

3rd Symposium in 2013

Poster Presentations—3:15-4:00

TLEC 113 A&B

Adam Faulstich

Football Fanatics: NCAA Division I Viewership in America

College football is a multibillion dollar industry watched by millions of fans each fall weekend. This project utilizes county level market Potential Data to reveal spatial patterns in College Football Viewership.

Andrew Malan

A Spatial Analysis of Crime Data in Lincoln, Nebraska

Knowing the locations of crime is crucial to prevention efforts. This project maps robbery and burglary occurrences in January of 2013 in Lincoln, Nebraska. Crime data is compared spatially to demographic variables to reveal spatial relationships between demographic data and locations of crimes.

Austin Mogg

Where the Wind Comes Sweeping Down the Plains

Wind power and wind energy production has increased tremendously in recent years. This project shows where “Wind Farms” are placed in relation to the wind energy potentials and the power capacity of the individual towers in the Great Plains. The objective is to determine whether wind farms are located in high wind potentials or not.

Brian Maxson

Migration Nation: The Decline of the U.S. Rural Population

Until recently, most humans lived in rural areas. With the rise of new farming technologies and improved transportation, the population of rural counties in the United States has declined precipitously. This project geographically displays each county’s population gain or loss from 2000 to 2010 in the United States.

Bryson Pond

Virginia: The Alpha and Omega State for the Civil War

The Civil War began and ended in the state of Virginia from Manassas (Bull Run) to Appomattox Court House. This state in which most battles commenced during the war was Virginia with 122 battles. Most of the well-known battles during the Civil War are in Virginia including Bull Run, Petersburg, and Appomattox. My research is to go deeper on which county holds the most battles in Virginia and whether or not it has the greatest casualties.

Daniel Moore

Spatial Analysis of Wildfires in Colorado

This project examines the spatial distribution of Colorado wildfires from 1980 to 2012. Wildfire locations are compared geographically with spatial layers showing county human population, fuel types, towns and cities, land ownership, and roads. The objective is to reveal how wildfires impact the human landscape.

Delilah Kond

Cut Down One Tree, Plant Two

According to the US Forest Service, an estimate of 831 sq. miles of primary forest was lost between 2000 and 2005. Conserving and developing the forest are major tools for climate change mitigation, watershed regulation and wildlife habitat protection. This research examines forest change in the United States between 2000 and 2010.

Ethan Hutton

Population Survey of Barred Owls (Strix varia) in Seward County, Nebraska Seward County borders Barred Owl (*Strix varia*) populations in the Eastern U.S. A population count is being conducted to determine this specie's density. Habitat associations surrounding Barred Owl locations will be analyzed using GPS and GIS technologies. The significance of a Barred Owl study in Seward County will be discussed.

Garrett Golke

National Lutheran Outdoors Ministry Association Camp Counselors, 2009-2012

This study examines the summer hiring patterns of camps that were members of the national Lutheran Outdoors Ministry Association from 2009 to 2012. Spatial information on former counselor's hometowns, colleges, and camps was discovered answering questions about a variety of topics including counselor regional densities, university denominations, and gender differences.

Jordan Schultz

High School Alumni Retention within Cuming County, Nebraska School Districts

In Nebraska, public schools are funded through taxes levied at the state and local levels. By retaining alumni within the school district after graduation, the district reaps a return on investment when graduates live and work in the school district. Therefore, this project examines the distribution and retention of alumni from selected schools in Cuming County, Nebraska.

Joseph Koenig

Hurricane Landfalls in the U.S.: 1962-2012

Since the beginning of accurate record keeping, nearly 43,000 people have been killed throughout North America by hurricanes. By examining hurricane landfall points from 1962-2012 this project will help determine the most hurricane prone areas. Knowing the most prone areas is a key in the preparation and response to these disasters by emergency planners throughout North America.

Joseph Weinau

Using GIS to Calculate Percent Land Use of American Kestrel Nest Boxes

This poster will feature a map of 50 American kestrel nest boxes in Seward County and show whether the nest boxes were occupied for the 2013 season or not. It will further look at the habitat of both used and unused nest-boxes within 250 meters of the nest box and look for patterns in habitat and land use between occupied and unoccupied nest boxes

Joshua Grass

Economic Impact of Sport Fishing in America

According to the American Sport Fishing Association in 2011 there were approximately 60 billion anglers in the United States. Sport fishing's economic impact is estimated at \$115 billion annually. This project will break down this economic impact into four categories, retail sales, taxes generated, jobs created, licenses sold and show spatially how this economic impact varies by state.

Lee Johanson

A Spatial Analysis of Iowa Record Book Bucks

This project examines the spatial distribution of Iowa record book whitetail bucks. Multiple regression was used to reveal the relationships between large bucks and several different habitat types. The study shows that a well balanced mixture of different habitats provides a quality environment for bucks to reach their full potential.

Levi Shinn

How the Great Flood of 1993 Affected Duck Hunting at Ted Shanks Conservation Area

When the Mississippi River flooded in 1993 it significantly altered the natural landscape which impacted habitat. This project utilizes the National Land Cover Database's 1992-2001 Retrofit Land Cover Change layer to analyze the change brought by the flood. This layer is used alongside duck population numbers and hunter effort.

Megan Osladil and Tim Fosmo

Diet of Barn Owls in Ulysses, Nebraska

The diet of Barn Owls in eastern Nebraska from 2008 – 2011 will be compared to this past summer through pellet dissection and prey identification. Data will be collected and analyzed to look for notable change. Lastly any changes will be examined for particular causes and further explanation of the subject.

Michaela Gierke

A Spatial Analysis of the Enrolled Students at Innovation Academy Charter School

A charter school is public and it receives money from the government, but it also has the freedom to change the curriculum based on the student's needs, within the prescribed laws and enrollment is typically on a lottery-based system. This project looks at the spatial distribution of enrolled students at Innovation Academy Charter School in Tyngsborough, Massachusetts. The objective of this project is to reveal the concentrations of students enrolled in this regional school from Middlesex, Essex, and Worcester County.

Paul Fortmeyer

Where Banks Are: An analysis of the locations of banks in Douglas County, Nebraska

Research suggests that in counties with populations over 250,000 banks tend to locate in wealthy, white regions. This project examines the locations of banks in Douglas County, Nebraska in relation to poverty levels, race, and per capita income by census tract.

Ruth Krc

Defining the Regions of the National Park System

The National Park Service has 398 sites in the United States and territories. Of these, 59 are National Parks, 78 are National Historic Sites, and 76 are National Monuments. This project examines the spatial distribution of the NPS sites, analyzes the data, and gives unique names to the identified regions.

Ryan Baney

An Analysis of Population & School Distribution in Sioux Falls, SD

In fast growing cities such as Sioux Falls, SD, it is important to spatially analyze the population growth and density to help better examine the location of schools. This project analyzes the population distribution, density, and growth to the location of schools in Sioux Falls.

Tai Pleasant

Cornhusker Red: Political Party Affiliations in Nebraska, 2010

Nebraska has only voted for a democratic Presidential candidate seven times in its history. This project examines the spatial distribution of political party affiliation by county in Nebraska. Party affiliation was geographically compared with county population, ethnicity, income, and population density to reveal spatial patterns.

Tate Bedwell

A Spatial Analysis of Violent Crime Rates in the United States

Violent crimes such as murder, forcible rape, aggravated assault, and robbery combined for an estimated 1,246,248 incidents in 2010. This study examines data from the Federal Bureau of Investigation's Uniform Crime Reporting (UCR) Program. Violent crime rates are mapped by state from 2006 to 2010 to reveal regional patterns.

Von Thomas

Spatial Analysis of Artificial Reefs along the Coast of Florida

Florida has one of the most active programs among artificial reef development in the Gulf and Atlantic oceans. These reefs improve fishing, diving, reef fish habitat, and provides research for scientists to monitor. This research displays and analyzes the spatial distribution of the artificial reefs.

Wendy Boller

Macro-Habitat Preferences of American Kestrels (Falco sparverius)

I am analyzing the habitat preference of American Kestrels. Data will be collected from 50 nest-boxes. This data will include nest-box orientation, geographic coordinates, height from ground, and occupancy rates. This will allow me to better understand whether Kestrels tend to use nest boxes in mainly wooded or non-wooded habitats.

Zackary Warner

Spatial Analysis of Hometowns of 2012 GPAC Football Team Rosters

Ten of the eleven schools in the NAIA affiliated Great Plains Athletic Conference are represented by a football program. This project displays the distribution of the hometowns of each football athlete of the ten programs from their respective 2012 football rosters.

Oral Presentations

4:10-4:30

Heidi Wilkinson—TLEC 111 A&B

Photometry and Observations of Solar System Objects

The purpose of this project is to observe solar system objects, such as comets or Jupiter's moons. The telescope for use in this experiment, located at the Osten Observatory, is a sixteen inch reflecting telescope accompanied by a Meade DSI optical CCD camera. The goal is to draw conclusions regarding the temperature and brightness of the objects of interest using photometry techniques and by fitting blackbody curves to the data.

Clinton Anderson—TLEC 106

Mobbing Behavior in Response to Eastern Screech-owl

I am studying the mobbing responses of different species of birds when exposed to an Eastern Screech-Owl (*Megascops asio*) model call. This study will be done in Eastern Nebraska and species along with unique reactions will be documented, and studied to find trends among those species.

Colin Spilker—TLEC 104

An Eye into Law Enforcement

An eye into law enforcement looks at the stress involved with police officers and their daily lives. Early into the study the findings show that stress is highly present and felt with the duties performed and the effects it has with home life.

Brandon Rehm—TLEC 102

R. MacDonald: What the Court Didn't Find

MacDonald was charged with the murder of his wife and two daughters on August 29th, 1979. To this day there are groups, organizations, and insist that he is innocent. However, evidence from the crime scene that was overlooked by the court may finally put this case to rest.

Oral Presentations

4:40-5:00

Erienne TeSelle, Sharie Moen, & Amanda Baldwin—TLEC 111 A&B

Evaluation of Law Enforcement Ammunition: A Comparison of Commercially Available Duty Ammunition

Using the FBI's terminal performance standard, we observed and characterized the behavior and effectiveness of two commercially available law enforcement ammunitions used by the Seward County Sheriff's Office. The results analyze wounding efficiency and barrier penetration to be used in prediction of performance for officers during lethal force situations.

Joseph Weillnau—TLEC 106

Percent Land Use as a Macrohabitat and Microhabitat Variable in American Kestrel Nest Box Selection

The population of American Kestrels, North America's smallest falcon, has been declining since 1974. Nest boxes are an increasingly used conservation tool. Research has shown that kestrel's select boxes in open microhabitats. This project will look at percent land use as a macrohabitat and microhabitat variable in nest box selection.

Ryan Fiero—TLEC 104

Relationship of Social Networking and Life Satisfaction

This study investigates the relationship between the amount of time college students spend using social networking and their life satisfaction. Over 700 survey responses are evaluated.

Oral Presentations

5:10-5:30

Sydney Kiesel—TLEC 111 A&B

The Diet of Barn Owls in Western Nebraska by Pellet Analysis from 1984 – 1987

The diet of Barn Owls in Western Nebraska by pellet analysis during the 1987 breeding season will be studied and compared to the 1984 – 1985 data. Based on previous studies I believe *Microtus ochrogaster* will comprise most of the owl's diet. Many factors play a role in this study that will be reviewed.

Crystal Bauer—TLEC 106

Memory and Conceptual Film

Following all the “-isms” of the art world, we have emerged into a time where anything goes. Visual stimulation has given way to intellectual stimulation; art is not only meant to be pretty, but is meant to make us feel, think, and experience along with the artist. My work in conceptual film (which I will present digitally) deals with ideas of memory, loaded metaphors, and the body. I will discuss my work and process, and how it fits into the larger framework within the field of art.

Kelly Jacob—TLEC 104

A Cross-Generational Study of the Role of Prayer in the Lives of LCMS Females.

The purpose of this qualitative cross-generational study is to investigate and compare the role and significance of prayer in the lives of Lutheran Church-Missouri Synod (LCMS) females. The type of information that is sought includes the importance of prayer and the role of prayer in the lives of LCMS females. 16 LCMS females were interviewed for the study, ranging from ages 20 to 87. Major and minor themes found within the study will be highlighted. Potential applications for future ministry purposes will be shared.

Oral Presentations

5:40-6:00

Tyler Ohlman—TLEC 111 A&B

Effects of microhabitat on nest site selection of American Kestrels (Falco sparverius)

In my project, I will mount and later examine nest boxes in Seward County, and observe whether or not they are inhabited by American Kestrels (*Falco sparverius*). By recording the height, orientation and surroundings of each nest box, I hope to find correlations between microhabitat features and nest box use.

Joshua Duncan—TLEC 106

The Art of Meme: The Avant-garde in the Age of the Internet

From LOLcats to Gangnam Style, many peculiar cultural phenomena, called memes, have accompanied the advent of Internet technology. By looking at memes through the lens of art history, one can find theological and philosophical implications in the spread of internet memes and their relation to avant-garde art.

Andrew Fugett—TLEC 104

A Study of Mindful Awareness and Perceived Stress

This research project examines the relationship between mindfulness and perceived stress in college students. Literature review of the subject and comparisons to similar research studies will be discussed.

The effect of mindfulness on perceived stress will also be examined. Methods, measures, and analysis used in this study will be addressed.

Refreshments will be available in the Mainstreet area.

A special thanks to...

All the presenters,

Judges,

and

The 2013 Symposium Committee:

Kelsie Elder

Emily Fleming

Mallory Hicks

Nicole Hill

Maddy Kronau

Jessica Olson

Elsie Ortmeier

Lindsey Spaits

Jessica Williams

Kelsie Zellar