

## Types of NP Modification

### Restrictive modification

The content of the modifier is an **integral part** of the meaning of the containing clause

vs

### Non-restrictive modification

The modifier presents a **separate or additional unit of information**

## Examples

	Restrictive	Non-Restrictive
<b>Relative Clause</b>	She took the necklace <b>that her mother gave her</b>	The speaker thanked president Obama <b>who just came back from Russia</b>
<b>Infinitives</b>	People <b>living near the site</b> will have to be evacuated	Assistant Chief Constable Robin Searle, <b>sitting across from the defendant</b> , said that the police had suspected his involvement since 1997.
<b>Prepositional modifiers</b>	the kid <b>from New York</b> rose to fame	Franz Ferdinand <b>from Austria</b> was assassinated on Sarajevo
<b>Postpositive adjectives</b>	a man <b>full of his own importance</b>	Pierre Vinken, <b>61 years old</b> , was elected vice president
<b>Prenominal adjectives</b>	The <b>bad</b> boys won again	The water rose a <b>good</b> 12 inches

## Motivation

### Question answering

Matching entities between questions and answers which might have different non-restrictive modifications

### Abstractive summarization

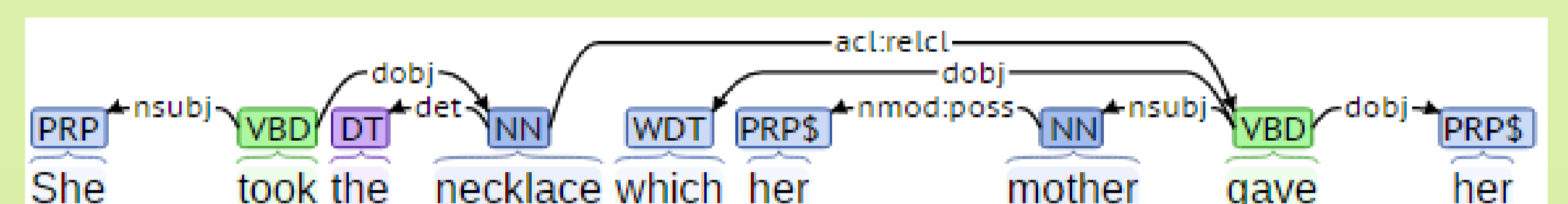
Remove non-integral modifications to shorten the sentence

### Knowledge representation

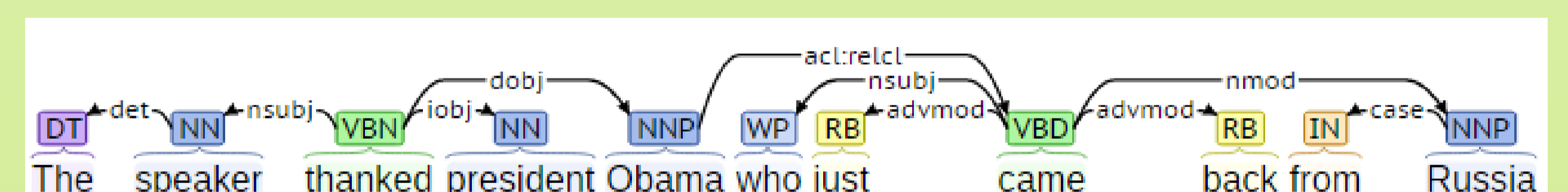
Extracting minimally scoped argument yields salient and more recurring entities

## Previously Unmarked

### Restrictive



### Non-Restrictive



## Contributions

### Annotation Methodology and Corpus

Consistent with the PTB corpus  
Makes use of the recent QA-SRL annotation

What did someone take?

The necklace which her mother gave her

**Restrictive**

Who was thanked by someone?

President Obama who just came back from Russia

**Non-Restrictive**

## Propaganda

### Come hear our related talk on Wednesday!

Defining a formal argument reduction criterion  
(Wed., 4pm, Audimax)

### Automatic Prediction

Using lexical-syntactic features

- Chunking features
- Enclosing commas
- Governing relatives (*that* vs. *which*)
- Lexical word embeddings

Modifier Type	#	Precision			Recall			F1		
		H	D	Our	H	D	Our	H	D	Our
Prepositional	135	.83	.67	.69	.1	.16	.41	.18	.26	.51
Adjectival	111	.33	.38	.59	.06	.06	.21	.11	.11	.31
Appositive	78	.77	.81	.82	.34	.93	.98	.47	.87	.89
Non-Finite	55	.77	.63	.64	.29	.97	.97	.42	.76	.77
Verbal	20	0	.75	.75	0	1	1	0	.86	.86
Relative Clause	13	1	.85	.85	.27	1	1	.43	.92	.92
<b>Total</b>	<b>412</b>	<b>.72</b>	<b>.72</b>	<b>.73</b>	<b>.19</b>	<b>.58</b>	<b>.68</b>	<b>.3</b>	<b>.64</b>	<b>.72</b>