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Appendix A Evolution of CSS Layout: 1990s to the Future

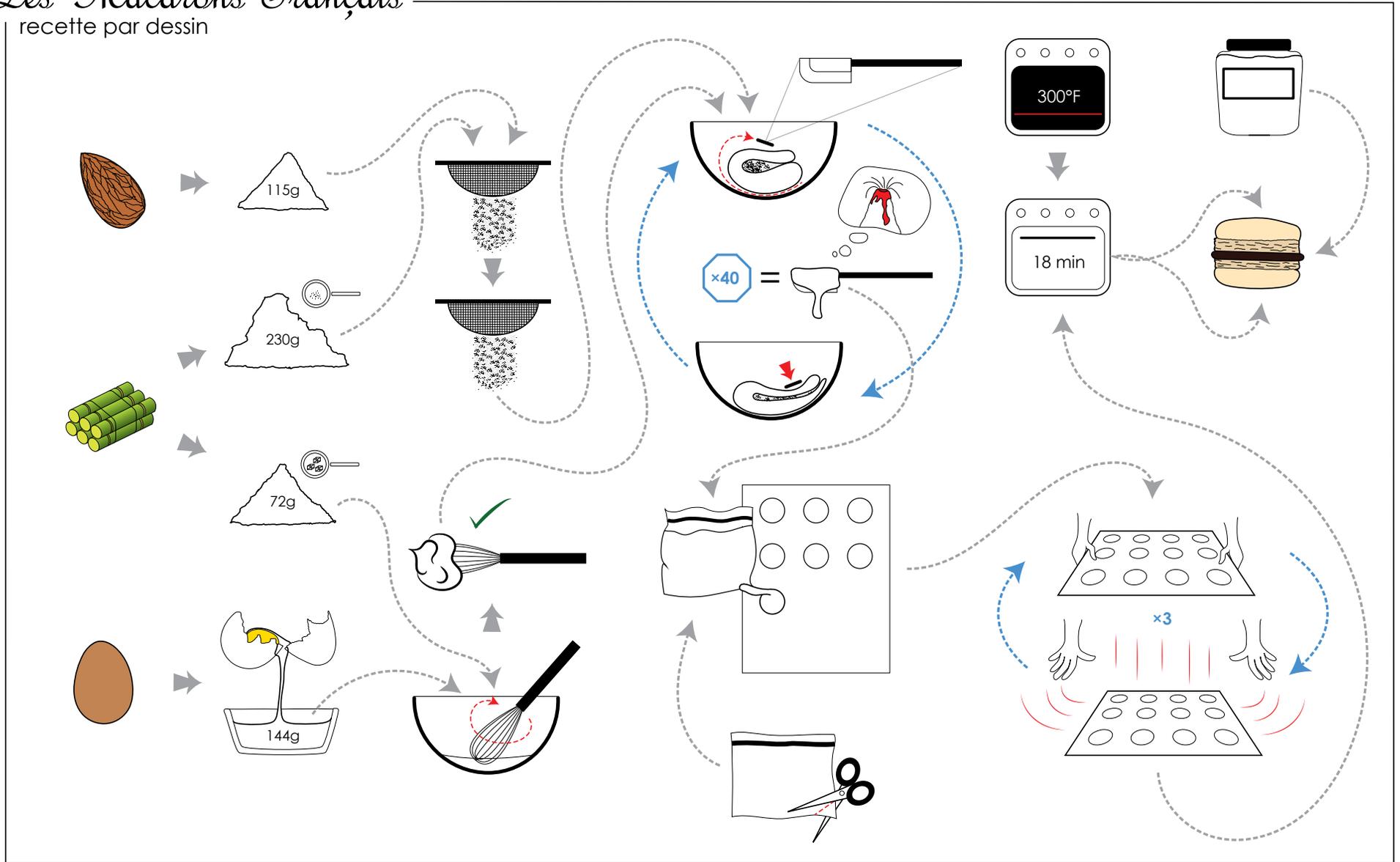
Presentation / Article, 2011
Philly Emerging Technologies Conference

Appendix B CSS Flexible Box Layout Module, Level 1

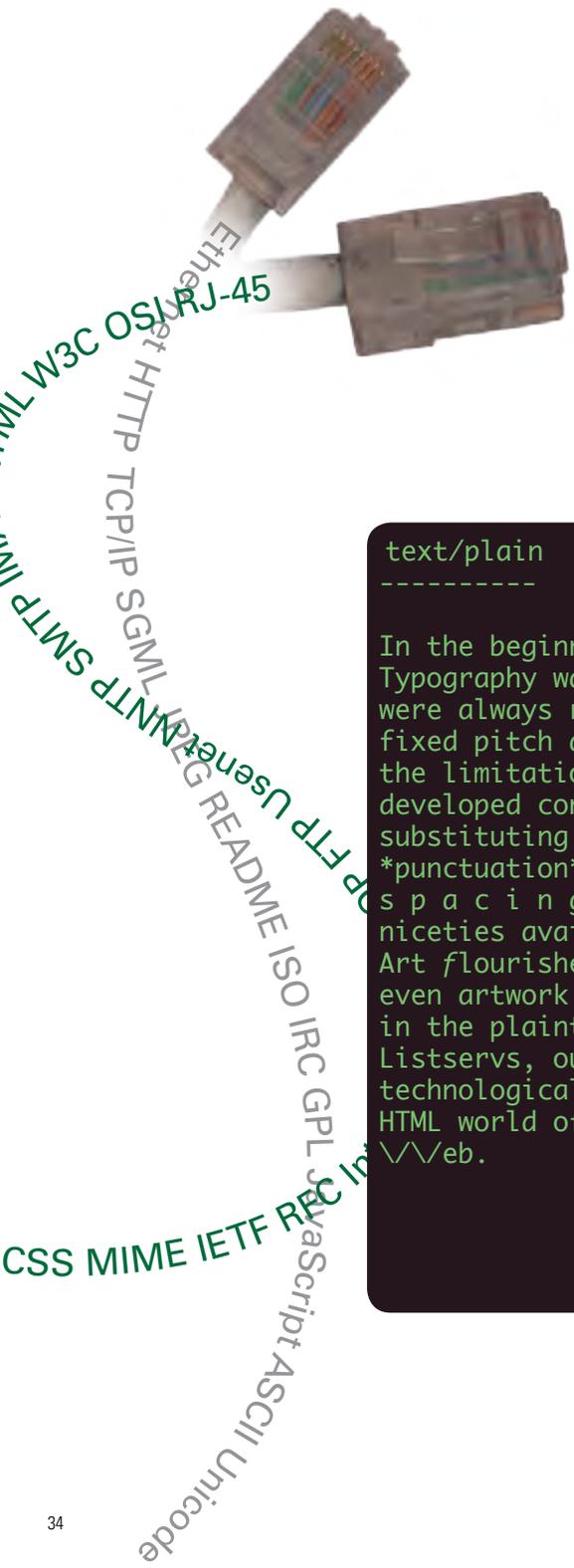
Technical Standard, 2012 (co-author)
World Wide Web Consortium CSS Working Group

Les Macarons Français

recette par dessin



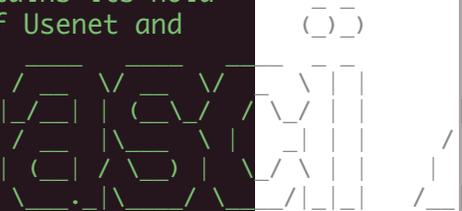
Macarons: Instruction by Pictograph
Vector Drawing, 2015
PhilaU ADFND-112: *Technics of Communication*
Using illustrations without words, explain how to perform this task: making macarons.



A History of

Internet Typography

```
text/plain
-----
In the beginning, there was plaintext.
Typography was monospaced: margins were
always ragged, fonts were fixed pitch
and fixed size. Despite the limitations,
plaintext nonetheless developed
conventions of its own, substituting
judicious use of *punctuation*,
CAPITALIZATION, and s p a c i n g
for all the typographic niceties
available for the press. ASCII Art
flourished in signatures, diagrams,
even artwork. It still retains its hold
in the plaintext realms of Usenet and
Listservs, outside the technologically
richer HTML world of the
\\eb.
```



HyperText Markup Language

HTML began as a universal shorthand that text display programs could interpret into slightly more refined displays. More fundamentally, it popularized the [hyperlink](#), which connected all the myriad HTML pages into a World-Wide Web. Version 2 codified the language as a set of tags for marking page structure into plain text. One viewing program, Mosaic, introduced a tag to embed images.

And thus began the era of the Browser Wars.

History of Web Typography
InDesign, 2004
UPenn FNAR-269: Typography
Write, typeset, and illustrate a four-page article. This one chronicles the history of Internet typography through spring of 2004.

The Browser Wars

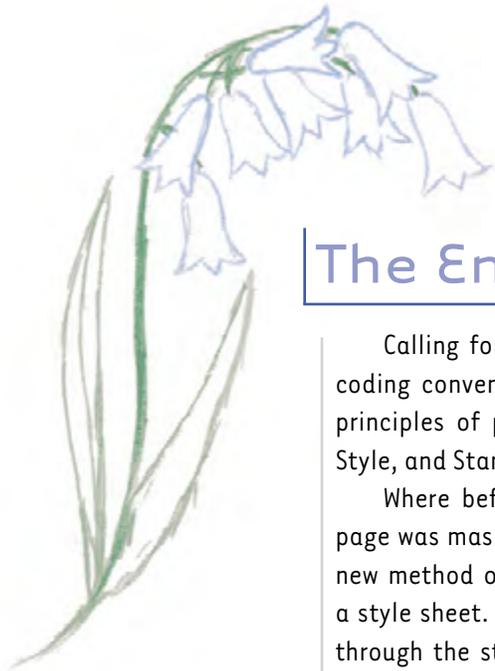
With web browsers vying for supremacy, the Web exploded into color. HTML was extended to allow font changes, background textures, and rudimentary table layout. As the Internet spurted into the popular consciousness, the Web became saturated with dynamism, clashing colors, and navigational confusion. These were the Dark Ages of web design, when, unfettered from the simplicity of early HTML and unguided by the aesthetics of design, the technical avant guard quickly filled the demand for sites with uncoordinated visual design and incoherent coding. Ignoring and ignorant of the language's principle of encoding output-independent structure, page authors abused HTML, twisting its tags to serve as purely presentational formatting instructions--a coding style Enlightenment critics would later call "tag soup".



In the middle of this, the W3C introduced Cascading Style Sheets, a true formatting language that would let authors simplify their HTML to pure expression of the document's content and structure, specifying the formatting in a separate, specialized Style Sheet. Once the technology caught on, CSS would revolutionize web design -- allowing a cleaner alternative to the mess of coding conventions and giving finer typographic control to the more discriminate designers rising through the now healthily-filled field.

At the end of this era, Microsoft Internet Explorer had stifled the browser competition with over 90% of the market share. Many designers forgot there was anyone else to support. The popularity of Netscape Navigator, their main contender, trickled to almost nothing.





The Enlightenment

Calling for an end to the tangled mess of existing coding conventions, web design critics advocated two principles of page coding: Separation of Content and Style, and Standards Compliance.

Where before CSS, the formatting code for a web page was mashed together with the structural tags, the new method of web design was to separate it out into a style sheet. The formatting was linked to the content through the structure: text marked as a header in the HTML received header styling from the header-styling rule in the CSS. Page code became more readable and less verbose: it was no longer necessary to repeat the gamut of paragraph formatting rules for each paragraph in the document. The writer could concentrate on structuring his text, and the designer could focus on styling the structure. Stripped of formatting and strongly structured, the content of the HTML page could again be understood by any browser.

The cry for standards compliance was a reaction to the different and incompatible ways browsers interpreted web code. Authors poured hours into excruciating code negotiation, struggling to coax both Netscape Navigator and Microsoft Internet Explorer to present their pages properly. At the most basic level, both programs behaved the same, but the lists of individual quirks was endless. Many gave up trying to write one-version-works-in-all in favor of creating separate pages for separate browsers... or, only one version for their favored one.

For years, the interpretation HTML and CSS code had been explicitly defined in a public document issued by a standards organization, in this case the W3C.

Unfortunately, neither browser manufacturers nor most page authors adhered to these specifications. In response to the current web coding mess, influential technology experts started the Web Standards movement. They worked to convince web designers and browser manufacturers to follow the rules in the specifications: to make it possible for an author to write a page once and expect it to consistently work in all programs across the industry.

At first, Microsoft made overtures to standards, tracking ahead of its competition. But once secure in its monopoly, its Windows web browser lazily imposed its own de facto interpretations, becoming an obstacle to true standards-based web sites.

Netscape's development team then scrapped its tag soup browser and reincarnated it, with the help of volunteers throughout the world, as the Mozilla open-source Web Browser. The engineers endowed its development with the goal of standards compliance and, by opening its source to free access and use, gained the help of hundreds of individual volunteers as well as several major companies. Although it would be four years before the team would release another viable browser based on this project, due to its open development, Mozilla (and its philosophy) began to work its way into web design's consciousness.

While Netscape disappeared to regroup, a Norwegian software company released its own (closed-source) web browser. Opera, like Mozilla, was designed for standards-compliance and set itself on track to compete with Microsoft Internet Explorer and Mozilla/Netscape.



Winds

2003

By 2003, the Enlightenment approach had become a way of life for many web designers and was slowly gaining acceptance on major sites. On the browser front, the resistance had begun to painstakingly win back users from Microsoft while a plethora of small devices like cell phones began hooking onto the web, auguring a shift in the web's distribution of media.

In January, Apple released a new browser, Safari, based on the open-source Linux web browser Konqueror. The company hired one of the key Netscape/Mozilla developers to help the program catch up with Mozilla and promised to release also the code for its improvements in the Konqueror layout engine.

In June, Microsoft announced that it would restrict new releases of its web browser on both Windows and Macintosh. Microsoft Internet Explorer would now only come bundled with the purchase of other Microsoft products.

In the future, web pages will be displayed on a variety of devices, from high-resolution desktop monitors to tiny cell-phone screens to text-to-speech readers: a layout that works on one is useless in another. The separation of content and style allows a single page of content to have a different design for each device, but this is impractical unless similar devices are grouped. Software developers need to design technology that can express layouts that fluidly translate among similar output devices. Web designers should use their technology intelligently to create such layouts for multiple device groups.

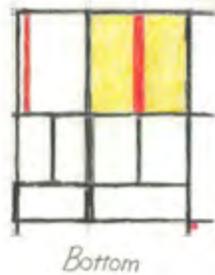
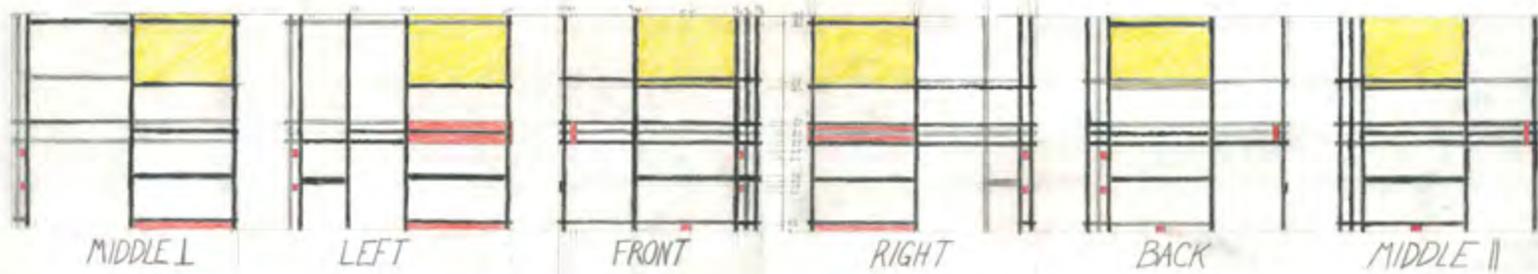
The challenge for the future technology inventors, software developers, and web designers remains three-fold: good coding, good usability, and good aesthetics.

Change

In July, AOL—which had acquired Netscape—laid off or transferred all engineers working on its web browser. Fortunately for Mozilla, the project's number of non-Netscape contributors had exceeded the number of Netscape contributors three months previous. Unshackled but underfunded, the open-source organization determinedly continued work on the leading rival to Microsoft Internet Explorer. A side project, originally code-named Phoenix and built on the back of the core Mozilla layout code, received official sanction as Mozilla's next-generation browser. Later christened Firefox, its revamped user interface continued to win devoted fans from Microsoft's clutches.

2004

Promoting interoperability, Safari, Mozilla, and Opera's development teams collaborate on improving web technology.



Mondrian in 3D

Wood / Hand-drafted, 2014

PhilaU ADFND-101: Design 1 for Architecture

Starting from a Mondrian painting, create a 3-dimensional sculpture that echoes its structure and composition, and which when projected on one side, matches exactly the painting.

ZORA

ZORA REMAINS IN YOUR MEMORY POINT BY POINT
IN ITS SUCCESSION OF STREETS, OF HOUSES...
OF DOORS AND WINDOWS... PATTERNS FOLLOWING
ONE ANOTHER AS IN A MUSICAL SCORE.



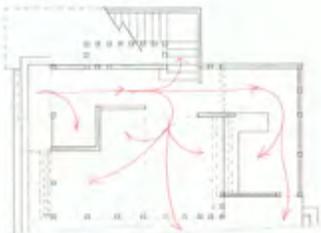
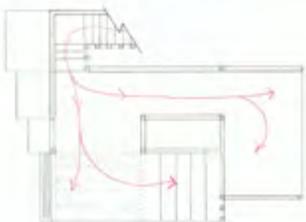
Zora: An Exploration in Space

Wood / Hand-drafted, 2014

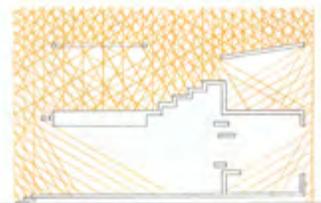
PhilaU ADFND-101: Design 1 for Architecture
Using X, Y, and Z slices of the Mondrian sculpture
as parallel sectional constraints, design a space
that evokes the chosen Invisible City.



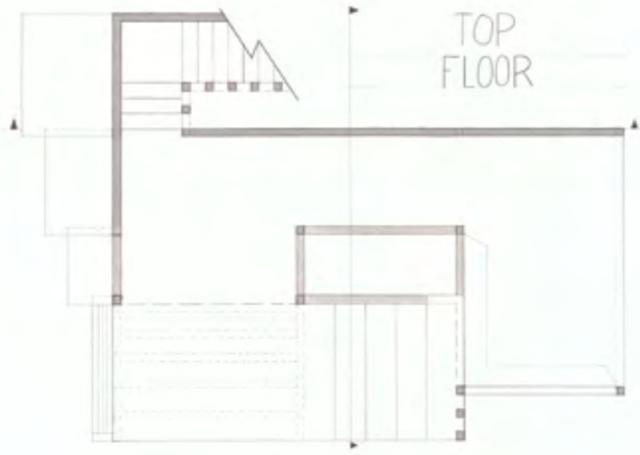
INDIVIDUALITY OF SPACES



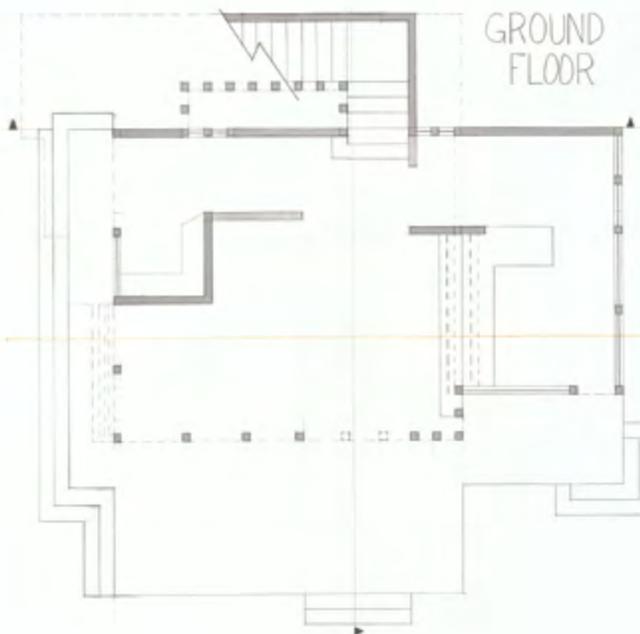
FLOW



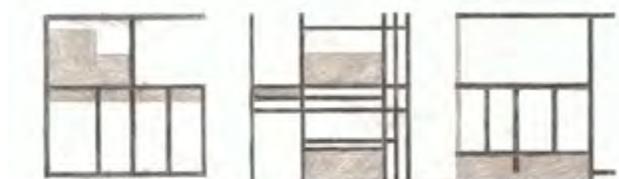
LIGHTING



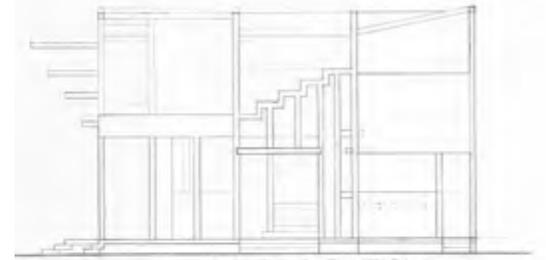
TOP FLOOR



GROUND FLOOR



MONDRIAN SECTIONS



SOUTH ELEVATION



NORTH SECTION



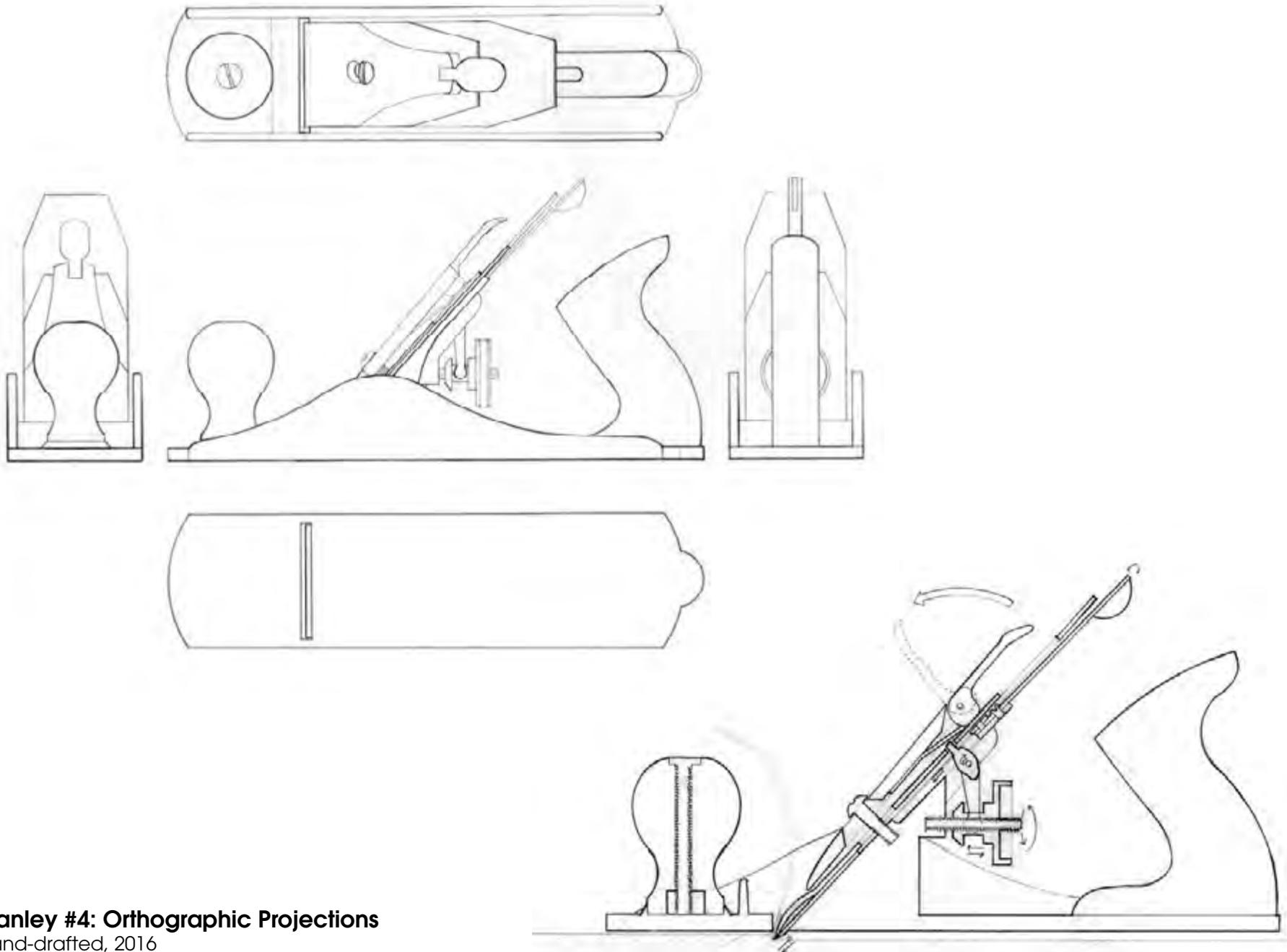
WEST ELEVATION



EAST SECTION



Paint-Mixing Exercises
Guache Paint, 2004
UPenn FNAR-322: Color



Stanley #4: Orthographic Projections

Hand-drafted, 2016

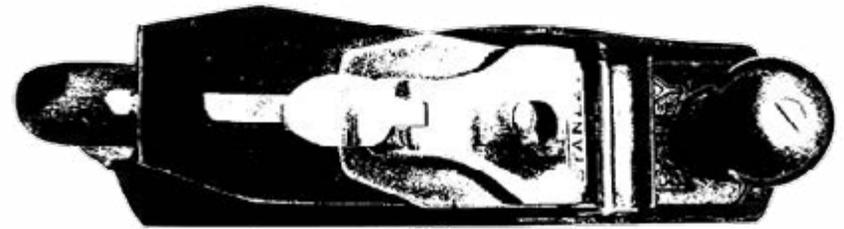
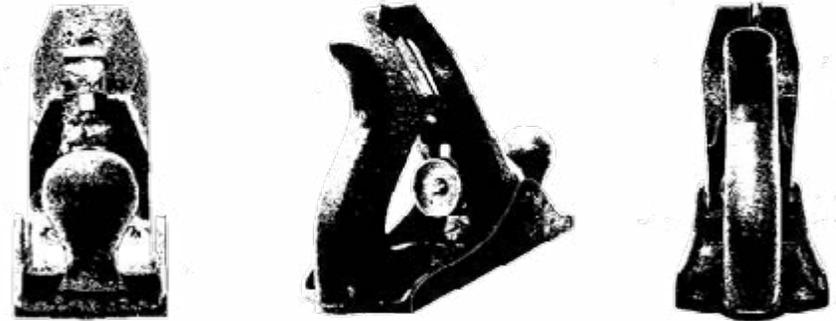
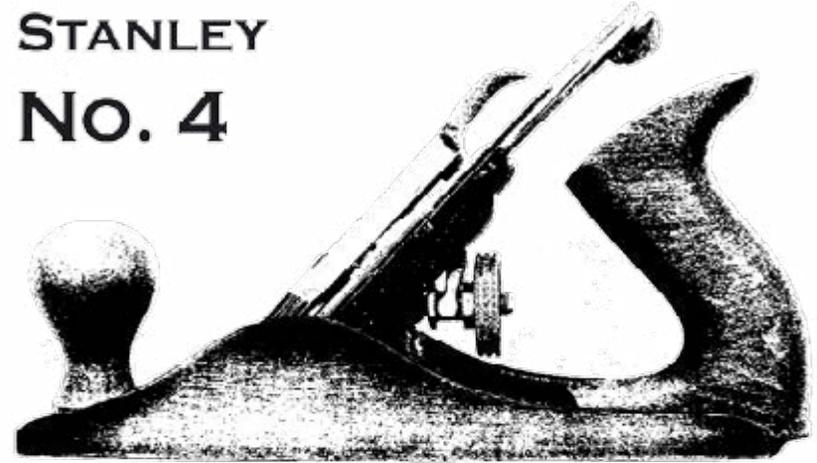
PhilaU ADFND-112: Technics of Communication

Hand-drafted Diagrams of a Hand Plane

**STANLEY
No. 4**



**STANLEY
No. 4**



Stanley #4: Digital Photography

Bitmap manipulations, 2016

PhilaU ADFND-112: Technics of Communication



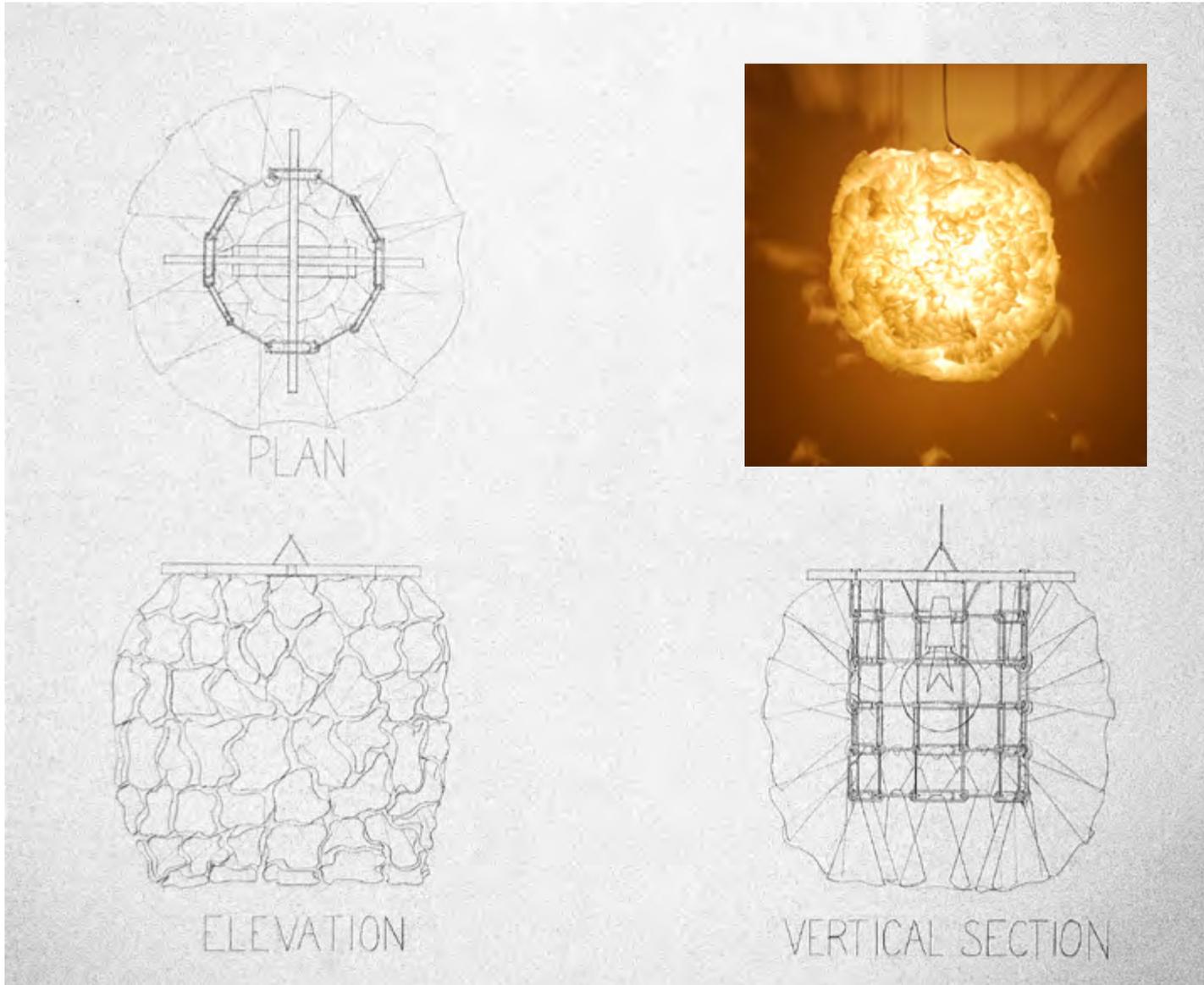
Shading: Draping & Geometry
Charcoal, 2014
PhilaU DRAW-101: Drawing 1





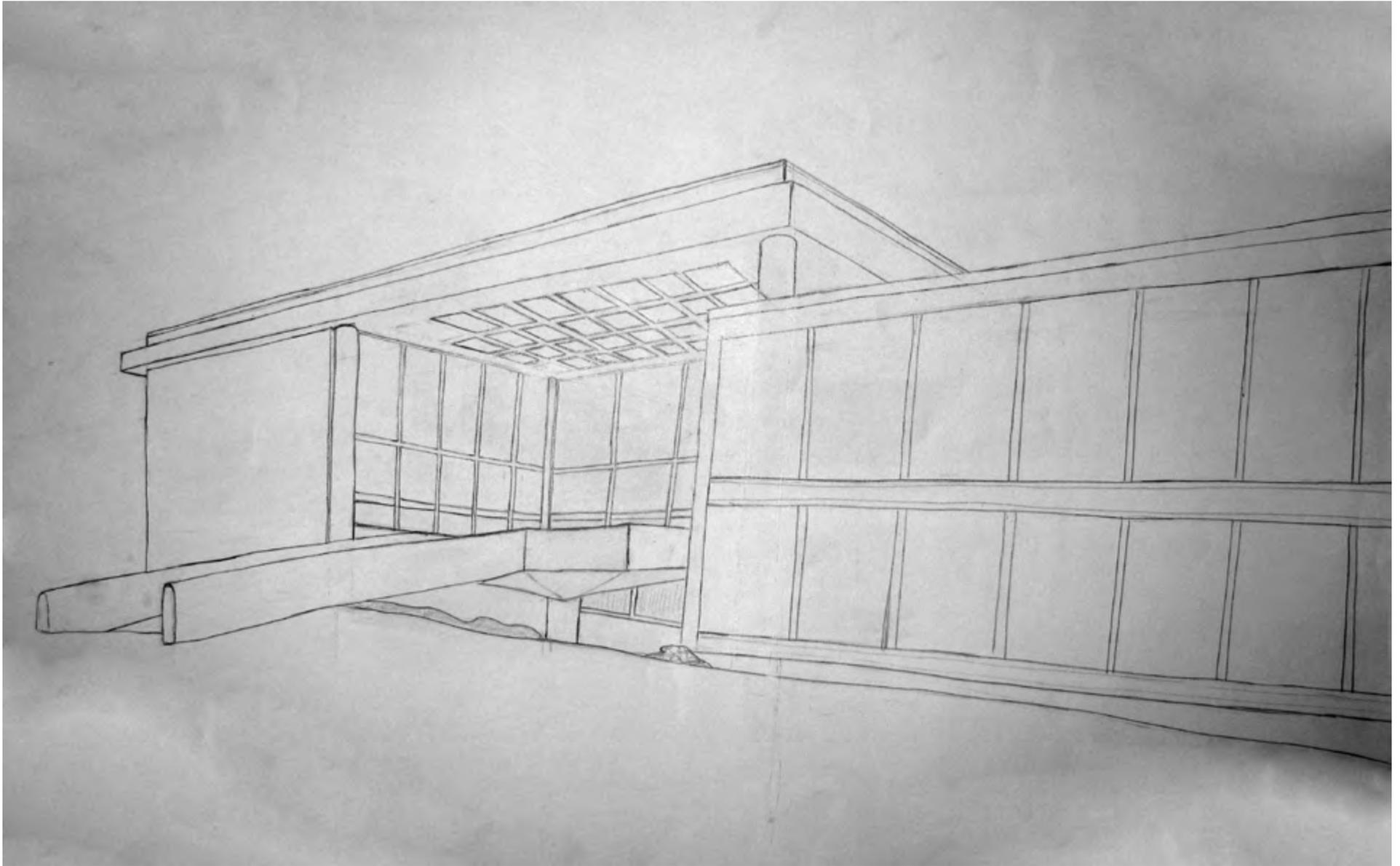
Low-light Photography

Canon PowerShot S110 Point-and-Shoot
Point Reinga 2006, Kyoto 2009, Tokyo 2011
Extended exposures show off scenes as visible to the human eye. Flash illuminates a signpost.



Fleur de Café

Coffee Filters, Paperclips, Incandescent Light, 2014
PhilaU ADFND-101: Design 1 for Architecture
Construct a lamp from common household objects.

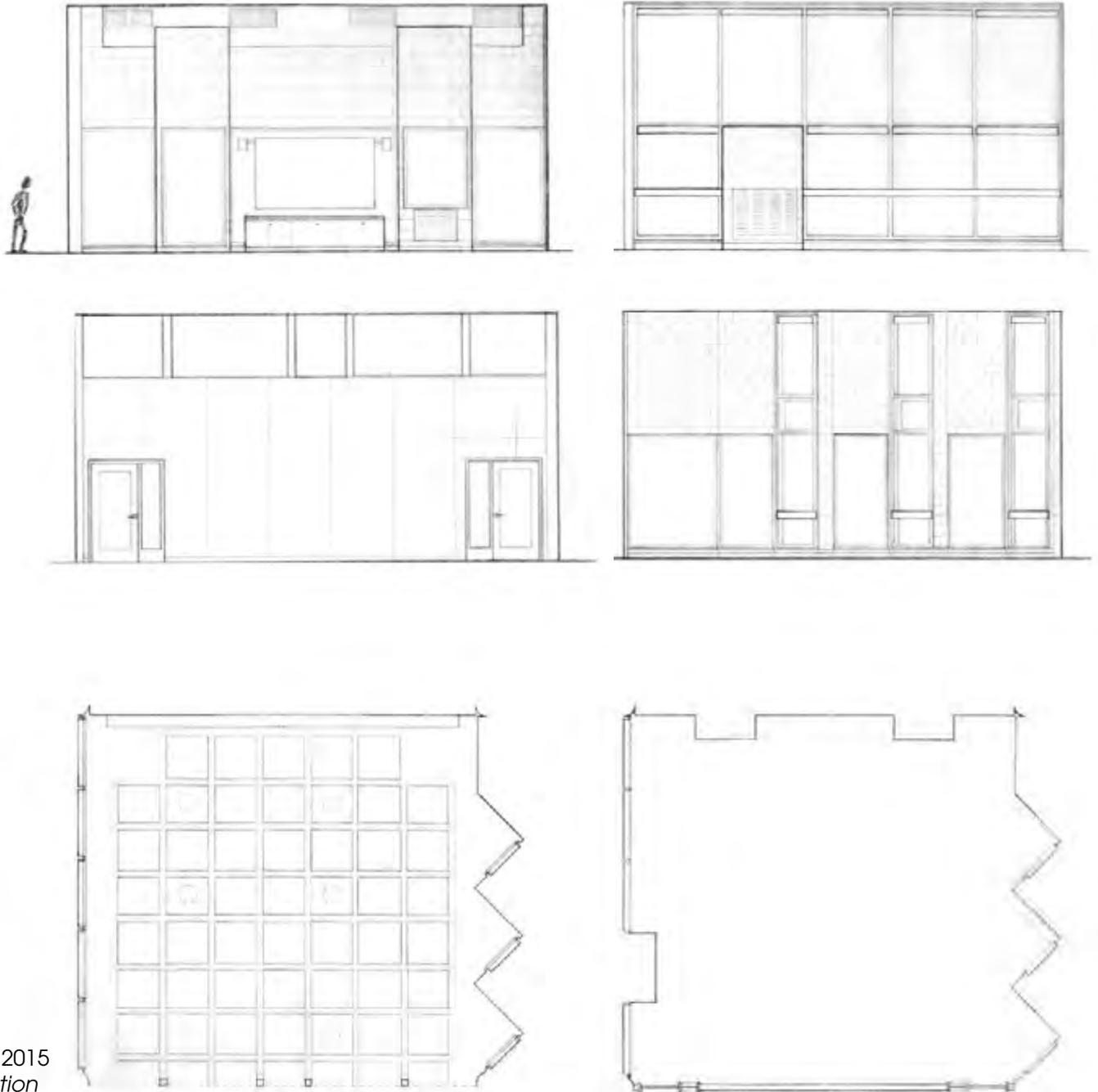


Architecture Center: Freehand Perspective

Freehand 2-Point Perspective, 2014

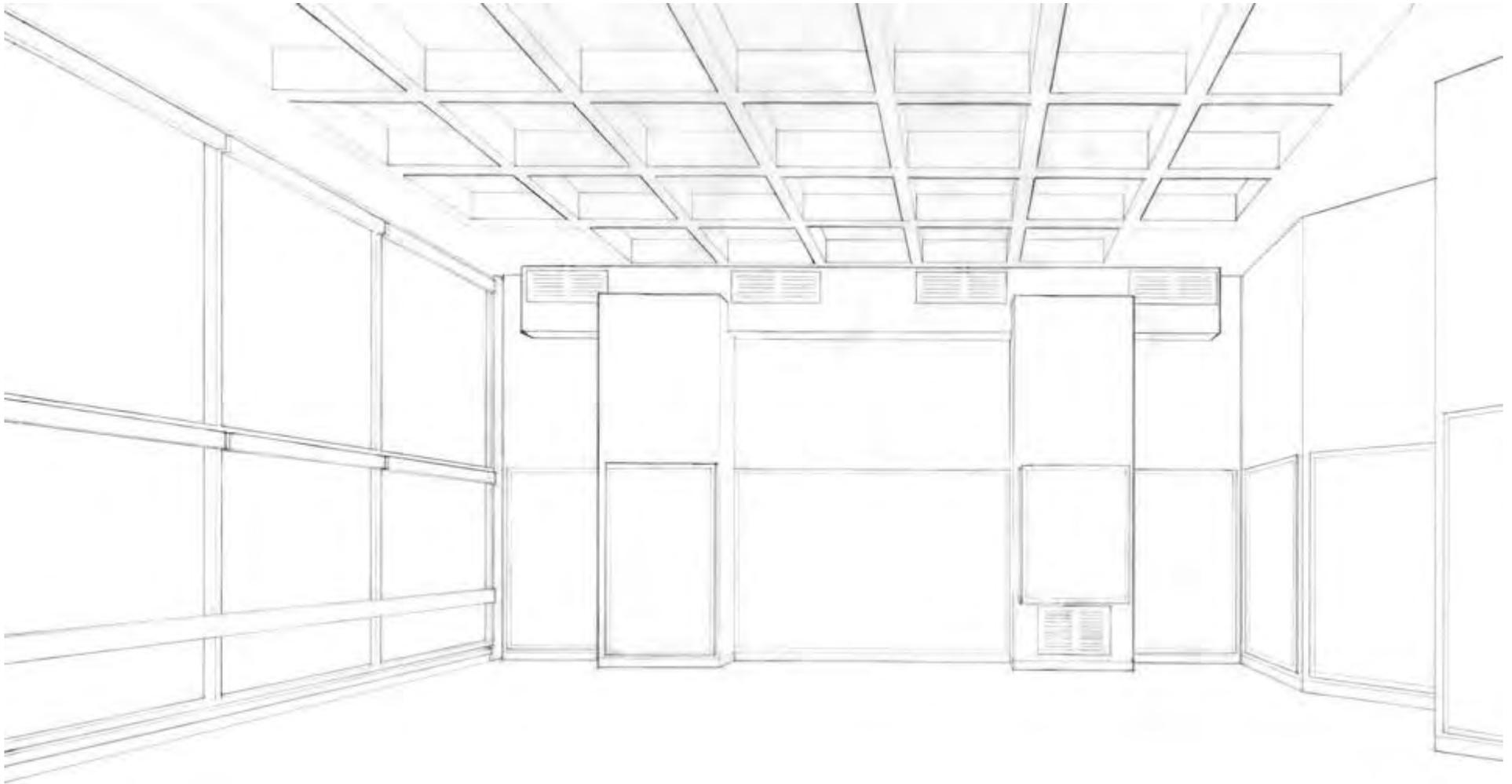
PhilaU DRAW-101: Drawing 1

Drawn from observation, no straightedge.



Architecture Center: Orthographic Projections

Hand-drafted Plan, Ceiling, and Elevations, 2015
PhilaU ADFND-112: Technics of Communication
Drawn from in-room observations.



Architecture Center: Interior Perspective

Hand-drafted 1-Point Perspective, 2015

PhilaU ADFND-112: Technics of Communication

Constructed from plans and elevations.