



UNIVERSITY OF
NORTHERN
COLORADO

Office of
Undergraduate
Research

February 23, 2026

Poster Perfect: designing and delivering an impactful presentation

Poster versus Oral: which is better for you?

Poster

Present multiple times in a set poster session, often 1 – 2 hours.

Quick, engaging way to share research

Great for early-stage research

Encourages one-on-one conversations

More spontaneous audience

Helps refine key messages through immediate feedback

May be less intimidating

Most common in science and social science

Oral

Present once: usually 10-15 minutes, plus questions.

More formal, structured presentation of your research

Can showcase multimedia elements (video, audio)

Can facilitate more thorough explanation of complex concepts

More deliberate audience – they chose to attend your session

Can be more prestigious

Most common in humanities and qualitative research

Attention Grabbing

Poster Design:
quick and easy

Clean layout

Readable text

Informative
charts &
figures

High-quality
images

Effective use
of color

Design Concerns

Fonts

- Title 90+ points
- Headings 36-48 points
- Body 28-32 points
- Captions, References 18-24 points
- No more than two typefaces
- Do not write in all capital letters

Color

Contrast

Consistency

Alignment

Open space

Common Mistakes

Overloading poster with text

Using complex jargon instead of clear language

Poorly chosen colors

Low-quality images

Not proofreading!!

Not practicing the verbal presentation

Poster Design: Tools



Disciplinary differences in posters

Science & Quantitative Research

- Emphasis on data & results
- Heavy use of graphs, charts & tables
- Typically follows IMRaD structure
- May use more technical language aimed at researchers in the field (depending on venue)
- Sometimes poster displayed without the presenter

Humanities & Qualitative Research

- Focus on interpretation & analysis
- Heavy use of quotes, images, photos, maps, etc.
- More variety in headings
- May use less technical language
- More emphasis on aesthetics
- More flexible design options

Poster Printing

SIZE

- Standard = 36" tall x 48" wide
- Or sometimes 36" x 42"
- The poster may be shorter or taller, but not wider.
- Know your conference's poster specifications!

PAPER or FABRIC

- 24# or heavier paper.
- May be gloss or matte paper or
- Fabric (for more finished projects)
- Use thicker for out of state conferences. Can be thinner for local.

LEAD TIME

- 3-7days lead time.
- Contact the printers in advance to be sure you submit your file for printing in time.

FORMAT

- Submit as a pdf
- Also send PPT if a Powerpoint.

Printer options

On Campus printing

- [MAST Institute](#)
- Some departments provide students with complimentary printing services

Off Campus Printing options

- [Copy Shoppe, Greeley Colorado](#)
- [Fed Ex Office](#)
- [Office Depot/Office Max](#)

Presenting Your Poster

Be approachable

- Dress in professional clothing
- Smile
- Look open to talking

Prepare a 2-3 minute synopsis of your research

- Include your key take-away
- Include the significance or importance or the "Why"

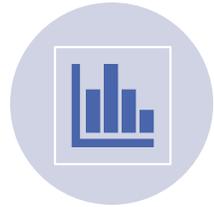
Use your poster as a visual aid

- DO NOT READ YOUR POSTER
- Can use notecards

Engage in conversation

- Prepare for questions
- Prepare for those more expert than you to provide feedback or suggestions.

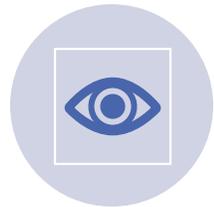
Data Visualization: Goals



Make data easily interpretable



Summarize information



Increase visual interest



Emphasize results/findings

Data Visualization: Simple options

- **Bar chart**
 - for comparing frequency differences between groups
- **Flow chart**
 - to describe research process or relationships between variables or display identified themes
- **Line graph**
 - for tracking variable/s values over time
- **Pie chart**
 - Shows proportional parts of a whole, good for percentages
- **Photos of data**

Data Visualization: More data

- **Tables**
 - descriptive (mean, SD) or inferential (ex: t-tests, ANOVA) statistics
- **Scatter plot**
 - to show relationship/correlation between variables
- **Box-and-whisker plot**
 - to compare distributions between groups
- **Histogram**
 - for displaying shape of distribution of a grouped variable
- **Maps**
 - Can show geographic distributions
- Excel recommends charts which can sometimes help narrow down best options

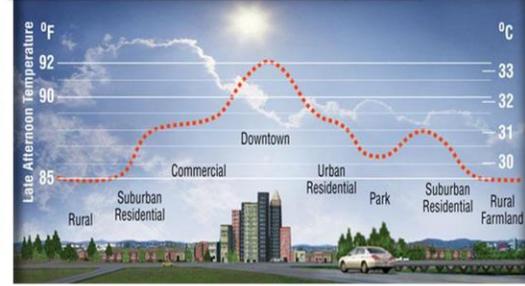
Defining the Spatial and Maximum Intensity of the Louisville Urban Heat Island

Joshua Clark and Cindy Shellito (mentor), Department of Earth and Atmospheric Science, University of Northern Colorado



BACKGROUND

What is an urban heat island (UHI)?



What causes a UHI to develop?



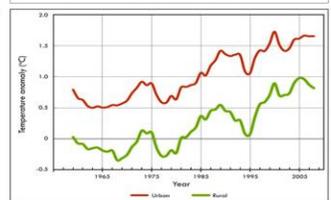
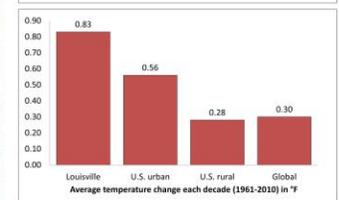
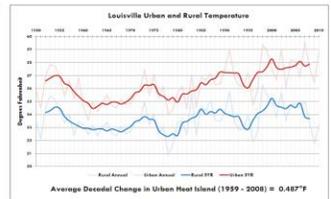
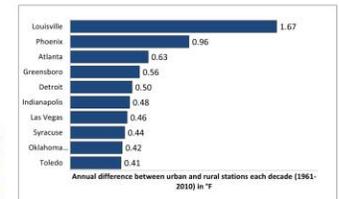
The increased heat absorption of building materials (A), anthropogenic heating from vehicles (B), the elimination of vegetation in construction (C), and urban structure geometry (D), are the principal reasons for UHI development.

Why do we care about UHIs?

- Increased energy consumption
- Human health risks (heat injury)
- Impaired water quality
- Increased pollutants and greenhouse gases

Does the city of Louisville, Kentucky, have a UHI? This study aims to be the **first** quantitative assessment of the urban heat island effect in the metropolitan area. It is hypothesized that the maximum observed temperature anomaly between the urban and rural areas during any day will be **11.67°F** and the average UHI will be between **2-4°F**.

WHY LOUISVILLE?



Motivation:

- Average temperature increase of 0.83° Fahrenheit each decade from 1961-2010, compared to a 0.30° F combined average of the other top fifty metro areas.
- The highest average change in temperature between the rural and urban areas per decade (1.67° F from 1961-2010) which stands in contrast to the change of 0.96° F found in second-ranked Phoenix, Arizona.

(Images and data courtesy of Brian Stone Jr., Associate Professor, Georgia Institute of Technology)

References and Further Reading:

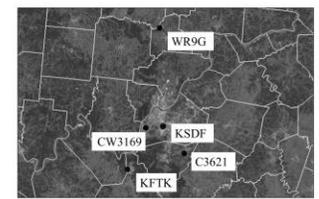
Stone, B. J. *City and the Coming Climate*. West Nyack, NY: Cambridge University Press (2012).
 Oke, T. R. City size and the urban heat island. *Atmos. Environ.* 7, 769-779 (1973).
 Ryu, Y.-H., Baik, J.-J. Quantitative analysis of factors contributing to urban heat island intensity. *J. Appl. Meteorol. Climatol.* 51, 842-854 (2012).

METHODS

This study is based on a climatological comparison of meteorological variables at five weather observation stations from Jan 2009 to Dec 2013.

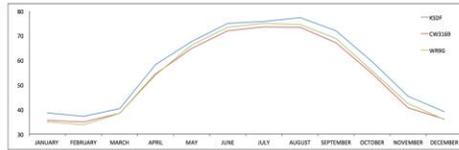
Days are classified as either 'selected' or 'non-selected'. The 'selected' day criteria includes 24 hr periods in which discontinuous wind speed values never exceed 3.0 m s⁻¹, hourly cloud cover never exceeds 4 okta, and no precipitation occurs. The 'nonselected' days group are any daily periods which violate these conditions.

Resulting observations will be computed as the average difference between rural/suburban stations and the urban stations representing the average intensity of the urban heat island. Additionally, a five-year maximum value will be obtained between the urban station (KSDF) and each experimental station.

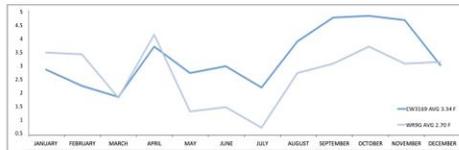


Station ID	Type	Height (m)	Proximity to urban areas and direction	Description
KSDF	Urban	149	10 km south	Airport. Dense industrial and residential area
CW3169	Suburban	139	14 km west	Heavy residential area. Close to Ohio River
C3621	Rural	192	30 km southeast	Light residential area. Wooded area and small lake nearby
KFTK	Rural	230	41 km southwest	Airport. Light residential and military use. Wooded area
WR9G	Rural	162	51 km northwest	Light residential and agriculture area. Small lake nearby

INITIAL RESULTS



Exploratory findings for 2013 show that without discriminating the data, both the stations located closest to (CW3169) and furthest from (WR9G) the urban area deviate from the control during each month.



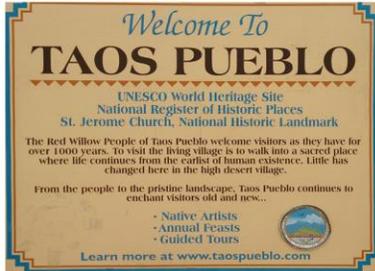
Interestingly, the suburban station CW3169 experiences a greater average temperature difference (3.34°F) over the year than the rural station located much further north (2.70°F). As the results are further filtered based on wind, cloudiness, and precipitation, it is expected that this will change.

These findings prove that the 2013 Louisville average heat island is between 2-4°F for the two stations analyzed. Further, on April 5th, 2013 at 0400, the observed difference between KR9G and KSDF was 11°F, demonstrating that the maximum intensity of the Louisville UHI as expected.

Exploring Conservation at Taos Pueblo, New Mexico through a Living Heritage Lens



Adriana Trujillo
Department of Anthropology



Research Question

How do the conservation practices at Taos Pueblo reflect a living heritage approach?

Purpose

This research expresses the importance of a community-based approach to conservation when protecting living heritage sites - sites that have a living community directly associated with it.

Living Heritage refers to the continuity of tangible and intangible heritage that is maintained by the core-community.

Methods

- Rapid Ethnographic Assessment Protocol (Taplin, Scheld, & Low, 2002)
- Poulios's (2014) methodology framework
- Semi-Structured Interviews
- Participant Observation
- Inductive analysis: themes emerging from transcriptions

Preliminary Findings



Exposed adobe brick layers under deteriorated plaster

Concerns

- Generation Gap
- Language Fluency
- Modernization
- Health Problems
- Protection of airspace



Restricted access to a damaged, unclaimed home



Quotes

"...they took satellite pictures...because they wanted to build those structures exactly the way they were many years ago."

"...it takes a lot of discipline and patience to teach the oral language. Even though we have fluent speakers, the younger generations are being spoken to in English. We...speak the language in the home, but then you have influences from [TV] and the primary language in the schools is English."

Significance

- Taking a living heritage approach to conservation expresses the continuity of heritage because the core-community is completely in charge of the management and protection.
- Conservation practices in Eastern NM pueblos have been understudied, hence this research highlights Taos Pueblo's successful conservation practices.

Future Directions

- Exploring successful conservation practices in other Eastern NM Pueblos and create a framework of successful conservation practices.
- Broadening the sample of interviewees that includes different age groups and genders.

Acknowledgements

I gratefully acknowledge the support of the UNC Academic Year Undergraduate Research Support Grant, 2016



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The Deaf Experience in National Parks with an Emphasis on

Rocky Mountain National Park

Madeline Dannewitz with Barbara Garrett, PhD



Background

- The purpose of this research is to investigate the experiences of Deaf visitors in Rocky Mountain National Park (RMNP) to gain understanding of this human experience.
- Based on known outdoor barriers for Deaf people in the outdoors, how does this compare to barriers in our National Parks?

Qualitative Methods

- Narrative Analysis
- Purposive Sampling
- Triangulated Research
- 4 participants
- Individual and Group Interviews via Zoom
- Thematic Analysis

Themes

- Social Barriers
- Accessibility Barriers
- Economic Barriers
- Educational Barriers

Participant Quote

“Yeah, I still agree that accessibility is the biggest one. I mean, of course, it does have an impact in regards to education and other things. But if people aren't having that accessibility to information in the first place, then, how would they know even how to go there?”



"ACCESS" in American Sign Language

Results

- All participants agreed that accessibility and social barriers caused the greatest challenge in recreation in RMNP.
- The most notable barrier in accessibility stemmed from access to information and timely interpretation.
- A major social barrier for Deaf people in RMNP is lack of events that are Deaf-centric.
- Cost did not pose a large economic barrier as all participants have and utilize the access pass, but it was mentioned that the information involving the access pass could be better communicated.
- Although one's personal level of schooling did not pose a barrier to accessing RMNP, it did pose a barrier in knowing where to access information about it.

Discussion

- Participants emphasized the need for better access to information regarding RMNP. Suggestions included more information and better advertising about the access pass, educational opportunities, and any other Deaf-centered activities.
- Participants underscored the importance of knowing that Deaf people work within the National Parks and the need to highlight these individuals to encourage connectedness.
- They also noted the need for visual signage instead of written text throughout the park.
- Participants recommended more timely accessibility when it came to requesting an interpreter, although they did acknowledge the national interpreter shortage.
- A huge theme of this research was the need for a Deaf Awareness Day held in RMNP. Participants discussed the need to include members of the Deaf and hearing community into an inclusive and educational event.

Recommendations

- Deaf-Centric Events
- Visual Signage
- Easy to Access Information
- Deaf Representatives in RMNP
- Educational Events such as Deaf Culture Training

References



Acknowledgments

I would like to thank the McNair Scholars program, my participants and my research mentor, Dr. Barbara Garrett, for this amazing opportunity.

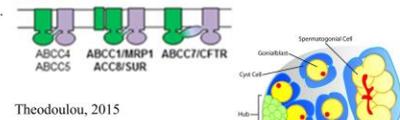
Abstract

ATP binding cassette (ABC) transporters are active influx and efflux transmembrane dimer transporters that can cause chemoresistance in tumors. To understand ABC transporters better we are studying them in the *Drosophila melanogaster* stem cell testis niche to look at adult stem cell (ASCs) populations. We are examining two stem cell populations present in this tissue, the germline stem cells (GSCs) and the cyst stem cells (CSCs) to see if stemness or differentiation is maintained. We use *Drosophila* because it is well studied, and genetic manipulation is possible. We also use the stem cell testis niche because the different cell types arranged in the microenvironment is well understood and the way these stem cells function to produce sperm is also thoroughly studied. We hypothesize that in a normal stem cell population, the ABC transporters will have a normal required function. In this project we investigated the *L(2)03659* gene, which is a homozygous lethal gene. We inhibited *L(2)03659* by RNA interference using the *Gal4 UAS* system, separately in either the germline or cyst-lineage stem cells to see if *L(2)03659* is necessary to maintain stemness or differentiation. We then stained the testis of the male *Drosophila* flies with immunostaining and imaged them to see if there was a phenotypic change in the cell populations. Once stained the testis are imaged on a confocal microscope, which shows if there is a change in phenotype. Crossing the *L(2)03659* with *C587 Gal4* is not showing an irregular phenotype; however, crossing *L(2)03659* with *Nos Gal4* has been inconclusive so far, which leads to further testing.

Introduction

- ABC transporters are active influx and efflux transporters.
- ABC transporters are a contributing factor in multi drug resistance (Theodoulou, 2015)

Subfamily C



Theodoulou, 2015

Matunis, 2012

- *Drosophila* is well studied and mapped extensively.
- *Drosophila* stem cell testis niche is a highly organized and maintained, with easily recognizable cells due to tissue architecture (Matunis, 2012).

Methods

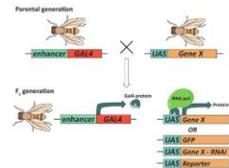
• Crosses

- UAS Gal4 system
- C587 Gal4 Cyst lineage expression
- NosGal4 Germline expression

• Staining

- Hub cells with Fas3
- Cyst lineage cells with TJ
- Germ line with Vasa

• Confocal Microscopy



Results

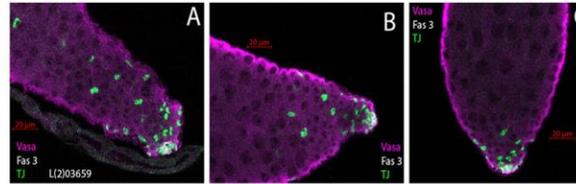


Figure 1. Knockdown of *L(2)03659* in the *Drosophila* cyst lineage cells showed no phenotypic change. Panel A, B, C are testes stained with the germ line cells in Vasa (magenta), hub cells in Fas 3 (white) and cyst lineage cells TJ (green). *L(2)03659* showed no phenotypic difference from a control image. All 16 testes were like this.

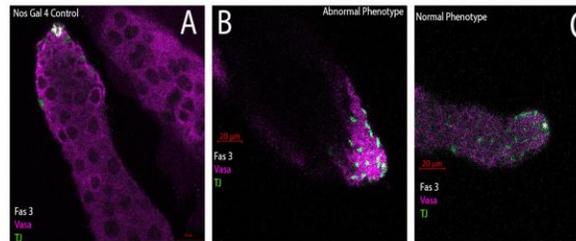


Figure 2. Germline knockdown of *L(2)03659* led differentiation block and normal phenotype. A: Nos Gal4 control testis with the hub in white, germ cells in magenta, cyst cells in green. B: Nos Gal4 UAS *L(2)03659* RNAi testes showed a differentiation block during spermatocyte to spermatogonia differentiation; 6/10 testes were like this. C: 4/10 testes showed a wildtype phenotype.

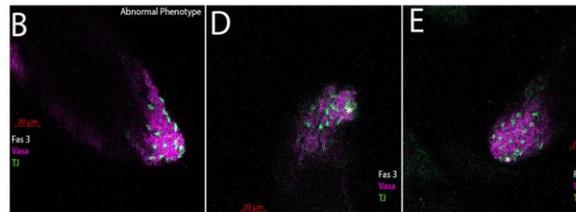


Figure 3. Germline knockdown of *L(2)03659* led differentiation block. Panels B, D & E show the abnormal phenotype. While the niche and the stem cell and some daughter cells are present, once the spermatocyte stage is left, we see no cells continuing down the testes even though we see outlines of the testes in the images.

Discussion

In the cross of *L(2)03659* we see the cross with C587 Gal 4 showed no phenotypic change. However, the cross with Nos Gal 4 showed a phenotypic change of about 60%. This phenotypic change is noted as a differentiation block. We have not seen this before in the knockdown of our RNAi lines. One of the limitations was the fact that the flies died within 6 days of incubation and the RNAi only activates in day 4. The next steps for this research would be to repeat the experiment. Another direction could be finding out why the differentiation block is happening.

Conclusion

L(2)03659 in an ABC-C gene known to be vital for development. When a knockdown occurs in the cyst lineage cells, there is no change in phenotypic expression. However, when a knockdown occurs in the germline cells, we see a 6/10 penetrance of a differentiation block in the testes. This is seen in the complete loss of cells in the testes where spermatocytes are turning into spermatogonia. The niche and the stem cells are kept, which could be the result of insufficient time for the RNAi to fully express itself in the testis because the flies would die if left for more than 5 days. In 4/10 of the testes we see a normal phenotype.

Acknowledgements

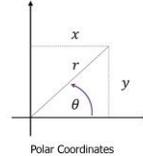
I would like to thank Dr. Leatherman for allowing me to do this research in her lab. My lab mates: Rey, Trey, Brecken, Swagata, and Sarah who were super supportive during this whole process. The McNair Scholars program for providing not just funding but amazing people to be with and learn from. And most importantly my parents, they are my biggest supporters and without them I would not be here.

References

- Matunis, E. L., Stine, R. R., & de Cuevas, M. (2012). Recent advances in drosophila male germline stem cell biology. *Spermatogenesis*, 2(3), 137-144. <https://doi.org/10.4161/spmg.21763>
- Theodoulou, F. L., & Kerr, I. D. (2015). ABC transporter research: Going strong 40 years on. *Biochemical Society Transactions*, 43(5), 1033-1040. doi:10.1042/BST20150139

Background

- The two-body problem models the gravitational relationship between two celestial bodies and predicts their corresponding orbital paths in polar coordinates.
- Isaac Newton proposed the original two-body problem, accurately modeling systems whose rotating mass exhibited a perfectly elliptical orbit.



Polar Coordinates

Newton's model:

$$u = \frac{1}{r}$$

$$\frac{d^2u}{d\theta^2} + u = c_1,$$

$$u = c_1 + A \cos(\theta)$$

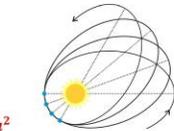
- However, not all systems possess perfectly elliptical orbits. For example, Mercury's perihelion (angular position closest to the sun/minimum radial distance) tends to precess.
- Albert Einstein's theory of general relativity expanded the original two-body problem to include systems with irregular orbits, creating a nonlinear Hamiltonian system.

Newton's model:

$$\frac{d^2u}{d\theta^2} + u = c_1$$

Einstein's model:

$$\frac{d^2u}{d\theta^2} + u = c_1 + c_2 u^2$$



Mercury's abnormal orbit, where the blue dots are its perihelion positions

- Solutions to Newton's model are trigonometric functions. By adding a nonlinear correction term, the solutions to the new model become elliptic functions. Their complexity, however, makes them inaccessible.
- Karl Schwarzschild discovered the first nontrivial exact solution to Einstein's model.

Schwarzschild's solution:

$$d\theta = \frac{du}{\sqrt{f(u)}}$$

Method

- We sought to answer the question of how periods of nonlinear Hamiltonian systems may follow a pattern or possess some unique property.

- We specifically addressed systems within our solar system, as they all precess to some degree.

- Constants c_1 and c_2 were computed based upon gravitational constants (G), mass of central body (M), orbital velocity (v), average radial distance (r_{avg}), and the speed of light (c).

$$c_1 = -\frac{GM}{v^2 r_{avg}^2} = \frac{1}{r_{avg}} km^{-1}; c_2 = \frac{3GM}{c^2} \approx 4.431 km$$

- Because c_1 and c_2 differed so greatly, we normalized the system by use of substitution.

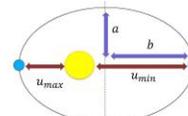
$$u = c_1 v$$

$$\frac{d^2v}{d\theta^2} + v = 1 + c_1 c_2 v^2$$

- We were then able to solve for $d\theta$ using Schwarzschild's solution.

$$d\theta = \frac{dv}{\sqrt{\frac{(1+\epsilon)^2}{2} - (1+\epsilon) - c_1 c_2 \frac{(1+\epsilon)^3}{3} - \frac{v^2}{2} + v + \frac{c_1 c_2 v^3}{3}}}$$

$$\epsilon = \sqrt{1 - \left(\frac{b}{a}\right)^2}$$



A mass's perihelion and aphelion (distance farthest from the sun)

- Once in the correct form, we were able to create a complete elliptic integral to theoretically compute full revolutions.

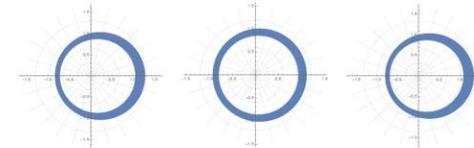
$$Total \theta = 2 \int_{v_{min}}^{v_{max}} \frac{dv}{\sqrt{\frac{(1+\epsilon)^2}{2} - (1+\epsilon) - c_1 c_2 \frac{(1+\epsilon)^3}{3} - \frac{v^2}{2} + v + \frac{c_1 c_2 v^3}{3}}}$$

- Unfortunately, this elliptic integral diverges. There were limitations from calculating in Mathematica stemming from two singularities in the parameter space.

Preliminary Results

System	ϵ (eccentricity)	c_1	Precession Amount Per Revolution
Mercury	0.2060	$1.7271 \cdot 10^{-8}$	$5.0130 \cdot 10^{-7}$
Venus	0.0070	$9.2336 \cdot 10^{-9}$	$2.5695 \cdot 10^{-7}$
Earth	0.0167	$6.6845 \cdot 10^{-9}$	$1.8568 \cdot 10^{-7}$
Mars	0.0930	$4.3878 \cdot 10^{-9}$	$1.2314 \cdot 10^{-7}$
Jupiter	0.0480	$1.2844 \cdot 10^{-9}$	$3.5876 \cdot 10^{-8}$
Saturn	0.0540	$6.7984 \cdot 10^{-10}$	$1.9393 \cdot 10^{-8}$
Uranus	0.0460	$3.4807 \cdot 10^{-10}$	$9.6963 \cdot 10^{-9}$
Neptune	0.0100	$2.2247 \cdot 10^{-10}$	$6.3026 \cdot 10^{-9}$
Pluto	0.2480	$1.6932 \cdot 10^{-10}$	$4.8481 \cdot 10^{-9}$

Data regarding properties of chosen systems



orbits of Mercury, Mars, and Pluto (respectively) after 500 years of revolutions, starting from v_{min}

- Though we weren't able to calculate exact values for comparison, we were able to find unique formulas for each system that we hope to integrate in the future using more efficient techniques. For example, the formula for Mercury is:

$$\frac{0.000451746\sqrt{1206 - 1.4\sqrt{1.96007} \cdot 10^7 - 1.1\sqrt{-0.794 + v}} \text{EllipticF}[\text{ArcSin}[1.55794\sqrt{0.794 + 1.1}], 2.10196 \cdot 10^{-4}]}{\sqrt{-0.476702 + v(1.4(-0.5 + 2.55093 \cdot 10^{-4})v)}}$$

Future Directions

- We hope to calculate full revolutions (periods) to confirm observed precession values of each planet.
- To evaluate each elliptic integral accurately, we plan to utilize the Jacobi elliptic integration reduction methods and the arithmetic-geometric mean (AGM) algorithm.
- We also hope to address perihelion shifts in the future.
- In principle, Einstein's model is universal. In the long term, we would like to apply it to celestial bodies outside of our local universe such as on non-rotational black holes with dramatic precession effects.



Does Childhood Socioeconomic Status Influence

Sustainable Consumption?

A Life History Theory Approach

Esmeralda Rodriguez & Daniel Brannon, PhD



BACKGROUND/KEY CONCEPTS



RESEARCH QUESTION

Does childhood socioeconomic status influence sustainable consumption?

HI: Individuals with lower socioeconomic status will not choose to consume sustainably and individuals with a higher SES will consume sustainably.

METHODS

- College students were surveyed regarding current and childhood SES, followed by scenarios asking them to choose between eco-friendly versus non-ecofriendly products, and finally were asked to indicate their agreement with statements about the long-term effect of their product choices.



Ecofriendly

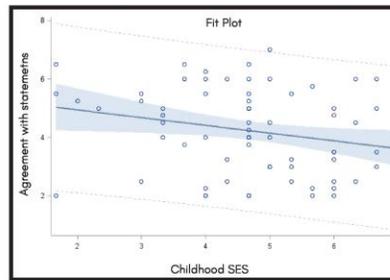
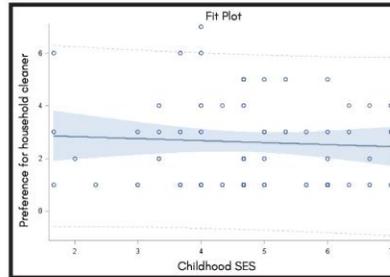
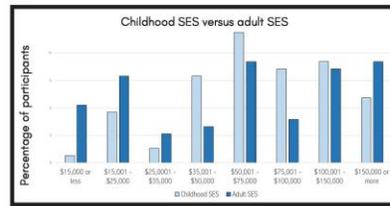


Non-ecofriendly

- *I often consider the long-term environmental consequences of my product choices.*
- *I often consider the long-term environmental benefits of my product choices.*

RESULTS

- 80 Individuals (N = 42 Males; N = 32 Females; N = 1 Prefer not answer)



DISCUSSION

After conducting a uni-variate regression analysis, we reject our initial hypothesis. Childhood SES did not significantly influence participants' choice of products ($p > 0.5$). Although there was no significance for the hypothesis being tested, childhood SES did significantly predict participants' consideration of the long-term effect of their product choices ($p < .05$). Contrary to life history theory, individuals with a higher childhood SES agreed less to the statements regarding long-term effects of product choices. This relationship was opposite to what we hypothesized.

FUTURE DIRECTION

Many studies have tested life history theory and childhood SES. These studies have shown that individuals with a lower childhood SES will develop a fast strategy causing them to act more impulsively and the opposite being for individuals with a slow strategy. Our study showed the contrary; further research can be done to help explain why our findings contradicted existing research.

ACKNOWLEDGEMENTS

I would like to thank Daniel Brannon for his help and guidance. I would also like to thank Karen Krob for her encouragement.

Childhood Health and Social Change in Ancient Albania



Maria Warne and Dr. Britney Kyle
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BACKGROUND

- Human remains are the most direct evidence of the biological health in past populations (Larsen 2002).
- Children are often underrepresented in the archaeological record due to poor preservation and sometimes differential burial practices. The lack of scholarly research done on children is unfortunate because their remains can help us understand the history and cultural changes of that region (Wheeler 2012).
- This study investigates childhood health at two archaeological sites in Modern Albania: Durres and Apollonia.
- Durres and Apollonia were initially occupied by local Illyrians, but were later colonized by the Greeks (c. 600 B.C.) and Romans (c. 250 B.C.).

Research Questions:

- Is child health affected by colonization?
- Do paleopathological conditions vary by age, time period, or archaeological site?

MATERIALS AND METHODS

- 100 subadult (0-20 years) remains were examined from two archaeological sites in Albania: Durres and Apollonia.
- Subadult age was estimated through dental development and epiphyseal fusion (Steckel et al. 2006).
- All skeletons were scored for three non-specific stress indicators: cribra orbitalia, porotic hyperostosis, and linear enamel hypoplasia (Buikstra and Ubelaker, 1994) (Figure 1).
- Chi-square tests were used to establish whether there is a relationship between stress indicators and time periods, age, and geographical location in juveniles.



Figure 1: Paleopathological conditions: cribra orbitalia (top left), porotic hyperostosis (bottom left), linear enamel hypoplasia (bottom right)



RESULTS

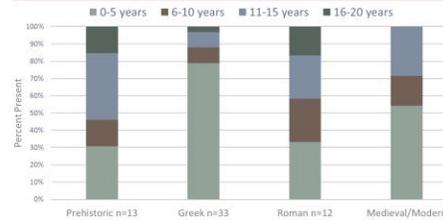


Figure 2: Variation in age distribution between time periods

Table 1: Variation in stress indicators by time period

Time period	Cribra orbitalia	n	Porotic hyperostosis	n	Linear enamel hypoplasia	n
Prehistoric	25%	4	27.3%	11	88.9%	9
Greek	50%	10	37.5%	24	100%	11
Roman	62.5%	8	66.7%	9	100%	4
Medieval/Modern	66.7%	24	36%	25	83.3%	12
Totals	58.7%	46	41.7%	72	91.7%	36

Table 2: Prevalence of cribra orbitalia by age and time period

	0-5	n	6-10	n	11-15	n	16-20	n
Prehistoric	0%	1	0%	0	50%	2	0%	1
Greek	55.6%	9	0%	0	0%	0	0%	1
Roman	75%	4	50%	2	0%	1	100%	1
Medieval/Modern	64.3%	14	66.7%	3	71.4%	7	0%	0
Totals	60.7%	28	60%	5	60%	10	33.3%	3

Table 3: Prevalence of porotic hyperostosis by age and time period

	0-5	n	6-10	n	11-15	n	16-20	n
Prehistoric	50%	4	50%	2	50%	6	0%	2
Greek	38.9%	18	33.3%	3	0%	2	100%	1
Roman	75%	4	50%	2	100%	1	50%	2
Medieval/Modern	33.3%	15	33.3%	3	42.9%	7	0%	0
Totals	41.5%	41	40%	10	43.8%	16	40%	5

Table 4: Prevalence of linear enamel hypoplasia by age and time period

	0-5	n	6-10	n	11-15	n	16-20	n
Prehistoric	0%	1	100%	2	100%	4	100%	2
Greek	100%	7	100%	2	100%	1	100%	1
Roman	0%	0	100%	1	100%	2	100%	1
Medieval/Modern	100%	1	66.7%	3	87.5%	8	0%	0
Totals	88.9%	9	87.5%	8	93.3%	15	100%	4

RESULTS

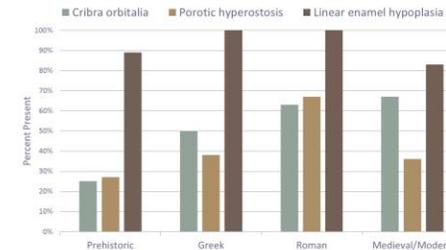


Figure 3: Prevalence of paleopathology by time period

DISCUSSION

- None of the differences in paleopathology by age, time period, or site were statistically significant. However, this does not mean that the observed trends are not indicative of biological significance.
- Although weaning is typically associated with higher rates of skeletal stress (Triantaphyllou 2008), higher rates of paleopathology were not observed in children aged 0-5 in this sample.
- Since juvenile remains were studied, it was not possible to examine variation by sex.
- Prevalence of cribra orbitalia increased steadily through time. Prevalence of porotic hyperostosis and linear enamel hypoplasia increased from the prehistoric period to the Greek period, but declined again in the post-Medieval/Modern period. Although non-significant, this increase in paleopathology from the prehistoric to the Greek period and from the Greek period to the Roman period suggest that colonization by the Greeks and Romans may have had negative impacts on the skeletal health of children.
- Children are critical indicators of population health. Future research will compare the prevalence of paleopathology among children in this population to children in other colonial contexts.

ACKNOWLEDGEMENTS

The research was supported by the Summer Support Initiative awarded to Dr. Kyle. Thank you to Marlon Koci, Melissa Chowning, and Codee Pileiderer.

Reconstructing activity patterns at Epidamnus, Albania: Impacts of Greek and Roman colonization

UNIVERSITY of
NORTHERN COLORADO

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McNair
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PROGRAM

Impacts of Colonization

Colonization is often associated with exploitation of local laborers as seen in the changes in physical activity of local populations. **This research tests the null hypothesis that levels of physical activity, as evidenced by osteoarthritis (OA) in human skeletons, remained constant at Epidamnus, Albania during Greek and Roman colonial occupation (627-100BC).** This study enables us to understand the changing levels of physical activity amongst Illyrians while under colonial control. Research on OA is important because no matter what generation of humanity we are looking at; joint damage is common in all of us. Globalization is at unprecedented levels in our modern world; therefore, understanding the significance of biocultural contact (human interaction) and its impacts on local populations is important for today's societies.



Figure 1. Map of Rome, Italy, Epidamnus, Albania, and Corinth, Greece

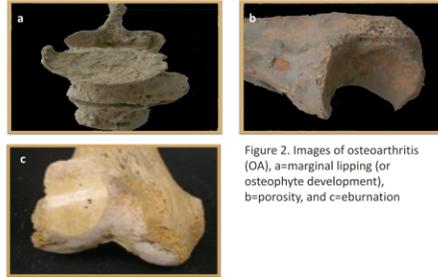


Figure 2. Images of osteoarthritis (OA), a=marginal lipping (or osteophyte development), b=porosity, and c=eburnation

Skeletal Remains of the Illyrians

Epidamnus (Figure 1) was originally colonized by the Corinthian Greeks in 627 BC, and later by the Romans in approximately 229 BC. To test the null hypothesis, 80 skeletons from Epidamnus were examined for evidence of osteoarthritis. Of these 80 individuals, 27 were adults that could be analyzed for OA. Six were from the Greek period and 21 were from the Roman (Table 1). I observed each shoulder, elbow, wrist, hip, knee, ankle, cervical, thoracic, and lumbar vertebrae, along with the temporomandibular joint surface looking for OA. Osteoarthritis is observed through marginal lipping, porosity, and eburnation (Figure 2). Evidence of OA was scored using international standardized methods (Buikstra and Ubelaker 1994; Steckel et al. 2006). In order to determine variation by colonial period chi square statistics were used.

Table 2. Osteoarthritis (OA) during Greek and Roman colonization

Joint	Greek	Roman	χ^2	Significant Change
Shoulder % (n)	50 (6)	10 (21)	5.067	p= 0.024
Elbow % (n)	66 (6)	29 (21)	2.904	p= 0.088
Wrist % (n)	50 (6)	14 (21)	3.444	p= 0.063
Hip % (n)	50 (6)	29 (21)	0.964	p= 0.326
Knee % (n)	33 (6)	29 (21)	0.051	p= 0.821
Ankle % (n)	66 (6)	10 (21)	8.816	p= 0.003
Cervical % (n)	17 (6)	10 (21)	0.241	p= 0.623
Thoracic % (n)	17 (6)	29 (21)	0.344	p= 0.558
Lumbar % (n)	0 (6)	14 (21)	0.964	p= 0.326
Temp/Mand % (n)	17 (6)	0 (21)	3.635	p= 0.057

Table 1. Age of individuals

Age	Total Greeks	Total Romans
Young Adult (21-34)	1	3
Mid Age Adult (35-49)	4	15
Older Adult (50+)	1	3

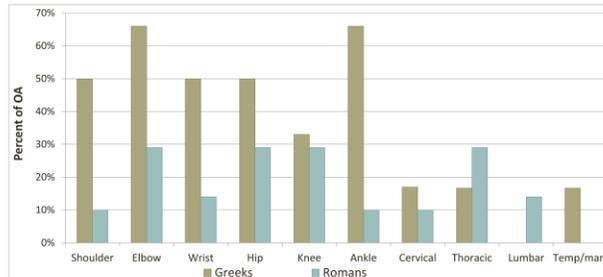


Figure 3. Percent of individuals with osteoarthritis (OA) by period

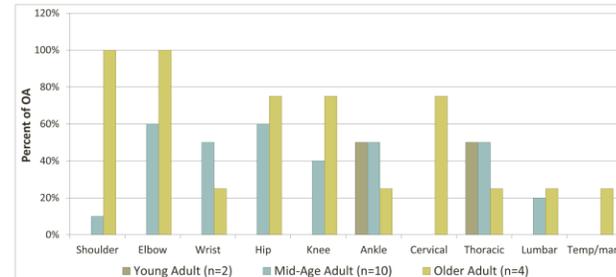


Figure 4. Percent of individuals with osteoarthritis (OA) by age

Findings

Our results indicate that OA was more pronounced in all joint surfaces during the Greek than the Roman period (Figure 3), with the exception of the thoracic and lumbar vertebrae. The p-value for chi-square was set at 0.05 for the standard level of significance. Our results (Table 2) indicates that this pattern is statistically significant in the shoulder (p=0.02) and ankle (p=0.003), and approaches significance in the elbow (p=0.09), wrist (p=0.06), and temporomandibular joint (p=0.06). These results do not support the null hypothesis of no change from the Greek to the Roman period. The age distribution of the Greek and Roman samples were not significantly different from one another (Kolmogorov-Smirnov, p>0.05). As expected, prevalence of OA generally increased with age (Figure 4).

Where do we go from here...

Historical documents reveal that Greek colonization resulted in increased dependence on agriculture, replacing local Illyrian nomadic pastoralism. However, during Roman colonial rule new technologies were introduced that increase agricultural efficiency, as well as methods of construction. This emerging pattern signifies that new, sophisticated technology made life easier for Illyrians during the Roman period. However, the impacts of a small sample size are possible confounding factors in this study.

Acknowledgements

This research was supported by the University of Northern Colorado's (UNC) Summer Undergraduate Research Stipend to Wright, and a UNC Summer Support Initiative and New Projects Program Grant to McIlvaine. The authors would also like to thank Kaytlyn Devers and Katelyn McEachern.

Experiences of LGBTQ Male Students of Color in a Predominantly White Environment



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 McNair Scholars Program¹; Cumbres Teacher Preparation Program²
 University of Northern Colorado



Background

There is a gap in the literature about how LGBTQ People of Color (LGBTQ-PoC) navigate their identities or social surroundings. The limited literature indicates that LGBTQ-PoC face heterosexism from their ethnic/racial communities and racism from LGBTQ communities. In higher education, there is a lack of focus on the needs of LGBTQ Students of Color (LGBTQ-SoC), how LGBTQ-SoC experience discrimination and what participants seek for inclusive spaces.

Research Questions

How do LGBTQ college students of color experience inclusion in a predominantly white environment (PWE)?

- How are LGBTQ-SoC social identities developed?
- Where do LGBTQ-SoC find inclusive spaces?
- How do LGBTQ-SoC define inclusion?

Methods

Using Intersectionality Theory (Crenshaw, 1995), Minority Stress Theory (Meyer, 2003), and Narrative Inquiry, Semi-Structured Interviews explored the experiences that LGBTQ-SoC have on a college campus. Data analysis focused on using an ongoing iterative coding process and developing themes co-constructed with the participants

Preliminary Themes



Participant	Academic Level	Ethnic-Racial Identity	Sexual – Gender Identity
Francisco	Undergraduate Senior	Hispanic	Bisexual Male
Simon	1 st Year Graduate Student	Black	Femme Gay Male
Edwin	Bachelor's Degree	Latino	Asexual Homoromantic Male
Xavier	2 nd Year Graduate Student	Black	Femme Gay Male

Quotes From Participants

Family / Cultural Influences

“I know growing up it was always kind of shameful to be part of the LGBTQ community. For most Hispanic families, it’s just something that’s not approved. It’s something that’s very frowned upon. It comes from a lot of machismo”
 - Francisco

Embracing Identities

“I have looked for ways to sort of assimilate to what it means to be a professional on a college campus which is difficult because the ways that I show up and the ways that I identify are not heavily represented particularly in this campus”
 -Xavier

Inclusive Communities

“For me not having that overwhelming guilt or uncomfortable feeling that I’m making them uncomfortable by bringing whatever issues I’m bringing up or whatever random experience I’m having that just happens to be about me being gay” - Edwin

Conclusion

Although participants cited Cultural Centers and an LGBTQ-focused living community as spaces of inclusion, the institution needs to work together with several advocacy-oriented areas on campus to make inclusivity an institutional priority.



Math Experiences and Attitudes of Latinas Majoring in STEM in Higher Education



Researcher: Shayla Bermudez Advisor: Molly Jameson, Ph.D.

Problem

For minority women, the intersection of their gender and race impacts their decision to attend college despite high academic performance (Jang, 2018).

Factors that cause negative math perception:

- Negative past experiences (Willies, 2010);
- Parental attitudes (Beilock & Maloney, 2015);
- Teaching methods (Quilter & Harper, 1988);
- Challenging learning environment (Harper & Daane, 1998);
- Detrimental stereotypes (Arrendondo et al. 2022).

Purpose

To understand the experiences and math attitudes of Latina STEM majors in relation to their intersectional identities.

Methods

The math anxiety and math self-efficacy of 3 Latina STEM undergraduates were measured using the Abbreviated Math Anxiety Scale (AMAS) and Mathematics Self-Efficacy Scale (MSES). Additionally, semi-structured interviews were conducted.

Discussion/Conclusion

This research highlights the pivotal role of early STEM engagement in shaping positive math dispositions. However, the inflated obstacles due to their intersectional identities pose a challenge to degree attainment.

Early STEM Engagement

- Early interest and engagement in science and math courses
- Previous participation in STEM programs
- Mitigated negative math dispositions

Unwelcoming Environment

- Predominantly White male space
- Discredited based on identities
- Difficulty finding community and necessary support

Lack of Shared-Identity Role Models

- Challenges to STEM-identity
- Less likely to receive support with coursework
- Increased feelings of isolation

Family Responsibility

- Determination to persist as an avenue to honor the sacrifices of their parents.
- Desire to alleviate the financial burdens of their families was a strong motivator.

"My teacher set up crime scenes in the classroom and we'd use scientific techniques ... we got to shadow ... almost all of the positions you could have in a hospital..."

"what they [White people] find acceptable, how you're allowed to act ... I think that I kinda struggled in that aspect."

"[My professor] ... she would not listen to me. I had to bring in another professor of color to help me out."

"At the end of the day, it is my parents ... I know that I am living what they would have wanted for themselves but couldn't have. So, I try to take every opportunity I have, every single one."

Emergency Room Nurses' Perceptions of Medication Errors in the Emergency Department



Yasmeen Mustafa, Deborah Rojas, PhD
School of Nursing



Background

- Medication errors (MEs) rank as 3rd leading cause of death in the US
- MEs are the 2nd most common sentinel event in the Emergency Department (ED)
- Nurses make up the majority of MEs
- Many interventions have been implemented to reduce MEs, but their effectiveness lacks consistent evidence

Purpose

- Identify prevalence of MEs from perspective of nurses
- Nurses are frontline caregivers and last line of defense
- Current literature overlooks nurses' direct involvement and struggles with underreporting
- Pinpoint tangible steps to reduce MEs

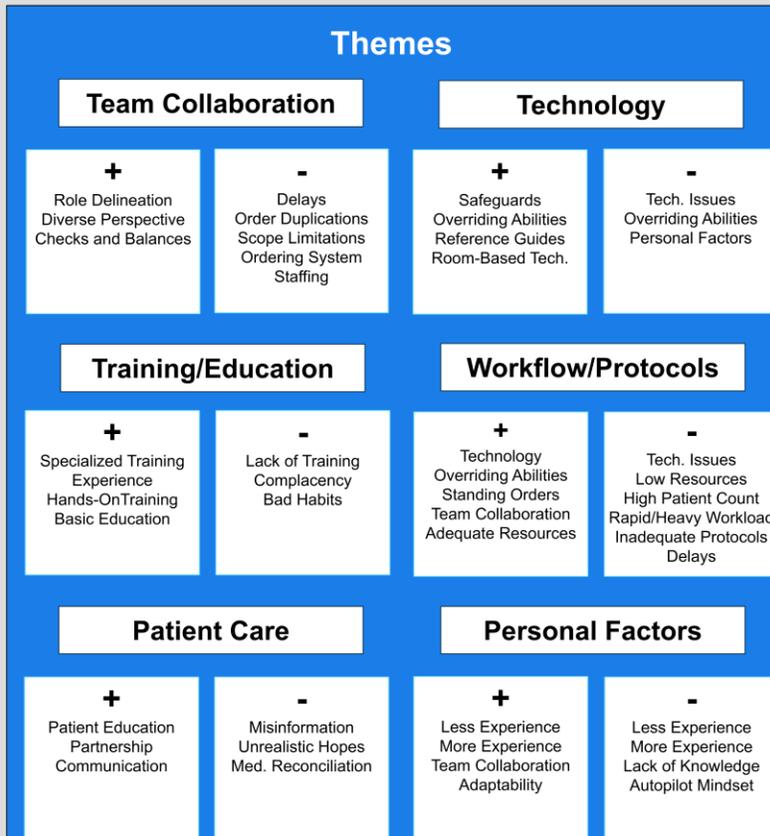
Methods

- Open-ended Qualtrics survey
- 13 currently practicing ED nurses in Colorado
- Thematic analysis

Research Question

What do Emergency Room nurses perceive to be the factors that facilitate and/or hinder the medication process in the emergency department?

Themes



Discussion

- **Technology:** Enhances safety and efficiency but causes delays and errors when it fails
- **Training/Education:** Crucial, but there is a risk of complacency with experience
- **Team Collaboration:** Vital to efficiency and workflow, but there is risk of delays and inefficiencies in emergency situations
- **Safety Measures:** Prevent errors, but human error and system limitations impact its effectiveness

Impact

- Comprehensive training programs
- Enhanced protocol development
- Resource allocation

Acknowledgements

Thank you to the McNair Scholars Program and Dr. Deborah Rojas for making this possible

References



Introduction

As one of the fastest growing denominations in early America, the interests of Baptists were often indicative of larger trends in religiosity. Conceptions of piety, including beliefs surrounding submission, faithfulness, and duty, were central to the structure of Baptist congregations and their proximate communities. This paper explores the role of gender in the discussion, presentation, and justification of Baptist notions of piety in their publications during the Early American Republic. *The widespread fear among Baptist men that women would become subservive rather than submissive manifested in their construction of unattainable and oppressive standards of piety.*



www.PeterPreston.com

Framework

Fear for the Loss of Authority

IN the conduct of life, there is nothing more to be dreaded and avoided,—nothing more dangerous to our peace, to our comfort, to our character, to our welfare here and hereafter, than a criminal attachment to an abandoned and unprincipled woman;

Notions of Piety

In conversation, she was unassuming, candid, entertaining and instructive; innocently pleasant on proper occasions, but prudent and faithful in embracing suitable opportunities for introducing the important subjects of religion, and in recommending them to others with becoming seriousness.

Gendered Print Media

it produces an anxious solicitude to copy after the example by pursuing the paths of virtue and usefulness in the world.

Scriptural Justification

Matthew 5

14 Ye are the *light* of the world. A city that is set on an hill cannot be hid.

15 Neither do men light a candle, and put in under a bushel, but on a candlestick; and it giveth light unto all that are in the house.

16 Let your *light* so shine before men, that they may see your good works and glorify your Father which is in heaven.

1 Timothy 2

11 Let the woman learn in silence with all *subjection*.

12 But I suffer not a woman to teach, nor to usurp *authority* over the man, but to be in silence.

Ephesians 5

22 Wives, *submit* yourselves unto your own husbands, as unto the Lord.

23 For the husband is the head of the wife, even as Christ is the head of the church: and he is the savior of the body.

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Determinism & Free Will: An Exploration of Gender Identity & Moral Responsibility

Presenter: Daniel E Mangandi-Escobar

Faculty Sponsor: Bailie Peterson, Ph.D

University of Northern Colorado: College of Humanities & Social Science & McNair Scholars Program



Introduction

- Two critical issues arise with determinism: free will & moral responsibility.
- This project extends the scope of the determinism debate by applying it to gender identity, pulling from feminist and queer theory.

Primary Questions:

- *To what extent is our universe/world determined?*
- *What implications does determinism have for gender identity?*
- *Is our gender identity determined, and at what point is our identity and moral responsibility our own?*

Understanding the Determinism Debate

Determinism:

Everything in the universe has been predetermined to happen.

The Determinism debate presented by Balaguer (2009):

- 1.[I]f determinism is true (i.e., every event is causally necessitated by prior events together with causal laws;
- 2.Human beings have free will,
- 3.[Therefore], Free will is incompatible with determinism.

Different School of Thoughts:

1. **Hard Determinists:** Our actions are determined by the laws of nature or the past (Pink, 2004; Ney, 2016; Pereboom, 2001; Wegner, 2002).
2. **Libertarianism:** Reject determinisms existence – Humans are the causes (Hume, 1975; Peroutka, 2022; Ney, 2016; Visala, 2013).
3. **Compatibilists:** States that determinism and free are compatible (Ney, 2016).

To What Extent is our Universe Determined?

Understanding the Fundamental Questions Associated with Determinism

Accepting Incompatibilism Theory?

Determinism	Hard Incompatibilist
<ul style="list-style-type: none"> • Questions about society (criminal justice/morality) • Seems impractical to implement 	<ul style="list-style-type: none"> • Questions about biological determinism • Questions about choice and the human experience

Accepting Compatibilism Theory?

Compatibilism	Libertarians
<ul style="list-style-type: none"> • Questions if we should believe in determinism • Solves the concerns brought within incompatibilism 	<ul style="list-style-type: none"> • Questions on biological determinism • Questions about the inevitability of things

Should we believe that determinism is true?

		Yes	No
Is Determinism True?	Yes	Hard Determinism: Determinism is true. We do not have free will.	Compatibilism (b): Belief that determinism is true but we should hold determinism as false.
	No	Compatibilism (a): Determinism is false but we should hold determinism as true.	Libertarianism: Determinism is false. We do have free will true.

Evidence for Determinism?

	Libet Experiments	Experimental Philosophy	Robert Sapolsky
Conclusions Made	<ul style="list-style-type: none"> • Uses fMRI & EGG scans to track neuron firing. • Concluded that decision making happens before conscious awareness of the decision. 	<ul style="list-style-type: none"> • Tested to see if believing in free will changes decision & behavior. • Concluded that behavior changes when believing or rejecting determinism. 	<ul style="list-style-type: none"> • Uses different forms of science/theories to show that we have no free will. • Science shows that we do not have free will.

What Implications does Determinism have for Gender Identity?

Theories of Gender identity & their Implication with Determinism

Feminist Theory: Biological Determinism	Feminist Theory: Social Contract Theory	Queer Theory: Gender Performativity
<ul style="list-style-type: none"> • Biology determines your gender. • Views gender as a binary. • Hard determinist approach. 	<ul style="list-style-type: none"> • Gender is based on societal factors assigning to you. • Questions about gender being continuous such as other identities. 	<ul style="list-style-type: none"> • Your gender is performative based on your nature and nurture. • Explain that your gender is based on personhood. • Questions about gender being continuous such as other identities.

Is our Gender Identity Determined: At What Point is our Identity and Moral Responsibility our Own?

- Holding that compatibilism is true is a perfect solution in explaining the ontological position of gender.
- Objection 1: Compatibilism fails to acknowledge gaps between alternative possibilities when concerning morals.
- Answer to Objection: Even though some possibilities can be seen as impossible, the believe that have free will in choice has some effect on human experience.
- Objection 2: Compatibilism fails because it can not solve the concerns made from incompatibilists.
- Answer to Objection: Believing in incompatibilism means that there needs to be more explanations made creating ad hoc explanations. We should default to Ockham's razor, which is compatibilism.

Conclusion

- Incompatibilism theories fail to answer concerns with their theories while compatibilism can solve those problems.
- Compatibilist theory addresses, if we should believe in free will. Shows that a minimal version of free will exists (compatibilism).
- A compatibilist theory holds that our gender identity is our own. This also extends to moral responsibility in which we are held responsible for the actions that we take with our identity and interactions to those identities.

Acknowledgement

Special thanks to my mentor Dr. Bailie Peterson & the philosophy department at UNC in supporting me in research. Another big thanks to McNair faculty and staff and my fellow cohort for the support in this intensive journey!

Bibliography



<https://qrco.de/bewCPY>

Languages Killing Languages: A Rhetorical Analysis of English Resistance Arguments

Denise Muro - McNair Scholar, Department of English

Introduction

Today → 6,000 Languages

In the year 3000 → 600 Languages

The English language has grown to be used internationally, but at the same time, many indigenous languages have become endangered and extinct. Recognizing these trends, scholars have begun studying language loss and recording endangered languages.

A language dies about every two weeks. By 3000, 50-90% of languages will be dead. According to the Rosetta Project, Arabic is not technically considered to be an endangered language. In fact, it is one of the 300 most widely spoken languages. However, a growing concern for the Arabic language is present in the media.

Research Questions

How are arguments in resistance to the globalization of the English language rhetorically framed in Middle Eastern, Arabic-speaking countries?

How does media portray the struggle between the languages?

How has the conversation moved throughout the past decade?

Acknowledgements

A sincere thank you to the McNair Scholars Program for their support of and advising on this project. Also, thanks to Dr. Marcus Embry, the chair of the English Department, for his advising and mentoring throughout this research project, and to Dr. Sarah Allen for consulting regarding the research methods.



Findings and Analysis

Rhetorical close reading of the sampled media sources revealed themes in their diction, in the associations of various languages, and who or what is blamed for language death and the state of the Arabic language.

Diction:

- ❖ Language loss as a systematic process
- ❖ Endangerment and extinction of language
- ❖ Language loss through violent means

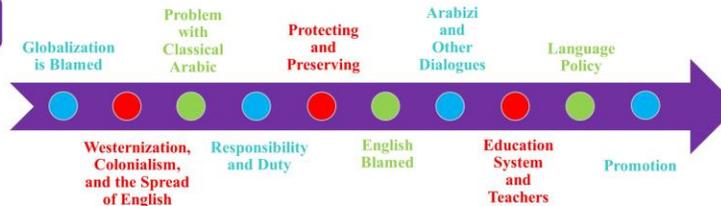
Language Associations:

- ❖ French → sophistication, class
- ❖ English → success, opportunism, work, motivation, education, style, and status
- ❖ Arabic → old, traditional, difficult, irrelevant → heritage, culture, identity, pride

Who's to Blame?

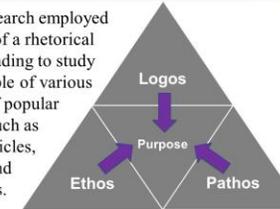
Throughout the last decade, this issue has surfaced and gained more attention in the media. Blame for the state of Arabic has been placed upon globalization, westernization, Classical and Standard Arabic, speakers of Arabic, the English language, Arabizi, dialects of Arabic, education systems and teachers in the MENA region, language policy and policy makers.

Following the Discussion



Approach

This research employed the use of a rhetorical close reading to study the sample of various forms of popular media such as news articles, blogs, and speeches.



Rhetorical analysis involves logos, pathos, and ethos; however, in this study, logos was emphasized. Logos is the logical appeal within an argument; this is the text or speech itself and the diction, facts, and reasoning within it. The sample of 65 media sources was analyzed using a rhetorical close reading focusing on the logical appeal.

Discussion

Whether the Arabic language is actually in danger or under threat is still widely debated. There are over 1 million Muslims worldwide (Desilver) who depend on the Arabic language to practice their religion, and this is often considered to be evidence of Arabic's permanence. However, Arabic is being used less and less in everyday life, causing some doubt about its stability and safety.

Literature Cited

- Desilver, Drew. "World's Muslim Population More Widespread than You Might Think." *Pew Research Center*. Pew Research Center, 7 Jun. 2013. Web. 28 Mar. 2015.
- "The 300 Languages." *The Rosetta Project*. The Rosetta Project, n.d. Web. 30 Jan. 2015.
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IDENTITY BASED EDUCATION

Where Social Justice Meets Learner-Centered Teaching
Tim Hernández and Jeri Kraver, Ph.D.

University of Northern Colorado Department of English Education



THEORY

Identity Based Education (IBE) seeks to empower and celebrate diverse student identities while simultaneously educating all students about social justice understandings and skills such as diversity, equity, inclusion, and empathy in their secondary education.

IBE is informed by the three educational theories and practices:

- **Critical Pedagogy (CP)**
CP dictates that the learner's world creates learning, making education relevant and applicable.
- **Learner-Centered Teaching (LCT)**
LCT values student experience and needs in the classroom, thus building education out from the learner's identities.
- **Literature Transaction Theory (LTT)**
LTT warrants that individuals have unique transactions with texts that are informed by and inseparable from the individual's experiences and identities.

IBE seeks to center literature curriculum around student identities and experiences to not only educate all students about the increasingly diverse world they live in, but empower them enough to change it.



For More Information, Visit
identitybaseded.org

CURRICULUM

Global Understandings and Skills	Standard-Based Outcomes	Assessments	Exemplar Lessons	Suggested Text(s)
<p>Understanding:</p> <ul style="list-style-type: none"> • Diversity <p>Skills:</p> <ul style="list-style-type: none"> • Self-Awareness • Self-Reflection • Empathy <p>Areas for Further Curriculums Not Included in this Outline:</p> <ul style="list-style-type: none"> • Equity and Empathy • Inclusion and Practicing Inclusivity 	<p>Academic Standards: (Colorado Department of Education/ Common Core State Standards)</p> <ul style="list-style-type: none"> • Standard 9.1.2.a • Standard 9.2.1.d • Standard 9.3.1.a <p>Social / Emotional Standards: (SEL Standards for Anchorage School District)</p> <ul style="list-style-type: none"> • Standard 1.B • Standard 3.A • Standard 3.C <p>Identity Development Standards: (Teaching Tolerance Social Justice Standards)</p> <ul style="list-style-type: none"> • Standard DI.9-12.10 • Standard DI.9-12.6 • Standard ID.9-12.5 	<p>Formative Assessments:</p> <ul style="list-style-type: none"> • Reflection Based Inquiry <ul style="list-style-type: none"> • Who am I? • How do others experience the world differently than I do? • Is difference a good thing? • How do I change when I am in different environments? • Where do inequalities come from? • Am I comfortable interacting with all kinds of people? <p>Summative Assessments:</p> <ul style="list-style-type: none"> • Original Narrative Piece (Any Medium) • Comic Strip • Children's Book • Rap Verse • Essay • Poetry Collection • Video / Short Film 	<p>Lesson One (Beginning):</p> <ul style="list-style-type: none"> • The class spends the day working on communication of identity, which involves understanding and exploring their own identities and communicating these to others <p>Lesson Two (Middle):</p> <ul style="list-style-type: none"> • The class spends the day analyzing the diverse point of view and experience of a character or author in the text and discuss how this relates to our world today <p>Lesson Three (End):</p> <ul style="list-style-type: none"> • The class spends the day constructing and disseminating the diverse experience of themselves or a character of their own construction through a creative writing piece 	<p>Racial / Ethnic Minorities</p> <ul style="list-style-type: none"> • <i>March</i> by John Lewis <p>Female Gender</p> <ul style="list-style-type: none"> • <i>FIRSTS: Women Who are Changing the World</i> by TIME Magazine <p>LGBT+ Members</p> <ul style="list-style-type: none"> • <i>Freaky Boy</i> by Kristin Elizabeth Clark <p>Refugees, Immigrants, etc.</p> <ul style="list-style-type: none"> • <i>The Secret Side of Empty</i> by Maria E. Andreu <p>Low-Income Populations</p> <ul style="list-style-type: none"> • <i>What is the What</i> by David Eggers <p>People With Different Abilities</p> <ul style="list-style-type: none"> • <i>A Mango Shaped Space</i> by Wendy Mass <p>Faith / Religious Groups</p> <ul style="list-style-type: none"> • <i>Godless</i> by Pete Hautman

TEXTS



For More Texts, Visit
identitybaseded.org/texts

FURTHER

There are many directions that IBE can expand. Some include:

- Using a variety of lexiled-texts to accommodate all educators from 6th grade Language Arts to AP English.
- Incorporating existing canonical texts into this curriculum model, thus using the same texts already in schools, but teaching them to prepare students with social justice skills.



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Ok... what is this?

Abstract

The detection of written emotions using algorithms has progressed each year, but it faces a challenge: sarcasm. Sarcasm can change the meaning of a statement. The purpose of this research is to determine whether it is possible to algorithmically detect written sarcasm through machine learning, a sort of artificial intelligence. First, we will hire users on Amazon Mechanical Turk to classify 1,000 reviews as a sarcastic or not sarcastic. Then, a large subset of these reviews will be used to train an algorithm to discover patterns between sarcastic and non-sarcastic text. We predict the algorithm will categorize the remaining subset of reviews with 80% accuracy.

Hmm... why is this important?

Significance & Purpose

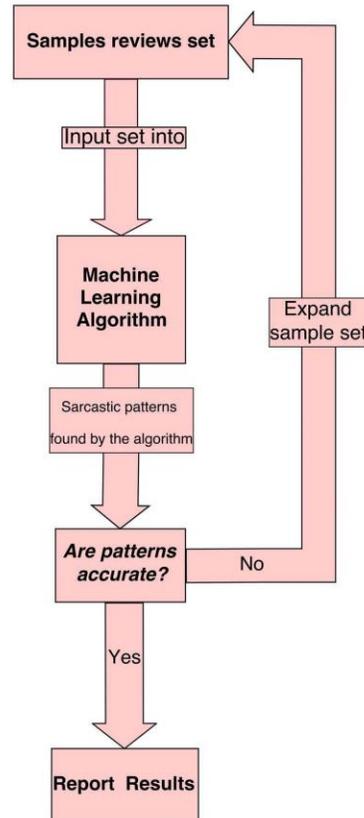
The detection of written sarcasm in text will improve the detection of emotions in artificial intelligence and the interaction between humans and computers in fields such as: marketing strategies, automated customer service, campaign success, and even more.



*Siri sarcasm detection parody

How are you going to do it?

Method



What about your data?

Data Collection

sar·casm

/sär,kazəm/ ⓘ

noun

the use of irony to mock or convey contempt.
"his voice, hardened by sarcasm, could not hide his resentment"
synonyms: derision, mockery, ridicule, scorn, sneering, scoffing, More

1. Classify the following review as sarcastic or not sarcastic.
2. If sarcastic, use the textbox to indicate which words or phrases in the review indicate sarcasm.
3. Submit

★☆☆☆☆ One Star is Too Much for This Product,
September 7, 2012
By [Cyphis](#)
This review is from: UFO Detector - Internal magnetometer interfaced with microcontroller for 24 hour/7 days a week monitoring for magnetic anomalies that have been reported with many UFO sightings (Electronics)
I don't know if this is a scam or if mine was broken, but it doesn't work and I am still getting abducted by UFO's on a regular basis.

Textbox

Submit

*Worker's interface

References



Templates

PosterNerd.com

GeniGraphics.com

ColinPurrington.com

PosterPresentations.com

[UNC PPT Template](#)

More
Examples

[https://www.unco.edu/academic-
engagement/aew/researchdayposters
.aspx](https://www.unco.edu/academic-engagement/aew/researchdayposters.aspx)

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