Digitally Empowered Education in SSH

Kristoffer L Nielbo
knielbo@sdu.dk
knielbo.github.io

Dept. of History & SDU eScience Center
University of Southern Denmark
Facebook’s AI accidentally created its own language

‘Terminator’ Come To Life? – Facebook Shuts Down Artificial Intelligence After It Developed Its Own Language

Facebook AI Invents Language That Humans Can’t Understand: System Shuts Down Before It Evolves Into Skynet
I'd like the books and the hats
I will take the books and hats
I really need the books and at least one other object
Ok, you can have one book and one ball
If I can have all the books, I can leave you the rest
Deal

You can have the ball if I can have everything else
No can't do that the ball is not going to give me anything
I need the hats and you can have the rest
Deal
Great! Thank you!
i can i i everything else . . . . . . . . . . . . . . . .
balls have zero to me to me to me to me to me to me to me to me to you i everything else . . . . . . . . . . . .
balls have a ball to me to me to me to me to me to me to me to me to me i i can i i i everything else . . . . . . . . . . . .
balls have a ball to me to me to me to me to me to me to me to me to me i . . . . . . . . . . . . . . . . . . . . . .
balls have zero to me to me to me to me to me to me to me to me to you i i i i i everything else . . . . . . . . . . . .
balls have 0 to me to me to me to me to me to me to me to me to you i i i i i everything else . . . . . . . . . . . .
balls have zero to me to me to me to me to me to me to me to me to me to me to me to me to me to me to me to me to me to me to
**compromise0:** I Pron will aux take verb the det books noun and conj hats noun

**compromise1:** You pron can aux have verb the det ball noun if s conj I pron can aux have verb everything noun else adj

**stubborn:** I pron get verb all det the det balls noun ? punct

**singularity:** balls noun have verb zero adj to adp me pron to adp me pron to adp me pron to adp me pron to adp me pron to adp me pron topart

<table>
<thead>
<tr>
<th></th>
<th>compromise0</th>
<th>compromise1</th>
<th>stubborn</th>
<th>singularity</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H(X)$</td>
<td>2.53 (1.16)</td>
<td>2.3 (1.35)</td>
<td>2.59 (0.84)</td>
<td>1.62 (0.51)</td>
</tr>
<tr>
<td>$TTR$</td>
<td>0.92 (0.09)</td>
<td>0.94 (0.07)</td>
<td>0.96 (0.09)</td>
<td>0.5 (0.27)</td>
</tr>
</tbody>
</table>
singularity
Core observations

– impossible without **digitization**
– cultural data require **culture analytics**
– **qual-quant** distinction is no longer valid
– scaling requires **automation**
– there is no way around basic **programming**

**humanities research and education need a define our human-centered informatics**
– the data deluge is transforming knowledge discovery and understanding in every domain of human inquiry

– knowledge discovery depends critically on advanced computing capabilities

**a large part of these data are soft and unstructured**

– to get additional value from these data, faculties of humanities must become computationally and data literate
number of research publications alone makes computational literacy a necessity for the humanities scholar

- publications related to Gospel of Marc (KJV) > 50K, ~ 16,500 words in 16 chp. on 11 p.
- plus a massive increase in digitized cultural heritage databases (libraries, archives, museums)
Computational Literacy | Programming & Analytics

- every knowledge intensive organization has to break the learning curve, but certain sectors are more challenged
- co-develop with the eScience Center and other resources @ SDU
- promote a common language and import best practice from software development
Computational Literacy | Programming & Analytics

GUI → CLI
- novice-friendly visual approach to computer interaction w. a fast learning curve ERROR
- expert-friendly text-based approach to computer interaction w. ++freedom VALID
- CONFLICT break the learning curve through training intensive, non-intuitive, and specialized tools

- in research, we try to solve this conflict by establishing small, semi-autonomous eScience units that intervene in (humanities) research
Figure: sentiment analysis and adaptive filtering reconstructs narrative vectors that reflect the reader experience. Particular fractal scaling-range, $0.6 < H \leq 0.8$, indicates literary optimality.
– historians and media researchers theorize about the causal dependencies between public discourse and advertisement

– time series analysis of keyword frequencies (from seedlists) indicated that for some categories ‘ads shape society’, while other categories merely ‘reflect’

– advertisements show a faster decay (on-off intermittent behavior) than public discourse (long-range dependencies)
Figure: Event counts in the GDELT database reflect economic and political dynamics.

Gao J., Ma M., Liu B., Nielbo K.L., Roepstorff A., Tangherlini T., Roychowdhury V. (in review) Brexit and Trump Presidency: were they black swan events or inevitable?
EMOTION|Grundtvig
- early phase: negative affective tone
- late phase: positive affective tone
- inverse relation → state incongruent writer
- emotional state Granger-causes creative state → dostoyevskian trope
THANK YOU

knielbo@sdu.dk
knielbo.github.io

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