beyond postmortem descriptions
natural language generation for historical figures

Katrine F Baunvig & Kristoffer L Nielbo
chcaa.io

Grundtvig Study Center & Center for Humanities Computing Aarhus University

Outline

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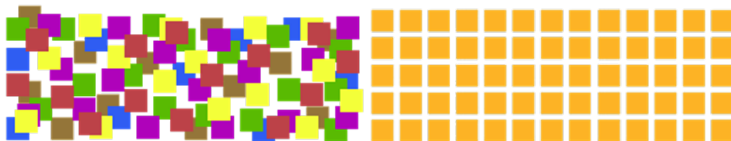Kristoffer L Nielbo
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data

psychological
description

neural description

neural simulation

prelim words in a database

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Figure 1: N.F.S. Grundtvig, 1783-1872, 1170 text objects → influential writer, graphomania, distinct phases in writings
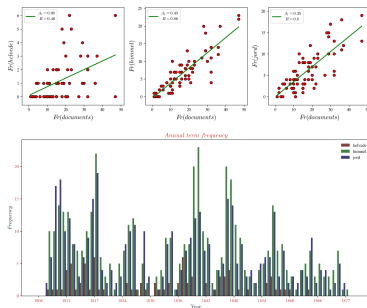
Figure 2: Keyword queries on time and document - naive compositional assumption → "atoms of meaning"

stage 1 psychological description

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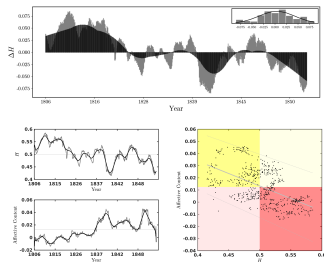
neural simulation

Figure 3: Developmental trajectories of creativity and affect with distinct phases
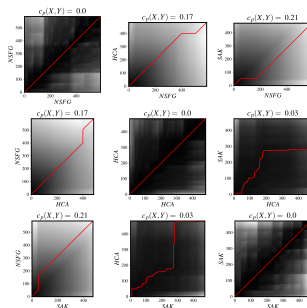
Figure 4: Comparison of Grundtvig, Andersen og Kierkegaard's creative trajectories

K. L. Nielbo, K. F. Baunvig, B. Liu, and J. Gao, "A curious case of entropic decay: Persistent complexity in textual cultural heritage," Digital Scholarship in the Humanities, Oct. 2018.

K. F. Baunvig and K. L. Nielbo, "Kan man validere et selvopgør?," Nordiskt Nätverk for Editionsfilologer Skrifter, vol. 2, pp. 45–67, 2017.

stage 2 neural description

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Figure 5: Neural embeddings in a hierarchical semantic graph centered on
{*heaven*, *earth*, *hell*}

K. F. Baunvig, O. Jarvis, and K. L. Nielbo, Mapping Worldviews. Word-embedding 'Heaven', 'Earth' and 'Hell' in the
Writings of Danish Nation Builder and Church Father N.F.S. Grundtvig (1783-1872), 17th Annual Conference of EASR:
Religion - continuations and disruptions, Tartu, Estonia

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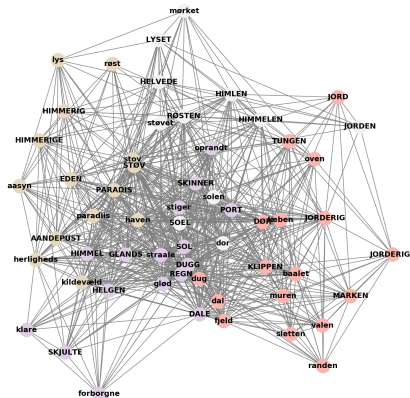description

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Figure 6: Recurrent neural network that learns Grundtvig's language from sub-word data.

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Thank you for your attention

slides: http://knielbo.github.io/files/kln_postmortem.pdf