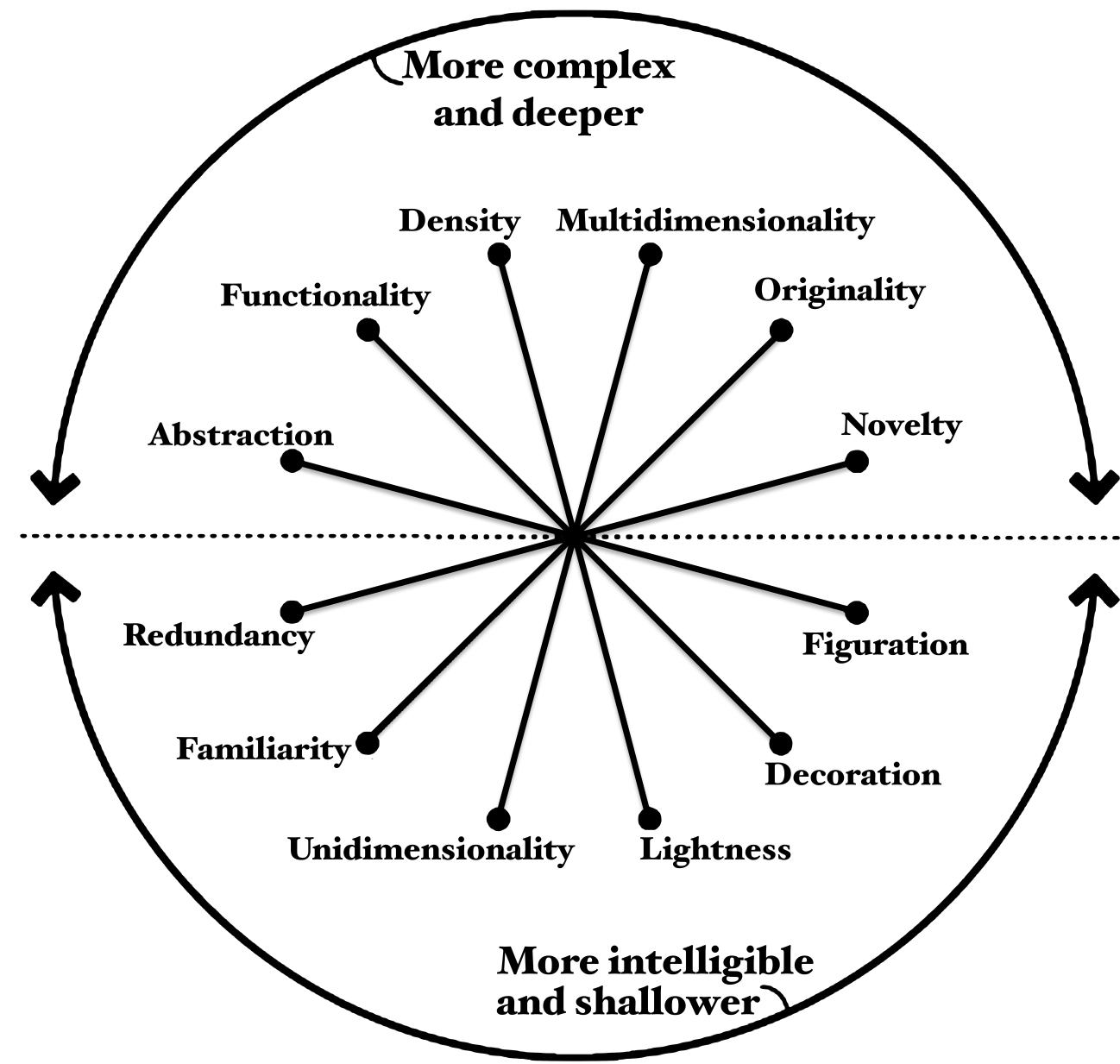
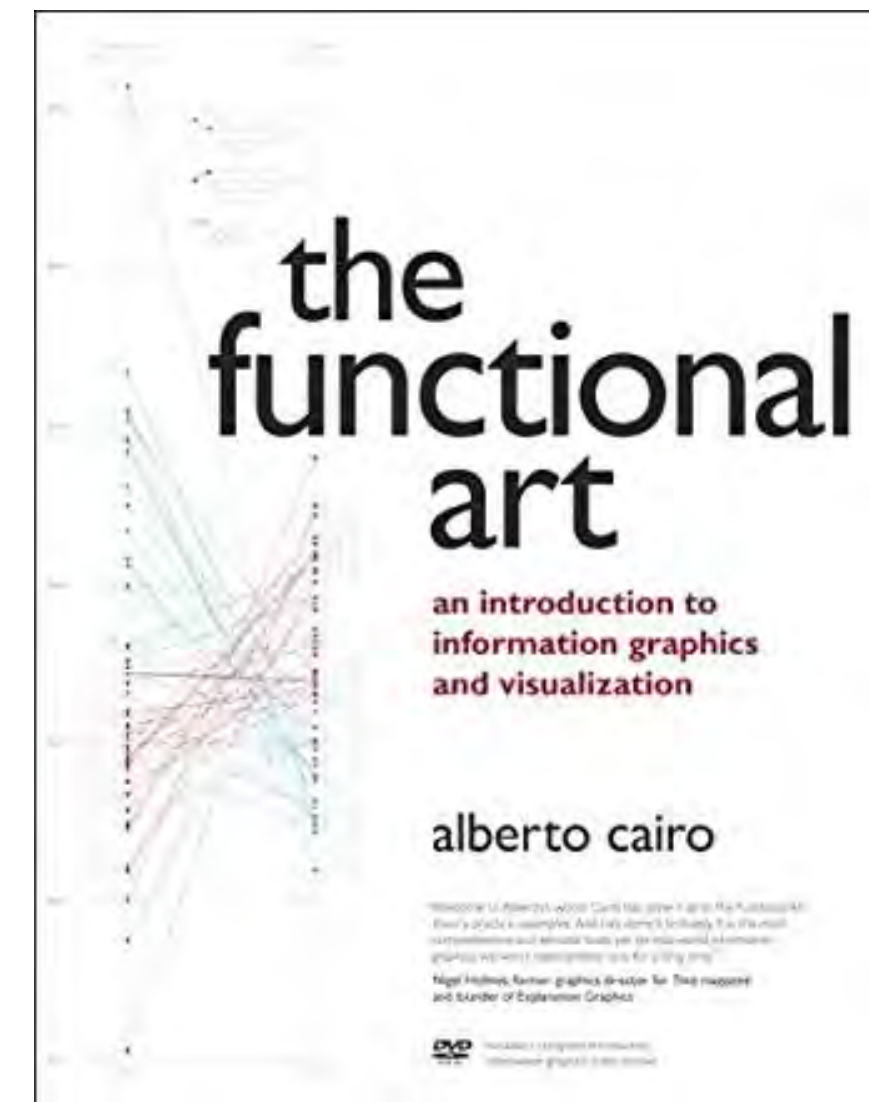


Visualization Wheel



- Alberto Cairo; the functional art



Visualization Wheel Dimensions

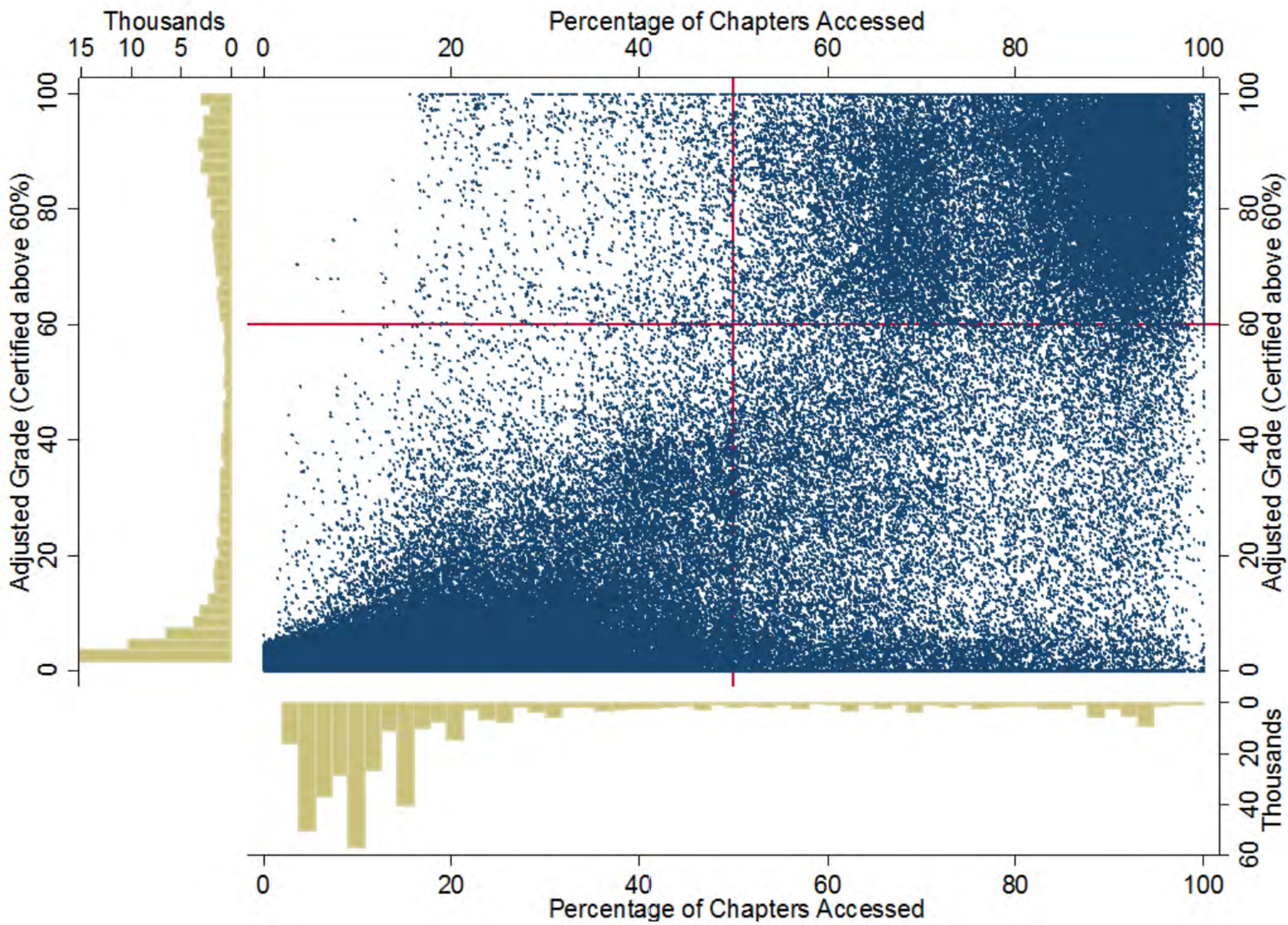
- **Abstraction – Figuration**
 - *Boxes and charts (abstraction) or real-world physical objects (figuration)*

Visualization Wheel Dimensions

- **Abstraction – Figuration**
 - *Boxes and charts (abstraction) or real-world physical objects (figuration)*
- **Functionality – Decoration**
 - *No embellishments (functionality) or artistic embellishments (decoration)*

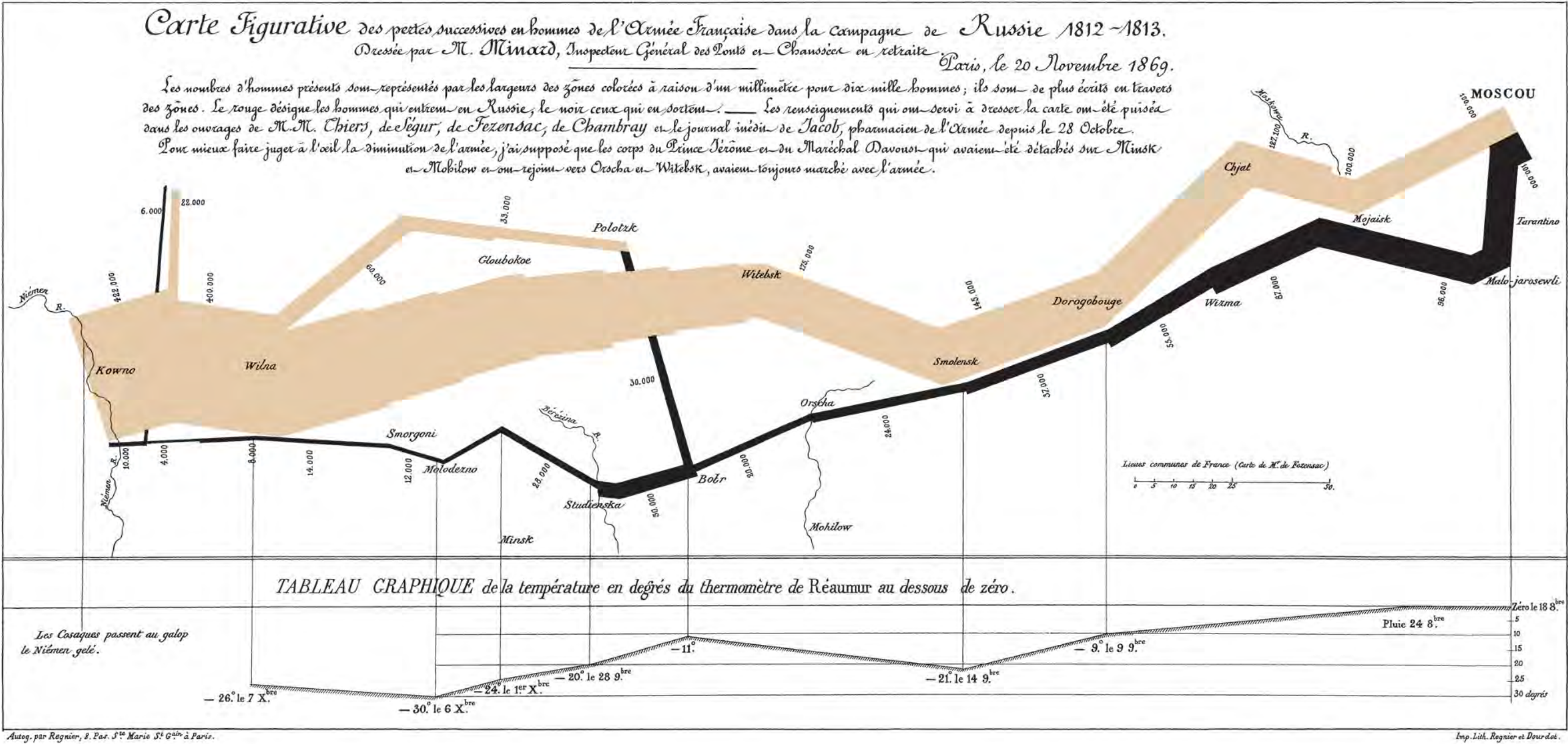
Visualization Wheel Dimensions

- **Abstraction – Figuration**
 - *Boxes and charts (abstraction) or real-world physical objects (figuration)*
- **Functionality – Decoration**
 - *No embellishments (functionality) or artistic embellishments (decoration)*
- **Density – Lightness**
 - *Must be studied in depth (density) or understandable at a glance (lightness)*



Visualization Wheel Dimensions

- **Multidimensional – Unidimensional**
 - *Different aspects of phenomena (multidimensional) or single or few items of phenomenal (unidimensional)*



Visualization Wheel Dimensions

- **Multidimensional – Unidimensional**
 - *Different aspects of phenomena (multidimensional) or single or few items of phenomenal (unidimensional)*
- **Originality – Familiarity**
 - *Novel methods of visualization (originality) or established and well understood methods of visualization (familiarity)*
- **Novelty – Redundancy**
 - *Explaining each item once (novelty) or encoding multiple explanations of the same phenomena (redundancy)*

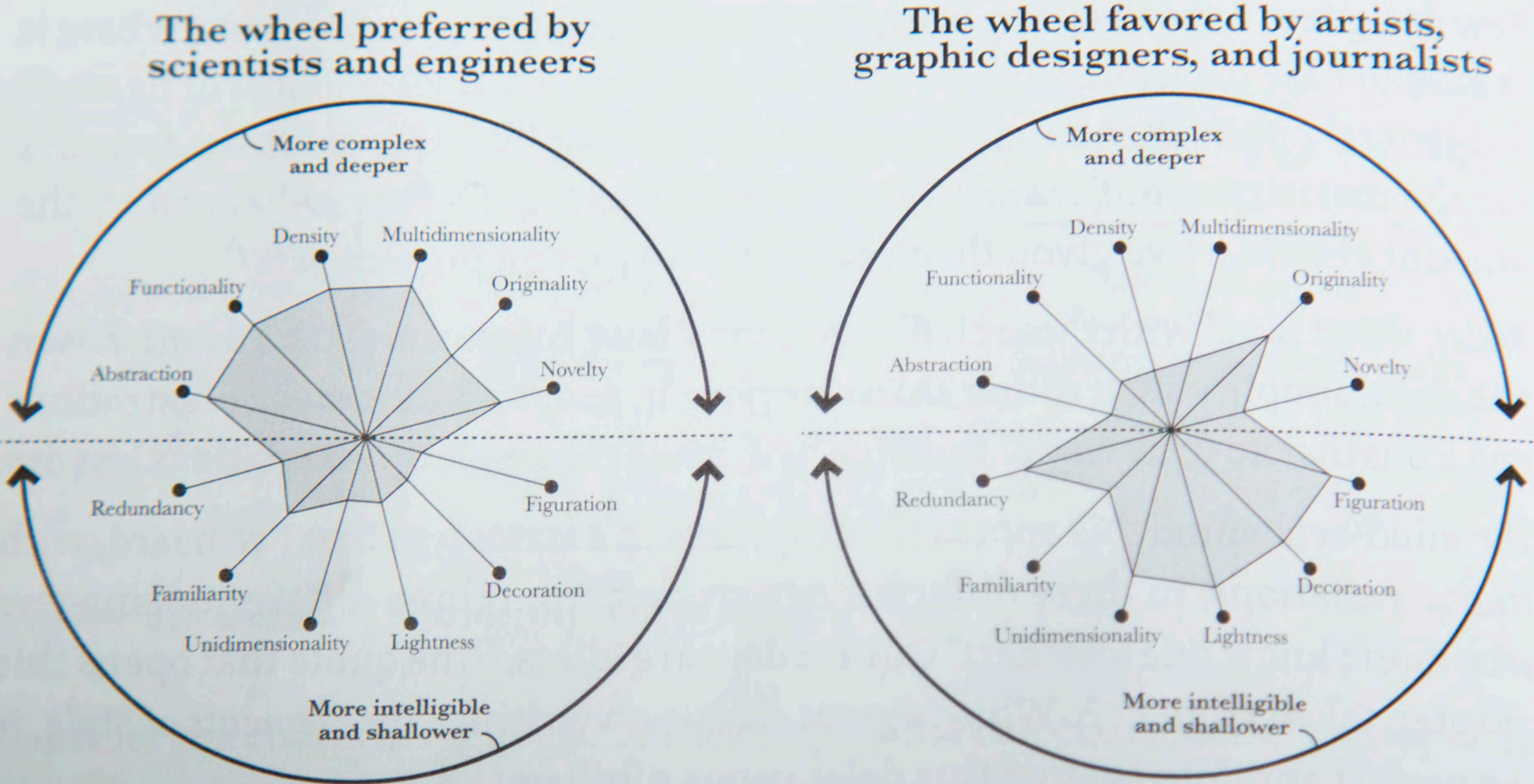
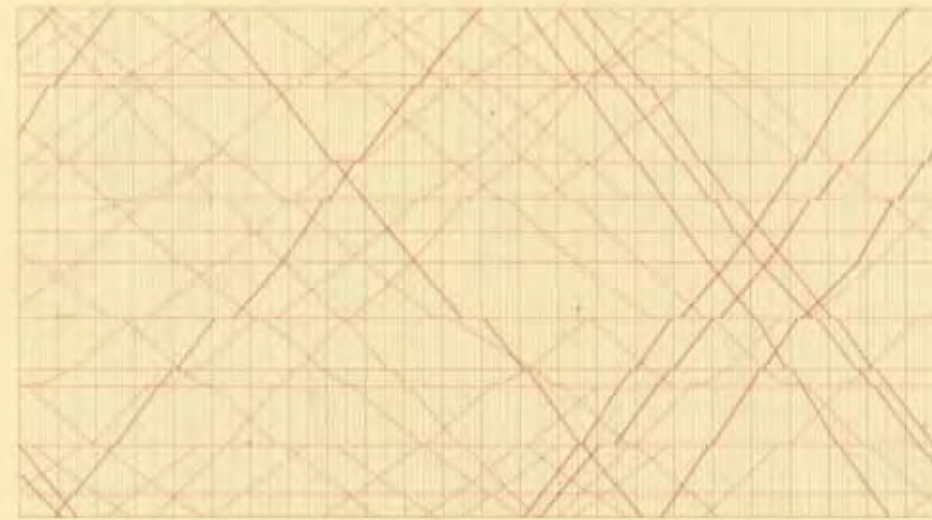


Figure 3.11 Different professional backgrounds, different ways of facing projects.



The Visual Display
of Quantitative Information

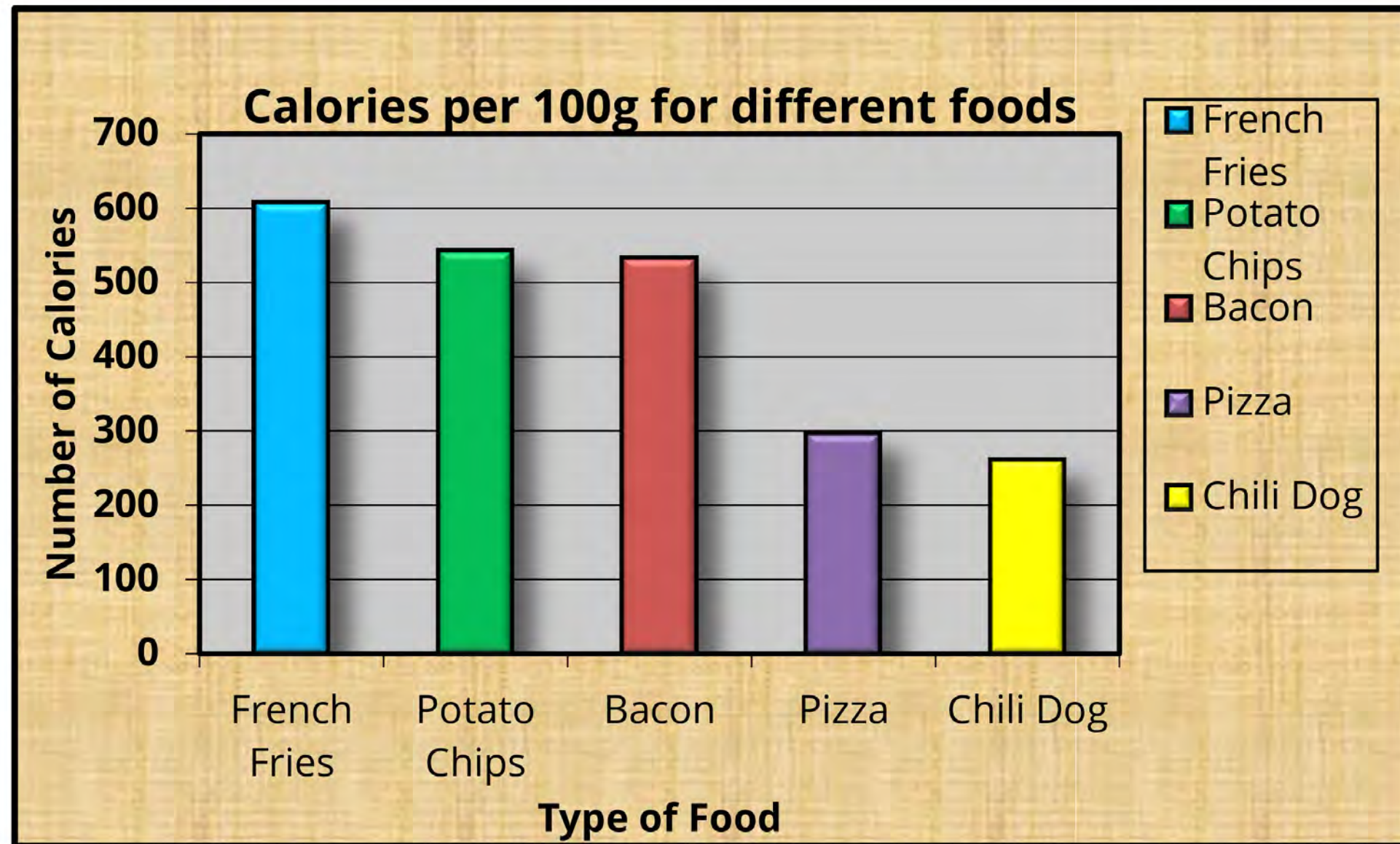
EDWARD R. TUFTE

Remove
to improve
(the **data-ink** ratio)

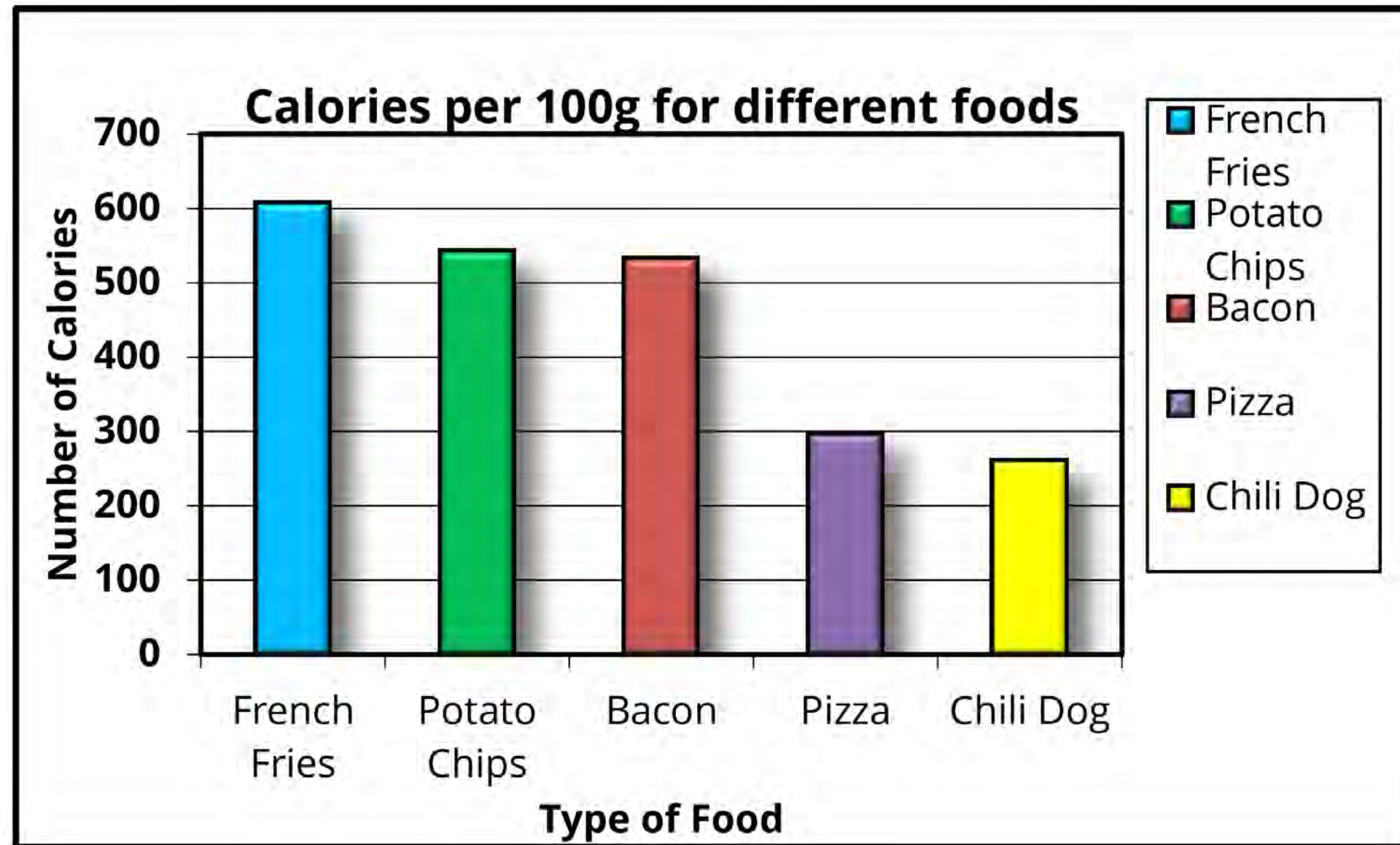


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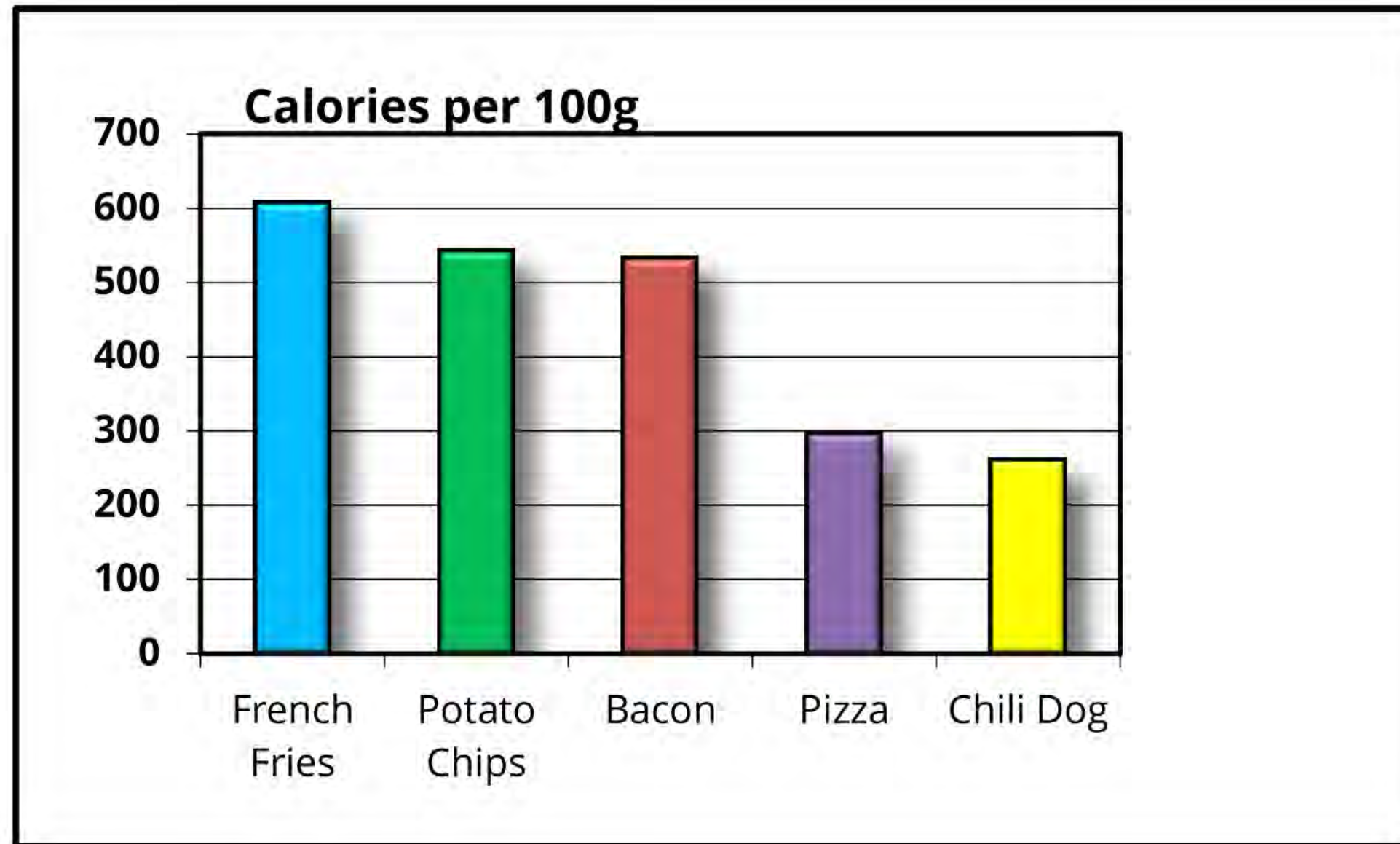
Remove backgrounds



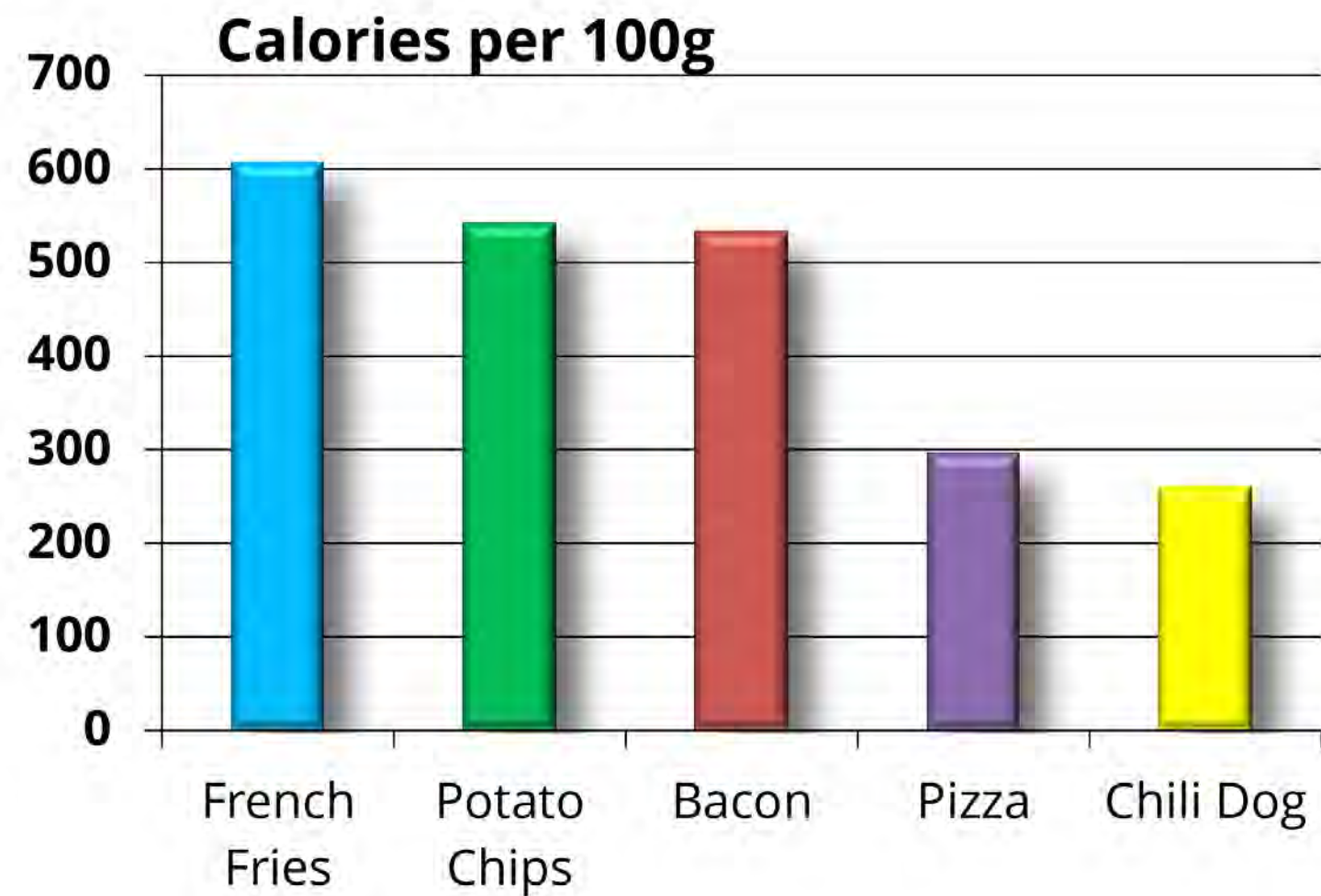
Remove redundant labels



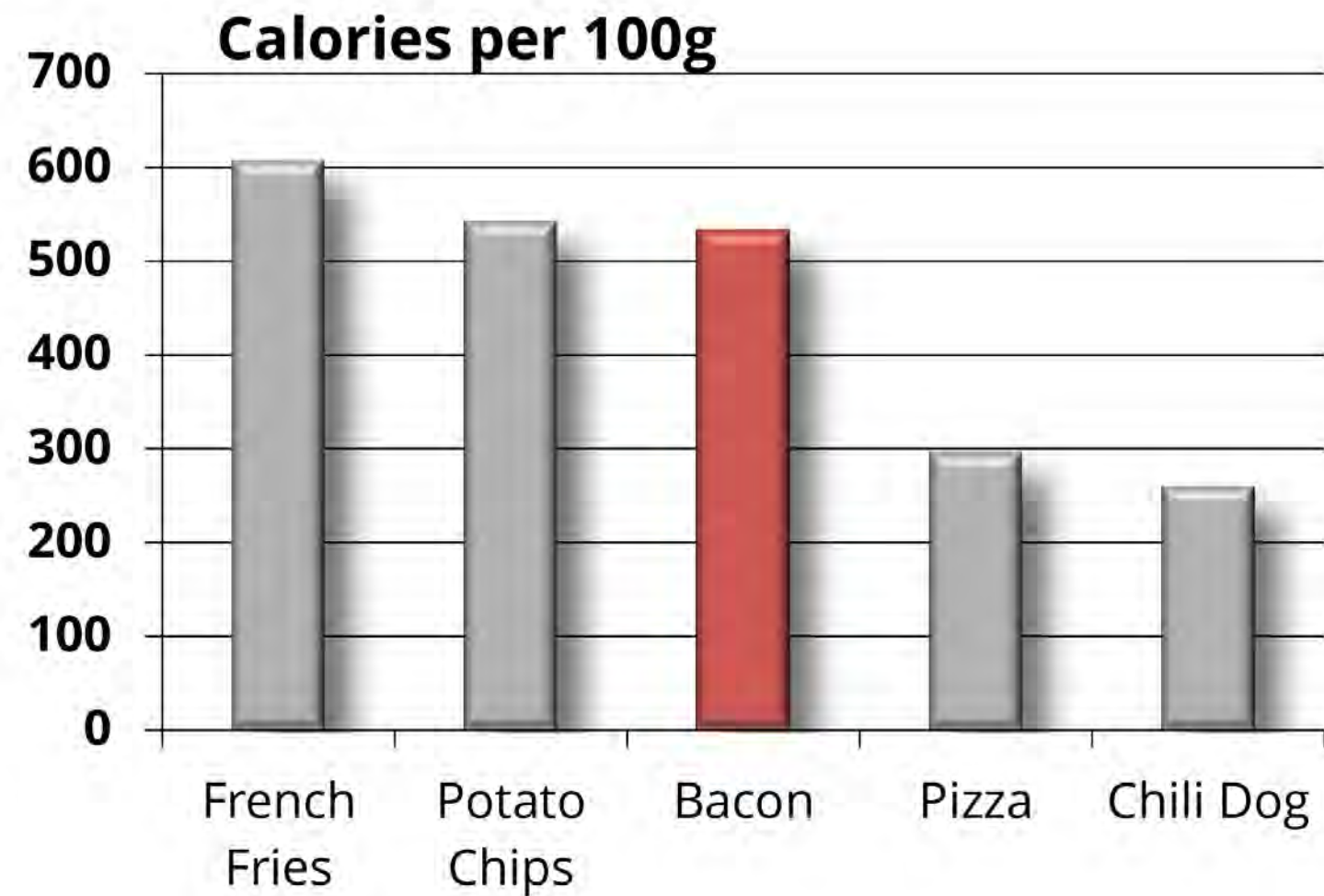
Remove borders



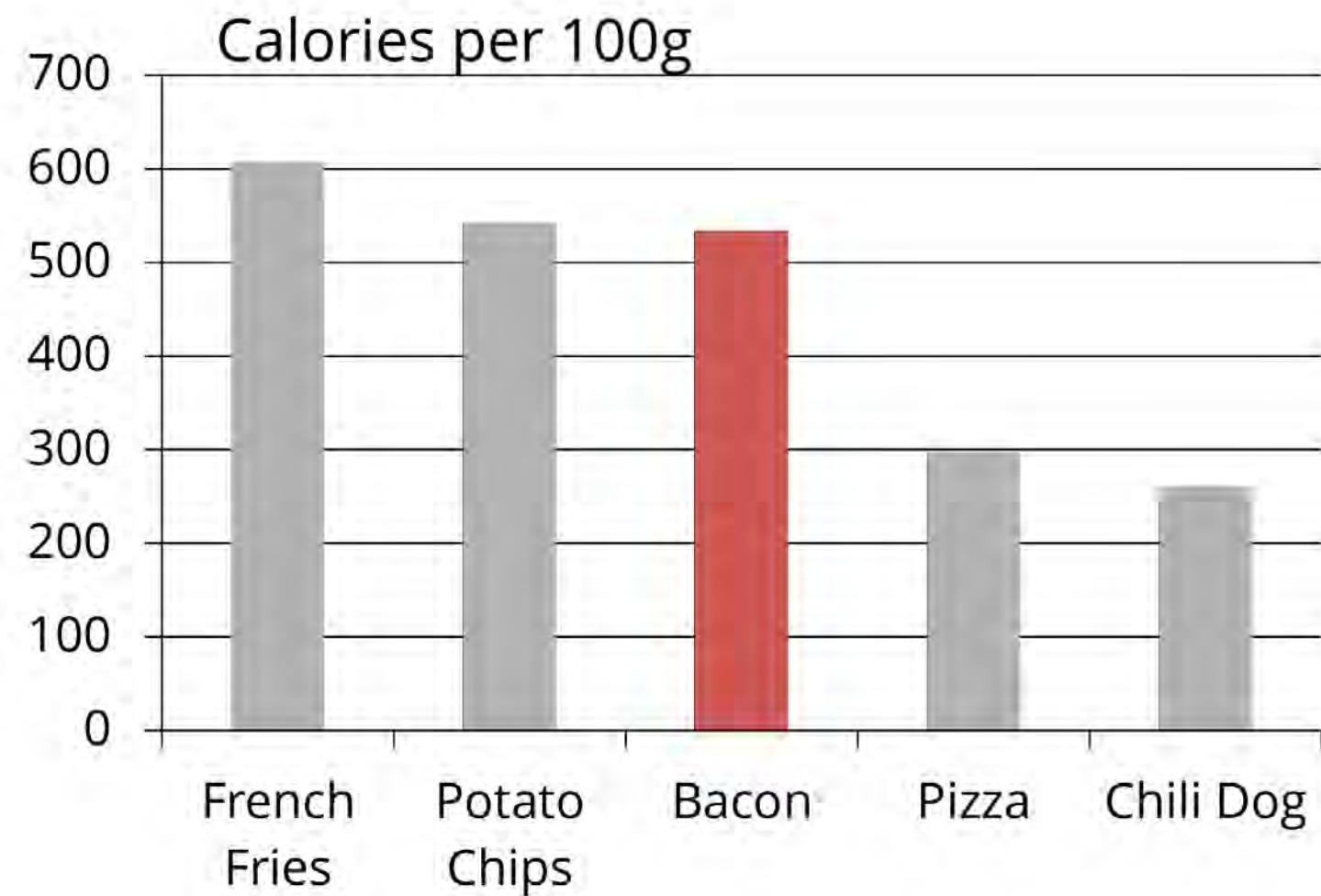
Reduce colors



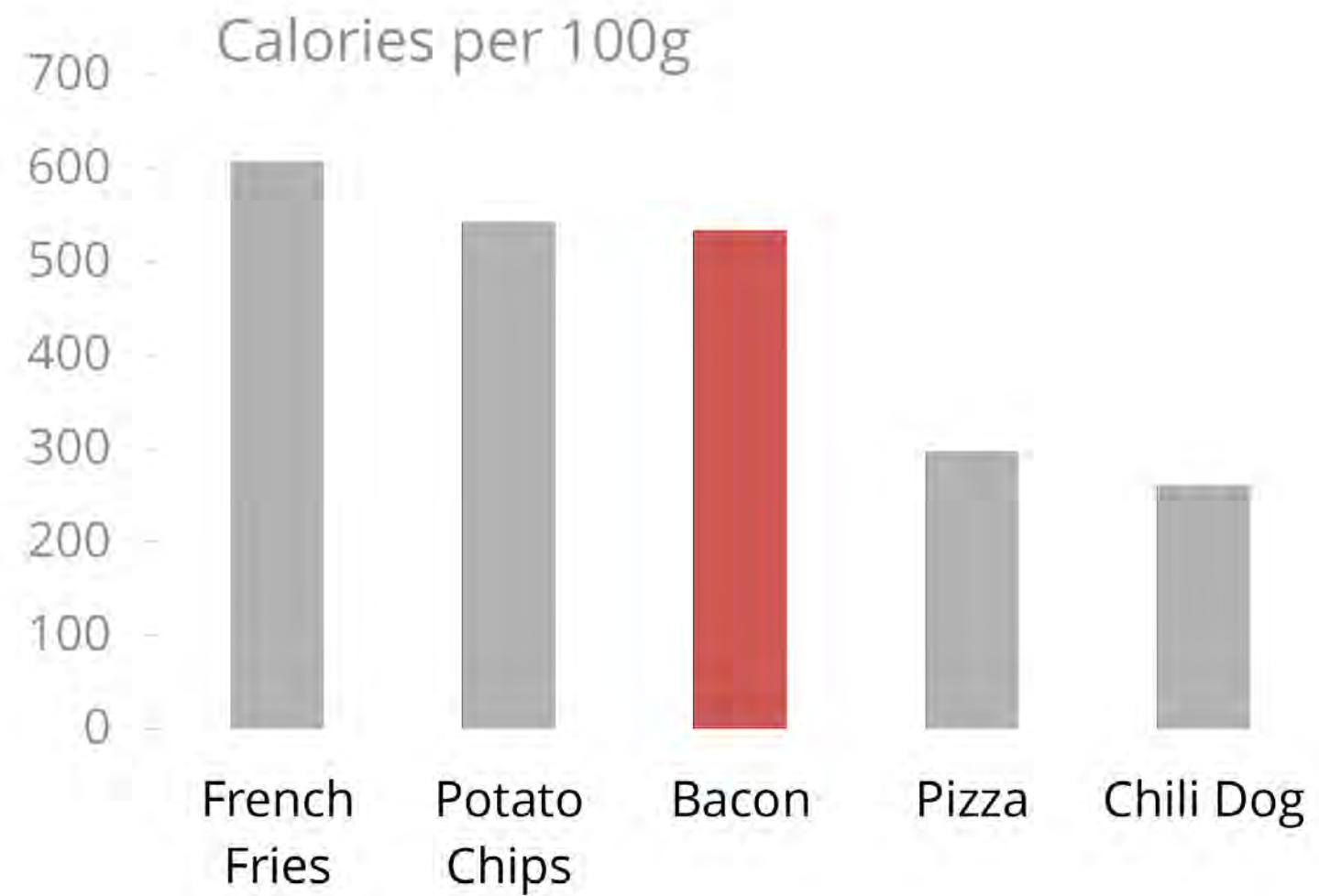
Remove special effects



Lighten labels

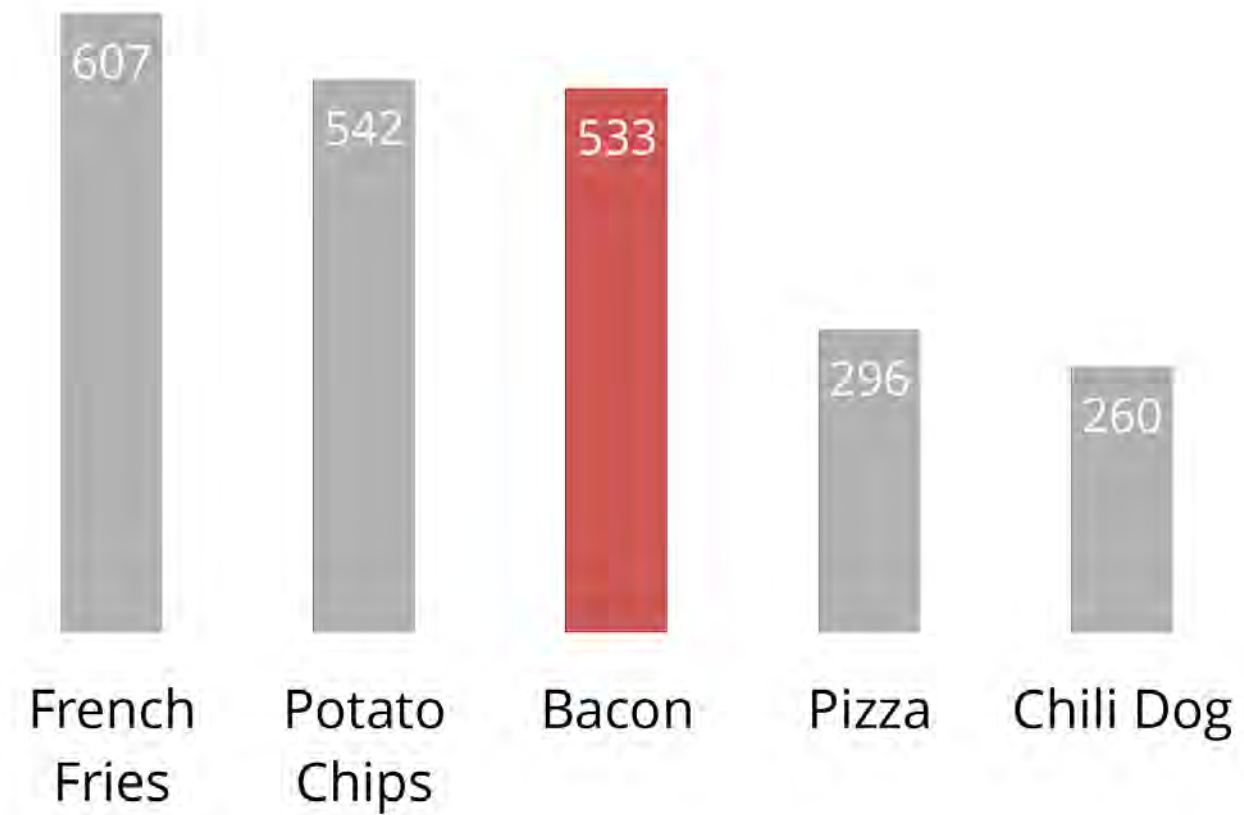


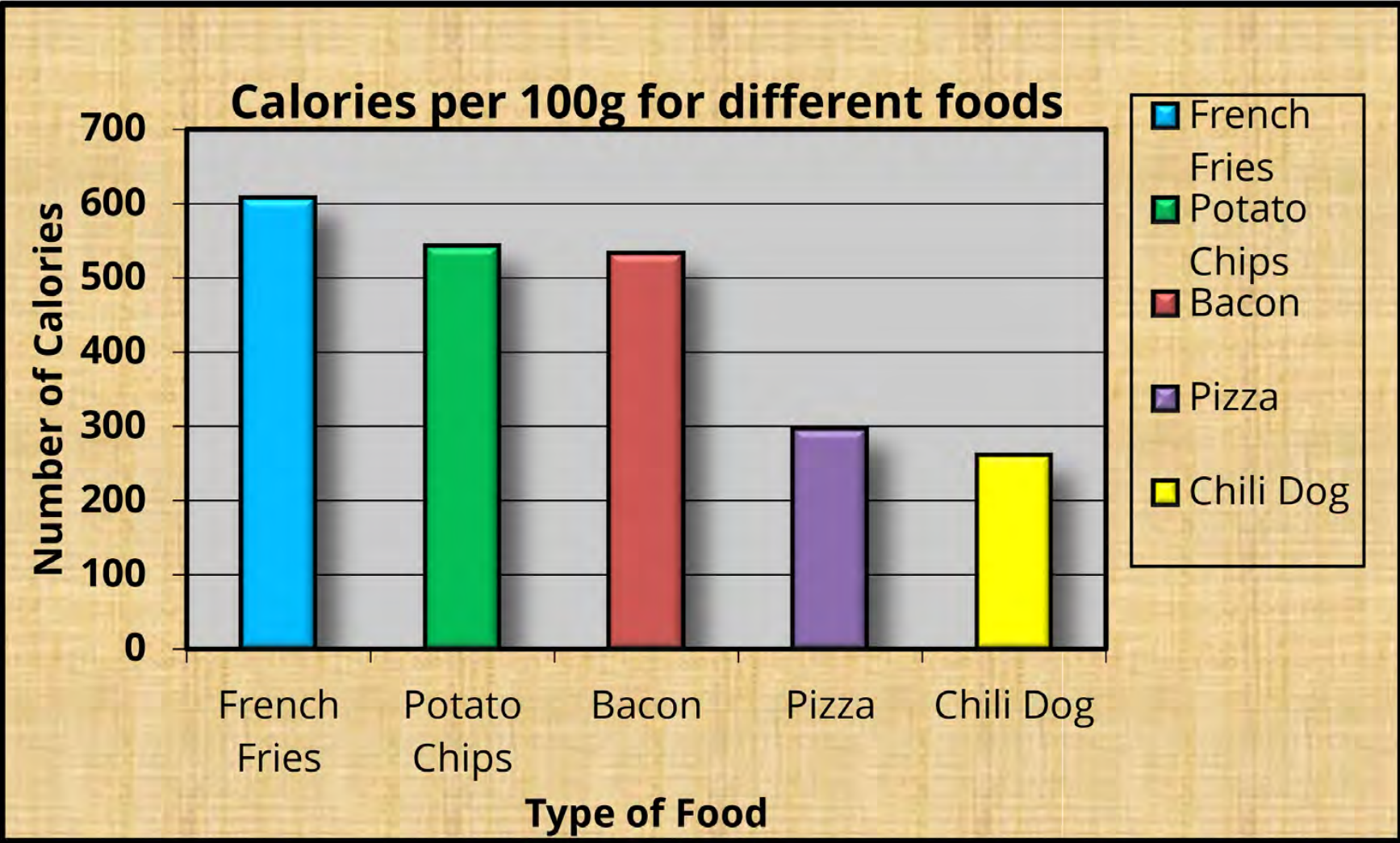
Direct label



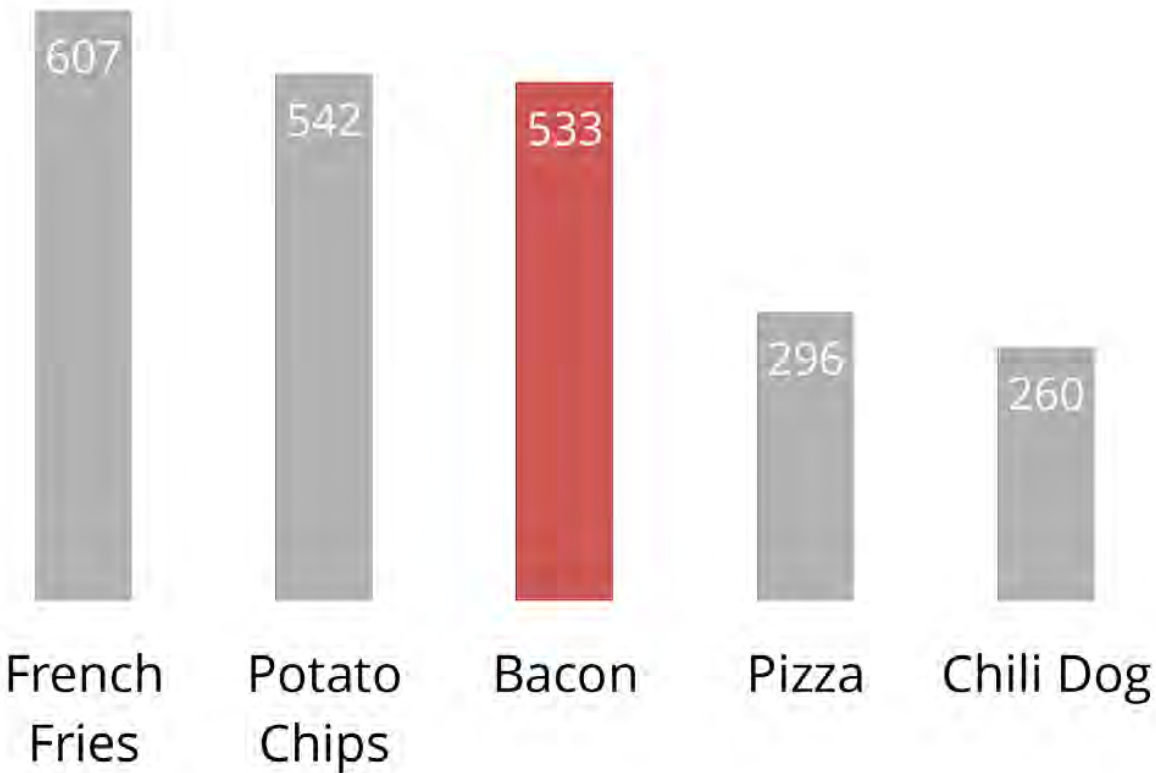
Direct label

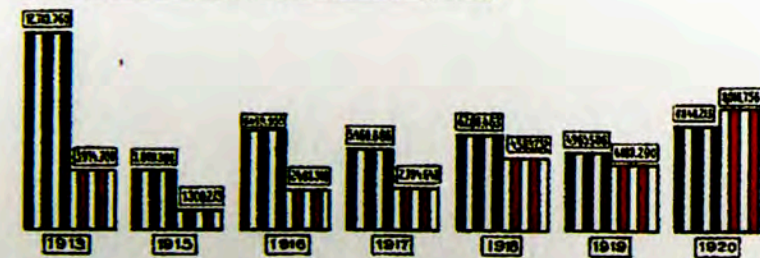
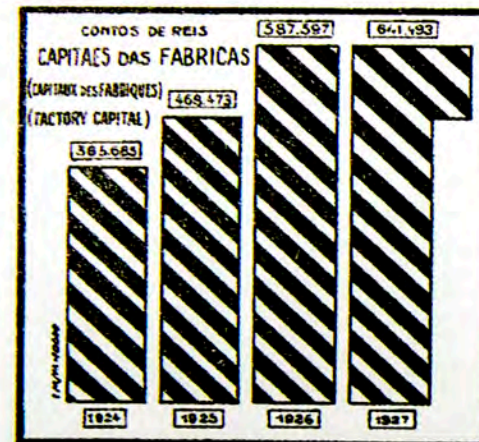
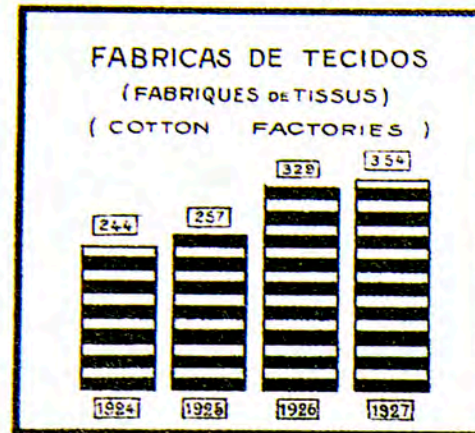
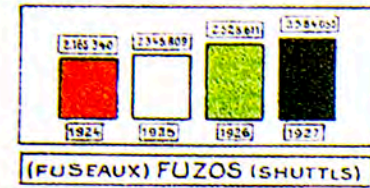
Calories per 100g



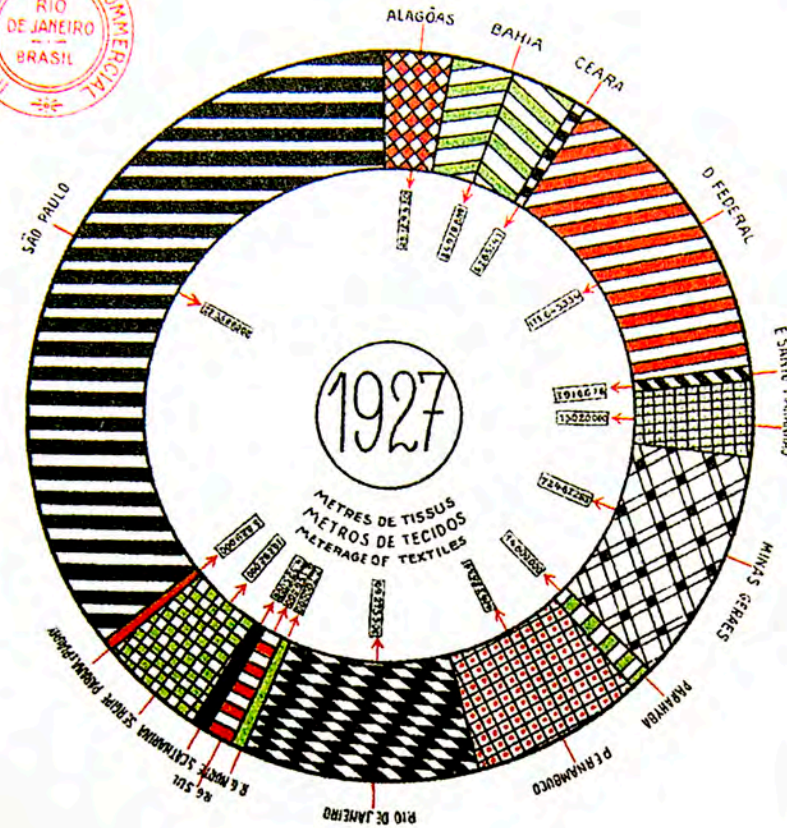
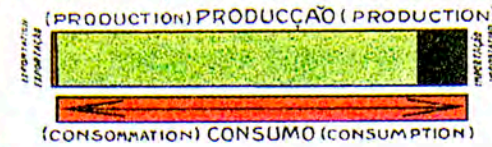


Calories per 100g

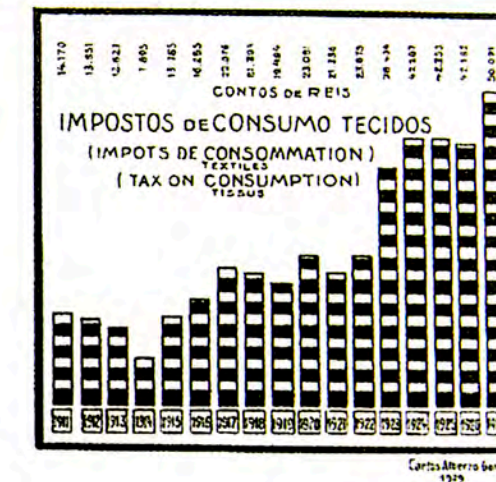
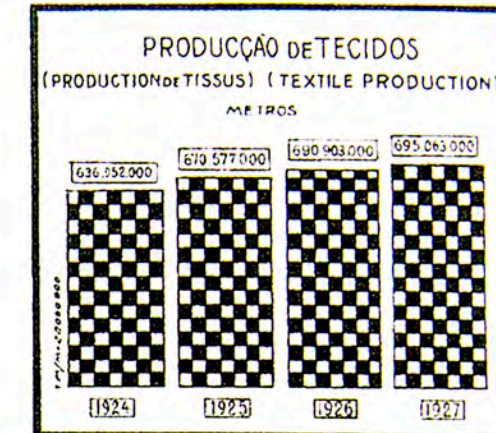
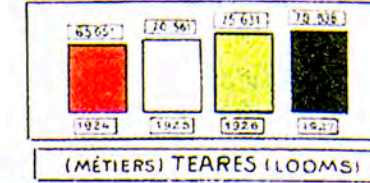
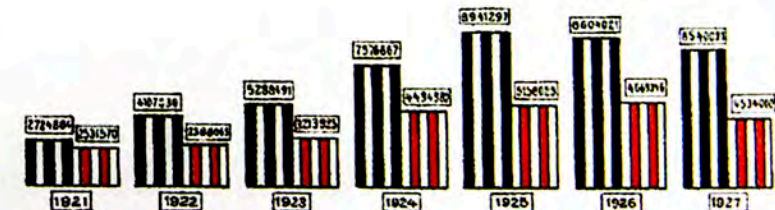
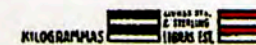


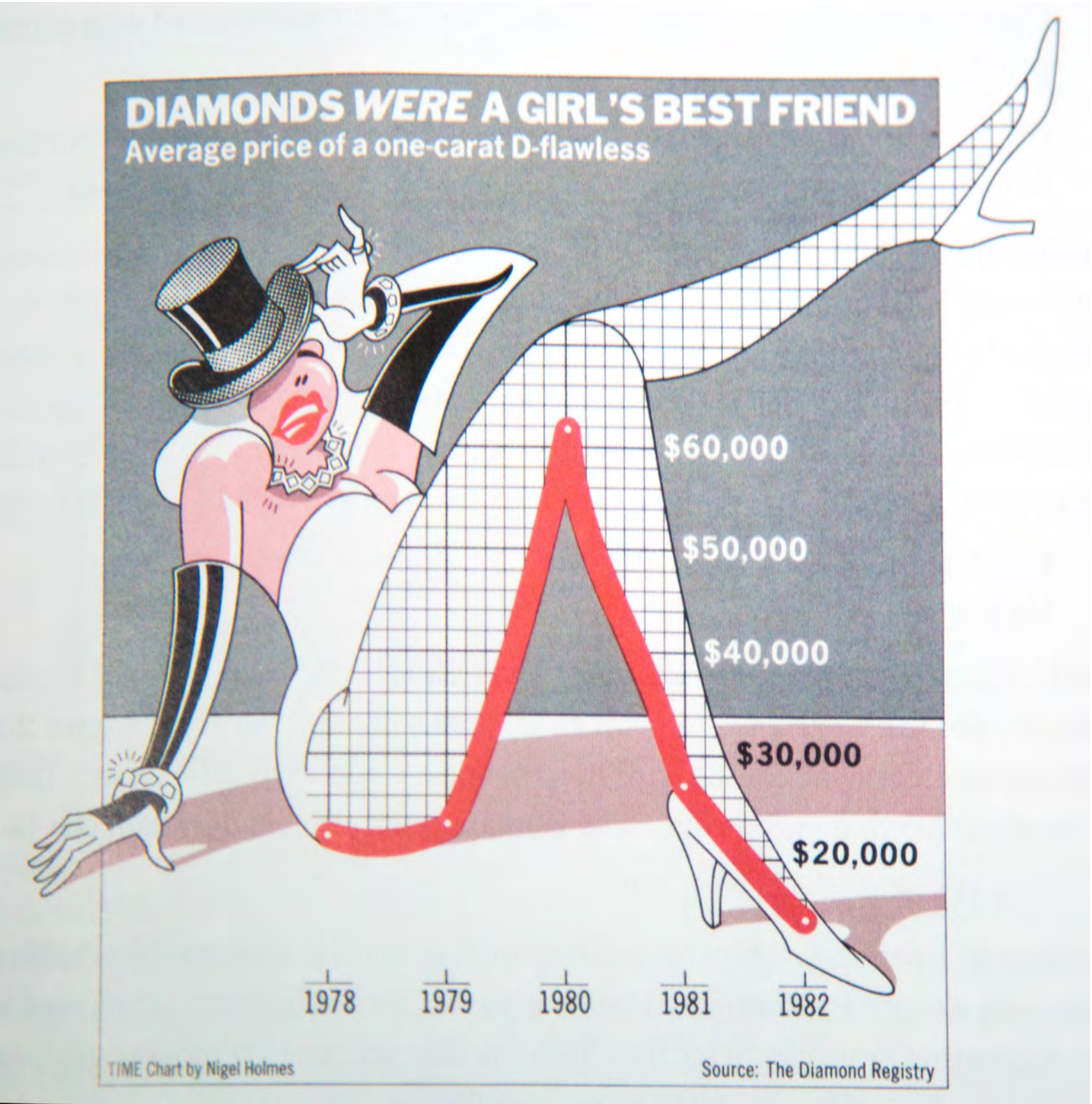


TECIDOS DE ALGODÃO
(COTONNADES) (COTTON TEXTILES)



(IMPORTATION)
IMPORTAÇÃO





	A	B	C	D	E
1	Date	Apple	Intel	Amazon	IBM
2	10/18/2016	118.18	57.53	822.11	150.02
3	10/19/2016	117.25	57.47	820.4	151.27
4	10/20/2016	116.86	57.5	813.99	151.28
5	10/21/2016	116.81	60.28	809.36	150.58
6	10/24/2016	117.1	59.94	824.95	150.4
7	10/25/2016	117.95	60.85	839.3	150.69
8	10/26/2016	114.31	60.81	832.76	150.71
9	10/27/2016	115.39	60.61	831.24	152.82
10	10/28/2016	113.87	60.01	782	154.05
11	10/31/2016	113.65	60.16	781.03	152.76
12	11/1/2016	113.46	59.97	799	153.5
13	11/2/2016	111.4	59.82	783.93	152.48
14	11/3/2016	110.98	59.53	765.05	152.51
15	11/4/2016	108.53	58.65	762.79	152.4
16	11/7/2016	110.08	59.78	771.64	153.99
17	11/8/2016	110.31	60.55	784.97	154.56
18	11/9/2016	109.88	60	764	152.96
19	11/10/2016	111.09	60.48	778.81	157.66
20	11/11/2016	107.12	58.23	735.73	159.97
21	11/14/2016	107.71	59.02	745.51	161.25
22	11/15/2016	106.57	58.33	730	158.42
23	11/16/2016	106.7	58.94	739.88	158.46
24	11/17/2016	109.81	60.41	749.32	159.22
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26					

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You have no recent quotes

Criteria

Company Distribution

Market cap

0

592.51B

P/E ratio

0

14595

Div yield (%)

0

800001

52w price change (%)

-101

10.88M

Add criteria

Reset

1 - 20 out of 33041

Company name	Symbol	Currency	Market cap	P/E ratio	Div yield (%)	52w price change (%)
01 COMMUNIQUE LAB COM NPV	OCQLF	\$	2.79M	-	-	-
024 Pharma Inc	EEIG	\$	134,600.00	-	-	-80.00
0373849 BC LTD	ZBLFF	\$	-	-	-	-
1-800-ATTORNEY, Inc.	ATTY	\$	770.00	-	-	-
1-800-Flowers.Com Inc	FLWS	\$	744.71M	30.68	-	38.92
1-PAGE LIMITED NPV	PGQWF	\$	18.19M	-	-	-
1000 Rocky Run Parkway Branch	FBOD	\$	-	-	-	-38.92
1010 PRINTING GROU HKD0.01	PTRGF	\$	-	-	-	-
11 88 0 SOLUTIONS NPV	TLGAF	\$	23.32M	-	-	-
11 Good Energy Inc	FLVM	\$	-	-	-	-



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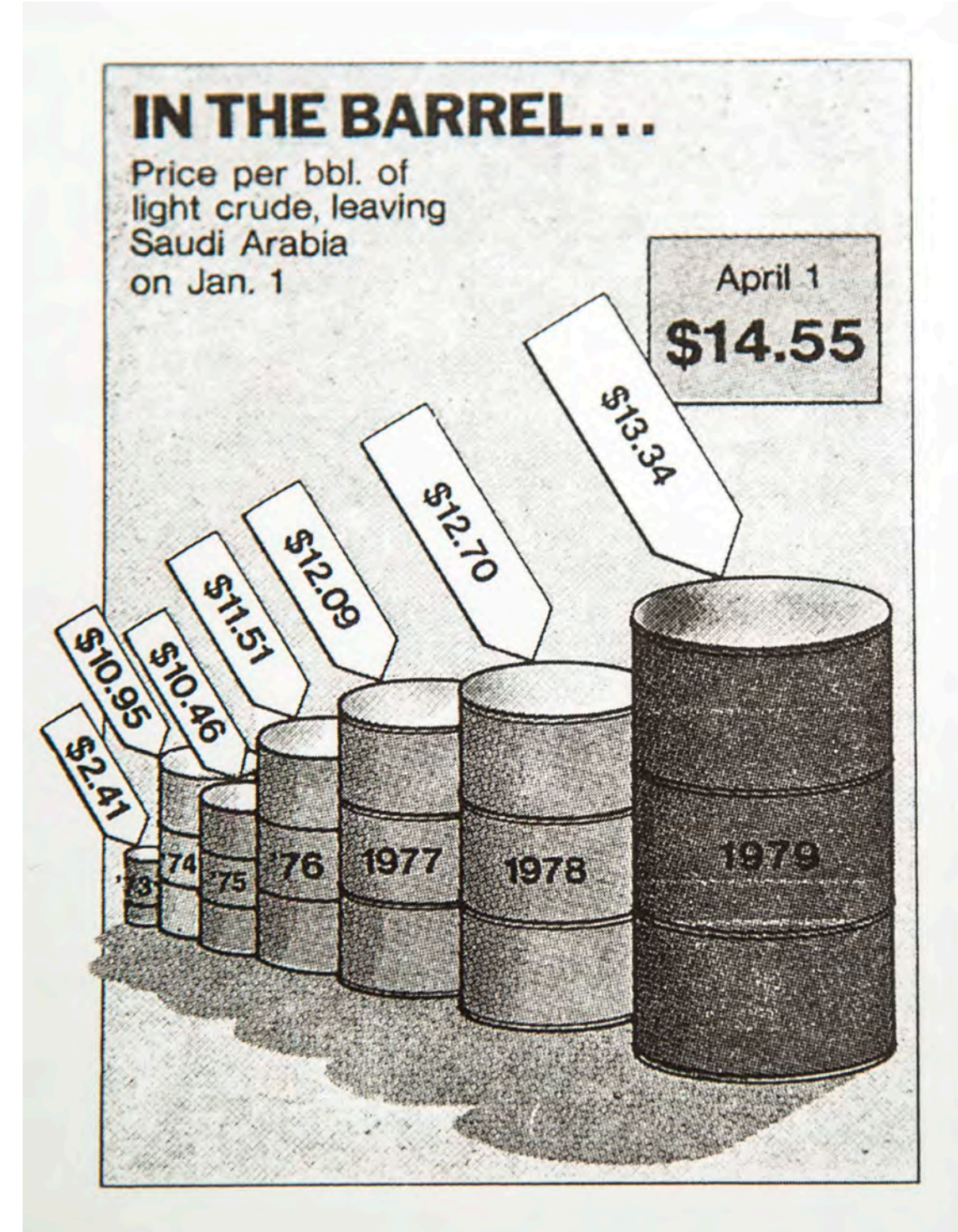
3



1



- **Lie Factor**
 - *If you consider volume, the lie factor is 9.4 times the stated prices*

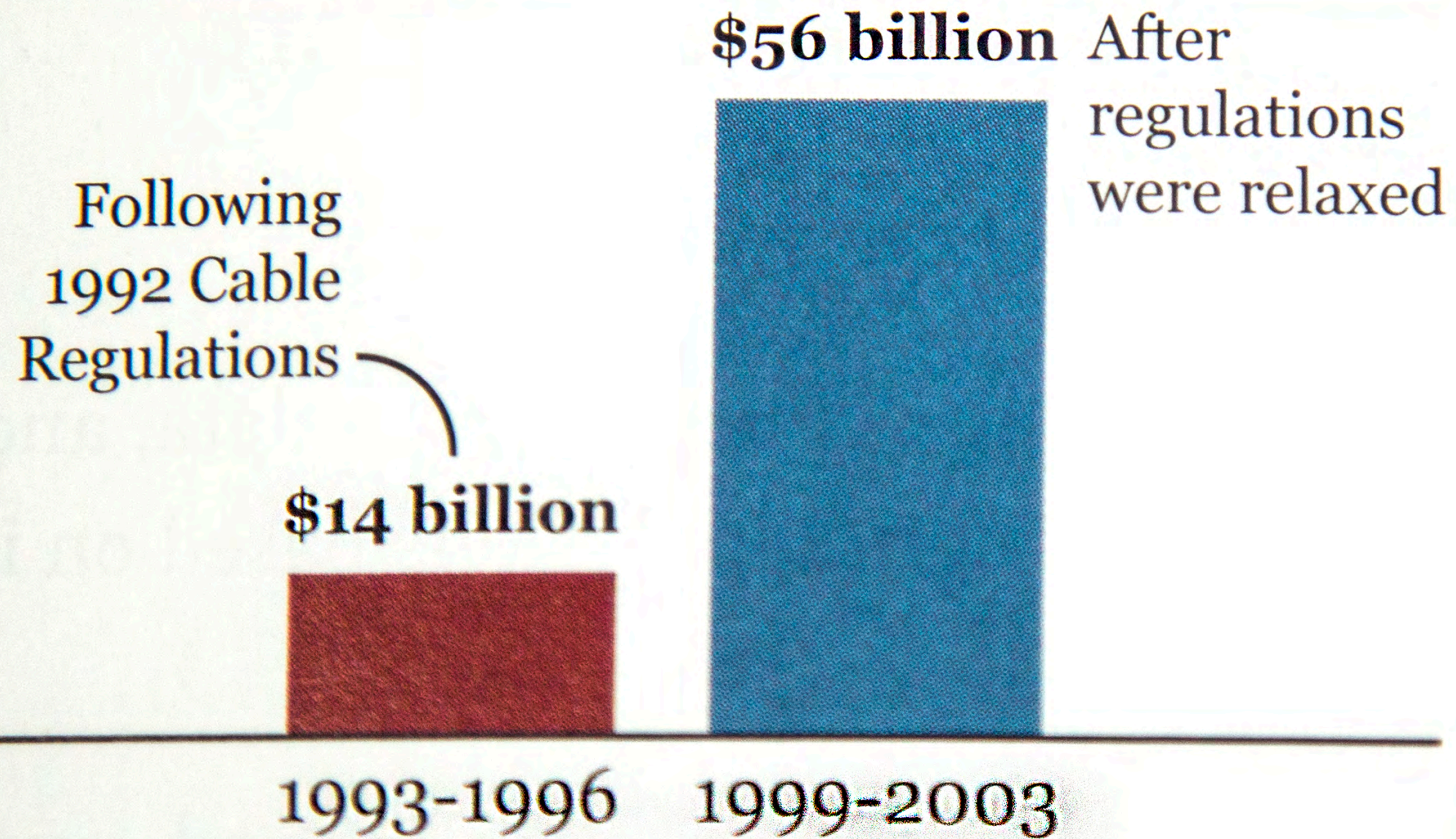


Qualities of a Great Visualization

I. Truthful

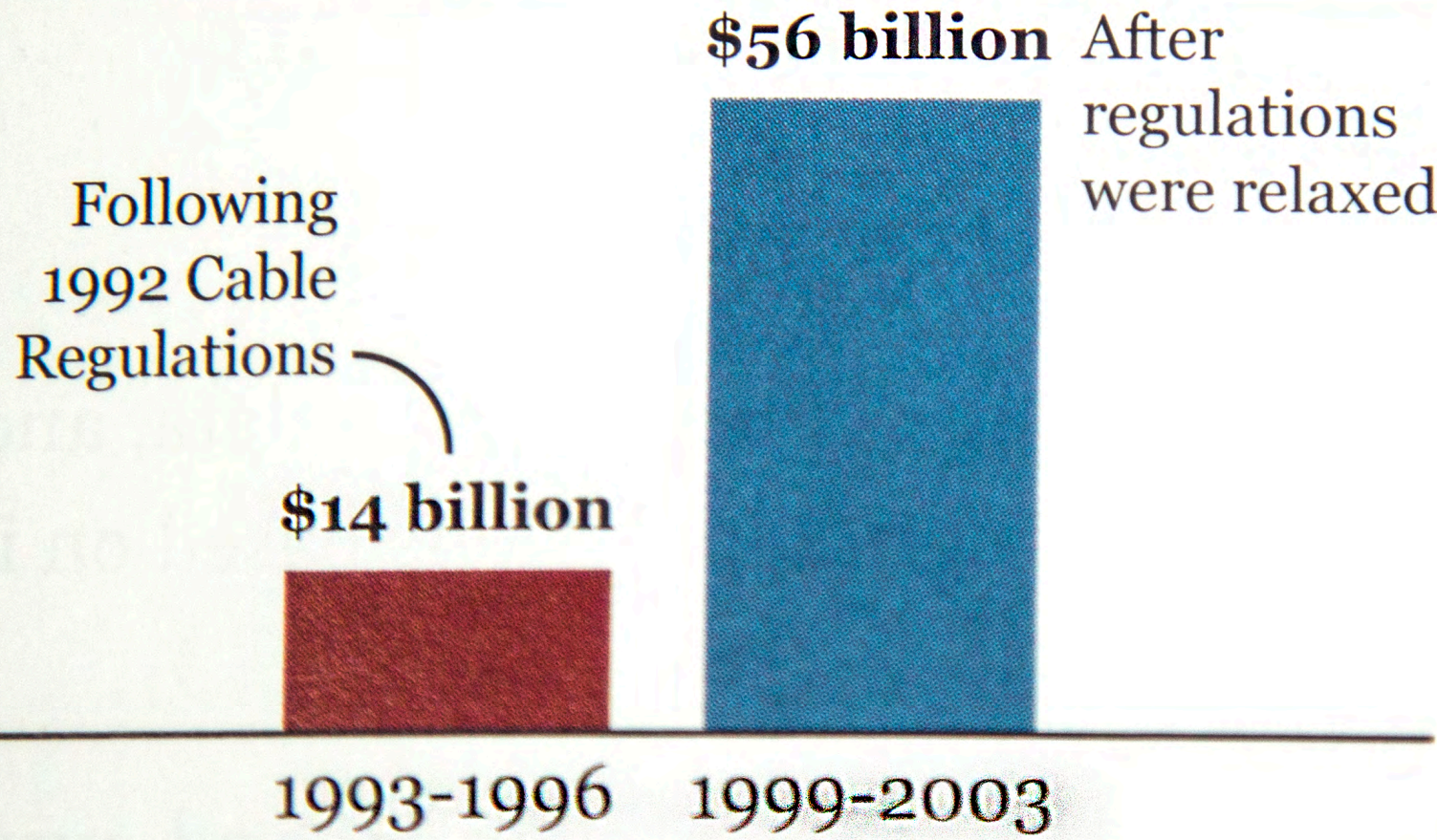
- *Be aware of your actions when cleaning, summarizing and manipulating data and ensure you aren't*
 - *Misleading yourself (self deception)*
 - *Misleading your audience*

Less regulation = More industry investment



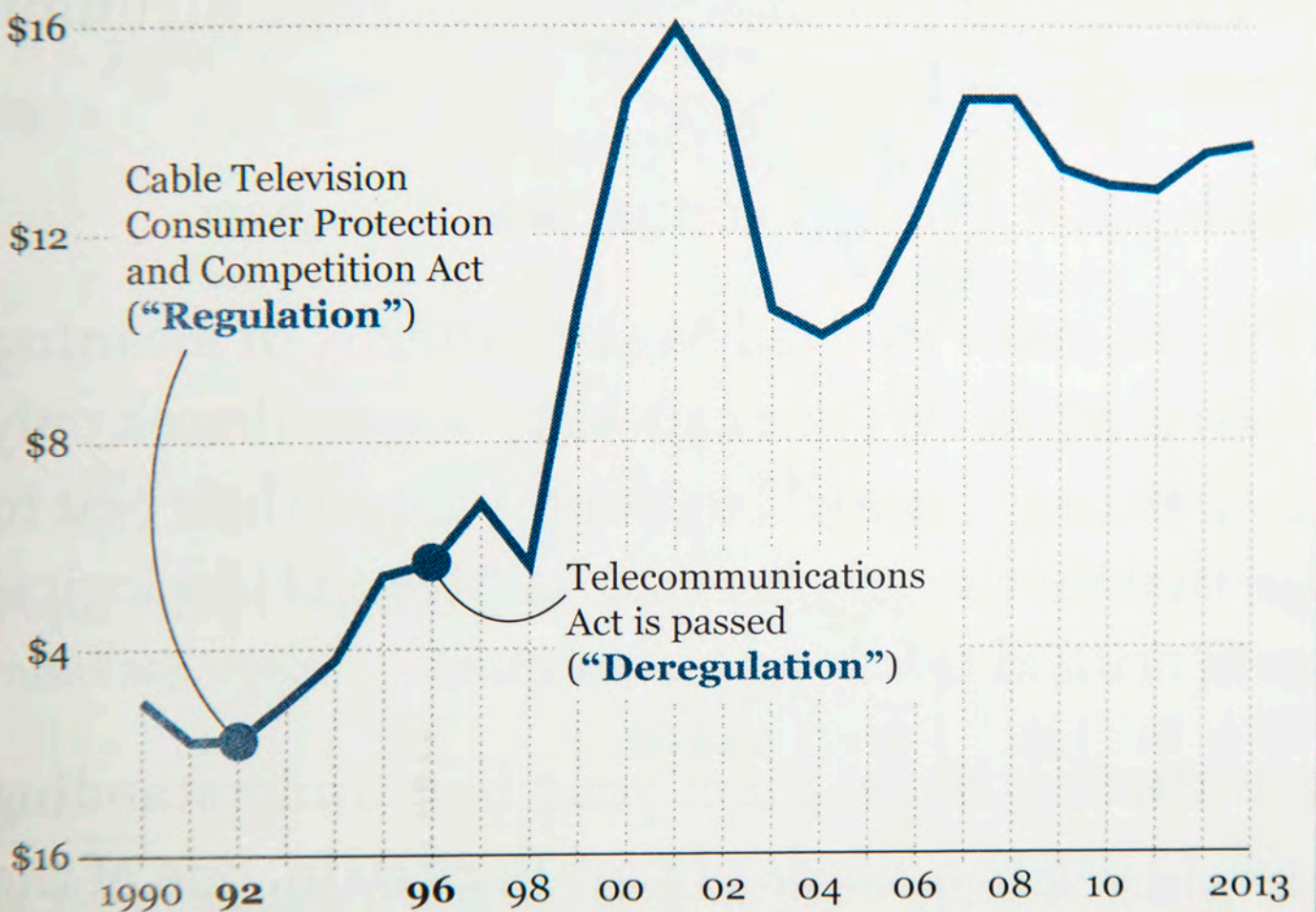


**Less regulation =
More industry investment**



Cable Industry Infrastructure Expenditures

In billions



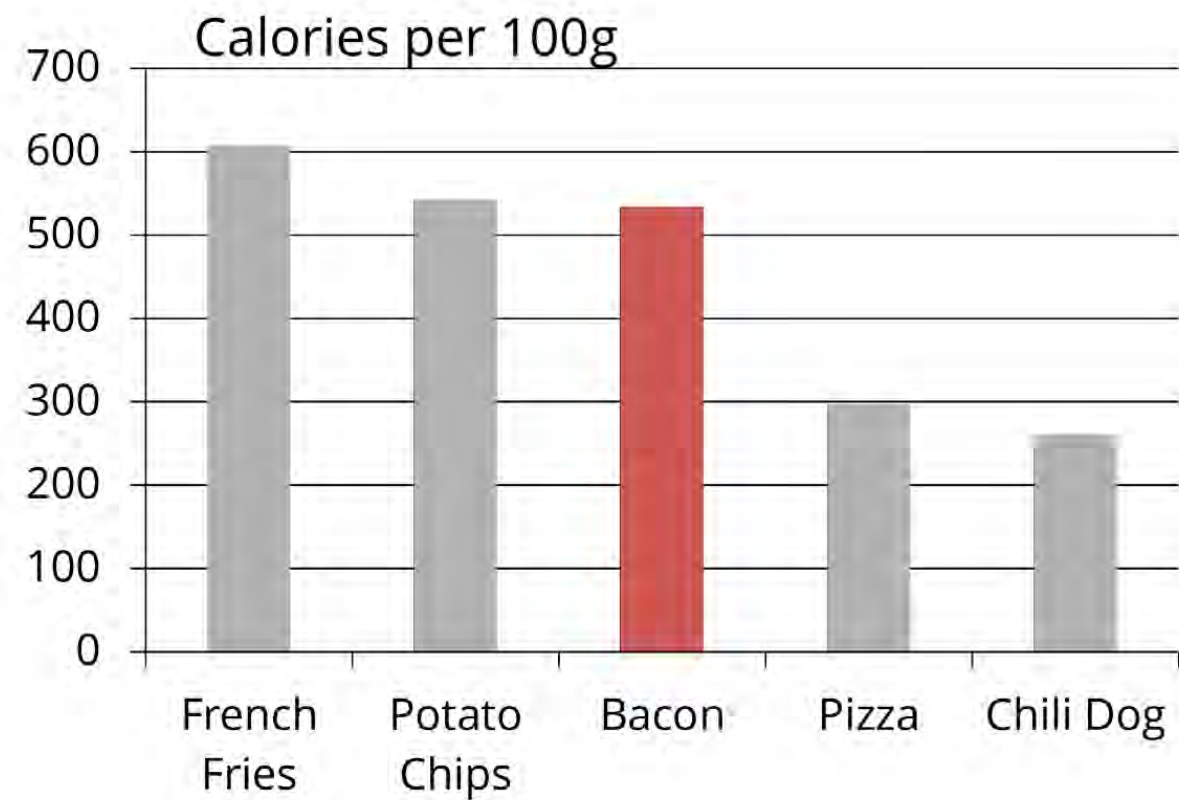
Qualities of a Great Visualization

1. Truthful

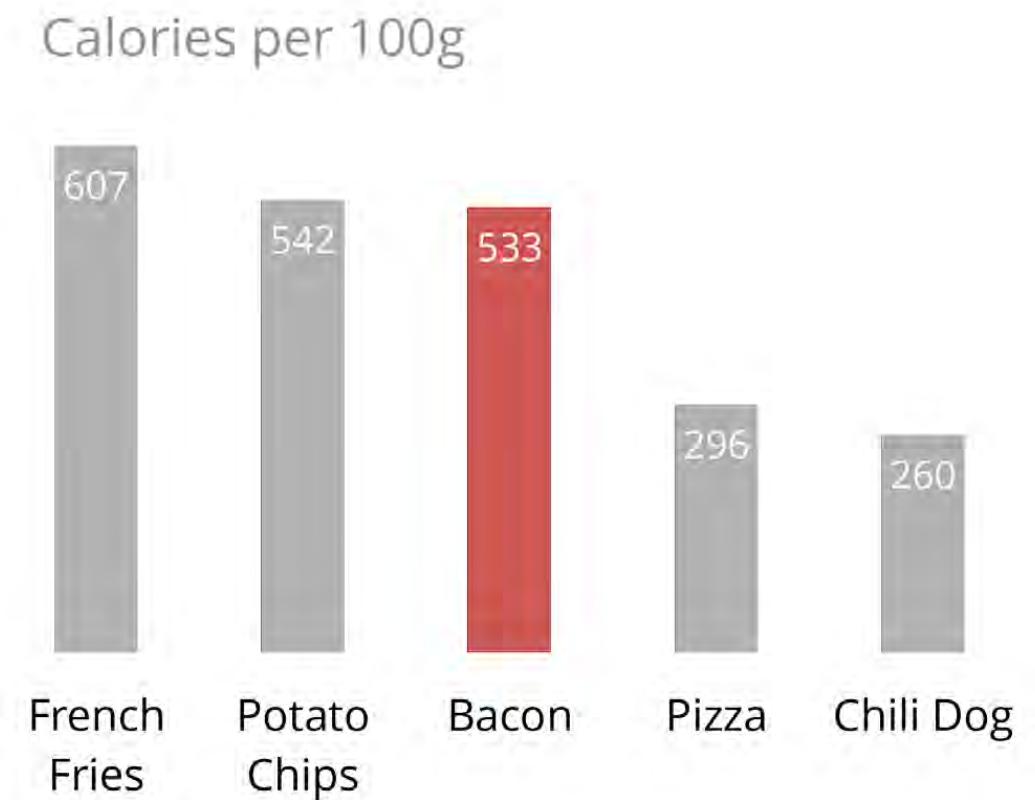
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 - *Misleading your audience*

2. Functionality

Lighten labels



Direct label



Qualities of a Great Visualization

1. Truthful

- *Be aware of your actions when cleaning, summarizing and manipulating data and ensure you aren't*
 - *Misleading yourself (self deception)*
 - *Misleading your audience*

2. Functionality

3. Beauty

Qualities of a Great Visualization

1. Truthful

- *Be aware of your actions when cleaning, summarizing and manipulating data and ensure you aren't*
 - *Misleading yourself (self deception)*
 - *Misleading your audience*

2. Functionality

3. Beauty

4. Insightful

Qualities of a Great Visualization

1. Truthful

- *Be aware of your actions when cleaning, summarizing and manipulating data and ensure you aren't*
 - *Misleading yourself (self deception)*
 - *Misleading your audience*

2. Functionality

3. Beauty

4. Insightful

5. Enlightening

- *A combination of the previous four, but with a social ethical responsibility*