"Reading" statistics

Statistics are sources, too, and contain important data related to economic, social and cultural history such as birth rates, income distribution, the development of prices, numbers of jobless people, voting statistics, educational development or military strength.

You are most likely to encounter statistics in news reports or newspapers, because politicians, journalists and scholars prefer to shore up their arguments with statistics.

Statistics are an organized collection of information in the form of numbers. These numbers are displayed using tables or graphic tools such as diagrams or graphs.
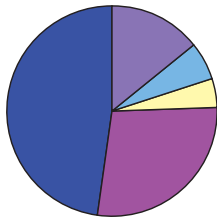
Pie charts illustrate the percentage of a whole. For example, a comparison is possible if there are two circular diagrams related to the same circumstances for at least two different points in time.
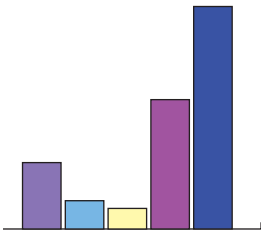
Bar graphs are designed to show changes over time or long-term trends. On the Y axis, the numerical value of a particular factual content is entered; on the X axis, dates are entered.
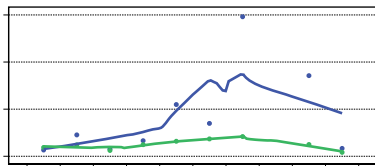
Curve diagrams illustrate temporal and quantitative development of several components.

At first glance, statistics seem to have many advantages over text sources: They seem clear, comparable and descriptive and provide a lot of information in a compact amount of space.

But it's not really as simple as it seems. In fact, statistics only seem to be objective. In the end, they are created with just as much concrete intention as any other source.

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That means that the person who compiles statistical information follows certain motivations and interests while preparing the data. That is why statistics must be interpreted just like any other source. The following questions will help you in that task:

1. Description

- Who has prepared the statistic? The source information describes the source and age of the data. When quoting, give the name of the author, the title and location of the source!
- What is the theme of the statistic?
- To which place and time period do the data relate?
- What questions could be answered using these results?
- How reliable is the data?
- Are absolute or relative (percentages) provided? When percentages are given, it is important to provide the basis to which the percentage values refer.
- What data lies behind which concepts (for example, what do such terms as "other groups" mean)?
- Which items are compared with one another, or contrasted with one another?
- Is the illustration supposed to describe, explain or suggest something?

Description

2. Interpretation

- What information may be inferred from the data?
- Which values stand out or seem to be important?
- Is it possible to determine uniformities, changes, conditions, tendencies? Careful! When interpreting percentages, pay attention to the difference between percentage points and percentages. Example: An increase from 5 percent to 10 percent is an increase of 5 percentage points, but a 100 percent increase!
- How could these developments have been triggered?
- What are the reasons for the facts presented in the statistics?
- What might the consequences be?
- What questions remain open?
- What information is missing, and why?
- Who benefits from, or who is hurt by the publication of the statistic?
- Does the statistic attempt to persuade the viewer of something?

Interpretation