Scientific Presentation

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Some general remarks on posters
Ways to present your research:

- Paper (e.g. essay, working paper,…)

- Oral presentation

- **Poster**

- Advertise your research

- More time than an oral presentation

- Immediate contact to audience

- Limited space ($<$500 words)

- Tough competition

How should a poster look like?
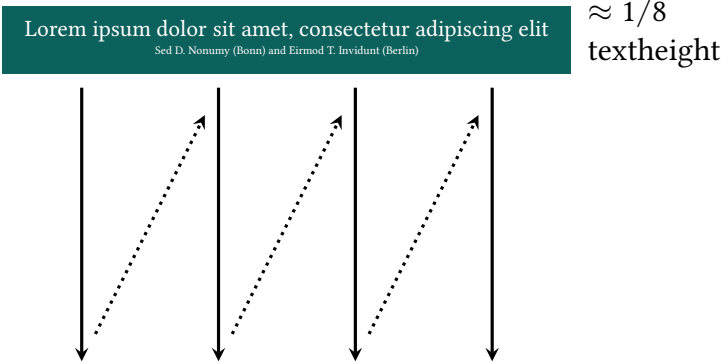
Visual appearance

- Display attracts viewer's attention.

- Words are easy to read from an appropriate distance (1-2 m).

- Poster is well organised and easy to follow.

- The poster can be read in a non-linear way

- Graphics and other visuals enhance presentation.

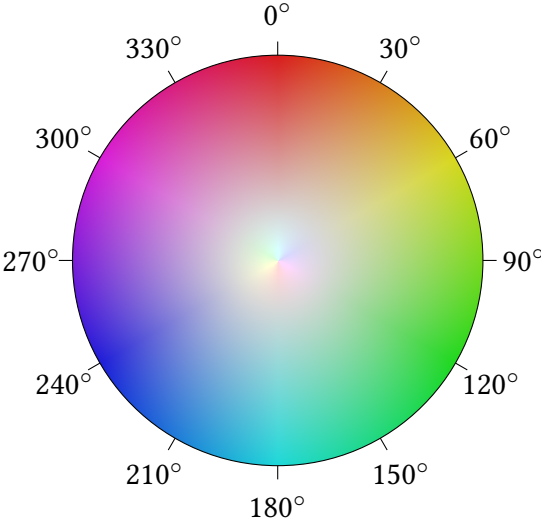- The poster is neat and appealing to look at.

Visual appearance

- Landscape A0 (1189mm × 841mm)

- Typeface: Font without hairlines
  - sans serif, dynamic sans serif,
  - old style serif…,
  - modern serif fonts have very fine serifs, great for books, but…)

- Font size:

	face	A4	A3	A0
title	bold	30pt	42pt	120pt
authors		18pt	25pt	72pt
section heading	bold	18pt	25pt	72pt
subsection heading	bold	14pt	20pt	56pt
normal text		10pt	14pt	40pt
small text		8pt	11pt	32pt
very small text		6pt	9pt	24pt

Layout in columns or in rows?

Lorem ipsum dolor sit amet, consectetur adipiscing elit
Sed D. Nonumy (Bonn) and Eirmod T. Invidunt (Berlin)

$\approx 1/8$ textheight

Be careful with text — a poster is not an essay

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.
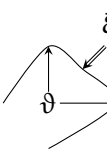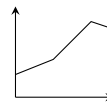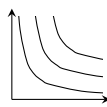
Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim ad minima veniam, quis nostrum exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla pariatur?

Text and lists:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris vitae ipsum eu tortor rhoncus ornare vitae sit amet eros. Aliquam dui tellus, tincidunt vitae mollis quis, tempor vel orci. Proin sit amet augue urna, eget rhoncus nisl. Pellentesque nec sapien eu dui ullamcorper blandit in quis tortor.

- Nulla hendrerit tincidunt est vel hendrerit.

- Morbi porttitor justo nec neque vehicula ac dignissim nisl pulvinar.

- Suspendisse vel nulla sed eros ultricies volutpat in nec urna.

The only way to approach a text is to swallow the entire paragraph. Lists can be digested in small chunks.

Colour

Colour

	CMYK				RGB			HSB		
A colour:										
87	0	5	62	13	97	92	177	87	38	
29	0	1	21	143	201	199	177	29	79	
The opposite colour:										
0	87	83	62	97	13	16	357	87	38	
0	29	28	21	201	143	146	357	29	79	
Two more variants, if you really need lots of colour:										
83	0	87	62	17	97	13	117	87	38	
28	0	29	21	146	201	143	117	29	79	
87	83	0	62	13	17	97	237	87	38	
29	28	0	21	143	146	201	237	29	79	

Logos and graphics:

vector graphics:	compressed raster graphics:
eps, svg,...	jpeg, png,...

Layout

One topic:

Lorem ipsum dolor sit amet, consectetur adipiscing elit
Sed D. Nonumy (Bonn) and Eirmod T. Invidunt (Berlin)

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Abstract

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris vitae ipsum eu tortor rhoncus ornare vitae sit amet eros. Aliquam dui tellus, tincidunt vitae mollis quis, tempor vel orci. Proin sit amet augue urna, eget rhoncus nisl.

Mauris mattis elementum libero in mattis. Vivamus ac felis sit amet libero egestas molestie. Aliquam eget augue in mauris imperdiet luctus a eu sapien.

Motivation

Pellentesque nec sapien eu dui ullamcorper blandit in quis tortor. Sed eget nisi in nunc tincidunt pellentesque. Vivamus vitae ligula ac felis sagittis varius non sit amet turpis. Maecenas vel urna nisl, at malesuada massa.

- Nulla hendrerit tincidunt est vel hendrerit.
- Morbi porttitor justo nec neque vehicula ac dignissim nisl pulvinar.
- Suspendisse vel nulla sed eros ultricies volutpat in nec urna.

Literature

- Nullam quis sem id purus tempor cursus sed eget nisi.
- In hac habitasse platea dictumst.
- Etiam vel odio erat.
- Quisque gravida eleifend est eu hendrerit.

Research Questions

- Praesent feugiat elit ac enim lobortis semper.
- Quisque dapibus magna eget mauris sodales mattis.
- Aliquam luctus turpis arcu, id consectetur dui.
- Proin eget diam et tellus facilisis tempus.
- Mauris sit amet volutpat arcu.
- Mauris erat dui, semper eu bibendum in, congue vel leo.
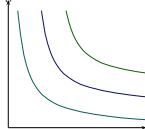
Method

Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Quisque leo dolor, mattis sed varius a, commodo non felis.
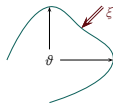
Experiment

- Ut eu est lacus, sed convallis purus.
- Nam quis ligula massa.
- Etiam sit amet odio dolor, ac sollicitudin tellus.
- Nullam tempus scelerisque justo in congue.
- Sed lacinia elit sed lorem commodo feugiat.

Results A

Suspendisse potenti. Nam nec erat eu nulla dictum mattis et pharetra metus. In ac interdum urna. Pellentesque euismod libero at ligula convallis volutpat. Duis viverra augue non leo sollicitudin non mollis lectus accumsan.
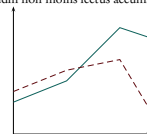
- Nullam lobortis velit venenatis.
- Etiam orci ipsum, hendrerit vitae laoreet.
- Molestie nec massa.
- Morbi id tortor a ligula rhoncus imperdiet.

Results B

Nullam ac vehicula turpis. Duis laoreet hendrerit lacus eget consectetur. Pellentesque eu enim lobortis massa cursus adipiscing. Fusce id pellentesque sapien.

- Donec consectetur lacinia leo, non rhoncus purus consectetur sit amet.
- Integer massa magna, auctor ut vulputate vel, fermentum at dolor.
- Donec at eros velit, in vestibulum risus.
- Suspendisse faucibus orci eu neque feugiat vestibulum.
- Vivamus ligula felis, pulvinar ac lobortis a, sagittis eget neque.

	all	asymmetric
β_0	0.270***	2.755***
	[0.144; 0.397]	[2.338; 1.132]
ξ	0.699***	0.263***
	[0.651; 0.686]	[0.295; 0.331]
Dev.	11706.492	10902.456
n	44	8
m	263	75
N	16958	4220

Conf. intervals and *p*-values are based on a parametric bootstrap with 1000 replications.

Conclusion:

- Nulla hendrerit tincidunt est vel hendrerit.
- Morbi porttitor justo nec neque vehicula ac dignissim nisl pulvinar.
- Suspendisse vel nulla sed eros ultricies volutpat in nec urna.

Contact: Sed D. Nonumy sed@d.nonumy.org
Eirmod T. Invidunt e.t.invi@mpg.com

Several topics on one poster:

Lorem ipsum dolor sit amet, consectetur adipiscing elit
Sed D. Nonumy (Bonn) and Eirmod T. Invidunt (Berlin)

12

### Motivation:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris vitae ipsum eu tortor rhoncus ornare vitae sit amet eros. Aliquam dui tellus, tincidunt vitae mollis quis, tempor vel orci. Proin sit amet augue urna, eget rhoncus nisl.

Mauris mattis elementum libero in mattis. Vivamus ac felis sit amet libero egestas molestie. Aliquam eget augue in mauris imperdiet luctus a eu sapien.

- Nulla hendrerit tincidunt est vel hendrerit.
- Morbi porttitor justo nec neque vehicula ac dignissim nisl pulvinar.
- Suspendisse vel nulla sed eros ultricies volutpat in nec urna.

Method A

Mauris vestibulum pretium congue. Cras sit amet tortor nec neque accumsan malesuada a in magna. Vivamus vel vulputate est. Vestibulum id nisi felis. Donec lorem nunc, sodales a rutrum eget, euismod et nunc.
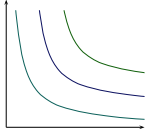
- Nullam quis sem id purus tempor cursus sed eget nisi.
- In hac habitasse platea dictumst.
- Etiam vel odio erat.
- Quisque gravida eleifend est eu hendrerit.
- Praesent feugiat elit ac enim lobortis semper.

Mauris vestibulum pretium congue. Cras sit amet tortor nec neque accumsan malesuada a in magna. Vivamus vel vulputate est. Vestibulum id nisi felis.

Method B

Pellentesque nec sapien eu dui ullamcorper blandit in quis tortor. Sed eget nisi in nunc tincidunt pellentesque. Vivamus vitae ligula ac felis sagittis varius non sit amet turpis. Maecenas vel urna nisl, at malesuada massa.
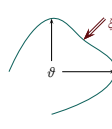
- Quisque dapibus magna eget mauris sodales mattis.
- Aliquam luctus turpis arcu, id consectetur dui.
- Proin eget diam et tellus facilisis tempus.
- Mauris sit amet volutpat arcu.
- Mauris erat dui, semper eu bibendum in, congue vel leo.

Donec lorem nunc, sodales a rutrum eget, euismod et nunc. Pellentesque nec sapien eu dui ullamcorper blandit in quis tortor. Sed eget nisi in nunc tincidunt pellentesque.

Method C

Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Quisque leo dolor, mattis sed varius a, commodo non felis.
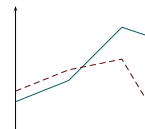
- Ut eu est lacus, sed convallis purus.
- Nam quis ligula massa.
- Etiam sit amet odio dolor, ac sollicitudin tellus.
- Nullam tempus scelerisque justo in congue.
- Sed lacinia elit sed lorem commodo feugiat.
- Nulla hendrerit, sem et tempus congue.

Summary:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris vitae ipsum eu tortor rhoncus ornare vitae sit amet eros. Aliquam dui tellus, tincidunt vitae mollis quis, tempor vel orci. Proin sit amet augue urna, eget rhoncus nisl.
Mauris mattis elementum libero in mattis. Vivamus ac felis sit amet libero egestas molestie. Aliquam eget augue in mauris imperdiet luctus a eu sapien.

- Nulla hendrerit tincidunt est vel hendrerit.
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- Suspendisse vel nulla sed eros ultricies volutpat in nec urna.

Contact: Sed D. Nonumy sed@d.nonumy.org; Eirmod T. Invidunt e.t.invi@mpg.com

Content

- **Clarity and simplicity**

- Drop all unnecessary detail

- State your question clearly.

- Motivate your question clearly.

- Be clear about model and assumptions.

- Is your method appropriate and technically sound?

- Provide sufficient detail about your methods and results.

- State your conclusions clearly.

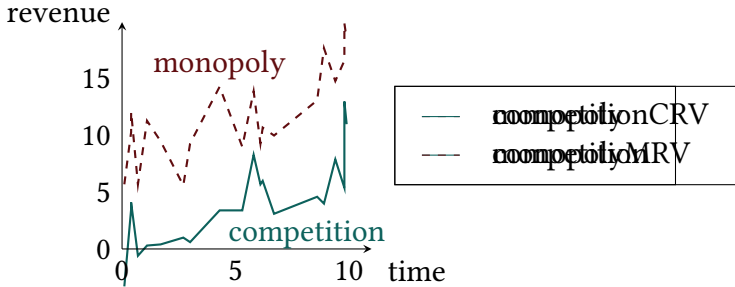- Are your conclusions supported by your results?

Presenting results: Formulas

$$I_A^1(I_B) = [\kappa_A I_B^\alpha]^{\frac{1}{1-\alpha}} \quad \text{where} \quad \kappa_A = \frac{(1-\rho)\pi + \rho(1-\pi)}{1-\rho}. \tag{1}$$

- Use formulas carefully!

- If you use them, you have to explain them.

Presenting results: Tables

time	revenue	
	competition	monopoly
.4	3.5	12.1
8.9	4	17.7
9.9	11	18.5
9.8	13	16.6
.7	-.6	5.7
2.7	1	5.6
4.3	3.4	14.3
6.1	5.7	9.3
9.4	7.9	14.8
1.7	.4	9.5
3	.6	9.3
.4	4.1	10.3
6.2	6	10.7
5.3	3.4	9
8.6	4.6	13.1
9.8	5.4	19.9
6.7	3.1	10
.1	-3.3	5.7
5.8	8.3	13.9
1.1	.3	11.3

Using graphs — successfullyless successfully

revenue

monopoly

competition

15

10

5

0

0 5 10 time

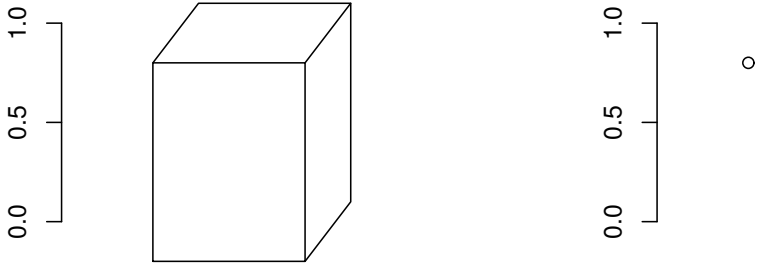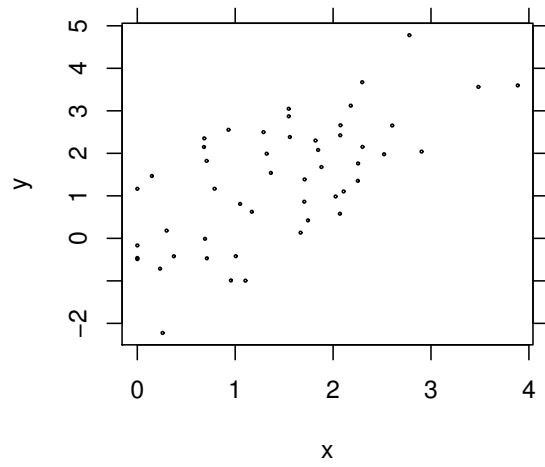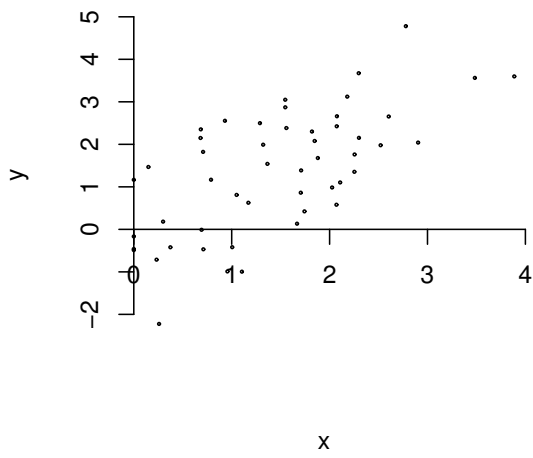|	
——	competitionCRV
– –	monopolyMRV

[3ex]

...We call MRV (brown, dashed) the relation between monopoly-revenue and time and CRV (green, solid) the relation between competition-revenue and time...

Axes and data must be labelled.

Unnecessary 3D
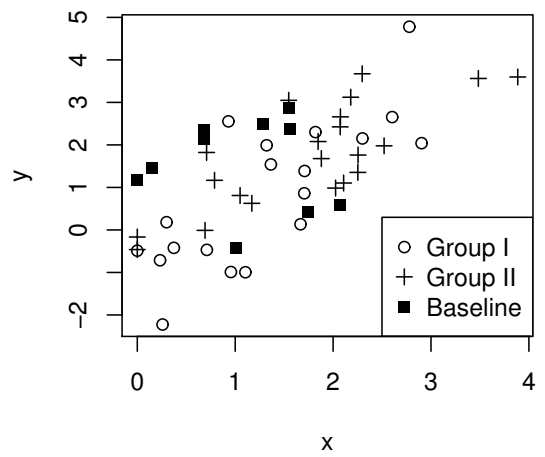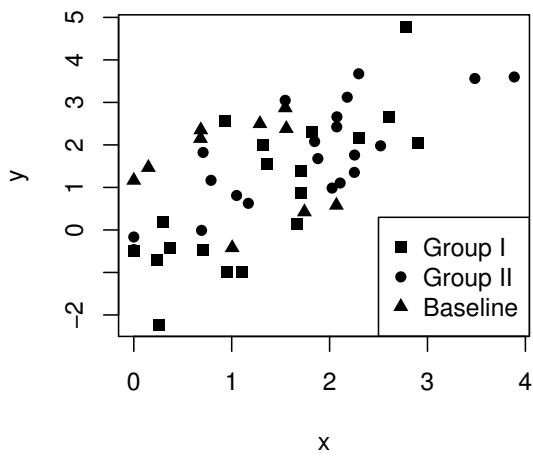
1.0

0.5

0.0

1.0

0.5

0.0

Axes

- Labels and tick marks are separated from the data.
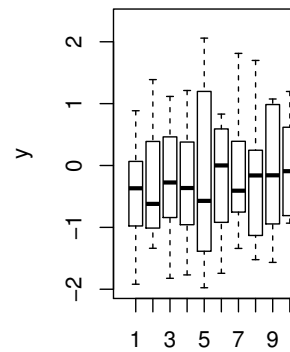
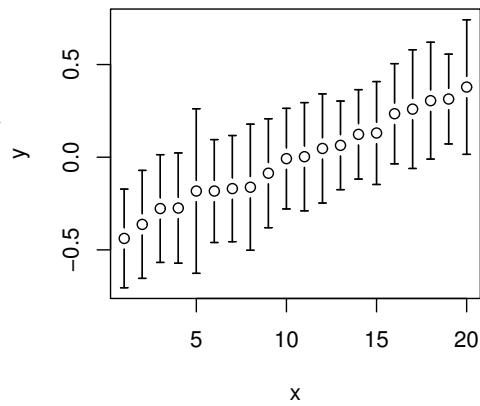- Ticks on the opposite axis can help.

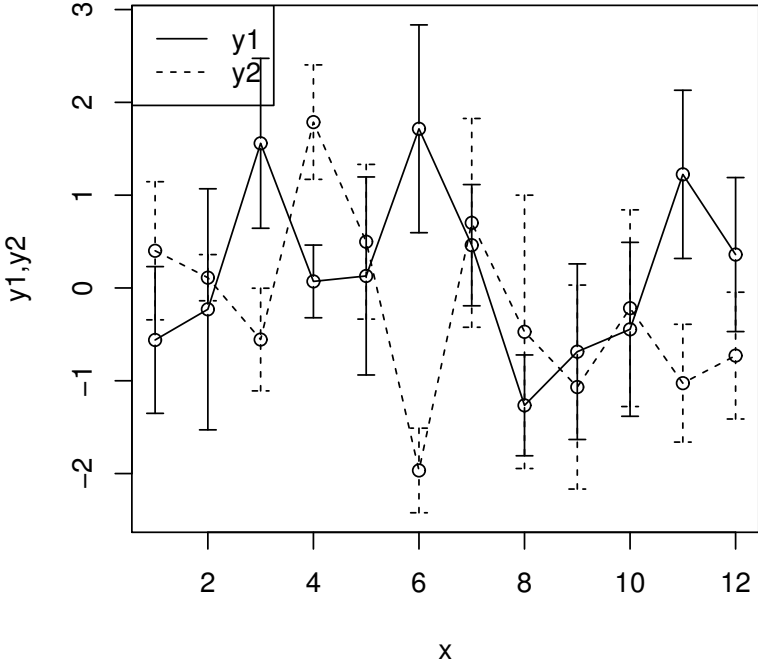**Overlapping points**

Error Bars

Error bars can refer to serveral quantities:

- Standard deviation of the sample

- Standard deviation of the estimated mean

- 95% confidence intervals of the estimated mean

- ⋮

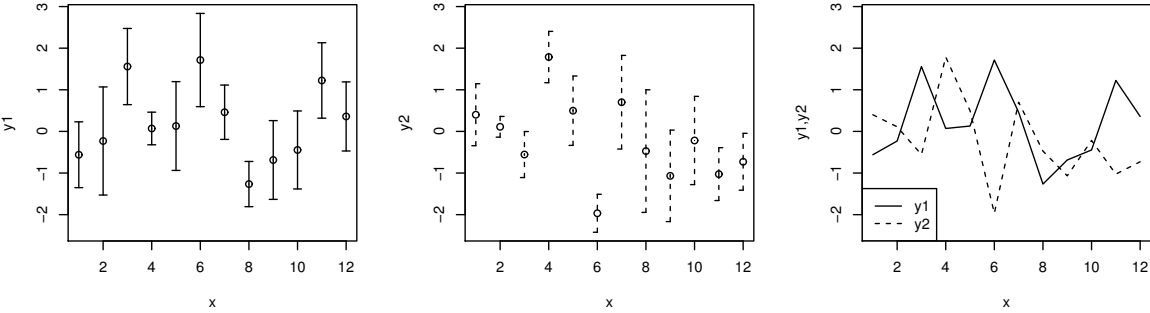

We have to explain clearly in the figure what quantity is shown.
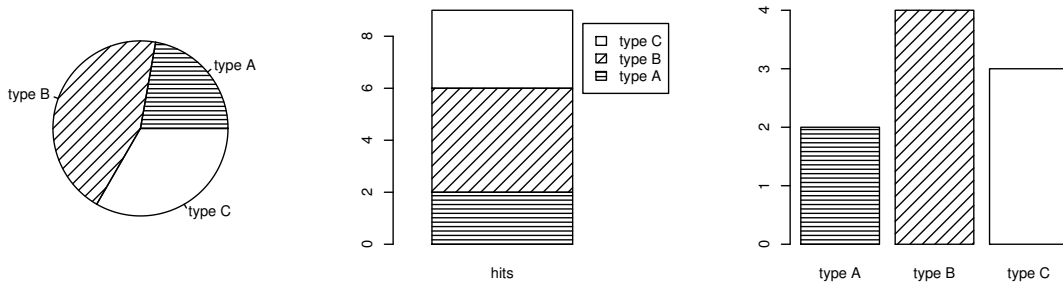Boxplots are often more informative than error bars.

Clutter

Perhaps splitting the information into several graphs can help:

Clutter

11

Nominal univariate

Pie chart   – The eye is not good at comparing angles. Avoid pie charts.
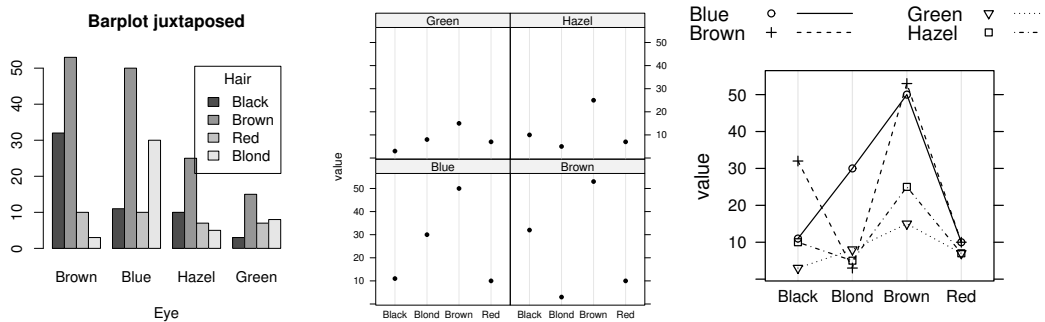
Stacked bar charts   + not much space

        + total size easy to assess

        – we need a legend to identify categeories

Juxtaposed bar charts   + even easier comparison of categories

        + size of sub categories easy to assess

Nominal — bivariate

Juxtaposed barplot   – hard to see a structure in the sub categories

Dotplot   + easy to look up and to compare absolute frequencies

        + easy to see a pattern

Things to keep in mind

- Display attracts viewer's attention.

- Words are easy to read from an appropriate distance (1-2 m).

- Poster is well organised and easy to follow.

- The poster can be read in a non-linear way

- Graphics and other visuals enhance presentation.

- The poster is neat and appealing to look at.

- **Clarity and simplicity**

- Drop all unnecessary detail

- State your question clearly.

- Motivate your question clearly.

- Be clear about model and assumptions.

- Is your method appropriate and technically sound?

- Provide sufficient detail about your methods and results.

- State your conclusions clearly.

- Are your conclusions supported by your results?