

# There be dragons: dataviz in the industry



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I started being serious about data visualization around 2005, when the field was still pretty niche and people like [Martin Wattenberg](#), [Ben Fry](#), [Jonathan Harris](#), [Marcos Weskamp](#), [Eric Rodenbeck](#), [Jer Thorp](#) or [Santiago Ortiz](#) only started to explore what using **data visualization as a medium**, and getting creative with data — beyond just making “nicer charts” — could actually mean.

Fast forwarding 12 years, we have seen a **massive evolution** of the field, with many people from all kinds of background streaming into data visualization. Why? Well, the equation is simple — there’s solid agreement that data is *kind of a thing* right now, and also that data visualisation *makes data more human* (whatever that means) — so... that seems to work.

Now, I’ve been working as a freelancer on ambitious projects to **create interesting data experiences**, and I must say over the last 10 years, I never had a shortage of projects. Most of my projects are public facing, communicative in nature, but I’ll also do internal, more utilitarian work, such as helping identify fraud networks for a large tech company or help the German railway system optimize passenger load in trains.

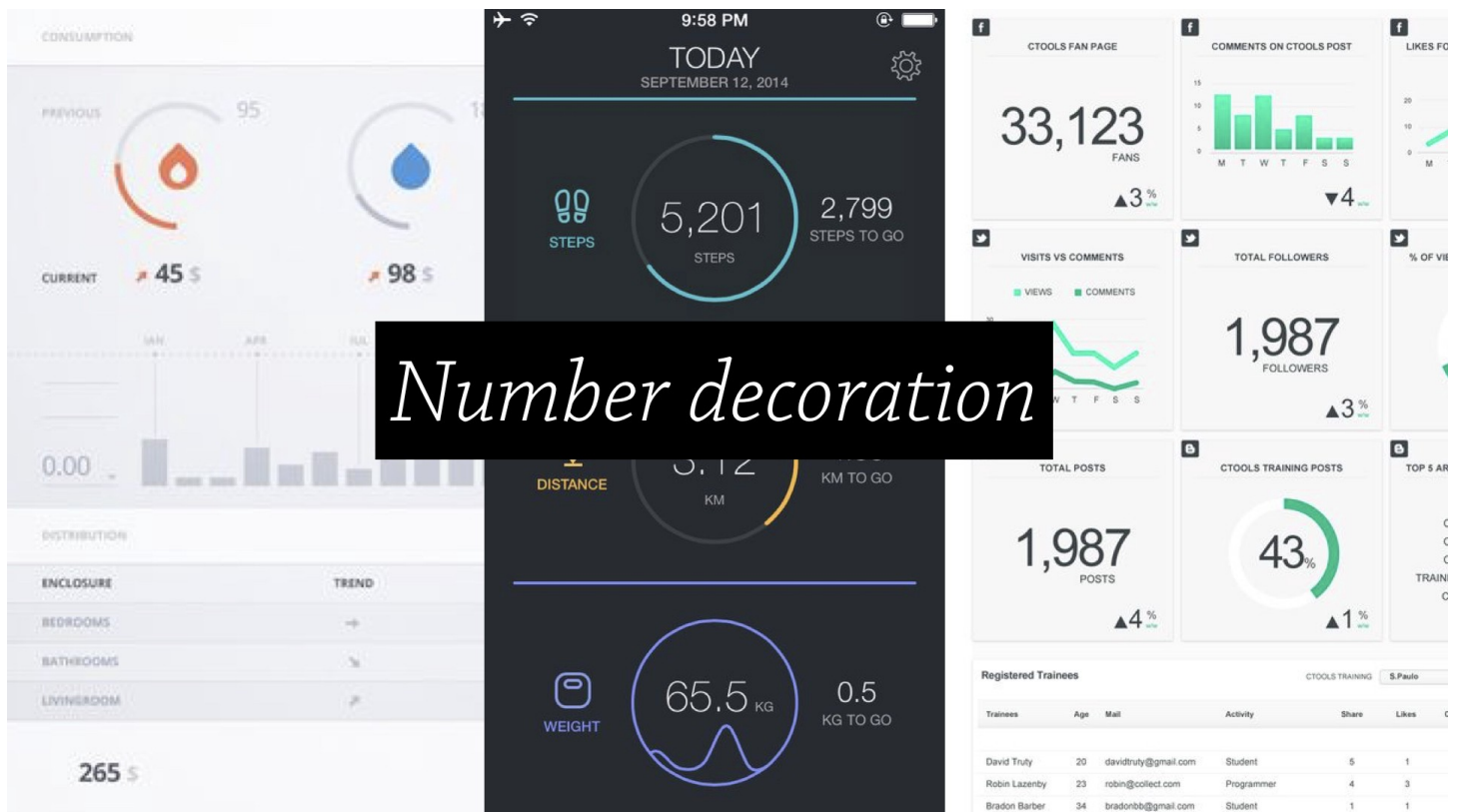
I can say that there is still a **huge need for skilled data visualization designers** who can take a data source, and a brief on information needs and / or communication goals, and turn them into an **intriguing, truthful, unique and aesthetic data experience**.

So, things look pretty good on this end, but as [Elijah Meeks](#) points out in [this much discussed tweet](#) and his full [article](#) on the topic —

Make sure to read also the [many responses](#) to this tweet!

— there's one nut we have not been able to crack: **anchoring bespoke data visualization as a full fledged profession in corporate settings.**

Relatedly, many data displays I see in corporate contexts fall into two major categories:



Numbers with circles around them have been shown to amplify human cognition! #DATAVIZ

## #1 Number decoration

Simple KPIs (key performance indicators) are decorated with visual elements to look sexy in dashboard or reports, but you never get access to the full texture and variety of the data underlying those numbers. It's like you were interested in the forest, but you only get a beautiful little stick. This is not harnessing the power of visualization — this is dressing up numbers. Just search for [dashboard design on pinterest](#) to catch my drift.

The other strategy is complementary, but almost as harmful:

## Sales Explore



Generic, technology driven, unfocused, inhumane dropdown orgies. Where insights go to die.

## #2 The data “explorer”

*“Aha, I understand you were interested in the forest? Well, here’s your f\*\*king forest — basically all the trees we could find. Good luck!”*

Where is the middle ground of **domain-specific, purposefully crafted user interfaces** that would truly enable us to see **beyond the numbers** and data and **actually investigate interesting phenomena**?

There must be a business case for better understanding your own business, right? Why don't we see more exciting bespoke visual data work from inside tech companies?

Yes, NDAs and general **secrecy** might be one reason, when it comes to business sensitive tools, but let's assume there might be more factors at play.

From my perspective, when I speak at companies, the audience **loves creative approaches to data visualisation**, but at the same time, I am confronted with the same questions:

- *“Are these custom interfaces really useful or just a gimmick?”*
- *“How can we make this scale?”*
- *“Will this last, or is there something new and fancy next year?”*

To which, my typical answers are

- yes, for your **core data sets** you will need **custom UIs** and they'll bring enormous value
- you might not be able to scale a single viz solution indefinitely, but you will need a **scalable method** to come up with good custom UIs (i.e. build up data + viz competence across your company) and
- that **data is not going away as a major factor** and that companies that can work well with data, and know when to automate, and when to involve human judgement the best ways will always have a crucial edge.

But, it's clear we still seem to have **a long way to go in proving our practical worth**, and I think it has a lot to do with

- Proven **success stories and case studies for industry**. Were you able to improve parts of your business with data visualisation? What worked, what didn't? In my experience, a few prominent success stories, which people can point to, are absolutely crucial to help sympathisers make their case internally.

- **Pragmatic guidelines and education** on use of data visualisation in corporate settings. Right now, we are stuck with “*better looking bar charts*” on one end and “*ooh nice everything creative and bespoke*” on the other, but very few methods, materials, and especially, prominent spokespersons in the pragmatic middle. How can we scale the production of bespoke, customized data visualizations? Which cultural and educational infrastructure and incentives do companies need to establish to achieve this?

## How can we get there?

First of all, keep in mind, it’s a **young community in a very fresh field**. 31.4% percent of respondents from a recent [data visualization survey](#) said it’s their first job doing data visualization! So, it’s only natural that we are having a hard time between much more established fields like UI/UX design and computer science and engineering.

Likewise, only 25.4% say data visualization is the primary focus of their job.

Consequently, [many folks](#) see data visualization as a supplemental skill rather than a full-time profession. In my view, this is a structural problem if we want to be taken seriously —beyond just making “better charts”— but also testament to the fact that **if we want to establish data visualization as a profession, it will take some work**.

Yet, as I [argued earlier](#) already, I don’t think we gain much from overemphasizing the (supposedly) fundamental differences between “serious/functional” and “aesthetic/entertaining” data visualizations, or, conversely, diminishing Excel dataviz work as “not really data visualization”.

I am thinking back to the time when it was fashionable to “[draw lines in the sand](#)” or to [attack designers on live TV](#). The **harsh, narrow-minded criticism** that novel designs and approaches faced for a while did not always lead to better results, but, in contrast, **scared talented folks away from the community**. I am really quite happy that, by now, we have a data visualization community that understands the [many purposes](#) of data visualization beyond scientific analysis.

Last, there might be a **common misconception** about what it takes to learn to create great data visualizations. There’s lots of materials available online to get started with data visualization and to create “cool data graphics”. Yet, in order to advance

professionally and to create actual impact, it is absolutely necessary to collect lots and lots experiences from actual project work, and especially to face **criticism**, have one's designs challenged, learn how to iterate, and develop a robust process to consistently deliver great results (yes, *real artists ship*).

But **I don't think twitter, blogs, or forums are the places to do that**. Rarely have I seen online criticisms of data visualizations that actually took the time to reflect on briefing, motivation, project constraints, or aesthetic value, as Wattenberg and Viegas suggest in [Design and Redesign](#).

**The most valuable criticism happens *where it matters*** — when working on a job, facing challenges and questions from a client or your co-workers, or during education when your teacher or mentor forces you take position and sharpen and defend your designs. If we think vocational training and actual professional practice can be replaced by occasional flame wars on twitter, a couple of [bl.ocks](#) and reading [/r/dataisbeautiful](#), then *we ourselves* are the ones who don't take data visualization seriously.

So, please, by all means, let's keep the data visualization community **inclusive and open** to new ideas and approaches . And let's all work together — data scientists, Excel folks, data artists, enigneers — to demonstrate that we can **create value with custom, high-end data visualizations in applied, business-critical settings**. The future of our young discipline might actually depend on it.

*This is my take on an ongoing debate about the role of data visualization in 2017. If you are interested in this topic, make sure to read other posts in [Visualizing](#), [The Field](#), or other related posts, such as: [In Defense of Simplicity](#) by [Irene Ros](#) or [The Death of Interactive Infographics?](#) by [Dominikus Baur](#)*

*Also, I am curious to hear your take, especially if you made experiences with custom data visualizations in corporate settings. Did you experience similar problems? What are the forces at work? And what do you think are viable solutions? Post a comment!*

Thanks to Boris Müller and Dominikus Baur.

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