

# A real life experiment illuminates the future of books and reading

28 February 2020, by Andy Simionato and Karen Ann Donnachie



Imagine infinite readings of the books we already have.  
Credit: Unsplash, CC BY

Books are always transforming. The book we hold today has arrived through a number of materials (clay, papyrus, parchment, paper, pixels) and forms (tablet, scroll, codex, kindle).

The book can be a tool for communication, reading, entertainment, or learning; an object and a status symbol.

The most recent shift, from print media to [digital technology](#), began around the middle of the 20th century. It culminated in two of the most ambitious projects in the history of the book (at least if we believe the corporate hype): the [mass-digitization of books by Google](#) and the [mass-distribution of electronic books by Amazon](#).

The survival of bookshops and flourishing of libraries (in real life) defies predictions that the "[end of the book](#)" is near. But even the most militant bibliophile will acknowledge how digital technology has called the "idea" of the book into question, once again.

To explore the potential for human-machine collaboration in reading and writing, we built a machine that makes poetry from the pages of any printed book. Ultimately, this project attempts to imagine the future of the book itself.

## A machine to read books

Our custom-coded reading-machine reads and interprets real book pages, to create a new "[illuminated](#)" book of poetry.

The reading-machine uses Computer Vision and Optical Character Recognition to identify the text on any open book placed under its dual cameras. It then uses Machine Learning and Natural Language Processing technology to "read" the text for meaning, in order to select a short poetic combination of words on the [page](#) which it saves by digitally erasing all other words on the page.

Armed with this generated verse, the reading-machine searches the internet for an image—often a doodle or meme, which someone has shared and which has been stored in Google Images—to illustrate the poem.

Once every page in the book has been read, interpreted, and illustrated, the system publishes the results using an online printing service. The resulting volume is then added to a growing archive we call [The Library of Nonhuman Books](#).

From the moment our machine completes its reading until the delivery of the book, our automated-art-system proceeds algorithmically—from interpreting and illuminating the poems, to pagination, cover design and finally adding the endmatter. This is all done without human intervention. The algorithm can generate a seemingly infinite number of readings of any book.

## The poetry

The following poems were produced by the reading-machine from popular texts:

"deep down men try there  
he's large naked she's even  
while facing anything."

from E.L. James' "[Fifty Shades of Grey](#)"

"how parties popcorn  
jukebox bathrooms depressed  
shrug, yeah? all."

from Bret Easton Ellis' "[The Rules of Attraction](#)"

"Oh and her bedroom  
bathroom brushing sending it  
garter too face hell."

from Truman Capote's

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