# Exploring the influence of medium and culture on language use in an online support group

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#### Context



- Show you all what my PhD research is about
- Introduce Systemic Functional Linguistics (SFL)
- Discuss some of the problems *SFL* might help *us* solve
- Discuss some of the problems you might help me solve

## Case study: my thesis



- I'm researching longitudinal linguistic change in a 12 year old bipolar disorder forum
- 60,000 posts
- 5821 unique usernames
- A few veterans with over 1000 posts, most users have 1–5
- Rules: no asking for diagnosis, stay 'anonymous'
- Normative biomedical ideology (c.f. Vayreda & Antaki, 2009)
- People come for information and/or social support
- Veterans answer questions, welcome new members, speak as 'we'

### The forum



## Bipolar Disorder Message Board HealthBoards > Mental Health Board > Bipolar Disorder

New Thread         ← Click here to post a new message         Page 1 of 450         1         2         3         11         51         101         > Last »						
Threads in Board ∶ Bipolar Disorder Board Tools ▼ Search this Board						Board 🕶
		Thread / Thread Starter	Rating	<u>Last Post</u> ▼	<u>Replies</u>	<u>Views</u>
		Sticky: <u>For Those Recently Diagnosed</u> amybp	ø	08-30-2013 04:50 All by <u>amybp</u> (		152
	靈	sticky: <u>NEW BOARD: Family &amp; Friends of Menta Ill</u> Administrator	lly ≉	07-12-2010 10:18 PP by <u>Administrator</u>	1 1	17,243
		Sticky: <u>Help with Medication or Medical Costs</u> Administrator	gP	07-08-2009 08:26 Pt by <u>Administrator</u> (		9,666
	⚠	sticky: On this board, negative discussion of bipolar people is inappropriate.  Administrator	ष्ट्री	10-26-2007 03:20 PP by <u>Administrator</u> (		15,288
	靈	sticky: Attention Newbies! Please Read: Bipolar Disorder Symptom Primer reesie		06-06-2005 08:51 Al by <u>reesie</u> (		37,272
		<u>Lithium issues?</u> Fringephotos	<b>&gt;</b>	10-19-2013 07:57 Pt by <u>Fringephotos</u> (		35
		Geodon withdrawals gardeningfool		10-18-2013 02:56 Pl by gardeningfool		47
	<b>②</b>	meds Strawberry.hill		10-14-2013 10:26 Pt by <u>Strawberry.hill</u>		46

## Thesis methodology: the easy part



- Wget to spider the forum
- Extract text from HTML with Beautiful Soup
- Spelling normalisation via *PyEnchant*
- Parse posts for constituency and dependency grammar with Stanford CoreNLP
- Create subcorpora based on post count
- Build corpkit, some tools for searching parse trees, manipulating and plotting results: pip install corpkit (Alpha!)
- Develop an IPython Notebook interface for working with the corpus/toolkit
- https://github.com/interrogator/corpkit,
   https://github.com/interrogator/sfl\_corpling

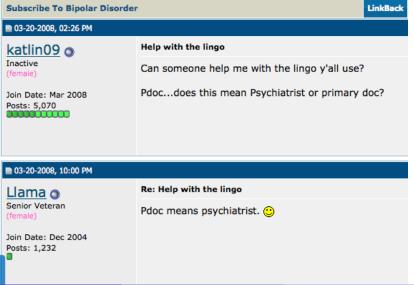
# Analysing 8m words: the hard part



How do we actually make sense of this huge collection of data?



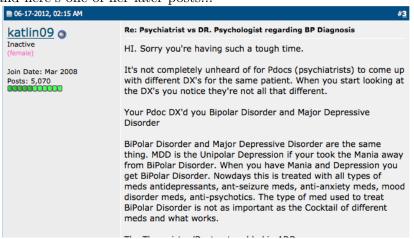
#### Katlin09's early posts look like this:



#### Katlin09



#### ... and here's one of her later posts...



## What's happening with her language use? MELBOURNE



- Has her language use changed over time?
- Does this same change happen to other members?
- What *causes* the change?
- If many things cause the change, how can we distinguish what forces are acting and when?

To answer these kinds of questions, we need a theory of language

# Systemic Functional Linguistics (SFL)

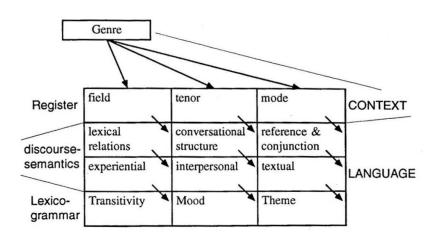


Halliday and Matthiessen (2004) conceptualise language as:

- Systemic: a sign-system, from which users select realisations
- Functional: structured to achieve meaningful social goals
- 3 Constitutive of context: context is mapped onto abstractions of grammatical systems (mood, transitivity and theme)
  - ► Context is in text.

### Overview of SFL





#### SFL: Introduction



#### SFL argues that we can break communication into strata

- Context:
  - Genre
  - Register
- Language:
  - ▶ Discourse-semantic
  - Lexicogrammatical
  - Phonological/typographical

## SFL: Metafunctions

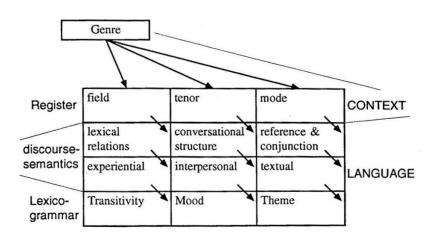


In SFL, language/images are communicating *up to* three different *kinds* of meaning simultaneously:

- Interpersonal meaning: roles and relationships between people
- Ideational meaning: what happens to whom, under what circumstances?
- Textual meaning: the role that language is playing in the interaction

### Overview of SFL





## Metafunctions in the lexicogrammar



Each function is accomplished through different linguistic subsystems at the level of lexicogrammar.

- Interpersonal meanings are made by the mood system: imperative, interrogative, declarative, modality
- Ideational meanings are made by the transitivity system: predicates and their arguments
- Textual meanings are made by the thematic system: linking texts together with and, but, so ...

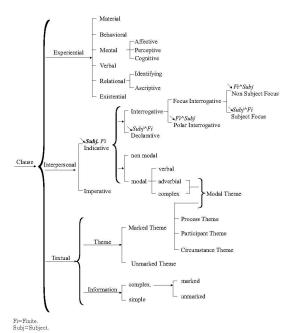
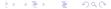


Fig. 1. — Sample system for the English clause



#### Power and mood choice



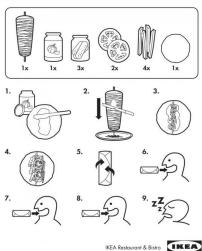
- When there's a power disparity, some interpersonal meanings are less available to the one with less power.
- A good example is the mood system (Questions, statements, commands):
  - ▶ Me: Would you tell me the answer? / I think you should tell me the answer. / Tell me the readings!
  - ➤ You: Can you speak slower? / We're having trouble understanding you / \_\_\_\_\_\_?

## SFL and multimodality



- Multimodality: the (simultaneous) use of different channels/modes to communicate
- Inherent to online communication (page layout, at the very least)
- We can look at images as also accomplishing the three metafunctions...

# **SHAWARMA**



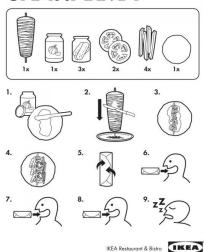
## SFL and genre



- In SFL, a genre is a staged, goal-oriented social process
- Culturally recognised sets of role relationships, things being spoken about, and modes of communication
- We can actually figure this stuff out from looking at the lexicogrammar
- Example:

Submissions must contain 8–10 references.

# **SHAWARMA**



## IPython Notebook ...



## Summary of findings



- More imperatives
- More I would
- More jargon
- More 'metadiscourse'
- etc.

## What's causing the change?



#### Two contradictory hypotheses:

- Socialisation: new members learn from veterans and implement the linguistic repertoire they've learned
- **2 Genre awareness:** new members know they are newcomers, and act like it

... and what role does the technology itself play?

## Reasons for jargonisation?



We can use SFL's idea of metafunctions as an explanation for why a certain kind of language change occurs.

- Interpersonal change: jargon demonstrates expertise, belonging
- Experiential change: jargon distinguishes between hypertechnical things
- Textual change: shorter words are easier to type

The important thing to remember is that different kinds of meaning are made *simultaneously*.

## Brainstorming ...



What interpersonal, experiential and textual meanings can we make by:

- Using imperatives: do this, go there
- Vague language: things will get better, things are alright

#### Where to next?



- More awareness of multimodality, hardware influence, site architecture
- Can we predict the influence of the three metafunctions?
- Can we *measure* the influence?
- How does it play out in new technology? Reddit? iPhones?
- A framework for doing SFL with mediated communication?

# Help!



Thoughts?

#### References I



- Halliday, M., & Matthiessen, C. (2004). An Introduction to Functional Grammar. Routledge.
- Vayreda, A., & Antaki, C. (2009). Social support and unsolicited advice in a bipolar disorder online forum. *Qualitative Health Research*, 19(7), 931–942.