

Insignificant things computers can do with language and literature,

with questions about their significance

Small changes seem insignificant, yet they sometimes foretell a sea change. The massive change of global warming is measured in parts per million of invisible carbon and mere millimeters of sea level rise. One degree of global temperature increase is cause for alarm for climate scientists, but largely unnoticed by the voting public. Small things matter, but rarely penetrate our consciousness: until they hit home in the sharp light of irreversible events¹

As instructors and students, we are standing on the damp ground of a slow-moving tsunami of computer applications. Follow here some snapshots of the inroads computers are making into our otherwise computer-proof language departments. Each snapshot is centered around software that represents a damp foreshadowing – not the most advanced applications, such as the android Sophia, but rather the everyday variety that are already under foot in the classroom.

But first, some general thoughts about the typical characteristics of computer applications. However diverse, digital artifacts are all cut from the same cloth and share some very general effects on the domains they colonize.

The Frankenstein factor. Computers are monstrously imperfect, which should make them seem more human, but instead we are quick to focus on their peculiar imperfections to underline how very unlike they are from us (Kawamoto). We ridicule Frankenstein's dancing,

¹ Aristotle considered the problem of how we perceive the seemingly imperceptible when he attempted to answer the question: Do dreams foretell the future? His answer was yes and no, and he explained with this analogy. A big light obscures a small light; when the big light is gone, we see all the small lights that were formerly invisible. Thus, during the day, the hills may look innocent, but at night we see the enemy's campfires.

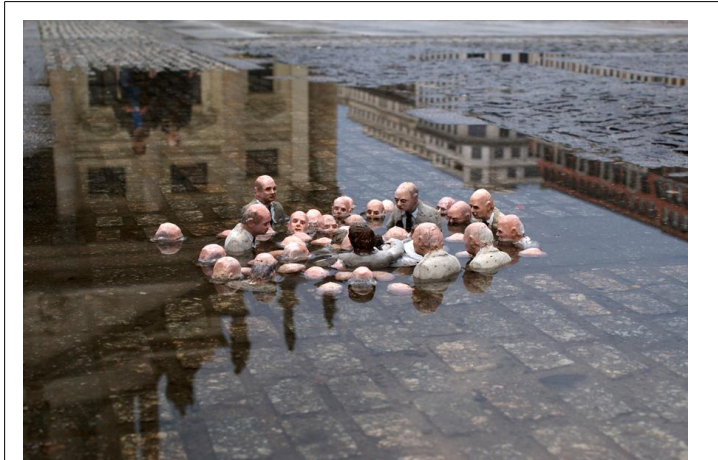


Figure 1: Members of the U.S. Senate congratulating themselves for having just passed a motion denying sea level rise. (Cordal)



Figure 2: Frankenstein
by Boris Karloff

but the fact that he exists at all, and furthermore dances, is full of uncomfortable portents. If his dancing improves too much, our ridicule turns to fear and disgust (Thulin et al. and the “Uncanny Valley”). Philological Humanists (word workers in a language department) find the computer Frankenstein particularly disconcerting. But it would be a mistake to dismiss what computers can do, are doing, and will do, simply because what they do now is so imperfect. Computer applications are both repulsively superhuman and laughably subhuman.

Google translate is perhaps the most frequent Frankenstein we face in the classroom. Google Translate can instantaneously translate, with both superhuman speed and repulsive results.

Radicalization factor. Technology speeds up the pace of cultural life and pushes things to extremes. Machines, agriculture, gunpowder, and fossil fuels have underpinned population explosion on the one hand and unparalleled slaughter on the other. Innovations augment the range of possibilities and human culture is quick to colonize the most extreme positions.

Money is the most obvious and most radicalizing innovation; wealth cannot accumulate at the same speed or to the same degree without it. To counter radical accumulation of wealth, the Spartan king Lycurgus is said to have replaced gold and silver with cumbersome iron. Today, money is at the opposite extreme: flashes of light on a computer screen or the wave of a card.

Computer processing and money are aligned at the pinnacle of technological innovation because they control intelligent work; money controls people and increasingly computers control both money and people. Money and computers function in a such a similar way that computer applications could reasonably be called animate money – the next step in money (see Bitcoin). Together they make things move faster and evolve to extremes: computerized stock trading, electronic surveillance, factory automation and soldier robots put extreme power in the hands of a few.

Research and teaching has been radicalized in a number of ways. In the classroom, it is the sheer throughput of information that the Internet and data projectors provide. Office “hours” have become 24/7 through email. “Hit and run reading” (Michael Best) produces wide but shallow understanding of things. Impact assessment in research tends to encourage polarizing, sensationalist research.

Fracturing factor. With radicalization comes segmentation. Computer applications work like electrophoresis on an electrified social matrix, separating people and things into distinct compact bands, with few bridges between them. The Internet’s social media does this most iconically – the bubble effect – but the same fracturing can be felt at many levels of granularity: in our classrooms, we navigate between chalkboard, whiteboards, digital projectors with 5 different cable adapters. Students’ written work is handed in as an email, or a Word or PDF attachment, or printed in colour or black and white, or hand written. Soon it will be tweeted and snapchatted.

Computers radicalize the fracturing potential of money and writing. Socrates’ scruples about writing and money are perhaps best understood as a response to the fracturing factor:

[Amun-Ra to Thot, the inventor of writing:] You have invented an elixir not of memory, but of reminding; and you offer your pupils the appearance of wisdom, not true wisdom, for they will read many things without instruction and will therefore seem to know many things, when they are for the most part ignorant and hard to get along with, since they are not wise, but only appear wise. (Plato 275a-b, my emphasis)

[Socrates:] O beloved Pan and all ye other gods of this place, grant to me that I be made beautiful in my soul within, and that all external possessions be in harmony with my inner man. May I consider the wise man rich; and may I have such wealth as only the self-restrained man can bear or endure.—Do we need anything more, Phaedrus? For me that prayer is enough. (Plato 279b-c, my emphasis)

The word “fractious” is a more literal translation than “hard to get along with”. The Greek “χαλεποί” is “rugged” (a fractured terrain), “rebellious” (a horse), “harsh” (unbending). And under Lycurgus, citizens could “bear” precious little money. In a text-less Socratic world, a world without bookkeeping, the debt economy might have never come to be.

The student population is increasingly fractured, not only by globalization but equally so by the good and bad effects of computers. When more course materials are put online, students see attendance in the classroom as optional. In a given class, students who use technology intelligently can advance quickly and leave behind those who do not use technology or whose time is consumed by video games, Facebook and texting.

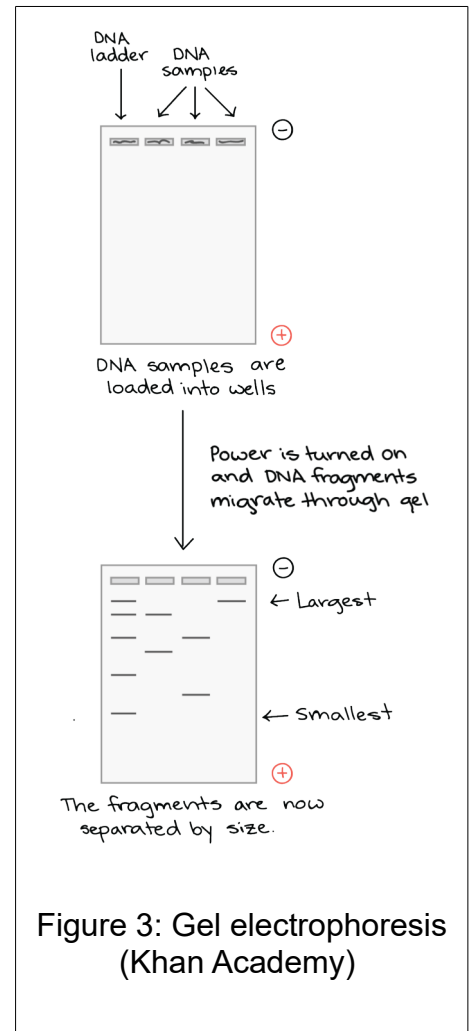


Figure 3: Gel electrophoresis (Khan Academy)

Most importantly, the written word separates as much as it unites because it “does not respond”:

Writing, Phaedrus, has this strange quality, and is very like painting; for the creatures of painting stand like living beings, but if one asks them a question, they preserve a solemn silence. And so it is with written words; you might think they spoke as if they had intelligence, but if you question them, wishing to know about their sayings, they always say only one and the same thing. [Plato 275 d-e]

Paradox factor. The previous factors generate a constant flow of paradoxes and ambiguities, all similar to the paradoxical effect of writing described in the *Phaedrus* and analyzed by Derrida in his “Plato’s Pharmacy”.

Writing as poison and remedy is the source of paradoxes not just because it is a kind of speech but because it is technology – technologized speech. The monstrous, radical, and fragmented world of computer applications undermines the ingrained usage of ordinary language. Wherever new, incremental technology meets speech, we find a conceptual paradox, a pharmakon paradox.

We see those paradoxes in every field: technology has meant that we are unsure when life begins or ends. Is our DNA private property? When we grow clones, can we use their parts because they are us?

Though less dramatic, instructors face similar perplexing issues, paradoxes and redefinitions. A lecturer is a speaker, not a reader. In our flipped classrooms “homework” is what we do in the classroom and “lectures” are what students watch at home.

More fundamentally, information technology is precisely a new instantiation of writing, with both the positive and negative effects that are discussed in the *Phaedrus*. Do grammar checkers teach us to spell better or do they allow us to forget spelling? Does Google Scholar improve research or are we so inundated with information that we skim articles without thinking:

Studies also show that Google is affecting our memory in chilling ways. We more easily forget anything we know we can find online, and we tend to remember where online information is located, rather than the information itself. ((Ackerman) 325 a)



“There can be no peace until they renounce their Rabbit God and accept our Duck God.”

Figure 4: Rabbit-Duck Religions
(New Yorker: “Cartoons at Random”)

Language, Linguistics and Literature

Without coming to any conclusion about the path down which computer applications are taking society or whether they are a form of writing in the Socratic sense –computers do reply, and their answers do evolve according to their interaction with the user--, it seems useful to give some thought to the ways computers are seeping into our daily practice, starting with what is most routine: teaching and learning a language, but continuing on through linguistics to stylistics and literary interpretation.

Further Reading

- Jockers, Matthew L. *Macroanalysis: Digital Methods and Literary History*. 1st Edition edition, University of Illinois Press, 2013.
- Laurette, Pierre. *Lettres et techne*. Balzac, 1993.
- Lévy, Pierre. *De la programmation considérée comme un des beaux-arts*. La Découverte, 1992.
- Schreibman, Susan, et al., editors. *A New Companion to Digital Humanities*. 2 edition, Wiley-Blackwell, 2016.

Works Cited

- Ackerman, Diane. *The Human Age: The World Shaped by Us*. First edition, W.W. Norton & Company, 2014.
- Cordal, Issac. *Follow the Leaders*. 2011, <http://cementeclipses.com/wp-content/uploads/2013/11/Follow-the-leaders-berlin.jpg>.
- Derrida, Jacques. "La Pharmacie de Platon", in Platon and Luc Brisson. *Phèdre suivi de La pharmacie de Platon*. Flammarion, 1989.
- Karloff, Boris. *Frankenstein*. 1934, https://upload.wikimedia.org/wikipedia/commons/a/a7/Frankenstein%27s_monster%28Boris_Karloff%29.jpg.
- Kawamoto, Dawn. *Watson Wasn't Perfect: IBM Explains the "Jeopardy!" Errors - AOL Finance*. 2011, <https://www.aol.com/2011/02/17/the-watson-supercomputer-isnt-always-perfect-you-say-tomato/>.
- Khan Academy. *Gel Electrophoresis*. <https://www.khanacademy.org/science/biology/biotech-dna-technology/dna-sequencing-pcr-electrophoresis/a/gel-electrophoresis>. Accessed 1 Dec. 2017.
- New Yorker. "Cartoons at Random." *Cartoons At Random*, <https://www.newyorker.com/cartoons/random/share=2907075>. Accessed 21 Feb. 2018.
- Plato. *Phaedrus*. Perseus, <http://data.perseus.org/citations/urn:cts:greekLit:tlg0059.tlg012.perseus-eng1:227>. Accessed 4 Dec. 2017.
- Thulin, Lila, et al. "What a Gymnastics Coach Thinks About Boston Dynamics' New Flipping Robot." *Slate*, Nov. 2017. *Slate*, http://www.slate.com/blogs/future_tense/2017/11/17/a_gymnastics_coach_rates_boston_dynamics_flipping_robot.html.
- "Uncanny Valley." *Wikipedia*, https://en.wikipedia.org/wiki/Uncanny_valley.