

New Dimensions of Food Economy Research

食品经济研究的新领域

Dr. Xiaoyong Zhang 张晓勇博士

LEI, Wageningen University and Research Centre

荷兰瓦根宁根大学农业经济研究所

Email: Xiaoyong.zhang@wur.nl



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The Economist

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Economist.com

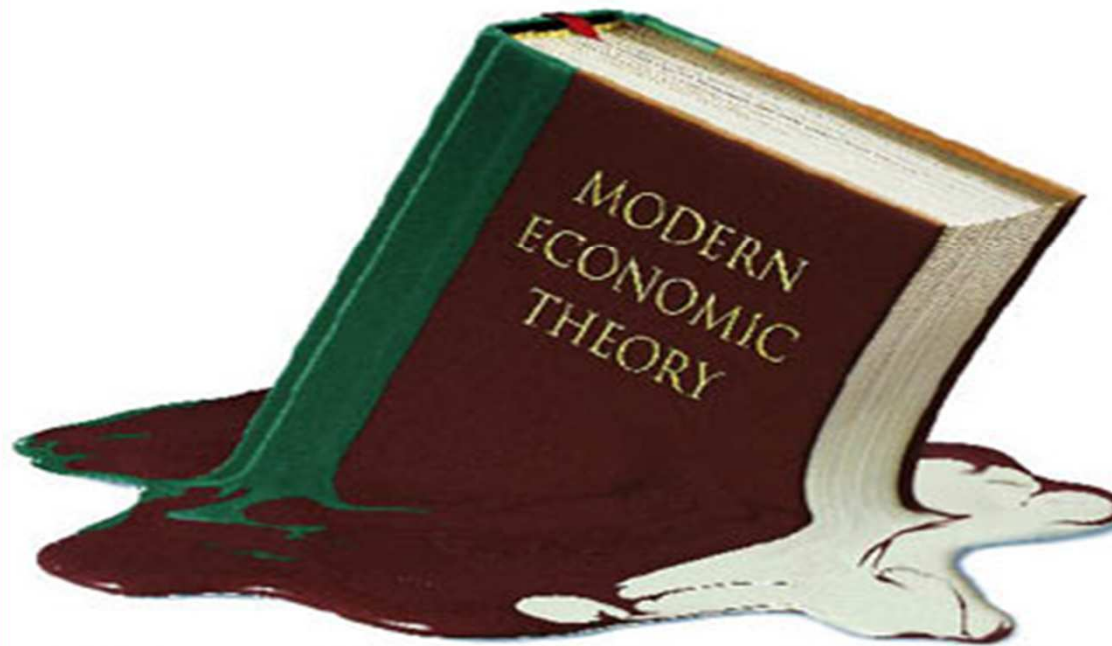
Britain agonises about Afghanistan

The rot in Japan's governing party

Europe's energy insecurity

Goldman Sachs's record profits

Summer camp for atheists



**Where it went wrong—and how
the crisis is changing it**

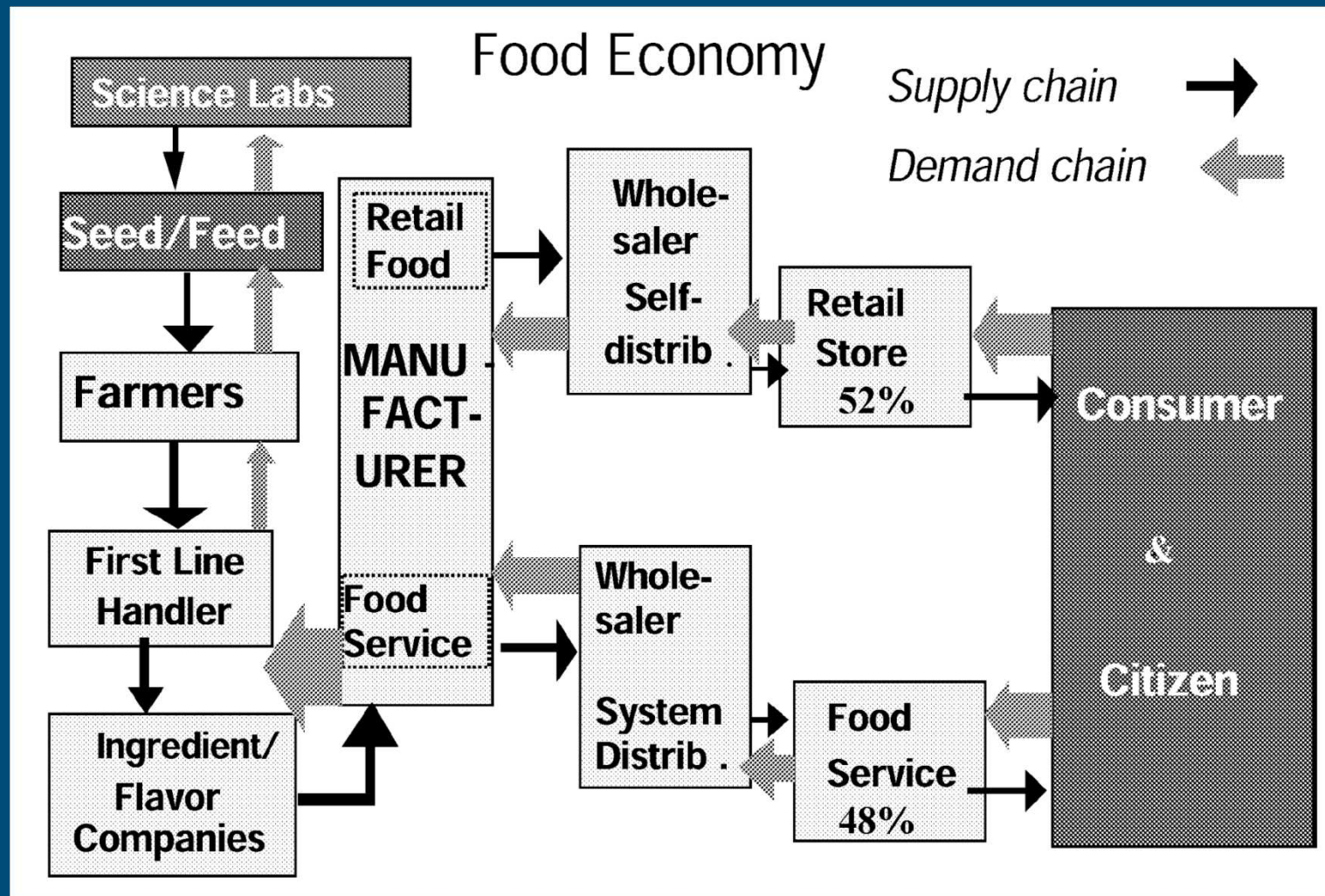
现代经济学失足在什么地方，经济危机如何
对它进行改变？



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The Traditional Food Economy 传统的食品经济



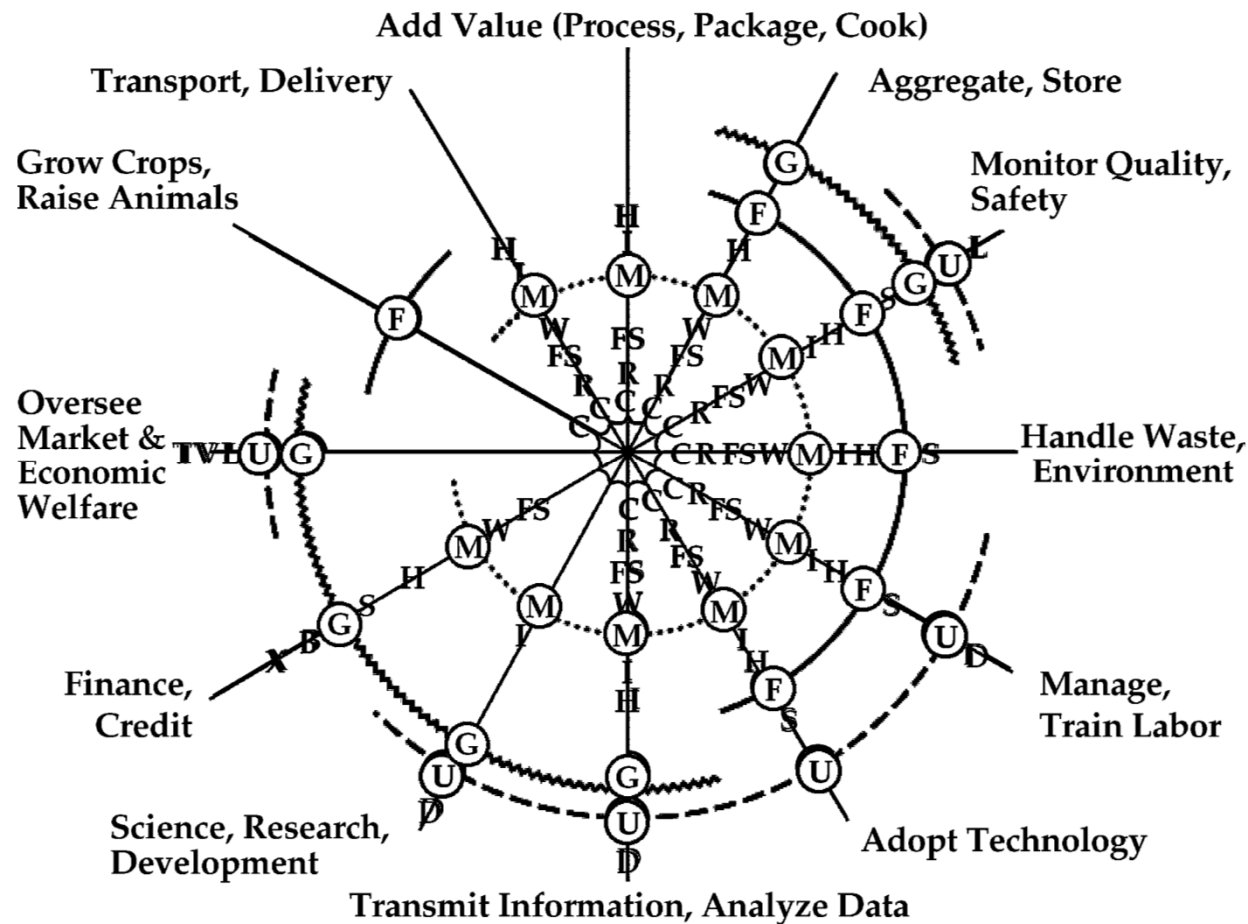
Theories applied in traditional food economy

传统食品经济采用的理论

- The equilibrium price is at the intersection of the supply and demand curves (cobweb model) 均衡价格出现在供应与需求曲线焦点上
- Competition theory (labor, natural resource...) 竞争理论（劳动力，自然资源.....）
- Consumer utility maximization (Rational decision) 消费者效应最大化（理性决策）
-
- Economic discipline mainly 主要是以经济学学科为主

Consumer Centered Web in New Food Economy

新食品经济中以消费者为中心的网



Theories required in New Food Economy

新食品经济采用的理论

- **Chain and Network** (*Supply chain, Alliance, Coordination, ..*)
链条和网络（供应链，联盟，协调，.....）
- **Institutional Economics** (*Transaction cost , Governance,..*)
制度经济学（交易成本，治理.....）
- **Organization Theory** (*Control, Incentive, Bureaucracy,..*)
组织学理论（控制，激励，政府机构，.....）
- **Consumer Behavior** (*Attitudes, Motivation, Perceptions, Lifestyle,...*)
消费者行为（态度，机动，生活方式，.....）

Here price discovery is difficult and market entry is often by invitation
这里价格发现不容易，市场进入为被邀请

More Challenges Ahead

更多挑战还在前方.....

- Still new food economy address tame problems
新食品经济仍然是研究驯服性问题
- Many wicked problems emerging
还有很多新出现的捣蛋性问题

What are Tame problems?什么是驯服性问题？

- E.g. Identifying the sources of food contamination
例如，食品污染源识别问题
- E.g. Costs and benefits of expanding an irrigation project
例如，发展灌溉项目的成本和利益问题

例如，发展灌溉项目
的成本和利益问题

S. Batie, 2009



What are wicked problems in food economy?

在食品经济中捣蛋性问题案例

- Animal welfare
动物福利
- GMO foods
转基因食品
- Biofuel production
生物燃料生产
- Climate change
气候变化
- Sustainable development
可持续发展

.....

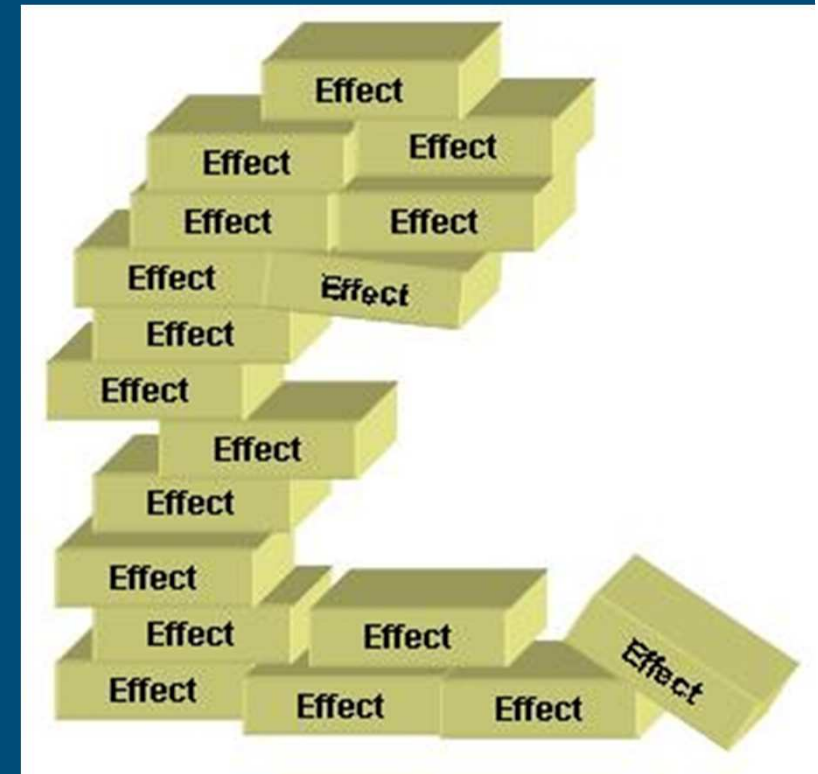


S. Batie, 2009

What are the characteristics of wicked problems?

捣蛋性问题有哪些特征？


- Socially complex
社会复杂性
- Many interdependencies
互相依存性
- Multi-causal
多层因果性
- Rarely the responsibility of one organization
很少是一个部门的责任



S. Batie, 2009

Comparison between Tame and Wicked problems 1

驯服性与捣蛋性问题比较1

	<u>Tame Problem</u> 驯服性问题	<u>Wicked Problem</u> 捣蛋性问题
1. The problem 问题	The clear definition of the problem also unveils the solution 问题有明显的界定，解决方案是透明的	No agreement exists about what the problems is. Each attempt to create a solution changes the problem 对于存在哪些问题达不成一致性。每一个尝试去解决问题的同时又改变了问题本身
	The outcome is true or false, successful or unsuccessful 结果是真正反映出对和错，成功还是失败。	The solution is not true or false. The end is assessed as 'better' or 'worse' or 'good enough' 解决方案没有明确的对与错。评估的结果是，“好一点”，“坏一点”或“足够好”。

Comparison between Tame and Wicked problems 2

驯服性与捣蛋性问题比较2

Tame Problem

驯服性问题

The role of stakeholders 利益相关者的作用



The problem does not change over time
问题不依时间变化

The causes of a problem are determined primarily by experts using scientific data.

问题的起因主要是由专家采用科学数据进行分析确定

Wicked Problem

捣蛋性问题

The problem changes over time
问题随着时间变化

Many stakeholders are likely to have differing ideas about what the 'real' problem is and what its causes are.

很多相关利益者对什么是“真的”问题，以及发生的原因有不同的主张

Comparison between Tame and Wicked problems 3

Tame Problem

The
'stopping
rule'
终止规则



The task is
completed when the
problem is solved

问题解决以后，任务
完成

Wicked Problem

The end is accompanied
by stakeholders, political
forces and resource
availability. There is not
definitive solution

问题的结束同利益者，政
治力量和资源可利用性联
系。没有明确的最终解决
结果

Comparison between Tame and Wicked problems 4

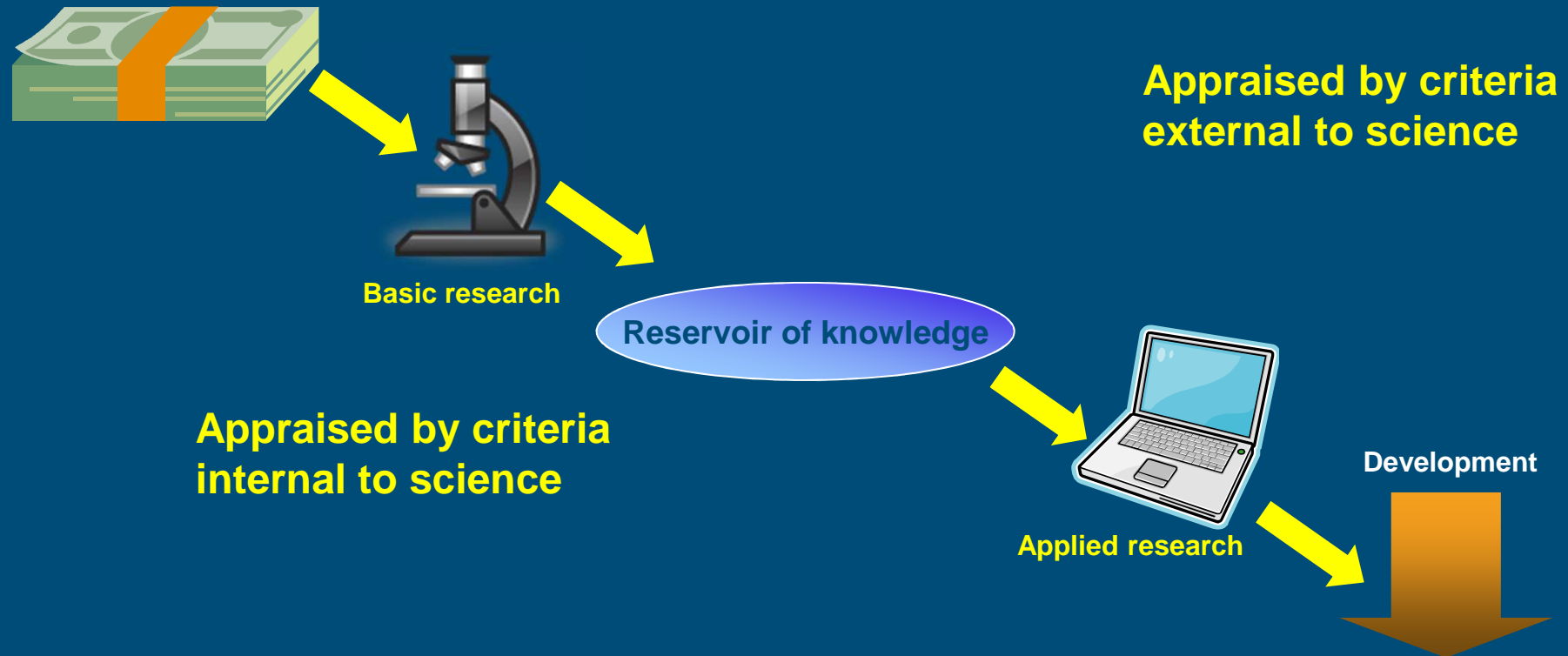
驯服性与捣蛋性问题比较4

	<u>Tame problem</u> <u>驯服性问题</u>	<u>Wicked Problem</u> <u>捣蛋性问题</u>
Nature of the problem	Scientific based protocols guide the choice of solution 有科学基础的规程来选择解决方案	Solution to problem is based on 'judgments' of stakeholders 问题的解决是以利益相关者的判断力为依据
问题的性质	The problem is associated with low uncertainty 问题的不确定性很低	The problem is associated with high uncertainty 问题具有非常大的不确定性
	There are shared values as to the desirability of the outcomes 对于最终的结果有共同的期待	There are not shared values with respect to societal goals 社会目标价值各自不同

Challenges Posed to Sciences 对科学提出挑战

- The model of sciences 两种不同的科学模式
 - The linear model of science (traditional model)
科学的线性模式（传统模型）
society builds on science
社会进步是建立在科学进步的基础上
 - A cyclical model of science (wicked problems asked for)
科学的周期模式（捣蛋问题所要求）
co-evolution of science and society
科学和社会共同推进

The Linear model of science 科学的线性模式



Assumption: Scientific progress leads to societal progress

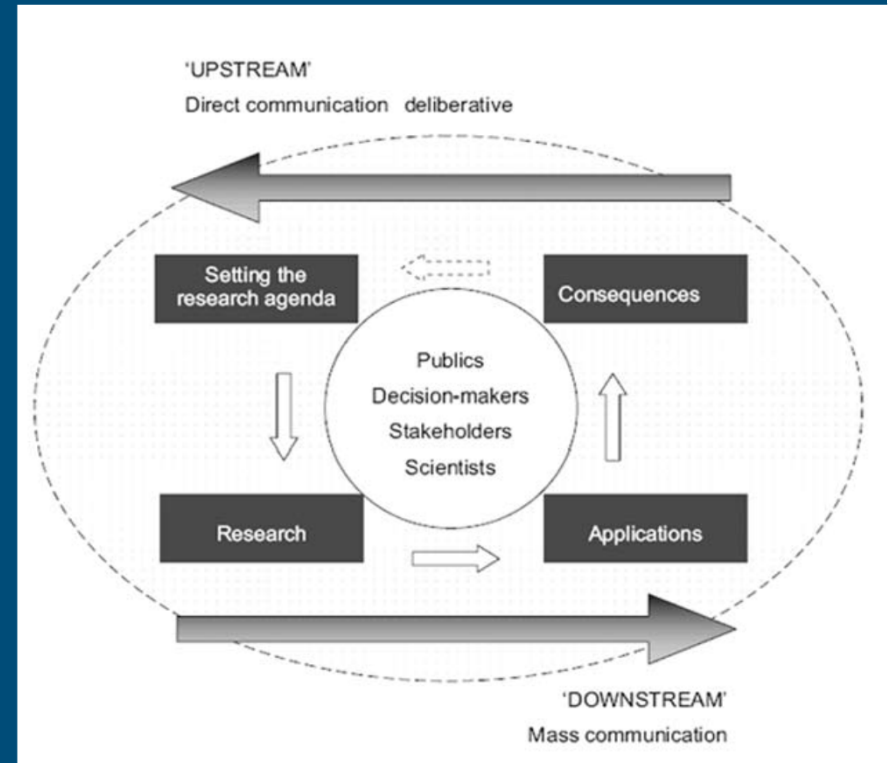
Getting science right is necessary to settle political disputes

假设：科学进步导致社会进步. 清楚无误的科学是解决政治纠纷的前提

A Cyclical Model of Science 科学周期模式

- Public engagement with Science
公众参与科学
- Democratized science
民主化科学

Van der Weele, 2009



S & T not taken as a black box; Social involvement in both

科学与技术（S&T）并不是黑匣子

downstream and upstream; 社会参与涉及上游和下游

Normal Science is not well-suited for wicked problems

普通科学并不适应捣蛋性问题

- Conflict in values over what are desirable outcomes 所希望结果上的价值冲突
- Can not gather facts without first discussing values 如果没有事前的价值讨论，无法收集事实情况
- Must engage stakeholders 利益相关者必须参与
- Society is changing what it is asking of science, the role of science in decision making is quite complex (Pielke, 2007)

社会对科学的要求发生变化，科学在决策时的作用变得相当复杂化

E.g. Diverse Priorities in Europe (in pop. categories)

例如：在欧洲多样繁杂的农业优先化

Note: ■ signifies that the particular priority is prioritised at above average levels by a socio-demographic group

Priority	Membership		Urbanis.	Education		Politics		Sex	
	NMS	EU15	RURAL	LEAST	MOST	LEFT	RIGHT	M	F
Fair standard of living for farmers			■						
Environmental protection		■			■	■			
Animal welfare		■							■
Enhancing rural areas	■		■						
Organic methods					■	■			
Encouraging quality production					■				
Competitiveness European agriculture					■			■	
Stabilising agricultural market	■								
Protecting family-type farms	■		■	■			■		
Adequate information on sourcing		■							
Sustainable methods		■			■	■		■	
Ensuring availability of supplies								■	

(Source: Special Eurobarometer 276, 2007)

E.g. Different Food Values of Dutch Consumers

例如：荷兰消费者的不同食品价值

- Health 健康
- Taste 口感
- Affordability 价格
- Environmental friendliness 环境友好
- Animal welfare 动物福利
- Justice (fair payment to farmers) 公正（公平地为农民付款）
- Traditional methods 传统的方法
- Convenience 便利性
- Naturalness 自然的
- Food safety 食品安全
- Familiarity 熟悉性
- Feeling good with 感觉很好

Source: Bartels, et al 2009

Implication for research funding mechanism

对于研究基金机制的含义

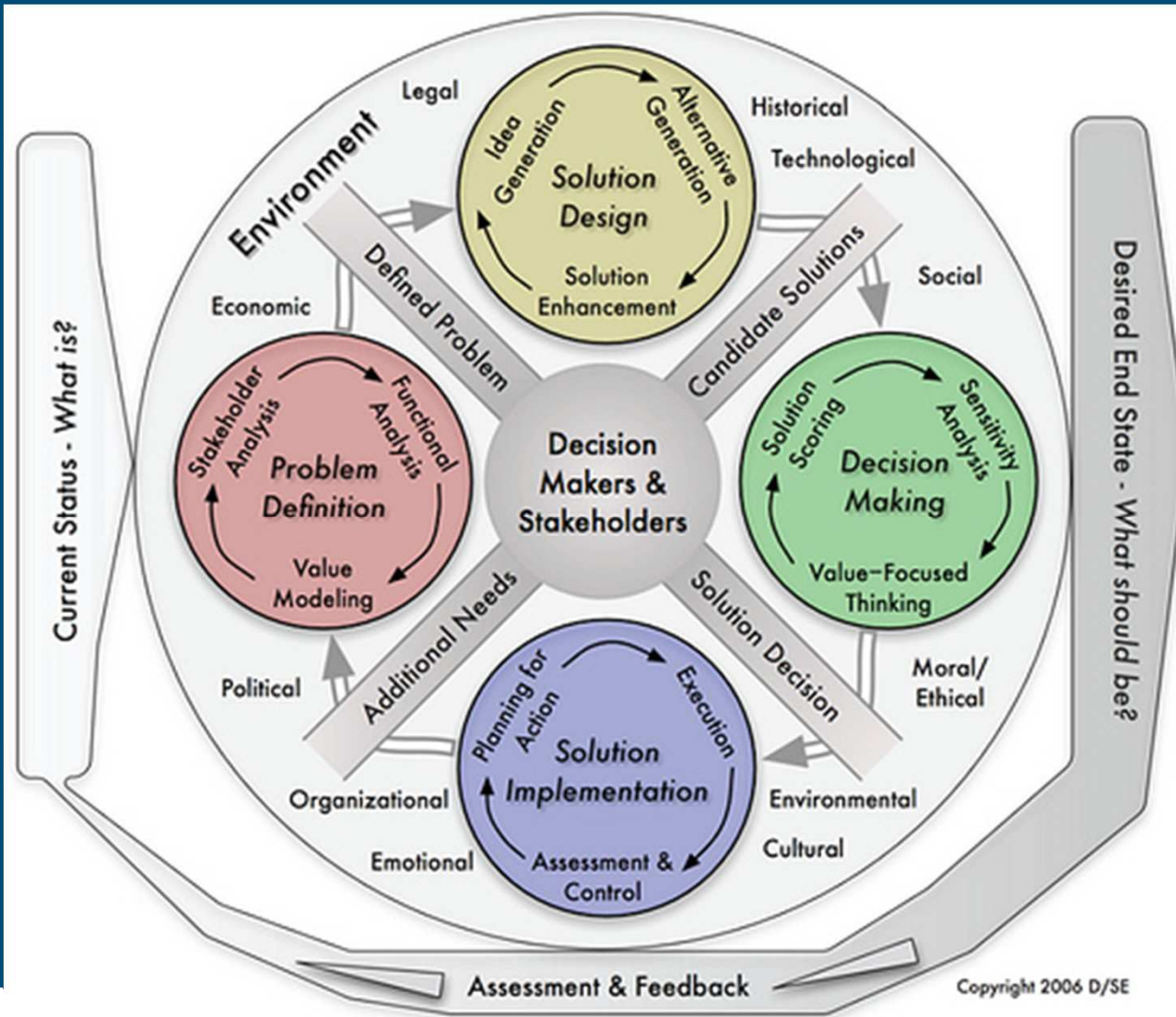
- EU research framework and US NSF increasing dissatisfied with curiosity-driven, disciplinary based science 欧盟和美国越来越不满意受好奇心驱使，建立在学科基础上的学术研究
- Addressing more on social impact of sciences 强调更多的科学对社会的影响
- Research Committee members: private business, NGO, practitioners, as well as scientists 研究委员会成员：私人企业，非政府组织，实践家，及科学家
- Situation in China ?.... 中国的情况？

Implication for researchers 对于研究人员的含义

- Wicked problem asks for alternative theories and methodologies 捣蛋问题需要选用另类的理论和研究方法
 - Behavioral economics 行为经济学
 - Stakeholder analysis 利益相关者分析
 - Effective engagement 有效性参与
 - Collective decision making facilitation 推进集体决策
 -
- Trans-disciplinary required: psychology, decision science, sociology, *anthropology, citizen, not only economy,* 跨学科的要求: 心理学, 决策科学, 社会学, 人类学, 公民, 不再局限于经济范畴,

The Complexity of Decision Making: are we ready for it?

如此错综复杂的决策：我们是否有所准备？



Still questions to be addressed 仍需回答的问题

- How does agricultural economics find its role in addressing wicked problems?

农业经济学在解决捣蛋问题中的地位？

- Alternatively, does agricultural economics survive, thrive, and maintain relevancy if it neglects wicked problems?

或者，如果农业经济学忽视捣蛋问题，它还能存在，繁荣发展和保持相关性？

Thank you for your attention! 谢谢!

