

Roundtable II: Quo vadis? Interdisciplinary Scholarship and Practice

Panel Members: Portney, Lantagne, Rogers, Wolf, Bandyopadhyay, Crow; Moderator (Moomaw)

May 13 1100AM – 130PM

1100-1110AM Moomaw Introduce the premise and provide the context

1110- 1120AM Portney

1120-1130AM Wolf

1130-1140AM Rogers

1140-1150AM Lantagne

1150-1200PM Bandyopadhyay

1200-1210PM Crow

1210-1220PM Break and Organize around Roundtable (one question per table; please choose your question and table)

1220-1240PM Each table chooses a presenter and discusses the question within the context of the premise.

1240-100PM Each table presenter summarizes the discussion from their Roundtable and share with the entire group (3-4 minute per table)

100-130PM Panel reflects and responds to questions and issues raised by the audience during their discussion; Open the floor for follow up questions from the audience.

PREMISE: Interdisciplinary Scholarship and Practice

1100-1110AM Moomaw Introduce the premise and provide the context

Context: In 2006, at the beginning of our journey, we argued that the nature of water as a resource is changing. Water resources are increasingly over-used, water quality is sub-optimal, and ecological integrity is excessively taxed. Water conflicts occur when natural, societal, and political forces interact. A changing world requires a changing education. Science alone is not sufficient. Nor is policy-making that doesn't take science into account. Sustainable solutions can only come from diplomacy that takes science, policy and politics into account within water networks of variables, processes, actors, and institutions.

Now in 2017, we recognize that many of our current and emerging water problems are complex because they are interconnected and interdependent. Many of these boundary crossing water problems are dynamic, non-linear and are often interconnected with other problems and feedback. Policy decisions addressing these problems are complex - because processes, actors and institutions are interconnected and interdependent – making a range of solutions possible. But not all possible decisions are actionable. We argue that context creates the subspace for actionable outcome; we need to account for contextual capacity of

effective action and the constraints present in a context to explore and implement intervention for measurable outcome(s).

Premise: The WDF hypothesizes that when water challenges stem from complex – uncertain, interconnected, and boundary crossing – system dynamics with feedback, traditional frames for problem solving can be limiting or counter-productive. Our integrative educational and research plans were designed to impart deep disciplinary skills fused with interdisciplinary perspectives. We recognize that foundational disciplinary knowledge and technical skills will vary between graduates, but all will require and need to be educated in the following scientific and professional abilities to:

- Identify, analyze, and solve a problem with appropriate normative principles, empirical theories, and available tools and techniques;
- Collaborate effectively on teams that include users and producers of data: scientists, engineers, practitioners, and decision makers with very different backgrounds and perspectives;
- Provide scientifically informed advice to decision makers in a timely and actionable way;
- Communicate results for effective action and facilitate discussion on contentious findings;
- Adapt and acquire skill sets to harness emerging technologies, techniques, and tools.

Our Water Diplomacy program has been specifically designed to educate water diplomats how to frame, formulate, design, and implement complex research projects from beginning to end with sensitivity to actionable outcomes that are grounded in the principles of equity and sustainability. What have we learned about interdisciplinary scholarship and practice? Where can we go from here?

Questions for the Panel (each panel member has 10-minute to discuss)

1110- 1120AM	Portney
1120-1130AM	Wolf
1130-1140AM	Rogers
1140-1150AM	Lantagne
1150-1200PM	Bandypadhyay
1200-1210PM	Crow

We will start with this premise and ask each panel member to focus on questions and issues related to interdisciplinarity in education and practice domain. Given the time allocated (10-minute per panel member), you may consider focusing on a few questions as outlined below:

- **Education:** (a) What are the gaps in translating theory (e.g., intellectual puzzles like coupling of natural and human systems; integration of numbers and narratives) into practice (barriers to implementation and evaluation) for actionable outcome? (b) How should interdisciplinary education be operationalized at the university level (e.g., Is simplifying metaphor of “T” a good model of interdisciplinary scholarship? How do we reconcile disciplinary requirements with interdisciplinary expectations?) (c) What are the replicable best practices to enhance interdisciplinary education (e.g., modular course elements; skill building workshops; role play simulations)? (d)

What are the effective ways to impart interdisciplinary “thinking and doing” that are transferrable to different problems and contexts?

- **Practice:** (a) Does interdisciplinary education create an identity (e.g., disciplinary identity) crisis within the University as well as in professional life? (b) What transferrable skills are essential to have a life-long interdisciplinary career? (e.g., Can they write their own job description?) (c) Do interdisciplinary professionals need to be entrepreneurial to maintain their freedom to practice in an interdisciplinary way?

Questions for the Roundtable (each Roundtable will have one question and 20-minute to discuss and present their summary to the audience and the panel)

1210-1220PM Break and Organize around Roundtable (one question per table; please choose your question and table)

1220-1240PM Each table chooses a presenter and discusses the question within the context of the premise.

1240-100PM Each table presenter summarizes the discussion from their Roundtable and share with the entire group (3-4 minute per table)

- How should interdisciplinary education be operationalized at the university level (e.g., Is simplifying metaphor of “T” a good model of interdisciplinary scholarship? How do we reconcile disciplinary requirements with interdisciplinary expectations?)
- What are the replicable best practices to enhance interdisciplinary education (e.g., modular course elements; skill building workshops; role play simulations)?
- What are the effective ways to impart interdisciplinary “thinking and doing” that are transferrable to different problems and contexts?
- Does interdisciplinary education create an identity (e.g., disciplinary identity) crisis within the University as well as in professional life?
- What transferrable skills are essential to have a life-long interdisciplinary career (e.g., Can they write their own job description)? Do interdisciplinary professionals need to be entrepreneurial to maintain their freedom to practice in an interdisciplinary way?

100-130PM Panel reflects and responds to questions and issues raised by the audience during their discussion; Open the floor for follow up questions from the audience.