

# **Social Cognitive Career Theory**

## **What Attracts Students to – and Keeps Them in – STEM Fields? A Theoretical Perspective**

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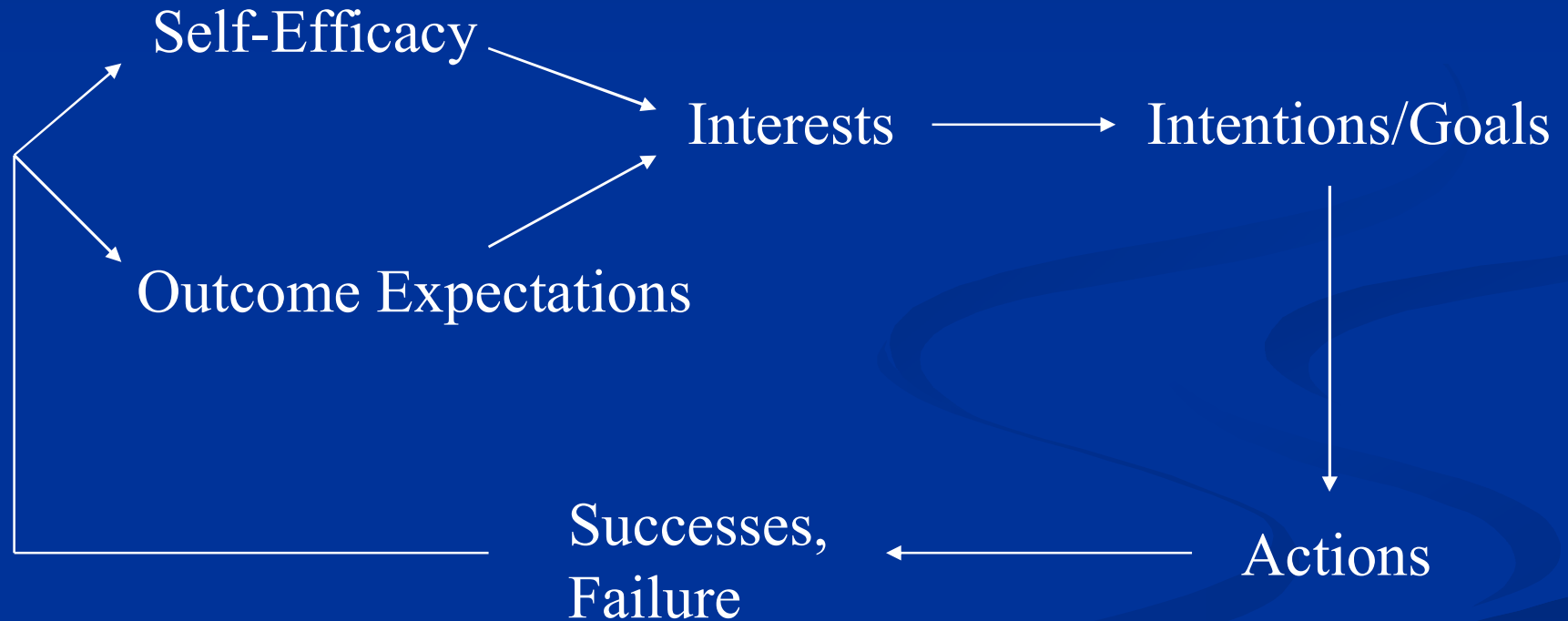
# SCCT: Origins, Purposes

- Integrative theory of academic and career-related *interests, choice, performance, and satisfaction*
- Extends Albert Bandura's (1986) general social cognitive theory to academic and career behavior
- Based on 25 years of research and applied experience
- Can be viewed as a foundation for conceptualizing and designing career development interventions, including efforts to expand the STEM pipeline

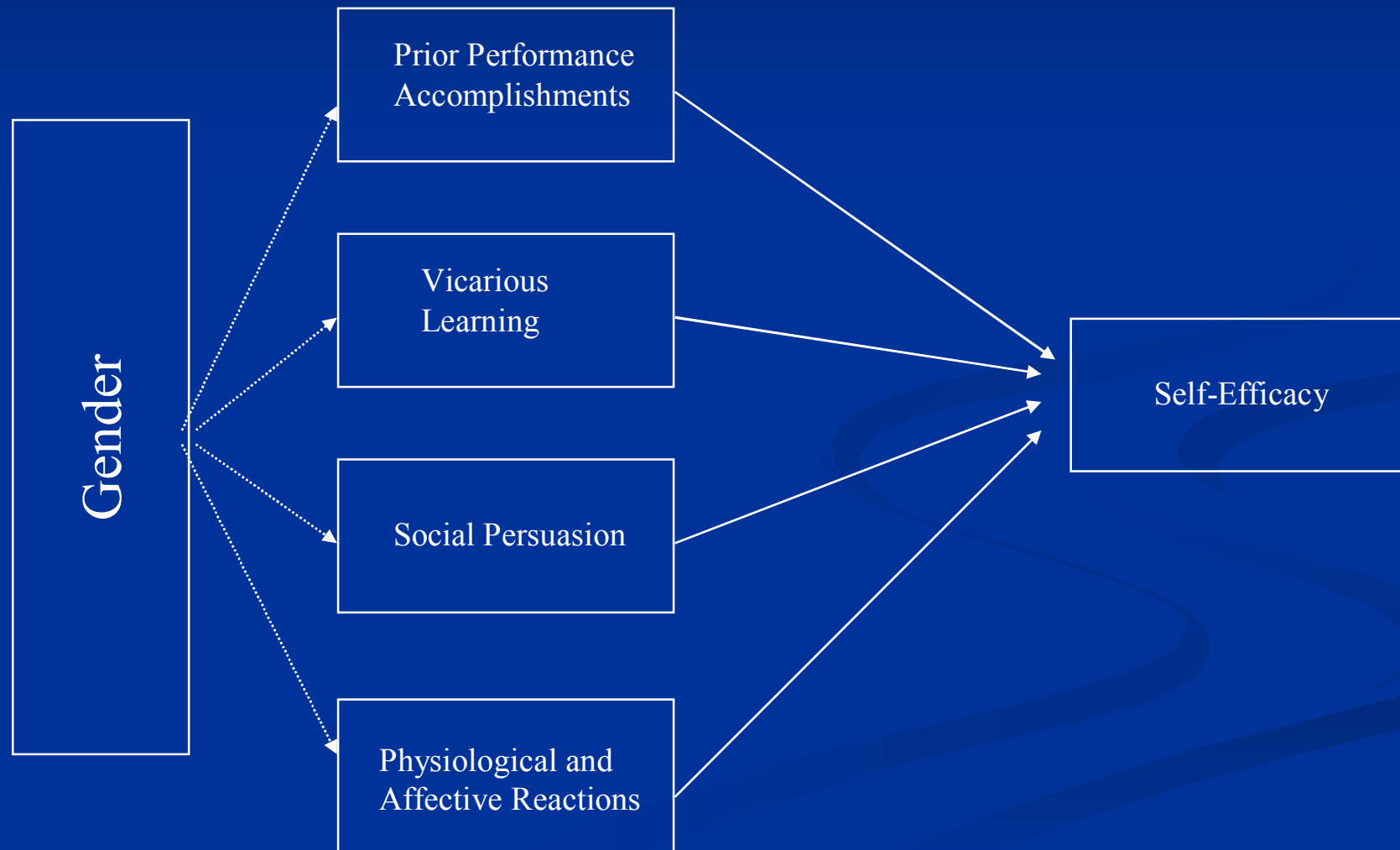
# Some Basic Elements of SCCT

- ***Self-Efficacy***: Beliefs about one's ability to perform specific behaviors → *Can I do this?*
- ***Outcome Expectations***: Beliefs about the consequences of given actions → *If I do this, what will happen?*
- ***Goals***: Determination to engage in a particular activity or to produce a particular outcome → *How much do I want to do this?*
- ***Contextual Supports & Barriers***: Supports and barriers that accompany goal pursuit (e.g., "chilly climate") → *How will the environment treat me if I try this?*

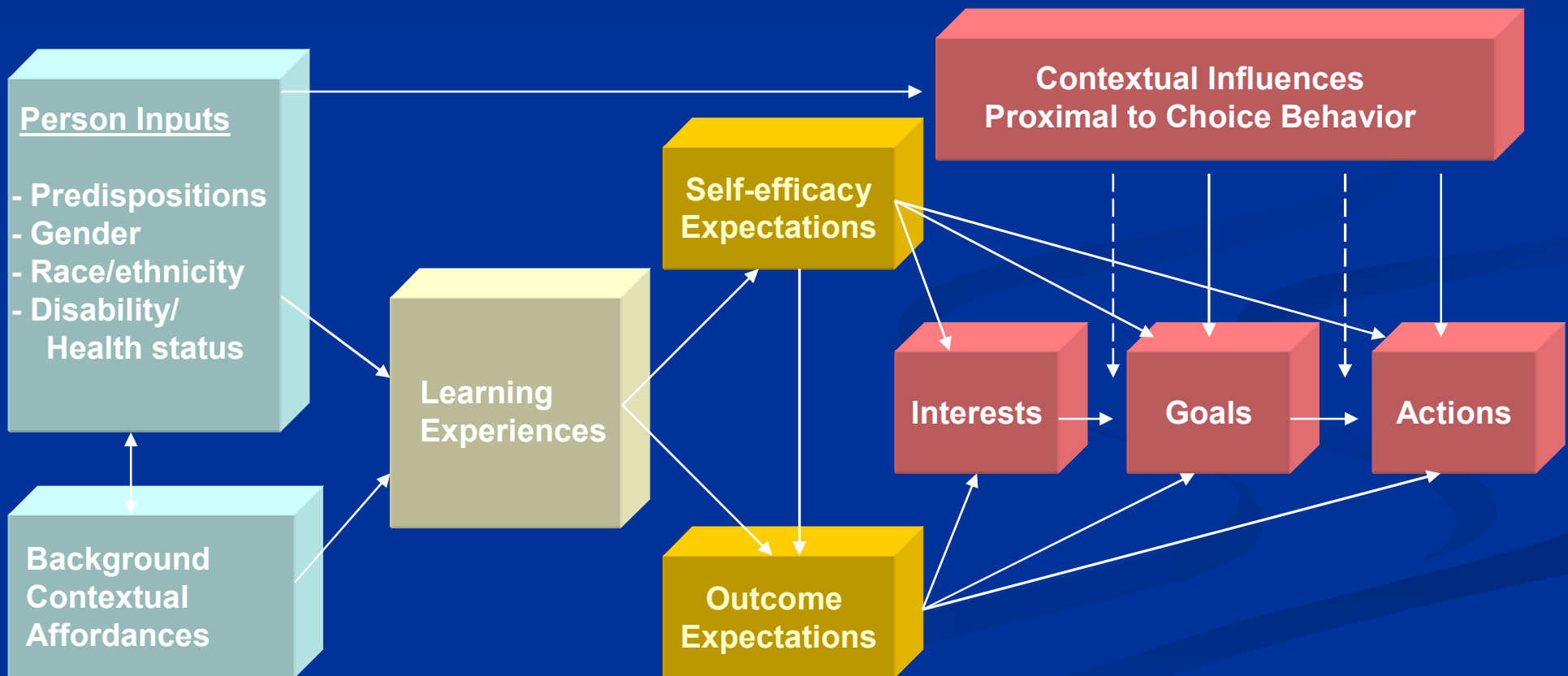
# A Simplified View of Interest Development & Career Choice



# Where Does Self-Efficacy Come From?



# SCCT's Complete Interest and Choice Model with Person and Contextual Factors



# Applying SCCT to STEM Fields

- Large and growing literature, beginning in early 1980s
- Major thrust of SCCT literature
- Several recent studies from NSF-funded grants:
  - Lent et al. (2003): SCCT predictive of goals and actual persistence in engineering over 3 semesters in a PWU
  - Lent et al. (2005): SCCT predictive of goals in engineering at 1 PWU and 2 HBCUs
    - Good fit of model to data across university type and gender
  - Large-scale longitudinal study of CS/CE students at multiple PWIs and HBCUs

# **Meta-Analytic Study**

## **Preliminary Findings**

- **Meta-analyze empirical studies derived from the SCCT Choice model**
- **Compare traditional bivariate meta-analysis with a new meta-analytic SEM technique**
  - **Traditional approach may overestimate bivariate effect sizes**
  - **New approach takes full set of predictors into account in estimating path coefficients and also enables testing of data-model fit**

# Next Steps in Research

- Need more *longitudinal*, multi-year, and multi-site research
- Need more study of SCCT's predictive utility, especially in relation to women and students of color, in STEM and other fields
- Need more theory-based *intervention* research – there has been some, but not enough

# Some Educational and Counseling Implications

## Six Particular Intervention Targets Derived from SCCT:

- Expanding Vocational Interests, esp. in High Aptitude Areas
- Clarifying Career Goals
- Strengthening Self-Efficacy Beliefs
- Instilling Realistic Outcome Expectations
- Managing Environmental Barriers
- Building Environmental Support Systems