

variable(s) in an appropriate way. Prior to the early 1990s, many nonexperimentalists using a correlational paradigm often used it inappropriately by (a) correctly creating a product term for the moderator and independent variable and then (b) inappropriately correlating it with the dependent variable. This paradigm is inappropriate for both theoretical and empirical reasons.

Theoretically, as Jacob Cohen has argued, while the interaction is carried by the product term, it is not the product term. The product term alone also carries variance due to the main effects of the independent variable and the moderator variable. The appropriate analysis is to partial out the main effects in a multiple regression analysis, as pointed out by Saunders as long ago as 1956.

Empirically, as Schmidt has shown, the correlation between a product term and the dependent variable is sensitive to the scale numbers used in the analysis. Changing from a scale of 1 to 5 to a scale of -2 to $+2$ will change the correlation dramatically. The proper analysis, as Arnold and Evans have shown, results in the incremental R^2 between an equation containing just main effects and one containing the main effects plus the product term being invariant under linear transformations of the data (unlike the simple correlation between the product term and the dependent variable, which changes dramatically). This invariance translates to a proper test of theory only if the measurement scales and the underlying psychological constructs are linearly related. More recent developments involving structural equation modeling do not have this limitation.

—Martin G. Evans

See also Analysis of Variance (ANOVA); Correlation Coefficient

Further Reading

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ASSOCIATION FOR PSYCHOLOGICAL SCIENCE

The Association for Psychological Science (APS) is the leading national organization devoted solely to scientific psychology. Its mission is to promote, protect, and advance the interests of scientifically oriented psychology in research, application, and improvement of human welfare.

Established in 1988, APS was instantly embraced by psychology's scientific community, and its membership grew rapidly. By the end of its first year, APS opened an office in Washington, D.C., and now has approximately 15,000 members from around the world. Members are engaged in scientific research or the application of scientifically grounded research spanning all areas of psychology. There are also student affiliates and institutional members. Distinguished contributions are recognized by Fellow status.

Formation

APS was created out of recognition that (a) the needs and interests of scientific and academic psychologists are distinct from those of members of the professional

community primarily engaged in clinical practice and (b) there was a strong need for a society that would advance the interests of the discipline in ways that more specialized organizations were not intended to do. An interim group, the Assembly for Scientific and Applied Psychology, had sought to reform the American Psychological Association from within, but its efforts were rejected by a membership-wide vote of the APA. APS then became the official embodiment of the reform effort, and the new organization was launched on August 12, 1988.

Publications

APS publishes four journals:

1. *Psychological Science* publishes authoritative articles of interest across all of scientific psychology's subdisciplines.
2. *Current Directions in Psychological Science* offers concise invited reviews spanning all of scientific psychology and its applications.
3. *Psychological Science in the Public Interest* provides definitive assessments by panels of distinguished researchers on topics for which psychological science has the potential to inform and improve the well-being of society.
4. APS's newest journal, *Perspectives on Psychological Science*, features longer integrative reviews and a variety of eclectic articles.

APS also publishes the monthly *Observer*, featuring news and opinion pieces; a Current Directions Readers series in conjunction with Prentice Hall; a Festschrift series in conjunction with LEA Press; and self-published books on the teaching of psychology.

Annual Convention

APS holds a meeting in late spring each year to showcase the best of scientific psychology. The program features presentations by the field's most distinguished researchers and educators in a variety of formats, including invited addresses and symposia, submitted symposia, "hot topic" talks, and posters. The convention also includes workshops on specialized topics.

APS Fund for the Teaching and Public Understanding of Psychological Science

In 2004, the David and Carol Myers Foundation pledged \$1 million to APS for the creation of an endowed fund that aims "to enhance the teaching and public understanding of psychological science for students and the lay public, in the United States, Canada, and worldwide."

Achievement Awards

APS recognizes exceptional contributions to scientific psychology with two annual awards: the APS William James Fellow Award (for significant intellectual contributions to the basic science of psychology) and the James McKeen Cattell Fellow Award (for outstanding contributions to the area of applied psychological research).

APS Student Caucus

Students are an important and active component of APS. The APS Student Caucus is the representative body of the society's student affiliates. The Student Caucus organizes research competitions, convention programs, and a variety of membership activities aimed at professional development and enhanced education in psychological science.

Advocacy

APS is widely recognized as an active and effective leader in advancing the interests of basic and applied psychological, behavioral, and social science research in the legislative arena and in the federal agencies that support these areas of research.

—Morton A. Gernsbacher,
Robert W. Levenson, and Sarah Brookhart

See American Psychological Association

Further Reading

Association for Psychological Science Web site: www.psychologicalscience.org