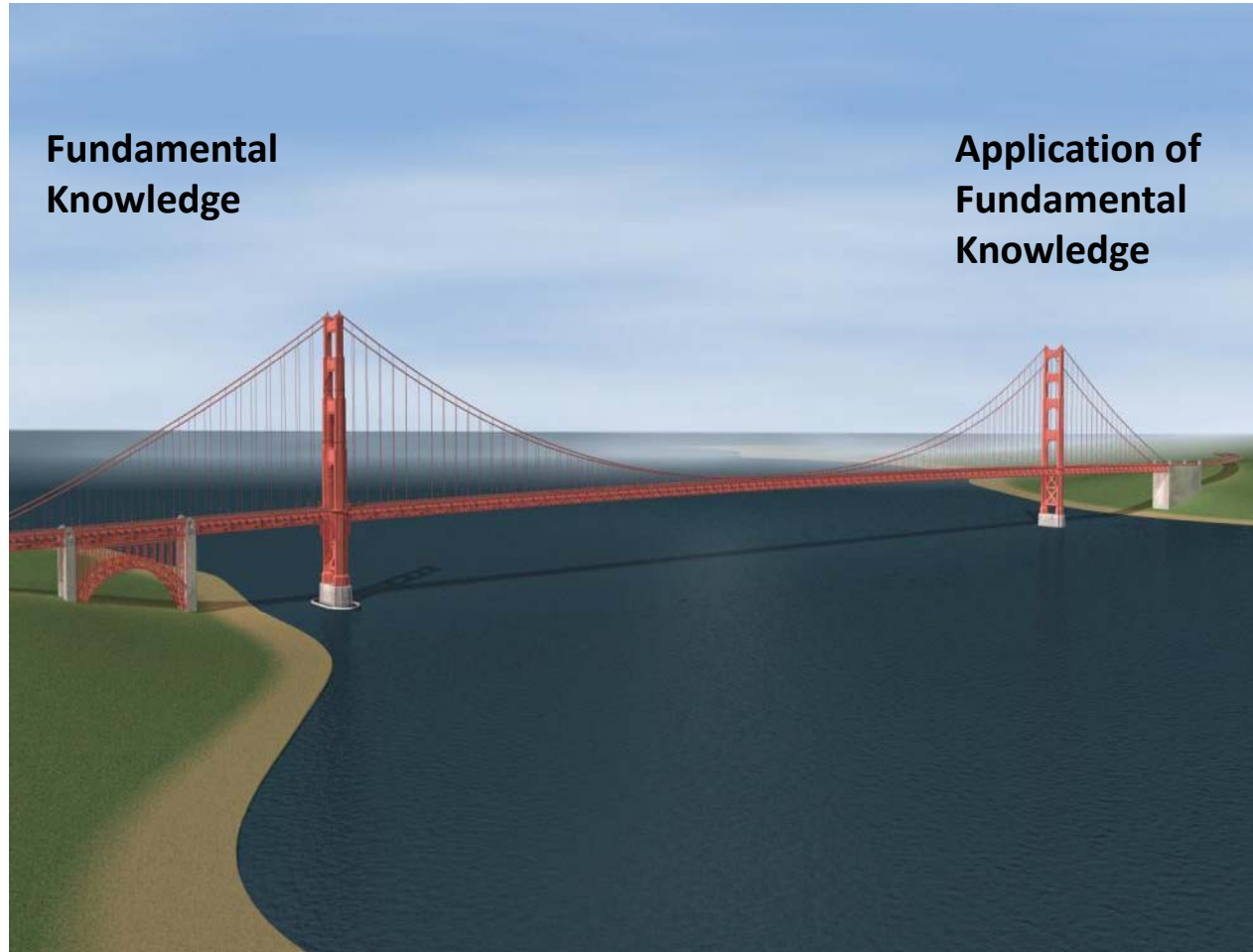


**Please pass me another metaphor,
I'm sick of street lamps and elephants**



I Wish I Were Making This Up



Source: FY 2012 NIH Budget Roll-Out, February 15, 2011

Research in Context, or: When Everything Connected to Everything Else, What is the Right Measure of Impact?

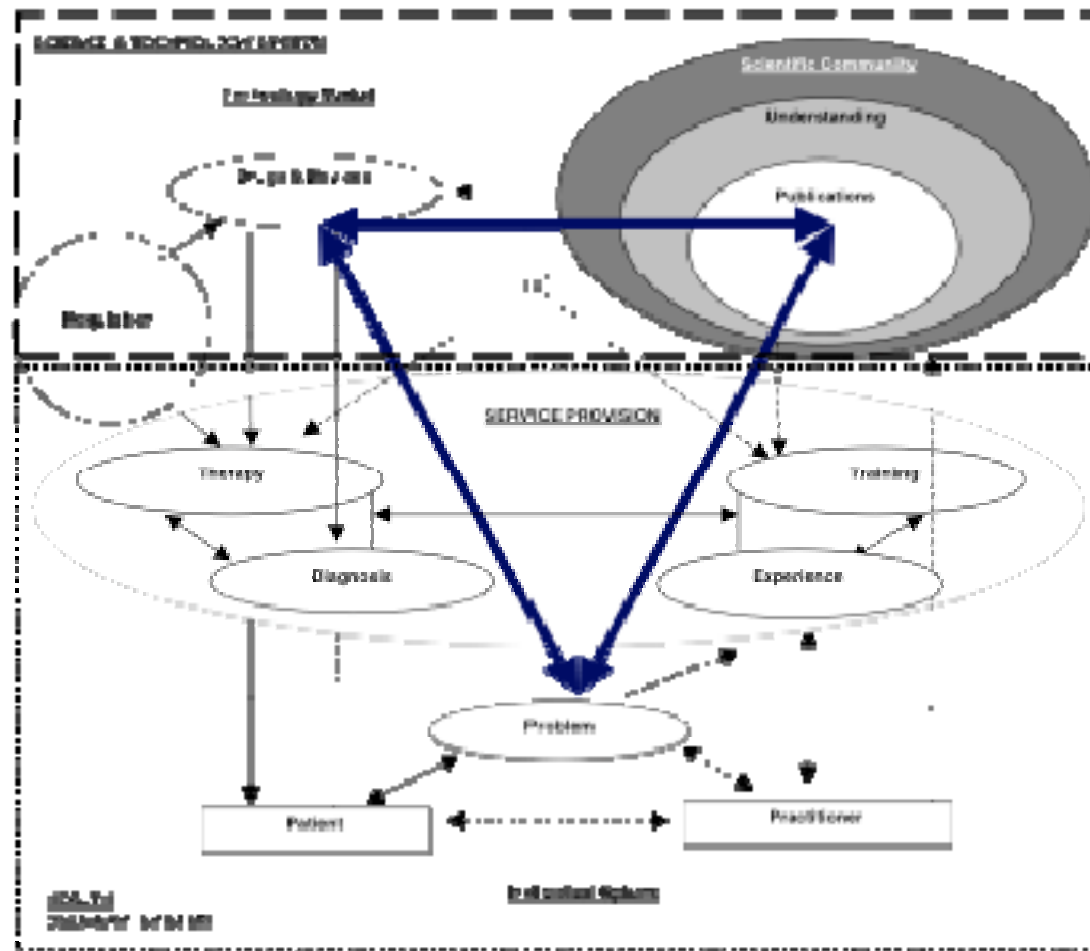


Fig. 1 Network of Science, Policy & Outcomes

Source: Consoli and Mina, 2009

17 Varieties of Innovation Policies

Modified from Alic et al, 2003

1. R&D contracts with private firms (fully funded or cost shared).	6. <i>Regulatory standards</i>
2. R&D contracts and grants with nonprofits.	7. <i>Patents.</i>
3. Intramural R&D in government laboratories.	8. <i>Tax credits or production subsidies for firms bringing new technologies to market.</i>
4. R&D contracts with consortia or collaborations.	9. <i>Tax credits or rebates for purchasers of new technologies.</i>
5. R&D tax credits	10. <i>Procurement.</i>
	11. <i>Demonstration projects.</i>
	12. <i>Monetary prizes.</i>
	13. <i>Education and training.</i>
	14. <i>Codification and diffusion of technical knowledge (e.g., screening, interpretation, and validation of R&D results, support for databases).</i>
	14. <i>Technical standards.</i>
	16. <i>Technology/industry extension.</i>
	17. <i>Publicity, persuasion, consumer information.</i>

Who's Measuring These?

Failure Criterion	Failure Definition
Mechanisms for values articulation and aggregation	Political processes and social cohesion insufficient to ensure effective communication and processing of public values
Imperfect monopolies	Private provision of goods and services permitted even though Government monopoly deemed in the public interest
Scarcity of providers	Despite the recognition of a public value and agreement on the public provision of goods and services, they are not provided because of the unavailability of providers
Short time horizon	A short-term time horizon is employed when a longer term view shows that a set of actions is counter to public value
Substitutability vs. conservation of resources	Policies focus on either substitutability or indemnification even in cases when there is no satisfactory substitute
Benefit hoarding	Public commodities and services have been captured by individuals or groups, limiting distribution to the population