

PARtners in Science Education and Communication (PARSEC): Scientists, Educators and Religious Leaders Building Bridges to Improve Public Understanding of Science

The Adler Planetarium, in collaboration with Butler, Northwestern, and Syracuse Universities, seeks to engage in a full-scale development project to build sustainable, long-term partnerships among scientists, science educators, and religious leaders to improve public understanding of science. Building on the Clergy Letter Project (CLP 2010), which has effectively served as a pathways project, PARSEC will enhance the efficacy of a perennially neglected category of informal education programs – those situated within religious institutions. Currently, while they may hold positive attitudes toward science, clergy members responsible for informal education activities for their congregations may be underprepared to draw on scientific knowledge when called upon to do so. Hence, the PARSEC project will generate a national, interdisciplinary network of scientist/educator/clergy triads. Working under established guidelines and with support from the project leadership, each triad will design, prototype, test, redesign, and retest its own innovative science education program, resulting in a collection of research-informed models for implementing effective informal science education in diverse religious communities.

Broad Goals and Objectives

- Help religious individuals to understand and appreciate the nature of science (NOS).
- Provide compelling experiences to promote reflective scientific thinking among religious Americans.
- Demonstrate to religiously affiliated Americans that scientific inquiry and resulting knowledge need not preclude or conflict with religious beliefs.
- Facilitate nimble innovation and testing of strategies generated by 30 scientist-educator-religious leader triads via a national network of community-based efforts.
- Identify the most effective strategies for broad dissemination and implementation nationally.
- Create a digital collection of empirically validated templates for designing, implementing, and evaluating unique informal science education programs for the religious public.

Intellectual Merit

The majority of Americans reject scientific claims if they view those claims to be in conflict with their religious beliefs (Masci 2007, Pew 2009). In contrast, the majorities of both clergy and scientists agree that the perceived science/faith conflict is a false dichotomy (Colburn & Henriques 2006; Dickerson et al. 2008). Yet little research has been done to explain *why* many religious Americans hold views of science that differ so markedly from those of their religious leaders. Additionally, although most Americans visit museums, parks, aquaria, planetariums, and other venues of informal science education only occasionally, their participation in educational activities of their religious communities on a frequent and regular basis is nearly ubiquitous. Given that many misconceptions about NOS and concerning scientific concepts such as cosmological and biological evolution stem from perceived conflicts with religious beliefs, these obstacles to the public's understanding of science may best be overcome within the context of informal education within religious institutions. However, there appear to be no reports of research exploring the informal science instruction that occurs between clergy and laity, nor are there sufficient and accessible field-tested models for effectively communicating science in religious settings.

Broader Impacts

The PARSEC project will increase equity and illuminate under-researched aspects of the public's understanding of science across geographically, ethnically, and religiously diverse groups. The end result of this 5-year effort will be a self-sustaining national network of interdisciplinary professionals who are (1) trained to help religious audiences understand NOS, (2) experienced in designing, implementing, and evaluating informal science education programs, and (3) equipped with a versatile collection of program design templates that can be replicated in different communities and different learning settings across the country. By helping to more closely align the understandings of NOS and attitudes toward science among religious Americans with those of the largely conciliatory clergy and scientific communities, we expect to significantly and positively impact the cultural climate around the teaching of evolution and other areas of perceived tension between science and faith. Achieving these goals would in turn have a positive impact on science instruction in other informal and formal settings.