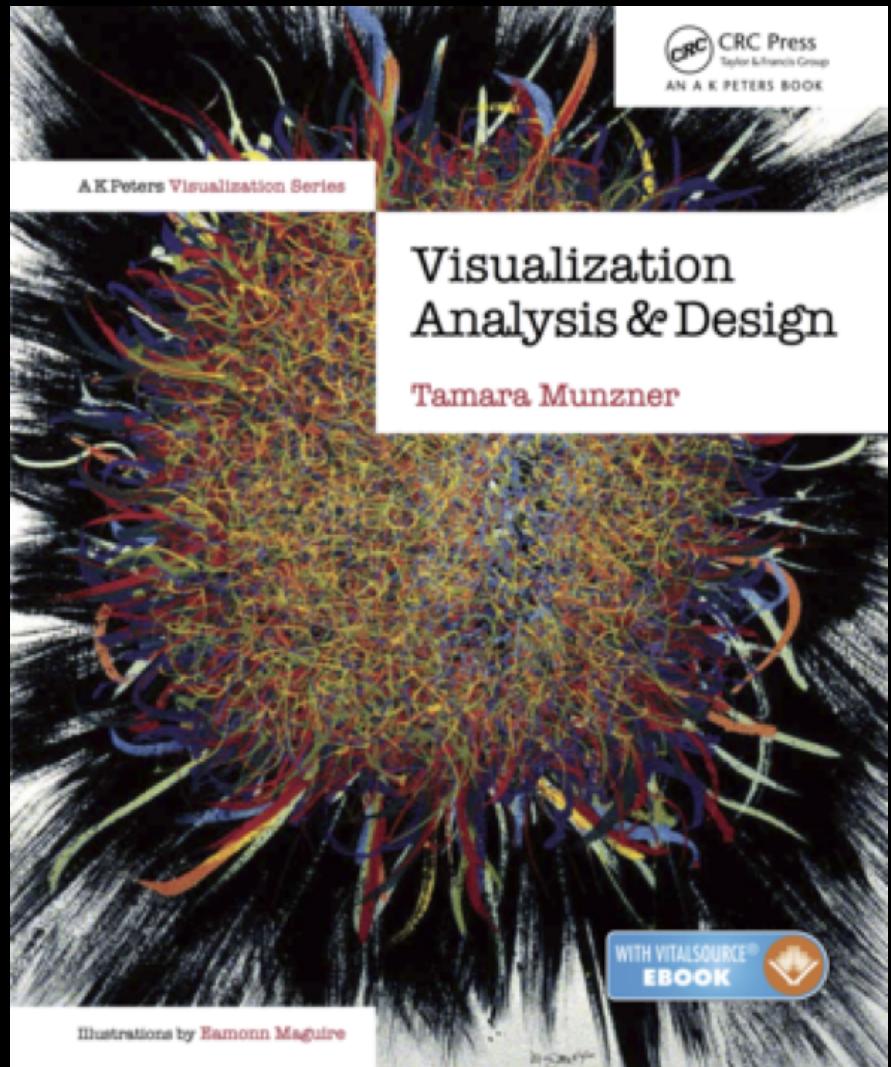


what makes a good visualization?

last round, including animation and interactivity:
Tamara Munzner's rules

Rules of thumb for a good visualization

Tamara Munzner
Chapter 6



Function first, Form next

no unjustified beauty

(Tufte's no chart junk)

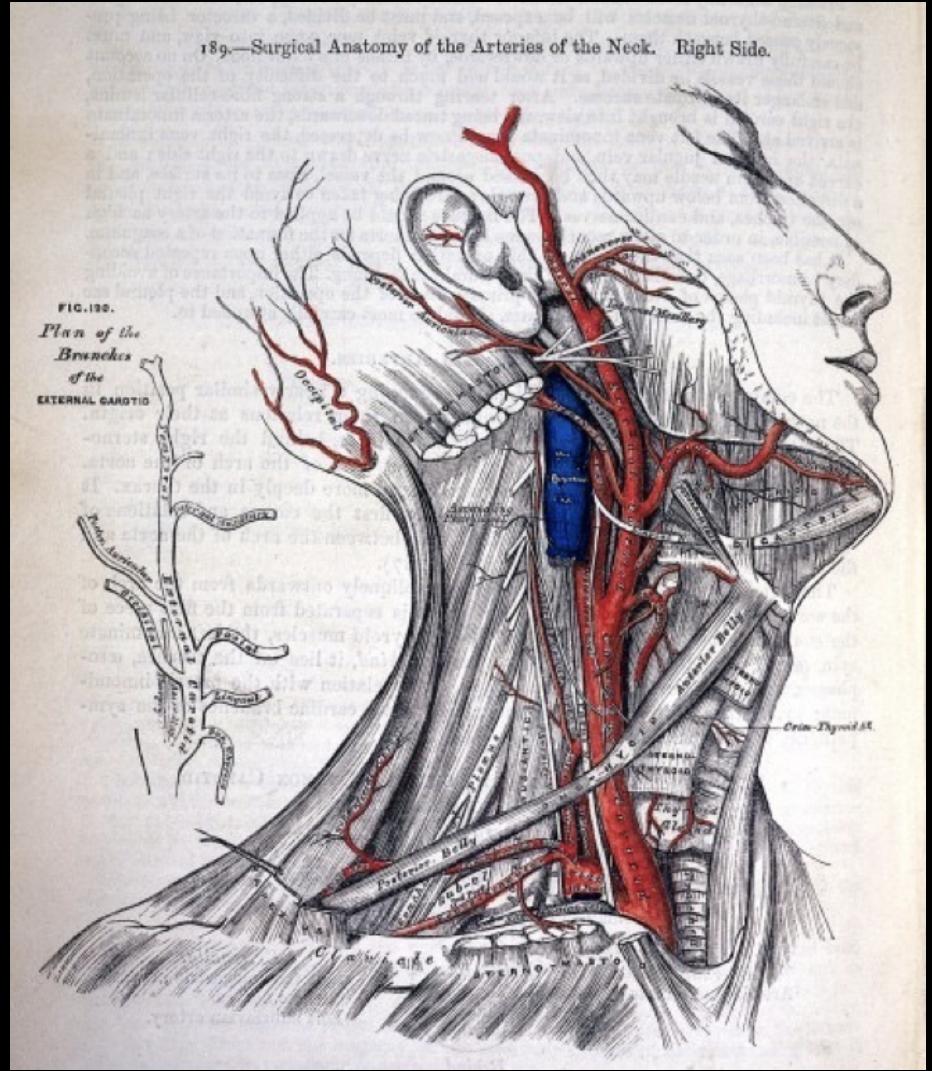
Get it right in Black & White

no unjustified color

consider designing your plot in BW first

Examples of functional use of color

functional use of color is the standard in anatomy drawings



Häggström, Mikael (2014). "Medical gallery of Mikael Häggström 2014". *Wikijournal of Medicine* 1 (2). DOI:10.15347/wjm/2014.008. ISSN 2002-4436. Public Domain. or By Mikael

Häggström, used with permission. - Image:Gray507.png

Examples of functional use of color (and distortion)

MTA NYC subway map

functional use of color

functional use of deformation

(the boroughs' size is changed to make the distance between subway stops similar.

but consider the psychological and social implications of blowing up Manhattan...



No Unjustified 3D

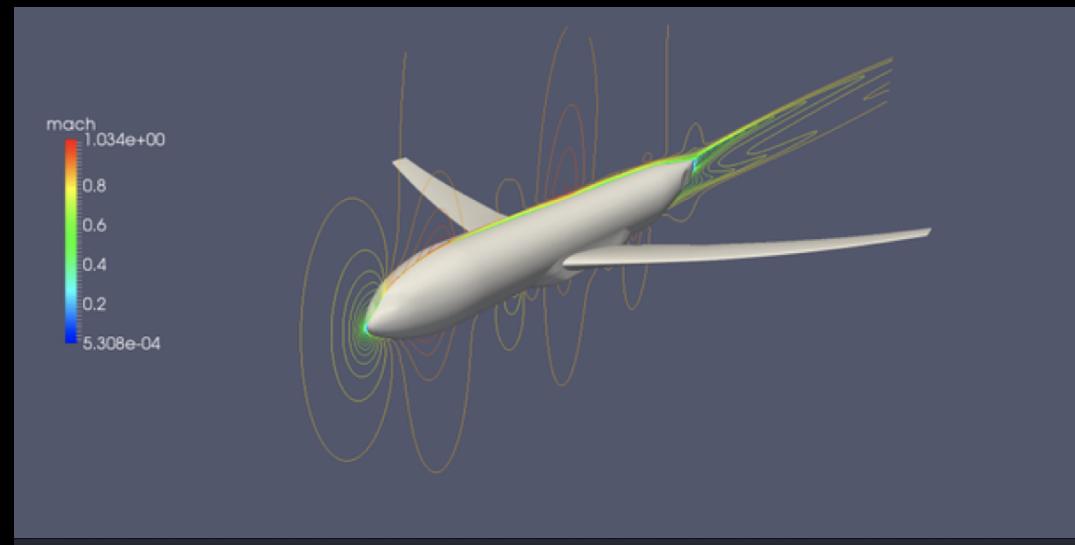
use 3D only if your 3rd dimension cannot be reduced.

Alternatives:

color,

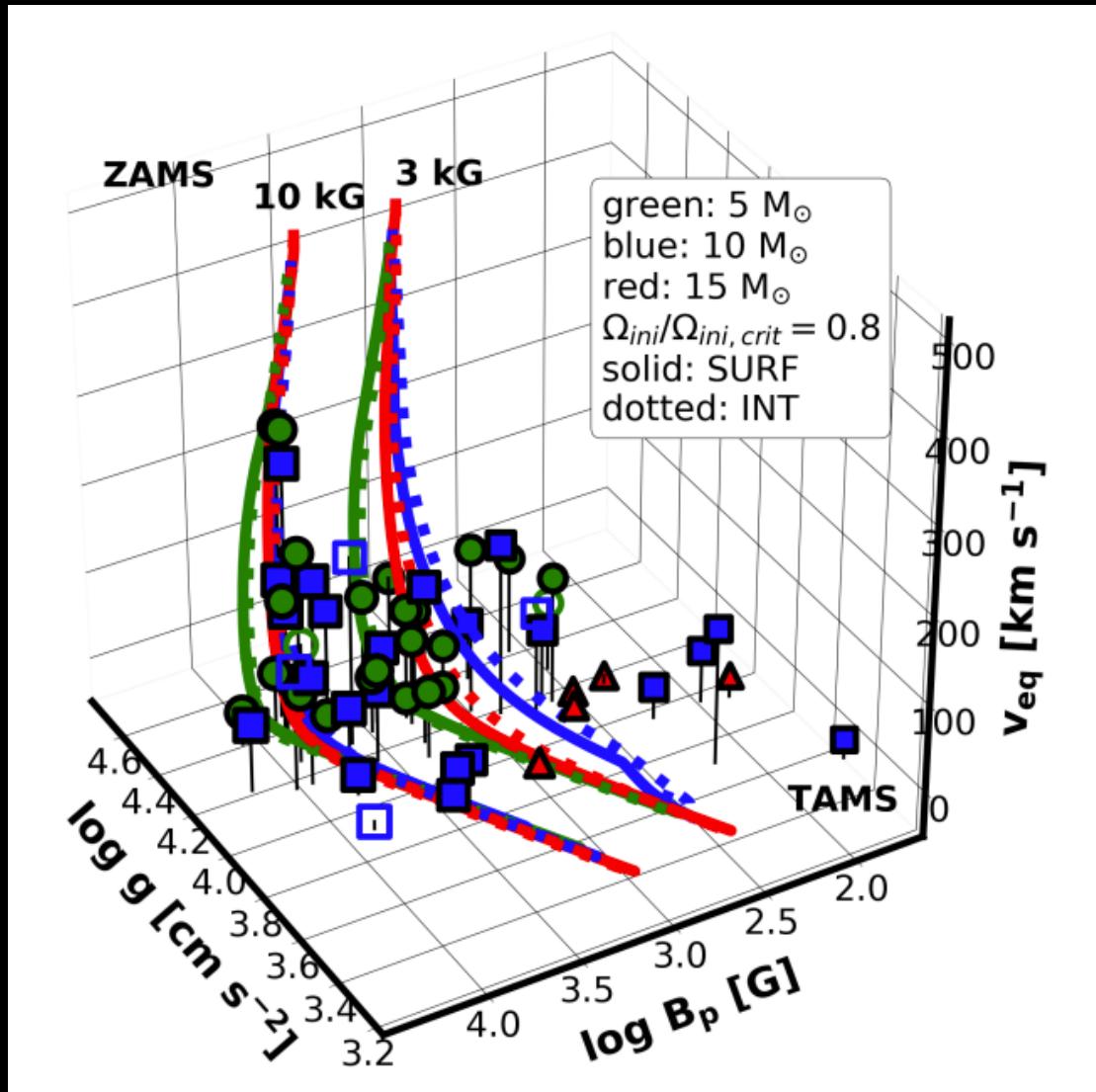
small multiples,

animation



from Tamara Munzner chapter 6

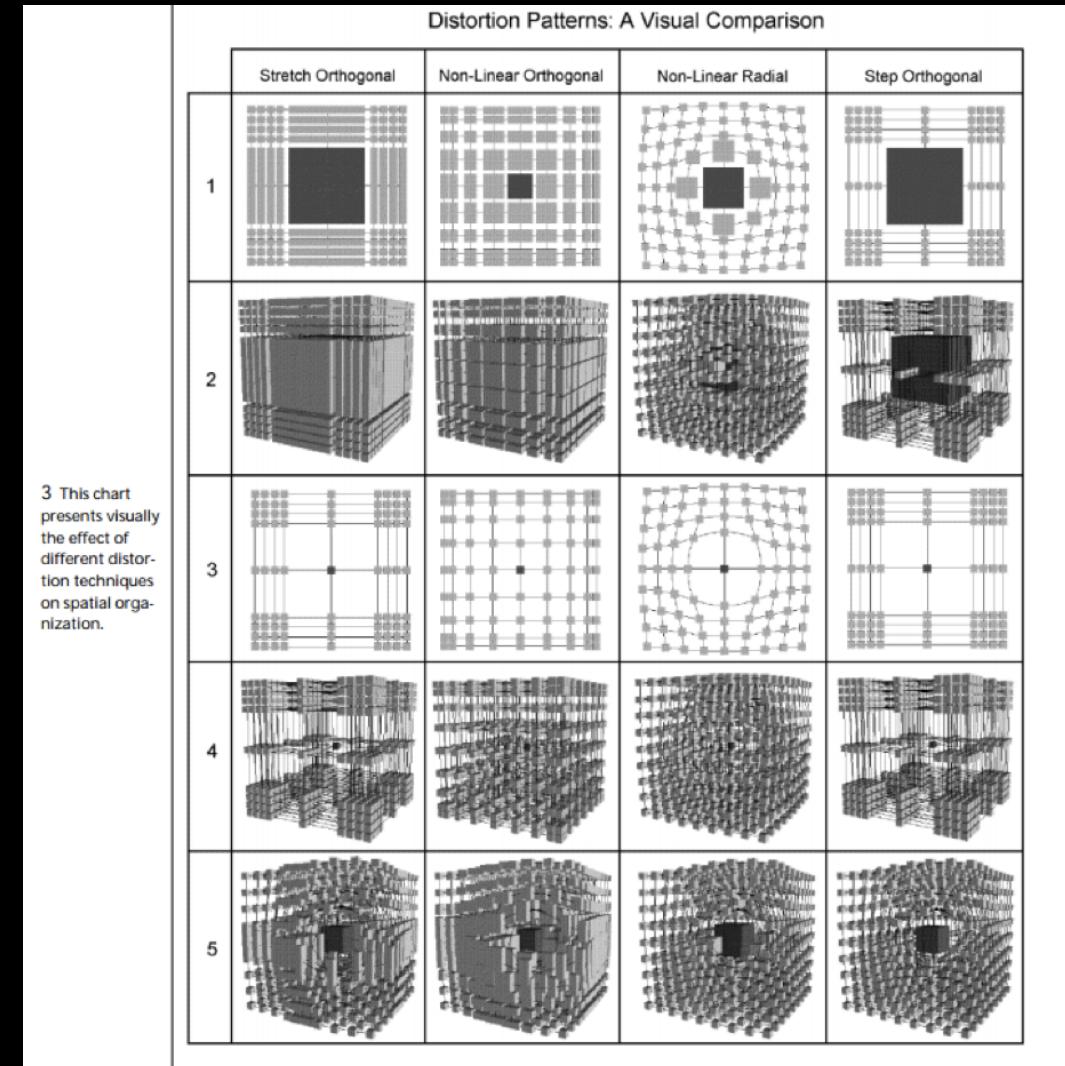
No Unjustified 3D



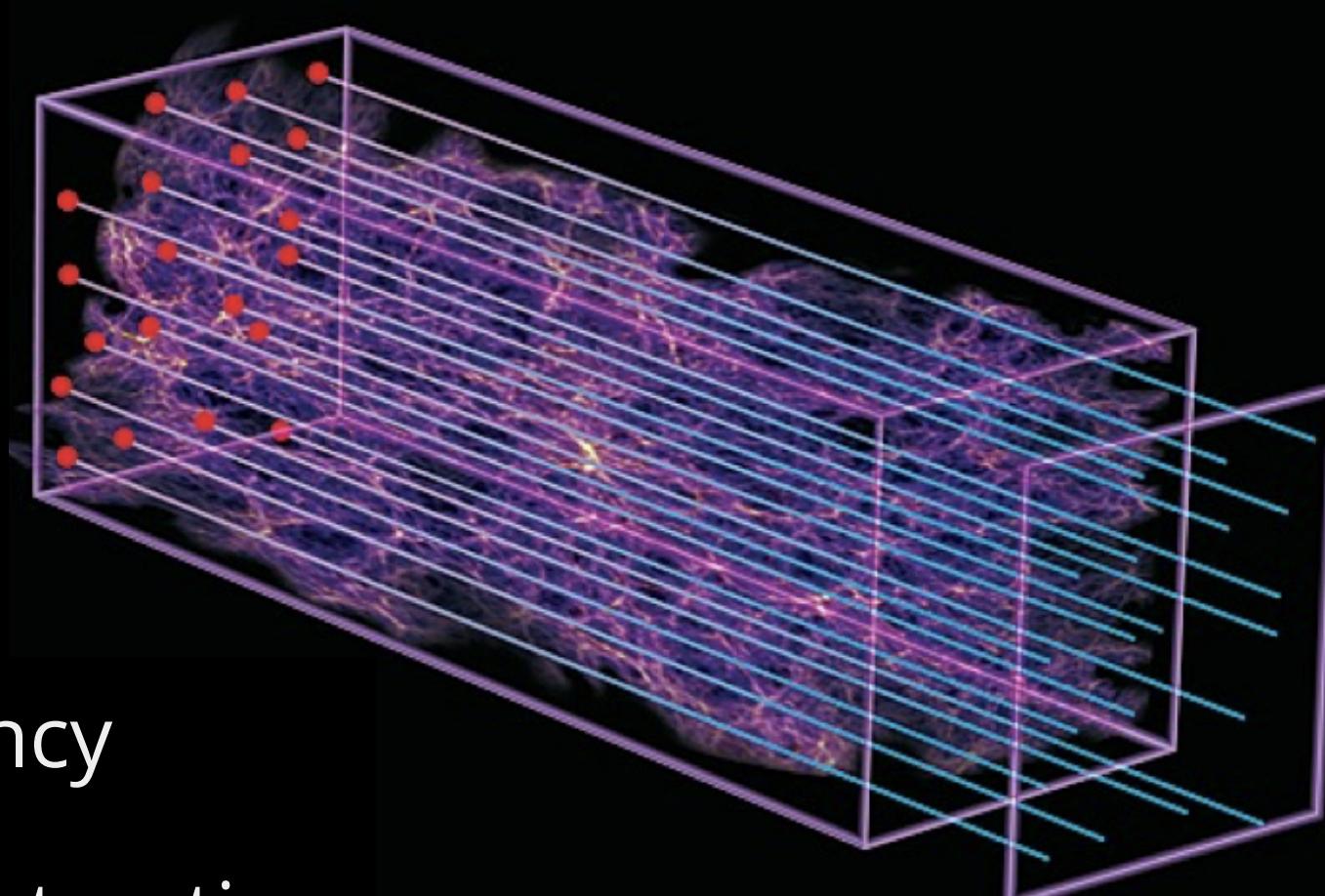
obstruction
clutter
deformation

No Unjustified 3D

distortion
techniques
to overcome obstruction
downside: distortion, clutter



No Unjustified 3D



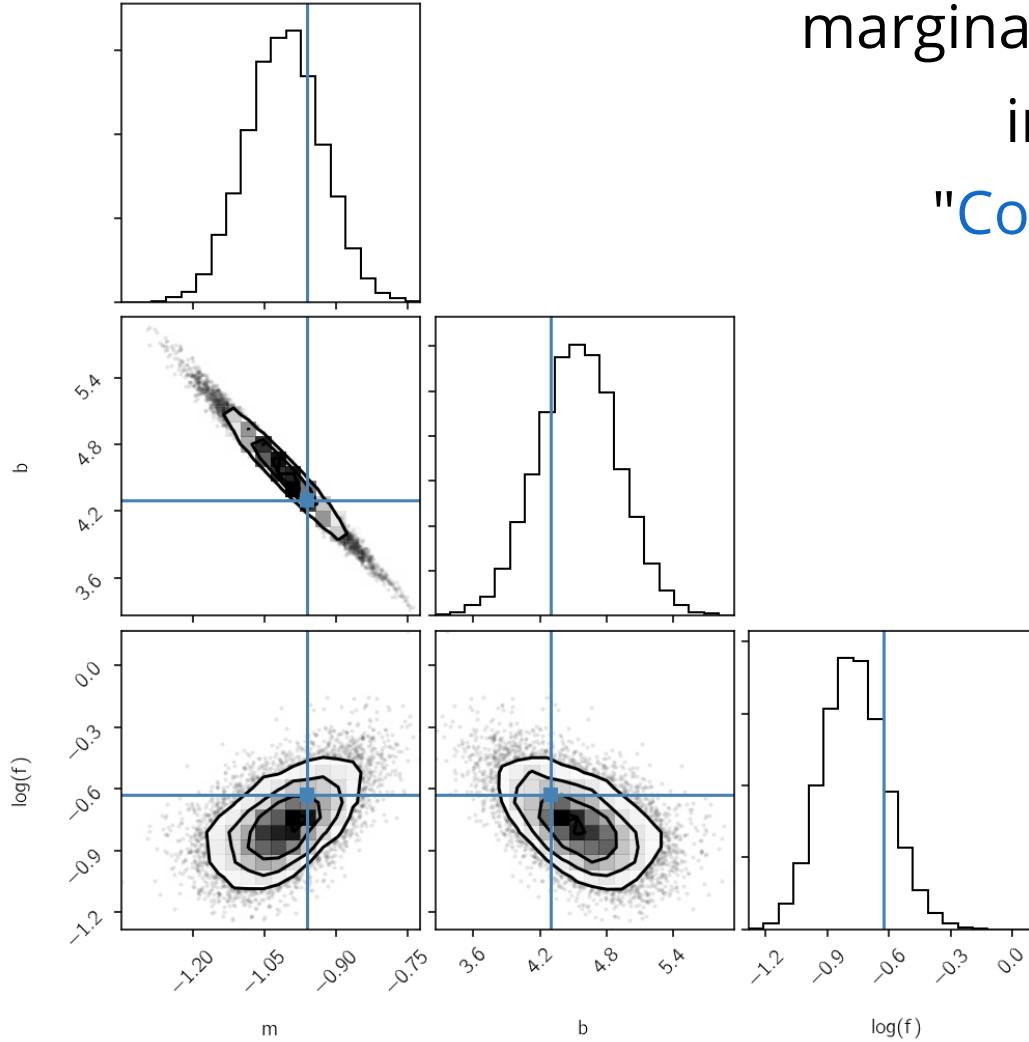
transparency

to overcome obstruction

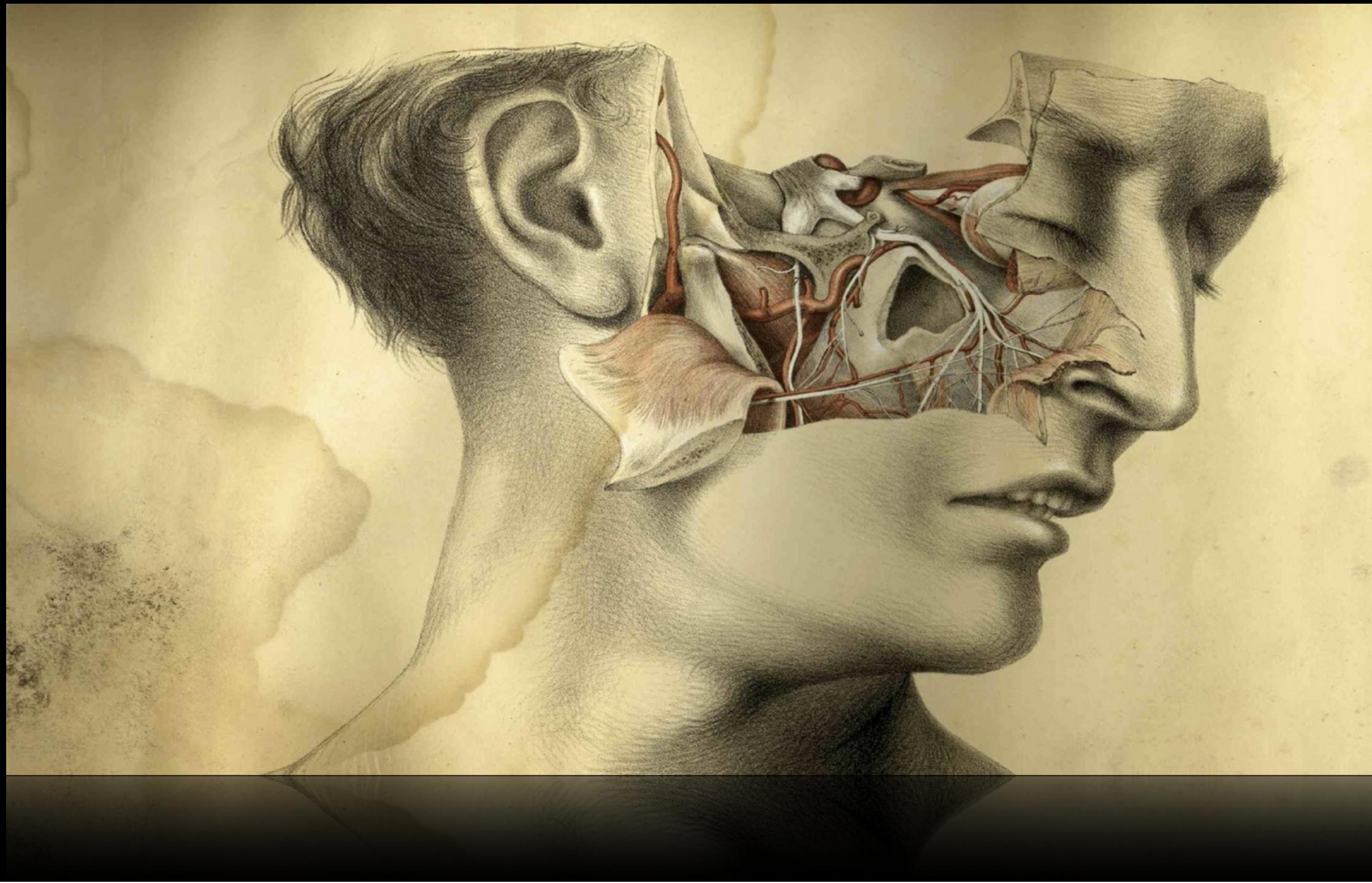
Zosia Rostomian, LBNL; Nic Ross, BOSS Lyman-alpha team, LBNL; and Springel et al, Virgo

Consortium and the Max Planck Institute for Astrophysics

No Unjustified 3D

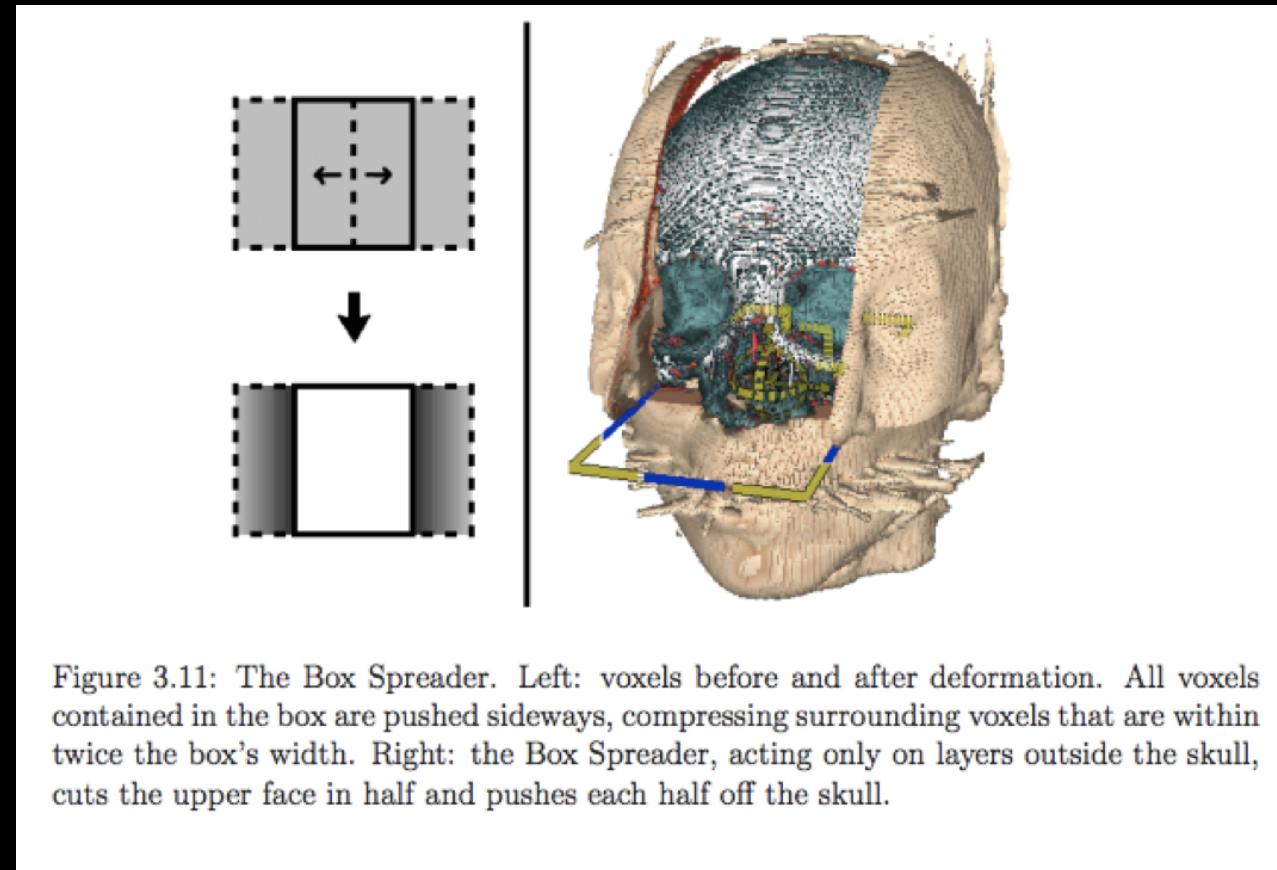


marginalized posteriors
in MCMC
"Corener Plot"



No Unjustified 3D

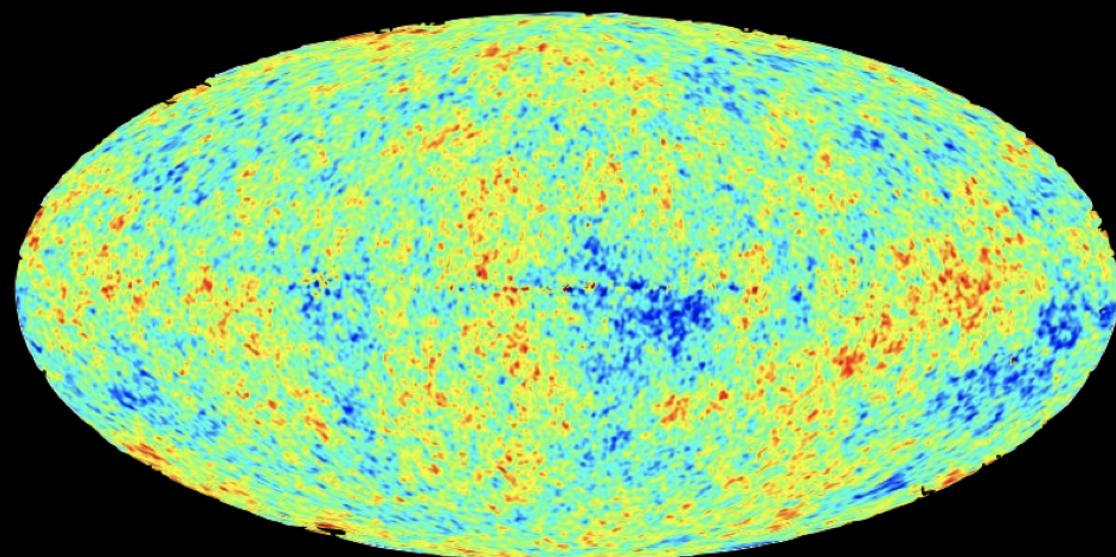
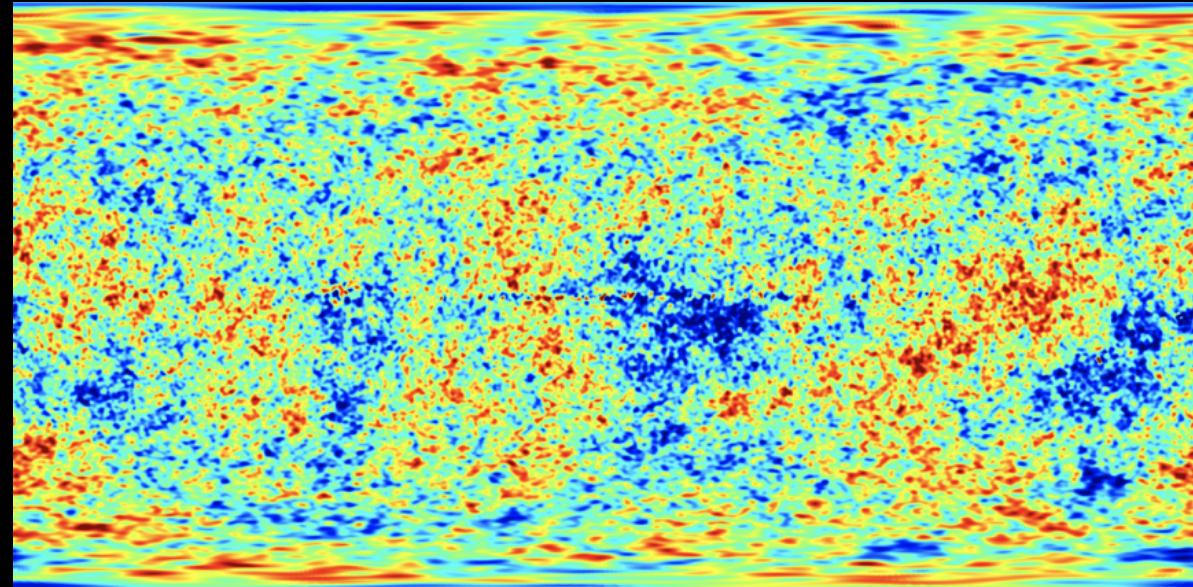
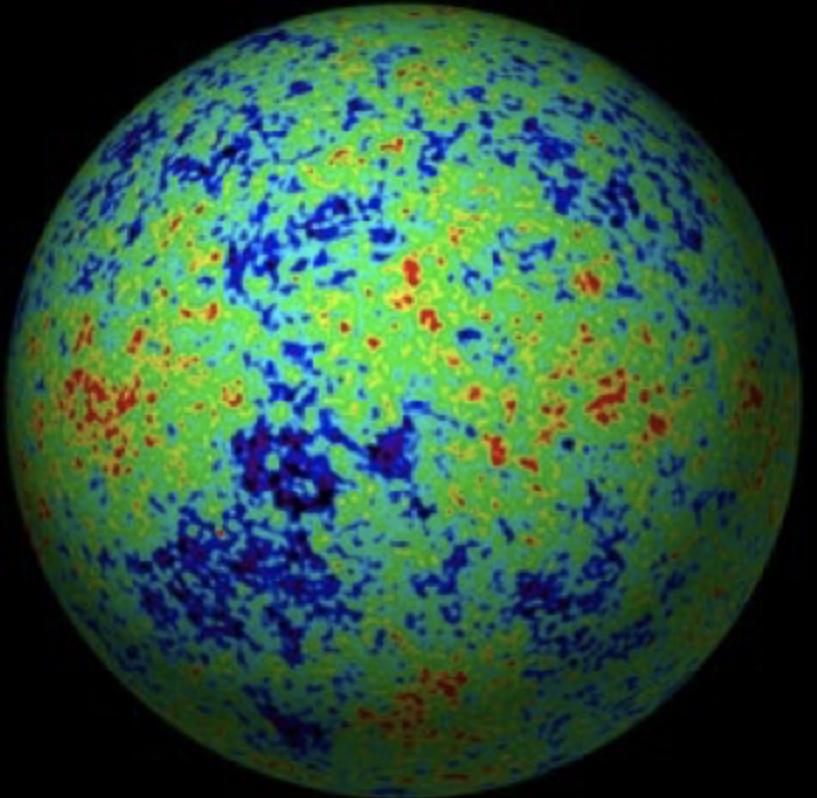
Anatomical drawing style deals with obstruction while preserving the context



An Investigation of Issues and Techniques in
Highly Interactive Computational Visualization

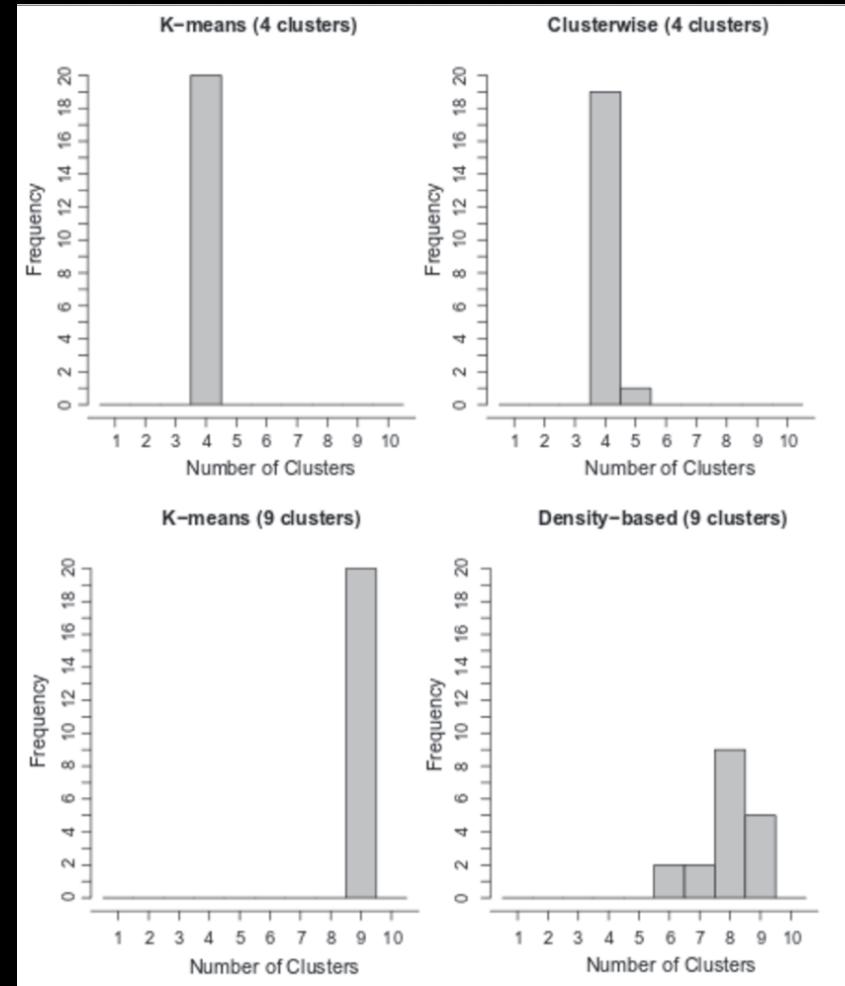
Michael John McGuffin

No Unjustified 3D



Also:
No Unjustified 2D!

Also: No Unjustified 2D!



Eyes over Memory

no unjustified animation

[https://www.youtube.com/embed/FWVDi4aKC-M?
enablejsapi=1](https://www.youtube.com/embed/FWVDi4aKC-M?enablejsapi=1)

Eyes over Memory

no unjustified animation



Interactivity

interactive visualization rules of thumb:

Resolution over immersion

Interactivity

interactive visualization rules of thumb:

Resolution over immersion

Details on demand

Interactivity

interactive visualization rules of thumb:

Resolution over immersion

Details on demand

Avoid latency