
CULTIVATING COLLABORATIONS IN SCIENTIFIC ENDEAVORS

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Have you ever found yourself in a conversation with someone on an important topic and you just keep talking past one another rather than addressing each other's perspectives?

"It's a frustrating experience," says Professor Michael O'Rourke, Department of Philosophy. "It's especially frustrating if you don't realize it and only later recognize that what you thought was agreement was in fact disagreement."

The likelihood of this type of experience increases when interdisciplinary and interprofessional teams work together to solve complex problems. In these situations, a number of different perspectives typically are brought forth with different assumptions, jargon, values, and priorities. These differences can lead to misunderstanding or disagreement among team members.

Situations such as this drove O'Rourke to investigate whether philosophy can help resolve the issue. His current research effort, The Toolbox Project (toolbox-project.org), focuses on making it possible for complex scientific endeavors to avoid this kind of frustration.

A National Science Foundation-sponsored initiative, The Toolbox Project studies and facilitates communication in collaborative, cross-disciplinary research and practice. The project has developed an approach that enables teams to identify potential disagreements and misunderstandings about fundamental research commitments.

The Toolbox approach is based on a facilitated workshop designed to enhance communication among collaborators who may have different approaches to investigating and understanding the world. In the workshop, teams engage

in dialogue that helps them identify and examine the dimensions of their collaboration and communication from a philosophical perspective.

"What we do is use philosophy to structure a dialogue among collaborators in these complex projects that focus on real-world issues like climate change or invasive species," O'Rourke said. "In that dialogue, collaborators are given the opportunity to share their research perspectives and learn about one another in a way that enables them to see the research landscape that they're operating in and their particular problem through each other's eyes."

During the three- to four-hour workshop sessions, various data are collected, which then are used to produce a report for the team, including a summary of team member responses, a transcript of the workshop, and an analysis of the workshop experience with suggestions of how to apply what has been learned in ongoing team activities.

As of June 2016, The Toolbox Project has conducted more than 190 workshops across the United States and around the world, including Australia, Canada, Japan, Kenya, and Ethiopia.

"What we've learned is that philosophy can contribute to the conduct of science and facilitate the integration of perspectives that is required in order for those projects to be successful," O'Rourke said. "Philosophy provides a number of resources that, if well used, can make science better."