

Evidence and Evidence Use: Whose Business Is It Anyway?

Kirsten Kainz, Ph.D.
UNC School of Social Work
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**GRAND
CHALLENGES**

for social work

It takes
ALL of us

#Up4theChallenge

The Grand Challenges¹

◉ 12 focus areas

- *Individual and family well-being,*
- *A stronger social fabric, and*
- *A just society that fights exclusion and marginalization, creates a sense of belonging, promotes trust, and offers pathways for social and economic progress.*

The Grand Challenges

- **Trans-disciplinary, team-based, translational**

- *Harness social work's science and knowledge base;*
- *Collaborate with individuals, community-based organizations, and professionals from all fields and disciplines; and*
- *Work together to tackle some of our toughest social problems.*

Think about...

- ◉ What's a *grand challenge* that you want to solve?
 - What's the problem space that you are working in right now?
 - What research methods do you use or rely on to address social problems?

What Do We Know about Big Problems?

MIT Technology Review

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HOW
TOMORROW'S
STARTUPS WILL
BE FUNDED
Business Report p.18

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AND MORE
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EDUCATION AT
A CROSSROADS
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Photo: Justin
Snyder for
MIT Technology
Review. The man
is not real.

**You Promised Me Mars Colonies.
Instead, I Got Facebook.**

We've stopped solving big problems.
Meet the technologists who refuse to give up. »

Big Problems Are Complicated

- ◉ *It's not true that we can't solve big problems through technology; we can. We must. But all these elements must be present: political leaders and the public must care to solve a problem, our institutions must support its solution, it must really be a technological problem, and we must understand it. ²*

Big Problems Are Complex

Policies to promote public health and welfare often fail or worsen the problems they are intended to solve. Evidence-based learning should prevent such policy resistance, but learning in complex systems is often weak and slow. Complexity hinders our ability to discover the delayed and distal impacts of interventions, generating unintended “side effects” ³

In Other Words

◎ To solve big problems

- We need to focus on complicated sets of agents and systems invoked by the problem
- We must also develop new ways and venues for using evidence given the complicated and complex nature of social problem solving

Today

- ◉ Examine the complicated nature of evidence use
- ◉ Examine the complex nature of evidence use
- ◉ Explore a few new methods for generating and using evidence for solving social problems in complex systems
- ◉ Discuss implications

Communities of Evidence Use

Complicated

Complicated

◉ From Merriam Webster:

- consisting of parts intricately combined
 - <a *complicated* recipe>
- difficult to analyze, understand, or explain
 - <a *complicated* issue>

Multiple Pressures and Demands

- ◉ To be evidence-based
- ◉ To be timely
- ◉ To be fiscally sound
- ◉ To be responsive to multiple stakeholders
- ◉ To achieve goals established by governing boards and other external bodies

Multiple Types of Evidence

○ Research:

- Published
- Brokered

○ Non-research

- Professional wisdom
- Constituent influences
- Expert/authority influences
- (Habits and routines)

Multiple Types of Research Evidence

	What	How	Under What Conditions
Random Assignment			
Quantitative			
Qualitative			
Observational			
Quantitative			
Qualitative			
Data Pile			
Quantitative			
Qualitative			

Multiple Ways to Use Evidence

- ◉ Evidence use is not singular⁴
 - Instrumental use
 - Strategic use
 - Conceptual use
 - Process use

Multiple Barriers and Enablers

- Access
- Understanding
- Relationships
- Contextual supports

Communities of Evidence Use

Complex

Complex

- System of systems
- Diverse agents
 - Stakeholders (policymakers, participants)
 - Practitioners
- Incomplete or inaccurate models
 - Uncertainty
 - Multiple unknowns and unknown unknowns
 - Emerging phenomenon and feedback systems
 - Unanticipated aftershocks

Observations from Public Health and Implementation Science

- Poor uptake of evidence-based practice
- Slow uptake of evidence-based practice
- Unintended consequences
- Null effects
- Misalignments
- Misunderstandings
- Missed opportunities

Borrowing from Other Fields

Gabriele Bammer

Professor, National Centre for
Epidemiology and Population
Health, Research School of
Population Health
ANU College of Medicine, Biology
and Environment

John D. Sterman

Jay W. Forrester Professor of
Management and Director of MIT's
System Dynamics Group, MIT

Gerald Midgley

Professor of Systems Thinking at
the University of Hull, UK.

John Mayne

Principal with the Canadian Office
of the Auditor General, where he is
responsible for accountability and
governance practices, managing
for results, measurement and
reporting.

David Chambers

Director of Implementation
Science at the National Cancer
Institute, USDHHS

Russell E. Glasgow

Associate Director Colorado
Health Outcomes, School of
Medicine University of Colorado

Does Complex Mean Unknowable?

- ◉ *Complex adaptive systems can form patterns and follow predictable paths of development* ⁵

Is There No Cause and Effect in Complex Systems?

- ◉ *Interactive causal relations exist within and between entities*⁵

Is There No Value in Traditional Science?

- *Generating reliable evidence through scientific method requires the ability to conduct controlled experiments, discriminate among rival hypotheses, and replicate results. But the more complex the phenomenon, the more difficult are these tasks.³*

Summary

- ⦿ Solving social problems requires evidence use in complicated and complex settings
- ⦿ Different agents create, use, and value different evidence
- ⦿ We need scientific tools – **conceptual, material, social** – to address complicated and complex challenges

I haven't got it yet, but I'm hunting
it and fighting for it, I want
something serious, something fresh
—something with soul in it!

—Vincent van Gogh,
The Hague, January 3, 1883, to Theo van Gogh

Develop Rigorous, Rapid, and Relevant Science⁶

- Develop
 - Worldview
 - Goals
 - Methods
 - Flexibility
- To address
 - Poor uptake, ineffective practice
 - Complexity
 - Variation
- For the purpose of
 - Sustainable, effective practice at scale

Engage Stakeholders and Practitioners

◉ Systemic Intervention⁷

- Intervention – purposeful action by agent to create change
- Systemic intervention – purposeful action by agent to create change in relation to a reflection on boundaries
 - Boundary = social or personal constructs that define the limits of knowledge deemed as pertinent

◉ Participatory planning and modeling

Co-Create Models, Expectations, and Evidence

◎ Contribution analysis⁸

- Set out the question: cause -> effect
- Develop a theory of change and risks to it
- Gather the existing evidence on the theory of change
- Assemble and assess the contribution story
- Seek out additional and contradictory evidence
- Revise and strengthen the contribution story

◎ Performance stories⁹

- What is the context?
- What was expected to be accomplished at what cost?
- What was accomplished in light of these expectations?
- What was learned and what will be done next?
- What was done to assure quality data?

Learn Collaboratively from Evidence

- ◉ Learning from evidence in complex systems³
 - Single loop learning: *process whereby we learn to reach our current goals in the context of our existing mental models*
 - Double loop learning: evidence drives initial decisions, leads to improvements in mental models, which result in new strategies and decision opportunities

**So, What Do We Think about
These Ideas?**

Thank You

Social work has
achieved its greatest
triumphs at the nexus
of science and social
action¹⁰

References

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