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## Towards Operationalizing Linguistic Creativity in Literary and Non-literary Text

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## What we are interested in

- What makes a text literary and poetic?
- What makes a text creative?
- How to disentangle creativity from a literary style?
- How to detect and measure creative language use?
- How to take into account the context?



## Literariness

- Level of the sign (formalist definition)
- Foregrounding/rhetorical devices
- Literary style, poeticity
- Context-independent, text-inherent literariness

## Creativity

- Level of usage (reception)
- Context-dependent



#### ORIGINAL

#### **Random string** nqDA LNXFX sSv gULLT KaugV catr tOEwH CIHmf koemV HuJj

#### CREATIVE

The road ran away westwards in the mist of the early morning, running cunningly through the little hills and going to some trouble to visit tiny towns which were not, strictly speaking, on its way. (Flann O'Brien: The Third Policeman, 1967)

#### SUCCESSFUL

**Poetic function** *It is the east, and Juliet is the sun.* 

(Romeo and Juliet, 2.2.3)



Runco, Mark A., and Garrett J. Jaeger. 2012. "The Standard Definition of Creativity." *Creativity Research Journal* 24 (1): 92–96.

## Literariness

- Level of the sign (formalist definition)
- Foregrounding/rhetorical devices
- Literary style, poeticity
- Context-independent, text-inherent
  literariness
- Not necessarily original
- $\rightarrow$  Only potentially creative

## Creativity

- Level of usage (reception)
- Context-dependent
- Successful (meaningful, fulfilling a poetic function)
- Original



# Corpus

- Literary and non-literary texts
- Currently, we work with around 37,000 literary German full texts
- Mainly 19<sup>th</sup> century
- German and potentially other languages
- Spatial descriptions on sentence- and paragraph level
  - The passage is static, no immediate actions
  - The described object is sensory perceptible
  - The described object could be real in the narrated world

[The sea] was almost motionless, for the **winds were hushed**, and all nature reposed under the eye of the quiet moon. A few fishing vessels alone specked the water, and now and then the **gentle breeze** wafted the sound of voices as the **fishermen called to one another**. (Mary Shelley: Frankenstein (1818), Chapter 20)



#### **Readers' Perception**

- Creativity-ratings of lay readers collected in a large-scale rating study
- Collect originality, poeticity, sense, and appreciation ratings
- Consider reading experience
- Canonicity and Goodreads

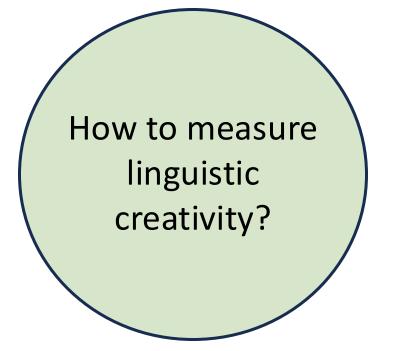
#### Stylometry

• Word-level

. . .

- Readability, complexity ...
- Syntactic features

## Foregrounding Rhetorical devices and deviation from everyday language Metaphors, personifications ... How to measure linguistic creativity? Language Models Fine-tune on our corpus data Embeddings Perplexity **Attention Entropy** • (Dis-)Similarity to later texts



# I am looking forward to hearing your ideas!

