



**National Technology of Mexico
Technological Institute of Tijuana**

ACADEMIC SUBDIRECTION
Systems and Computing Department

SEMESTER
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CAREER
Information and Communication Technologies Engineer

SUBJECT AND KEY:
Data Mining BDD-1703TI9A

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NAME OF THE JOB:
Statistical Distributions

UNIT TO BE EVALUATED
Unit II

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Where do graphs come from?

The first significant statistical graphs were published mucho more recently, usually credited to William Playfair (1759 - 1823), political economist and engineer from Scotland. As a statistician Howard Wainer points out, this choice of “first” is not so much that no one had done somewhat similar graphs before, but Playfair’s work was so excellent and compelling.

What is the grammar of graphs?

There are many ways to represent your data, but not all of them are as efficient or as correct. The key is to understand what we want to communicate and how we are going to structure it.

Joaquín Sevilla, physicist and professor at the Public University of Navarra, read the graphs in the media or when he reviewed the work of his students. He found numerous errors that made the reading and interpretation of a graph very difficult.

Seville established an analogy between grammatical construction and the structure of a graph.

<i>Graphic Text</i>	<i>Text</i>
Graph	Sentence
Infographic	Paragraph
Represented Magnitude	Subject of the sentence
Visual impression that the graph reproduces	Predicate of the sentence
Graph with one data stream	Simple sentence
Graph with more than one data stream	Compound sentence
Graphic related to others with an infographic	Subordinate sentence

But it went further. From the analysis of many graphs, he drew some conclusions to recommend some tips with which to build a graph that would not give rise to confusion and would be faithful to its original message. They are the ones that we can see in the following table.

Summary of the recommendations made throughout the book	
Orthography	The subject must be defined There must be a match between the type of graph and the type of data They must include explicit, comprehensive and well-referenced axes
Syntaxis	The magnitude represented must be the same for all the data Axes and scales must keep a certain proportion
Semantics	With the same data there are different representations depending on the message You can do demagoguery with flawless graphics Small formal errors help demagogic effects



	The choice of the magnitude to present must be in accordance with the message
Literature Styles	And in all of the above there is a lot of room for personal taste