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The Emerging Genre of Data Comics

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Comics are an old art, familiar to many. An art to tell stories in engaging ways. One that works by established elements and rules, many of which are well studied. At the same time, comics allow for great expressive freedom.

Here, we explore data comics as a new genre, inspired by how comics function, to convey information in data, tell a story, and communicate through visualizations.

Early examples of data comics paved the way...

Four Essential Components of Data Comics

Visualization Flow Narration Words and Pictures

Our goal will be to spot the Island of Data Comics...

...in the ocean of storytelling.

We believe it is timely to start this journey now. We start exploring different angles, trying to describe what makes data comics special and show their potential.

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Art on Graphics

Data comics are inspired by other visual forms concerned with the presentation of change and sequence:

We call this component visualization, ranging from iconic realistic pictures to abstract and conceptual visualizations.

Realistic Visualization Abstract

While all of these pictures are visualizations, not all of them show data.

Data visualizations provide a visual form to something otherwise invisible.

In fact, data does not actually have to exist, nor can we be sure the representation is true.

Data comics can vary in style and detail to support a message.

Data visualizations are designed to allow for a variety of discoveries and insights.

It's going up! This is unstable!

A chosen visualization must fit the data, but most importantly, it must be understood by readers,

or use alternative representations to highlight a different point.

check out the visualizations

Even those who have never seen a visualization.

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In storytelling, it is important that people understand the presented content easily, especially when data and visualizations are complex. Yet, comics offer a fascinating and simple way.

We call this component flow, ranging from an undirected non-flow to a directed flow indicated by the order of the panels.

**Undirected** ↔ Flow ↔ **Directed**

No reading order requires readers to explore by themselves. Comics can explain complex processes by splitting them into less complex units.

Linear order provides guidance and aids argumentation. This requires transition.

**For example:**
- **Visualization-to-Visualization**
- **Moment-to-Moment**
- **Detail-to-Detail**
- **Level-of-Detail**

**Data-to-Data**

**Visualization-to-Context**

**Message-to-Message**

But sometimes, a linear order is not desired or just too simple.
However, sequential visualizations do not yet make a good story nor explanation.

A good story has a rhythm, it draws readers in, it immerses.

But most important, it has a message to the world.

We call this component narration, ranging from factual arrays of visualizations to richly narrated graphic novels.

Data never comes alone, data always has a context.

Context creates story which wants to be narrated.

A good narration requires balance.

It can use different types of narrators:

Universal

Human

Visualization

It makes use of transitions between panels:

and separates the important from the detail.

But storytelling is an old art and learning from the masters...

...can help to create truly dramatic walkthroughs.

May/June 2017
We call this component **Word and Picture**, ranging from almost entirely verbal, to nonverbal and visual.

**Verbal**    **Words and Pictures**    **Nonverbal**

In data comics, pictures are mostly visualizations that show evidence in data.

Data comics embrace both words and pictures to create a better understanding.

Eventually, text becomes more annotations.

We can show an increase or any other pattern in temporal data. Other systems showed soccer games, or the amount of change in data, changes in networks, and email maps.

*Understanding can come from context, but more text may be better than less.*

A combination can mean associating paragraphs with pictures.

Or integrating text into pictures.

Leaving more space for the visualization and for the observers to explore.

Words can be considered the realm of the **verbal**:
- the logical
- the sequential
- the abstract
- the learned
- the slow

Pictures can be considered the **nonverbal**:
- the factual
- the parallel
- the concrete
- the perceived
- the fast

Or can stand alone where no words are required to convey the intention.*

Wording can help understand a picture, explaining and telling us what to look at.
References


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Editor’s Note
The authors behind this special Art on Graphics department article—Benjamin Bach, Nathalie Henry Riche, Sheelagh Carpendale, and Hanspeter Pfister—also contributed this issue’s cover image. See the About the Cover profile article, “Stories in the Data,” for more details about their motivation, creative process, and attempts to leverage the massive untapped potential for data-driven comics to explain multiple threads of simultaneous data.