

Outline of a Human Informatics

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October 2, 2018

Outline

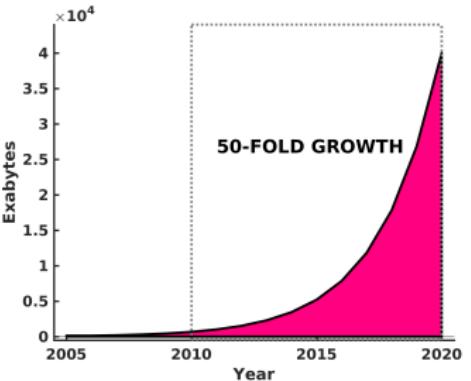
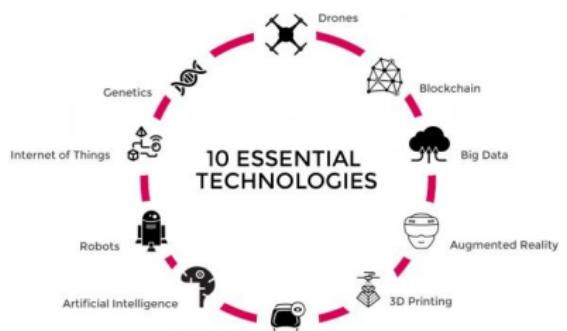
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A need for Human Informatics

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the data deluge is transforming knowledge discovery and understanding in every domain of human inquiry

a large part of these data are soft and unstructured ⇒ to get value from these data, humanities (and social sciences) must utilize automation

human informatics - automatic information processing in the humanities

eScience Infrastructure at SDU

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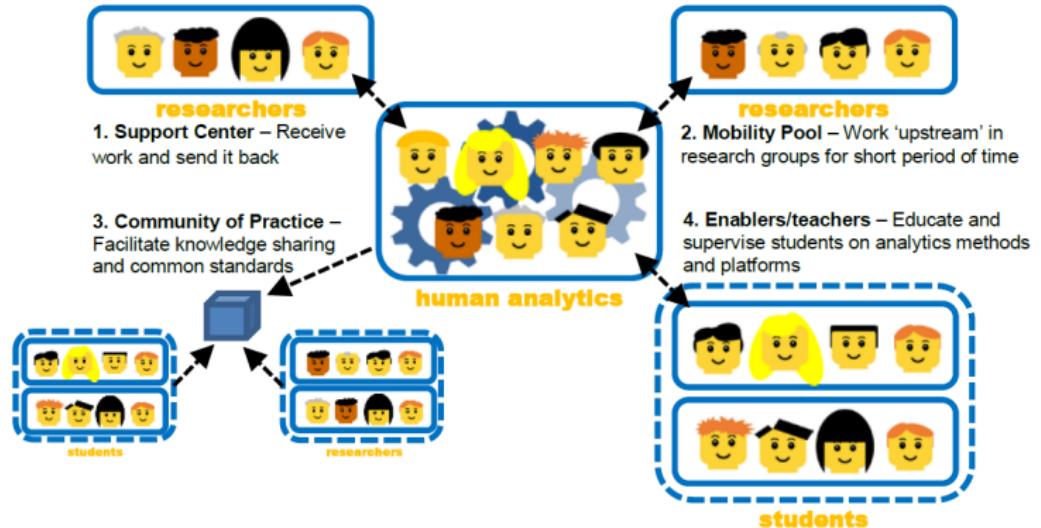
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14.016 cores, 392 slim nodes, 64 fat nodes, 72 GPU nodes with two Nvidia K40/node

the center is expanding its userbase to include more SSH relevant areas and competencies, e.g., DL, NLP, computer vision

cloud offers a fully GDPR compliant environment for cloud computing with a cumulative codebase



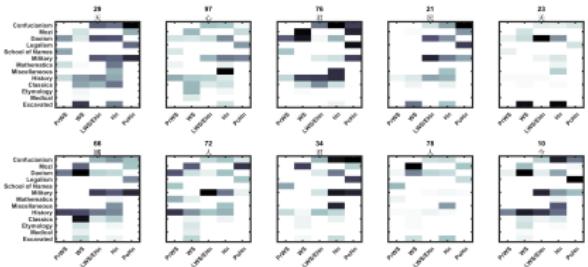
research support through collaboration (pilot, shared funding, shared authorship)

recently turned to tool and competency development - software development in the humanities

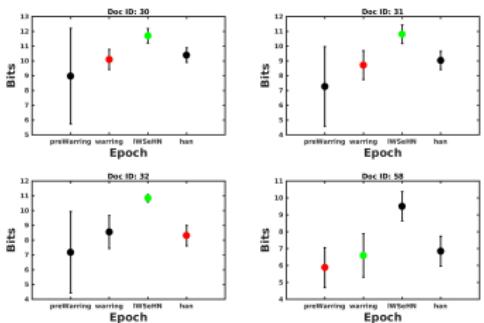
Dating Classical Chinese Documents

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Thematic structure in CTEXT corpus conditioned on period and genre



Average distance from each period, **classical period**, and **alternate period**

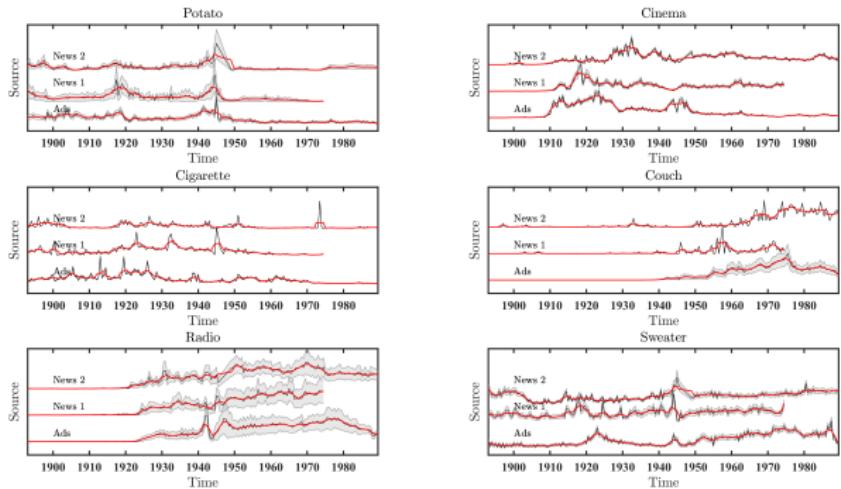


Figure 1: Articles and advertisements from *De Tijd* (1890-1974) and *De Telegraaf* 1893-1989, $N \simeq 30E^6$.

Shaping: *advertisements* \rightarrow *articles*

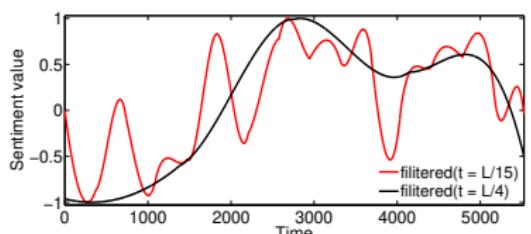
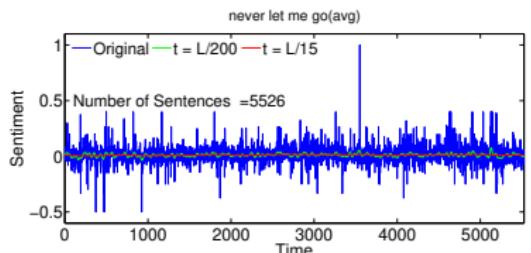
Reflecting: *articles* \rightarrow *advertisements*

Complex: *advertisements* \leftrightarrow *articles*

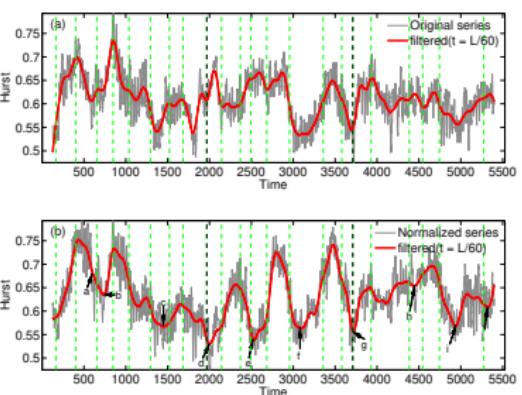
Literature and affective computing

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Story arc of Kazuo Ishiguro's 2005 novel
Never let me go

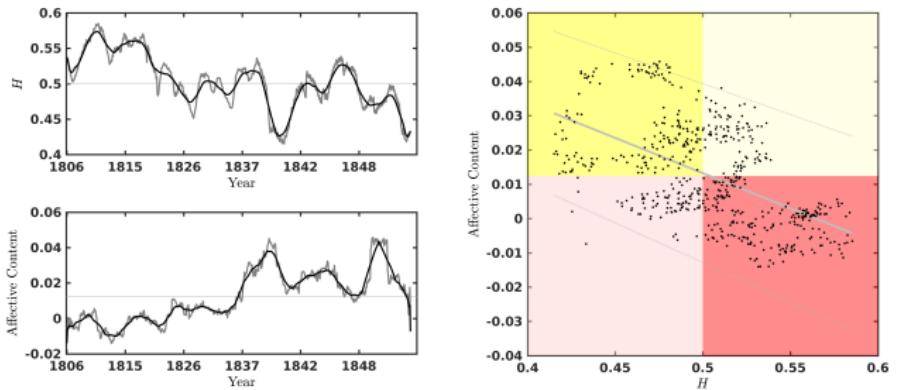


Evolution of the Hurst parameter under 256 window size of original and normalized sentiment time series

Dynamic author profiling

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Combining persistent entropic trends with sentiment analysis and causal modeling, we can study "the tormented artist" phenomena in intellectual history.

Time period	Age of onset	$H(X)$	Behavior	Profile
1806-1826	23	$H > 0.5$	<i>persistent</i>	theoretician
1826-1839	43	$H \approx 0.5$	<i>short memory</i>	pragmatic
1839-1845	56	$H < 0.5$	<i>anti-persistent</i>	breakthrough
1845-1848	62	$H \approx 0.5$	<i>short memory</i>	disease
1849-1872	65	$H < 0.5$	<i>anti-persistent</i>	politician

THANK YOU

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

& credits to

Max R. Echardt and Katrine F. Baunvig, datakube, University of Southern Denmark, DK
Melvin Wevers, DHLab, KNAW Humanities Cluster, NL
Mads Rosendahl Thomsen, Comparative Literature, School of Communication and
Culture, Aarhus University, DK
Jianbo Gao and Bin Liu, Institute of Complexity Science and Big Data, Guangxi
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