Teaching Current Directions in Psychological Science

C. Nathan DeWall and David G. Myers

C. Nathan DeWall, University of Kentucky, and renowned textbook author and APS Fellow David G. Myers, Hope College, have teamed up to create a new series of Observer columns aimed at integrating cutting-edge psychological science into the classroom. Each column will offer advice and how-to guidance about teaching a particular area of research or topic in psychological science that has been the focus of an article in the APS journal Current Directions in Psychological Science. Current Directions is a peer-reviewed bi-monthly journal featuring reviews by leading experts covering all of scientific psychology and its applications and allowing readers to stay apprised of important developments across subfields beyond their areas of expertise. Its articles are written to be accessible to non-experts, making them ideally suited for use in the classroom.

Submitting the Teen Brain to a Student Jury
by David G. Myers


Compared with children and adults, adolescents take more risks. They are more likely to experiment with controlled substances, chance unprotected sex, commit crime, and drive recklessly. The synopses of research on the adolescent brain and behavior by Albert, Chein, and Steinberg (2013) and Bonnie and Scott (2013) suggest thought-provoking discussion questions. To prime the pump for such discussion, introductory or developmental instructors can invite students to start by writing notes for 30 seconds on each question below.

An alternative strategy is to have groups of students debate contentious questions, such as numbers 3 and 4. By random assignment, one team of three argues for one side, and another team of three argues for the other side. Members of both teams wait outside of class for three minutes while the class deliberates about which side made the most convincing argument. Team members re-enter the classroom and receive the decision. By repeating the process in other class sessions, all students can be given an opportunity to argue for or against a position.

1. **Do examples of risky teen behaviors come to mind from your middle and high school days?** Did you observe or engage in behaviors that, on reflection, seem pretty dumb?

2. **Why are adolescents more risk-prone?** Are teens more stupid about assessing risks? Do they not appreciate the long-term consequences of tobacco addiction, or the possibility of pregnancy, or the dangers of speeding? Actually, teen comprehension of risk tends to be quite accurate. Adolescent risk-taking instead appears to stem from: *a. a not-yet mature prefrontal cortex.* Thus immature executive control of planning and controlling behavior, and

   *b. greater peer influence.* Teens, more than children and adults, are herd animals. In real life, teens tend to commit delinquent acts in groups, while adults more often offend solo. In
laboratory driving simulations, teens likewise — when in the presence of other teens — take
more risks, such as running more yellow lights, leading to immediate rewards but risking
accidents. It is as if the presence of peers shortens teens’ time focus, making them more attuned
to immediate rewards.

Think of it this way: Peer influence steps on the gas pedal, and still-developing frontal lobes do
not yet have full braking power.

1. **If 15-year-olds have immature brains that are attuned to social influences and
   immediate rewards, but that also have limited braking capacity, should they — after
   committing a violent crime — not be tried and sentenced as adults?** In response to
   violent juvenile crime increases, legislatures during the 1980s and 1990s decided it was
time to get tough: Give violent youth punitive long sentences that remove them from
society. Others object to trying juveniles as adults, noting that many teen offenses are a
temporary product of the adolescent brain. What say you?

2. **Teen driving risk is highest given a mix of a) nighttime driving, b) peers in the car, and
c) alcohol. In your opinion, do these facts justify proposals for “graduated licensing,”
   which increases teen driving opportunities only gradually?** For example, 16-year-olds
might be allowed daytime driving alone or with an adult for the first six months, then
nighttime driving, then (say, during their 18th year) driving with one peer, and thereafter
— after the brain has further matured and peer influence becomes less commanding —
unrestricted driving. Or is graduated licensing a bad or unworkable idea?

3. **Could research on adolescent brains and cognition inform judicial decisions about
   individual teens — explaining, for example, that a particular 15-year-old defendant
   has an especially immature brain compared with other 15-year-olds?** Bonnie and Scott
(2013) caution: Although today’s science should inform public and legal policies that
protect adolescent interests, it provides no basis for judging the brain maturity of
particular individuals.

Through constructive discussion and debate, students can grapple with how psychological
science informs their experiences, attitudes, and future behaviors. And they can learn to engage
and respect others’ ideas.

April 30, 2013