Psychology

*In the mind’s eye: How situations and personality impacts prototypic facial mapping*

**Summary of Research Project:** The human face is the most important social stimuli. It yields a host of trait invariant information (e.g., age, sex, race) as well as variant information (e.g., emotions). All people have, stored in their mind, prototypes for various facial categories; what does the prototypical happy person look like? What does the prototypical woman look like? What does the prototypical black man look like? Gay man look like? Professor look like? These prototypes can vary among people and can vary based on personality factors but also by situational factors. This year, I am going to be conducting a series of studies related to this broad line of research. In one line, I'll be examining how Whites and Blacks differ in what the prototype of police officers look like? We'll also be examining how happy looking whites look like from White and Black perspectives. This will be done using experimental methods and a procedure known as reverse correlations.

**Requirements for Students:** Students should be interested in social science broadly and be willing to dedicate time to reading primary source scientific articles in social psychology. They should be interested in learning more about statistics and methods and should be willing to learn how to program using various computer software programs (prior expertise is not required). They should also expect to dedicate a few hours a week to data collection in late Fall or early Spring.

**Contact Information:**
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Psychology

*Virtual Depictions of Actual Space*

**Project Description:** This project will task TMN students with building a 3d representation of a real location and presenting it to others in the Maker Mayhem. Combining skills from modeling, photography, animation, and computer programming, we will model a portion of downtown Philadelphia.

**Contact Information:**
Faculty Name: Dr. Jake Benfield
Faculty Email: jab908@psu.edu
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Faculty Member Office Location: 236g Woodland
Psychology

Virtual Reality and False Eye Witness Memory

**Project Description:** Research has long shown that eyewitness memory can be fallible but never in an immersive setting that more fully mimics real life events. The current study will expose participants to a virtual reality car accident and examine the susceptibility of their memory for those events through conversations with other witnesses.

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Psychology

Virtual Reality and Urban Neighborhoods

**Summary of Research Project:** How do people respond differently to a neighborhood when subtle information is changed about the environment and people in it? This project will explore how urban neighborhoods, presented in virtual reality, can be seen differently when the users of that neighborhood are changed.

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Criminal Justice

Capital Punishment for Offenses Committed by Youth: A Population-Based Analysis

Summary of Research Project: Of the 824 people executed in jurisdictions across the United States from 2000 through 2015, 142 were youths aged 18, 19, or 20 years when they committed the capital offense for which they were executed. Using publicly available information, this project considers the application of the death penalty to this population of youths. Despite neuroscientific evidence that brain maturation continues into the early-to-mid twenties in prefrontal regions affecting impulsivity, behavior, future planning, and processes likely relevant to determining criminal culpability, youth are not protected from the death penalty by jurisprudence as juveniles are by Roper v. Simmons (2005). Here we report on the more pronounced racial disparities in the application of the death penalty among youths relative to all those executed in the U.S. We also consider how legal factors and those pertaining to the specifics of each case of interpersonal violence influence the amount of time from arrest to conviction and conviction to execution. Policy implications are then discussed.

Requirements for Students: Strong writing skills and interest in reviewing social science and law review articles.

Contact Information:
Faculty Member Name: Dr. Oren M. Gur
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Faculty Member Office Phone: 215-881-7904
Faculty Member Office Location: 310c Sutherland
Criminal Justice

Accidental Drug-Related Deaths in Montgomery County, Pennsylvania

Summary of Research Project: The United States is facing an epidemic of accidental drug overdoses; Pennsylvania has been particularly hard-hit, and in Montgomery County the proportion of drug-related deaths involving opioids has increased precipitously since 2000. Extending Zinberg’s conception of “Drug, Set, and Setting” (1984), this project considers how the opioid overdose epidemic has impacted Montgomery County by collecting, entering, and analyzing records from the Montgomery County Coroner’s Office (MCCO). We will report on the drugs, people, and places associated with overdoses in this county since 2000, and there will be opportunities and support for students to develop and investigate additional research questions utilizing the dataset.

Requirements for Students: The project requires a database specialist (or two) who can help manage over 1,000,000 data points utilizing Red Hat; proficiency in SPSS statistical software a plus.

Contact Information:
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Criminology

The Use of Comparison Groups in Post-9/11 Terrorism Research

Summary of Research Project: Most terrorism studies do not include a comparison group. The absence of a comparison group prevents the construction of a causal explanation and reduces confidence in findings. The current project seeks to understand what comparison groups are used in terrorism studies when they are included and grapple with the question over what the proper comparison group should be (e.g. violent terrorists versus nonviolent terrorists, criminal versus noncriminal extremists, ideologically-motivated offenders versus "regular" criminals, etc.). The project will require a student to collect all empirical terrorism studies published in peer-reviewed journals after September 11, 2001. The student will collect data from each study, including research questions, theory used, presence of comparison group, data source, unit of analysis, methods, findings, appropriateness of the comparison group, and journal outlet. The findings will be of interest to terrorism scholars as well as policymakers and practitioners in terrorism prevention efforts.

Requirements for Students: Proficiency in use of Penn State Library databases and other Internet search engines as well as Google Drive and Microsoft Word and Excel. The student must also have a GPA above 3.0.

Contact Information:
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Faculty Member Office Location: Sutherland 310D

Science Education

Aren't You Afraid of Getting Sick? Dumpster Diving and Food Waste Education

Summary of Research Project: Dr. Kathy Fadigan’s current research investigates dumpster diving as a means of educating the public about the socio-scientific issues surrounding food waste, such as food safety, microbiology, decomposition, waste disposal, hunger and food insecurity, and sustainability. She is interested in evaluating the use of Facebook as an educational tool. She will also be looking at the effectiveness of food waste curriculum in various informal learning environments such as social media, museums, schools, and community-based organizations.

Contact Information:
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Management

*Technological Competence Creation of EMNCs and Performance: Empirical Justification of EMNC Theories*

**Summary of Research Project:** This project aims to offer empirical justifications for three common assumptions in Emerging Market Multinational Corporations (EMNC) theories, namely the critical role played by overseas subsidiaries in knowledge seeking, the systematic integration of subsidiary knowledge and home country activities, and the positive relationship between the first two and firm performance. This project focuses on the most innovative EMNCs from India and China, with a control group of Multinational Corporations (MNCs) from mature industrialized countries. The latest US patent citation data up to 2014, complemented with other firm-level and country-level data, are employed to empirically test MNCs’ international learning patterns. This project offers a finer-grained picture of the EMNC’s technological knowledge seeking patterns and contributes to the clarification of various theoretical frameworks of EMNCs.

**Requirements for Students:** Minimum GPA 3.2; B or better in Statistics courses, if any; B or better in Business related courses, if any.

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