English Verbs of "Yelling"
A Quantitative Corpus-Based Exploration of Synonymy

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Synonymy

Why study synonymy?

- Synonymy is relatively understudied[1]
- Synonymy is gaining attention within cognitive and corpus linguistics[2]

What impacts the meaning of synonyms?

- Language usage patterns[3]
- The context of language use[4]

[1] Divjak, 2010; [2] Arppe & Yarvikivi, 2007; Dabrowska, 2009; Divjak, 2010; Dijvak & Gries, 2009; Gries & Divjak, 2009; Gries & Otani, 2010; Liu, 2013; Liu & Espino, 2012; Su & Lu, 2009 [3]e.g., Gries & Otani, 2010; [4]Arppe & Järvikivi, 2007.

Synonym Set:
10 English synonyms for "yelling"

BAWL, BELLOW, HOLLER, HOWL, ROAR, SCREAM, SCREECH, SHOUT, SHRIEK, YELL.

Examples from COCA
(Contemporary Corpus of American English: Davies, 2008-)

"... he began **bawling** at the top of his voice..."

"...as he spins towards us, **bellowing** at the top of his voice..."

"...the unhinged officer **bellowed** at him..."

"...I lost my cool and **hollered** at all three kids..."

"...they **howled** at each other..."

"... 'let me go' she **roars** at a team of doctors..."

"... **roaring** out at the top of her voice..."

"...she finally **screamed** at him..."

"...Robert would literally **scream** at the top of his voice..."

"...he and Litlun **screeched** at each other..."

"... 'you are dog excrement!' he **shouted** at the guy in the mask..."

"...Barry **shrieked** at Moore, 'you set me up'..."

"...the guy **yelled** at Enrique to 'open the God damned door'..."

Data Sources

- Contemporary Corpus of American English (COCA: Davies, 2008-)
  - Written sub-genres only
  - 200 random concordance lines / synonym

- Elicitation Task
  - 31 university students
    - mean age = 20.55 years
    - Native-speakers of English
  - 3 sentences / synonym / student

Concordance Line Coding

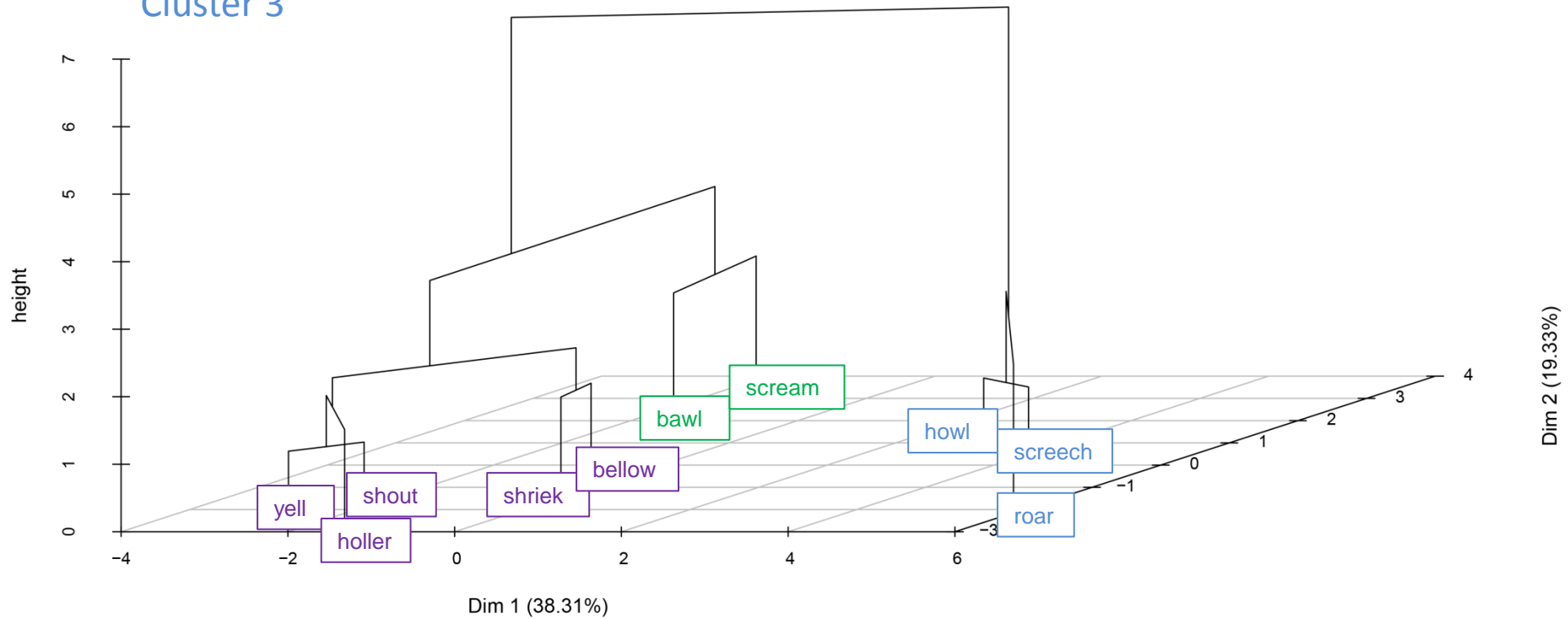| Feature	Levels	Description	Example
Logical Subject (LS)	Human Animal Inanimate Unknown	The agent. In most cases, this was the syntactic subject. However, in cases where the syntactic subject was not explicitly expressed the agent was often still identifiable (e.g., see the last example for SS).	although my **sister** bawled pitilessly = human the **beast** bawled and spooked = animal she heard a **steamship whistle** bawl = inanimate
Verbal Morphology (TAM)	VVB (bare) VVD (past) VVG (-ing) VVI (infinitive) VVN (past participle) VVZ (3sg)	Verbal morphology	NOTE: The CLAWS-5 coding scheme was followed: http://ucrel.lancs.ac.uk/claws5tags.html
Logical Object (LO)	Yes No	Was the action directed towards a specific person or object?	He bellowed **at the angus bull** = yes ...to deal with Bala yelling **at him** = yes ...howling **at the moon** = yes The kids were bawling = no
Right Collocate (Next Word)	Adverb particle Preposition Other Sentence final	Classification of the right collocate	NOTE: The CLAWS-5 coding scheme was followed and then consolidated: http://ucrel.lancs.ac.uk/claws5tags.html
Emotion	Positive Negative Neutral Unavailable	The emotion underlying the action. (e.g., joy, fear, etc.)	Her father bellowed with laughter ... = positive I can howl in agony = negative ...the fire roaring away ... = neutral

COCA Results

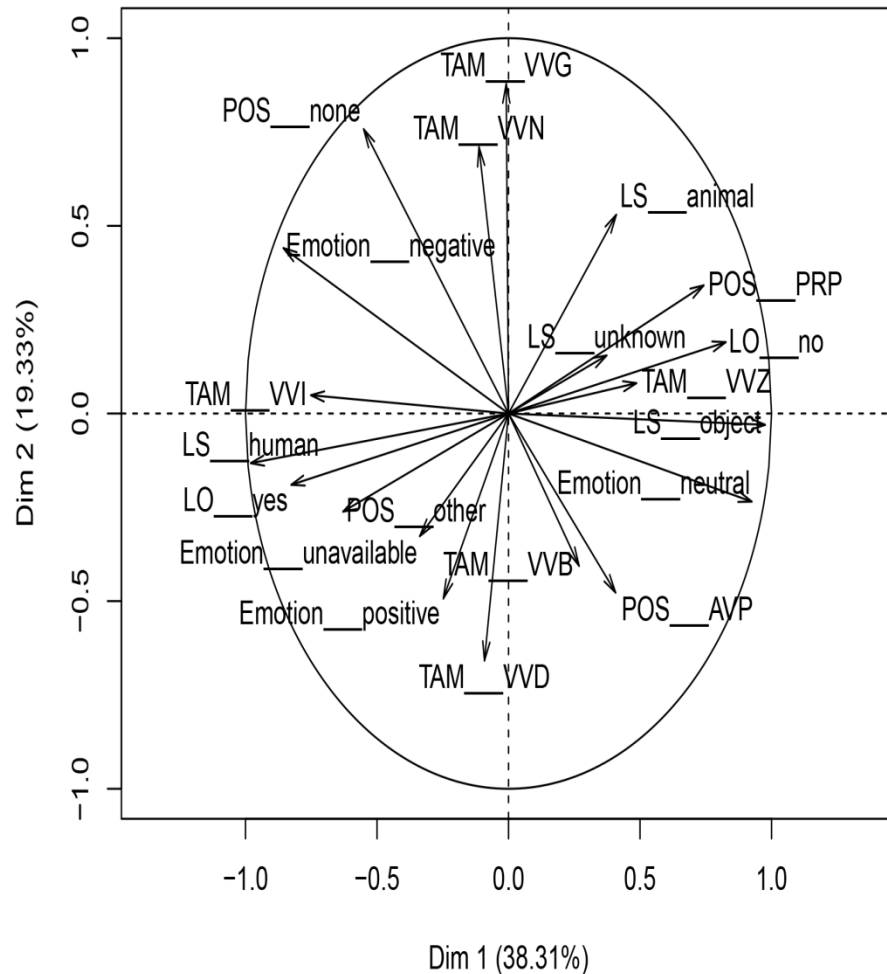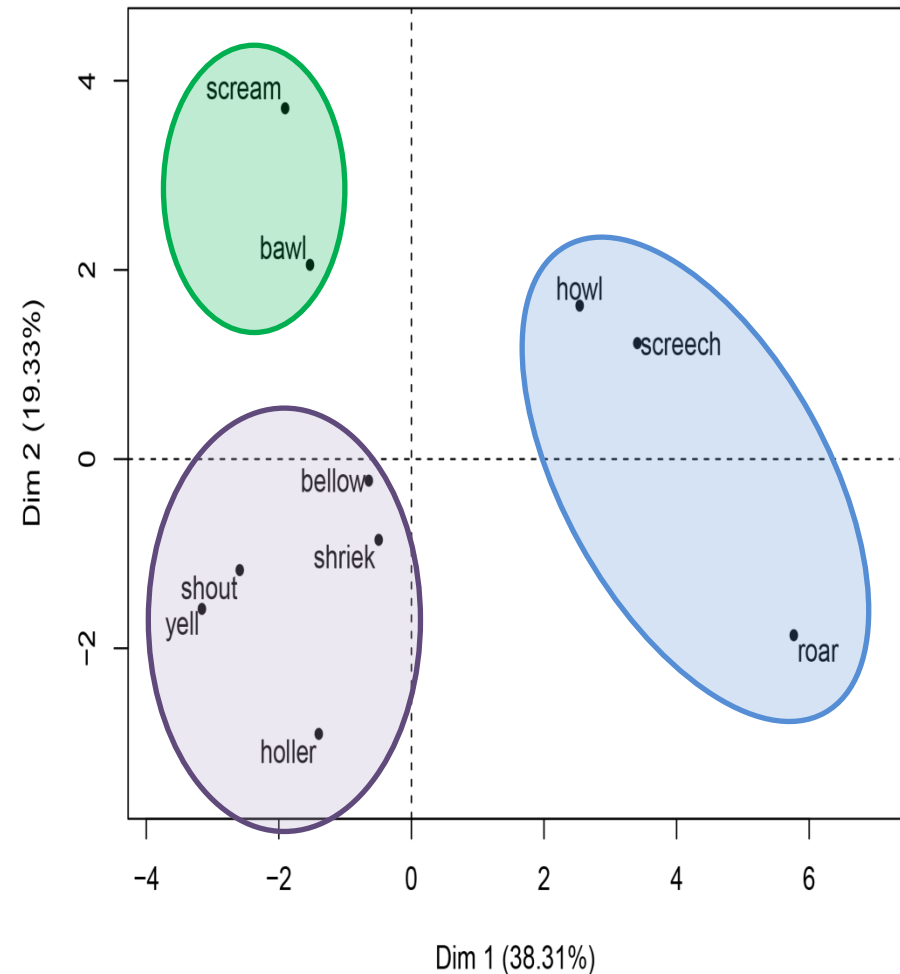**Hierarchical clustering on the factor map**

Cluster 1
Cluster 2
Cluster 3

Multivariate Exploratory Data Analysis and Data Mining with R

(Husson, Josse, Le & Mazet, 2013)

COCA Results

Variables factor map (PCA)

Individuals factor map (PCA)

Multivariate Exploratory Data Analysis and Data Mining with R

(Husson, Josse, Le & Mazet, 2013)

HCFA Significant Results(COCA)

WORD	LS	TAM	LO	POS	Emotion	Freq	Exp	Cont.chisq	P.adj.Holm	Q
ROAR	inanimate	VVD	no	PRP	neutral	23	1.22	388.8167	7.99E-18	0.011
Example Sentence: "One flick of the switch and the vacuum roared to life."										
ROAR	inanimate	VVZ	no	AVP	neutral	8	0.0581	1085.845	2.31E-11	0.004
Example Sentence: "A big sedan roars up, cutting her off."										
YELL	human	VVD	yes	PRP	negative	16	1.1122	199.2884	6.72E-10	0.007
Example Sentence: "Mom was irate. Mom yelled at me. Mom told me to get the hell out."										
SCREECH	inanimate	VVD	no	PRP	neutral	15	1.22	155.642	3.54E-08	0.007
Example Sentence: "Cars screeched to a halt in front of us."										
ROAR	inanimate	VVZ	no	PRP	neutral	8	0.2758	216.3214	4.93E-06	0.004
ROAR	inanimate	VVG	no	PRP	neutral	11	0.8739	117.3398	1.92E-05	0.005
ROAR	inanimate	VVG	no	AVP	neutral	6	0.184	183.7911	0.000351	0.003
Example Sentence: "The chopper lifts out in a power climb, roaring away across the parking lot…"										
SCREECH	inanimate	VVG	no	other	neutral	11	1.1833	81.4376	0.000407	0.005
Example Sentence: "…their tires screeching as they turn onto this street…"										
YELL	human	VVI	yes	PRP	negative	6	0.2232	149.5077	0.001081	0.003
Example Sentence: "You're going to yell at me. It's not fair."										
SHOUT	human	VVD	yes	PRP	negative	10	1.1122	71.0248	0.002198	0.004
Example Sentence: " 'You are dog excrement', he shouted at the guy in the mask."										

(Gries, 2004)

HCFA Significant Results(COCA)
(Gries, 2004)

| WORD	LS	TAM	LO	POS	Emotion	Freq	Exp	Cont.chisq	P.adj.Holm	Q
YELL	human	VVD	no	none	negative	22	5.9886	42.8084	0.002732	0.008
Example Sentence: " 'Get your dad,' Wyman yelled. 'I'm bleeding to death.' "										
ROAR	inanimate	VVG	no	other	neutral	10	1.1833	65.691	0.003832	0.004
SCREAM	human	VVG	no	none	negative	18	4.2894	43.8238	0.004883	0.007
Example Sentence: "They plummet. Alice screaming."										
SCREAM	human	VVG	yes	PRP	negative	8	0.7966	65.1359	0.015069	0.004
Example Sentence: "Mahesh kept screaming at his uncles, his cousins…" (NOTE: larger context used for emotion)										
HOWL	inanimate	VVG	no	PRP	neutral	8	0.8739	58.1121	0.029519	0.004
Example Sentence: "The wind howling around them."										
SCREECH	inanimate	VVG	no	PRP	neutral	8	0.8739	58.1121	0.029519	0.004
Example Sentence: "…stops the disk that spins before him and sends it screeching in the opposite direction."										
SCREAM	human	VVI	no	none	negative	9	1.2019	50.5968	0.037195	0.004
Example Sentence: "…shaking desperately and trying not to scream." (NOTE: larger context used for LS and emotion)										

(Gries, 2004)

Summary

Differences Amongst Synonyms:

- Figurative compared to literal use (e.g., "The wind howling around them" compared to "You're going to yell at me")

- Expression of emotion (e.g., "The guards roared in laughter" compared to "Mom was irate. Mom yelled at me")

- Whether the action is directed at a particular person or entity (e.g., "he roars very loud" compared to "he shouted at the guy in the mask.").
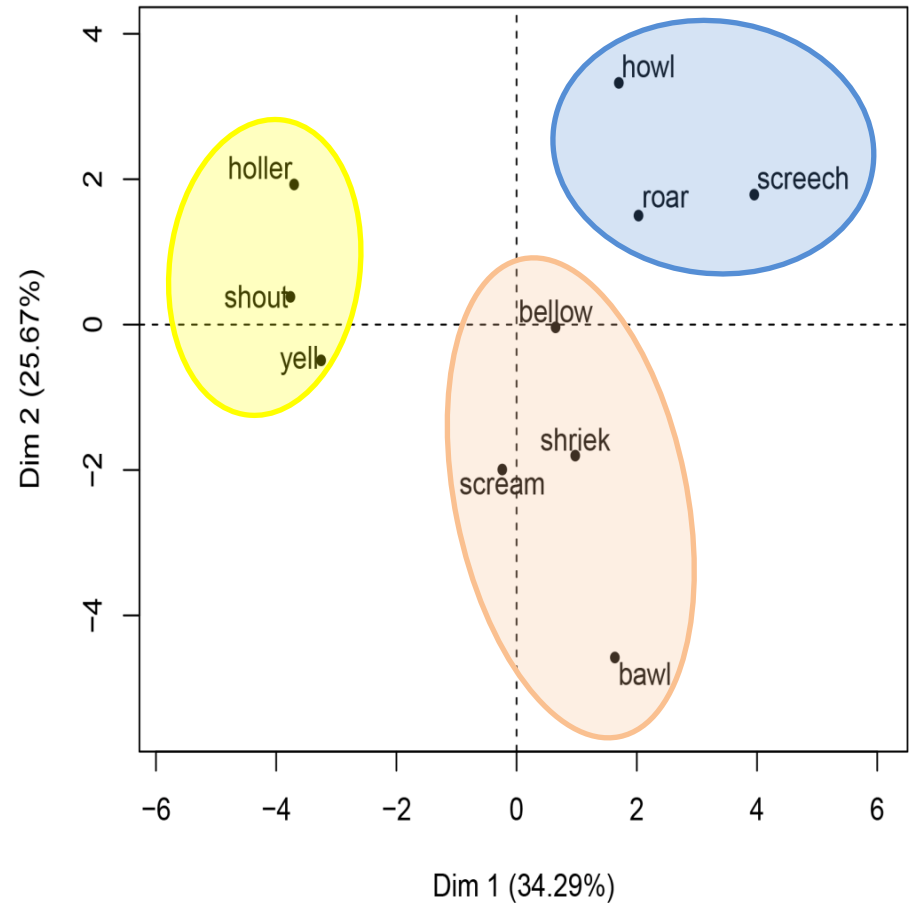
Corpus Compared to Elicitation Data
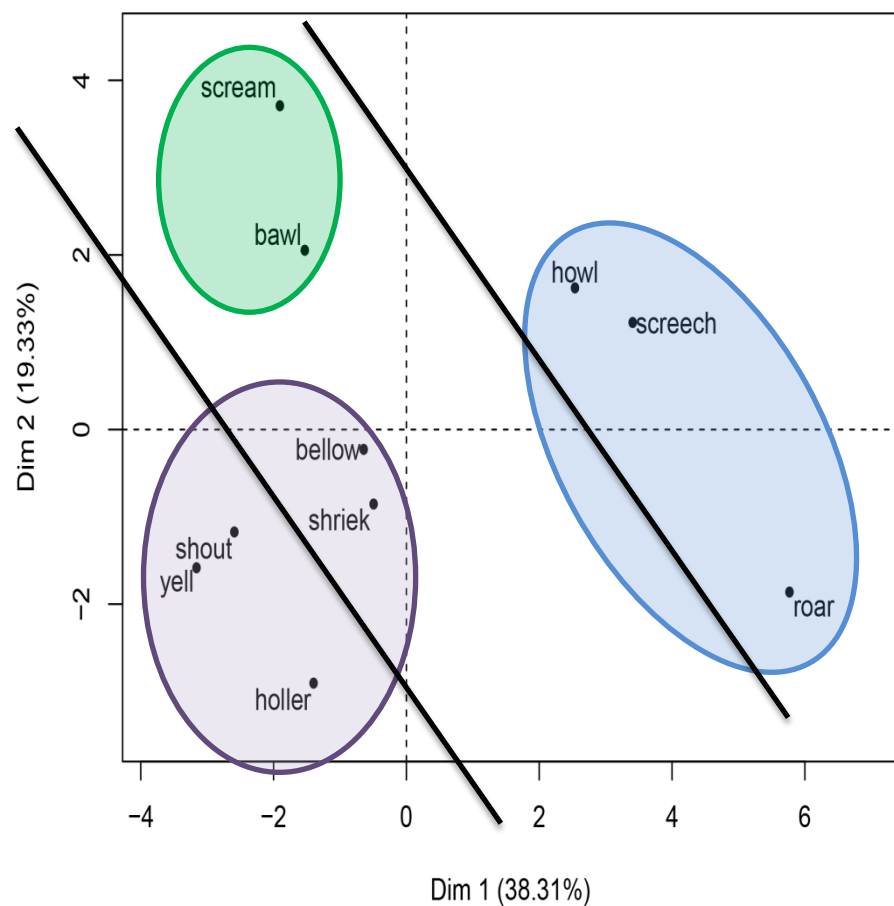
COCA

Individuals factor map (PCA)
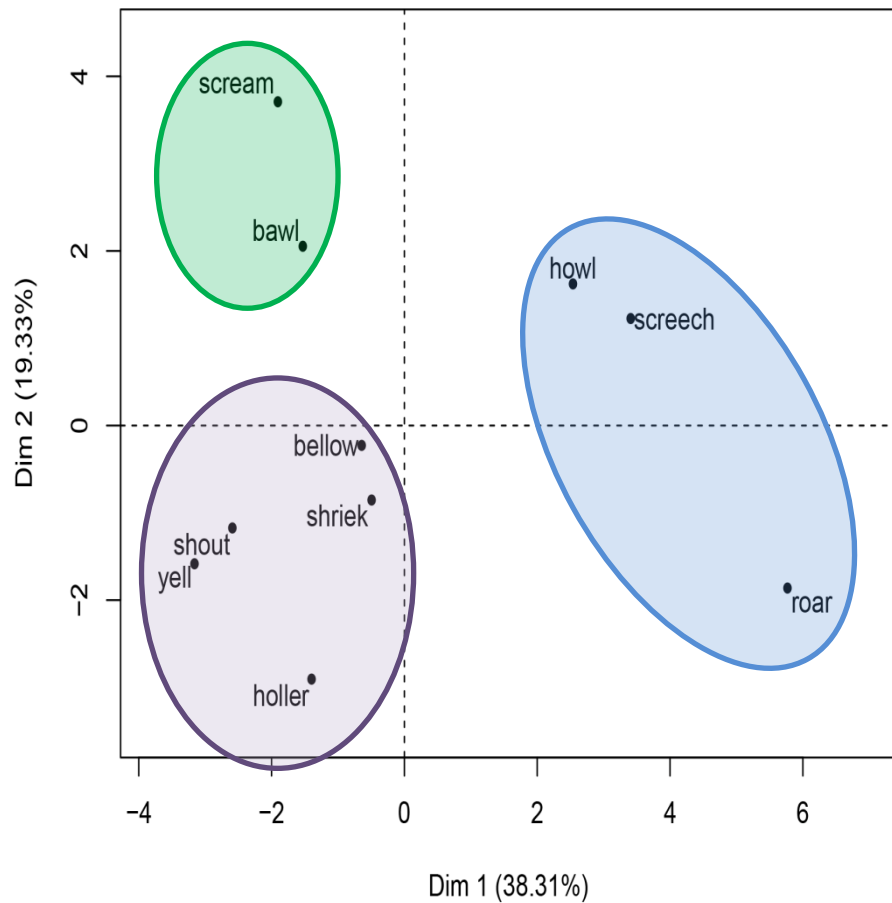
Elicited

Individuals factor map (PCA)
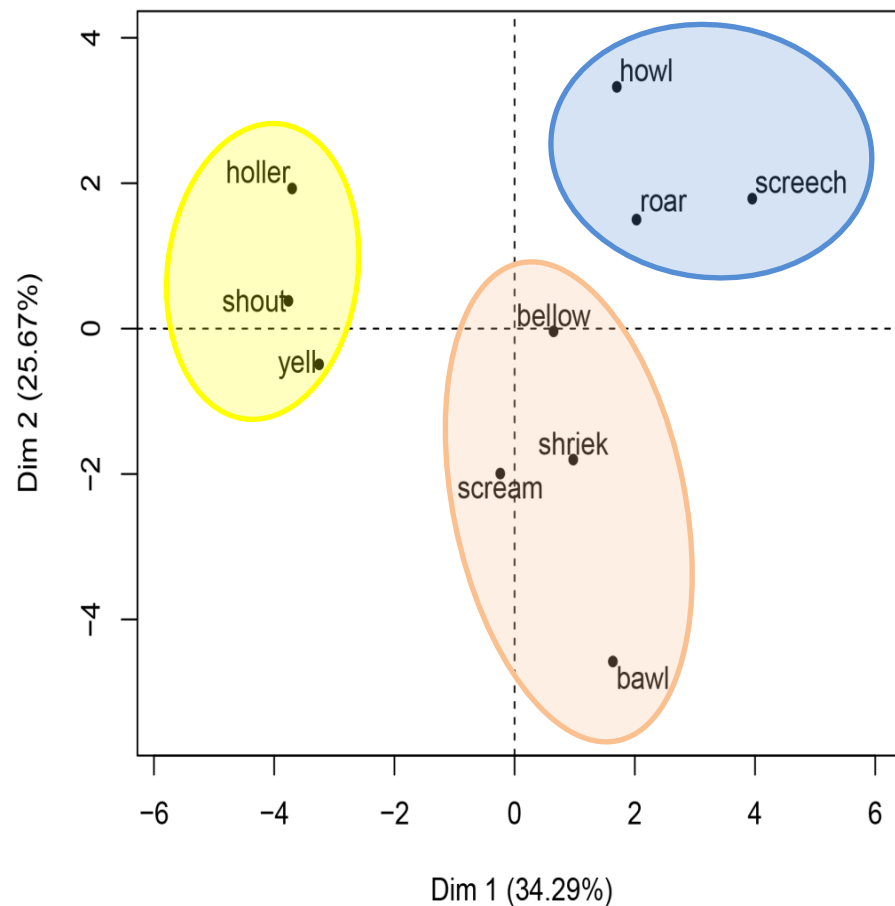
Corpus Compared to Elicitation Data

Comparison of Data Sources

• The proportion with which each feature was used is highly correlated across the two data sources (r (188) = 0.80, p < 0.01).

Subjects: Proportion of animals compared to Inanimates

	COCA Proportion of Occurrence (Mean)	Elicited Proportion of Occurrence (Mean)	Difference between COCA and Elicited
LS Animal	0.064	0.142	-0.078
LS Inanimate	0.157	0.075	0.082

HOWL_ROAR_SCREECH CLUSTER

LS Animal in COCA = 0.10

LS Animal in the elicited data = 0.40

HOWL_ROAR_SCREECH CLUSTER

LS inanimate in COCA = 0.38

LS inanimate in the elicited data = 0.21

Animals vs. Inanimate as Subjects

- Corpus = frequent uses in naturalistic speech

- Elicitation = language out of context

    Why would they differ?

- Exemplar and Prototype Theory

    - Exemplars = specific examples (e.g., like in a corpus: "A big sedan <u>roars</u> up, cutting her off.")

    - Prototypes = abstract categorization of the "best" example (e.g., like in the elicitation task: "The coyotes <u>howled</u> all through the night.")

(e.g., Reisberg, 2010; Rouder & Ratcliff, 2006; Vanpaemel & Storms, 2008)

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