Demystifying the Academic Poster
(or, how I learned to stop worrying and love the format)

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“The more strikingly visual your presentation is, the more people will remember it. And more importantly, they will remember you.”

— Paul Arden
What is the purpose of an academic poster?

“...to display information in a clear, concise manner, while generating interest to engage in a discussion”

“...a big piece of paper (or wall-mounted monitor) that can communicate your research at a conference, and is composed of a short title, an introduction to your burning question, an overview of your novel approach, your amazing results in graphical form, some insightful discussion of aforementioned results, a listing of previously published articles that are important to your research, and some brief acknowledgement of the tremendous assistance and financial support conned from others” (Purrington 2014)
the poster format permits a great deal of creative freedom...

I think you should expand your Results section to fill up that entire space. Also, a picture of a Boba Fett in a tutu over there would be cool.

...but it must be used wisely

Listen to him, do not! Lead you astray, he will! For the path of tiny, cluttered text leads only to the Dark Side...
BEWARE THE DARK SIDE OF THE FORCE

Pigs in Space: Effect of Zero Gravity and Ad Libitum Feeding on Weight Gain in Cavia Porcellus

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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. As 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 ounce, 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 solid theories only to be found to be rather harmful, we tested our predictions with a long-term experiment on 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 we offered them. After 30 days, each Guinea pig was weighed. After 6 months, we found that individuals, on average, weighed nothing. In addition to eating nothing, no weight appeared to be gained over the duration of the experiment. We believe that this assumption is sound, and that is why 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 1990s with the invention of elastics and related stretchy bands, which released foods from the rigid constraints of clothes and permitted monthly weight gain without the need to buy new outfits. Indeed, exercises today for hundreds of millions of people involve only the act of wearing stretchy pants in public, presumably because the restrictive pressure forces food molecules to adopt a more compact form. (Koert 1965)

Luckily, at the same time that fabric makers became stretchy, the race to the moon between the United States and Russia yielded a useful fact: gravity in outer space is minimal and consistent. When gravity is zero, objects tend to have weight. Indeed, even astronauts and cosmonauts had to secure themselves to their ships with seat belts and sticky boots. The potential application to weight loss was not immediately apparent, but the time to travel to space was prohibitively expensive and thus the issue was not seriously pursued. Now, however, multiple companies are developing new travel options for normal consumers, and potential travelers are 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 overweight syndrome quickly and permanently for a large number of humans.

RESULTS:
Mean weight of pigs in space was 0.0000 ± 0.0002. Some individuals gained less than zero, some more, but these variations were due to lack of duct tape and sticky boots. The control cohort, gained 240 grams (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 deviations (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 similar circumstances. We are currently in the process of obtaining necessary human trial permits, and should have our planned experiment initiated within 60 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 rights were funded by SPACE-EXES, the consortium of wives divorced from insecure wealthy space-flight startups. I am also grateful for comments on early drafts by Mañana Athletic Club, Corpse Christ, USA. Finally, thanks to the City Foundation for generously donating animal care after the conclusion of the study.

LITERATURE CITED:
YOU WILL LEARN FROM MASTER YODA, THE JEDI MASTER WHO TAUGHT ME HOW TO PUT TOGETHER A DYNAMITE POSTER PRESENTATION

I don’t believe it!
MASTER YODA’S 3 TIPS FOR GREAT POSTER SUCCESS

maintain sufficient white space, you will!

a Jedi’s strength flows from the use of logical column arrangements

provide clear visual cues to guide the reader from start to finish, you must!
BONUS PRO TIP FROM R2-D2:

**BEEP-BOOP-BEEPBEEP-BIP-BOOP!*  
(*the drafting and revision process is your best friend – try to get a rough draft done early enough to incorporate feedback and make revisions!)

Sooooo... does it suck?

More graphics! Less text!
a typical poster session.
what are poster sessions like?

- crowded (hopefully)
- noisy
- last 1-3 hours
- often too hot (or too cold)
- bad lighting (this significantly impacts color perception)
- conferees may be a smidge intoxicated (if poster session coincides with the beer and wine mixer)
- and finally...lots of other presenters to contend with (i.e., competition for attention)
NO
YES
The implications, please...

HERETICAL STATEMENT #1: conference presentations don’t really have that much to do with the research.

HERETICAL STATEMENT #2: in reality, conference presentations are pretty much all about networking and shameless self-promotion.
IN A NUTSHELL:

YOUR POSTER MUST
GRAB EYEBALLS.
what is a visual hierarchy?

“The visual organization of elements within a design format to establish focal points based on their importance to the message to be communicated”

“The organization and prioritization of content as a means to communicate a message”

“Using color, contrast, texture, shape, position, orientation, and size to organize elements in a way that gives users a sense of visual importance”
why use a visual hierarchy?

• humans are primarily visual creatures
• we tend to focus on differences, not similarities, when making comparisons
• this is a key consideration for designing an effective poster

POSTER = COMMUNICATION, and
DESIGN = COMMUNICATION, so...
GOOD DESIGN = EFFECTIVE POSTER

(assuming that your data isn’t crap – but there are ways to get around that as well)
a simple exercise to illustrate
the concept
a simple exercise to illustrate the concept
elements of a visual hierarchy

a visual hierarchy is constructed using some combination of the fundamental principles of graphic design

- negative/positive space
- contrast
- repetition
- proximity
- color
- alignment
- typography (not really a principle)
negative/positive space

- the balance between negative (background) and positive (foreground) space in a composition is very important
  - too much negative space = incomplete or disassociated appearance
  - too little negative space = busy, cluttered, and difficult to read

Cramming too much information into too small of a space is far and away the number-one mistake in academic poster designs
“Densely-packed, high word-count posters attract only those viewers that are excited by manuscripts tacked to walls, and you generally don’t want to talk to those types of people. They’re weird.” (Purrington 2014)
what's wrong with this picture?
negative space ≠ nothing!
contrast

- contrast = differences in values, colors, textures, shapes, and other elements
  - visually attractive
  - aids organization of information
  - creates a focal point in the composition

the human eye finds contrast irresistible
types of contrast

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<tr>
<th>size</th>
<th>texture</th>
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Preliminary Results of a Paradigmatic Classification of Early Thule Inuit Winter Houses

INTRODUCTION
The Thule expansion (ca. AD 1200) was a migration and colonization event that originated in western and northern Alaska, and then spread rapidly eastward across the Arctic to Greenland. Recent re-dating of the eastern Thule sites outside of Alaska strongly suggests that the population movement was extraordinarily fast, perhaps on the order of a few decades or less. The rapid pace left an ephemeral archaeological record, which has made reconstructing the route(s) a very difficult undertaking. Harpoon typologies, long preferred for establishing cultural relationships in the Arctic, have only been marginally useful for this purpose, as early diagnostic types in good context are simply too rare to provide a sample of sufficient size.

OBJECTIVE
This study is part of a larger effort aimed at exploring the utility of using transmission of dwelling style as a way to reconstruct the migration and spread of the Thule Inuit across the expanse of the North American Arctic. Architectural theory indicates that the organization of the built environment tends to strongly channel and modulate physical interactions between their inhabitants, which implies that people map or allocate living space in culturally-specific ways. By this logic, shared design elements should function as an ethnic marker of early Thule culture that are embedded in a ‘mental template’ of the culturally-determined ‘ideal’ way of constructing a winter dwelling. The Thule sod house, which is best thought of as a highly-engineered system of subsystems (e.g., entrance tunnel/cold trap, raised sleeping platform), is naturally suited to phenetic analysis of its component parts. These components or characters can be easily encoded and entered into a data matrix, which in turn can be used to construct a paradigmatic classification.

METHODS
A sample of thirty-two winter houses was drawn from sites in the western, central, and eastern Arctic (Figure 1). The bulk of the sample (n=30) is comprised of dwellings from the early Thule period, while the remaining two houses (a pre-Thule Birnirk house and a typical Late Western Thule house) were included to bracket the tree. Planview drawings of each house feature were scanned and manually traced using Adobe® Illustrator® (Figure 2). Each tracing was then visually evaluated and scored according to the scoring scheme in Table 1. Where necessary, excavation records were consulted to clarify the nature of specific characters (e.g., alcoves vs. kitchen). The code matrix was fed into PAUP® 4.0b10 to generate the consensus tree (Figure 3).

RESULTS AND DISCUSSION
Despite the small sample size, a few clear patterns emerged from this preliminary analysis. First, as expected, all of the western Thule houses form a distinct clade, primarily due to fundamental differences in construction materials. Secondly, the single central Arctic house is placed midway between the traditional and eastern clades. While a single data point is clearly insufficient, its transitional position in the tree may signal the existence of stylistic change in house form during the eastward expansion. Finally, the classification was able to make very little sense of the High Arctic dwellings, as is clearly evident from the large, unresolved crown group occupying the center of the tree. This was not wholly unexpected: early Thule houses in the eastern High Arctic exhibit a relatively high degree of homogeneity. On a broader scale, the apparent lack of stylistic evolution in house form across space may also simply be a reflection of the rapid pace of the Thule expansion, which may have occurred too quickly for any significant change in dwelling style to develop.

FUTURE WORK
Future efforts will focus on maximizing the sample size, particularly for the central Canadian Arctic. This area is poorly represented in the current sample. A second goal is to include the number of characters, particularly with regard to internal structure (e.g., platform construction, presence/absence/position of lamp stands, tables, platform lockers, meat pits). Because the internal functional features of the dwelling tend to reflect the culturally-specific practices of their inhabitants, integrating these elements into the coding scheme may increase the discriminatory power of the analysis.

REFERENCES
size

• variation in size is a form of contrast
• bigger = more important
• one of the most powerful ways to organize information
• can be applied to both graphical and textual elements
color theory is an extremely complicated topic that could take up an entire class on its own.

For our purposes, we will focus on two aspects:

- color as an emotional tool
- color as an organizational tool
color temperature – warm or cool?
color temperature – warm or cool?
color temperature

warm vs. cool colors

• warm
  – hues from red through yellow, including browns and tans
  – seem to advance or appear more active; often evoke feelings of happiness, optimism and energy, but can be visually overwhelming

• cool
  – cool = blue-green through blue-violet, including most grays
  – appear to recede into the background; usually calming and soothing, but can also express sadness
color as an organizational tool
color as an organizational tool

Implicatures in uncooperative contexts: Evidence from a visual world paradigm.

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Background
Quantifiers and quantifiers are processed in the cognitive system in parallel. Coloring implicatures in non-cooperative contexts is typically required.

Eye-tracking experiment
Materials: a game, a test phase, and a non-cooperative phase. Participants were divided into two groups: cooperative and non-cooperative.

Predictions for implicatures
If the cooperative condition is used, the implicature is more likely to be activated.

Results
Some... more... frequently... in... the... cooperative... condition.

Discussion
The factor quantifiers seems to have played a role in the cooperative condition. In non-cooperative conditions, quantifiers are not activated.

Acknowledgements
First and foremost... for... helpful suggestions... and... encouragement...[...]

Research was funded by SFB 833.
color as an organizational tool
a final word about color...

• color is an extremely powerful tool – use with caution!
  – using too much and/or too many colors drastically reduces effectiveness
  – a limit of 3 colors is usually recommended
    • but not always possible (think pie charts and the like)
  – however, it is possible to substitute pattern for color
    • also avoids potential problems with colorblindness in your audience (it’s much more common than you may think)
NORMAL

PROTANOPE/DEUTERANOPE

NORMAL

PROTANOPE
(red-green)

TRITANOPE
(blue-yellow)

http://www.vischeck.com/
a textbook example of poor use of color

Put logos at the top of your poster to ruin poster aesthetics, reduce legibility of title, and undermine the ability of your graphs to visually compete for viewers’ attention

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Introduction
Your reader was mildly intrigued by the title, but you have exactly two sentences to hook them into reading more. So describe exactly what your interesting question is and why it really needed to be addressed. Gratutious background information will cause them to walk away.

Typography research has shown that text is easier to read if you use a serif font such as Times. But use a non-serif font for title, headings, etc., to subtly tag them as different. Research has also shown that fully justified text (like this paragraph) is harder to read, so don’t do this, even if it seems cool and professional looking.

Materials and methods
Few people really want to know the gruesome details of what you’ve been up to, so be brief. And be visual. Use a photograph, drawing, or flow chart if possible, supplemented only by a brief overview of your procedure. If you can somehow attach an object, an iPad, etc., that can involve viewers in a direct way, do so. Refer to the companion website (see bottom right section) for more ideas if you are creatively challenged.

Results
The overall layout in this arena should be visually compelling, with clear cues on how a reader should travel through the components. You might want a large map with most graphs. Or have questions on left and answers with supporting graphs on right. Be sure to separate figures from other figures by generous use of white space. When figures are too cramped, viewers get confused about which figure to read first and which legend goes with which figure. Cramped content just looks bad, too.

A big thing to remember is that A Results section on a poster does not need to look like a Results section on a manuscript, so feel free to be creative.

If you can add small drawings or icons to your figures, do so—those visual cues can be priceless aids in orienting viewers. And use colored arrows or callouts to focus attention on important parts of graphs. You can even put text annotations next to arrows to tell reader what you’re interested in relation to the hypothesis test. E.g., “This outlier was most likely caused by contamination when I sealed into tube.” Also, don’t be afraid of using colored connector lines to show how one part of a figure relates to another figure.

Figures are prefered but tables are sometimes unavoidable, like death. It must be included, go to great efforts to make it look professional (the table, that is). Look in a respectable journal and analyze the layout, line types, line thickness, text alignment, etc., exactly. A table looks best when it is first composed within Microsoft Word, then inserted as an Object. Use colored text or arrows to draw attention to important parts of the table.

Do treatments differ in their effects?

Do A and B respond differently to X?

Are medians of treatment A and D different?

Conclusions
Conclusions should not be mere reiterations of your results—that would be boring. You want to guide the reader through what you have concluded from the results, and you need to make the first several sentences understandable on their own and interesting—because many conference attendees will start reading this section first. If you don’t hook them, they’ll walk. These first several sentences should reflect back, explicitly, to the burning issue mentioned in the introduction. (If you didn’t mention a burning issue in the introduction, go back and fix that.)

A good conclusion will also explain how your conclusions fit into the literature on the topic. E.g., how exactly does your research add to what is already published on the topic? It’s important to be humble and generous in this section, so assume that authors of previous literature may be at the conference, and further assume they are credible and influential. You can also draw upon less formal types of content such as conversations you have had with mentors and important people (Colloquial conversation).

Finally, you want to tell readers who have lasted this long what needs to be done next, and who should do it. E.g., are you taking the next logical step, or should another discipline follow up on your amazing result? It’s OK to put a bit of personality into this ending because viewers expect posters to be personal, and if you’re not actually standing there to convey your enthusiasm, your poster should be doing that for you.

If you have a graphical way to express the next iteration of your hypothesis, by all means include it. For example, you might make a graph of hypothetical data that shows an expected result as a future experiment. Something that you couldn’t do it in a traditional manuscript, but it’s totally fine for a poster.

Acknowledgments
We thank 1. Gior for laboratory assistance, Mary Jean for seeds, and Herb side for greenhouse care. Funding for this project was provided by the Department of Thinkology. If you want to clutter your poster with amazing logos, shrink them down so they can fit inside this area without amusing text too much. Note that people’s titles are omitted...titles are TML.

References


Further information
More tips than you’d ever want can be found on “Designing conference posters,” at <http://coltoppurrington.com/tips/ academic-posterdesign>. [Note: The URLs should be stripped of automatic hyperlink, formatting prior to poster printing a poster; you can do this by right-clicking, then “remove hyperlink.”] This file and contents copyright Colin Purrington. Free for poster to link to and use, but not for plagiarizing, adapting, or hosting elsewhere (thanks!).

Literature cited
repetition

- the reuse of the same or similar design elements in a composition
- brings a clear sense of unity, consistency, and cohesiveness to the overall design

when used effectively, repetition is conspicuously inconspicuous
Implicatures in uncooperative contexts: Evidence from a visual world paradigm.

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**Background**

New (propositional) semantic and pragmatic meanings are processed in two separate stages. First, the speech implicatures are derived in context. Then, the implicates are evaluated in a post hoc manner, similar to our quantifiers like all (Schnitt 2009: 371).

Details: the test was administered online to 30 volunteers (25 females) and not later than 36 days after the last test item, as per standard (for all 148, 3, 0, 2010: 126).

Correlation was divided in their assessment (see 2) by Schein et al. 2013. Cognitive task implicates can be computed independently and effortlessly, while others (2) Huang & Brandt 2006, Cognitive Psychology, consider it a time and resource consuming process.

Are implicates computed when a pretest is plausible for communicative in Gricean terms - cooperativity is lacking?

**Pretest**

The pretest aimed at confirming that the German quantifier *keiner* (some*) carries an implicature, as it does not fully equal some (9). "Some-eat sat on the table."

64 fillers, 16 items, 4 conditions (see 1) contributed over 4.4% to a detailed online questionnaire. A condition with false belief was tailored for control. 30 German native speakers judged the pretest's truth value (2), if the pair was true, they had to rate the acceptability (7-point scale).

**Results**

False controls were expected 92.4% (9). Items: 11% of the time.

A prototypical quantifiers were judged as ceiling (6.8) and 1.8. Some-eats some score condition judged better than some-all (11, 28% to 20.4 but worse than all and none (16 and 11, 9% of 10)

Results as in line with Degen & Humber (CUNY 2000).

**Eye-tracking experiment**

Materials were almost identical to the pretest (see 1). Recordings were piloted quantifiers started/ ended in the same way. Distinct responses varied in ten 10% of target color to the (s) 12:30, 14:35. 26 Items, 4 Conditions, counterbalanced for speaker gender. Pictures were shown in a delay.

Flankers: speaker (cooperative, non-cooperative), picture (all, none, same), quantifier (all, none, same), time (50 ms). The experiment was divided into 4 phases and tested against 45 minutes:

- Training: Surprising game with 2 conditions: understand the background, familiarity with player's gender, cooperativeness of all-none-conditions never mentioned all same, same.
- Exercises: introduction of speaker voices, participants distinguish between players, 20 rounds.
- Main experiment (preceded by 2 dranys trials):
  - s: speaker & color information, picture display & image information needed for sentence parsing but quantifier.
  - e: eibling on a blue circle in the middle of the display triggered sound playback.

**Predictions for implicatures**

Conjecture: Cooperative conditions (as quantifier as all) automatic, (as quantifier as none) automatic but more slowly than all.

- Cooperative conditions: not computed but more slowly than all.
- Non-Gricean: computed automatically, cancelled.

**Results**

Some was paired more frequently with the all-picture when the speaker was non-cooperative (p<0.05, see 2).

GLMM analysis (post quantifier region vs. baseline) found some vs. all interaction 100 to 450 ms post-quantifier onset: more fixations on target in cooperative than in non-cooperative cases. Latter (HS-1000 ms), target fixations on the image corresponding to the quantifier are prevalent in both conditions (see 2).

None was always delayed in comparison to both all and some, possibly due to negation.

2 measure groups: 4 semantic (paired) non-cooperative with picture all + 3 undecided (95%) rest paired with some picture irrespective of the speaker.

**Discussion**

The factor quantifier seems to only have played a role if the speaker was cooperative. In cooperative contexts implicature computation was fast and automatic, as predicted by Defauw and Conti (2002). The results replicate Sokol-Dror et al. (2010). In uncooperative cases the implicature was computed late. This result was not predicted by any of the theories. Moreover, all was also unexpectedly computed late. Possibly, with enough contextual support, quantifier computation can be put on hold until the learner decides whether to trust the speaker.

**Acknowledgements**

First and foremost, I thank my father, Oliver Blut, and Fabian Moll, both for their patience, knowledge and encouragement. I am truly indebted and grateful to Michael Furhac for the constructive feedback and many fruitful discussions. A great many thanks to my supervisor, Wolfgang Degen, for his continuous support, from initial advice and contact to the very last sentence, whilst allowing me to work in my own way. Besides, I am most grateful to Robin Hump for his help in elaborating the results and eye-tracking data.

Lastly, thank you Alexander Enz for reading through so many drafts.

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proximity

• moving elements closer or farther apart to achieve a more organized look
• based on the idea that related items in close proximity will be perceived as a unified group
• your audience will respond by:
  a) tending to naturally group similar items that are near to each other into a single unit, and
  b) assuming that items that are not near each other in a design are not closely related to one another
Salvage Archaeology at the Snake River Sandspit Site in Nome, Alaska

Concurrence of No Historic Property:
- March 10, 1998: The Corps sent a letter to the SHPO requesting, concurrence that their project to improve the harbor at Nome, Alaska “does not have the potential to affect cultural resources.”
- April 29, 1998: The Corps received a letter from the SHPO, in which they concurred that “there are no historic properties in the area of potential effect.”

Despite this, the Corps thought it was a good idea to have an archaeological monitor on site during the groundwork. A private archaeologist familiar with the area was subcontracted to monitor the initial construction during May 2005.

Discovery of the Site (Locus A):
- 1st week of May 2005: The subconsulted archaeologist identified the remains of a semi-subterranean house pit while monitoring the construction.
- The archaeologist took photographs and recovered approximately 25 artifacts, then decided that the house pit was ineligible for inclusion on the National Register of Historic Places and allowed the bulldozers to push the remains into the ocean.
- May 14, 2005: The Corps received a letter from the subconsulted archaeologist mentioning the discovery and subsequent destruction of the semi-subterranean house pit.
- May 26, 2005: The Corps sent a letter to the SHPO stating that the house pit is “not eligible for the National Register of Historic Places” because it “has lost integrity of design, materials, workmanship, and association.”
- September 27, 2005: The Corps sent a letter to Nome Eskimo Community (tribe), apologizing for not consulting after the discovery of the site and stating that they will continue to work with the tribe to mitigate the damage done.
- October 28, 2005: The SHPO sent a letter to the Corps in which they concurred with the “finding that the house pit no longer retains sufficient integrity to be eligible” and agreed that “appropriate mitigation could include the development of interpretive signs that discuss the Native history of the Nome area.”

Continued Discovery of the Site (Loci B and C):
- July 2006: The Corps sent one of its own archaeologists, Margan Grover, to monitor the continued project construction.
- July 26, 2006: Margan identified the remains of a second semi-subterranean house pit. She called the SHPO and left a telephone message about the discovery of the house pit, along with her contact information. She also contacted the City of Nome, Nome Eskimo Community (tribe), and Bering Straits Native Corporation. She called the SHPO again and spoke with a Review and Compliance Archaeologist at the SHPO’s office, who agreed that she should excavate a test pit and do some shovel screening to identify the boundaries of the feature.
- July 27, 2006: Margan called the SHPO again and left another telephone message about the site.
- July 28, 2006: Margan called the SHPO again and talked with a Review and Compliance Archaeologist at the SHPO’s office. Margan told the SHPO archaeologist that she was assuming the site was eligible for the National Register, and that she was going to excavate at least 50% of the site.
- August 3, 2006: A meeting was held between the Corps, the Nome Eskimo Community, and the City of Nome, with the SHPO participating via teleconference, to discuss the discovery of the site and what to do about it.

The Excavation:
- Occurred from July 26, 2006 to August 26, 2006.
- Involved over 25 community volunteers, including:
  - City of Nome employees
  - Nome Eskimo Community (tribe) employees, members, and tribal Elders
  - Mr. Karl Bchool, the tribe’s Historic Preservation Representative, participated in the excavation every day
  - Kawekar, Inc. (regional non-profit Native corporation) employees
  - Interested Nome citizens
  - Involved 6 Corps employees, including biologists and chemists as well as archaeologists and archaeology interns

Proposed Mitigation (as agreed upon in the draft MOA):
1. Write a site report (Data Recovery Report)
2. Provide for an accredited museum conservator to visit the City’s Carrie M. McLain Memorial Museum and assist in the conservation and curation of the site artifacts on display
3. Assist with the accessioning of site artifacts and archaeological data (logging, cataloging, and if appropriate photography)
4. Provide a museum-quality display case to the City’s Carrie M. McLain Memorial Museum
5. Present information learned from the site in a series of public lectures in Nome
6. Prepare a manuscript on information learned from the site that can be utilized by Nome teachers (grades 5-12)
7. Present information learned from the site to a conference of peers
8. Submit an article about the site for publication in a peer-reviewed journal (if not accepted, publish elsewhere)

Who We Are Today:
- Multiple drafts of the MOA have been sent out to signatories and concuring parties (on the following dates):
  - November 22, 2006
  - September 22, 2008
  - April 13, 2009
  - August 10, 2009
  - December 14, 2009
- After a telephonic meeting among the signatories to the MOA on December 15, 2009, and numerous unproductive meetings afterwards, advice was informally requested from the Advisory Council on Historic Preservation. On March 19, 2010, the ACHP sent the Corps an edited copy of the MOA.
- A new draft of the MOA is currently under discussion.
- Artifact and faunal analyses are being undertaken by Corps archaeologist Kelly Eldridge, and the Data Recovery Reports is being drafted.

Public Outreach in Nome:
- Public viewing at Old St. Joe’s Cathedral (August 10, 2006)
- Over 200 people attended
- Viewing of artifacts at Nome Eskimo Community building, for tribal members (August 2006)
- Viewing of artifacts at Kawekar’s building during the regional shareholders meeting (August 2006)
- Another public viewing event at Old St. Joe’s Cathedral (September 16, 2006)
- Over 150 people attended
- Margan Grover gave a public lecture at the National Park Service’s building (November 2006)
Project Baseline
A living genome bank to capture evolution in action

www.baselineseedsbank.org

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Anthropogenic Change
Is happening faster than ever, affecting all ecosystem types. Development, pollution, and climate change are challenging the capacity of many species to adapt, disperse, and survive. However, understanding the effects of human activities on plant populations requires several generations of propagation or comparison between historical and contemporary propagules. Currently, there are no centralized, freely available resources for these kinds of experiments.

Species Selection
- Hosted a Project Baseline planning meeting to assist species suggestions (see figure — — —)
- Established and released suggestion list to species currently used in evolutionary/ecological research, with wide geographic range and with suitable comparators (e.g., Anthropogenic genotypes with A. virginiensis)
- Final list in 42 species, including annuals & perennials, herbaceous & woody species, and native & non-native
- Will also collect associated species occurring at the same sites as target species

Site Selection Criteria
- 10 sites per species, 2 populations per site
- Cover the entire species range
- Maximize longitudinal, latitudinal, altitudinal, and ecocenotic coverage
- Choose sites that are likely to be maintained for the next 50 years to facilitate recollection (e.g., long-term ecological research (LTER) stations or national parks)

Drought and Germination
- Drought significantly reduced the germination rate of L. virginicum
- In extreme drought, almost no germination!
- Strong selection pressures due to adverse weather events, even in 1 year
- Preserving current genotypes diversity for future evolutionary studies is imperative

Future Project Goals
- Are to collect and bank nearly 12,600,000 seeds over the next three years. We have field crews on the both coasts and in the Midwest ready to collect seeds from target species and associated species that occur at the same sites. In addition, we are collecting accessory data, including voucher specimens, photographs, and environmental data. This will be stored in a database for easy access by researchers. Some of our seeds will be used to refine seed storage practices, which will help both seed banks and conservation efforts.

You Can Help
- Make Project Baseline a success!

Contact Nicole. ergo@umn.edu or 218-726-0610
www.baselineseedsbank.org
alignment

• arranging elements so that they line up
  – creates order
  – organizes page elements; links disparate groups into a unified whole
  – satisfies the subconscious human desire to line things up (I’m not kidding, this is an actual thing)
  – creates imaginary visual connections

ignore alignment at your own peril!
a well-aligned composition is invisible to the viewer...but a poorly-aligned one sticks out like a sore thumb.
this poster has some serious alignment issues...
...but this one does not.
consider making a “reading path” to help reveal potential problems with eye flow
background

- the background of a poster may consist of:
  - whitespace
  - solid color (try to avoid using warm colors)
  - color gradient (again, avoid warm colors)
  - texture (may interfere with legibility)
  - photograph (frequently interferes with legibility)

Generally speaking, try to avoid using photographic backgrounds – they are often much more trouble than they are worth, and can easily ruin an entire poster if deployed improperly.
compromise #1: cover it up
compromise #2: fade it to pointlessness

Ryedale Flood Research Group
Poster 4: Floods – have we never had it so bad?

Flood histories – a national perspective

Sir Menzies Campbell: “The Prime Minister was responsible for the establishment of the Stern review, which he will recall pointed out the severe economic consequences of climate change. Is it not clear from the events of the past few weeks that we cannot afford not to take the necessary steps or indeed, not to spend the necessary money, in order to mitigate the effects of climate change?”

The Prime Minister: “The right hon. and learned Gentleman is right. The Stern report, which the Treasury commissioned, said that global warming is very likely to intensify the water cycle and increase the risk of floods. It is an accepted part of the Stern recommendations that we have to do more...”

Or are we? How does this stand up to scrutiny?

Records from water recorders
The River Severn Record from 1965 to present suggests a rising trend.

The full River Severn Record — things were much worse before 1965.

The data problem
The plots above illustrate a serious problem, which influences our perception of flooding and flood risk. Only 7% of our rain gauge records go back to before 1960. Our data are biased to a flood poor period. This is probably why the current wave of flooding seems so bad.

Evidence from other sources of data
The possibility that, until the late 1930s, we had become used to living in a flood poor period is supported by other evidence, such as historical accounts, if we allow them to be used in analyses. For instance, the British Hydrological Society has a register of historical flood events that runs into the 1940s, based upon reported flooding (e.g. in newspapers). These data suggest that we go through runs of flood rich periods and runs of flood poor periods.

This shows us that there are other dimensions to the story, such as those to be found in historical and contemporary accounts of what it was like to live with floods. In this respect, 1947 & 2007 make an interesting comparison in that they were both years when the nation, as opposed to regions or districts, experienced flood risk.

1947 versus 2007: 60 years of social change
Looking back over this period, we find evidence of how our approach to floods has changed. In particular, two government publications, one called Harvest Home, published in 1947 by the then Ministry of Agriculture and Fisheries, the other from the Review of the 2007 flood events led by Sir Michael Pitt, serve to illustrate this.

This shows how society has changed... from one where, during what is widely known as “Authority Britain,” flooding was something to be lived with by doing something personal, to one where technology should have stopped flooding and what flooding remains should be managed by other people.

Searching further back...
We can search even further back to appreciate better our relationship with flooding. In this respect, besides what can be found in local histories, the British Hydrological Society’s ‘Chronology of British Hydrological Events’ provides a wealth of material:

A northern example, around Leeds...
1768 – major floods, following heavy rains and snow;
1790 – major flood after a sudden thaw, rivers higher than in the great flood of 1774–1782 – big flood, many routes inundated and properties damaged; 1806 – great flood, prompting the Town Council to replace the old bridge; 1862 – extraordinary winter thunderstorm, many lives lost and much property damaged; 1874 – very wet summer, with major flooding, prompting worries about the capacity of the sewers and storm drainage; 1878 – great storm, with serious flooding;
2000 – major floods, as in much of the U.K.

In summary, national trends in flooding are not so tractable to expressions of ‘the worst ever’ as one might believe. In particular, we seem to have moved from a ‘flood poor’ period, roughly between 1980 and 2010, to a ‘flood rich’ period, but it is not clear that this is any worse than has been experienced in Britain over past centuries.

Living with floods in 2007 (Evidence from Pitt Review)
“Every member of flood risk management... should be aware of the effect of action or inaction over several years or even decades...”

Living with floods in 1947 (Evidence from Harvest Home)
“In 1947 the worst floods, and with modern eyes they aren’t even floods. Green water round here.” (Bramblethorpe, Lancashire)

Why do things seem to be bad?
1. We have had an unusually flood poor period from the 1960s to the 1990s.
2. We are much less able and prepared to live with flood risk.

A southern example, around Bath...
1790 – major floods in Bristol and Bath; 1794 – major flood;
1847 – broad areas of the city under water; 1849 – major flooding, including at the site of the new GWR station; 1875 – enormous summer storms over much of England; 1894 – major Autumn floods, hundreds of homes evacuated; 1927 – major floods in Wiltshire, Somerset, adjoining counties; 1947 – Bath flooded following the thaw after the severe winter; 1966 – worst floods since 1947; 1968, 1979, 1990 and 2000 – major floods...

Buckley: Fishing floods in 1932, a scene recorded in the early 1930s of the Market Place, photography by Stanley Suckling © Stanley Suckling, by kind permission of the Bucklow (Now Dorning), Buckley, and Astbury Lychgate Association
compromise #3: just do it

Fodonyx Spenceri: A new genus of rynchosaurs from the South West of England

Abstract:
Two new specimens of *Rynchosaurs spenceri* consisting of a near complete skull and extensive postcranial material provide much new information about this taxon. Cladistic analysis confirms that it should be ascribed to a new genus and has been named *Fodonyx*.

The Skull:
The skull is almost complete, although missing pieces can be restored from the existing material of *R. spenceri*. Part of the area around the quadrate is missing and the rear of the lower jaw. The palate is intact. The skull is somewhat lower than suggested previously. The supratemporal can be confirmed in rynchosaurs. Uniquely, the opisthotic's point ventrally.

Cladistic analysis:
The position of *R. spenceri* was evaluated with a new cladistic analysis with 75 characters and 19 taxa. A total of 16 MPTs were recovered giving the MRC tree figured. Contrary to expectations, this tree is less resolved than if the original (incomplete) coding for *R. spenceri* is used. This is a result of data replacing 75 in less parsimonious arrangements. Thus data increases but tree resolution decreases.

Conclusions:
As long suspected, the Devon rynchosaur belongs to a new genus, and nests between *Rynchosaurs* and *Hyperodapedontidae*. *Fodonyx now has a complete skull and most of a postcranial skeleton*. Stratigraphic data suggests that *Fodonyx* was about SMY younger than *Rynchosaurs*, which may account for its more derived features.
typography

• the theory and practice of letter and typeface design; necessarily concerned with design elements that can be applied to letters and text
• much like color theory, an entire course could be devoted to the ins and outs of typography
• so we will focus on only 4 aspects of type:
  – selecting a typeface (or faces)
  – the optimal number of unique typefaces
  – serif vs. sans serif fonts
  – size and weight
font choice

- typefaces are like actors – each one has its own unique personality
- the “voice” of the font should comport well with the tone of the presentation
- some basic guidelines:
  - avoid novelty and calligraphic fonts; they look cheap, cutesy, and/or unprofessional
font choice

• if you intend to use more than one typeface, you must “go big or go home”
• use the Principle of Decisive Contrast
  – “either keep it the same, or change it a lot!”
  – subtle differences have no place in a hierarchical system – they only serve to confuse the reader
number of fonts

Q: how many different typefaces should be used in a single poster?

A: NO MORE THAN 3. EVER. AND FOR THE LOVE OF ALL THAT IS GOOD, NEVER, EVER, EVER, USE COMIC SANS.
serif vs. sans serif fonts

- serif: a small line attached to the end of a stroke in a letter or symbol; assists the act of reading by guiding the eye from one character to the next
  - best suited for body copy or longer blocks of text; avoid using serif fonts on titles and headings

try to avoid using the highly ubiquitous Times New Roman (my 2 cents)
serif vs. sans serif fonts

- **sans serif**: a typeface that does not have serifs
  - clean, crisp, and minimalist
  - best suited for headings, subheadings, table text, and figure captions; avoid using serif fonts on large blocks of text

try to avoid using Arial – it’s too ubiquitous (again, my 2 cents)
a few classic font pairings:

Myriad    Caslon

Myriad Black    Minion

Franklin Gothic Demi    Baskerville

Gill Sans    Garamond

Franklin Gothic Medium    Caslon
Q: how large should you make your type?

A: AS! LARGE! AS! POSSIBLE! THIS CANNOT BE OVEREMPHASIZED. MAKE IT AS BIG AS YOU CAN, THEN ADD ANOTHER 10% FOR GOOD MEASURE.

- **rule of thumb**: the smallest text on your poster should be clearly legible from 6 to 10 feet away
  - at a **minimum**, type should be approximately:
    - 72 points for titles
    - 48 points for headings
    - 24 points for body copy

**REMEMBER – THESE ARE MINIMUM VALUES!**

**BIGGER IS ALMOST ALWAYS BETTER**

*(within reason, of course)*
letter weight and style

use changes in weight (i.e., boldface) and style (i.e., italics, SMALL CAPS) to denote rank-order differences in the visual hierarchy


versus

Lorem ipsum dolor sit amet.

Ut justo. Suspendisse potenti.
Preliminary Results of a Paradigmatic Classification of Early Thule Inuit Winter Houses

INTRODUCTION

The Thule expansion (ca. AD 1200) was a migration and colonization event that originated in western and northern Alaska, and then spread rapidly eastward across the Arctic to Greenland. Recent re-dating of the earliest Thule sites outside of Alaska strongly suggests that the population movement was extraordinarily fast, perhaps on the order of a few decades or less. The rapid pace left an ephemeral archaeological record, which has made reconstructing the route(s) a very difficult undertaking. Harpoon typologies, long preferred for establishing cultural relationships in the Arctic, have only been marginally useful for this purpose, as early diagnostic types in good context are simply too rare to provide a sample of sufficient size.

OBJECTIVE

This study is part of a larger effort aimed at exploiting the utility of using transmission of dwelling style as way to reconstruct the migration and spread of the Thule Inuit across the expanse of the North American Arctic. Architectural theory indicates that the organization of the built environment tends to strongly channel and modulate physical interactions between their inhabitants, which implies that people 'map' or allocate living space in culturally-specific ways. By this logic, shared design elements should function as ethnic markers of early Thule culture that are embedded in a mental template of the culturally-determined 'ideal' way of constructing a winter dwelling. The Thule sod house, which is best thought of as a highly-engineered 'system of subsystems' (e.g., entrance tunnel/cold trap, raised sleeping platform), is naturally suited to phenoetic analysis of its component parts. These components or characters can be easily encoded and entered into a data matrix, which in turn can be used to construct a paradigmatic classification.

METHODS

A sample of thirty-two winter houses was drawn from sites in the western, central, and eastern Arctic (figure 1). The bulk of the sample (n=30) is comprised of dwellings from the early Thule period, while the remaining two houses (p-early Thule is a more typical late Thule). The houses were included to bracket the tree. Plan-view drawings of each house feature were scanned and manually traced using Adobe® Illustrator® (fig. 2). Each tracing was then visually evaluated and scored according to the coding scheme in table 1 when necessary, excavation records were consulted to clarify the nature of specific characters (e.g., alcove vs. kitchen). The final matrix was fed into PAUP® 4.0b10 to generate the consensus tree (fig. 3).

RESULTS AND DISCUSSION

Despite the small sample size, a few clear patterns emerged from this preliminary analysis. First, as expected, all of the western Arctic house forms consist of a distinct climatic form, primarily due to fundamental differences in construction materials. Secondly, the single central Arctic house is placed midway between the semi-arctic and arctic groups. While a single data point is clearly insufficient, its transitional position in the tree may signal the existence of stylistic change in house form during the eastward expansion. Finally, the classification was able to make very little sense of the High Arctic dwellings, as is clearly evident from the large, unreserved crown group occupying the center of the tree. This was not wholly unexpected: early Thule houses in the eastern High Arctic exhibit a relatively high degree of homogeneity. On a broader scale, the apparent lack of stylistic evolution in house form across space may also simply be a reflection of the rapid pace of the Thule expansion, which may have occurred too quickly for any significant change in dwelling style to develop.

FUTURE WORK

Future efforts will focus on maximizing the sample size, particularly for the central Canadian Arctic. This area is poorly represented in the current sample. A second goal is to increase the number of characters, particularly with regard to internal structure (e.g., platform construction, presence/absence of roof trusses, tables, platform lockers, meat pits). Because the internal functional features of the dwelling tend to reflect the culturally-specific practices of their inhabitants, integrating these elements into the coding scheme may increase the discriminatory power of the analysis.

REFERENCES


Table 1: List of the characters used to develop the classification.

<table>
<thead>
<tr>
<th>Character</th>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcove</td>
<td>Character</td>
<td>Present/absent</td>
</tr>
<tr>
<td>Kitchen</td>
<td>Character</td>
<td>Present/absent</td>
</tr>
<tr>
<td>entrance</td>
<td>tunnel</td>
<td>Length (m)</td>
</tr>
<tr>
<td>cold trap</td>
<td>length</td>
<td>Length (m)</td>
</tr>
<tr>
<td>sleeping</td>
<td>platform</td>
<td>Length (m)</td>
</tr>
<tr>
<td>platform</td>
<td>lockers</td>
<td>Presence/absence</td>
</tr>
<tr>
<td>roof</td>
<td>trusses</td>
<td>Presence/absence</td>
</tr>
<tr>
<td>tables</td>
<td>presence</td>
<td>Presence/absence</td>
</tr>
<tr>
<td>platform</td>
<td>lockers</td>
<td>Presence/absence</td>
</tr>
<tr>
<td>meat pits</td>
<td>presence</td>
<td>Presence/absence</td>
</tr>
<tr>
<td>Note:</td>
<td></td>
<td>Data sourced from excavation reports and literature review.</td>
</tr>
</tbody>
</table>

Figure 3: Majority rule consensus of 2,000,000 trees.
A Zooarchaeological Approach to the Reconstruction of a Prehistoric Inuit Winter Dwelling on Cape Grinnell, NW Greenland

Jeremy C. Foin and Christyann M. Darwent
1: Department of Anthropology, University of California, Davis

RESULTS
- The faunal assemblage from House 20 is dominated by small phocids (Pusa hispida and/or Phoca vitulina), the remains of which comprise 85% of the total number of bones recovered.
- Phocid remains were heavily concentrated in excavation unit 2N/3E, which encompasses the area of the floor between the sleeping platform and the adjacent alcove.
- The remains of bearded seal (Erignathus barbatus), walrus (Odobenus rosmarus), Arctic fox (Vulpes lagopus), Arctic hare (Lepus arcticus), caribou (Rangifer tarandus), and muskox (Ovibos moschatus) were also concentrated in the general vicinity of unit 2N/3E.
- The only statistically significant exception is bird remains, which were most abundantly deposited inside the tunnel of House 20.

FOCUS
While prehistoric and historic Arctic dwelling designs demonstrate broad spatiotemporal variability, the reasons for these differences are not well understood. While it is often assumed that the observed variation in house design is linked to functional differences, the phenomenon has not been subjected to much formal scrutiny. This is primarily the result of an equally poor understanding of Inuit household archaeology in general, which has served to preclude any meaningful pan-arctic comparisons of prehistoric dwelling design.

OBJECTIVE
The goal of this project is to paint a more comprehensive picture of household archaeology in the Arctic during the Thule period by utilizing the distribution of faunal remains to reconstruct discrete activity areas within the structure. Comparisons between the faunal parts recovered within the separate dwelling features (e.g., sleeping platform, kitchen area, alcove) should serve as a reliable proxy for household spatial organization. Furthermore, the demographic distribution of the faunal assemblage may shed more light on when the dwelling was inhabited, as well as improving our understanding of prehistoric Inuit subsistence patterns.

ACKNOWLEDGMENTS
The authors wish to gratefully acknowledge the invaluable assistance of the following individuals: Dr. Christyann Darwent, for her help with the identification and cataloging of the House 20 faunal assemblage; and Dr. John Davis, for his patient assistance with map interpretation and digitization.
questions?