Faces look inward

MAX-PLANCK-GESELLSCHAFT

How to design a scientific poster?

Use a short and compelling title, also questions or answers are OK

It's nice to provide first names rather than initials
Carsten Kutzner and Helmut Grubmüller
Theoretical and computational biophysics, MPI for biophysical chemistry, Göttingen, ckutzne@gwdg.de

A picture helps people to find you

Make it easy for the reader!

Everything else follows from this

Remember, no one ever complained that someone's poster was too easy to read. (S. Block, 1996)[1]

The purpose of your poster

- Introduce a piece of your work to colleagues
- Summarize what you did, how you did it, and what you learned
- Stimulate exchange of ideas between you and your audience
- Opportunity for networking:
  many collaborations begin in front of a poster board!

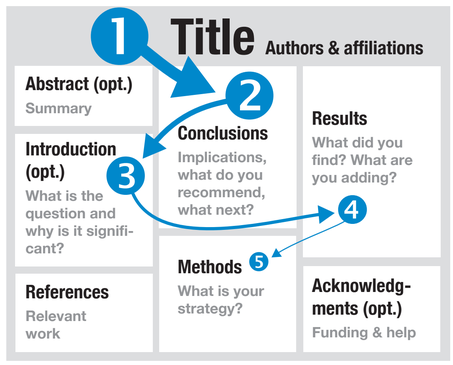
Fig. 1 ➔
General poster layout

A
Better not this way!

B
Natural reading direction

C
Be clear about the order

D
Use a (hidden) grid, let blank space organize the layout



← Fig. 2

Poster content elements

Arrows show typical reading sequence. Size ~ number of people still at your poster.

Can you convey your main message in 10 seconds?

Poster content: focus on the key points!

- A poster is an illustrated abstract, therefore
  focus on what is essential for a simplified version of your story
- Design such that the main ideas are captured in < 3 minutes (Fig. 2)
- Never hide your main points in-between too many details

Text & Layout

Build a content hierarchy!

Expose headings clearly

General layout considerations

- Everything should be readable from 2–3 meters distance
- To attract people, you can place an eye-catcher
  or some other attention-getting gimmick
- Be aware of busy backgrounds, a white background is usually best

Text & Fonts

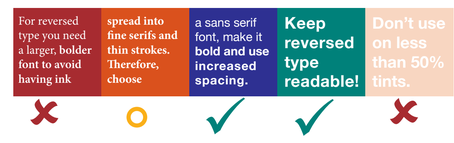
Use bullet points to shorten a text and make it easier to understand

- Choose fonts for legibility (Fig. 3),
  - 1 type for the text, preferably serif Here I used Minion regular
  - 1 type for title and headings (may be the same),
    preferably sans serif Here I used Helvetica condensed bold
- Limit yourself to ~3 font sizes:
  - 18–28 pt for body text Here 24 pt
  - 30–40 pt for headings Here 36 pt
  - 70–120 pt for title Here 115 pt
- Use 11 words per line on average, set column width accordingly
- Avoid paragraphs with > 10 sentences
- Don't cover > ⅓ of poster with text
  More text = less communication!
- Spell-check! Typos, if too many, could make the reader think you are also sloppy with your science.

← Fig. 3

Readability matters most!

Font, size, line length, alignment and spacing all affect readability.[4]



← Fig. 4

Reversed type needs special treatment

Graphics & Color

Use a visual language!

- Visual language encodes logic in non-text elements,
- it is a graphic hierarchy that identifies
  - what is important (Fig. 7), and
  - what belongs together (Fig. 8).
- *similar* things have *similar* properties
  (type, color, line style, shading, ...)
- *different* things have *contrasting* properties!
- which of your ideas can you communicate without text?

Fig. 5 ➔
How to improve a plot

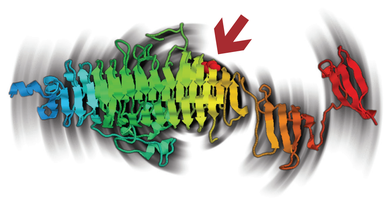
A
"The computer did it this way"

B
Labels must be clearly visible

C
Now the focus is on the *data*

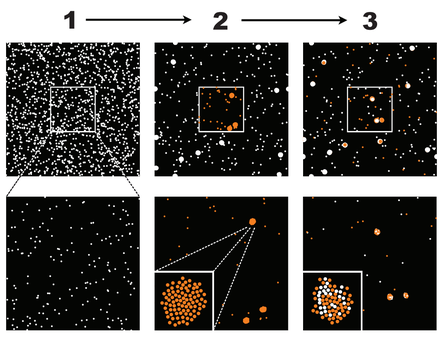
D
All lines were too thin in A–C

Fig. 6 ➔
Lines must be thick if colored



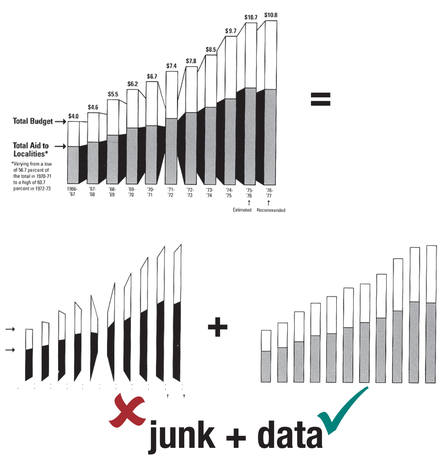
← Fig. 7
3 Visual language elements

a) color encodes sequence
b) shadow signals *motion*
c) arrow signals *look here!*



← Fig. 8
Visual language example

What information is given without a single word?



← Fig. 9

Avoid chartjunk!

***Chartjunk*[5] is all ink not carrying information**

↙ Fig. 10
How to improve a plot

A
Don't use 3d plots for 2d data!

B
Much clearer!

C
Using implicit lines frees space

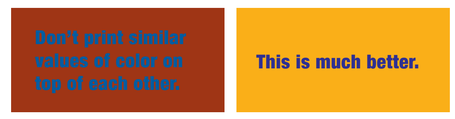
D
... that can now be used for the legend.

Figures ...

- must have properly labelled axes (values & units),
- must have a clear, short legend,
- should be numbered in the order they appear in the text,
- should be high quality and near to the text explaining it

Color

- Use as few colors as possible (fewer than on *this* poster!)
- Consistently use same color for same things, e.g. **bad, OK, good**
- Colors print identical only if values and mode (RGB/CMYK) match!



← Fig. 11

Color is about contrast!

✂ ... Don't place any key findings below this line. Anything in the lowermost quarter of a poster is likely to not get overlooked

Tab. 1.1 ➔

Cluttered table

Units should go into table head. Most lines are unnec-essary. Old style numerals not suited for tables.

Tab. 1.1: Coffee consumption per person and year.

Country	2007	2006	2005
Finland	12 kg	11.8 kg	12.6 kg
Norway	9.9 kg	9.6 kg	9.6 kg
Denmark	8.7 kg	9 kg	8.8 kg
Netherlands	8.4 kg	6.7 kg	7.1 kg
Sweden	8.2 kg	7.8 kg	7.8 kg
Switzerland	7.9 kg	8.2 kg	8.7 kg
Belgium/Lux.	6.8 kg	6.6 kg	6.9 kg
Canada	6.5 kg	5.7 kg	5.2 kg
Germany	6.4 kg	5.5 kg	6.1 kg
Austria	6.1 kg	4.2 kg	5.6 kg

Download ➔
poster PDF here if you like

http://www.mpibpc.mpg.de/home/grubmueller/ihp/ckutzne

Tab. 1.2: Yearly coffee consumption per person.

Country	2007 kg	2006 kg	2005 kg
Finland	12.0	11.8	12.6
Norway	9.9	9.6	9.6
Denmark	8.7	9.0	8.8
Netherlands	8.4	6.7	7.1
Sweden	8.2	7.8	7.8
Switzerland	7.9	8.2	8.7
Belgium/Lux.	6.8	6.6	6.9
Canada	6.5	5.7	5.2
Germany	6.4	5.5	6.1
Austria	6.1	4.2	5.6

← Tab. 1.2

Clear table

Numbers are aligned on the decimal point, one line is emphasized with a 20 % grey box.

References and further resources

[1] Block, SM: Do's and dont's of poster presentations, Biophys J 71 (1996)

[2] Erren, TC and Bourne, PE: Ten Simple Rules for a Good Poster Presentation, PLoS Comp Biol 3 (2007)

[3] Hess, GR, Tosney, K, Leigel, L: Creating effective poster presentations: AMEE Guide no. 40, Medical Teacher 31 (2009)

[4] Strizver, I: Type rules, Wiley (2010)

[5] Tufte, E: The Visual Display of Quantitative Information, Graphics Press, Cheshire, CT (1983)

Acknowledgment

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