

Social Science Theories for Natural Scientists: The decoder you have been looking for to translate theory to practice for interventions!

Lynn Gazley, Patricia B. Campbell, Jill L. Keller and Richard McGee

Although recent efforts toward program evaluation have given program directors and other practitioners a better idea of *which* intervention components achieve their proposed objectives, it is far more difficult to determine *why* these components work. Additionally, most interventions start from customary practices rather than theoretical foundations as the designers of interventions tend not to be social scientists and often don't have the time or expertise to attempt to translate those theories to practice. One of the primary goals of our interdisciplinary team is to bridge this divide by translating powerful social science theories into the language and practices of life scientists; our goal is to make the social science knowledge applicable and usable by laboratory scientists involved in interventions.

Interventions and academic support activities aim to increase students' knowledge, skills, and success. However, these aims don't always result in positive outcomes and potentially miss critical elements for promoting interest and success in research careers. Theoretical perspectives reveal mechanisms for *how* activities increase science persistence, promotion, identity, and career aspirations. In this workshop, we use four social science theories (Social Cognitive Career Theory, Social Identity, Cultural Capital, and Communities of Practice) as part of a multi-level model to help guide program design. These four "lenses" provide useful and valuable insights for making sense of student outcomes and designing programs or interventions to meet the needs of diverse students interested in careers in the sciences.

This hands-on workshop uses recently developed, field-tested tools for introducing the four theories to laboratory scientists in ways that are easily understandable and contextualized within a research training setting. Participants will then have the opportunity to practice applying these theories in order to design, troubleshoot, and evaluate discrete elements of typical research careers-related interventions.

The primary audience for this workshop is natural scientists who want a working knowledge of social science theories. The expected outcomes for the workshop include: 1) a working knowledge of these theories within the context of scientific training; 2) the ability to start looking at intervention design from a more theory-driven perspective; 3) shared language and concepts to promote collaboration between social scientists and natural scientists engaged in interventions and research training.

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