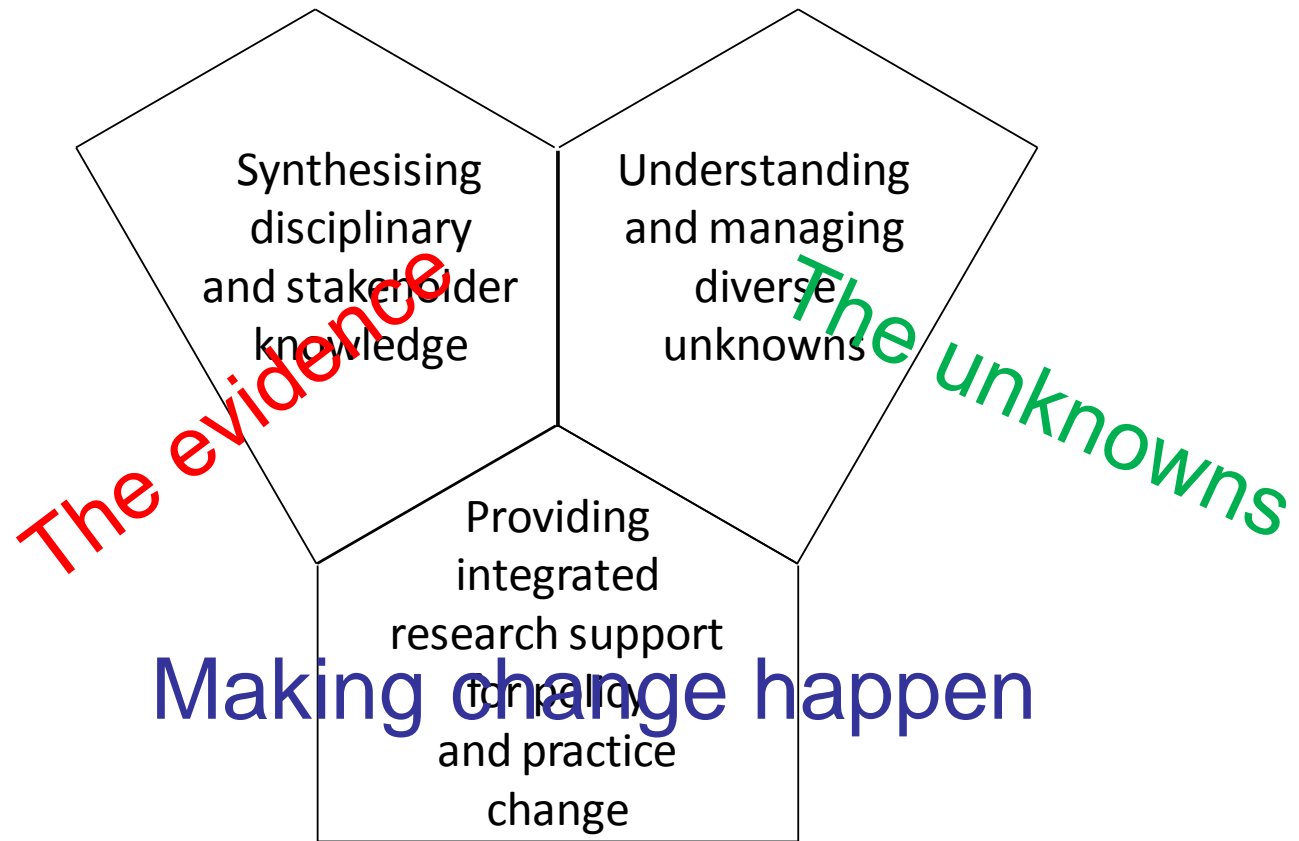


New framework for reporting: Integration & Implementation Sciences (I2S)

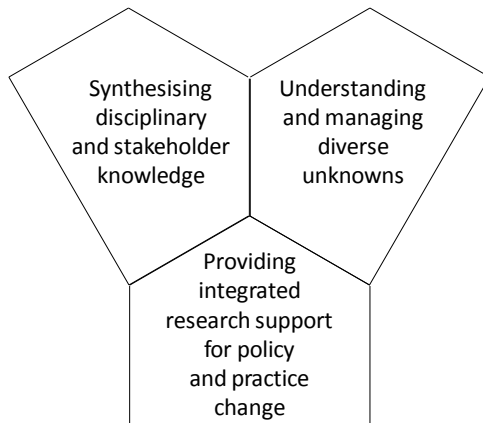
3 domains
5 questions



Three domains of I2S



Five questions... for Domain 1



1. Aims & beneficiaries

What is the knowledge synthesis aiming to achieve?
Whose perspectives will be included?

5. Outcomes

For knowledge synthesis, were good choices made for
a) aims and beneficiaries
b) knowledge synthesised
c) methods and processes
d) dealing with context

2. What knowledge needs to be synthesised for this problem?

- a) systems approach
- b) scoping
- c) boundary setting
- d) problem framing
- e) values
- f) harnessing and managing differences

CONCEPTS
METHODS
CASE EXAMPLES
GUIDES

4. Context

- a) big picture
- b) legitimacy
- c) organisation facilitators and barriers

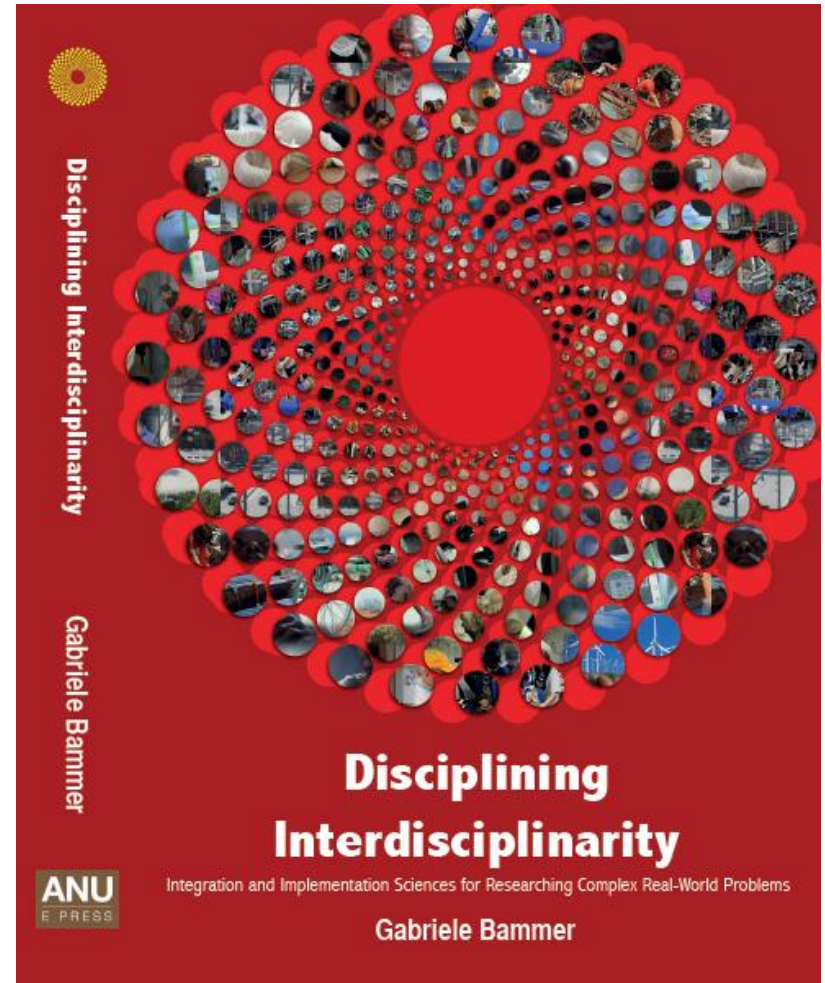
3. Methods & processes

- a) dialogue based
- b) model-, product-, or vision-based
- c) common metric-based plus by whom and when



Australian
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<http://epress.anu.edu.au/titles/disciplining-interdisciplinarity>





Plenaries

Join us!

Digital posters

In Canberra or on-line

Sept 8-11, 2013

Online
co-conferences

Networking

I2Sconference.org