



**Trinity College Dublin**

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

# Designing Posters

TIDI Development Research Week

**Derina Johnson**

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DSAI Steering Committee Postgraduate Representative

Date 1<sup>st</sup> November 2017

# Today

- Core components
- Presenting research with clarity, confidence and conciseness.

## Bad poster bingo

Different parts of poster don't line up	Boxes within boxes	Zigzag reading order	More than three <b>typefaces</b>	Long-winded title
Gradient fills in coloured boxes	Big blocks of text	Photographic background	Unlabelled error bars on graphs	Pixelated pictures
More than five colours	Institutional logos bookending title	Free space	ALL CAPITALS	Text with shadows, outlines, or bevels
Abstract	<u>Underlined text</u>	Comic Sans	3-D graphs	Checking tablet or phone during presentation
Tables showing data that could be in a graph	Poster does not fit on poster board	Comic Sans (it's that annoying)	Objects almost touching or overlapping	<small>Tiny, unreadable type</small>

By Zen Faulkes, [betterposters.blogspot.com](http://betterposters.blogspot.com)

Inspired by: <http://www.monicametzler.com/bad-presentation-bingo/>

# A poster...

- Represents you
- (can) have immediate impact and draw further interest
- Helps you connect with people with similar focus and reach a broader audience
- Facilitates one-to-one conversations
- Is visible throughout conference
- Is easily shared – Twitter, Facebook



# First steps

- Are you provided with guidelines?
  - Size, orientation

## DSAI Conference:

Accepted posters must be prepared in portrait format and designed for printing in A1 size (594mm wide x 841 mm high). For guidance on developing posters see some examples here: <http://guides.nyu.edu/posters>; <http://colinpurrington.com/tips/poster-design>;

<http://www.slideshare.net/LAICDG/laura-connaughton-poster-presentations-that-get-noticed-cdg-agm-2015>

DSAI will print the accepted posters and set up the display. Therefore, submitting authors are not required to bring a printed poster to the conference.

Posters will be displayed in various locations around the conference venue and authors will be encouraged to stand near by their posters at break times. At least one author of each accepted poster must attend the conference.

# Layout

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- Trinity Identity

*“The Trinity logo should always appear in the top left-hand corner of documents, and should not be centred. The shield should be used together with the text as a full logo and the shield should never be used on its own. The logos should not be edited or amended in any way and a 3 cm space should be allowed around the logo in all directions with no other text appearing.”*

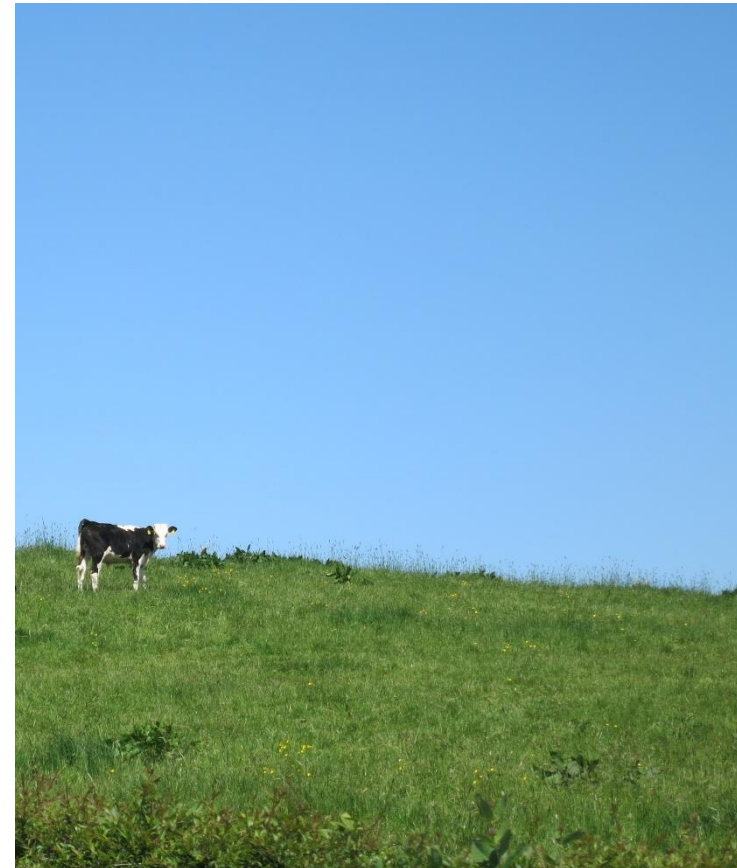
- <https://www.tcd.ie/local/identity/logo-downloads/>

- <https://www.tcd.ie/local/identity/powerpoint/>



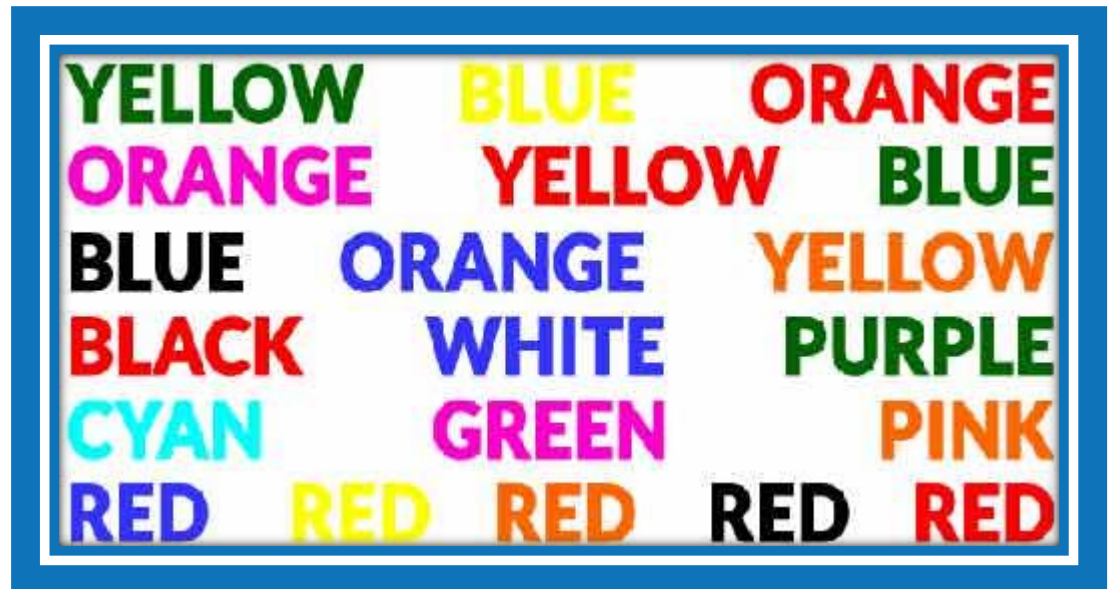
# How to make your poster work for you

- Colour
- Font
- Size
- Logical flow
- Use of negative space ----->>>>>>>



# Colour

- Dark lettering on light background **Light on dark background is tiring**  
Light lettering on light background is hard to read
- Colour theme – 2-3 colours only - Trinity blue (eye dropper)





# Font

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- Main points need to be able to be read by 1 – 1.5m away
  - **Title:** 72-120 (Do you want it to be read from the other side of the room?)
  - **Subtitle:** 48-80 (To be read by someone passing by)
  - **Section Headers:** 36-72 (Drawing them in...)
  - **Body Text:** 24-48 (Readers)
- Sans-serif fonts for the title, subtitle, and headers: Helvetica, Arial, Calibri, Trebuchet, Tahoma, Verdana
- Serif fonts for text: Times New Roman
- Minimise use of underlines, *italics*, and **bold**

# Logical Layout

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- People read left to right
  - Things can get confusing
- If you put things in random places
- Readers need to be able to quickly work out how to move through the poster
- 800-1000 words with white space between sentences
- Justified

Cramping your paragraph makes it hard to follow and doesn't encourage the reader to read on, no matter how compelling your poster about whether cats are a solid or a fluid, or maybe both.

# What to include?

- Target audience
- Useful tables, graphs, pictures
- Summary NOT thesis... bullet points
- **Title:** Short & eye-catching
- **Authors & Affiliations:** Supervisor & funder
- **Contact details**
- **Your photo?**
- Typical Sections:
  - Aim, Rationale, Abstract, Context, Methodology, Findings, Implications, Conclusion, References



# Content: What is the punchline?

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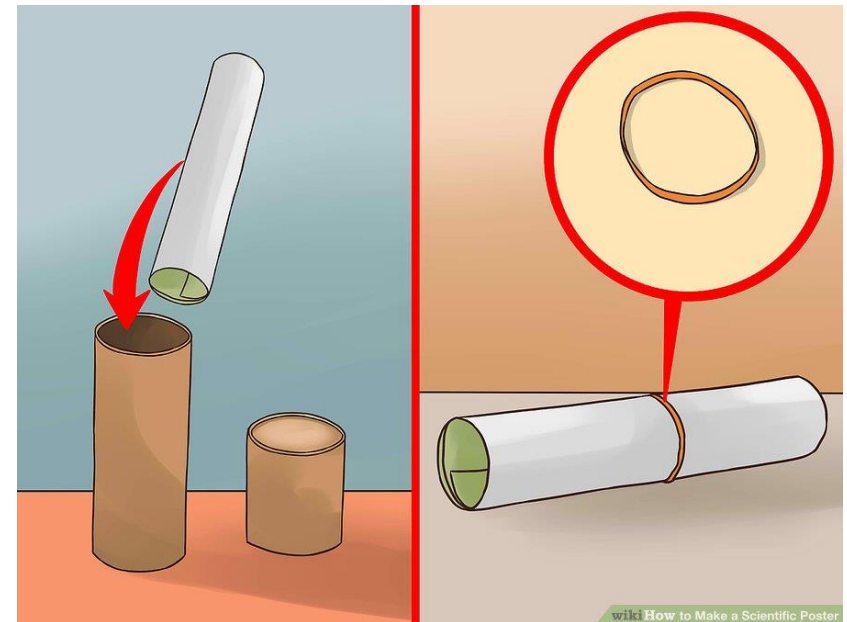
**Your Poster. So much detail. It looks interesting, innovative and informative....**

Something  
shiny

- Direct reader's eye to main message.
- Rationale, results, implications, conclusion, methodology...
- What do you want your take home message to be?

# Extra materials

- Provide people with an A4 or A5 Handout
  - Summary of the poster
  - Contact details
- Bring pen and paper to jot down feedback
- Bring business cards (if you don't have handouts)
- Poster storage – get a cardboard tube



# Random additional tip

- Coordinate attire with your poster presentation – may get more attention according to this study:

<http://www.cmaj.ca/content/169/12/1291.full.pdf+html>



# A0 – Size matters

- Aesthetics, content, accuracy, organisation and clarity (& oral explanation)
- This is larger than DSAI dimensions... can hold more information

**Designing Creative Reasoning Tasks for Junior Certificate Science and Maths**  
 Aisling Reilly and Ailbhe Garry  
 Supervised by Dr Máiréad Dempsey and Dr Ann O'Shea

**Maynooth University**  
 National University of Ireland, Maynooth

**ABSTRACT**  
 Junior Certificate is a key transition point for students and teachers alike. It is a subject that is often seen as the 'gatekeeper' to higher education. This poster presents a research project that aims to develop the Creative Reasoning Framework which defined two different types of reasoning required for competition of mathematics tasks: *Involutive* and *Creative*.

With *Involutive Reasoning (IR)* being a Memorisation Reasoning (MR) and Algebraic Reasoning (AR) task. *Creative Reasoning (CR)* comprises Logical Creative Reasoning (LCR) and Critical Creative Reasoning (CCR).

We extended this to science and an extended version of our framework can be seen on the right.

**MODIFIED TASK-OCR**  
 In a multiple choice question, a driver reads a vehicle with its power windows on. When it is the driver's turn to drive, the driver notices that the power windows are not working. What is the most likely reason for this?

1) The driver forgot to turn off the power windows.  
 2) The driver forgot to turn on the power windows.  
 3) The driver forgot to turn on the power windows.  
 4) The driver forgot to turn off the power windows.

**Figure 1: A line graph showing the percentage of correct answers for each type of reasoning task across different subjects.**

	Sci '17	Sci '18	Sci '19
MR	48.04	35.36	36.5
AR	19.02	14.02	19.88
LCR	7.87	0.00	0.00
CCR	0.00	0.00	0.00

	Math '17	Math '18	Math '19
MR	13.00	0.00	0.04
AR	12.00	30.00	14.70
LCR	12.40	10.00	0.00
CCR	0.00	1.11	1.20

These tables show the types of a percentage of tasks per subject. The figure shows that the used Junior Certificate framework for the maths tasks, and not seen to be the science tasks. Our findings led us to explore some of the questions further with the goal of providing a framework that enhances the quality of tasks required for

**Key Findings:**

- Defining a task
- Chemical formulae
- Experimental procedures
- Diagrams and labels
- Procedure already done before
- Prompts given
- Strategy can be chosen without understanding
- Modifications to practice based on understanding
- Decision-making is required
- Designing strategy for novel scenario
- Linking topics
- Justification of method using understanding

**JC SCIENCE HL 2019 GUIDES**

1) Read the first letter for the correct answer.  
 2) Consider the average number of correct answers for the last four years of the test.

✓ Reasoning algorithm needed  
 ✗ No analogy with science

✓ Feasibility and plausibility ✓ Linking topics

# Bridging the Gap: Improving Access to Local Food in Austin Elementary Schools

Acknowledgement: [Redacted] in Office of Undergraduate Research Studies

Holly Harkrider ✉ The University of Texas at Austin ✉ College of Education ✉ hollyharkrider@mail.utexas.edu

## Research Questions:

What are the current barriers and affordances to local food access in Austin area elementary schools? What points in the chain of production and distribution of food from farm to cafeteria could be altered to allow local farmers to supply products to school lunch programs?

## Purpose:

To identify the barriers and affordances for incorporating local foods into school lunch programs and propose a plan for a future program model.

"Re-localization... lies at the core of the concept of community food security, which advocates food systems that strengthen localities and communities by creating spatially closer links among two or more food system activities."

(Patterson, 2004, Page 207)

## OBSTACLES BETWEEN FARMS & SCHOOLS



## Emerging Results:

My emergent research suggests the complexity and difficulties of the school food system in the Austin area and around the United States. The most pervasive barriers that occur across one or more areas with the cycle of food from farm to school are related to monetary and labor support—policy, markets, educators, school district officials. While these barriers do prevent access to local food in schools, the affordances may be able to serve as an aid to "bridge the gap" and make this option in our schools.

## Background:

With over 25% of teens currently suffering from obesity, we are in dire need to find a way to become healthier and ensure positive outcomes for future generations (CDC, 2008). For many children, school lunches are their most nutritious meal—sometimes the only meal—of the day (USA Today, 2009). With the numerous benefits to local food, why do more schools purchase their food services to vendors instead of purchasing from the farms in their communities? Local food:

- Is less processed and usually grown using lower pesticides
- Is fresher because it has spent less time traveling (NY Times, 2006)
- Supports the local economy
- Takes a shorter carbon footprint, reduces risk to transport and is therefore easier on the environment
- Is less susceptible to E.coli (Associated Press, 2008)
- Helps to ensure positive futures for smaller farmers

## Problems:

Debates about obesity are being waged, better economically or health-wise.

- "Having the food be natural is nice, but a bigger threat to children's health is making sure that there's not too much salt and not too much saturated fat." (Maggi Woodard, 2008)
- "Local" and "green" are not necessarily better than "good" and "fair" (Morgan and Samaha, 2008)

## Affordances

### For Choosing Local Food

- School Food Service staff training
- Supportive legislation and public policy
- Teacher and school staff support
- Community and parent interest
- Wide availability of local farms and gardens
- Partnership with local NGOs

## Barriers

### To Getting Local Food In Schools

- Cost
- Knowledge and Equipment
- Awareness and Information
- Legal Issues
- Leadership and support
- Student Preferences
- Provided commodities by the USDA
- Logistics
- Produce growing season
- Incentives, revenue from FMNVs

## PROPOSED METHODS:

The approach to research will draw on the Grounding Theory of qualitative research methods developed by Glaser and Strauss, which suggests "to generate methodology, by developing theory that is grounded in data gathering, gathering and analysis" (Glaser and Strauss, 1987). The idea will be to identify the barriers in the farm to school ecology and understand the previous and current environment around school programs in the Austin area. Potential existing literature will also be used to clarify the requirements, and that data needs to develop an emergent research theory. The data will be analyzed using grounded theory methods and content analysis of key documents as developed by Glaser and Strauss (2003). A major goal for this research would be to evaluate and synthesize existing data to develop a model for how to approach these barriers and affordances more holistically into laws.

### Non-Governmental Organizations

Who has been successful in their efforts at what are they looking for in a partner? Are there barriers to getting local food into schools? What would they expect an organization to do? What would they expect an organization to do? What would they expect an organization to do?

### Local Farmers

What are the barriers to getting local food into schools? What are the barriers to getting local food into schools? What are the barriers to getting local food into schools?

### School District Staff

Who are the barriers to getting local food into schools? What are the barriers to getting local food into schools? What are the barriers to getting local food into schools?

### Educators

How do you see the barriers to getting local food into schools? How do you see the barriers to getting local food into schools? How do you see the barriers to getting local food into schools?

### Public Policy

What are the barriers to getting local food into schools? What are the barriers to getting local food into schools? What are the barriers to getting local food into schools?

## AUSTIN FARMS

- |                                       |   |                         |
|---------------------------------------|---|-------------------------|
| <b>Vegetables, Fruits &amp; Herbs</b> | <b>Eggs</b>                             | <b>Meat &amp; Dairy</b> |
| Johnson's Backyard Garden             | Hands of the Earth Farm                 | Green Gate Farms        |
| Boggy Creek Farms                     | Natural Springs (Green Urban Patchwork) | Urban Patchwork         |
| Green Gate Farms                      | Neighborhood Farm                       | Neighborhood Farm       |
| Springdale Farm                       | Neighborhood Farm                       | Bonsai Farm             |
|                                       |   | Wild Farms, Green Desk  |

And according to local news, there are **75** more local farms in the Austin area, of which **50** miss our Capital Building.



# Information-seeking behaviour in people with lung cancer and the World Wide Web: Does Dr Google promote early help seeking?

Julia Mueller<sup>1</sup>, Professor Chris Todd<sup>1</sup>, Dr Simon Harper<sup>2</sup>, and Dr Caroline Jay<sup>2</sup>

<sup>1</sup>School of Nursing, Midwifery and Social Work, University of Manchester <sup>2</sup>School of Computer Science, University of Manchester

## 1. Background

Lung cancer has the lowest survival rates among common cancer types. In the UK, approximately 40,000 people die of lung cancer every year. Patients frequently present at a late stage after having had symptoms for several months ("patient delay"). Given the increasing volume of health information online, the Web could be a key factor influencing individuals' decisions to seek medical advice.

## 2. Aim

This study aimed to explore the role of lay information sources (with focus on the Web) in help-seeking behaviour of individuals with lung cancer prior to diagnosis.



Do individuals affected by lung cancer or their friends / family research symptoms online?



## 3. Methods

**Sample:** Patients recently (≤ 6 months) diagnosed with lung cancer from 2 clinical sites in England.

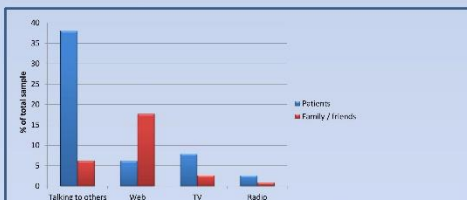
**Data collection**

1. A survey to assess the use of lay information sources for symptom evaluation prior to diagnosis.
  2. Semi-structured interviews with a purposive sub-sample of patients and their family / friends.
- Data analysis:** Survey data is analysed quantitatively to establish the proportion of the sample using various lay information sources. Interview data is analysed qualitatively using Framework Analysis (FA) to develop a theoretical framework of themes, sub-themes and how they relate. FA is a flexible, pragmatic approach with straightforward and transparent methods.

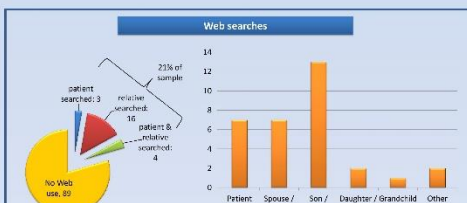
## 4. Results

### 4.1. Survey results

Participants	
Sample size	113
Age	66.6 ± 8.9 years; 42-87 years
Sex	m = 49, f = 64
Smoking status	3 never smokers, 25 current smokers, 78 former smokers (7 missing)



Percentage of the sample reporting use of different lay health information sources either themselves or by family members / friends. Based on patient self-reports. Patients mainly evaluated their symptoms by talking to others (family and friends).



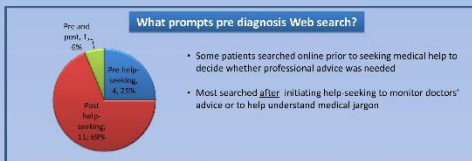
The pie chart depicts the proportion of Web use prior to diagnosis among the present sample. The bar chart shows which individuals engaged in the online search process (some patients reported online searches by several people). Web searches were mainly undertaken by family members rather than patients themselves.

• Web use was not significantly associated with length of patient delay ( $p > 0.05$ )

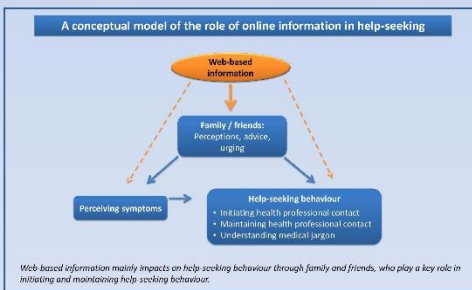
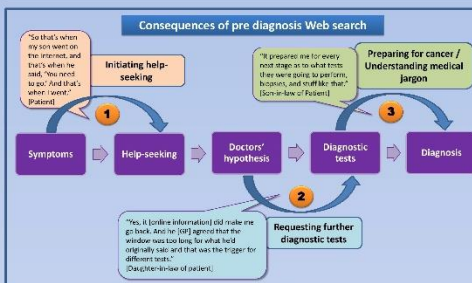
• Web use was significantly associated with age ( $p < 0.05$ )

## 4.2. Interview results

- 24 interviews (10 with patients, 7 with relatives, 7 with patients and relatives)



- Some patients searched online prior to seeking medical help to decide whether professional advice was needed
- Most searched **after** initiating help-seeking to monitor doctors' advice or to help understand medical jargon



## 5. Conclusions & Future Plans

While affected individuals are unlikely to research their symptoms online themselves, they tend to discuss their symptoms with family and friends, who in turn use the Web to appraise symptoms. Accessing appropriate information at this stage could be crucial for timely help-seeking, and for maintaining contact with health professionals.

Based on findings from this study, we plan to develop and evaluate an online behaviour change intervention based on psychological theory to trigger early help-seeking among those experiencing lung cancer symptoms.

- Very fussy and word heavy
- Poor choice of graphics, too many colours
- Text boxes don't line up > distracting

**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

**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 new 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.

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

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

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

**ACKNOWLEDGEMENTS:**  
I am grateful for generous support from the National Research Foundation, Black Hole Diet Plans, and the High Fructose Sugar Association. Transport flights were funded by SPACE-EXES, the consortium of wives divorced from insanely wealthy space-flight startups. I am also grateful for comments on early drafts by MaHans 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. 1962. Project STS-XX: Guinea Pigs. Leaked internal memo.  
Sekulic, S.R., D. D. Lukac, and N. M. Naumovic. 2005. The Fetus Cannot Exercise Like An Astronaut: Gravity Loading Is Necessary For The Physiological Development During Second Half Of Pregnancy. Medical Hypotheses, 64:221-229.  
Xavier, M. 1965. Elastane Purchases Accelerate Weight Gain in Case-control Study. *Journal of Obesity*, 2:23-40.

www.colinpurrington.com



# Multidimensional NMR Spectroscopy of Proteins in Living Cells



Leonard D. Spicer,<sup>1</sup> Patrick Reardon,<sup>2</sup> Anne Marie Augustus<sup>2</sup>

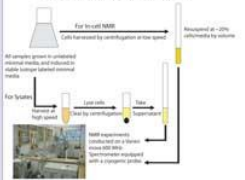
<sup>1</sup>Department of Biochemistry and Department of Radiology

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Department of Biochemistry  
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Durham, NC 27710

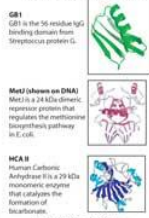
## Abstract

We have successfully implemented a suite of 3D NMR spectroscopy experiments which provide sufficient data to assign the full backbone resonances of the protein GB1 in live *E. coli* cells. This represents a unique demonstration that proteins can be studied with detailed NMR characterization in living cells when the crowded and complex environment during biological function. The purified and homogeneous samples of proteins and other macromolecules normally studied in structural biology may not reveal this functionally important information. Experiments of this type are essential for the *de novo* assignment of proteins undergoing structural changes in response to perturbing influences such as intermolecular interactions. In cell multidimensional NMR experiments depend critically on both recent advances in NMR probe performance at high magnetic fields and NMR techniques which considerably reduce the time needed for data acquisition. For this purpose data were collected using fast projection reconstruction (FPR) NMR methods and cytoplasmically expressed protein on the 600 MHz and 800 MHz NMR spectrometers in the Duke NMR Spectroscopy Center. We now also studied the behavior of the methionine repressor protein, MetJ, using this strategy. Our data suggest that MetJ is primarily associated nonspecifically with DNA in intact cells. This indicates that the repressor likely undergoes linear diffusion along DNA in finding its specific methionine repressor sequence rather than the slower random 3D diffusion associated with free cytoplasmic proteins. Support for the NMR Center and the instrumentation used in this research was provided by grants from the NIH and NSG.

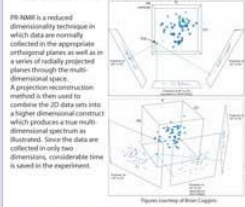
## Sample Preparation



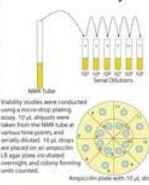
## Model Systems



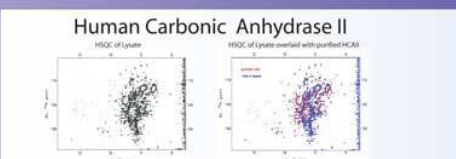
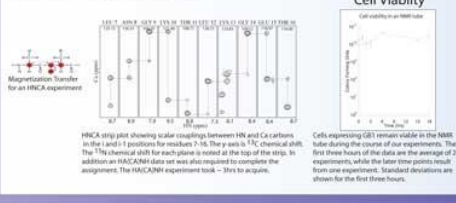
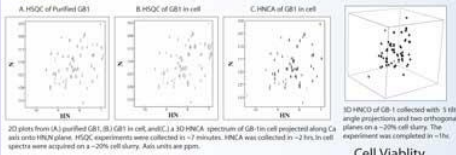
## Projection Reconstruction



## Cell Viability



## Assignment Spectra



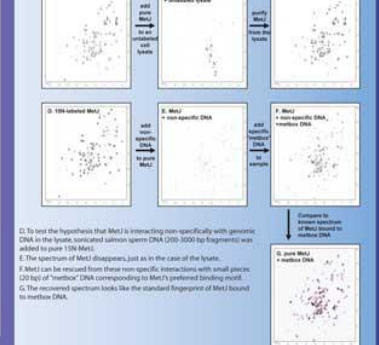
Human Carbonic Anhydrase II is generally considered a cytoplasmic enzyme. However, earlier biochemical data have indicated that HCA II may be membrane-associated. Association with the membrane could render the protein undetectable by *in vivo* NMR, due to the increase in rotational correlation time or intermediate exchange. The weak signal detected in this experiment suggests that this carbonic anhydrase isoform maintains some level of membrane association.

## GB1

The characteristic HSQC spectrum for MetJ was not visible in whole or lysate cells even expressing MetJ. A theoretical pure 136 labeled MetJ was used in order to ensure there was enough well defined well defined material for NMR analysis, as well as to eliminate the non-specific background labeling in the cells.

B. When pure 136 labeled MetJ was added to approximately 100 µg of the lysate the spectrum completely changed, and the MetJ fragment was lost.

C. The fact that MetJ could be so purified from this lysate, however shows that MetJ was not being degraded, bound, linked to or intermediate exchange with components in the lysate (likely DNA) (prevent detection of the MetJ signal).



D. To test the hypothesis that MetJ is interacting non-specifically with genomic DNA in the lysate isolated lysis buffer (DNA-D50-3000) for fragments was added to pure 136 MetJ.

E. The spectrum of MetJ disappears just as in the case of the lysate.

F. MetJ can be removed from these non-specific interactions with small pieces (200 bp) of "methionin" DNA corresponding to MetJ's preferred binding motif.

G. The recovered spectrum looks like the standard fragment of MetJ bound to methionin DNA.

## Summary

In summary, we have demonstrated the *de novo* assignment of the small protein GB1 from 3D data collected on whole, living *E. coli* cells. This was enabled by fast NMR experiments incorporating fast projection reconstruction data acquisition and the enhanced sensitivity of cryogenic probes. The implementation of heteronuclear 3D data acquisition in living cells opens a route to previously inaccessible studies of proteins in the biological milieu inside the cell. Furthermore, we have demonstrated how cell NMR can yield new insights into the behavior of proteins in their natural environment. In the case of MetJ, the protein may be associated with DNA non-specifically, allowing it to undergo linear diffusion to locate its specific cognate binding site. For HCA II, our data support biochemical results that suggest association with membranes and/or membrane-bound proteins.

## References

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- Clean design
- Appropriate graphics
- Note: large title

# If you can read this you must be nocturnal...

Your name, title, and contact information  
Place this name at your institution name

## Abstract

This paper reports on a study investigating the effect of various stimuli on the circadian rhythm of a nocturnal animal. The study was conducted over a period of 24 hours and the results indicate that there is a significant correlation between the stimuli and the circadian rhythm. The study was conducted in a laboratory setting and the results are presented in the following sections.

## Introduction

The circadian rhythm is a biological process that regulates the body's internal clock. It is a 24-hour cycle that is influenced by external factors such as light and temperature. The study was conducted in a laboratory setting and the results are presented in the following sections.

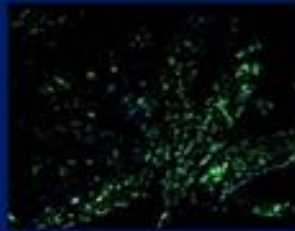
## Questions

This paper reports on a study investigating the effect of various stimuli on the circadian rhythm of a nocturnal animal. The study was conducted over a period of 24 hours and the results indicate that there is a significant correlation between the stimuli and the circadian rhythm.

## Hypothesis

This paper reports on a study investigating the effect of various stimuli on the circadian rhythm of a nocturnal animal. The study was conducted over a period of 24 hours and the results indicate that there is a significant correlation between the stimuli and the circadian rhythm.

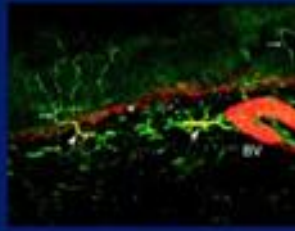
## Results



## Methods & Materials

This section describes the methods used in the study. The study was conducted over a period of 24 hours and the results indicate that there is a significant correlation between the stimuli and the circadian rhythm. The study was conducted in a laboratory setting and the results are presented in the following sections.

## Results



## Methods & Materials

This section describes the methods used in the study. The study was conducted over a period of 24 hours and the results indicate that there is a significant correlation between the stimuli and the circadian rhythm. The study was conducted in a laboratory setting and the results are presented in the following sections.

## Discussion

This section discusses the results of the study and compares them to the existing literature. The study was conducted over a period of 24 hours and the results indicate that there is a significant correlation between the stimuli and the circadian rhythm. The study was conducted in a laboratory setting and the results are presented in the following sections.

## Conclusion

This section concludes the study and summarizes the findings. The study was conducted over a period of 24 hours and the results indicate that there is a significant correlation between the stimuli and the circadian rhythm. The study was conducted in a laboratory setting and the results are presented in the following sections.

## References

This section lists the references used in the study. The study was conducted over a period of 24 hours and the results indicate that there is a significant correlation between the stimuli and the circadian rhythm. The study was conducted in a laboratory setting and the results are presented in the following sections.

## Acknowledgements

This section acknowledges the funding sources and the individuals who assisted in the study. The study was conducted over a period of 24 hours and the results indicate that there is a significant correlation between the stimuli and the circadian rhythm. The study was conducted in a laboratory setting and the results are presented in the following sections.

- Very hard to read!
- Too much text

# SOCIAL VULNERABILITIES TO CLIMATE-RELATED DISASTERS

## CASE STUDIES IN TACLOBAN, PALO, ORMOC AND KANANGA, LEYTE

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### RATIONALE

Social vulnerability refers to the socioeconomic and demographic factors that contribute to the degree of which the communities can cope with changes. Hazards become risks when they have potential to harm people and these risks become disasters the moment they cause damages. Disasters are common to vulnerable communities—population which due to socioeconomic conditions, have no alternatives but to concentrate in the low-lying coastal areas, riverbanks, flood plains, dangerous slopes and degraded urban environments where the impacts of extreme weather are more severe. It is only reasonable to assess the social vulnerability for it is the population that suffers from disasters. Case in point are the coastal communities in the cities of Tacloban and Ormoc as well as in the municipalities of Palo and Kananga in Leyte, where densely populated areas with inadequate urban planning and poor infrastructure and at high risk to strong winds, flooding and even storm surges were badly hit by the Typhoon Yolanda.

### METHODS/Framework

Social vulnerability was assessed using Cutter's Social Vulnerability Index (SoVI) and data were gathered by incorporating participatory approaches—key informant interviews and household surveys. The household surveys were facilitated in selected barangays most affected by Typhoon Yolanda according to the records of the LGUs and from the accounts of the communities. The sample size per site was drawn at a 95% confidence interval and further distributed proportionally to the population of selected barangays.

CENSUS DATA

SURVEY

KEY INFORMANT INTERVIEWS

The Mayors, City or Municipal Planning and Development Officers, Local Social Welfare and Development Officers, Local Disaster Risk Reduction and Management Officer were the key informants, among all others in the LGUs.

#### EXPOSURE

Population, infrastructure and land use exposure to climate-related hazards

#### SENSITIVITY

Livelihood and vulnerable populations at risk

#### ADAPTIVE CAPACITY

Economic, institutions, education and policies

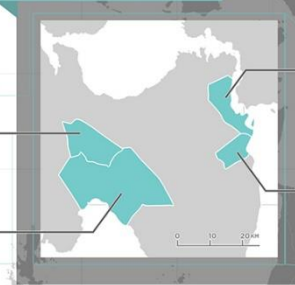
### AREA OF STUDY



Kananga



Ormoc City



Tacloban City



Palo



### SIGNIFICANCE

The potential effects of disasters can best be understood with the assessment of the social geography of cities and the differential access to resource. Socially created vulnerabilities are product of social inequalities—those social factors and forces that create the susceptibility of various groups to harm, and in turn affect their ability to respond, and bounce back (resilience) after the disaster, thus being largely ignored in the hazards and disaster literature because they are so hard to measure

and quantify (Cutter, 2011). But social vulnerability must be considered in development planning as it involves the basic provision of health care, the livability of places, overall indicators of quality of life, and accessibility to lifelines (goods, services, emergency response personnel), capital, and political representation. From the identified social vulnerabilities climate change adaptation and disaster risk reduction and management could be mainstreamed in the local government operations.



- Lovely colour scheme
- Probably not Powerpoint though!
- Background graphic a little distracting perhaps?

## Insecure Lives, Uncertain Futures

A case study of undocumented and displaced young migrants from Myanmar negotiating education and work in northwest Thailand

Derina Johnson, PhD Candidate Professor Robbie Gilligan (Supervisor)



### Abstract

Lack of documentation shapes young migrants' lives, undermines human rights and restricts access to education, health and justice, exacerbating poverty.

This is the harsh reality faced by young people born to undocumented migrant parents, or who as children cross borders by irregular migratory channels to escape extreme poverty and humanitarian crises.

While a growing global phenomenon, particularly in non-western contexts, empirical and theoretical understanding of these lived realities predominately relates to western contexts, leaving non-western voices unheard.

Adopting a bottom-up, person-centred approach, this qualitative case study seeks to uncover these under-represented realities. In the context of the Thailand-Myanmar border, generations of young migrants are growing up undocumented, displaced and marginalised, with restricted education and livelihoods, echoing similar realities globally.

With relevance to both international policy and programming, findings not only offers new insights into the lived realities of young undocumented migrants in non-western contexts, but also important theoretical understanding concerning agency and adaptation within extreme adversity.

### Context



#### Myanmar (Burma)

- Decades of instability, military dictatorship and economic destitution

#### Thailand

- Host to millions of Myanmar migrants/refugees
- Restrictive immigration laws consider most as 'illegal aliens'

Uncertain Current Political Context

#### Study Site: Mae Sot

- Border town, northwest Thailand
- Main entry point from Myanmar, home to hundreds of thousands of migrants
- Precarious immigration documentation increases vulnerability to exploitation, abuse and poverty



### Background



#### LACK OF DOCUMENTATION

- Desperation and poverty frequently demands borders to be crossed by irregular migratory channels, resulting in a lack of appropriate immigration documentation
- Young lives become defined by daily fear of arrest, vulnerability to extortion, exploitation, and abuse

"They are not Thai or Burmese... so even though they really try hard for their future it is not effective for them as they don't have any documents"  
*(Key Informant, Sept 2014)*

#### PROTRACTED DISPLACEMENT

- Two-thirds of displaced populations spend on average 20 years in 'virtual limbo'
- Over 15 million 10 to 24 year olds are displaced globally, spending their formative development years in social marginalisation

"It can be traumatic to feel like you don't belong, but it can also be traumatic to feel like you belong to some place that will never have you."  
*(Key Informant, Sept 2014)*

#### LIVED EXPERIENCE: EDUCATION & WORK PATHWAYS

- Long-term value of schooling is undermined by acute and immediate poverty and the restrictive labour market realities of undocumented migrant populations
- As these two key routes out of poverty are blocked so too are young migrants' hopes of a future without poverty and insecurity

"Officially, the Thai government allow the people to work, not to learn"  
*(Key Informant, Sept 2014)*

#### COPING & RESOURCES

- Growing up in this 'clandestine existence', fear and isolation remain also concealed, and mental and emotional health overwhelmed
- However, flexibility, agency—albeit 'ambiguous' or 'constrained'—as well as extraordinary resilience is frequently observed
- Social capital and connections can play vital determining roles in young people's coping with insecure, uncertain futures. These insights are critical to understanding how to support young people in such adversity.

"We survive, we still survive"  
*(Key Informant, Sept 2014)*

#### NON-WESTERN CONTEXT

- 80% displaced people reside in non-western contexts
- Research predominately focuses on western contexts, leaving disparity in knowledge and understanding of the realities of growing up in adversity and poverty in non-western world contexts

### Central Research Question

How do young men and women, growing up undocumented and displaced in non-western world contexts, understand and negotiate their precarious status, particularly in relation to their education and work pathways?

### Method

#### THEORETICAL AND METHODOLOGICAL FRAMEWORK

- Social constructionism provides theoretical 'scaffolding'
- Qualitative case study gives in-depth detailed descriptions and enriches the reader's vicarious experience
- Grounded theory methods support a systematic approach to data collection and analysis
- Reflexivity strengthens rigour, integrity and validity
- Dual-Site Ethics Process (TCD & Mae Sot, Myanmar Community Ethics Board)

#### DATA COLLECTION PROCESS

- Phase 1**
  - September 2014 (complete)
  - 20 Key Informant interviews
- Phase 2**
  - June - December 2015 (in progress)
  - Extended, immersed data collection
  - In-depth semi-structured interviews + visual prompts
  - 30-35 undocumented men & women aged 18-25
- Phase 3**
  - November 2016 (anticipated)
  - Validation & Member Checking

#### FOR FURTHER INFORMATION

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Professor Robbie Gilligan - robbie.gilligan@tcd.ie

#### KEY REFERENCES

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# A1 size



## "I am a girl so I cannot go anywhere" Gender differences in managing life as a young 'illegal migrant' on the Thailand-Myanmar (Burma) border

Derina Johnson, PhD Candidate    Professor Robbie Gilligan, Supervisor




Young Lives Adolescence, Youth & Gender Conference, Oxford 8-9 Sept, 2016

Trinity College Dublin  
Coláiste na Tríonóide, Biall Átha Cliath  
The University of Dublin

School of Social Work and Social Policy    Children's Research Centre

### Context



**Myanmar (Burma)**


- Decades of instability, military dictatorship & economic destitution
- Ongoing Uncertain Political Contexts

**Thailand**

- Host to millions of Myanmar migrants & refugees
- Restrictive immigration laws consider most 'illegal aliens'; little access to permanent residency or citizenship

**Study Site: Mae Sot**

- Bustling border town, northwest Thailand
- Main entry point from Myanmar, home to hundreds of thousands of 'illegal' migrants
- History of fluidity between Mae Sot migrant community & refugee camp 57km north
- Widespread vulnerability to exploitation, abuse & poverty



### Background

The findings presented in this poster are part of a wider PhD research study - a qualitative case study exploring the perspectives and experiences of undocumented & displaced youth growing up on the Thailand-Myanmar border.

This poster discusses the gendered risks & strategies associated with 'illegal' migrant status in the narratives of undocumented young women.

Despite the majority of irregular migration and displacement occurring in non-western contexts, these realities are often underrepresented and hidden as studies in the area typically explore western contexts.

The PhD study takes a bottom-up, person-centred approach to reveal these hidden realities, offering important insights into youth agency and adaptation amid complex contexts of adversity and poverty in non-western contexts.

### Research on being 'illegal'

**Growing up 'illegal'**

- Undocumented migrant youth grow up as "illegal aliens" in their country of birth or where they've lived since childhood
- Daily fear of detention; restricted mobility & access to education & secure work, healthcare, justice & social opportunities (De Genova, 2005; Gonzales, 2011; Petchot, 2014; Suárez-Villa et al., 2011)

**Growing up displaced & 'out of place'**

- Distinctions between 'political' & 'economic' refugees, 'forced' & 'voluntary' migrants become blurred within realities of escaping violence & extreme poverty
- Over 15m 10-24 year olds displaced globally spend their youth in the 'virtual limbo' of refugee camps & urban marginalisation (Chatty & Mansour, 2011; Milner & Loescher, 2011; Pollock, 2011)

**Gendered implications**

- Gendered implications of 'illegal' status & displacement incl.: educational pathways; available work & associated risks; vulnerabilities to abuse; social isolation; healthcare & justice (Bloch et al., 2009; Coquette, 2011; Jacobsen & Nichols, 2011; Menjívar, 2006; Sciortino & Pumpaings, 2009; Sigona, 2012)

**Female gender & 'ambiguous agency'**

- Undocumented young women demonstrate 'ambiguous agency', their agentic actions situated within layers of social & cultural power relations & coercion (Arnold, 2015; Wilten, 2007)

*Full detailed reference list available*

### Emerging Findings - Key Themes

**'Illegal' status heightens vulnerabilities of undocumented young women & perpetuates poverty**

**Physical vulnerability**

- Young undocumented women are aware of their physical vulnerability and their lack of recourse to justice in Thailand

*"I am a girl so I cannot go anywhere. For boys, wherever they go, they have freedom. For girls, (we're) afraid to go this place that place - if we meet bad people, it's not good" (WW, 18)*

*"It's not safe to go out... This is not our own country" (CC, 21)*

*"It's like living in the prison sometimes" (TH, 18)*

**Physical vulnerability & poverty**

- Poverty & lack of secure work in refugee camps & migrant communities lead young women to risk being trafficked to Bangkok. Both en route & alone in the city, their vulnerability is stark

*"I was scared... if I said anything I would die so I wouldn't complain about anything. I just followed" (SM, 21)*

**Social isolation**

- Young undocumented women are often trapped in the home as families fear for their daughters' safety and to protect them from being 'ruined'
- This isolation restricts access to key social connections & Thai language skills critical informal pathways to educational & work opportunities

*"Mother doesn't let me go anywhere as I am a girl... I just stay home. I cannot (practice) speaking" (WW, 18)*

**Social pressure of marriage**

- Perceived vulnerabilities & social stigma associated with separated, undocumented young women can lead to early marriages

*"I didn't have parents, and there was no one who I could depend on... As a girl, it was not appropriate to stay alone (=single). I was afraid that it would become chaos... so (I) decided it would be better to get married." (TM, 24)*

**Unplanned pregnancies**

- Married at a young age, lack of access to reproductive health education & healthcare result in unplanned pregnancies

*"It (just) happened. I was taking pills but it got wrong. Actually we were not planning on having a baby yet." (TT, 18)*

**Black market medical treatments**

- Language issues & perceptions of discrimination & poor treatment in Thai hospitals can lead undocumented young women to seek alternate treatments, such as risky black market methods

*"Someone told me to go to the hospital to check my uterus, but they said nothing happened. When I came back I took the 'hni-gwe seig'" (two cup medicine) = a large dose of multiple random 'cure all' medications, obtained from the market" (ZZ, 20)*

**Parenting and poverty**

- Having children at a young age perpetuates future uncertainty & the cycle of poverty

*"I had to face difficulties for getting married early and having children. Financial problems." (TM, 24)*

*"I save, I do it for my daughter, so that later we can go back to Myanmar... There's not much work... We are many people so saving is a bit less" (TT, 18)*



### Methodology

- Qualitative, bottom-up, person-centred case study
- Social constructionism provides 'theoretical scaffolding'
- Dual-Site Ethics Process (TCD & Mae Sot Migrant Community Ethics Board)

**FIELDWORK**

- Phase 1: 20 Key Informant interviews (Sept 2014)
- Phase 2: 44 in-depth semi-structured interviews utilising visual prompts with young men & women, 18-25, recruited from migrant communities, refugee camp & regional Thai university (June 2015 - April 2016)

**CURRENT PHASE**

- Analysis - Initial and focused coding & memo writing
- Ongoing literature review

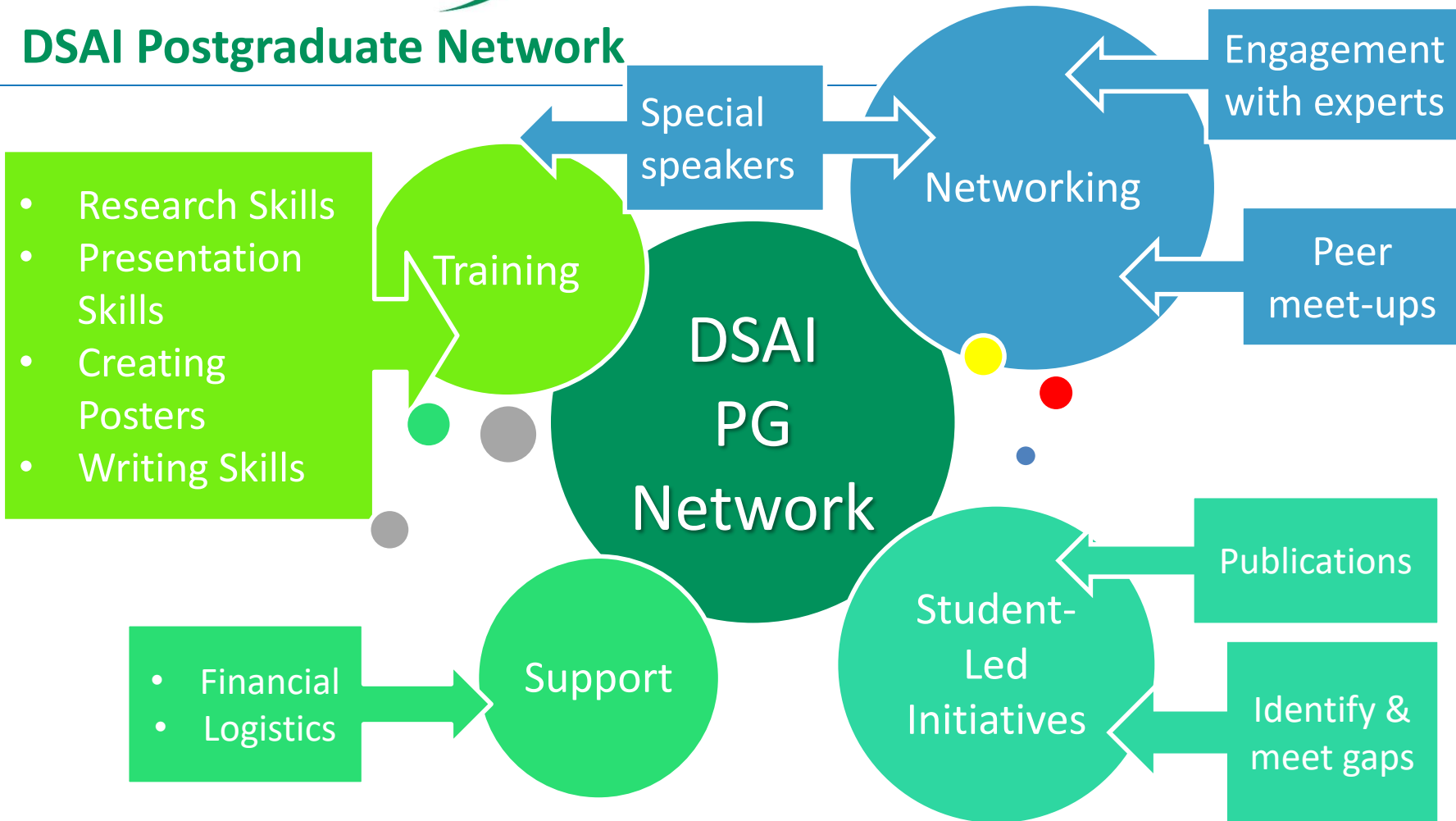
# “Tell me about your research / poster”

- Be able to give 1-2 minute elevator pitch
- AND
- 5 minute presentation
- Don't read your poster
- Smile!





# DSAI Postgraduate Network



<https://youtu.be/QAv7-JxpKf0>



**Trinity College Dublin**  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin

# Thank You

**Derina Johnson**  
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