

Mellon Foundation Grant: Team-Teaching Grant Proposal

Course: Psychology 376: Aggression and Violence: An integrated analysis

Instructors: Amanda Vicary and Abigail Kerr

Narrative

Over 1,000,000 violent crimes are reported in the United States annually, averaging one incident per every 30 seconds (fbi.gov). Countless other acts of aggression occur on a daily basis, ranging from bullying in schools to verbal altercations between peers and significant others.

The causes of aggressive behavior have been studied by social psychologists in earnest since the 1950's, with focus on the potential impact of environmental causes such as parenting, peer influence, and the media. More recently, the field of neuroscience has begun to study the potential causes of aggression, with a focus on biological antecedents. The fields of social psychology and neuroscience have approached the study of aggression with vastly different methodologies—social psychologists focus on surveys and controlled experiments, while neuroscientists focus on neural recordings, brain imaging, and genetic analyses. As such, the pedagogical approaches to exploring the content vary significantly.

We propose a course that focuses on an integrated understanding of aggressive behavior through evaluation and implementation of methodologies from both traditions. Although social psychology and neuroscience are housed in the same department at IWU, they are actually quite different disciplines. In fact, many universities house neuroscience in its own department (e.g., Bowdoin, Trinity College, Oberlin College). By offering a course that focuses on both the environmental and biological causes of aggression and, importantly, the integration of the two, we will offer students a holistic view of the causes of behavior (specifically violent crimes and aggressive behavior) that would be impossible without including the expertise of both a social psychologist and a neuroscientist.

Course content:

Students will study aggression from both a social (i.e., environmental) and biological (i.e., neuro) approach. Dr. Vicary will provide lecture on the social causes of aggression and students will read research articles that detail survey and experimental studies. Students will receive hands-on experience in the various ways that social psychologists approach the study of aggression. For example, students will take and score self-report measures of aggression and watch some of the stimuli (such as music videos and television clips) used in prior studies so that they can provide their own analysis of these methods.

Dr. Kerr will provide lecture on the technological advances that have permitted the study of the neurological underpinnings of aggressive behavior. Students will read empirical papers concerning the brain circuitry responsible for aggressive behavior, the physiological mechanisms

of the fight or flight in response, and areas of the brain that are differentially responsive in animals that exhibit abnormal aggression. These readings will vary drastically from those presented by Dr. Vicary with most articles focusing on non-human animals and/or pathophysiology. In addition to these readings, Dr. Kerr will expose students to the hard-science/lab-based approach to these issues. Students will spend class time in the animal lab that is housed in the psychology department, getting hands-on experience with learning principles that influence aggression and observing and practicing techniques (such as tissue harvesting and imaging) that are used to identify and analyze the biological mechanisms of behavior.

After students have been exposed to both approaches, they will begin to integrate the two to develop a deeper understanding of aggressive behavior. We will directly expose students to ways in which aggression can be studied using both social and neuro approaches simultaneously, something that is infrequently done. For example, students will play different video games while hooked up to an EEG machine (currently available in the psychology department), allowing them to see firsthand how violent media exposure impacts brain activity. For students' final paper in the course, they will write an in-depth research proposal in which they design a study that investigates aggression from an integrated social and neuro approach. For instance, students could choose to focus on the impact of social isolation on aggression by proposing to place young mice or rats in an isolated environment and then determine whether their brains develop differently than mice or rats raised in groups.

Throughout the course, students will participate in debates about the ethical issues in both approaches, take daily quizzes over assigned readings, take turns leading class-wide critical analyses of empirical papers, present their final research proposal, and write several short papers that focus more specifically on each approach.

Pedagogical approaches:

Students will be exposed to a variety of pedagogical approaches throughout the course. Dr. Vicary will use lecture, video, and demonstrations to guide students to a better understanding of the scientific approach of social psychology. Dr. Kerr will expose students to laboratory techniques, providing students with hands-on experience in neuroscientific data collection and analysis. Throughout the term students will learn to integrate the two distinct approaches, culminating in a final research proposal that combines the strengths of each to answer a critical question of animal (human or non-human) behavior in a novel way.

Contribution to broader university curriculum:

A course on aggression could easily be of interest to a variety of students including psychology, biology, sociology, and anthropology majors. Additionally, we plan to apply for a Writing Intensive Flag. Finally, some of the topics covered in the course (or that students may choose to focus on in their assignments) integrate well with topics that have recently been covered in

colloquia, documentary showings, and other events at IWU, such as acts of police brutality and campus rape.

Integration into curriculum:

This course contributes significantly to the psychology department as well as the greater university. The psychology department is always in need of 300 level courses for majors to take toward their basic requirements, as well as May term offerings (we typically offer a May term course only once every two or three years). Finally, the psychology department plans to add a neuroscience concentration to its major. This course would service this concentration and also help those students interested in pursuing a career in neuroscience gain an understanding of how neuroscience can be integrated with basic psychology.

Teaching information:

The course will be taught by Amanda Vicary (social psychologist) and Abigail Kerr (neuroscientist). The course will be offered every other May Term, beginning 2018.