Brainstorming scientific opportunities: Synthesis on topics
21st Century Transdisciplinary Approaches to bBSSR

http://oppnet.nih.gov

The Challenge - Barriers

• How to get people in different disciplines together
• Logistical challenges such as common language (e.g., mechanism)
• Issues within institutions such as distribution of funds
• Hiring, promotion, and tenure
• NIH support change in institutional reward structures
• Culture of review committees
• Cross-IC funding of projects
The Challenge - Unknowns

- Disciplines that are not represented (e.g., urban planning, political science, humanities, communication, mathematics, engineering, computer science)
- Unknown partners such as community leaders and NGOs

The Challenge - Approaches

- Need to broaden approaches in bBSSR for generating theories and models
- Handling massive amounts of data (computing issues, conceptual understanding)
The Opportunity - Barriers

• NIH-funded evaluation of team science, collaborative and communications structures

• Common language translations within as well as across disciplines

• Promote scientific matchmaking (including training)

• Interdisciplinary T32s like biobehavioral program

• Planned interdisciplinary thematic courses

• Center mechanisms including CTSAs

• Don’t forget to look in your own backyard

The Opportunity – Scientific Topics

• Mindfulness

• Developmental/lifecourse research on resilience

• Plasticity and recovery as function of the person and the environment (social and environmental outcomes, not just physiological)

• Downward mobility

• Gene-environment interactions

• Climate change, extreme events, disasters
The Opportunity – Approaches

• Modeling approaches to bBSSR (e.g., simulation)
• Involve humanities in understanding ethics
• Transdisciplinary collaborations (including humanities) to understand context across multiple levels

What does this concept provide that is lacking or needed to advance the field?

• True collaboration (not just each member in their own box)
• Infrastructure/support for the development of TD teams
• Collaboration across ICs and federal agencies
• Integrated computing systems for data analyses and interdisciplinary concept searches
• Developing “smart” databases that would make suggestions (e.g., Amazon)
• Technological breakthroughs in sampling techniques
• New ethical standards to reflect emerging data collection technologies