

Materiality

Intro Frameworks Case Studies Workshop

- Tangible & fixed properties
- Engaging with our senses directly

Materiality

In Print

- print materiality is characterized by its tangible and fixed properties
 - engaging our senses directly

1. Physical & Tactile

- paper texture
- weight
- dimensions
- binding



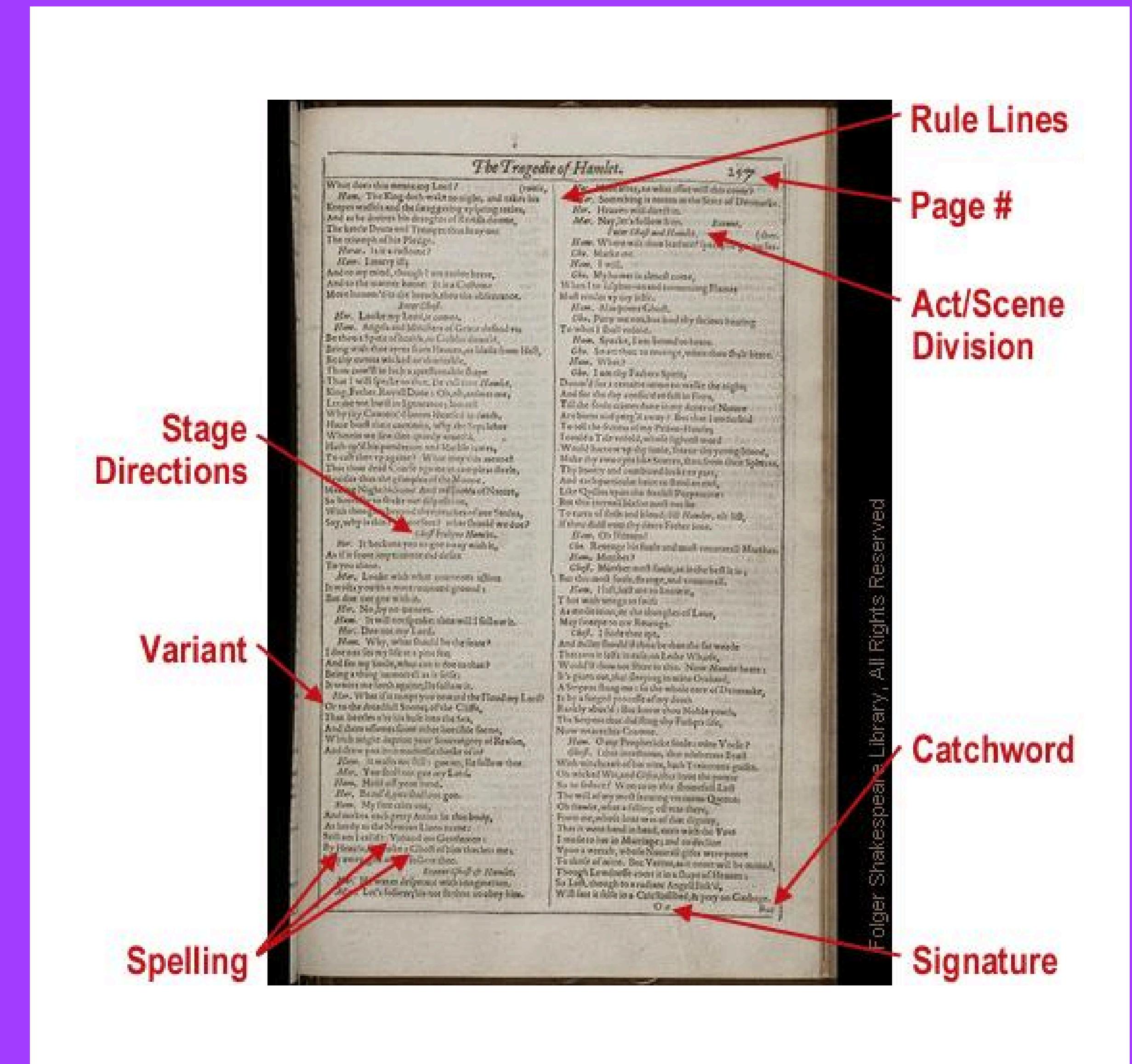
Irma Boom
SHV Think Books

Materiality

In Print

2. Visual Stability

Fixed layout with permanent positioning of elements - doesn't change between readers experiences



4. Chemical Properties

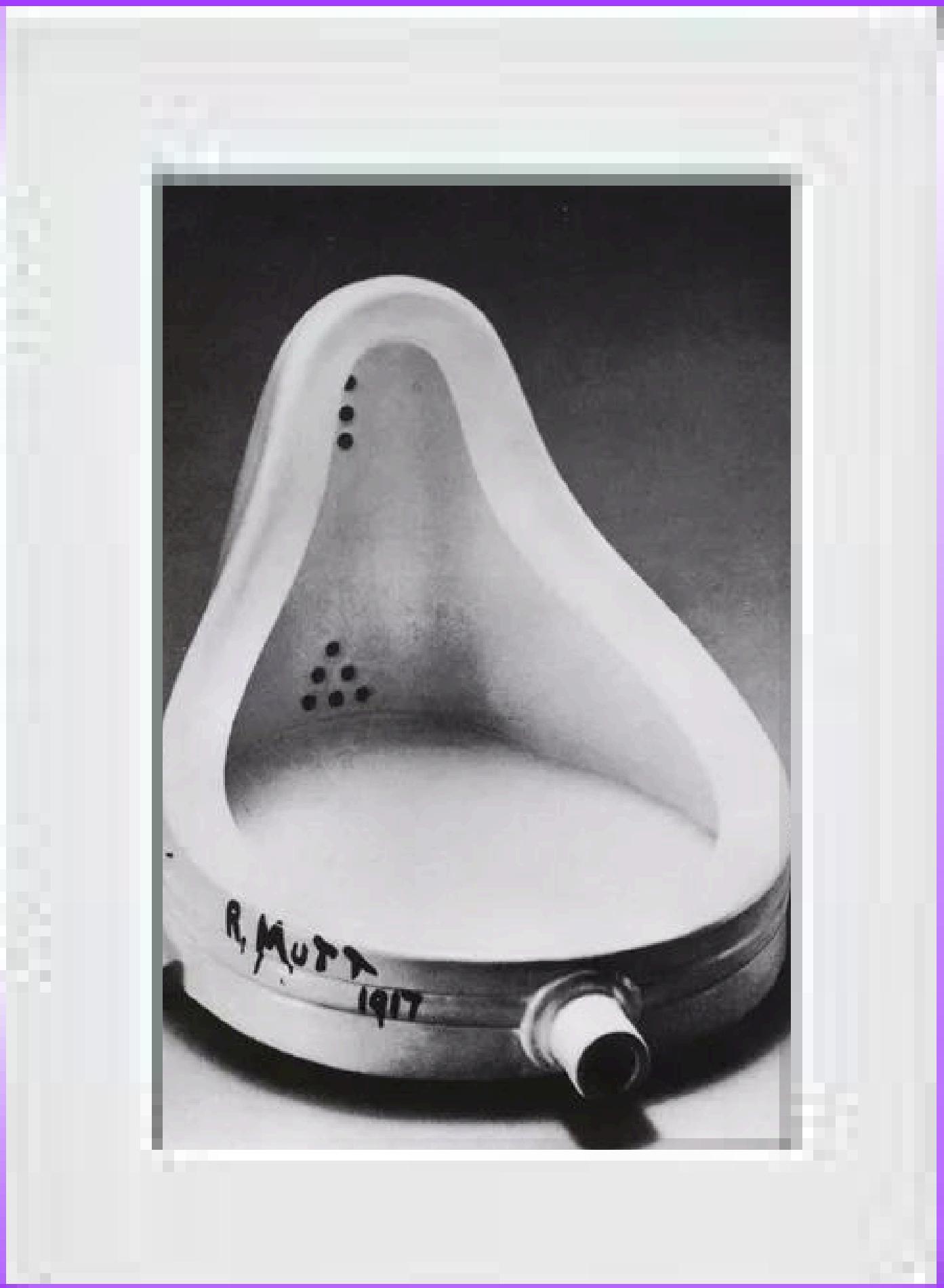
- inks
- paper
- acidity/alkalinity
- environmental factors

Thomas Fisher
Rare Book Library
(Climate and light
controlled)



5. Production Artifacts

- offset
- letterpress
- laser
- inkjet



Fountain
Duchamp
Readymade Sculpture

6. Permanence

Once printed, content cannot be updated without creating a new edition.

- physical & digital properties that define how web content exists & users interact
 - fluid & interactive
 - shapes the creation AND consumption of content

1. Digital Infrastructure

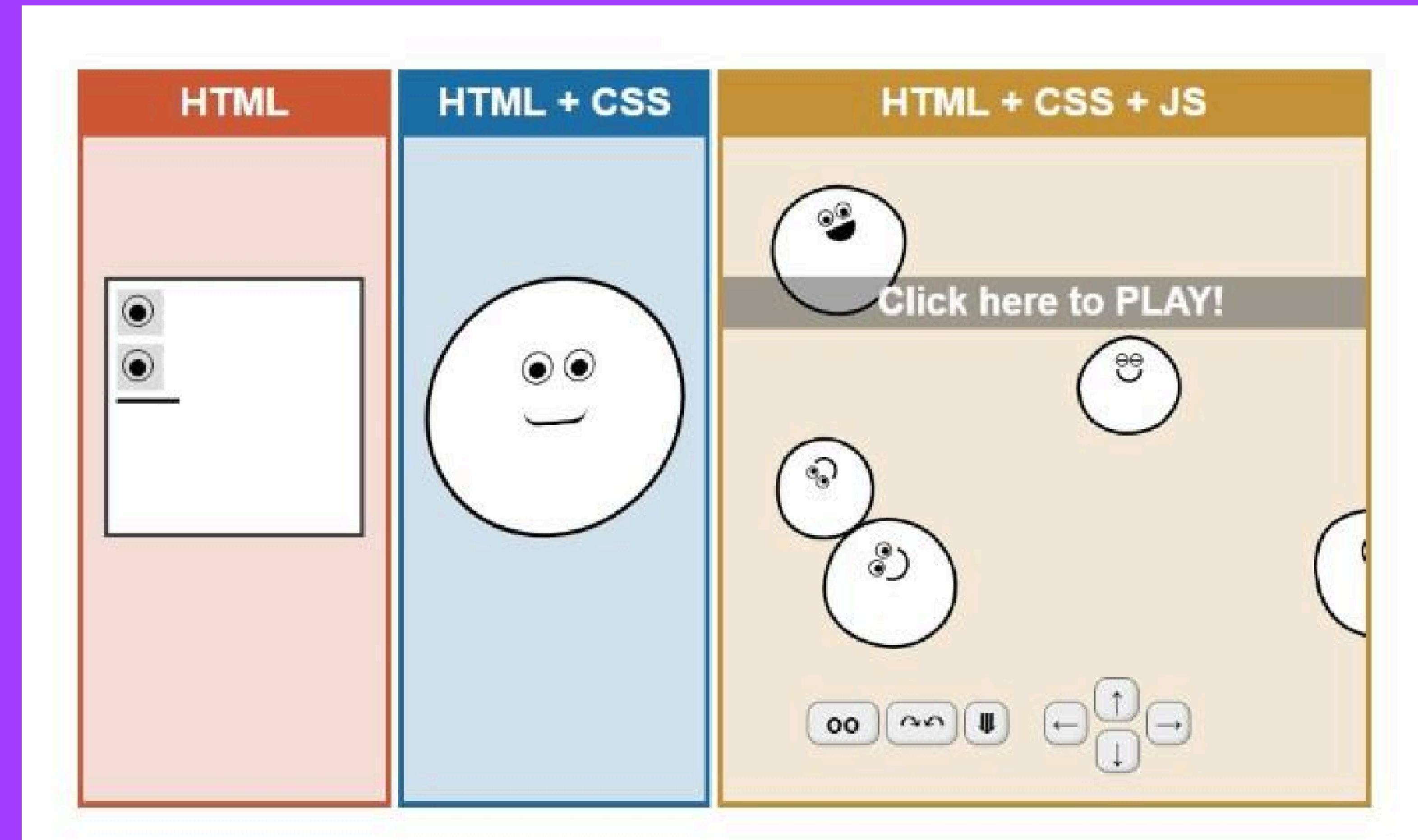
- Physical servers
- Networks
- Cables



Shark's attraction to
undersea fiber-optic
cables

2. Code as Material

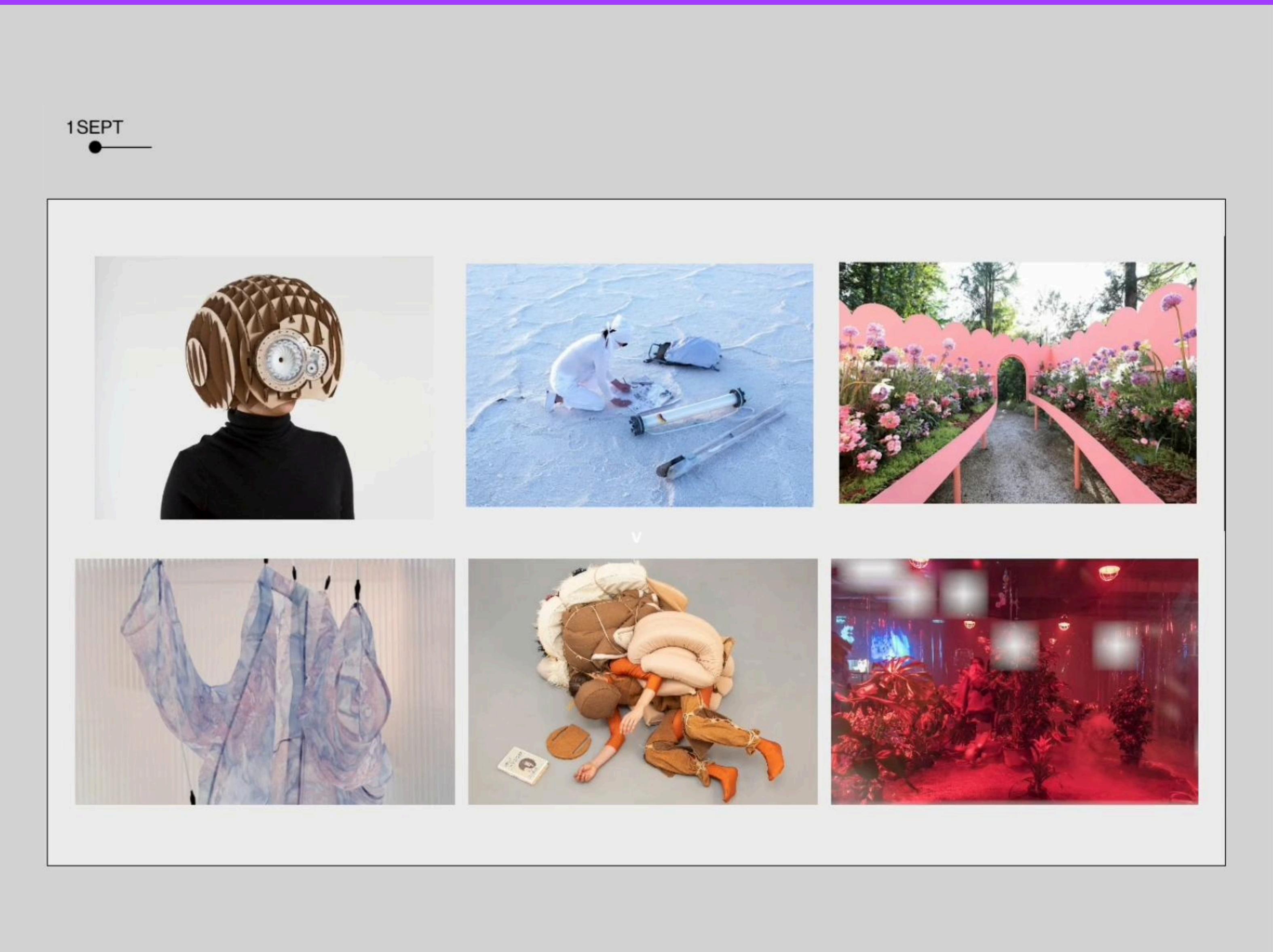
- **HTML**
- **CSS**
- **JavaScript**



3. Fluidity & Responsiveness



4. Temporality



Ephemeral Website,
Image Decay

5. Energy Consumption

The power required to
maintain and access web
content

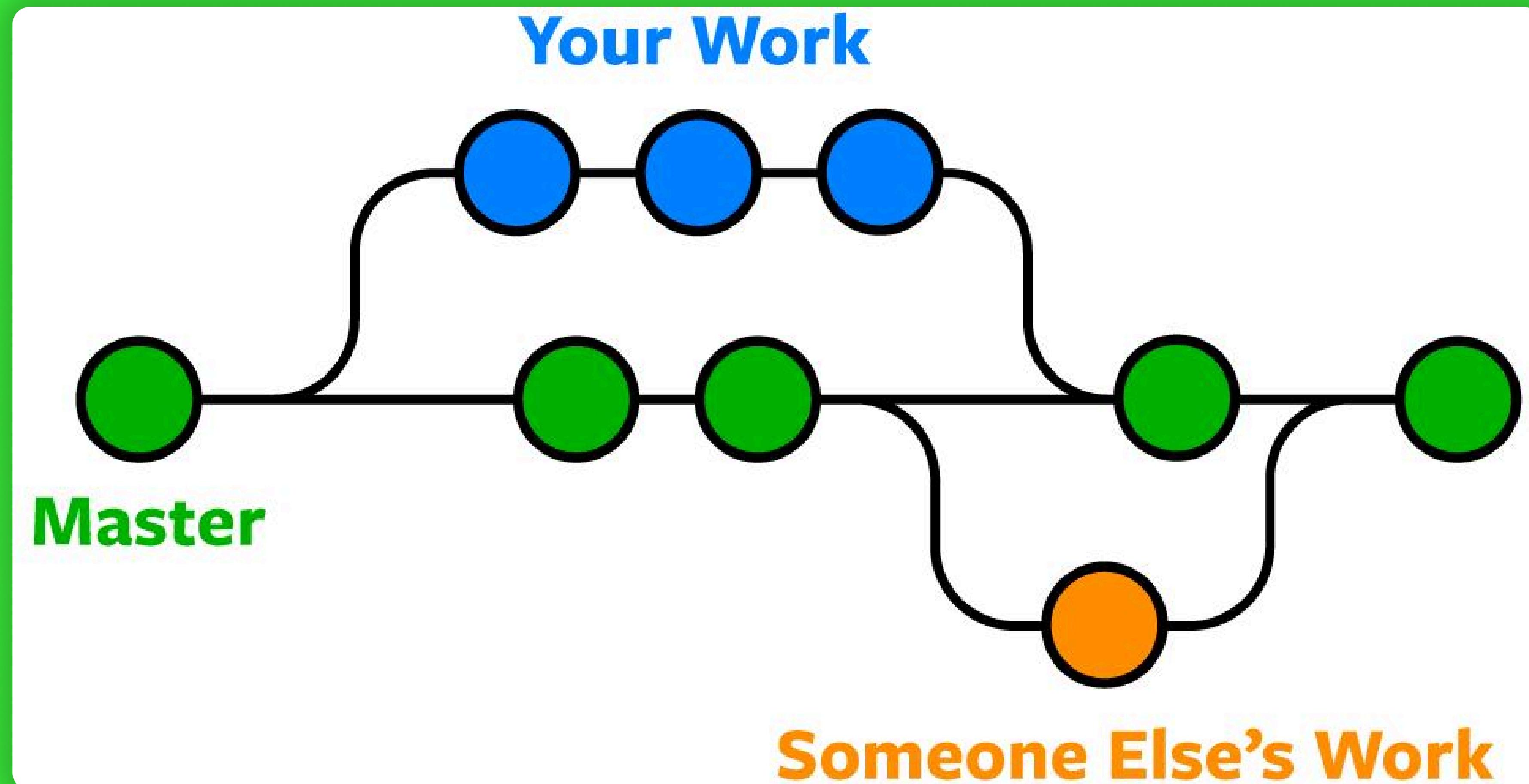
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GIT

- tracks changes to files over time
- allows users to revert to previous versions
 - collaborate on projects
- manage different stages of development

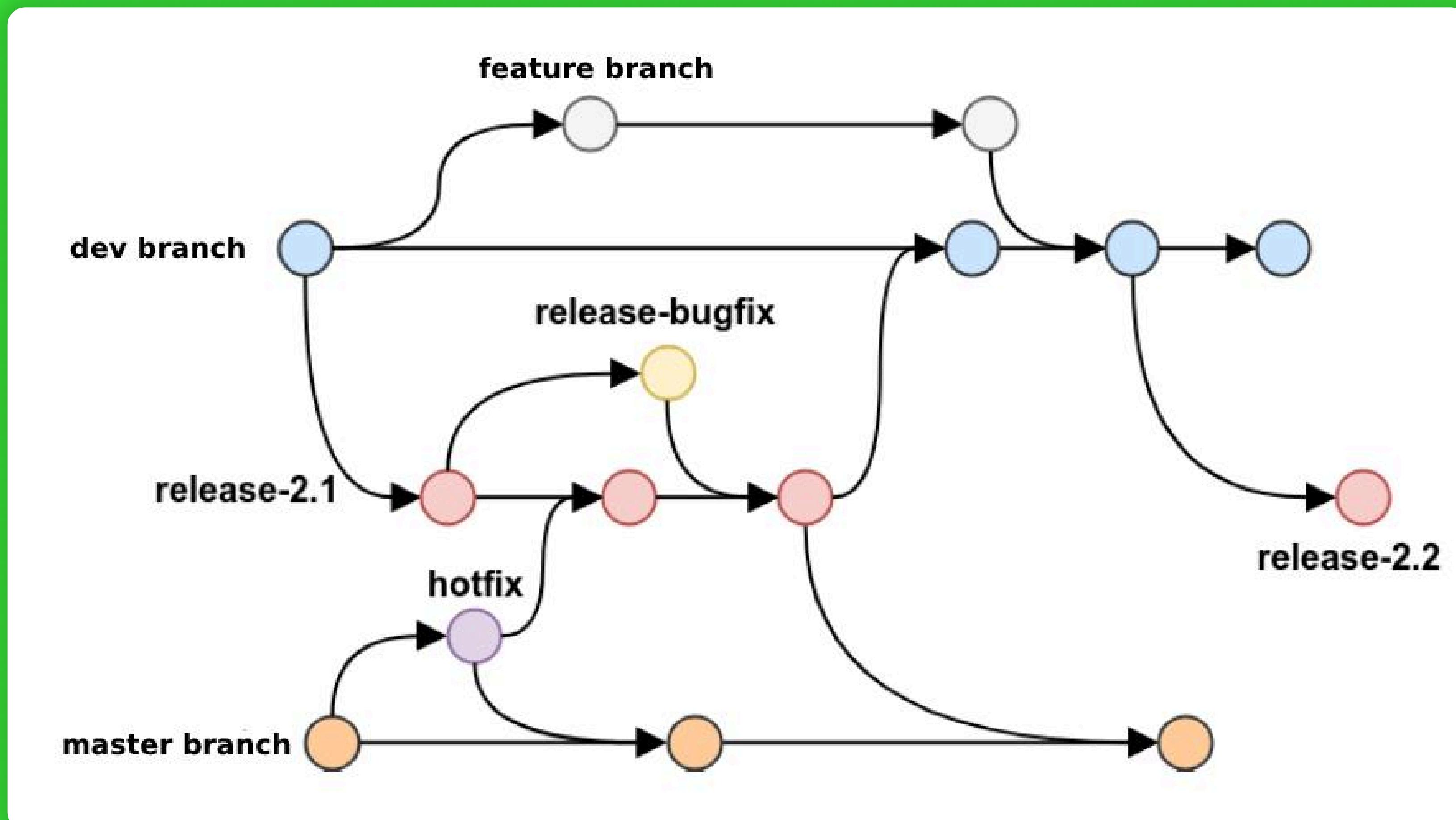
Version Control

Example



Version Control

Example



Version Control

Significance

collaboration 

iteration 

tracking changes 

Responsive Design

What is it?

```
@media {
```

**CSS that allows content to adapt
to different devices**

```
}
```

Responsive Design

Example

The Responsive

90%

Gallery showcasing the finest responsive design

DONATE &

Vibrant award-winning design and creative direction by Maxim (alternatively Maksim) Aksenov, a visual designer and creative director focused on multimedia design for loud brands, young products, studios and agencies globally. Renowned for rapid concepts, captivating visuals, and boundaries-pushing creative direction.

As seen on: Shapero, It's Nice That, Product Hunt, Kalerenka, Brainly, New Look, Asos, PAGE, and Impasse. The Brand Identity, etc.

MM +

Not all those who wander are lost.

* * * * * GET LOST WITH CONFIDENCE TERRA takes you on a journey into the unknown, but don't worry, it always brings you back to where you started. Along the way, whimsical milestones ensure you're on track.

Responsive Design

Significance

**print is fixed
web is responsive**

Servers & Hosting

What is it?

physical books exist as independent objects
web content requires continuous maintenance of server systems

Servers & Hosting

Example



**a persistent dependency that
doesn't exist in print media**

Network Latency & Caching

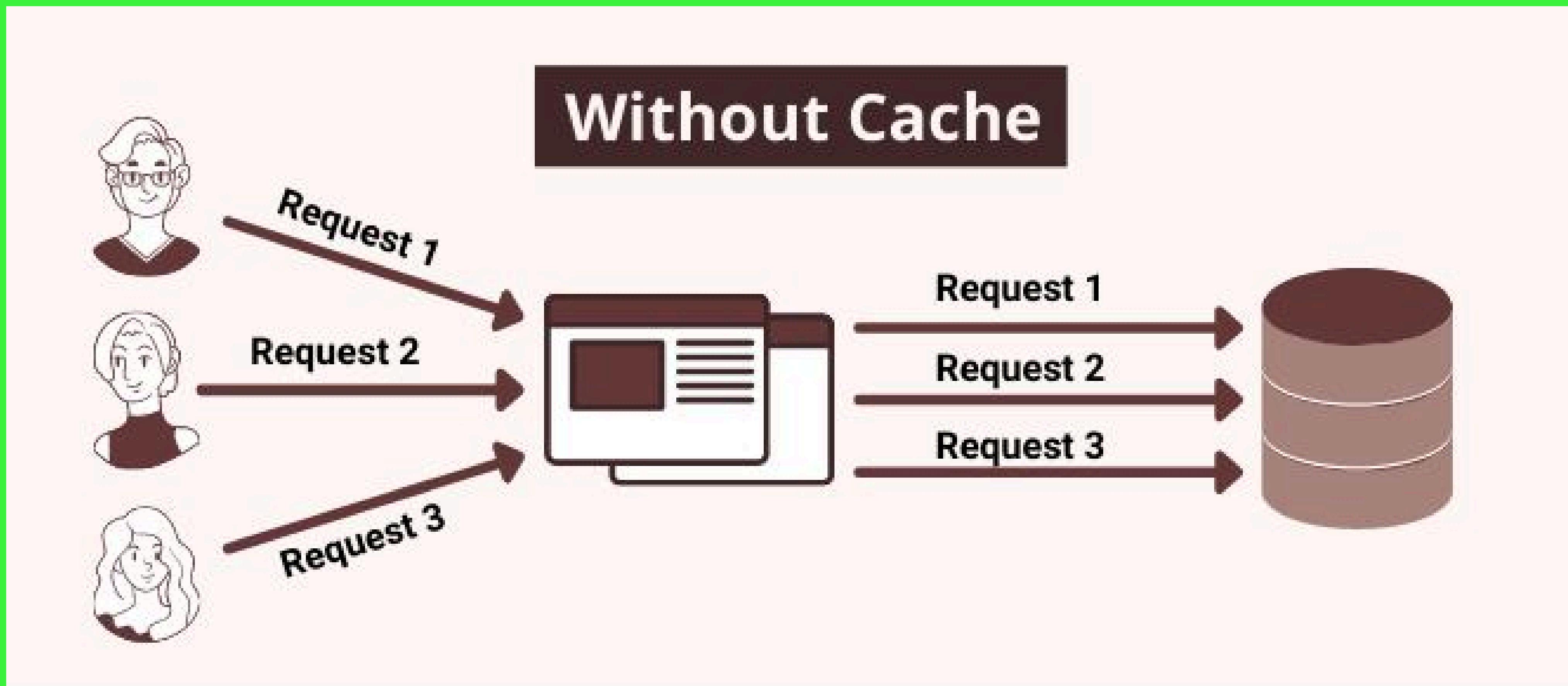
What is it?

Network Latency: the time delay between requesting web content and receiving it

Caching: stores copies of frequently accessed content closer to users to reduce these delays.

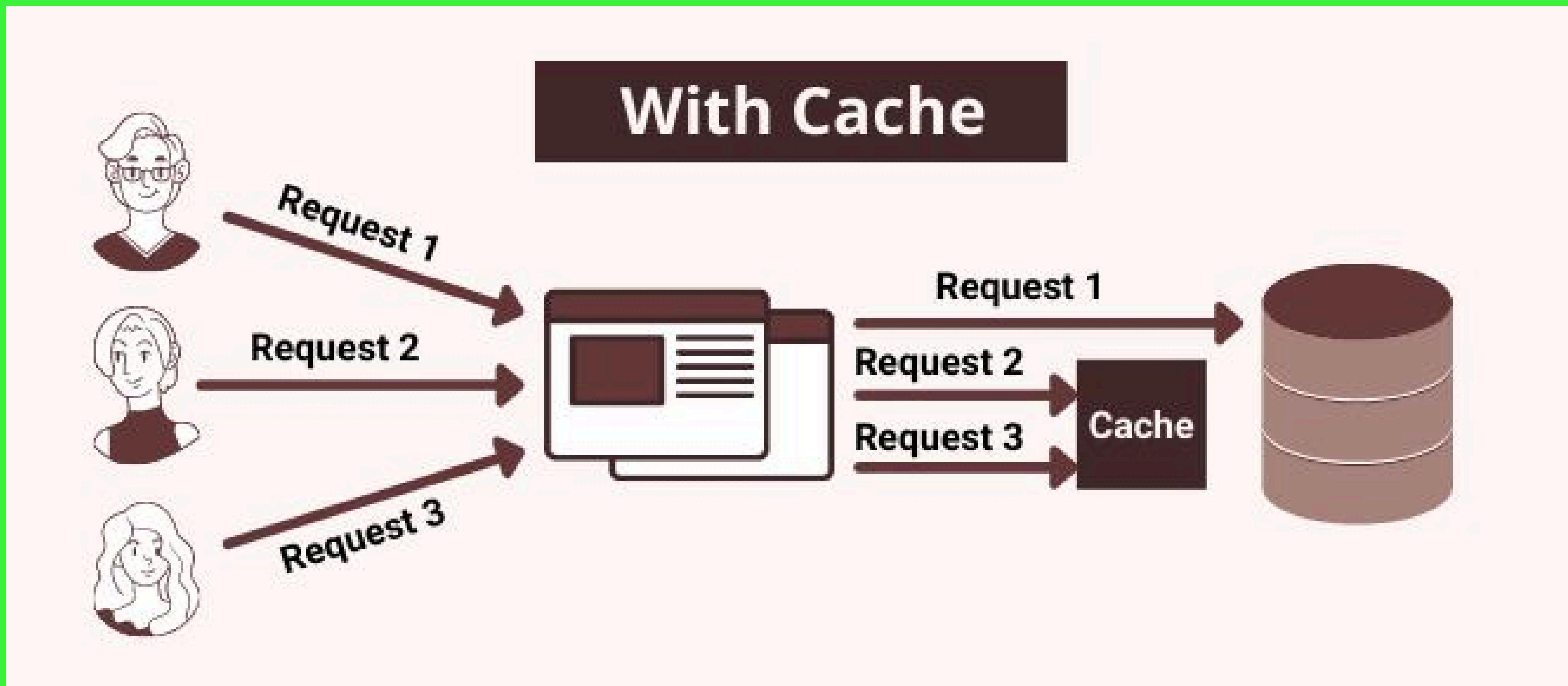
Network Latency & Caching

Example



Network Latency & Caching

Example



**variable loading times for web
that doesn't exist in print**

**varied & inconsistent user
experiences**

Software that provides a user-friendly interface for creating, editing, organizing, and publishing digital content without requiring technical coding knowledge, allowing multiple contributors to collaborate on web content.

Content Management System

Example

The screenshot shows the WordPress admin interface for creating a new post. The left sidebar is dark-themed and includes links for Dashboard, Kinsta Cache, Posts (which is selected), All Posts, Add New, Categories, Tags, Media, Pages, Comments, Appearance, Plugins (with a red notification badge), Users, and Tools. The main content area has a title 'Add New Post' and a text editor containing the text 'Look How Easy This Is'. Below the title is a permalink field showing 'http://test.kinsta.com/look-how-easy-this-is/'. The text editor toolbar includes buttons for Paragraph, Bold, Italic, and various alignment and list options. To the right of the editor is a 'Publish' sidebar with options for Save Draft, Preview, Status (set to Draft), Visibility (set to Public), Publish immediately, SEO (set to Not available), Move to Trash, and a prominent blue Publish button. At the bottom of the sidebar is a 'Format' section with radio buttons for Standard (selected), Aside, Image, and Video.

Test Site 4 0 + New Clear Cache Howdy, testadmin

Dashboard Kinsta Cache

Posts

All Posts Add New Categories Tags

Media

Pages

Comments

Appearance

Plugins 1

Users

Tools

Add New Post

Look How Easy This Is

Permalink: <http://test.kinsta.com/look-how-easy-this-is/> Edit

Add Media

Visual Text

Paragraph B I “ ” [link] [list] [list-item]

It's so easy to do things with a content management system. No code required.

Publish

Save Draft Preview

Status: Draft [Edit](#)

Visibility: Public [Edit](#)

Publish immediately [Edit](#)

SEO: Not available

[Move to Trash](#) **Publish**

Format

Standard

Aside

Image

Video

Print = linear production process

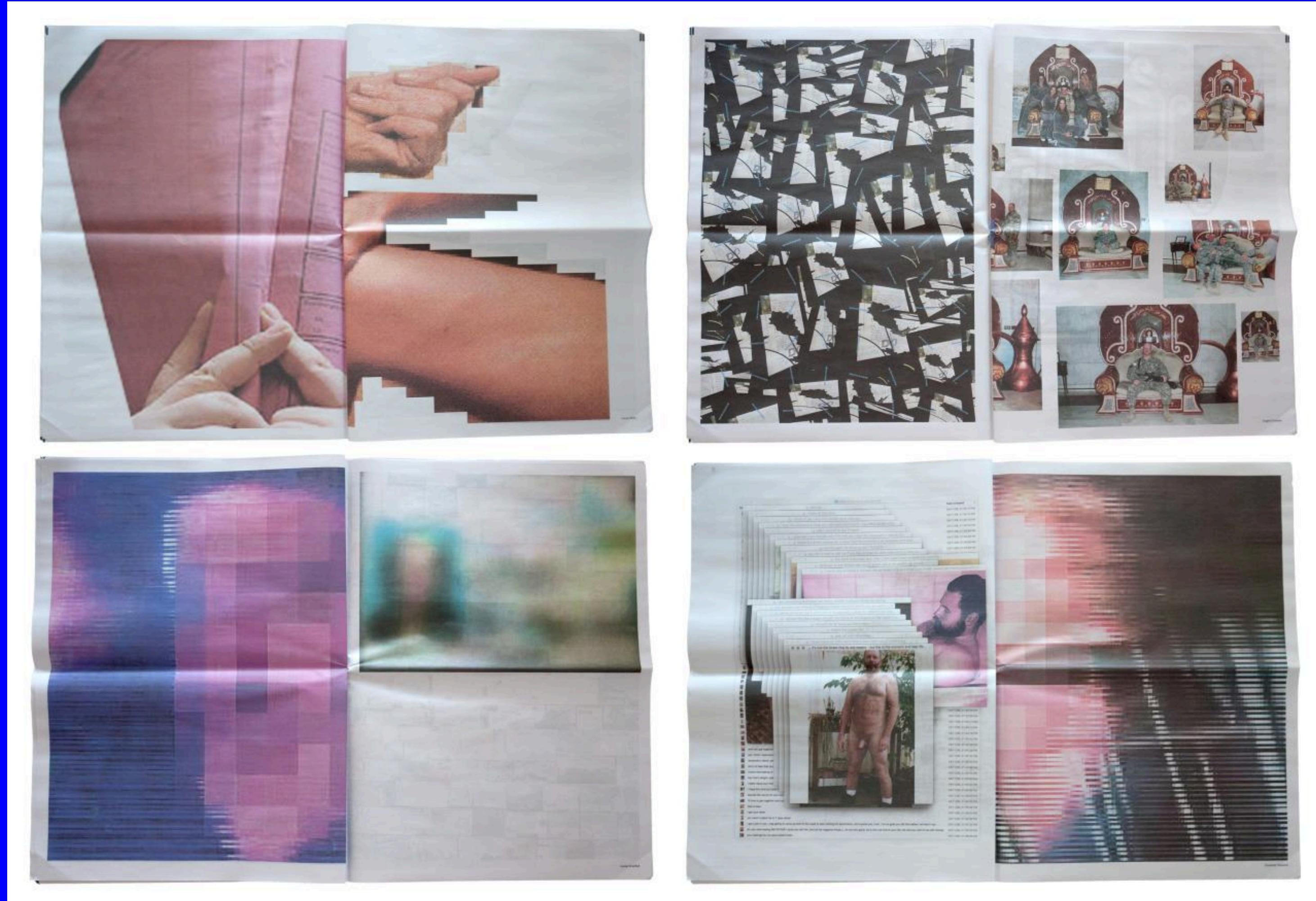
Web = democratized publishing

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Paul Soulellis, Printed Web



Paul Soulellis, Printed Web



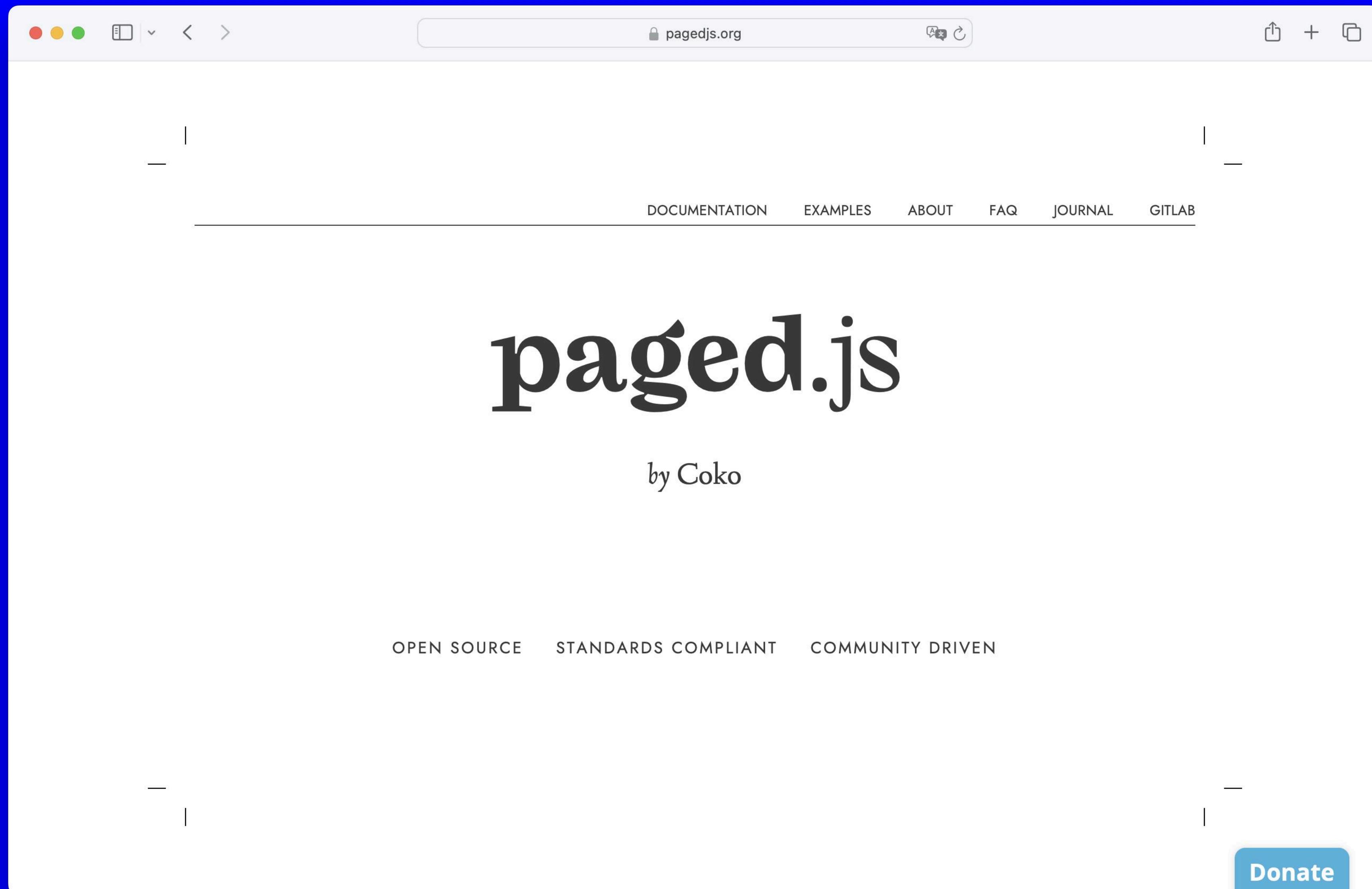
Page spreads from
Printed Web #4

Paul Soulellis, Printed Web



Printed Web publications
displayed at Transmitter
Gallery, Brooklyn, NY,
April 2016

Julia Blanc, Paged.js



The screenshot shows a web browser window with the URL 2x4.org. The page has a minimalist design with a white background. At the top left is the text "2 × 4". At the top right are links for "Work", "Ideas", "About", and a search icon. Below this is a large, bold, black "WYSIWYG" text. A horizontal line separates this from the author information below. The text "MICHAEL ROCK / 2014" is displayed. Below this is a block of text in a bold, sans-serif font:

**I have nothing to say
and I am saying it
and that is
poetry.**

— John Cage, *Lecture on Nothing*

At the bottom of the page, there is a note in a smaller font:

This sentence is a work in progress: I am writing it over and over, making small adjustments, or radical edits, until at some point I declare it finished.

Low-tech Magazine, Solar Powered Website

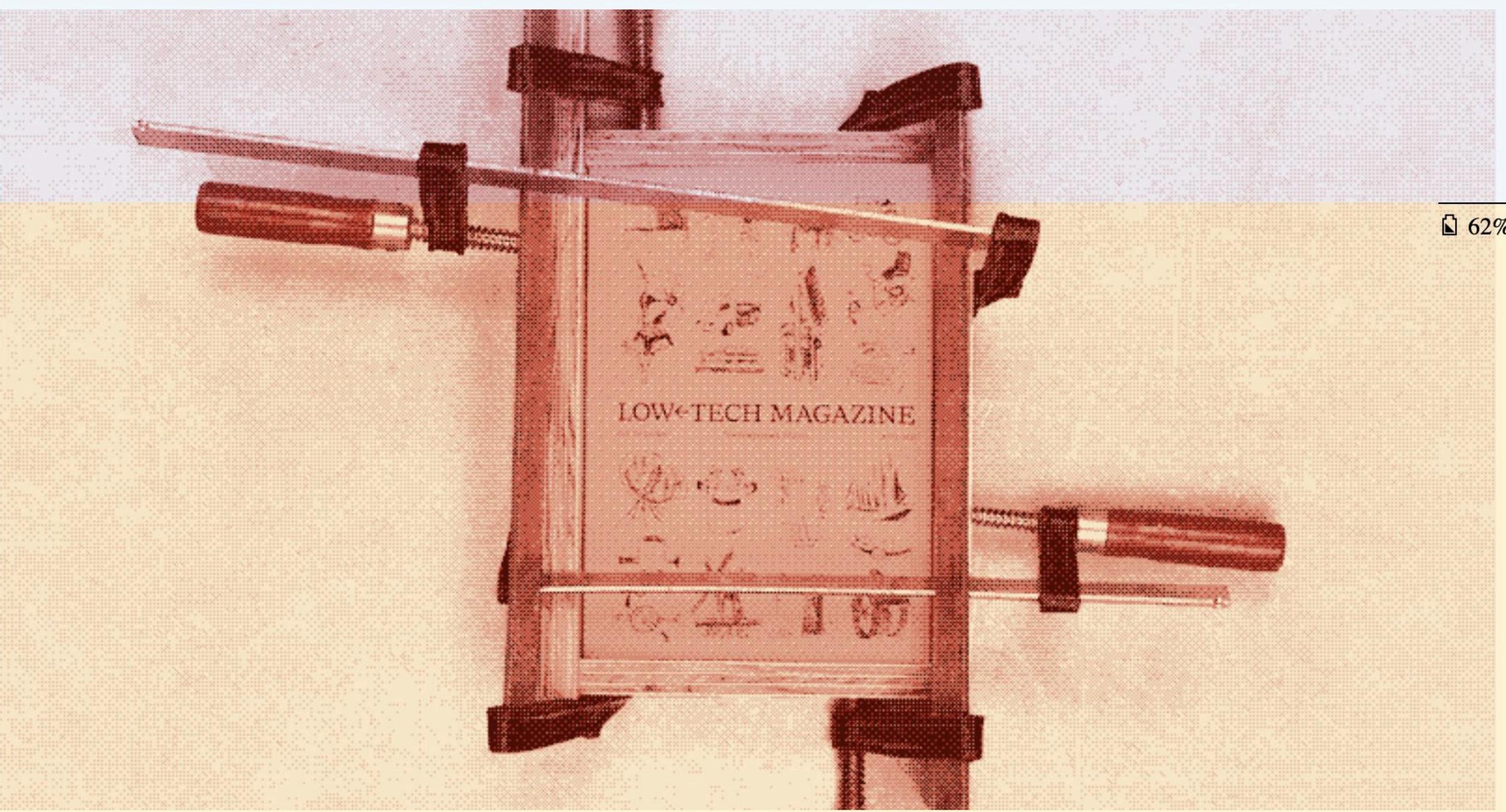
This is a solar-powered website, which means it sometimes goes offline ☀

[About](#) | [Low-tech Solutions](#) | [High-tech Problems](#) | [Obsolete Technology](#) | [Offline Reading](#) | [Archive](#) | [Donate](#) | [NTM](#) | [✉](#) | [RSS](#)

The Compressed Book Edition

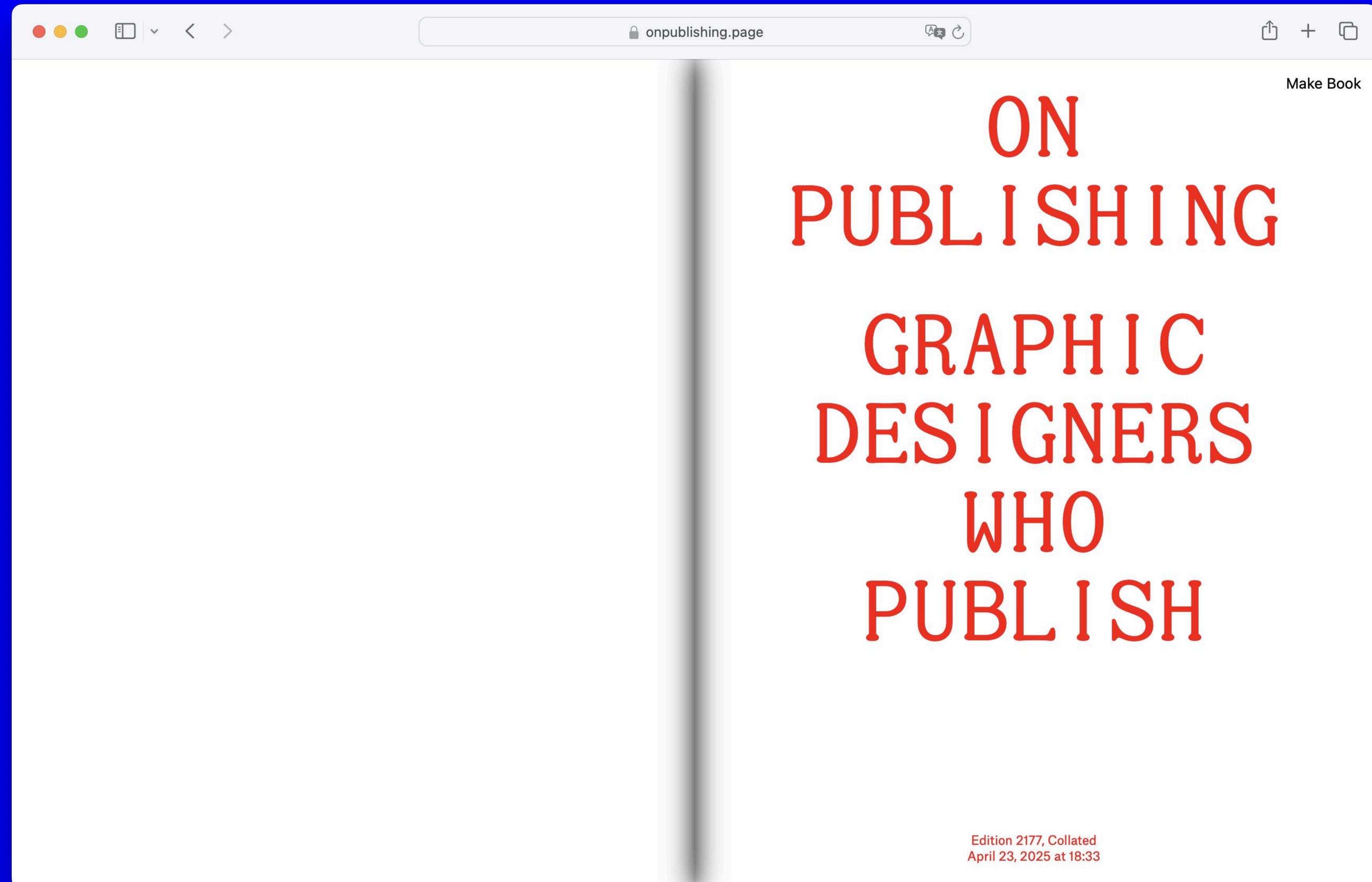
How to make books more sustainable? Inspired by the image compression on our solar-powered website, we squeezed the article catalog of our three-volume book series into just one book.

March 20, 2025

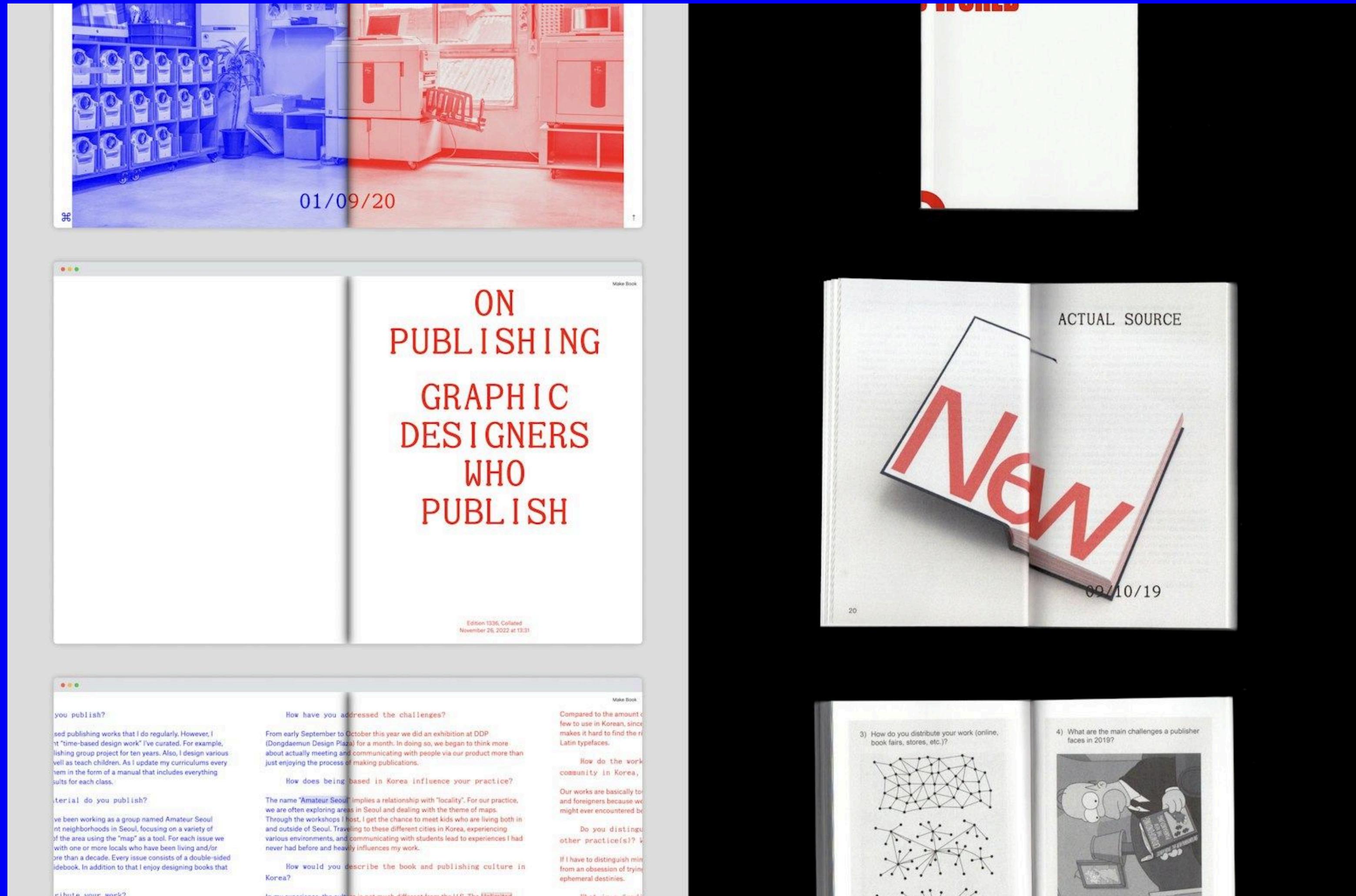


571.12KB ↑

On Publishing



On Publishing



Comparison of Web Page and Printed

Graphic Design in the Post Digital Age

The screenshot shows a web browser window with the URL postdigitalgraphicdesign.com. The page features a large, stylized title "R/APP/ÉL·3/AS T/DÉ" in red and blue. Below it, the text "Interviewed by Rob van Leijsen" is visible. A bio for Raphaël Bastide follows, mentioning his work in art, design, and music. To the right, there are two sidebar columns. The first column, titled "13 Practices + Econ< / Design Practice", contains an interview with Emilie Pillet about her first collaboration with Raphaël Bastide. The second column, titled "Field of Graphic Design", contains an interview with Samuel Weißmann about his thesis project, Grafik Kiosk.

GDP-DA ≡ R/APP/ÉL·3/AS T/DÉ

Raphael Bastide

Interviewed by Rob van Leijsen

<Raphaël Bastide>1 lives, works, and teaches art and design in Paris. Bastide creates transitional musical instruments, ephemeral web pages, ambiguous computer programs, critical network architectures, revisable and version-controlled sculptures, and quarantine-driven coding performances. He is a free/open-source software enthusiast, and is involved in several collectives related to free culture and creation, such as PrePostPrint and the Velvetyne Type Foundry.

FACSEQ Player (Alpha). Raphaël Bastide, 2019.

Each Page a Function. Raphaël Bastide, 2019.

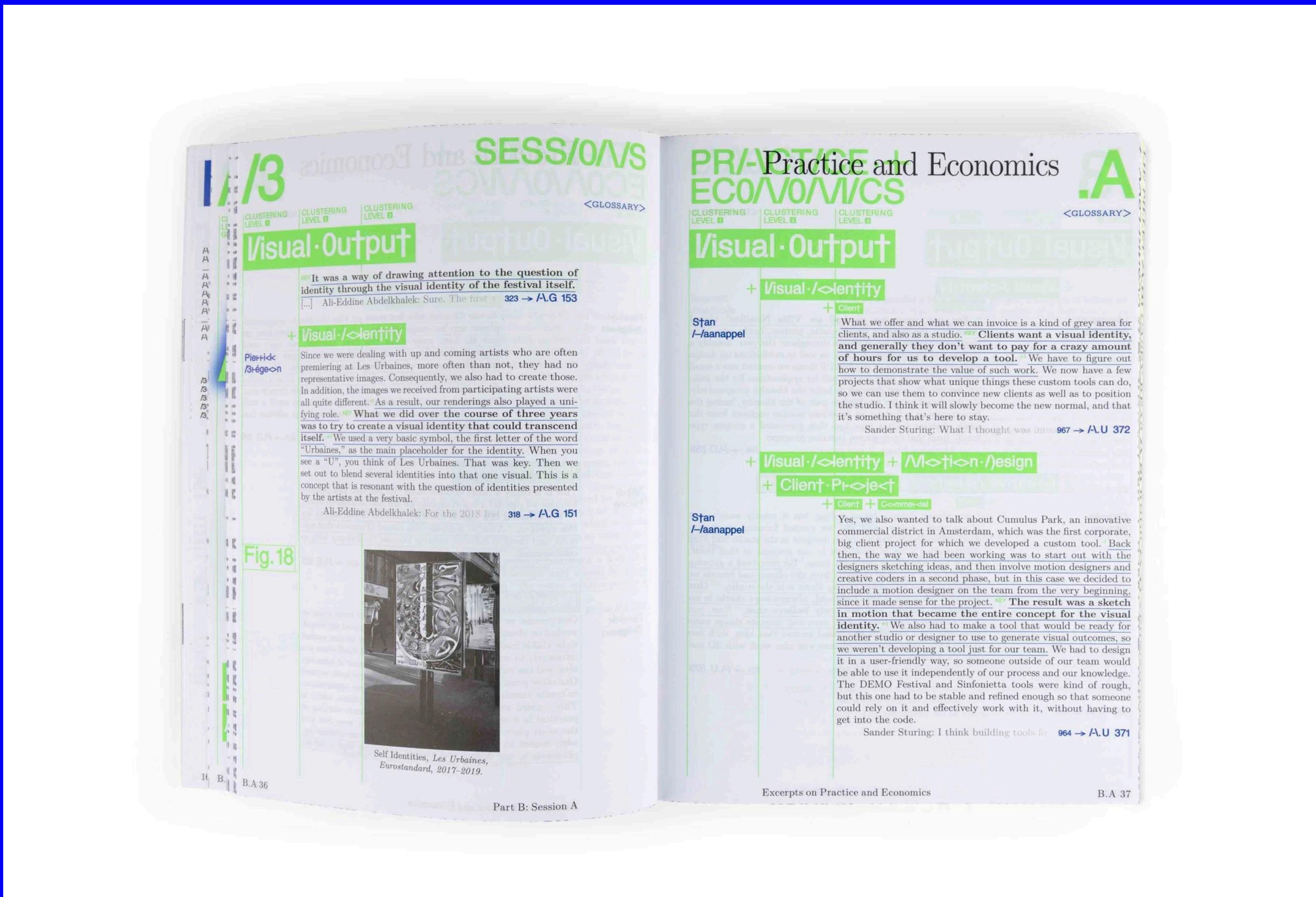
Emilie Pillet

Yes. Our first collaboration was for a ⁷⁹³ project I did at ECAL, an animated poster. I created a pattern in Illustrator and he saw the possibility of rendering it more dynamic with code. That got me interested in how code could mesh with my design practice. When I was working on my diploma project I learned some basics, but unfortunately I quickly forgot it all because I did not practice enough. So now I'm learning again, and I will see where it leads. I am on the lookout to see how creative coding can be implemented in my design practice, but it takes a long time to master a programming language.

Samuel Weißmann

Grafik Kiosk was my thesis project with ⁹⁹⁷ Jonas Hegi for our Bachelor's Degree in Visual Communication at ZHdK, back in 2011. While I was in school, I already became interested in future issues relating to the profession of graphic designer. This continued during my internship at Lehni-Trüb, where they were already thinking about process automation in the field of graphic design, such as templates and PDF to book. Jonas was an intern at NORM, and he was interested in design

Graphic Design in the Post Digital Age



Quick guides to making beautiful PDF documents from HTML and CSS

The screenshot shows a web browser window with the URL css4.pub. The main content is a guide titled "Quick guides to making beautiful PDF documents from HTML and CSS". Below the title, there is a section titled "Cheat sheets with reusable code". A paragraph describes Prince as a powerful converter and provides a list of features. At the bottom, there are two examples of generated PDF documents: one featuring a rhinoceros and another featuring geese.

Quick guides to making beautiful PDF documents from HTML and CSS

Cheat sheets with reusable code

Prince is a powerful HTML-to-PDF-via-CSS converter which offers advanced layout features. All your existing CSS skills can be used, and the guides below will teach you how to use the new features. To try the code for yourself, download and install Prince.

- Styling Tufte for screen and print
- CSS Grids
- Variable fonts
- Business letters
- Musical notation
- Printing Tufte with CSS
- Boxtracking API
- Page and column floats

Geese

Our garden correspondent

Geese

Our garden correspondent

Quick guides to making beautiful PDF documents from HTML and CSS

The screenshot shows a web browser window with the URL `css4.pub`. The page title is "Starting point". The content consists of a paragraph of placeholder text ("Lorem ipsum") with a `span` element containing a footnote. To the right, the browser displays the generated HTML and CSS code.

HTML:

```
span { float: footnote }
...
<p>Lorem ipsum<span>Lorem Ipsum is a placeholder text, commonly used in graphic design</span> dolor sit amet...
```

CSS:

```
@page {
    size: 80mm;
    margin: 10mm;

    @footnote {
        border-top: solid red thick;
        background: beige;
    }
}

span { float: footnote }
```

The browser interface includes standard window controls (red, yellow, green buttons), a toolbar with icons for search, refresh, and other functions, and a status bar at the bottom.

Quick guides to making beautiful PDF documents from HTML and CSS

CSS FOR PUBLISHING

How to use HTML and CSS for printing

Genre	HTML	PDF	What to look for
Textbook	HTML	PDF	Sidenotes are often placed in the outside margin of textbooks, and in the PDF version of document they alternate between left and right side. Figures and tables float to the top and bottom of pages, and wide content extend into margins. To run this example, use a recent version of Prince , and follow these instructions .
Dictionary	HTML	PDF	Dictionaries often use multi-column layout to save space, and running headers indicate keyword entries on that page. Notice how each letter is marked on a tab on right pages. The fonts used in the PDF version are <i>Satyr</i> and <i>Faunus</i> , made by <i>Monokrom</i> . Archive.org has a scanned copy of the printed edition from 1910.
Scientific Journal	HTML	PDF	The USENIX conference Proceedings has a two-column layout with figures floating to the top and bottom. In the HTML source of this sample document, references are inline but appear at the end by way of JavaScript.
Newspaper article	HTML	PDF	A typical newspaper article is laid out in several columns, with images spanning two columns.
Textbook	HTML	PDF	This book, <i>Cascading Style Sheets – Designing for the Web</i> , was the first printed book written in HTML and CSS. The sample document contains the frontmatter and first chapter.
Fiction	HTML	PDF	Project Gutenberg has published Oliver Twist and many other classic titles in HTML. By adding a small style sheet, a PDF file can be created. A small script automatically generates the Table of Contents.
Letter	HTML	PDF	This business letter uses several font families, and even a script to find the current date. The footer at the bottom of the page floats there by itself.
Letter	HTML	PDF	Why not write business letters in HTML? They can easily be converted to PDF and attached in email. This is a minimalist example to showcase how simple it can be. Click on the HTML link and use View/Source in your browser to see!
Poetry	HTML	PDF	This document reconstructs the first edition of Henrik Ibsen's poetry collection, first published in 1871. His typographers in Copenhagen didn't have all the Norwegian letters in their typecases, so they improvised. The modern-day equivalent is to modify font files, and to hand-code other errors they made. The poems are in Norwegian, but a section in English describes the process.
Short story	HTML	PDF	This short story by Gogol is found on Project Gutenberg (local copy) . The text was cut/pasted into a text editor and a few HTML tags were added, resulting in a basic HTML version . To achieve better quote marks, the quotation marks (") in the text was replaced with elements. After that, a style sheet was added to format the text into a PDF file. The <code>text-replace</code> property is used to further improve punctuation, and to replace <i>St. Petersburg</i> with <i>Leningrad</i> . A few footnotes and figures were added to the story on a whim. Note how the style sheet expresses that footnotes should be inline, one figure should float to the top of the column, and the other figure floats to the top of the page.
Essay	HTML	PDF	Thomas Malthus published his essay on <i>Principles of Population</i> in 1798. At the time, the descending "s" was in fashion and this reconstruction uses the 'text-replace' property to recreate the original printed book (Archive.org has a scanned copy). Also, the document uses ligatures and the Table of Contents is generated with a script.
TOC + index	HTML	PDF	A table of contents (ToC) and an index are basic ingredients in a book. It is hard for authors to write these, as page numbers will change during formatting. This document shows how to offload the task to JavaScript, which happily keeps track of page numbers. Also, the script is able to combine page ranges so that the index doesn't show «3, 4, 5», but rather «3-5». This example requires a version of Prince released in May 2020 , or newer.

Intro Frameworks Case Studies Workshop

Workshop

Let's explore the differences between web and print!

Workshop

Split Into 2 Groups

Group A (web)

- start with this GitHub repo
- split content evenly
- each group member designs a page on the website
- think about how a web format can influence design
- push to the repo (be careful with merge conflicts!)
- present to the class

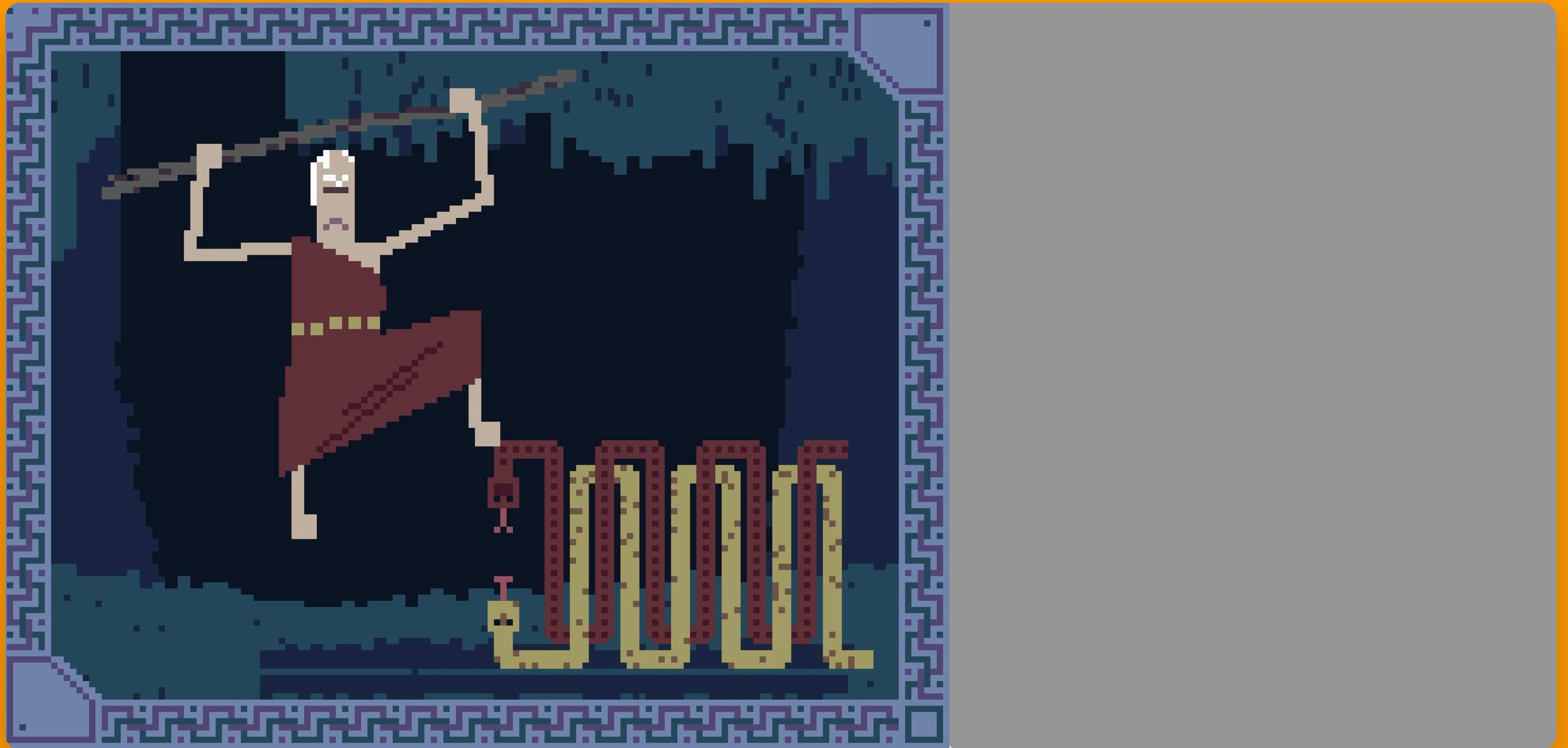
Group B (print)

- start with this InDesign package
- split content evenly
- each group member designs a spread for the zine
- think about how a printed form can influence design
- combine and print one copy on 6th or 8th floor printer
- present to the class

Take a moment now to download and set up the GitHub repository or InDesign package. Familiarize yourself with the content—we'll be working with sample text from a Wikipedia page.

Web Design

What design moves can only exist in the web space?



WIKIPEDIA

The Free Encyclopedia

English
6,974,000+ articles

Русский
2 036 000+ статей

Español
2.021.000+ artículos

中文
1,470,000+ 条目 / 條目

日本語
1,457,000+ 記事

Deutsch
3.001.000+ Artikel

Français
2 674 000+ articles

Italiano
1.910.000+ voci

Português
1.146.000+ artigos

Polski
1 652 000+ haseł

| EN 🔍

———— [Read Wikipedia in your language](#) ————



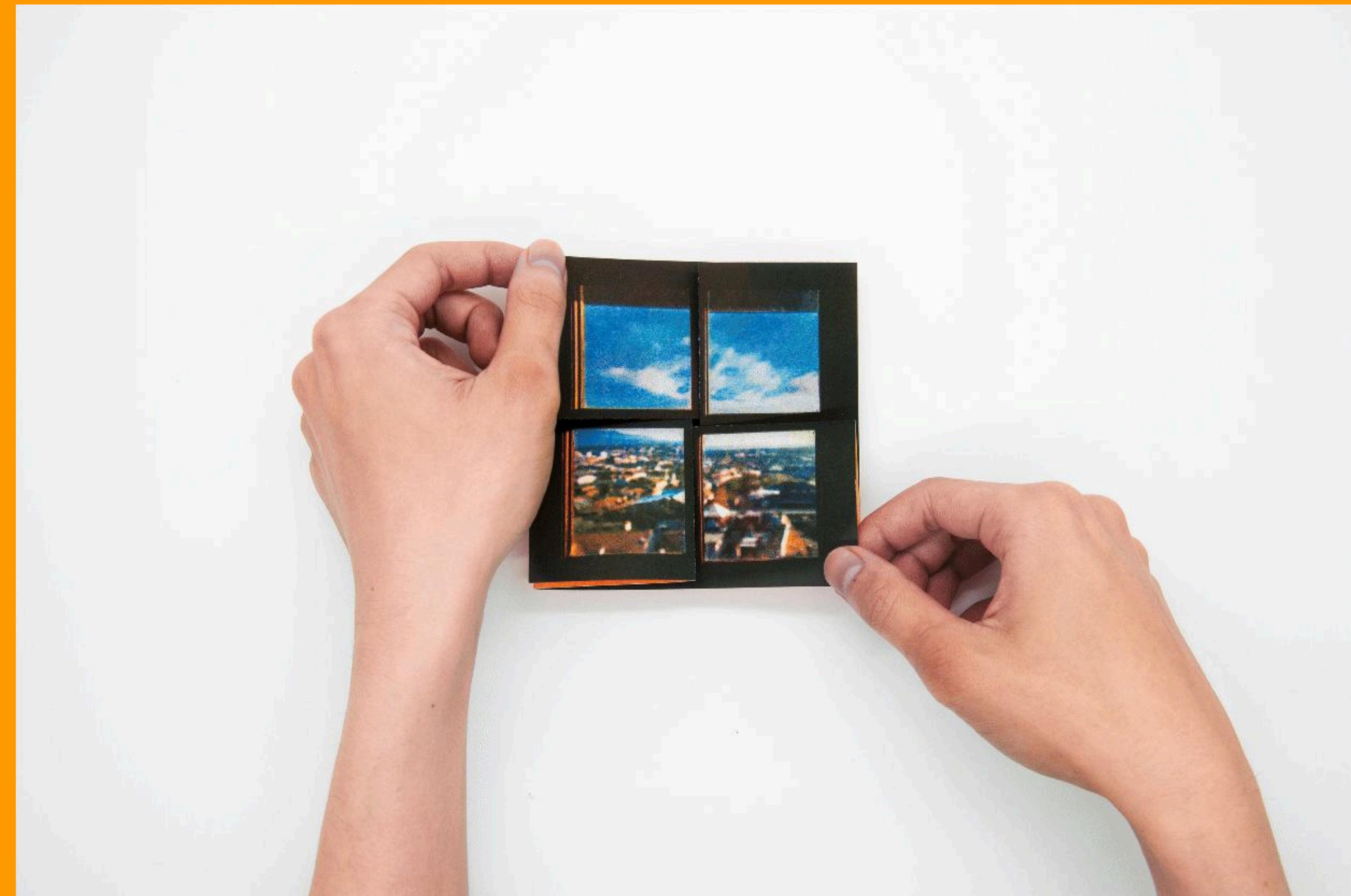
The screenshot shows the Internet Archive homepage with a dark header bar. The header includes the "INTERNET ARCHIVE" logo, navigation links for WEB, TEXTS, VIDEO, AUDIO, SOFTWARE, and IMAGES, and user options for SIGN UP | LOG IN and UPLOAD. Below the header is a search bar with the placeholder "Search the history of over 928 billion web pages on the Internet." A prominent red "WayBack Machine" logo is centered above a search input field. The main content area features a large white box containing a black icon of a classical building with four columns. To the right of the icon, text describes the Internet Archive as a non-profit library of millions of free texts, movies, software, music, websites, and more. Below this text are icons representing different archive categories: 928B, 44M, 14M, 13M, 3.1M, 1.2M, 5.2M, 272K, and 2.7M. A search bar with a "GO" button and a link to "Advanced Search" are also present. To the right of the main content box is a sidebar titled "Archive News" with links to various news articles. At the bottom of the page, there is a section titled "New to the Archive?" with links to "How to search the archive", "How to download files", "Listening to music on the archive", and "How do I find old web pages?". A "Top Collections" section and a "Terms of Service (last updated 12/31/2014)" link are also visible.

Print Design

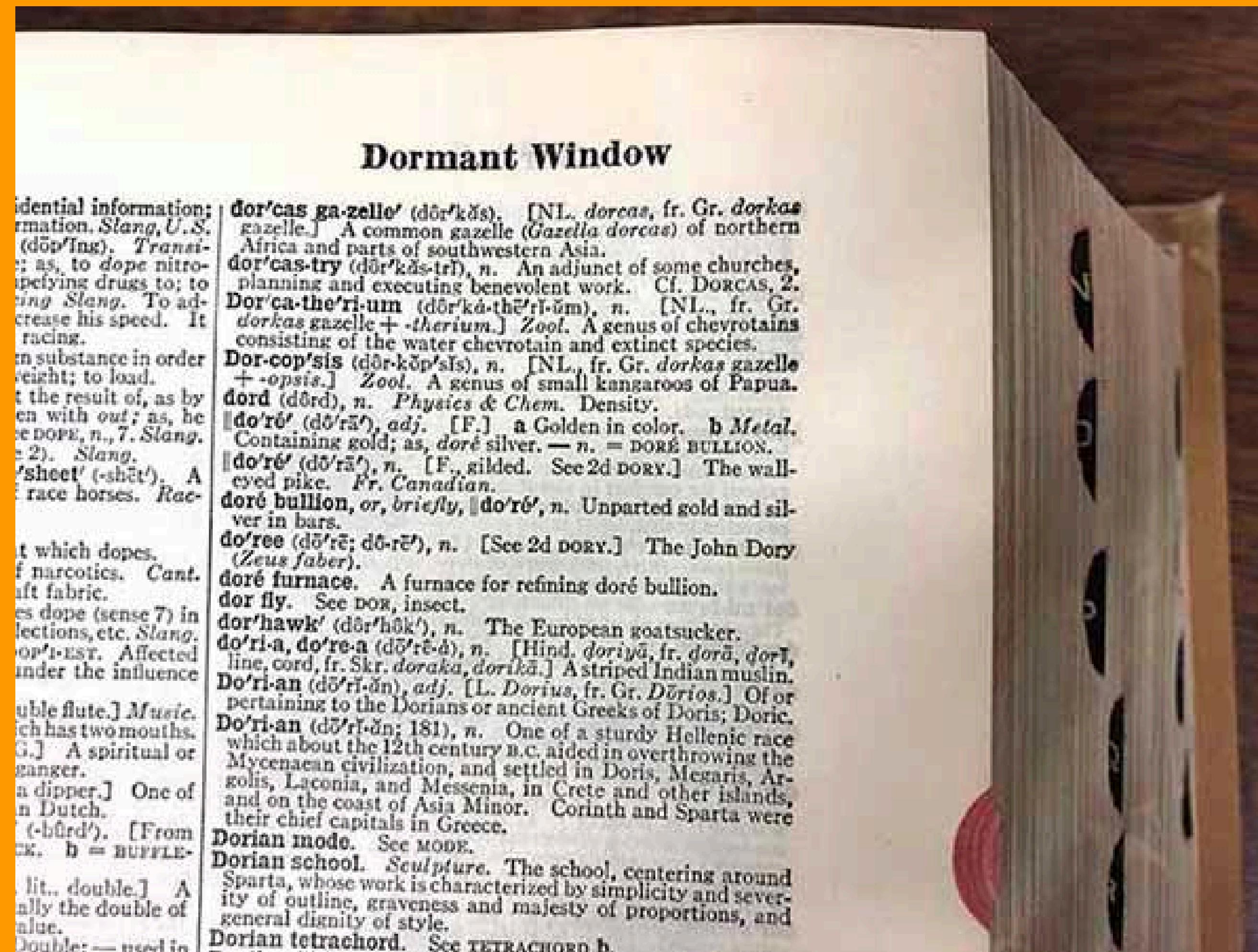
What design moves can only exist in a printed space?

Print Design

Physical Reading Experience

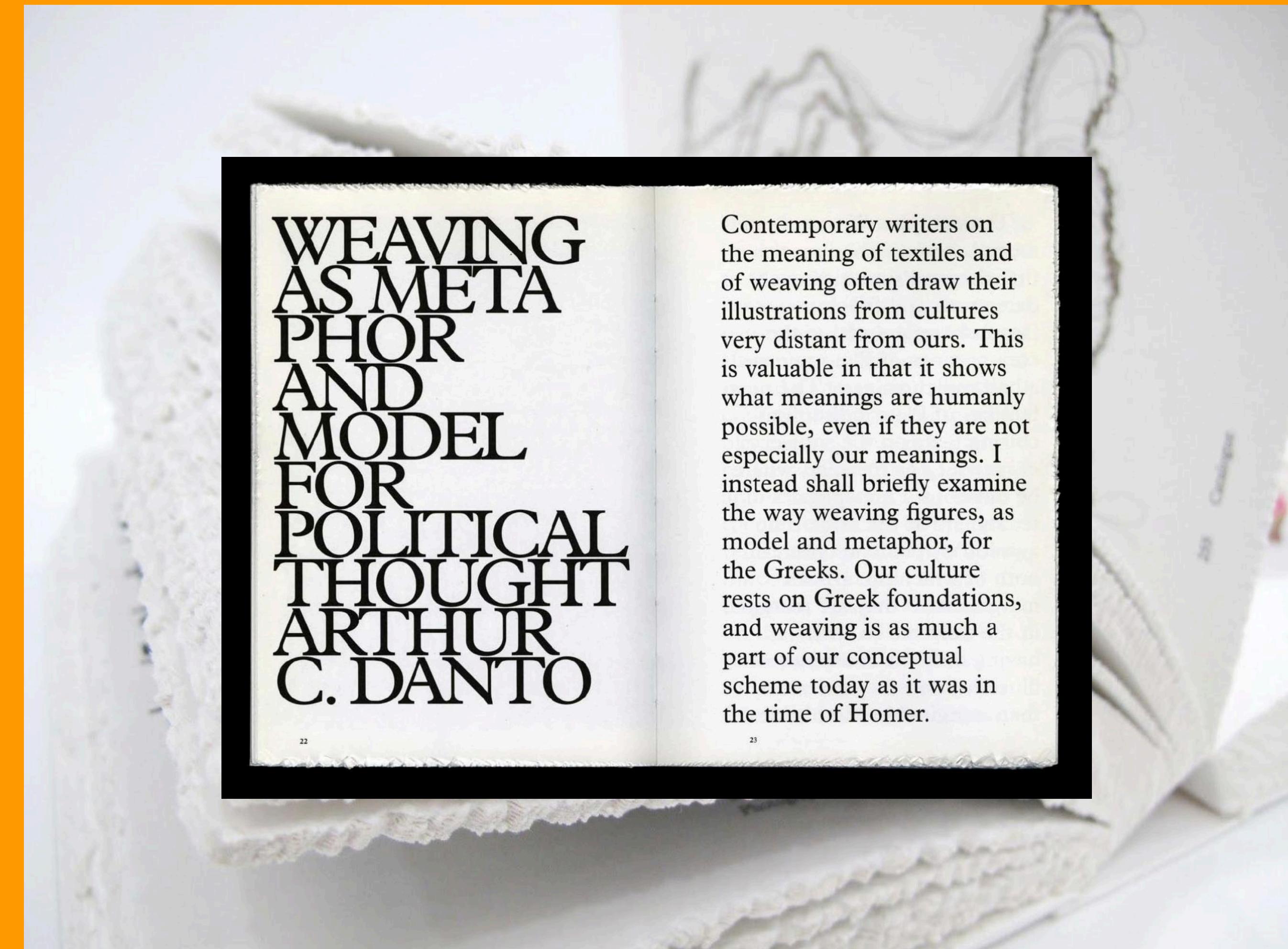


Selina (Kehuan) Wu
“One Day, I Reopened The Window
and Smelled The Sunlight Inside”



Print Design

Materiality



Sheila Hicks
“Weaving as Metaphor”

Happy Designing!

You'll have 7 minutes to design your webpage or spread. Keep it simple! Make sure to have fun!

Share a link of the website or pdf!

browser
of timer
goes
here