

Things Have Forgotten What the Shapes are For

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1. The term 'Laser' is an acronym for "Light Amplification by Stimulated Emission of Radiation", commonly adopted in light research and applications since the 1960s.

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Nonhuman collage,
AI / Machine-learning,
Post-literature,
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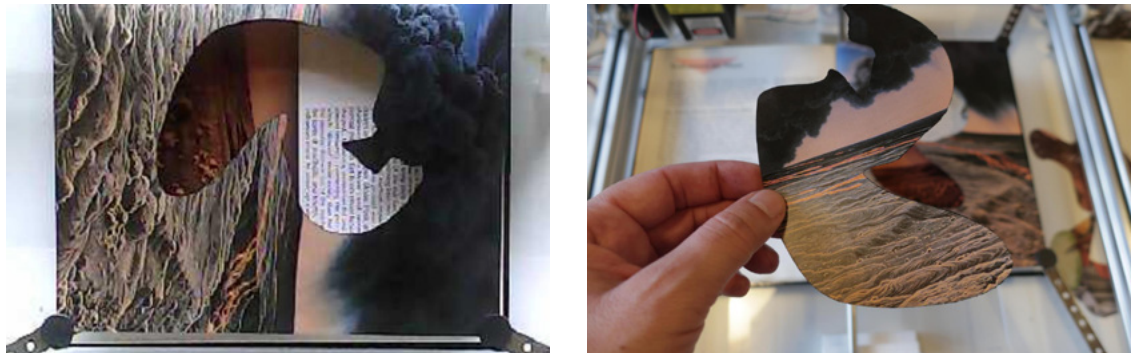
Every burned book enlightens the world. (Emerson 1841)

Things Have Forgotten What the Shapes are For, (2022) is an automated-art-system consisting of a CNC (Computer Numerical Controlled) laser-enabled¹ machine, driven by custom-coded software that removes parts of any book in order to reveal relationships between the images and texts across multiple pages. Each automated 'reading', or burning, generates a unique artefact while destroying the original, producing new 'portals' through the book. An experiment in post-digital publishing that explores the differences between the deconstruction and the destruction of knowledge in the age of the mass-digitalisation of the book.

Fig. 2. 'Life's a Parade', 2022 [Computer Vision process screen captures], from *Things Have Forgotten What the Shapes are For*, Donnachie & Simionato.



Fig. 3. *Things Have Forgotten What the Shapes are For*, Donnachie & Simionato [burning-process images].



4. Generally speaking, most existing human and, consequently, machine-learning reading 'pathways' serve to build meaning by parsing a handful of traditional grid-like organisations of the printed page (i.e. words and images distributed vertically or horizontally on the page; from left to right in Western regions; right to left in Middle-East to Eastern regions of the world).

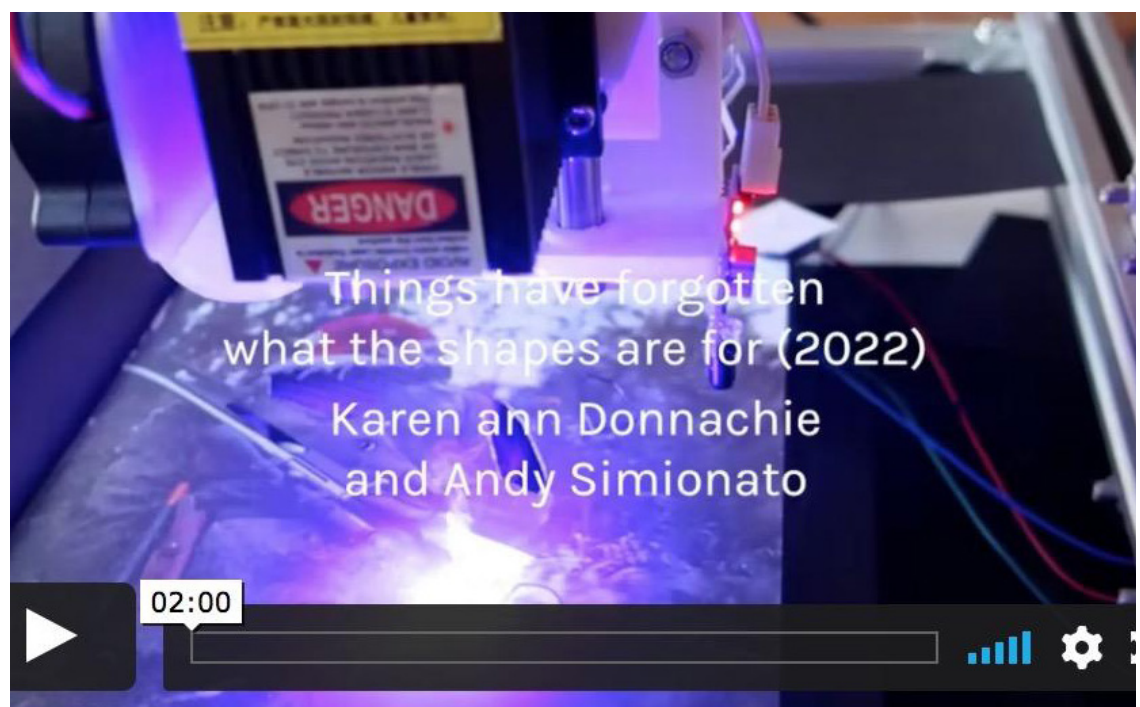
The system iterates through this process for every page of the book, attempting to preserve specific combinations (collages?) of imagery by building many 'wormholes' which travel through the book in ways that appear alien when compared to the typical pathways available for human reading⁴. It is worth noting that the system has been designed to preserve the book's original cover and binding throughout the process. The resulting book appears integral at first, only opened does its evisceration become evident.

The physical removal of the selected shapes from the page occurs by driving a high-powered laser module that, through amplification and focus, uses concentrated light waves to burn the page. This process evokes literary and historic precedents of book burning, censorship and information control in mass media. The project also engages with post-digital publishing practices that seek to explore new materialities of the book as medium in an era where networked computing has disrupted the more traditional roles of the book as vehicle for information and cultural distribution. The AI and machine-learning algorithms, on which our automated-art-system is built, are directly informed by the data-archives resulting from the mass-digitisation of the book by companies such as Google over the last 20 years. Such 'artificial readings' of the book underpin the dual processes of exploring new interpretations of the book, while simultaneously contributing to its destruction.

Once initiated, our system inexorably proceeds in permanently destroying the original book, while attempting to produce a unique new bookwork. Like the Ship of Theseus, progressively transformed through constant repair, our project tests the idea of the book itself. At which point have we removed enough material from the original for it to become a different book, or something else altogether? Finally, what can these remains of the book still offer?

This research is presented as a response, or provocation, to assumptions of beyond-human computational capacity, and its increasing adoption in building meaning through cultural production.

Fig. 4. [Things Have Forgotten What the Shapes are For](#), [process video on Vimeo].



Acknowledgements. Open Source Libraries and software: Python, Tesseract OCR, Natural Language Toolkit (NLTK), Pillow, OpenCV, Tkinter, cnc.js. The artefacts of this work are singular edition artists books, presented as derivative works of found publications. No attempt has been made to contact the publishers, authors or artists of the original texts for permission or endorsement.

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