We'll burn that bridge when we get to it

Thematic coherence in identifying idiom blends

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Malaphors

He missed **the boat**

He dropped the boat on that one.

He **dropped** the ball

brain **surgery**

It's not rocket surgery!

rocket science

> **Idiom blends**

 > **"Malaphors" (Hofstadter & Moser 1989)**

> **Cf. Malaprop(ism):** *infinity clause, right extrapolation*

> **Cf. Coercive modification:**
get your ugly ducks in a stupid row

What we learn from idioms

> **Nature of formal linguistic representations**

> **Syntax (Fraser 1970, Nunberg et al. 1994, Bruening 2010)**
The jig seems to be up.
#The jig wants to be up.

> **Semantics (McGinnis 2002)**
#John died to meet you.

> **Prosody (Ashby 2006)**
#She has eyes in the BACK of her head.

= non idiomatic

What we learn from idioms

> **Processing**

> > **Storage/Retrieval (Nordmann 2013)**
> > Idioms show TOTT, and literal meaning is also activated.

> > **Comprehension (Gibbs & Nayak 1989)**
> > #John kicked the bucket for 10 years.

> > **Neuro (Van Lacker 2006)**
> > Idioms are right-hemisphere.

> **Acquisition**

> > **TESL (Grant & Bauer 2004, Vanderniet 2015)**
> > 'Core idioms' are the most difficult phrases for learners.
> > Idioms ability as a metric for overall language ability?

Malaphors as production errors

> **Errors are systematic and shed light on the reality of linguistic units (Fromkin 1973)**
> > *It's a spirative [spirant/fricative]*
> > *I wouldn't buy <u>kids</u> for <u>the macadamia nuts.</u>*

> **<u>Idiom blends</u> are more likely to be produced if they share features (Cutting & Bock 1997)**
> > **syntactic structure**
> > **literal meaning**
> > **figurative meaning**

Corpus study

> **Dictionary of blends (Hatfield 2016)**

> **Hand coded malaphors for thematic coherence**

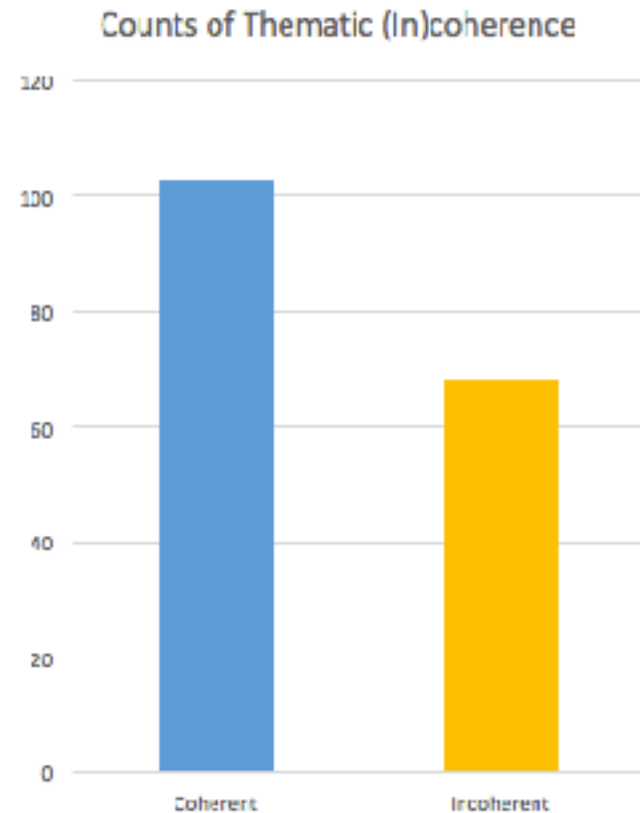> <u>**Thematic coherence:**</u> **the 2 source idioms have the same idiomatic meaning**

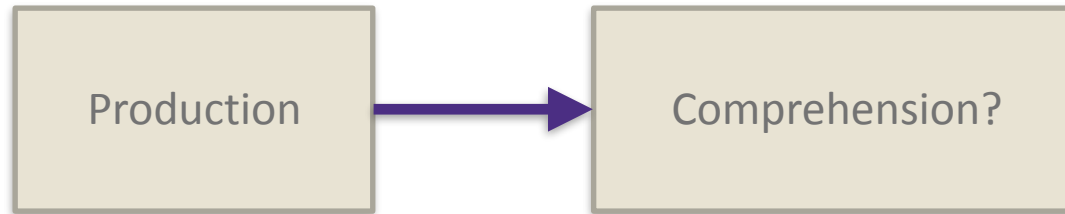| Coherent	Incoherent
that's the way the cookie bounces	there's no use crying over fish in the sea
it's like pulling blood	throw it under the rug
i'll chew his brain a little bit	you're a tough nut to follow
...going to do on a dime's notice	i was taken to the wolves

Corpus study

60.2% coherent

39.8% incoherent

Supports Cutting & Bock 1997

Counts of Thematic (In)coherence

Guiding questions

Production → Comprehension?

> **Can hearers distinguish blends of 2 idioms from single idioms?**

> **Do hearers better recognize a phrase as a malaphor if it is thematically coherent?**

Method

Participants

> **20 native speakers of English**

> > **Mechanical Turk**

> > **IP-limited to USA**

> > **IP-screened for duplicates**

> **Average time: 4'50"**

Method

Materials

> **Sentence-rating task**

> **4 conditions**

> > **Malaphor – Coherent**
> > *He isn't going to throw in the white flag.*

> > **Malaphor – Incoherent**
> > *She's sitting on her hands and needles.*

> > **Single idiom**
> > *They're going to hit the sack.*

> > **Not idiom**
> > *He ate the soup.*

> **All stimuli simple sentences, randomized *he/she/they* subject**
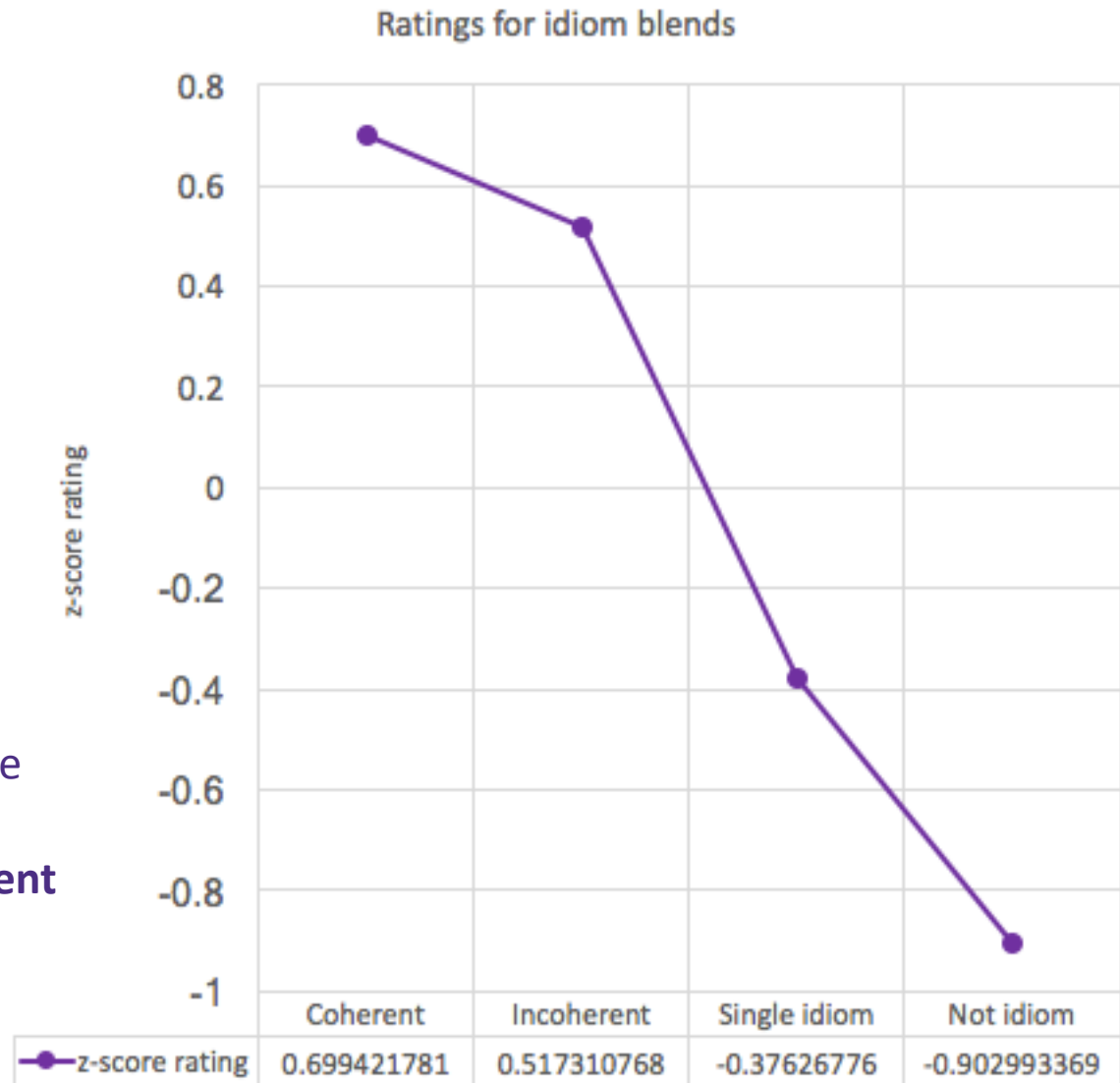
> **19 per condition**

Method

Procedure

> **Sentence rating task**

> **Pts shown examples and given instructions**

> **"Is this an idiom blend?"**

>> **Likert scale 1–7**

>> **1 = "definitely NOT"**

>> **7 = "definitely IS"**
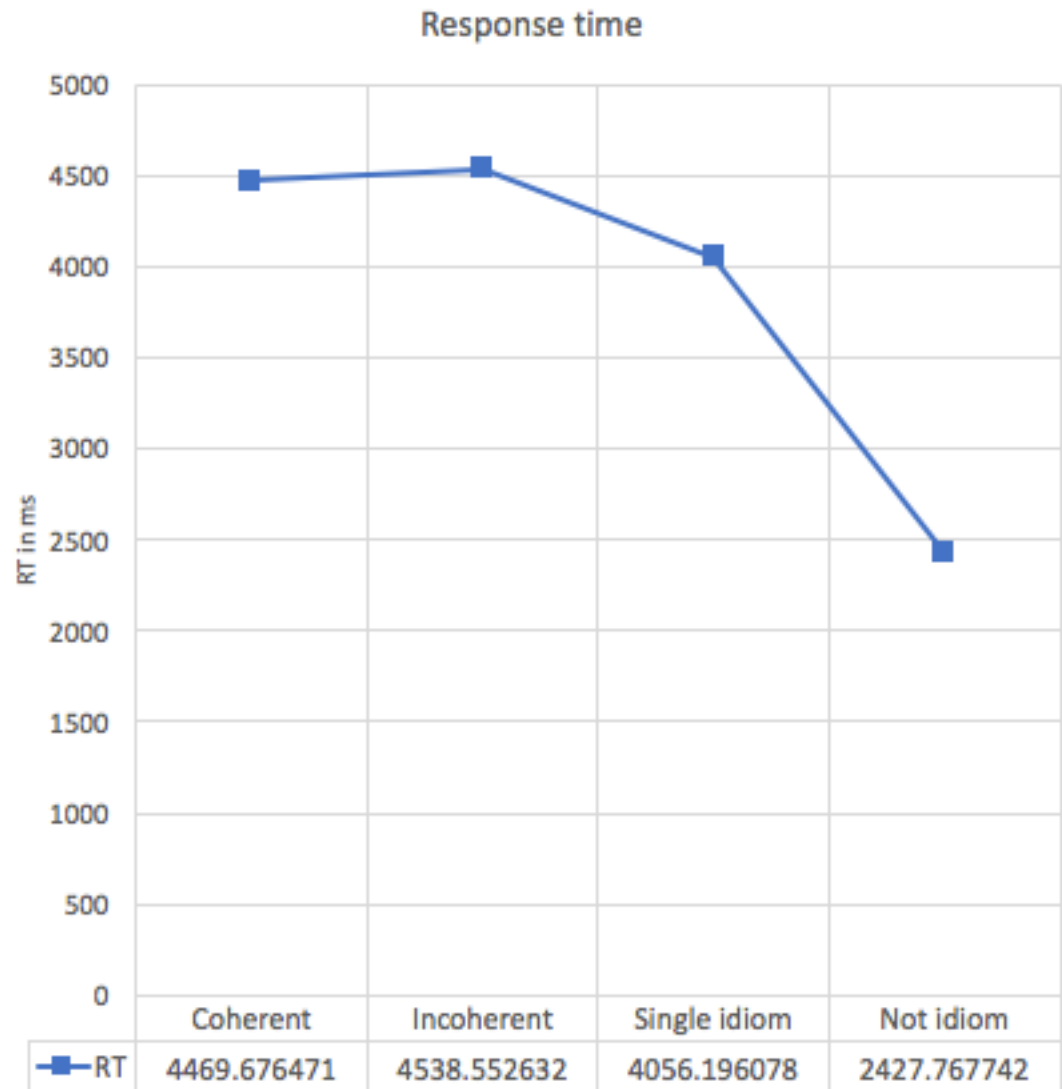
Results

Ratings

- Outliers removed
- All pairwise comparisons show significant difference (p<0.05) **except Coherent-Incoherent**

Ratings for idiom blends

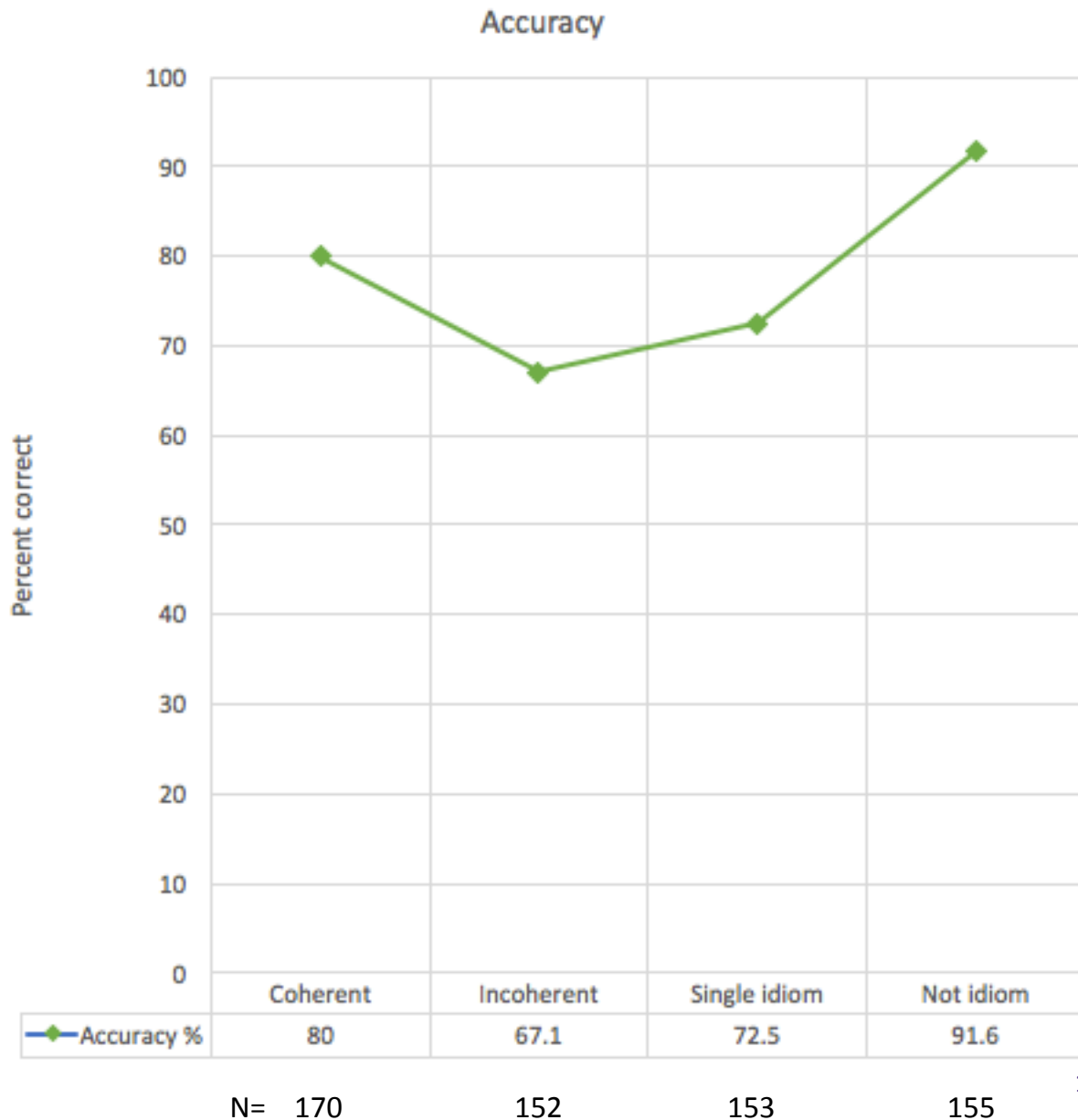|	Coherent	Incoherent	Single idiom	Not idiom
z-score rating	0.699421781	0.517310768	-0.37626776	-0.902993369

Results

Response time

- Outliers removed
- Increased response time indicates deliberation before a decision.
- **Not idiom** was faster than all other conditions (p<.05). No other comparison is significant.

Response time

	Coherent	Incoherent	Single idiom	Not idiom
RT	4469.676471	4538.552632	4056.196078	2427.767742

Results

Accuracy

- Overall:
  77.8% accuracy
- Coherent-Incoherent decrease in accuracy
- Incoherent most difficult condition

Accuracy

	Coherent	Incoherent	Single idiom	Not idiom
Accuracy %	80	67.1	72.5	91.6
N=	170	152	153	155

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Discussion

> **Can hearers distinguish blends of 2 idioms from single idioms?**
Yes. Reliably, quickly, and accurately.

> **Do hearers better recognize a phrase as a malaphor if it is thematically coherent?**
No. Thematic coherence not a significant factor in recognition.

> **However, incoherence is associated with a drop in accuracy.**

> **'Single idiom' condition was difficult.**

Shift over time

ho__e in on a target

hone in on a target

home in on a target

Burke advises students to **hone** in on departments in which they are comfortable and already feel close to professors. [Swarthmore Phoenix]

Bone cancer is sometimes treated with radioactive isotopes that **home** in on the bone. [NY Times]

553k

261m

Shift over time

it's the 800-pound _____

800-pound gorilla

800-pound elephant

"China is **the cliche 800-pound gorilla in the room** that no one can ignore," said Hayes, [The Hill]

Data security: **the 800-pound digital elephant in the room** for physicians [Medical Economics]

340k

199k

One of the most 'talked about' idiom shifts:
- Chicago Tribune 2011: http://articles.chicagotribune.com/2011-01-05/features/ct-tribu-words-work-gorilla-20110105_1_gorilla-idiom-elephant
- Huffington Post 2008: http://www.huffingtonpost.com/jeff-dorchen/where-did-100-pounds-of-g_b_97262.html
- Mentioned in Psychology Today 2011: https://www.psychologytoday.com/blog/the-good-life/201109/the-800-pound-gorilla

Research agenda

> **Production and recall experiments on idiom blends.**

>> **People tend to recall and read "lexical bundles"** (in the middle of) **faster, supporting a construction-based theory of the lexicon (Tremblay et al. 2011)**

> **Self-paced reading tasks reveal "unexpected" components.**

> **Can we distinguish real-occurring examples from made-up ones?**

> **Collect more examples.**

To err is human, to malaphor is the question

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