



# The Functional Art: An Introduction to Information Graphics and Visualization

*Alberto Cairo*

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**Unlike any time before in our lives, we have access to vast amounts of free information.** With the right tools, we can start to make sense of all this data to see patterns and trends that would otherwise be invisible to us. By transforming numbers into graphical shapes, we allow readers to understand the stories those numbers hide. In this practical introduction to understanding and using information graphics, you'll learn how to use data visualizations as tools to see beyond lists of numbers and variables and achieve new insights into the complex world around us. Regardless of the kind of data you're working with-business, science, politics, sports, or even your own personal finances-this book will show you how to use statistical charts, maps, and explanation diagrams to spot the stories in the data and learn new things from it.

You'll also get to peek into the creative process of some of the world's most talented designers and visual journalists, including *Conde Nast Traveler's* John Grimwade, *National Geographic Magazine's* Fernando Baptista, *The New York Times'* Steve Duenes, *The Washington Post's* Hannah Fairfield, Hans Rosling of the Gapminder Foundation, Stanford's Geoff McGhee, and European superstars Moritz Stefaner, Jan Willem Tulp, Stefanie Posavec, and Gregor Aisch. The book also includes a DVD-ROM containing over 90 minutes of video lessons that expand on core concepts explained within the book and includes even more inspirational information graphics from the world's leading designers.

The first book to offer a broad, hands-on introduction to information graphics and visualization, *The Functional Art* reveals:

- Why data visualization should be thought of as "functional art" rather than fine art
- How to use color, type, and other graphic tools to make your information graphics more effective, not just better looking
- The science of how our brains perceive and remember information
- Best practices for creating interactive information graphics
- A comprehensive look at the creative process behind successful information graphics
- An extensive gallery of inspirational work from the world's top designers and visual artists

### On the DVD-ROM:

In this introductory video course on information graphics, Alberto Cairo goes into greater detail with even more visual examples of how to create effective information graphics that function as practical tools for aiding perception. You'll learn how to: incorporate basic design principles in your visualizations, create simple interfaces for interactive graphics, and choose the appropriate type of graphic forms for your data. Cairo also deconstructs successful information graphics from *The New York Times* and *National Geographic* magazine with sketches and images not shown in the book.

## The Functional Art: An Introduction to Information Graphics and Visualization Details

Date : Published September 1st 2012 by New Riders Publishing (first published November 29th 2011)

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Author : Alberto Cairo

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# From Reader Review The Functional Art: An Introduction to Information Graphics and Visualization for online ebook

## Bg\_comedian says

Good book for infographic designers.

Since, I am Data Visualization, it doesn't relate to my working field much. Still, some chapter is applicable such as how eyes and brains perceive the image.

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## Andrey says

Examples may seem a bit outdated (book published in 2013, but this field is moving REALLY fast), but still lot's of great insight and timeless principles.

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## Josh says

Great introduction to infographics and data visualization, with a heavy lean towards the perspective of working in journalism infographics. Having seen data viz from the perspective of coders and artists mostly, it was good to get a solid introduction from someone who could convey the importance of framing your data to tell a story.

I also took Alberto Cairo's online workshop / MOOC / course at the same time; however I think I can safely say the book stands well on its own.

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## Nhat Anh says

Amazing book for those who start diving into the data visualization world. I love its linear and clear structure starting with the description humans' process of seeing and comprehending in order to explain why we should respect some certain rules of design to bring out the best results possible. The interviews with data viz. experts coming from different academic backgrounds are also thought provoking, inspiring and resourceful.

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## Manuel Frias says

This book is a pleasure to read if you want to learn the basics on how to make good information graphics and visualizations. I like Alberto's style - clear and without any kind of jargon. You can tell he is a journalist.

The only minus in my opinion is that there are perhaps too many interviews at the end of the book. They are great, informative and inspiring but I would have liked to read more of Cairo's ideas. Maybe he is saving them for his next book? :-)

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### **Thomas says**

I liked this book better than Cairo's "The Truthful Art", although I recommend both books.

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### **Alan says**

A very nice and insightful read if you have something to do with data visualization.

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### **Juan Torregrosa says**

The book itself was entertaining but I thought its narrative was more engaging than its technical advices. I recommend it, but I expected a bit more. Here I wrote a long summary of its content <https://goo.gl/JTtEua>

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### **Shane says**

This really extends beyond "Information Graphics", and is useful for anyone who has to give presentations or convey information. I've realized that have knowledge of something is useless unless you can express that knowledge to someone else. This book approaches how to do that. I would have liked a bit \*more\*, but this is still a great guide to start with.

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### **Jerzy says**

Just as great the 2nd time around :)

Well written, well organized, with helpful examples (and printed large enough that you can actually read them and get insights!)

Covers the basics of the "full stack" info graphics designer (with a focus on journalism): do the research, understand the client or goal, sketch and plan your graphic, analyze the data, report it graphically, incorporate into a well-designed layout, and perhaps use good interaction design if relevant.

Plus, an intro to the human visual perception principles that justify datavis best-practices advice.

Plus, interviews with practitioners that cover things like how to build a good infographics team, how to keep clients happy as a freelancer, how to get started in the field, etc.

Not all is directed at statistical graphics (which I want to focus on) -- there's a fair amount about illustrations and 3D models. But in fact that's great, because it's actually helpful for me to see how stat graphics fit in the broader spectrum of such visualizations.

**Bing Wang says**

**Olesia says**

The book is entertaining and inspiring with lots of great examples (among my favorites is the one about sex reassignment surgery <http://ptgmedia.pearsoncmg.com/images...>). The author does a great job at introducing some of the most important names in the field. But, in my opinion, this book is not a very good choice if you want some kind of practical guide to data visualization.

**MirReads says**

A good digest of visualization information theory and practice, blended with a life of practice.

I liked specially the visualization wheel, with 6 axes from more complex and deeper to more intelligible and shallower: (a) density-lightness (b) multidimensionality-unidimensionality (c) functionality - decoration (d) abstraction - figuration (e) originality - familiarity (f) novelty - redundancy.

I miss a reference to Colin Ware, and more insights on interaction. Lots of infographics but far less graphs. Good introductory manual, full of examples

**Art says**

Data and visual journalists tell their stories through information graphics, which now include interactive infographics. These beautiful pieces can stand on their own rather than just serving as decoration for a written article.

“The purpose of visualization is insight, not pictures,” said Ben Shneiderman, who writes about visual information and is quoted here. We gain insight through this hierarchy: data, to information, to knowledge, then wisdom. “We reach wisdom when we achieve a deep understanding of the acquired data,” writes the author, Alberto Cairo.

This book transforms the theories into practical state-of-the-art infographic studies by leading practitioners, such as National Geographic Magazine, The Washington Post, and The New York Times, which employs thirty people on its graphics desk.

Hannah Fairfield at The Washington Post said that graphic design in the newsroom occupies the intersection of science and storytelling, visual storytelling.

This book traces the theory, history and construction of these graphics. Profiles of a dozen leading visual journalists include samples of their infographics, from concept to sketches to the published piece. The book includes an interesting one-hour infographics video course on DVD.

I will never design an infographic, but this interesting book deepened my appreciation of the art as well as its commitment to truth and beauty.

Alberto Cairo serves as part of the brain trust for The Best American Infographics 2015 since the series began in 2012.

Edward R. Tufte began raising my awareness of visual data and information design about thirty years ago. I read all his design books and attended his workshop.

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### **Tom Tao says**

Reading this book made me want to be an (amateur) journalist.

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