A Quick Guide to Poster Presentations

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The Importance of Poster Sessions

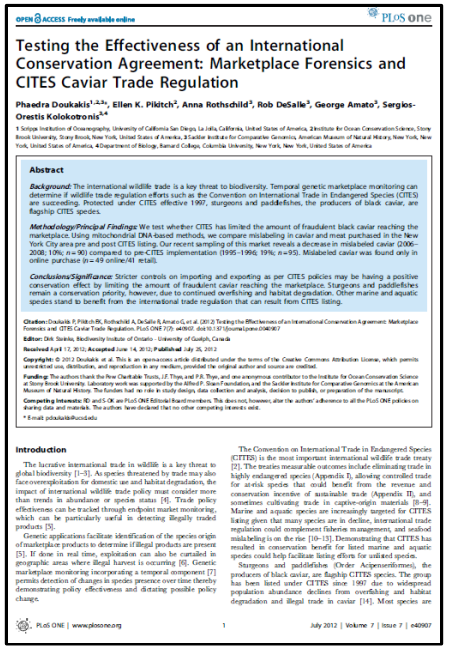
- Present yourself and your work.
- Personally interact with persons interested in your work.
- Meet other researchers and potential employers.
- Develop presentation and inter-personal skills.
- Get feedback on your research.
- Standing makes everyone more fun and dynamic.

What posters need to accomplish

- Attract visitors to come and speak with you
- Hold their attention so that you can talk to them.
- Communicate your research clearly and quickly.
- Meet the guidelines of the conference.

Elements of a poster

- Title
- Introduction
- Methods
- Results
- Conclusions
- Acknowledgments (optional)
- References (use short in-text citations instead of a section)



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PLoS one

Testing the Effectiveness of an International Conservation Agreement: Marketplace Forensics and CITES Caviar Trade Regulation

Phaedra Doukakis[1,2,3]*, Ellen K. Pikitch[2], Anna Rothschild[2], Rob DeSalle[3], George Amato[3], Sergios-Orestis Kolokotronis[3,4]

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Abstract

Background: The international wildlife trade is a key threat to biodiversity. Temporal genetic marketplace monitoring can determine if wildlife trade regulation efforts such as the Convention on International Trade in Endangered Species (CITES) are succeeding. Protected under CITES effective 1997, sturgeons and paddlefishes, the producers of black caviar, are flagship CITES species.

Methodology/Principal Findings: We test whether CITES has limited the amount of fraudulent black caviar reaching the marketplace. Using mitochondrial DNA-based methods, we compare mislabeling in caviar and meat purchased in the New York City area pre and post CITES listing. Our recent sampling of this market reveals a decrease in mislabeled caviar (2006–2008; 10%; $n = 90$) compared to pre-CITES implementation (1995–1996; 19%; $n = 95$). Mislabeled caviar was found only in online purchase ($n = 49$ online/41 retail).

Conclusions/Significance: Stricter controls on importing and exporting as per CITES policies may be having a positive conservation effect by limiting the amount of fraudulent caviar reaching the marketplace. Sturgeons and paddlefishes remain a conservation priority, however, due to continued overfishing and habitat degradation. Other marine and aquatic species stand to benefit from the international trade regulation that can result from CITES listing.

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Introduction

The lucrative international trade in wildlife is a key threat to global biodiversity [1–3]. As species threatened by trade may also face overexploitation for domestic use and habitat degradation, the impact of international wildlife trade policy must consider more than trends in abundance or species status [4]. Trade policy effectiveness can be tracked through endpoint market monitoring, which can be particularly useful in detecting illegally traded products [5].

Genetic applications facilitate identification of the species origin of marketplace products to determine if illegal products are present [5]. If done in real time, exploitation can also be curtailed in geographic areas where illegal harvest is occurring [6]. Genetic marketplace monitoring incorporating a temporal component [7] permits detection of changes in species presence over time thereby demonstrating policy effectiveness and dictating possible policy change.

The Convention on International Trade in Endangered Species (CITES) is the most important international wildlife trade treaty [2]. The treaties measurable outcomes include eliminating trade in highly endangered species (Appendix I), allowing controlled trade for at-risk species that could benefit from the revenue and conservation incentive of sustainable trade (Appendix II), and sometimes cultivating trade in captive-origin materials [8–9]. Marine and aquatic species are increasingly targeted for CITES listing given that many species are in decline, international trade regulation could complement fisheries management, and seafood mislabeling is on the rise [10–13]. Demonstrating that CITES has resulted in conservation benefit for listed marine and aquatic species could help facilitate listing efforts for unlisted species.

Sturgeons and paddlefishes (Order Acipenseriformes), the producers of black caviar, are flagship CITES species. The group has been listed under CITES since 1997 due to widespread population abundance declines from overfishing and habitat degradation and illegal trade in caviar [14]. Most species are

Guidelines for Poster Design

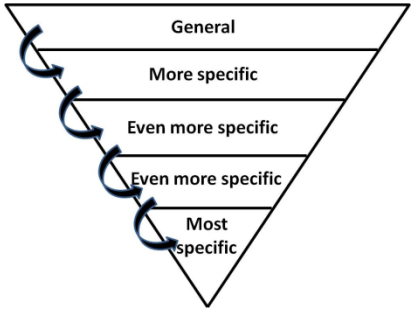
- Should appeal to your audience.
- Text should be large enough to read from far away.
- Should be easy to follow. The poster should guide the reader through.
- Contain simple, easy to understand illustrations.
- Text should be simple. Aim to have the audience get it in 30 to 60 seconds.

Planning the Poster

- Know who will be looking at your poster.
- Determine the size of your poster.
- Think visually: what size and proportions will you be working with? Sketch your poster.
- List all the things that you want to communicate to your audience. Then list them in the order of importance. Focus on the top three.

Planning the Poster

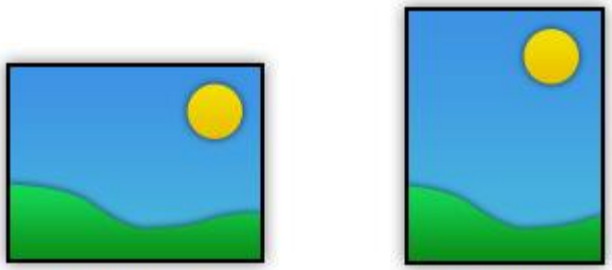
- Develop a hierarchy of information. What is your key point? What do you need to support it? Do an outline.
- Provide detailed information in a handout that accompanies the poster.



Taken from: http://ianbrownlee.wordpress.com/2013/08/12/the-three-key-structures-of-effective-communication/

Choosing a Layout

- Portrait vs Landscape.
- How many columns?
- Remember to get the paper size correct in PowerPoint.
- The important things go first on the poster.



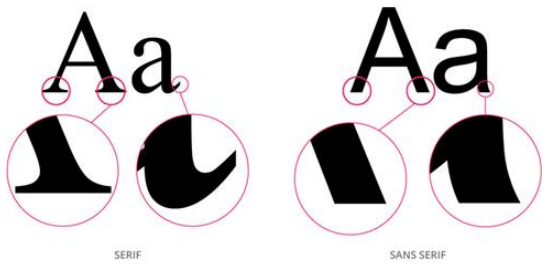
Taken from: http://www.usabilityfirst.com/glossary/portrait-and-landscape/

Choosing a Layout

- Use gridlines to keep objects aligned.
- Keep enough empty space to separate objects on the poster. (40% graphics, 35% empty space, 25% text)
- If items are related then put them close together on the poster.

Selecting Fonts and text

- Use fonts that people are familiar with.
- Use common serif fonts for the body text.
- You may use sans serif fonts for titles and labels.



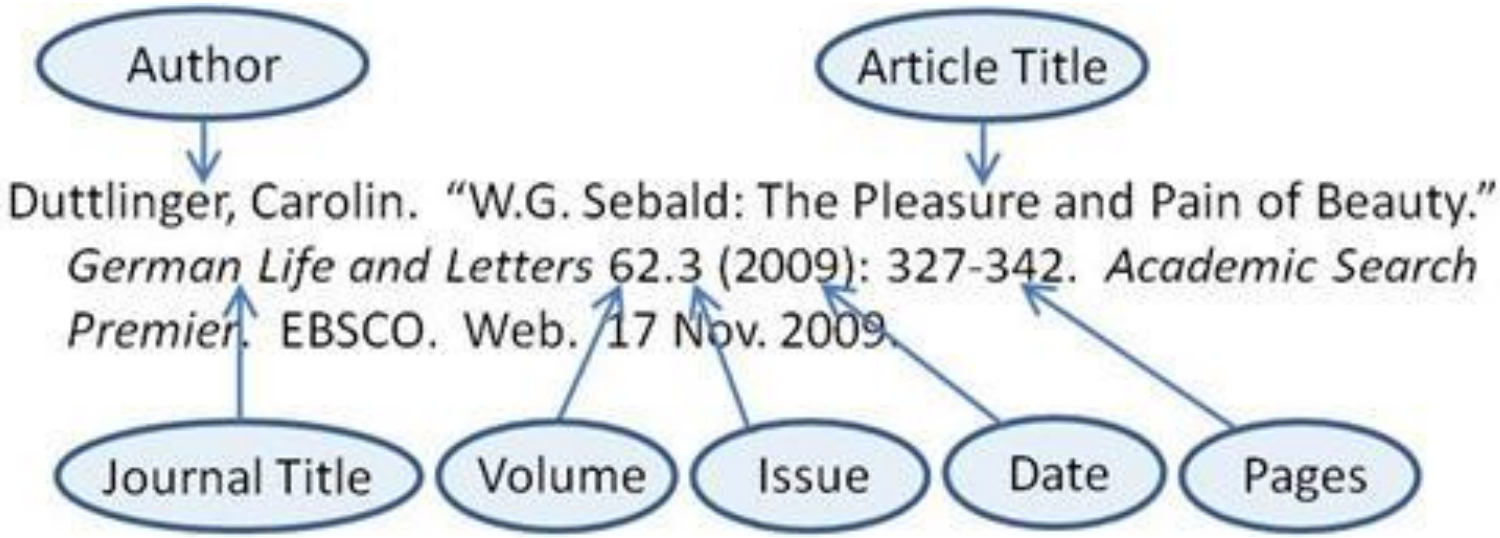
Taken from: http://candelita.is/finding-perfect-font/

- Use no more than three different fonts on your poster.
- Write titles in ‘Sentence case’ instead of ‘Title Case’ or ‘ALL CAPS’.

Selecting Fonts and text

- Use large fonts that can be read from at least 5 feet away. Use at least 48 point for titles and 24 point for body text.
- Use the active voice in writing.
- Edit out redundant references and filler phrases.
- Aim to have 800 words max.

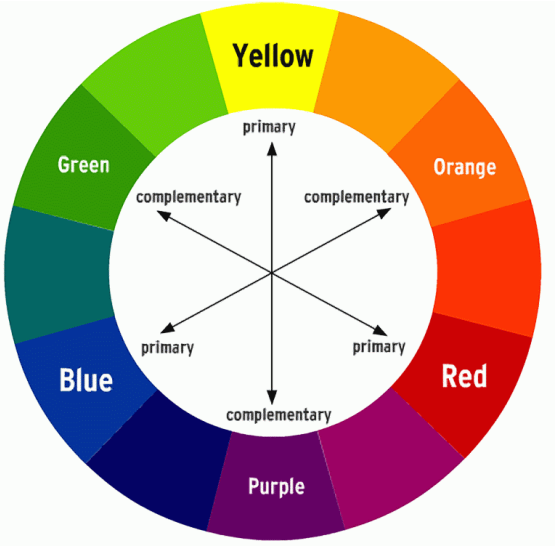
Cite Your Sources!



Taken from: http://www.anselm.edu/Library/Research-Help/Research-Tutorials/Understanding-Citations.htm

Using Colors

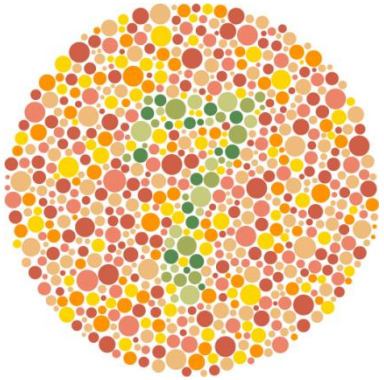
- Use text that has high contrast against the background. Black text on white background has excellent contrast.
- Choose colors that are ‘natural’ to your project.



Taken from: http://willkempartschool.com/beginners-colour-mixing-acrylic-paint/

Using Colors

- Selecting color schemes: pick two or three related colors. Use contrasting colors sparingly for impact.
- Keep backgrounds subtle, pastels and greys. Use bright colors sparingly.
- Pick colors with the colorblind in mind.



Taken from: http://scpvu.wordpress.com/2008/04/14/colorblindness/

Using Images

- Use simplified graphs and charts instead of tables. Include more complex versions on a handout.
- Use bold lines in graphs so that they can be seen at distance.
- Use illustrations that show how the work was done.
- Use photos that were taken during your work.
- Use high quality images.

Using Images

- Crop images so that the most important part is obvious.
- Give photos short titles.
- Label directly on maps/charts/ images instead of using legends.
- Place photos so that they are balanced. Do not place all pictures on one side of poster.

Making the poster

- Programs that can make a poster: QuarkXPress, InDesign, LaTeX, Scribus, Illustrator, CorelDRAW, Freehand, Omnigraffle, Inkscape, PosterGenius and PowerPoint.
- Get lots of people to critique your poster while you draft it.
- Save your poster in PDF form before printing it. PDF format allows you to see what it should look like before printing.

Poster Template (Landscape)

Title title

Author, Author, and Author
Address(es)

Introduction
Blah, blah, blah.

Materials and methods
Blah, blah, blah

Results
Blah, blah, blah

Conclusions
Blah, blah, blah

Literature cited

Blah, blah, and blah. 2012. Blahing, blahing, and more blahing. *Journal of Blahology* 1:1-2.
Blah, blah, and blah. 2012. Blahing, blahing, and more blahing. *Journal of Blahology* 1:1-2.
Blah, blah, and blah. 2012. Blahing, blahing, and more blahing. *Journal of Blahology* 1:1-2.
Blah, blah, and blah. 2012. Blahing, blahing, and more blahing. *Journal of Blahology* 1:1-2.
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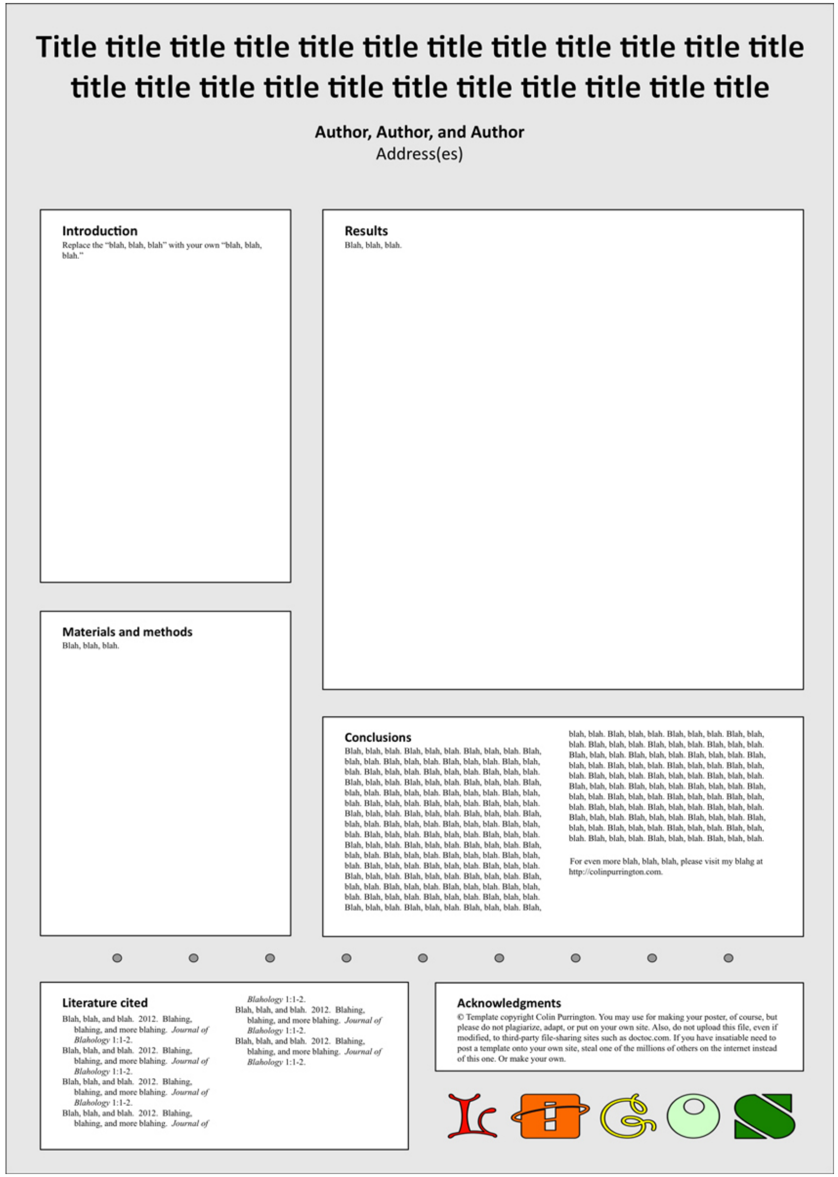
Acknowledgments
Blah, blah, blah

Further information
Blah, blah, blah.

Poster Template (Portrait)



Badly Designed Poster

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

Colin B. Purrington
6673 College Avenue, Swarthmore, PA 19081 USA

NRF

BLACK HOLE DIET PLANS

THE HIGH FRUCTOSE SUGAR ASSOCIATION

SPACEEXES

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 of 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.

Examples of Effective Posters

The Multiplicative Domain in Quantum Error Correction

Man-Duen Choi, Nathaniel Johnston, and David W. Kribs
Department of Mathematics, University of Toronto
Department of Mathematics & Statistics, University of Guelph

The Big Question

If we want to send some quantum data through a given noisy channel, how can we do it so that the information is preserved?

Mathematical Basics

Let $\mathcal{H}$ be a finite-dimensional Hilbert space and let $\mathcal{L}(\mathcal{H})$ be the set of linear operators on $\mathcal{H}$.

- A completely positive (CP) trace-preserving linear map $\mathcal{E} : \mathcal{L}(\mathcal{H}) \to \mathcal{L}(\mathcal{H})$ is called a *quantum channel*.
- $\mathcal{E}$ is said to be *unital* if $\mathcal{E}(I_{\mathcal{H}}) = I_{\mathcal{H}}$.
- $\mathcal{A}$ and $\mathcal{B}$ are called *subsystems* of $\mathcal{H}$ if we can write $\mathcal{H} = (\mathcal{A} \otimes \mathcal{B}) \oplus (\mathcal{A} \otimes \mathcal{B})^{\perp}$.

Correctable Subsystems

Given a quantum channel $\mathcal{E}$, a subsystem $\mathcal{B}$ of $\mathcal{H}$ is said to be a *correctable subsystem* [1] if there exists a quantum channel $\mathcal{R}$ such that

$$\forall \sigma^A, \sigma^B \; \exists \tau^A \text{ s.t. } \mathcal{R} \circ \mathcal{E}(\sigma^A \otimes \sigma^B) = \tau^A \otimes \sigma^B.$$

- The channel $\mathcal{R}$ is known as the *recovery operation*.
- We can decompose $\mathcal{R}$ into a two step form:
  1. Perform a projective measurement.
  2. Conjugate by a unitary (which can depend on the result of the measurement).
- If $\mathcal{R} = id_{\mathcal{H}}$ is the identity map then $\mathcal{B}$ is called a *noiseless subsystem* [2].

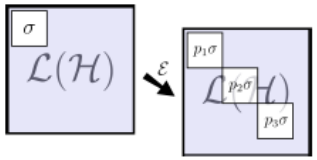


Figure 1: A correctable subsystem, depicted as a sub-block of the operators acting on the Hilbert space. To correct the error, project onto one of the three resulting sub-blocks and then conjugate by a unitary.

Unitarily-Correctable Codes

A correctable subsystem $\mathcal{B}$ is said to be a *unitarily-correctable code* (UCC) for $\mathcal{E}$ if the recovery operation is simply a conjugation-by-unitary channel $\mathcal{U}(\cdot) := U(\cdot)U^*$.

- Since finding correctable subsystems in full generality is an extremely difficult problem, restricting our attention to unitarily-correctable codes seems potentially wise.
- These codes are of physical interest; they are codes in which the two-step process of recovery only involves the conjugation-by-unitary step (and not the projective measurement step).
- It has been shown [3] that if a quantum channel $\mathcal{E}$ is unital, then we can unambiguously define *the unitarily-correctable code algebra* of $\mathcal{E}$, denoted $UCC(\mathcal{E})$, to be the albebra composed of the direct sum of all of the unitarily-correctable codes.
- In terms of Figure 1, unitarily-correctable codes are those for which $p_1 = 1$ and $p_2 = p_3 = 0$ (i.e., there is just one block on the right).

The Multiplicative Domain

The *multiplicative domain* of $\mathcal{E}$ [4], denoted $MD(\mathcal{E})$, is defined to be the following set:

$$\{a \in \mathcal{L}(\mathcal{H}) : \mathcal{E}(a)\mathcal{E}(b) = \mathcal{E}(ab) \text{ and } \mathcal{E}(b)\mathcal{E}(a) = \mathcal{E}(ba) \; \forall b \in \mathcal{L}(\mathcal{H})\}.$$

- $\mathcal{E}$ behaves particularly nicely when restricted to $MD(\mathcal{E})$ (as a $*$-homomorphism, in fact).
- $MD(\mathcal{E})$ was first studied by operator theorists over thirty years ago.
- $MD(\mathcal{E})$ is an algebra, and hence [5] is unitarily equivalent to a direct sum of tensor blocks:

$$MD(\mathcal{E}) \cong \oplus_k [I_{\mathcal{A}_k} \otimes \mathcal{L}(\mathcal{B}_k)] \oplus 0_{\mathcal{K}}. \quad (1)$$

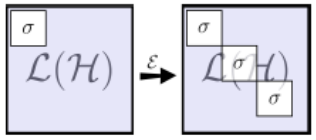


Figure 2: The action of a quantum channel on its multiplicative domain.

The Great Connection

By looking at Figures 1 and 2, we expect that there might be some connection between correctable subsystems for a channel $\mathcal{E}$ and its multiplicative domain. Indeed, one of our main results is that the two situations coincide when $\mathcal{E}$ is unital and the subsystem is unitarily-correctable.

Main Result

Theorem. *Let $\mathcal{E}$ be a unital quantum channel. Then $MD(\mathcal{E}) = UCC(\mathcal{E})$.*

- This theorem says that when we write $MD(\mathcal{E})$ in the form of Equation (1), the $\mathcal{B}_k$'s are exactly the unitarily-correctable codes for $\mathcal{E}$.
- When $\mathcal{E}$ is not unital, $MD(\mathcal{E})$ in general only captures a subclass of the unitarily-correctable codes for $\mathcal{E}$.
- Because $MD(\mathcal{E})$ is easy to compute, this provides a concrete method of finding some UCCs.

Generalization

In the same spirit as the multiplicative domain, we can define "generalized multiplicative domains" for channels by requiring not that the channel be multiplicative with itself, but rather that it be multiplicative with some $*$-homomorphism.

- Generalized multiplicative domains capture *all* correctable codes for *arbitrary* channels.
- Unlike the multiplicative domain, these algebras in general are very difficult to compute.

Conclusions and Outlook

This characterization provides a simple way to find all unitarily-correctable codes for unital channels and even some codes for non-unital channels. General correctable subsystems can be characterized in terms of algebras that are analogous to the multiplicative domain, though in general it is not clear how to calculate them – further research in this area would be of great interest.

For Further Information

For the details of our work:

- Choi, M.-D., Johnston, N., and Kribs, D. W., Journal of Physics A: Mathematical and Theoretical **42**, 245303 (2009).
- Johnston, N., and Kribs, D. W., *Generalized Multiplicative Domains and Quantum Error Correction* (2009, preprint).

Preprints and this poster can be downloaded from:

- www.arxiv.org
- www.nathanieljohnston.com

References

[1] D. W. Kribs, R. Laflamme, D. Poulin, M. Lesosky, Quantum Inf. & Comp. **6** (2006), 383-399.
[2] P. Zanardi, M. Rasetti, Phys. Rev. Lett. **79**, 3306 (1997).
[3] D. W. Kribs, R. W. Spekkens, Phys. Rev. A **74**, 042329 (2006).
[4] M.-D. Choi, Illinois J. Math., **18** (1974), 565-574.
[5] K. R. Davidson, *C^*-algebras by example*, Fields Institute Monographs, 6. American Mathematical Society, Providence, RI, 1996.

Acknowledgements

M.-D.C. was supported by an NSERC Discovery Grant. N.J. was supported by an NSERC Canada Graduate Scholarship and the University of Guelph Brock Scholarship. D.W.K. was supported by an NSERC Discovery Grant and Discovery Accelerator Supplement, an Ontario Early Researcher Award, and CIF, OIT.

UNIVERSITY OF TORONTO UNIVERSITY of GUELPH

Examples of Effective Posters

Discovering protein functional sites with unsupervised techniques

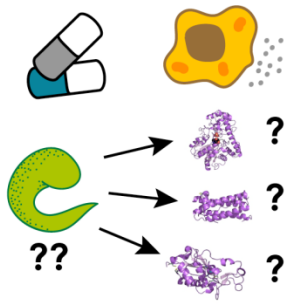
Shirley Wu[1], Russ B. Altman[2]

1 Program in Biomedical Informatics, 2 Department of Bioengineering

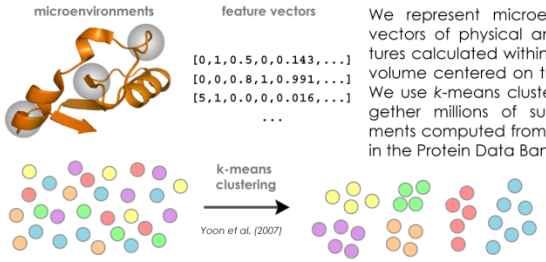
Motivation

Characterizing protein function - for example, what molecules they bind and interact with - is important for understanding biological processes. We can use this knowledge to engineer therapeutics and other beneficial biology.

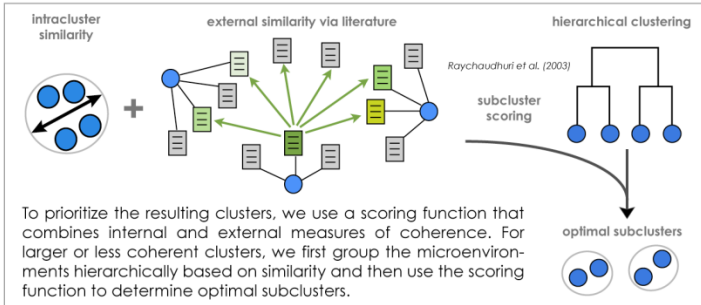
Computational methods are fast and inexpensive, allowing high-throughput prediction of protein function. Most methods are supervised approaches, i.e. they use available data about known proteins and functions to make predictions. Thanks to genomics, researchers are now discovering novel proteins at a tremendous rate. We therefore need methods to identify new functions in proteins as opposed to methods that only recognize known functions.



Methods



We represent microenvironments with vectors of physical and chemical features calculated within a small spherical volume centered on the site of interest. We use *k*-means clustering to group together millions of such microenvironments computed from protein structures in the Protein Data Bank (PDB).



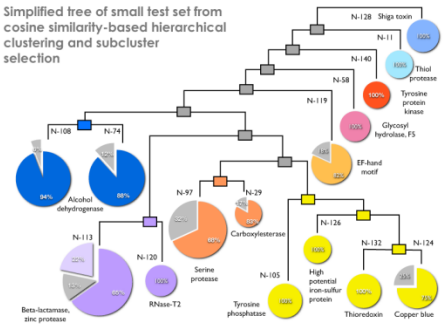
To prioritize the resulting clusters, we use a scoring function that combines internal and external measures of coherence. For larger or less coherent clusters, we first group the microenvironments hierarchically based on similarity and then use the scoring function to determine optimal subclusters.

Evaluation

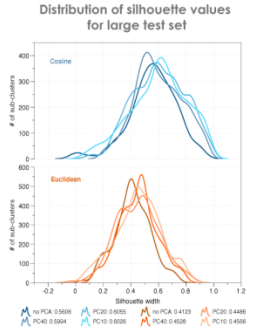
Results from the subcluster selection approach on the small test set seem reasonable. We then evaluated different distance metrics on a larger test set. Cosine similarity produced subclusters with better purity (external coherence) and silhouette values (internal coherence).

Small test set	Large test set
~150 vectors	~1400 vectors
15 functions	168 functions

Simplified tree of small test set from cosine similarity-based hierarchical clustering and subcluster selection



Distribution of silhouette values for large test set



Application

We are currently applying the subcluster selection approach to the whole-PDB *k*-means clustering. We then use a number of term enrichment methods to gain insight into the possible biological role of the microenvironment represented by each candidate subcluster.

Boyle et al. (2004)

Cluster 257: 30 proteins	MeSH terms	Raw text terms	Gene Ontology terms
	Insulin	structur monomer	hormone activity
	Hydrogen Bonding	sequenc c-peptid	glucose metabolic process
	Ribosomal Proteins	monomer insulin	receptor binding
	Peptides	conform insulin	hexose metabolic process
	Pancreas	hexam crystal	insulin receptor binding
	Amino Acids	2zn insulin	monosaccharide metabolic process
	Chymotrypsin	protein-protein	negative regulation of catabolic process
	Electrophoresis	coordin zn	positive regulation of cytokine secretion
	Protein Folding	zn atom	insulin-like growth factor binding

Conclusion

We use unsupervised, automated techniques to identify biologically interesting groups of protein microenvironments, creating a potential pipeline for discovering novel functions.

References

Yoon S, Ebert JC, Chung EY, De Micheli G, Altman RB. (2007) BMC Bioinformatics, 8:Suppl 4:S10.
Raychaudhuri S, Chang J, Imam F, Altman RB. (2003) Nucleic Acids Res 31(15):4553-60.
Boyle EI, Weng S, Gollub J, Jin H, Botstein D, Cherry JM, Sherlock G. (2004) Bioinformatics 20(18):3710-5.

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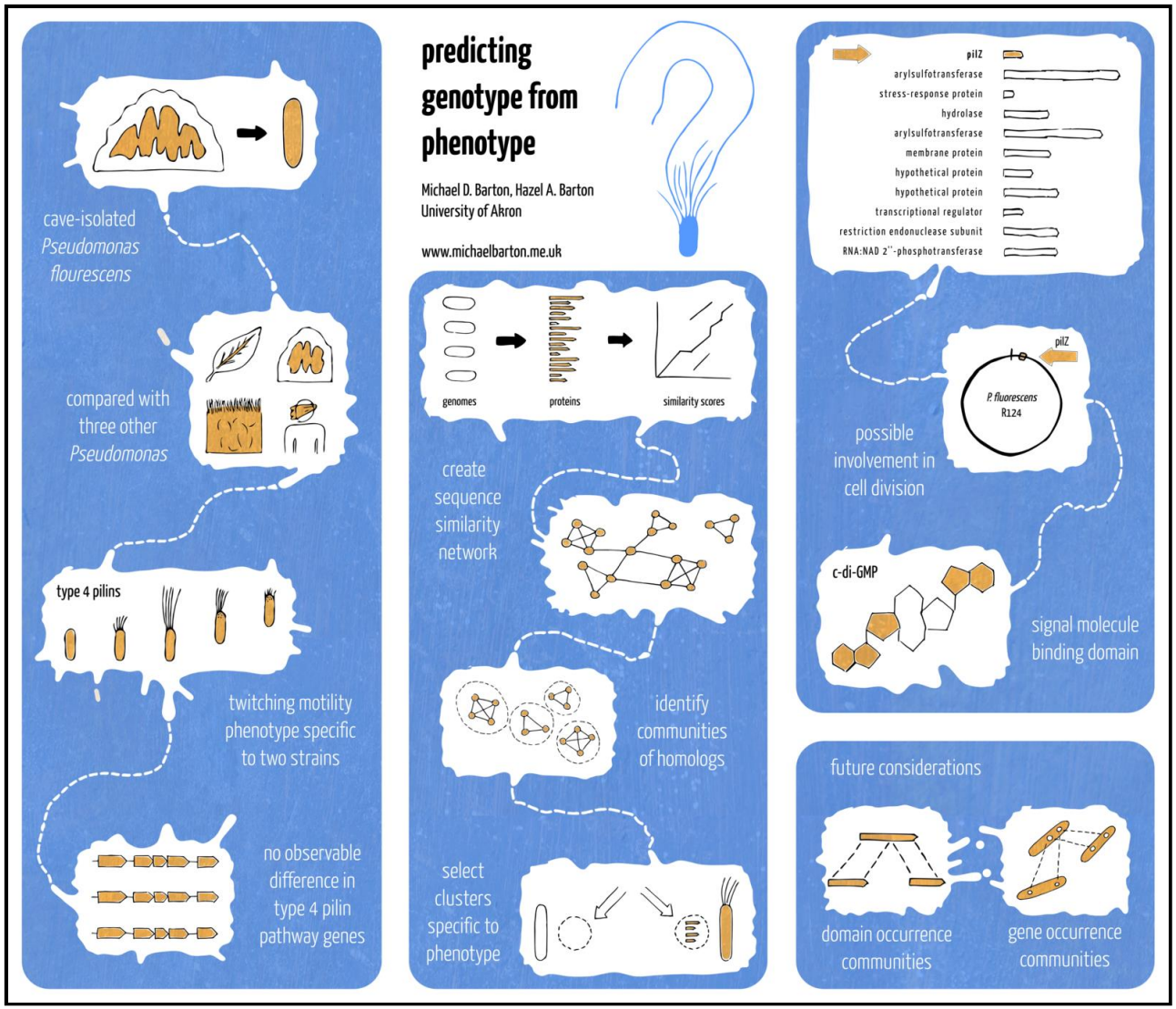
Examples of Effective Posters



How to Dress for a Poster Session

- Dress for success! Think of your poster session as a job interview.
- Look neat and polished.
- For men: wear a suit or button-up shirt with a tie and khaki pants.
- For women: wear a power suit or a button-up shirt with slacks or a dress.
- Wear comfortable shoes that match your outfit.

What to Bring to Your Poster Session

- Take a note pad and pen.
- Extra thumbtacks.
- Tape or another adhesive.
- Copies of a handout with detailed information on your project.

The Day of the Poster Session

- Stay close to your poster and be available for discussion.
- Do not chew gum while by poster.
- Do not refer to your notes wile explaining your poster. Know your stuff.
- Speak directly to your viewers, not the poster.
- Thank your viewers for visiting your poster.

References

- Barton, Michael. Poster: Predicting genotype from phenotype. Retrieved from http://www.bioinformaticszen.com/post/genotype-from-phenotype/
- Graphic designers of TLT (2005). Designing Communications for a Poster Fair. Retrieved from http://www.personal.psu.edu/drs18/postershow/
- Graphic designers of TLT (2005). Judging Guidelines: An example for designers. Retrieved from http://www.personal.psu.edu/drs18/postershow/judges.html
- Purrington, Colin. Designing conference posters. Retrieved from http://colinpurrington.com/tips/academic/posterdesign
- Ritchison, Gary. Poster Presentations. Retrieved from http://people.eku.edu/ritchisong/posterpres.html
- Wu, Shirley. Poster redux. Retrieved from http://shirleywho.wordpress.com/2009/03/05/poster-redux/
- Zielinska, Edyta. Poster Perfect: How to drive home your science with a visually pleasing poster. Retrieved from http://www.the-scientist.com/?articles.view/articleNo/31071/title/Poster-Perfect/