**Introduction: Infographics and Visualization**

**Visualization plays a crucial part in understanding things. The difference between infographics and visualization is that infographics are primarly used to present data, where visualization is primarily used to explore data. However both infographics and visualization contain elements of presenting and exploring.**

**Infographics shouldn’t be seen as an illustration or decoration, but rather as a way to bring across information in a clear way.**

**Chapter 1: Why Visualize: From Information to Wisdom**

**The first and main goal of any graphic and visualization is to be a tool for your eyes and brain to perceive what lies beyond their natural reach.**

**Unstructured information 🡪 Data 🡪 Structured information 🡪 Knowledge 🡪 Wisdom.**

**The brain always tries to close the distance between observed phenomena and knowledge or wisdom that can help us survive 🡪 cognition. The role of an information architect is to anticipate this process andgenerate order before people’s brains try to do it on their own.**

**A part of information architecture is information design 🡪 “The art and science of preparing information sothat it can be used by human beings with efficiency and effectiveness.”**

**Significant part of information design is information graphics and visualization. To visualize is “to make certain phenomena and portions of reality visible and understandable; many of these phenomena are not naturally accessible to the bare eye, and many of them are not even of visual nature.” 🡪 Last part refers to the fact that graphical displays can be either figurative or non-figurative. In the latter there is no mimetic correspondence between what is being represented and its representation.**

**An idea crucial to the premise of this book: Visualization should be seen as technology:**

1. **They are extensions of ourselves. They help us do stuff that is otherwise very hard.**
2. **They are means to reach goals.**

**According to Arthur, we can use the word technology in three different senses: Technologies-singular, technologies-plural and technology-general.**

* **Singular 🡪 a means to fulfill a human purpose (refigirator).**
* **Plural 🡪 assemblages of practices and components (electronics, biochemistry)**
* **General 🡪 entire collection of devices and engineering practices available to a culture.**

**This is relevant for graphics visualization because they are still a formative hodge-podges of concepts, methods and procedures borrowed from many areas. Second, and more important, individual information graphics are also technologies, means to fulfill purposes, devices whose aim is to help an audience complete certain tasks.**

**Chapter 2: Forms and Functions: Visualization as a Technology**

**With infographics 🡪 The function constrains the form.**

**When you see an infographic ask yourself the following question:**

1. **What does the desiger want me to do with this graphic?**
   1. **The graphic must present several variables.**
   2. **It should allow comparisons.**
   3. **It should help me rank objects being analyzed (countries in military spending example).**
   4. **It should make correlations evident to me.**

**Always think first about what kinds of questions readers are more likely to want answered by your infographic.**

**“Form follows function” was born in 1896 in an article of Louis Sullivan. This theory isn’t proved by natural evolution though. Howver, the form of a technological object must depend on the tasks it should help with. The form should be constrained by the functions of your presentation. The better defined the goas of an artifact, the narrower the variety of forms it can adopt.**

**Effective analytic designs entail turning thinking principles into seeing principles. Design architectures hould be decided on how the architecture assists analytical thinking about evidence.**

**Bubble charts are not always effective because the human brain is not good at calculating surface sizes. It is much better at comparing a single dimension such as length or height.**