Poster Presentation Best Practices

Kuba Glazek, Ph.D.
Methodology Expert
National Center for Academic and Dissertation Excellence Excellence
Los Angeles
Outline

• Background
• Scholarship and career goals
• Overview of conference presentation types
• Poster presentation best practices
  – Design guidelines
  – Sections and content
  – Technical tips
• External conferences and and funding
Background

• Visual perception and human factors
• Multiple conference presentations
• Multiple awards
• Peer reviewer of conference submissions
Importance of Scholarship

• Career goals
  – Expertise in chosen field
  – Curriculum Vitae (CV)

• Lifelong learning
  – Maintaining expertise
  – Passing down expertise
  – Continuing Education credits

• Competitiveness
  – What experience sets you apart?

• Networking
  – What can you do for/with someone?
  – What can they do for/with you?
Career Goals: Expertise

- Be known as an expert
- Be known by experts
- Get referrals

- Patients’ social networks are involved in seeking treatment (Pescosolido, 1992; Pescosolido et al., 1991)
Presenting at Conferences: Means to Achieve Goals

• Learn about relevant topics
  – Attend sessions
  – Learn from experts and colleagues

• Network with other experts
  – Gain insights
  – Learn about career opportunities

• Disseminate scientific findings
  – You are the expert!

• Bolster CV/resumé
Conference Presentation Formats

• Individual talk
• Colloquium/symposium
• Panel discussion
• Poster session

• A submission may be written and (hopefully) accepted as any one of the above after peer review
Poster Sessions

• Usually one hour
• Highly interactive
  – Impromptu audience
  – Different from a paper
• Poster is a visual aid
Poster Templates: What to Avoid

- Over-reliance on text
- Lack of figures/tables
- Lack of visual flow
- Distracting visual effects
Contrast is very important
**Example Poster**

**Pigs in Space:**

**Effect of Zero Gravity and Ad Libitum Feeding on Weight Gain in Cavia Porcellus**

**ABSTRACT:**
One ignored benefit of space travel is the 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 gain even an atom of fat. But because many diet schemes start as very good ideas 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. Zero weight continues to be gravity-free, and we believe that assumption is sound, we believe that cells in space have lost their weight — and those at risk for overweight — to space would be an interesting area.

**INTRODUCTION:**
The current obesity epidemic started in the early 1980s 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 millions of people involves only the act of wearing stretchy pants in public, presumably because the constraining pressure forces fat molecules to adopt a more compact tertiary structure (Xavier, 1996).

Luckily, at the same time that fabrics became stretchy, the race to the moon between the U.S. 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 new ways to pay for products and services that they cannot afford. Together, these factors open the possibility that moving to space could cure obesity 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.

**RESULTS:**
Mean weight of pigs in space was 0.0000 ± 0.0000 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 slammed shut against the force plate in the balance. Individuals on Earth, the control cohort, gained about 240 g/month (p = 0.0000). 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 decreases in body weight (double digits) 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 86 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 airlines chartered from menacing wealthy space-flight startups. I am also grateful for comments on early drafts by Mariana Athletic Club, Corpus Christi, USA. Finally, sincere thanks to the Oy Foundation for generously donating animal care after the conclusion of the study.

**LITERATURE CITED:**


Poster Templates: What to Seek

- Focus on figures/tables
- Visual flow: Axis of symmetry
- Text provides only absolutely necessary information (e.g., bulleted list of results)
- Appropriate font sizes (headings vs. body)
Example Poster

**Visual Art Expertise Affects Visual and Motor Processing**

Kuba J. Glazek & Robert W. Weisberg  
Temple University, Philadelphia

---

**Background**

- Domain of expertise can be defined in different ways (Sternberg, 2005).
- Trained category of stimuli (chess, faces, cars).
- Trained category-relevant skill.
- Trained mode of processing information (strategy, feature-extraction).
- Discovering and elaborating general principles of perceptual learning may require abandoning the narrowest views of perceptual learning (Kellman & Carrigan, 2009, p. 78).

- Glazek (in press). Expert visual artists had:
  - More efficient visual encoding regardless of stimulus novelty.
  - More efficient motor output.
  - More efficient visual encoding when task was not relevant to expertise.

---

**Results**

- **Retention Trials**
  - Proportion of perfect sketches.
  - Angular disparity (rad).
  - Delay (in seconds).

- **Manipulation Trials**
  - Proportion of perfect sketches.
  - Angular disparity (rad).
  - Delay (in seconds).

- **Gestalt Errors**
  - Experts.
  - Novices.
  - Retention trials.
  - Manipulation trials.

---

**Discussion**

- Expertise (in visual art) is associated with efficient:
  - Encoding (early processing).
  - Retention (visual STM).
  - Manipulation (visual WM).
  - Motor output (late processing).
  - A “higher-order” level of analysis should be considered in studies of perceptual expertise.

- Future directions:
  - Transfer to other modalities (e.g., audition).
  - Uni- and multi-sensory training environment.

---

**Method**

- Factor 1 (between-subjects): Expertise
  - Experts (n = 20)
  - Controls (n = 20)

- Factor 2: Process
  - Retain (STM)
  - Manipulate (WM)

- Factor 3: Delay
  - 5 s
  - 15 s
  - 30 s

- Factor 4: Delay
  - 5 s
  - 15 s
  - 30 s

---

**Procedure**

- Trial onset
- Stim. pref. (1500 ms)
- Instruction: A. retain or manipulate mental image, B. sketch or recognize
- Delay period with vertical distracter task
- Sketch or forced-choice response

---

**Sketch Error Quantification**

- Within-Shape Errors
  - \( E = \frac{1}{7} \left( \sum_{i,j} d_{ij} \right) \)
  - \( d_{ij} \): # of squares in sketch shape.
  - \( T_{1} \): # of squares in target shape.

- Between-Shape (i.e., Gestalt) Errors

---

**References**

Poster Sections

• Title
• Abstract
• Introduction
• Methods
• Results
• Discussion
• Acknowledgments
• References
Title

• Should be 12 words or less, center-aligned
• Choose a large font (should be legible from far away)

• Include author name(s), institution and department, contact information (e-mail)
• Choose smaller font than title, but larger than text in body of poster
Abstract and Introduction

• What is being studied
• Theoretical background
• Highlight how previous research informed direction of current study
• List hypothesis or hypotheses
• Should take up *at most* one-third of poster
Method

• In brief: Describe the design
• Identify how phenomenon is being studied
  – Provide *operational definitions* (e.g., instruments used, criteria for inclusion in a group)
  – Describe sample or groups (number of participants, demographics)
• Provide only enough information to communicate the methodology, not full detail
Results

• Focus on figures and/or tables
• Include a caption underneath each graphic
  – Describe what variable(s) are presented
  – Describe effect of interest
• Organize results in logical order
• The poster as visual aid is paramount here
Discussion

• Briefly summarize main findings
• Present importance/relevance of findings
• Present how findings fit into the field (reconnect with introduction)
• Suggest future directions for research on the topic
• Organize in logical order
Acknowledgments and References

• Acknowledge anyone who assisted but is not an author of the poster
• List references of all studies cited anywhere in the poster (use APA format for citations and references)
Make PowerPoint Work For You

• Determine required poster size (e.g., 3’ x 4’)
  – Design Tab ➔ Page Setup ➔ Width and height

• Becomes important for printing
  – Too small leads to blurry poster
PIGS IN SPACE: EFFECT OF ZERO-GRAVITY AND AD LIBITUM FEEDING ON WEIGHT GAIN IN CAVIA PORCELLUS

ABSTRACT:
One ignored benefit of space travel is the 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, 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 1980s 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 millions of people involves only the act of wearing stretchy pants in public, presumably because the constritive 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 pig” 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.

RESULTS:
Mean weight of pigs in space was 0.0000 ± 0.0000 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 pigs at any point during the study were related to starting size (which was used as a covariate in the ANCOVA). Both Earth and space pigs developed substantial adipose (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 88 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 flies donated from insatiably wealthy space-flight startups. I am also grateful for comments on early drafts by Mariana 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:
“Snapping” Tool

1. In the “Home” tab, click “Arrange.”
2. Scroll down to “Align.”
3. Click “Grid settings.”
4. A box pops up, allowing you to “snap” objects to each other or to a grid.
Cutting Down Workload

• Add “Grid settings” to quick access toolbar
Reprints

• Print a handful of 8.5” x 11” copies of poster to hand out to attendees
• Add a link so that anyone can instantly access your content (e.g., pdf of poster, full paper, professional website)
  – Add a QR code to your poster
    • Visit http://qrcode.kaywa.com/
    • Copy the QR code, paste it into your poster
  – Add a bit.ly link to your poster
    • Easy to jot down by attendees
    • Visit https://bitly.com/
    • Insert any link (e.g., to files in free dropbox account)
Presenting, Step 1: Internal Conference

• Chicago
  – Date: Tuesday, June 23\textsuperscript{rd}
  – Time: 3:00-5:00 p.m. CDT
  – Location: Rooms 407/412

• Los Angeles
  – Date: Friday, June 19\textsuperscript{th}
  – Time: 5:00-7:00pm PDT
  – Location: 8\textsuperscript{th} floor

• Washington, DC
  – Date: Tuesday, June 16\textsuperscript{th}
  – Time: 3:00-5:00pm EDT
  – Location: Rooms 403 A, B, and C (1015 15th Street Bldg.)

• Online
  – Date: Wednesday, June 17\textsuperscript{th}
  – Time: 4:00pm-6:00pm PDT/6:00-8:00pm CDT; 7:00-9:00pm EDT
  – GoToMeeting Log In information will be announced closer to the GRF
Presenting, Step 2: External Conferences

• Goals recap
  – Learn about relevant topics
  – Network with other experts
  – Disseminate scientific findings
  – Bolster CV/resumé

• Determine fit of conference to maximize value
  – Ask TCS faculty
  – Peruse organization mission statements
  – Peruse previous convention archives
  – Balance specific interest and general appeal
Sample External Conferences

• American Psychological Association (APA)
  – 56 Divisions

• Western Psychological Association (WPA)

• Eastern Psychological Association (EPA)

• Use Google
  – [Your topic] + “society” or “association” + “conference” or “convention”
  – “art therapy society convention” → arttherapy.org → conference in Minneapolis in July
External Conference Expenses

• Chicago School Student Association Reimbursement Scholarship
  – Professional membership dues
  – Conference registration
  – Conference travel
  – Printing costs
  – Contact your campus CSSA representative for details

• Professional organization awards
  – For example, APA: 100 students receive $300
    (http://www.apa.org/about/awards/scidir-stutrac.aspx)
  – Peruse specific organization websites for opportunities
Summary

• Expert scholar-practitioner model
  – Find, teach, and learn from other scholar-practitioners
  – Build a name
  – Build a curriculum vitae

• Present information clearly and efficiently
  – Poster presentation is the established format
  – Be creative within formatting constraints
Thank You! Questions?

Presentation available on YouTube
• https://www.youtube.com/channel/UChCvwPnugSXf85vbQfSeLJQ
• http://bit.ly/1GE1XsD
• or just search for “NCADE”

Email: kglazek@thechicagoschool.edu
Office: Los Angeles campus 825-B
Phone: (213) 615-7290