

The Ohio State University at Lima

**Undergraduate Research
Forum**

Thursday, April 29, 2010

12:30pm

Lima Campus Library

Undergraduate Research Forum

Purpose

The Lima Campus Undergraduate Research Forum is designed to encourage students to actively engage in research. Beyond the Lima Campus Forum, participation in the Denman Undergraduate Research Forum, the University Libraries Undergraduate Research Prize, or publication in JUROS are all strongly encouraged, although faculty and students are welcome to pursue any appropriate forum for their discipline that will showcase undergraduate research.

Thank You

We would like to thank Dean John Snyder for his support of this Forum. Thanks also to the support given by the Lima Campus IT department, maintenance department, and Lima Campus Student Senate.

Judges

William Ackerman, Associate Professor of Geography,
Director of the Lima Campus Honors Program

Roger Nimps, Assistant Dean and Lecturer in History

Virginia Tompkins, Visiting Assistant Professor of Psychology

Victoria Gonzalez, President of the Lima Campus Student Senate

The student body will also be able to judge the posters from April 29–May 7. Ballots are available in the library during this time. The first, second, and third prizes will be awarded at the Ohio State University at Lima Awards Ceremony on June 4, 2010.

Oral Presentations Schedule

Student Presentations

12:30pm-2:45pm

12:30pm Lauren McKinley and Ashley Holtzapple

12:45pm Ryan Ehrnsberger and Jed Ketcham

1:00pm Brian Campbell

1:15pm Kurt Westhoven and Jacob Klay

1:30pm Kurt Westhoven

1:45pm **Break**

2:00pm Taylor Robbins

2:15pm Steve Walter

2:30pm Katrina Hackworth

Abstracts

Brian Campbell

Faculty Sponsor: Dr. Allison Gilmore (History)

Restoring Democracy in Cuba: Cuban Exile Participation in the Bay of Pigs Invasion

In April 1961, a group of Cuban exiles aided by the CIA attempted to invade Cuba with the hope of toppling the Castro regime. Fourteen hundred exiles participated in the Bay of Pigs invasion, many of them recruited from Cuba and the Miami area. Much of the Bay of Pigs research has focused on the political impact of the failed invasion. However, there has been scant attention specifically paid to the exiles' perspective, especially in the United States. My research examines the invasion from the exiles' point of view and their struggle to create a new government in Cuba. The main purpose of this project is to understand the background of these exiles and the reasons for their participation in this covert operation. I have analyzed various primary and secondary source materials pertaining to the invasion. I traveled to the Ford Presidential Library, where I discovered a diary excerpt from Arturo Lopez concerning the day to day activities of the soldiers. The Cuban exiles saw this invasion as an extension of the ongoing struggle to restore democracy in Cuba. They were not mercenaries as Fidel Castro has stated, but nationalists who viewed the operation in terms of a Civil War. Examining the exiles' perspective is essential to fully understanding the Bay of Pigs invasion.

Abstracts

Ryan Ehrnsberger and Jed Ketcham

Faculty Sponsor: Dr. Joseph Green (Psychology)

Does a neutral site level the playing field? Analysis of basketball games from the ACC and Big 12

It is often claimed that winning three consecutive basketball games against the same team in a given season is particularly difficult. In order to test this belief, we sampled basketball game data between 2000 and 2009 from men and women's programs within the Atlantic Coast and Big 12 Conferences. We found a total of 120 instances where one team defeated another team twice in the same season and then played a third game. To test the hypothesis that it is particularly difficult to win three games against the same team in a single season, we looked at the probability of the "top dog" team winning the third game. We will analyze our data in a series of loglinear analyses and examine the following predictors: location of the third game (e.g., home, away, or neutral court), margin of victory across the first two games, men versus women's program, and conference.

We predict that the odds of the "top-dog" team winning the third game will be quite high across both men and women's programs, challenging the belief that winning a third consecutive game is particularly difficult. The availability heuristic and the ease of recalling basketball games where the underdog team won the third game likely contribute to the maintenance of the belief that winning a third game in one season is unusually difficult.

Abstracts

Katrina Hackworth

Faculty Sponsor: Dr. Allison Gilmore (History)

Territory, Oil, and Competing Interests in the Middle East

Conflicts in the Middle East have been the focus of the world's attention since 1947 when the United Nations sanctioned the creation of the new Jewish state of Israel in the place of the Arab nation of Palestine. Since that time, the official U.S. policy toward Israel has remained neutral; however, secret negotiations between the U.S. and Israel regarding arms, territory, and oil during the Sinai Disengagement Agreement of 1974 prove the U.S. chose to align itself with Israel. This research focuses on the U.S. claims of neutrality and contradicting acts that favor the policies and development of Israel especially as they occurred during negotiations with Egypt. By analyzing research in articles, books, and documents from the archives at Ford Presidential Library, the benefits U.S. received: acquiring oil from a non-Arab supplier in the Middle East; a decrease in the amount of financial assistance to Israel each year; and the possibility of controlling or managing an oil facility in the Middle East were paramount to maintaining the U.S. status as a superpower. Additional research is needed to comprehend how the U.S. worked to maintain a balance of neutrality and power between Israel and the Arab countries while major competing interests were present. For example, both Egypt and Israel sought rights to land in the Sinai Peninsula, but the U.S. neutrally forced both countries to agree on territorial terms although it desired Israel-control of oil fields within the Peninsula. This research will prove that while all objectives in diplomacy are not successfully achieved, arbitration is successful if some form of peace is attained.

Abstracts

Abigail Hauenstein

Faculty Sponsor: Dr. Fabio Leite (Psychology)

The effects of colors on attitude toward eating

This project's aim was at examining the effects of environmental colors on participants' attitudes toward food. The particular colors of interest were red and blue, whereas white served as a neutral color. In a pilot study, participants were asked to complete a questionnaire probing their appetite and overall eating attitude and behavior. At one time point, participants received the questionnaire on red paper, at another on blue paper, and at yet another session on white paper. The idea was to investigate whether the color of the paper influenced how participants answer questions about food and eating behavior. That is, if red were to have stimulating effects on appetite and blue were to have suppressive effects on appetite and the color of the sheet of paper in which the questionnaire was presented could bring about these effects, then these self-reports would reflect these differences. No significant differences were found in the data obtained at 3 time points from questionnaires printed on sheets of different colors. This pilot study, however, illustrates that if there is an effect of color on how much people eat, such effect is not easily detectable. Hence, we caution restaurant managers not to decide on tablecloth or plate color, for example, based on the idea certain colors can stimulate appetite. Rather, the restaurant industry could benefit from a field study based on the same premises as this study to compile evidence favorable or contrary to the hypothesis of a relationship between environmental colors and attitude toward eating.

Abstracts

Lauren McKinley and Ashley Holtzapple
Faculty Sponsor: Dr. Joseph Green (Psychology)

Newspaper coverage of high school basketball games: Is there a gender bias?

In an attempt to explore possible gender bias in newspaper coverage of high school basketball games, we examined the length of articles, placement of articles, if there was front-page mention, the page where the article was placed, and whether a picture accompanied the report. The two newspapers that we selected were the Kenton Times and the Lima News. They were selected due to their geographic proximity to OSU – Lima. Searching library archives of the Kenton Times, we examined the coverage of Kenton High School basketball games for boys and girls during the 2000-2001 season. During that year, each gender played 20 regular season games with the boys' team winning two more games than the girls' team. We repeated this examination using data from the Lima News coverage of Lima Senior High School basketball games during the 2009-2010 season. During that year, which also consisted of 20 regular season games, the girls' team won one more game than the boys' team. Data analysis is currently under way, in which we will contrast our findings by gender, year of report, and city. Results will show whether gender bias in coverage of high school sports exists within the local news media.

Abstracts

Taylor Robbins

Faculty Sponsor: Dr. Nicoleta Roman (Mathematics)

Object tracking as a means to enhance human-computer interaction

I present an object tracking algorithm that's main purpose is to convert any flat surface into a touch screen. I use two cameras positioned on adjacent sides of a rectangular surface to track the position of a pointing device and then output x and y coordinates for the computer's mouse. Once set up, the cameras will send the computer an image that will be scanned for objects near or touching the surface.

If a pointing device is detected, its coordinates will be converted proportionally to the coordinates of the computer screen, thus simulating the movement of a mouse.

Abstracts

Steve Walter

Faculty Sponsor: Dr. Allison Gilmore (History)

Guns and Butter: Cold War Era Defense Spending on U.S. Social Spending

During the “Cold War” (1945-1990), the U.S.A. and the U.S.S.R. spent unprecedented amounts developing huge military arsenals. Annual U.S. defense spending as a percentage of Gross Domestic Product (GDP) increased from 1.7% in 1940 to an annual average of over 7.5% from 1946 through 1990. The purpose of this research is to use economic and policy primary source data to identify the social program cost, if any, of increased U.S. defense spending during the Cold War. The evidence shows that the unparalleled level of peacetime spending on defense expanded the U.S. economy contributed to the expansion of domestic social spending. Archival research at the Ford Presidential Library has revealed that the U.S. government distributed spending on nuclear technology and systems across nuclear weapons programs, conventional weapons, foreign aid, and even domestic civilian programs, making it impossible to calculate total spending on this category of armaments. This finding suggests that arguments about the social impact of spending on the nuclear arms race are highly subjective. It is easier to reach a consensus on the total amount of defense spending, although the impact on social spending has generated disagreement. A neutral analysis of this issue will provide a reference for future policy makers.

Abstracts

Kurt Westhoven and Jacob Klay

Faculty Sponsor: Dr. Fabio Leite (Psychology)

Factors Influencing Cooperation in the Iterated Prisoner's Dilemma

In game theory, prisoner's dilemma games have been used to demonstrate that two people might choose to defect rather than to cooperate even when it is advantageous to cooperate. Following Furlong and Opfer (2009), we used an iterated prisoner's dilemma game to investigate whether: (a) levels of cooperation would differ depending on strategies played by computer, consistent with previous literature; (b) presenting payoff structures with symbols or spelled-out denomination would not have any influence on level of cooperation, as reported in Furlong and Opfer; (c) 300-cent rewards would elicit different level of cooperation than 3-dollar rewards, as reported in Furlong and Opfer; and (d) introducing a larger trial-by-trial reward amount would yield different levels of cooperation. In the first experiment, a 4x4x2 design manipulating opponent strategy, payoff structure, and monetary denomination of rewards yielded support for (a), but not for (b) or (c). In the second experiment, a 4x4 design manipulating opponent strategy and payoff structure yielded support for (d) and further support for (a). Together, these findings indicate that factors such as opponent's strategy or perceived economic value of rewards may have a larger influence than numeric value of rewards over the choice of cooperating or defecting in a prisoner's dilemma scenario.

Abstracts

Kurt Westhoven

Faculty Sponsor: Dr. Allison Gilmore (History)

Case Studies in American Military Policy and Cold War
Technology

American military policy from 1945-1990 was one dominated by its perceptions of the Soviet Union. During this period the two superpowers were engaged in a 'cold war', or a war in which conventional battlefield operations were subsidiary to proxy wars, an arms race, neocolonialism, and diplomatic saber rattling. The focus of my research is on the relationship between American military policy and technology during the development of the hydrogen bomb and Multiple Independently targetable Reentry Vehicles (MIRVs). I will be examining primary and secondary source documents in an attempt to investigate how scientific progress pushed the nation's military policy in a certain direction, as well as in which ways American military policy pulled technology forwards by providing funding for particular research and development projects. Based on my archival research at the Ford Presidential Library as well as my examination of secondary source scholarship, the evidence suggests that America's military policy played the preeminent role in spurring the development of a multistage thermonuclear device in order to meet policy objectives. The evidence also suggests that the development of MIRVs was one molded by American policy objectives. An analysis of these two developments as case studies from the Cold War arms race will reliably demonstrate the role that America's military policy had in the creation of these two technological advances.

About

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