

Poster Session Prep



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Poster sessions are ...

- An opportunity to share your work with others
- A place to network
- A venue to spark new ideas

How do poster sessions work?

| As an attendee ... | As a presenter ... |
|---|--|
| <p>... move around the poster hall to browse posters</p> <p>... stop and talk with presenters</p> | <p>... stay near your poster so that interested participants can find you</p> <p>... chat with your poster's neighbors</p> |

Planning your presentation

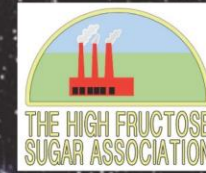
- What is your take-home message?
- How did you get there?
 - Background/Introduction
 - Problem/purpose
 - Methods
 - Results/Outcomes
 - Conclusions/Next steps
- Who was involved?

What makes for an effective poster?

- Well-organized
- Readable
- Visually appealing
- Facilitates networking



PIGS IN SPACE: EFFECT OF ZERO GRAVITY AND AD LIBITUM FEEDING ON WEIGHT GAIN IN CAVIA PORCELLUS



SPACEEXES

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ABSTRACT:

One ignored benefit of space travel is a potential elimination of obesity, a chronic problem for a growing majority in many parts of the world. In theory, when an individual is in a condition of zero gravity, weight is eliminated. Indeed, in space one could conceivably follow ad libitum feeding and never even gain an gram, and the only side effect would be the need to upgrade one's stretchy pants("exercise pants"). But because many diet schemes start as very good theories only to be found to be rather harmful, we tested our predictions with a long-term experiment in a colony of Guinea pigs (*Cavia porcellus*) maintained on the International Space Station. Individuals were housed separately and given unlimited amounts of high-calorie food pellets. Fresh fruits and vegetables were not available in space so were not offered. Every 30 days, each Guinea pig was weighed. After 5 years, we found that individuals, on average, weighed nothing. In addition to weighing nothing, no weight appeared to be gained over the duration of the protocol. If space continues to be gravity-free, and we believe that assumption is sound, we believe that sending the overweight — and those at risk for overweight — to space would be a lasting cure.

INTRODUCTION:

The current obesity epidemic started in the early 1960s with the invention and proliferation of elastane and related stretchy fibers, which released wearers from the rigid constraints of clothes and permitted monthly weight gain without the need to buy new outfits. Indeed, exercise today for hundreds of million people involve only the act of wearing stretchy pants in public, presumably because the constrictive pressure forces fat molecules to adopt a more compact tertiary structure (Xavier 1965).

Luckily, at the same time that fabrics became stretchy, the race to the moon between the United States and Russia yielded a useful fact: gravity in outer space is minimal to nonexistent. When gravity is zero, objects cease to have weight. Indeed, early astronauts and cosmonauts had to secure themselves to their ships with seat belts and sticky boots. The potential application to weight loss was noted immediately, but at the time travel to space was prohibitively expensive and thus the issue was not seriously pursued. Now, however, multiple companies are developing cheap extra-orbital travel options for normal consumers, and potential travelers are also creating news ways to pay for products and services that they cannot actually afford. Together, these factors open the possibility that moving to space could cure overweight syndrome quickly and permanently for a large number of humans.

We studied this potential by following weight gain in Guinea pigs, known on Earth as fond of ad libitum feeding. Guinea pigs were long envisioned to be the "Guinea pigs" of space research, too, so they seemed like the obvious choice. Studies on humans are of course desirable, but we feel this current study will be critical in acquiring the attention of granting agencies.

MATERIALS AND METHODS:

One hundred male and one hundred female Guinea pigs (*Cavia porcellus*) were transported to the International Space Laboratory in 2010. Each pig was housed separately and deprived of exercise wheels and fresh fruits and vegetables for 48 months. Each month, pigs were individually weighed by duct-taping them to an electronic balance sensitive to 0.0001 grams. Back on Earth, an identical cohort was similarly maintained and weighed. Data was analyzed by statistics.

RESULTS:

Mean weight of pigs in space was 0.0000 +/- 0.0002 g. Some individuals weighed less than zero, some more, but these variations were due to reaction to the duct tape, we believe, which caused them to be alarmed push briefly against the force plate in the balance. Individuals on the Earth, the control cohort, gained about 240 g/month (p = 0.0002). Males and females gained a similar amount of weight on Earth (no main effect of sex), and size at any point during the study was related to starting size (which was used as a covariate in the ANCOVA). Both Earth and space pigs developed substantial dewlaps (double chins) and were lethargic at the conclusion of the study.

CONCLUSIONS:

Our view that weight and weight gain would be zero in space was confirmed. Although we have not replicated this experiment on larger animals or primates, we are confident that our result would be mirrored in other model organisms. We are currently in the process of obtaining necessary human trial permissions, and should have our planned experiment initiated within 80 years, pending expedited review by local and Federal IRBs.

ACKNOWLEDGEMENTS:

I am grateful for generous support from the National Research Foundation, Black Hole Diet Plans, and the High Fructose Sugar Association. Transport flights were funded by SPACE-EXES, the consortium of wives divorced from insanely wealthy space-flight startups. I am also grateful for comments on early drafts by Mañana Athletic Club, Corpus Christi, USA. Finally, sincere thanks to the Cuy Foundation for generously donating animal care after the conclusion of the study.

LITERATURE CITED:

- NASA. 1982. Project STS-XX: Guinea Pigs. Leaked internal memo.
- Sekulić, S.R., D. D. Lukač, and N. M. Naumović. 2005. The Fetus Cannot Exercise Like An Astronaut: Gravity Loading Is Necessary For The Physiological Development During Second Half Of Pregnancy. *Medical Hypotheses*. 64:221-228
- Xavier, M. 1965. Elastane Purchases Accelerate Weight Gain In Case-control Study. *Journal of Obesity*. 2:23-40.



Source:
<https://guides.libraries.wright.edu/celebration-of-research/example>

TWO IS BETTER THAN ONE?

Song function for joint territory defence and within pair communication in Lovely fairy-wrens

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INTRODUCTION

Song in birds has been extensively studied and is considered a classical example of a sexually selected trait. However, this interpretation is based on studies of predominantly one sex, the male. There is growing evidence that female song is common and phylogenetically widespread, but there are still only a few species for which song similarities and differences between the sexes have been described.

In this study, we investigated the function of female and male song in the Lovely fairy-wren (*Malurus amabilis*), a tropical species that maintains and defends territories year-round.

METHODS

We used observational data to describe their song structure and examine sex-specific variation in song rate across breeding and non-breeding stages and seasonal variation.

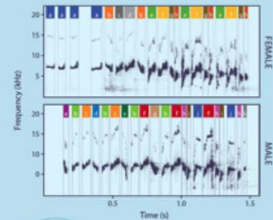
We also used experimental data to examine female and male responses to simulated territorial intrusion, with song playbacks of solo intruders of either sex that varied in complexity.

DOWNLOAD FULL METHODS

RESULTS

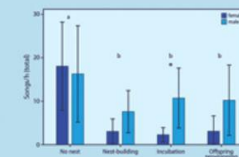
Females and males had similar song metrics and natural song rates.

- Song duration
- Peak frequency
- Min. frequency
- Max. frequency
- Bandwidth
- Entropy

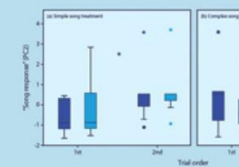
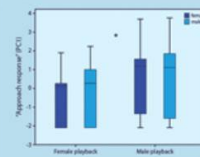


PRESS THE BUTTON TO HEAR THE LOVELY FAIRY-WREN SONG

Pairs sang more during non-breeding periods than during breeding periods. Within each breeding stage, males sang more when females were incubating.



Male song playbacks elicited a stronger approach response from both sexes, than female song playbacks.



Pairs sang with shorter latency and at higher rates to simple (than complex) songs but, only when they were presented after complex songs.

CONCLUSION

- Similar acoustic structure and song across all metrics measured.
 - Pairs sang year-round and overall with similar song rates.
 - Pairs sang more when not nesting compared to all breeding stages, and when apart from their partner.
 - Both sexes had coordinated and similar responses to the intrusions.
- Overall, observations and experiments suggest that female and male songs function primarily for within-pair communication and joint territorial defence.

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Design: obranquinho.com



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Source: Osvaldo Branquinho on Behance - <https://www.behance.net/gallery/2284120/Scientific-Poster>

Title

Authors

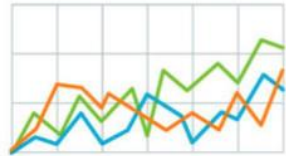
Intro

- [Bar]
- [Bar]
- H1 [Bar]
- H2 [Bar]

Methods

1. [Bar]
2. [Bar]
3. [Bar]
4. [Bar]

Results



- [Bar]
- [Bar]
- [Bar]

Discussion

More research is needed, but...

- [Bar]
- [Bar]
- [Bar]

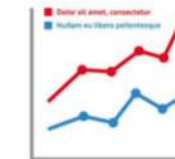
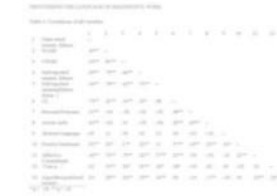


Main finding goes here,
translated into **plain english**.
Emphasize the important
words.



Take a picture to
download the full paper

Extra Tables & Figures



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Source: Inside Higher Ed - <https://www.insidehighered.com/news/2019/06/24/theres-movement-better-scientific-posters-are-they-really-better>

How to create your poster?

Pick your favorite software:

- Powerpoint
- Microsoft publisher
- Adobe Creative Suite
- GIMP
- Canva

Format for final (printed) size (e.g., 36"x48", 42"x56") – preview at 100% to be sure images/logos/figures won't print blurry

Pro-Tips for Poster Design

From Emily Lemiska



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1. Inclusive Imagery

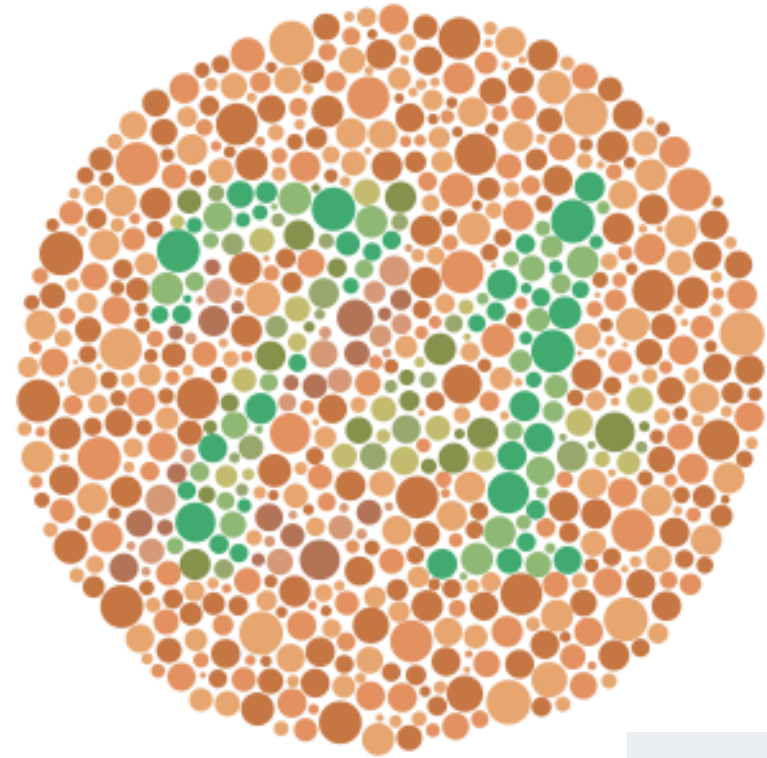
- **Why it's important:**
 - To reach diverse audiences, *must reflect diverse audiences*
 - In health care especially – counteracting marginalization is vital
- **Considerations:**
 - Don't reinforce stereotypes
 - Consider who the image centers
 - Be mindful of colorism
 - Royalty-free stock image site:



Credit: Disabled and Here

2. Color Choice

- **Why it's important:**
 - 14 million Americans have visual impairments
 - But even outside of impairments, color affects readability
- **Considerations:**
 - Use high-contrast colors/shades
 - Avoid red and green (for people with color blindness)



3. White or “Negative” Space

- **Why it’s important:**
 - Visual “breathing room”
 - Too much text is overwhelming
- **Considerations:**
 - Avoid single-spacing
 - Use bullets, numbered lists, charts
 - When in doubt: *25% minimum*



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Start now



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Start now

4. Font Choice

- **Why it's important:**
 - Visibility & readability
 - People tend to scan, not read
 - Example: on web, people read 20% of text
- **Considerations:**
 - Use size 12 font *at a minimum*
 - Use sans serif fonts
 - Avoid all caps

And you will read this last

**You will read
this first**

And then you will read this

Then this one