Nomen est omen

Fictional characters' names encode polarity, gender, and age

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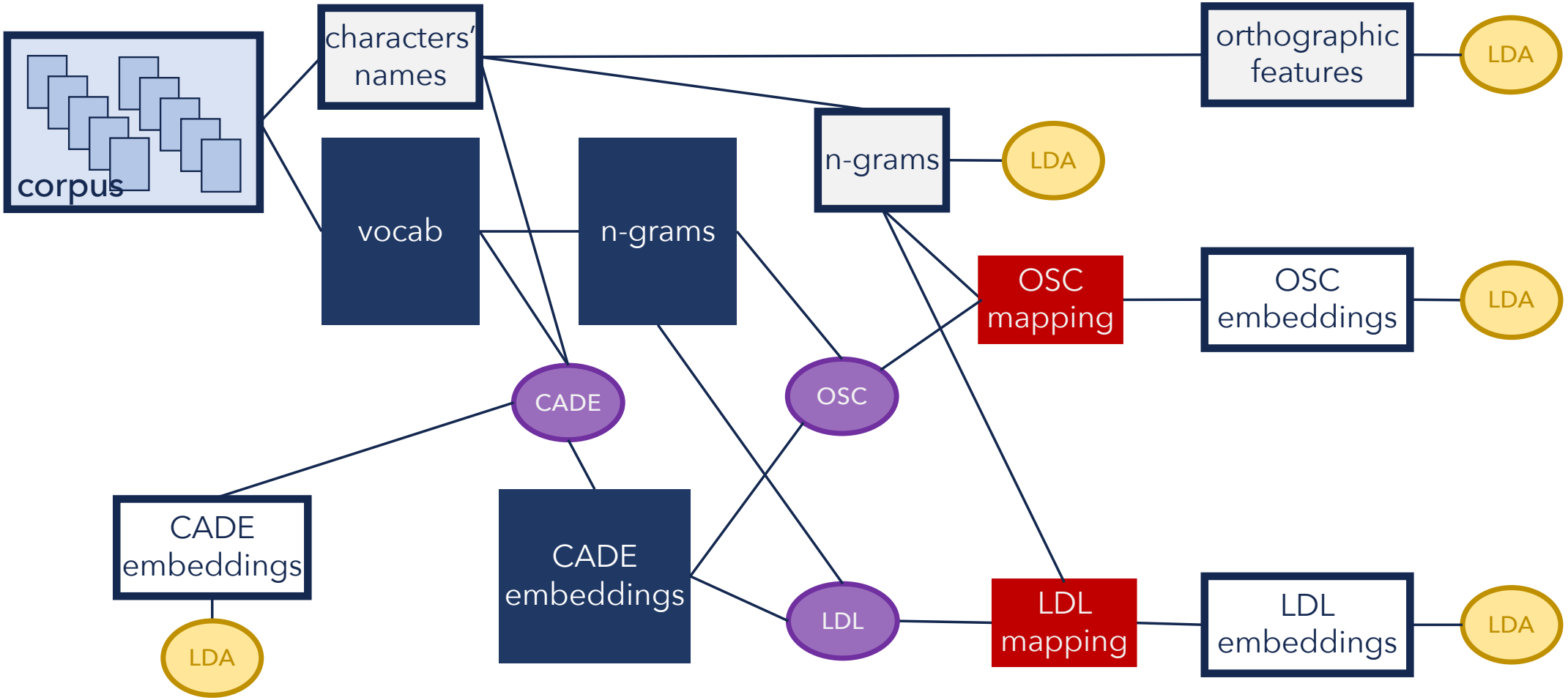
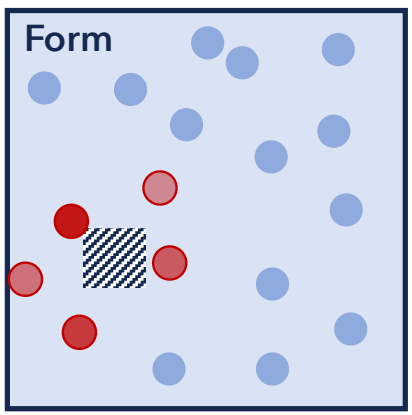
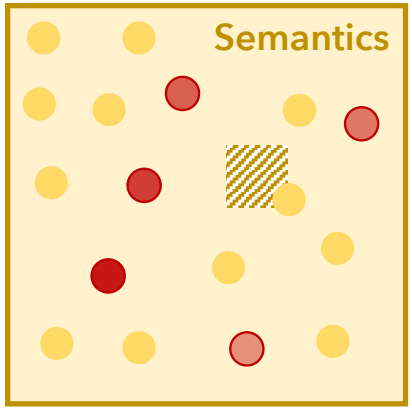
The pipeline



Form to meaning





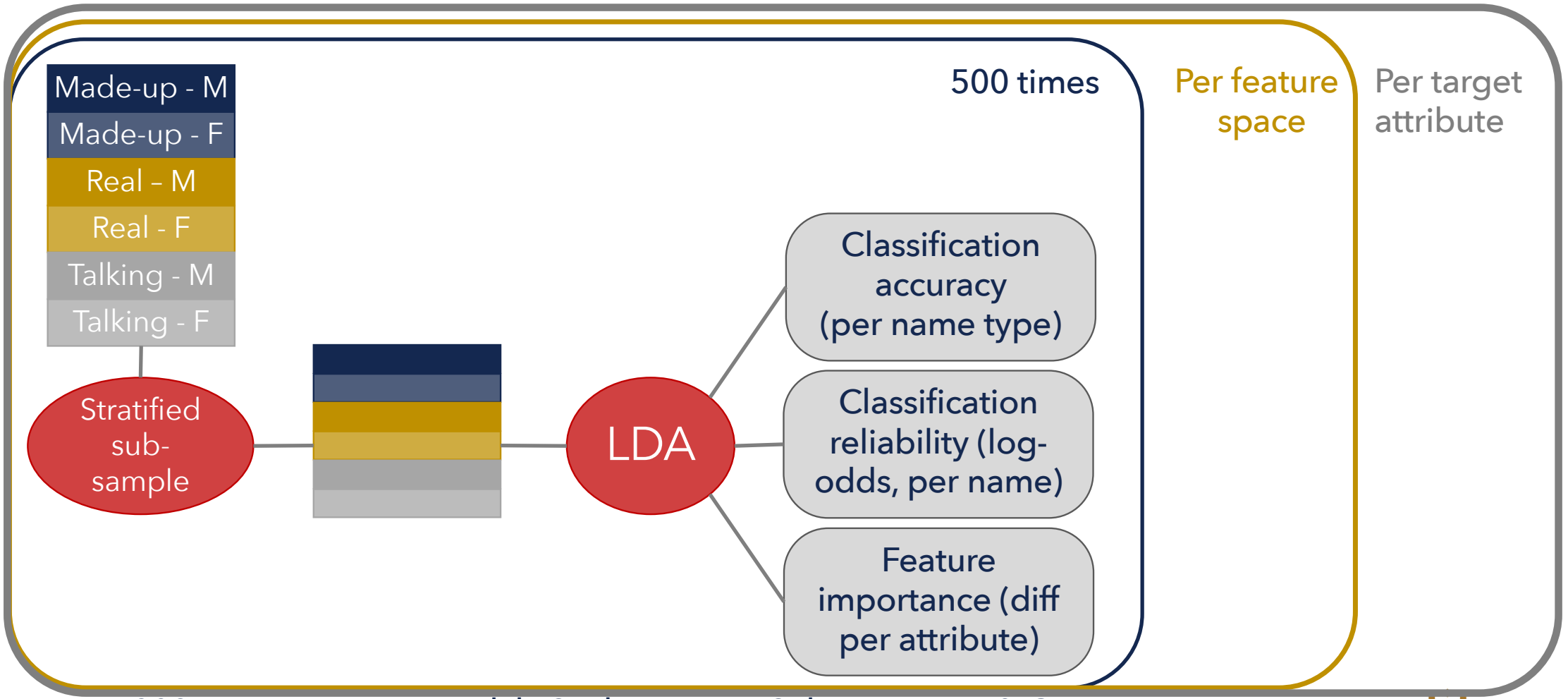
OSC: analogise in form space and average semantic neighbors

LDL: learn linear mapping from form to meaning and apply to novel words

Questions

- Can we discriminate characters' feature vectors in the different representational spaces?
- Is there a correlation between how difficult it is to discriminate characters in different feature spaces?
- Can we find reliable predictors?

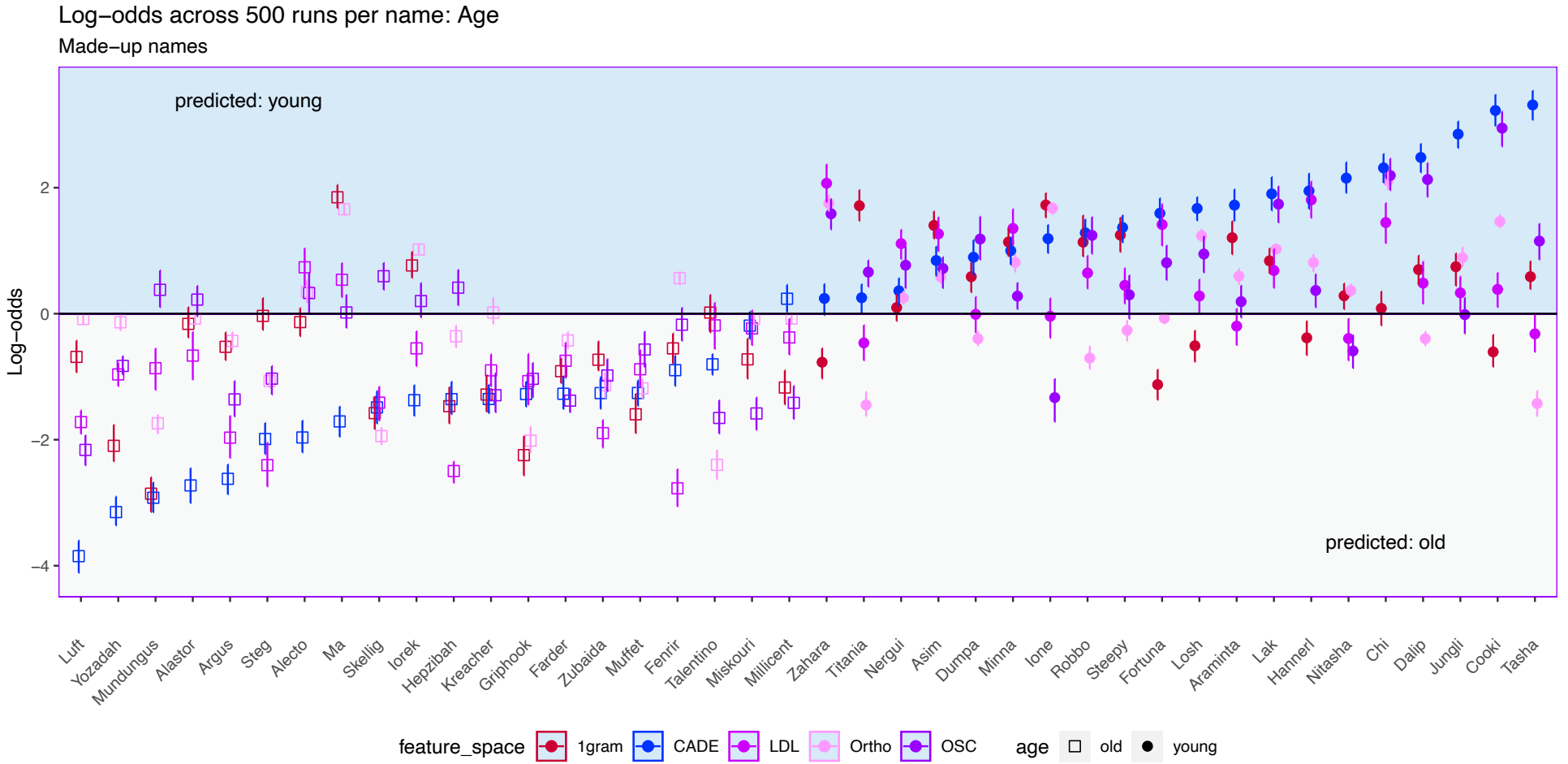
Bootstrapped LDAs



Classification accuracy

	Age		
	Real	Talking	Made-up
Unigrams	0.655 [0.651, 0.658]	0.606 [0.603, 0.610]	0.758 [0.754, 0.761]
Ortho features	0.690 [0.688, 0.693]	0.559 [0.556, 0.562]	0.688 [0.685, 0.691]
CADE	0.878 [0.875, 0.880]	0.956 [0.955, 0.958]	0.955 [0.953, 0.957]
LDL	0.847 [0.844, 0.850]	0.743 [0.739, 0.747]	0.775 [0.772, 0.779]
OSC	0.780 [0.776, 0.783]	0.801 [0.797, 0.804]	0.755 [0.751, 0.758]

Log-odds per name



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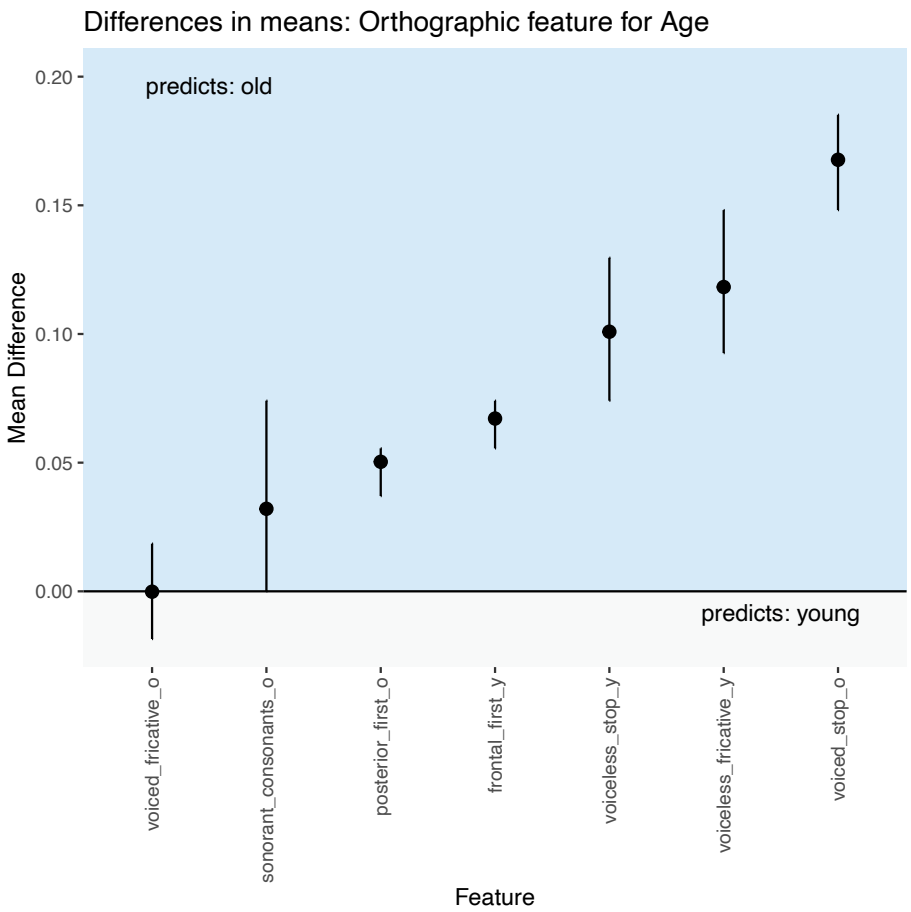
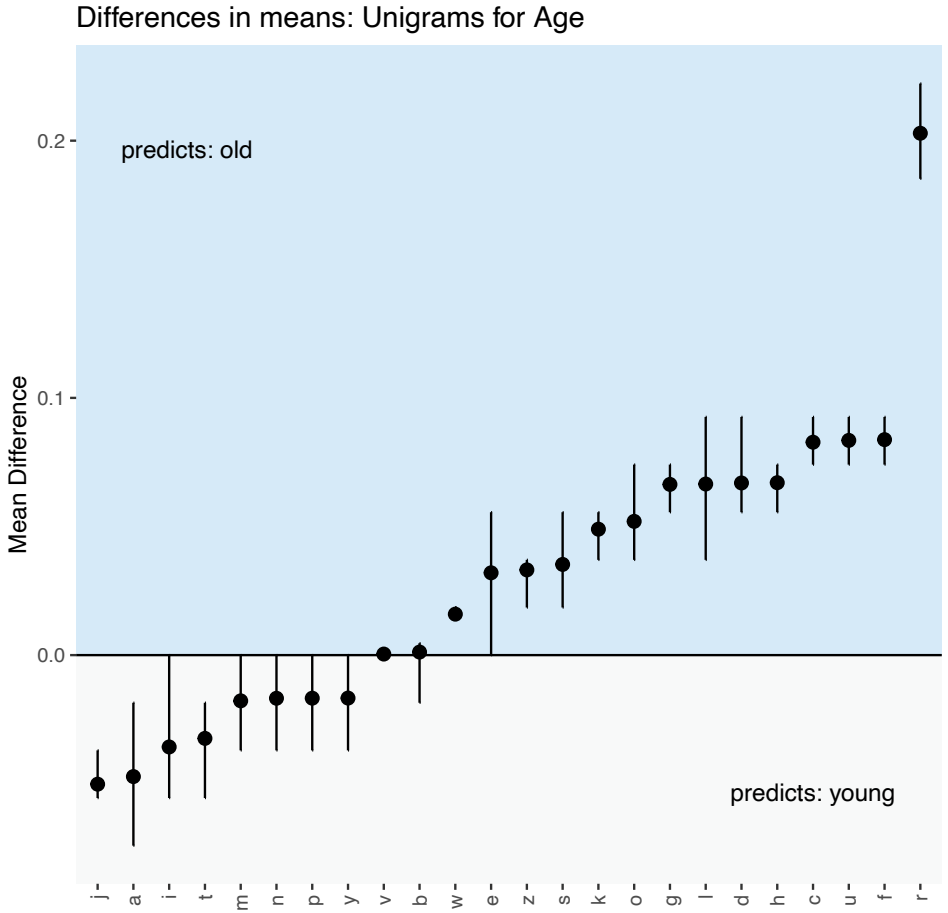
Correlation Matrix

Age	CADE	OSC	LDL	Ortho
OSC	0.535			
LDL	0.466	0.412		
Ortho	0.198	0.228	0.313	
1grams	0.302	0.269	0.265	0.397

Feature discriminability: form





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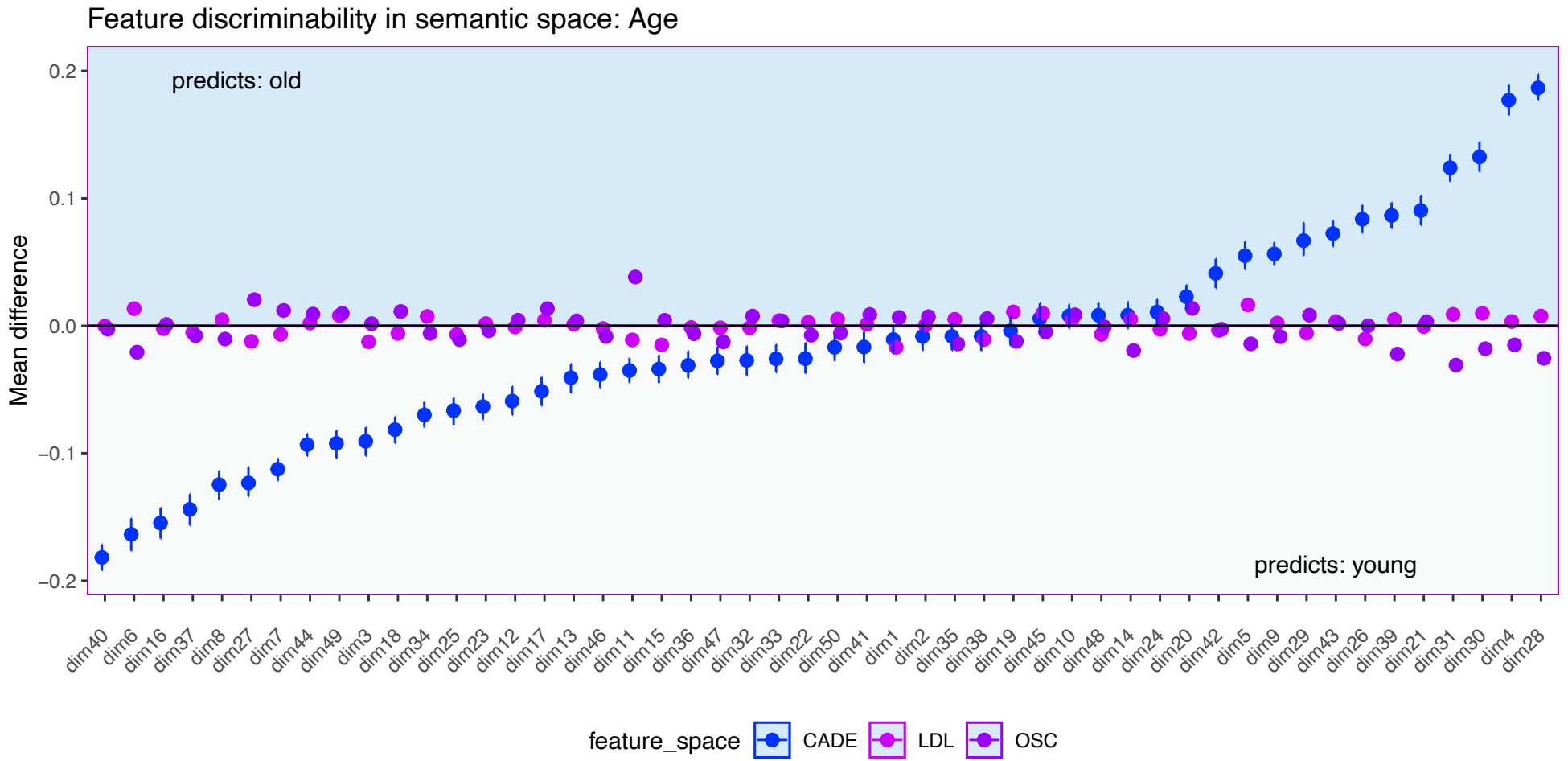
Feature discriminability: semantics



Summary of results

- Very **good discriminability in semantic space**
- *Above chance discriminability in form space*
- **Very good discriminability in form-based semantic spaces**
- Moderate correlation between log-odds in different feature spaces
- Feature reliability makes sense (**r** for *male, old, evil*; CADE more discriminable than OSC and LDL)

Take-home

- Characters sharing a trait are described similarly across stories
- Characters sharing a trait are *named more similarly* than characters having a different trait
- It is possible to **infer semantic attributes from form alone**
- More **prototypical characters** along a trait are named with more **prototypical names** for that trait
- Sound-symbolic devices are consistent in form and consistently point to semantic space

Thank you!