

Web Mapping & Analysis

Map Design

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Today

- Designing maps
- Design Elements
- Design Principles

Mapbox

Guide to Map Design

<https://www.mapbox.com/designers/>



Designing Maps

What is design?

“To plan in the mind, intend”

Oxford English Dictionary

Why is design relevant?

- Explicitly consider the **purpose** of your map
- Encode your **goals** in the final product
- Influence **decisions** along the map making process

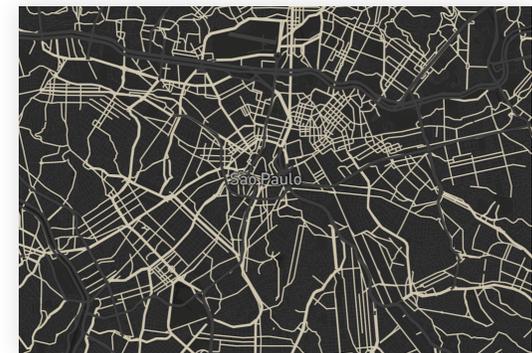
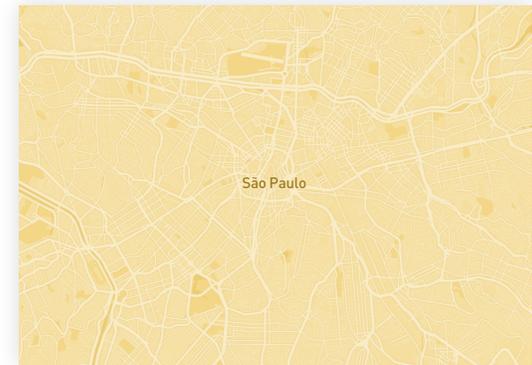
How to think about design?

- **Elements**: building blocks
- **Principles**: how to combine them

Design Elements

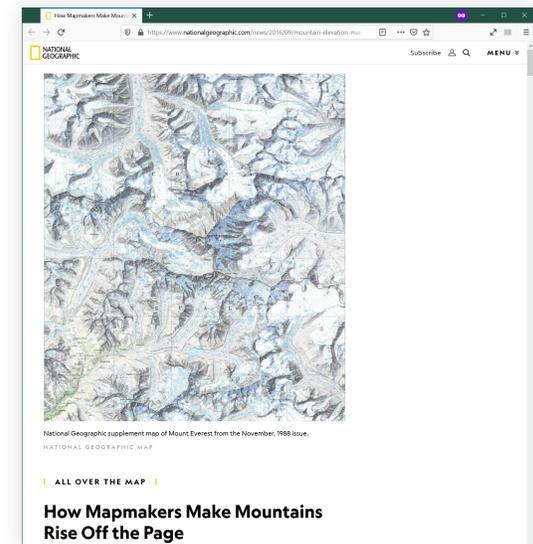
Color

- Grab attention
- Encoding similarity, meaning
- Aesthetics, brand, tone, etc.



Texture

- “*Perceived surface*”
- Contributes to look and feel, but can also encode information (e.g. rugosity)
- Like color, without color

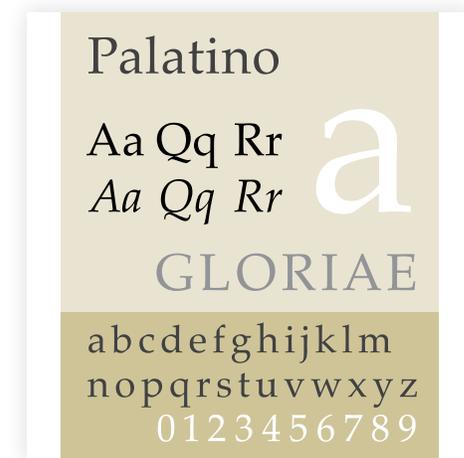
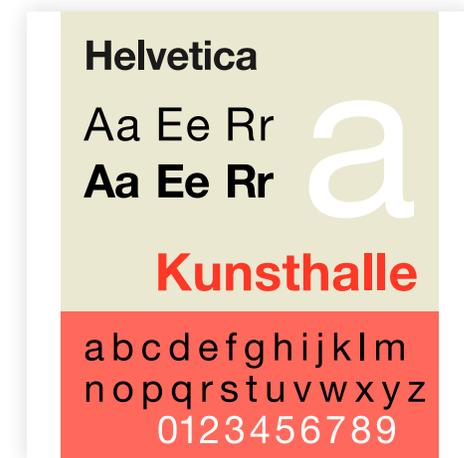


URL: Nat. Geo.

Labelling/typography

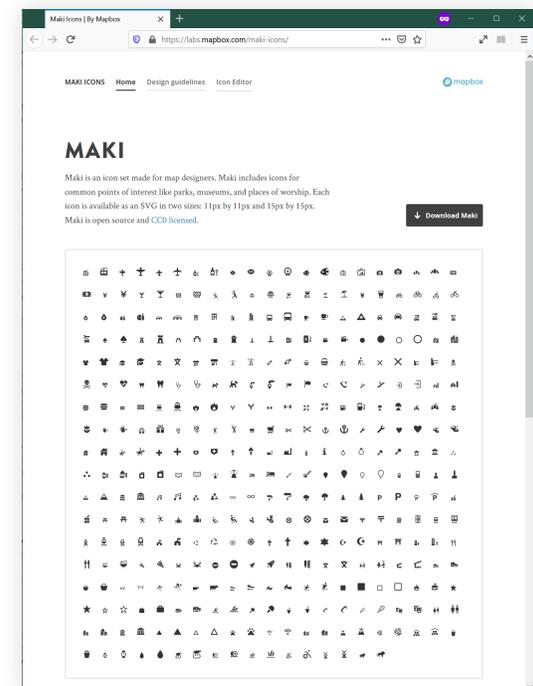
- Signal locations
- Keep readability in mind
- Typography communicates character, tone, style, etc.

[Sources: **Helvetica**, **Palatino**]



Iconography/markers

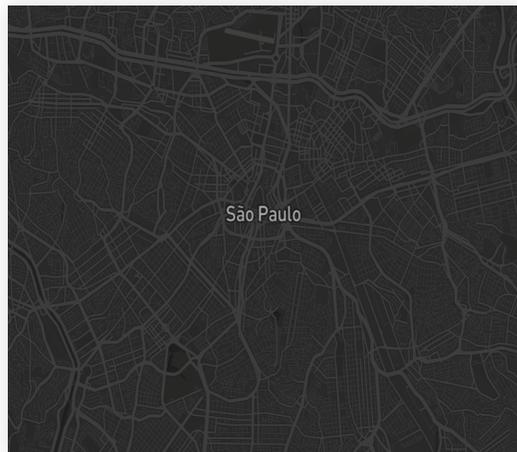
- Mark a location
- Encode category, etc.
- Aesthetics



URL: Mapbox

Design Principles

Contrast

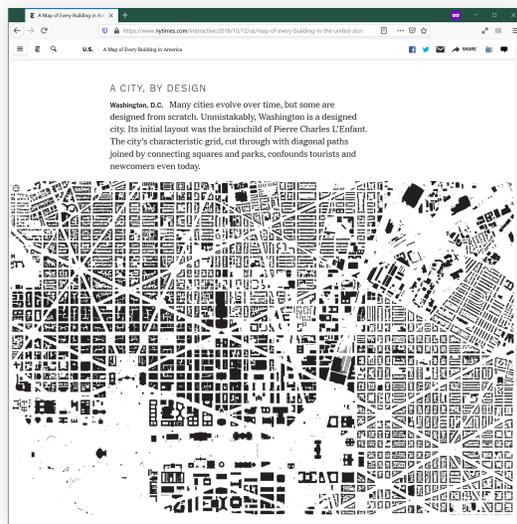


- Wired to the human brain
- Focus attention to areas of interest
- May hinder readability

Visual Hierarchy

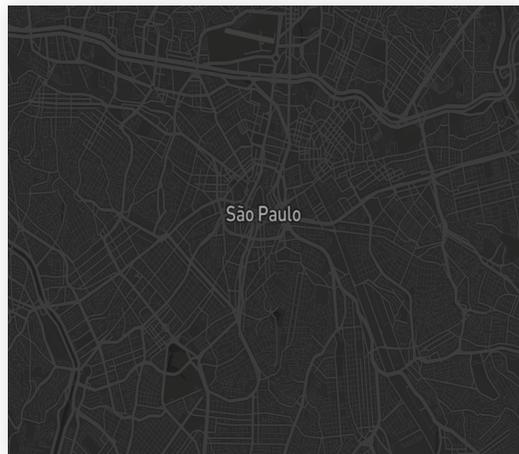
- Priority order
- Foreground Vs Background
- How much each aspect is “abstracted”

Visual Hierarchy: *Content*



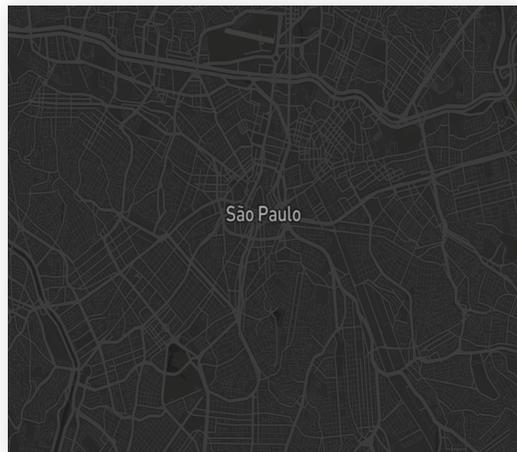
- Do not clutter
- Keep in mind cognitive load of each element
- Align with the core message

Visual Hierarchy: *Context*



- Provide the “right” background
- Ensure it does not have protagonism
- Include *only* if it helps read the content better

Density



- Information Vs Clutter
- Think of the purpose and audience
- Consider: placement, size, readability

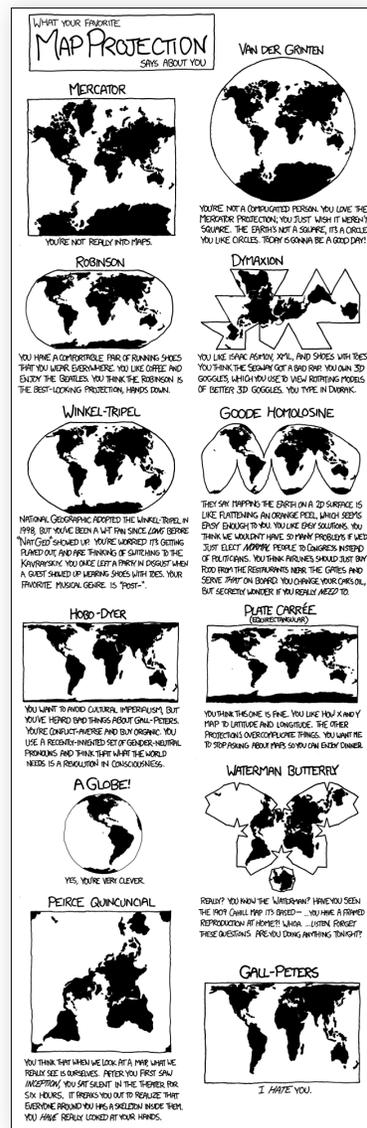
Legibility

Is the message you try to get across getting across?

- Context-dependent
- Combination of iconography, typography, proximity of features, etc.

Other considerations

Projections



How do you want to be wrong about the Earth?

Source: **XKCD**

Legend & other elements

Do you really need it?

- Auxilliary elements: legend, North arrow, scale...
- May improve legibility, but also clutter
- Sometimes, it is required (e.g. scientific publications)



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