# ALL DATA ARE FLAWED

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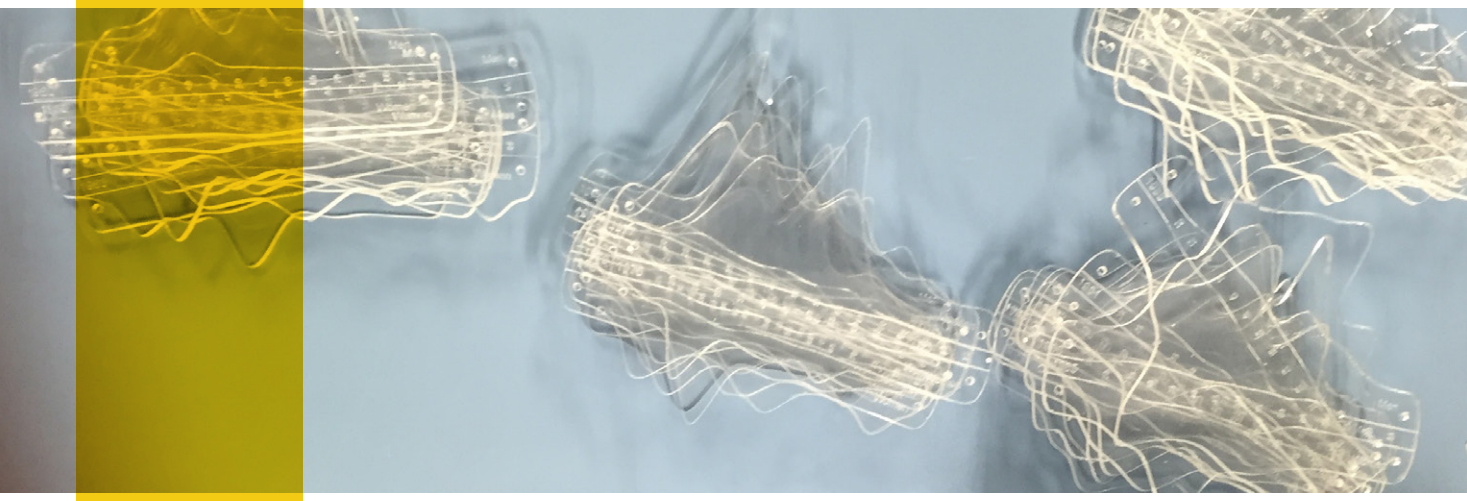
*Photo: Niels Nydam Andersen, Hack4fi i Helsinki i 2016.*



# MICHAEL PETER EDSON – ALL DATA ARE FLAWED

People — visitors, audiences, citizens — are the center of our universe in the cultural industries. But understanding people is *hard*, and using audience research to increase the strength of our institutions and the value we create in society, can be even harder. I love audience research and consider it to be one of the most important tools in my work, but I've often gotten it wrong.

I've used audience research to illuminate and clarify issues, and I've used the same research, unintentionally, to mislead and obfuscate them. I've seen research to inspire teams to approach problems and opportunities in entirely new ways; and I've seen the same data distract, overwhelm, and confuse teams, or have no effect on them at all. And even with the right data and analysis in my hands I've never found it easy to overcome the old habits of institutions and the assumption that whatever we've been doing is what it should be, and that our next steps should look pretty much like our last.

The problem, I think, is seldom with the research itself. More often than not the challenge lies in how we bring research into our organizations, and the mental models we use to make it clear and actionable in the context of our daily work over time.

I am not a researcher or a data scientist, nor am I an expert in the analysis and interpretation of audience data, but after many years of working in cultural institutions, often in challenging circumstances at the intersection of technology, scholarship, and societal change, I have noticed a few things about working with audience research that seem to work for me, and maybe they'll work for you too. These are not hard-and-fast rules or a comprehensive methodology, but rather they are series of tricks, approaches, and rules-of-thumb that have helped to bring audience research into focus and make it actionable for decision makers and teams alike.

Artikelrækken: "Data, museer og ikke-brugere" tilbyder tre perspektiver på, hvordan museumsprofessionelle aktivt kan bruge data som led i udvikling af museets formidlingspraksis og organisation.

**Michael Peter Edson: All data are flawed** (juli 2018)
**Line Bjerregaard: Museernes ikke-brugere** (juli 2018)
**Ida Brændholt Lundgaard: Atmosfære som åbning** (august 2018)

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## DATA IS MEANINGLESS WITHOUT A CLEAR SENSE OF PURPOSE

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Knowing how many visitors came through your doors, attended your programs, or watched your videos doesn't do you any good unless you have a sense of why your institution exists and what kind of impact you want to have in the world. Who is your institution for? Why do you matter in society? What kinds of behaviors should you expect to see more of if you are doing your job well? Without clarity on those points — and a drive to excel and take action — no amount of data, research, or audience feedback is going to help you understand what your data means or what you should be doing differently.

And if your mission doesn't provide enough clarity and urgency to prioritize and focus your efforts, then perhaps you need a new mission.

## ALL DATA IS FLAWED, BUT...

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Many cultural professionals believe that their work is too complex and intangible to be measured. But Jim Collins, in his famous book Good to Great in the Social Sector (2005) provides a compelling counterargument.

"To throw our hands up and say, 'But we cannot measure performance in the social sectors the way you can in business' is simply lack of discipline. All indicators are flawed, whether qualitative or quantitative. Test scores are flawed, mammograms are flawed, crime data are flawed, customer service data are flawed, patient-outcome data are flawed."

And then he closes with this, which I love: "What matters is not finding the perfect indicator, but settling upon a consistent and intelligent method of assessing your output results, and then tracking your trajectory with rigor."

Any serious team at any institution of any size is capable of acting with consistency, intelligence, and rigor. I would even say that we are obligated to do so.

## GOOD RESEARCH CREATES MORE QUESTIONS THAN IT ANSWERS

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Often, initial attempts at audience research create more questions than they answer. Why are teenagers attending at such low (or high) levels? Why aren't our audiences growing? How are people learning about our events and programs? What are they learning?

The trick is to avoid being overwhelmed by or frustrated by the fact that initial research doesn't point at quick fixes or immediate solutions and in-

stead find ways to refine your questions and seek insight and wisdom from many sources. Audience research should be part of a continuous process of curiosity and question–asking, not an academic exercise you do once or a year (or two).

## 4 GET TO KNOW SOME REAL PEOPLE

"All data in aggregate is crap," says entrepreneur and web analytics researcher Avinash Kaushik, and ethnographer/technologist Tricia Wang observes that "having more data is not helping us make better decisions."

Data is important, but what matters is the ability to drill down into aggregated data — to "segment" it, as researchers say, into an intimate and actionable understanding of people's wants, needs, and behaviors in the real world.

A few years ago I was leading a digital strategy workshop for a large national museum that wanted to be a "visitor–centric organization." But when I asked the senior staff to tell me about some real visitors they knew I was met with blank stares. They had data, but they had never taken the time to get to know any of the people they claimed to serve.

Conversely, at a recent strategy workshop for my own museum, hosted by the Museum of Tomorrow in Rio de Janeiro, I asked the host museum's staff to tell me about the visitors they knew and I was met with an outpouring of knowledge about, and love for, the real people in their community.

Both museums were, on paper, dedicated to their visitors, but to the Museum of Tomorrow, being visitor–centric meant doing things with and for the real people of their community. It was personal.

There are whole fields of design and research dedicated to making better products and services through personal relationships with actual and potential visitors and "users" (and I would identify almost everything a cultural organization does as some type of product or a service). Digital design teams build complex and expensive systems by testing simple prototypes with small numbers of users in processes called agile development and "heuristic" analysis. The discipline of Design Thinking, increasingly used in the museum field, emphasizes involving small numbers of potential consumers in an iterative process of observation, design, and prototyping designed to maximize the chance that new products, exhibitions, and websites will actually be used and enjoyed by the public and meet the museum's goals.

If you want to be an organization that matters to real people, get to know some real people, and then get them involved in your work.

## STORIES HAVE POWER

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The kind of data that you need to understand who your visitors are, what they are doing, and what impact you are having on them is different depending on where you are in the cycle of strategy, design, and implementation.

Mature, ongoing initiatives (such as maintaining permanent exhibitions) require a wide variety of data, visitor interactions, and analysis to understand and assess. But for new initiatives, too much emphasis on research and data too early in the game can actually kill the kinds of experimentation, creativity, and boldness you need to innovate and succeed.

For these fledgling initiatives, and often for mature programs as well, stories and anecdotes from the real people who are using and testing your work are crucial to getting the clarity and insight necessary to steer a project in the right direction and inspire teams, funders, and stakeholders.

As a point of reference, astronomer Carl Sagan fought with NASA's bureaucracy for years to include visible light cameras on interplanetary spacecraft such as the Cassini and Voyager probes. (Visible light cameras were not considered to be sufficiently scientific for NASA's researchers.) Eventually Sagan persevered, and the resulting photographs, including Voyager 1's "pale blue dot" photograph, changed our understanding of our place in the universe, increased public understanding of NASA's mission, and likely increased its ability to fund future programs.

In a less profound, perhaps, but equally relevant example, a Smithsonian team I worked with was seeking a multi-million dollar grant for archives digitization and access initiatives. The team had ample data about the hits, visits, and downloads from its websites, but they had also been collecting stories, over many years, from the system's users. The team told me that the data was great, but the stories were what made the difference in both the design and the eventual award of the grant. The stories were what brought the data to life.

Use quantitative data whenever possible, but gather and use stories and anecdotes as well.

## 6 TO CATALYZE ACTION, FORM A HYPOTHESIS

Watch the body language of your team the next time you gather to talk about audience research. Are your colleagues sitting up in their seats, energized? Are they trading ideas and laughing together? Or are they leaning back, checking email, and counting the minutes until the meeting ends? In my experience it is too often the latter.

Data and research can be an impediment to creativity and action unless you have a hypothesis about what it means.

Whatever your situation is, force yourself to form a hypothesis about what you think might be going on, then find ways to test that hypothesis in the real world. For example, you may know that your museum has 1,000 followers on Instagram, but you probably don't know why they follow you or what, if any, benefits result. Work with your team to form a hypothesis. For example, "we think people follow us to connect with fellow art lovers" — and then reach out to your community and put your team to work figuring out whether you're right.

## 7 THINK BIG

Most institutions dutifully track and report on their visitor statistics, but I've seen high–powered teams, leaders, and advisors struggle to understand the significance of a few more Facebook followers here, or a few more exhibition visitors there. The problem usually isn't with the data or the interpreters, but rather that the institution's overall expectations for reach and impact are so low. Most cultural institutions have very small dreams for what they can accomplish.

Try thinking big. Big ideas about service, impact, and mission — "work that matters", as digital pioneer Tim O'Reilly says — induces teams to see beyond small fluctuations in visits or followers and look for larger, more meaningful insights about what people are doing and why. And the overall effect of big goals on a team's creativity, focus, and drive can be dramatic.

Big goals are sometimes easier to accomplish than small ones. Big goals attract the best people and inspire teams to think outside the boundaries of established doctrines. John Wood, founder of Room to Read and author of the remarkable Leaving Microsoft to Change the World, advises people to "think big from day one." Mr. Wood writes, "The side benefit of thinking big is that it can be a self-fulfilling prophecy, because bold goals will attract bold people." [Source: Leaving Microsoft to Change the World]

## USE "HALVES AND DOUBLES"

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Data and statistics can get very confusing for teams, but I've found there's something reassuringly clear and concrete about the concept of cutting something in half or doubling it in quantity.

One trick is to encourage colleagues to think in new ways about goals, accomplishments, and measurement. Ask them to name a kind of visitor interaction or public service they care about; then ask them what it would take to double the number of people it serves or benefits or to double its impact in some way. Or, you could ask them about a program, exhibition, or service they already work on and what it would take to halve the amount of time it takes to produce it (thereby doubling the number you could do).

For example, I asked the leadership team of a world–renowned library and performing arts center to tell me about a program or activity they were exceptionally proud of. "We are very proud of our educator training program. It is the best and most influential in the world," they told me. I asked them how many educators they trained every year, and their answer was…"23". Shocked by that small number, I asked them if they could double that figure in a few years. They had never considered that such a thing was even possible or desirable.

## THE RULE OF 1 YEAR

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I've often found that teams working with goals and metrics can get stuck in an endless loop of discussion and debate about priorities and resources. Or, God forbid, they form a committee.

Debate and discussion (and even, sometimes, committees) are vitally important, but the sooner you choose a few priorities and begin taking action, the more likely you are to build momentum, expertise, and create results.

Harvard Business School professor and bestselling author John Kotter, in his 2008 book A Sense Of Urgency, writes "With time and thought, anyone can generate dozens of ideas…that are relevant to a specific situation. My advice: don't try. A long list can be overwhelming. A sense of being overwhelmed stops action instead of encouraging it. A better strategy is to identify three or four ideas that will be easy to implement, and start doing so immediately."

At the end of your next board meeting, strategy meeting, or team retreat, look at your research and your portfolio of projects and ask yourself: "When we gather back together one year from now, what must we have accomplished? What initiatives are so clear and important that if we fail to do them over the next year we should we all just resign in shame?" Pick one or two things and begin working on them immediately. For example The Statens Museum for Kunst took this approach with their open access initiatives back in 2012 and have since distinguished themselves both nationally and internationally in the area of public engagement with digital collections.

# 10 WHO DO YOU WANT YOUR VISITORS TO BECOME?

People seem to fall into two main camps when it comes to deciding how, and to what extent, to use audience research to plan and execute cultural initiatives.

On one end of the spectrum is the Please The Visitor camp. These people believe that the way to create exhibits and programs is to use research data, focus groups, branding, advertising, and marketing.

On the other side is the Experts Know Best camp. Steve Jobs, the visionary co-founder of Apple Computer, was a notorious proponent of this philosophy. He believed that focus groups, surveys, audience research, and other kinds of strategic insights taken from what consumers think they want were nothing more than distractions. "A lot of times, people don't know what they want until you show it to them," he said. [source: Bloomberg Businessweek, Steve Jobs: 'There's Sanity Returning' May 25, 1998] "We weren't going to go out and do market research. We just wanted to build the best thing we could build."

I know many museum and cultural professionals who feel the same way. They have told me in countless interviews and design and strategy workshops over the last 20 years that they don't need to know what the public wants or needs; they themselves are the experts, and they alone know what the public wants and should have.

In my own work I have found that "the experts" are often right — but only partially so. The public is indeed interested in the expert judgment of scholars, curators, and designers, but their interest doesn't start or end there. Expert judgment is only one part of a broader narrative that includes the visitor's own knowledge, goals, dreams, life experience, and emotional needs — all of which are constantly changing and extend well beyond our expert, but narrow, preconceptions about who our visitors are and what they want from us on any given day.

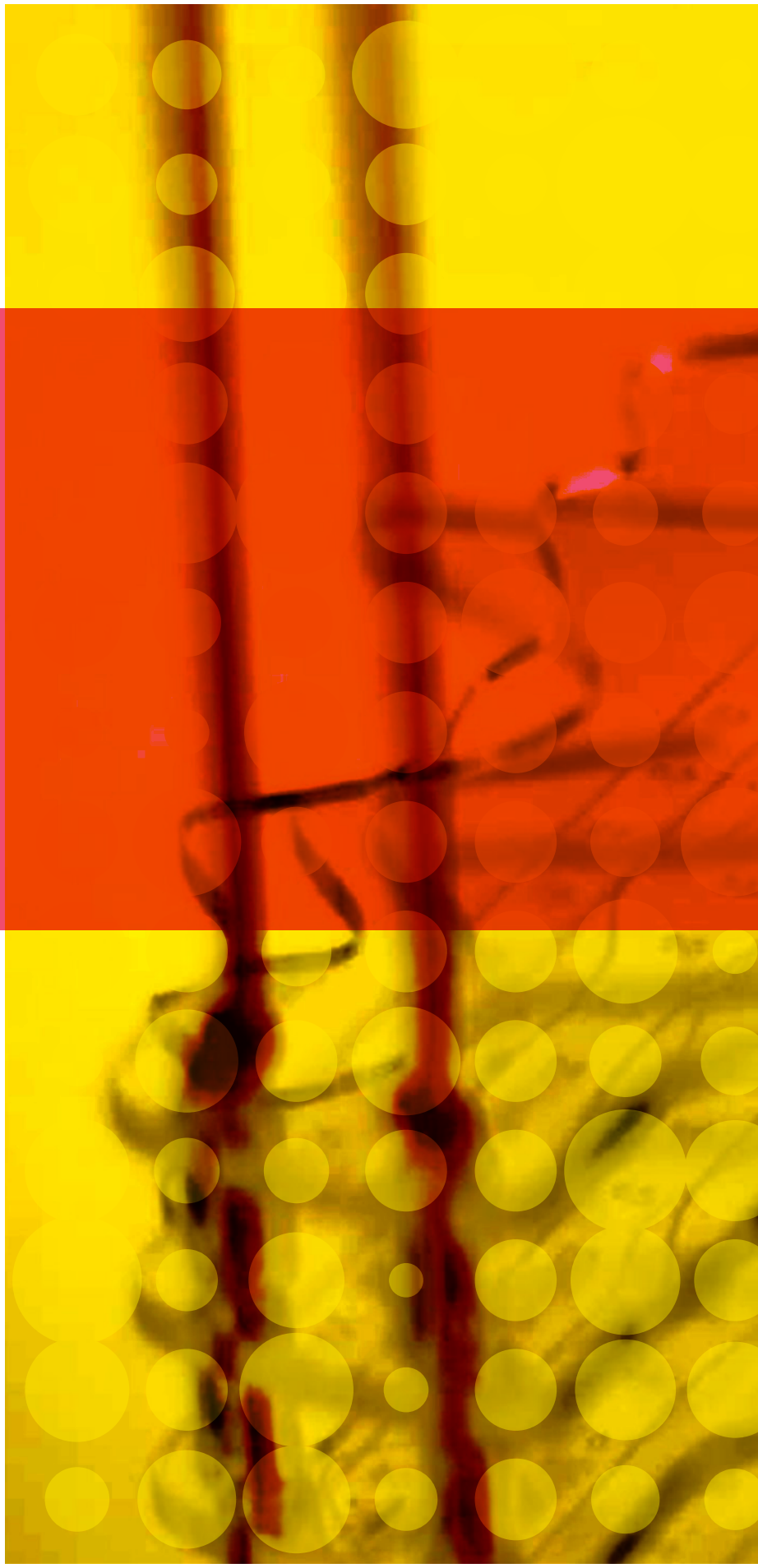
Knowledge, learning, and cultural participation are more complicated and interesting than experts knowing and audiences consuming — which really shouldn't surprise us in the 21st century, but somehow often does.

The tension between the Please the Visitor and Experts Know Best approaches to program development can be frustrating, and sometimes even paralyzing, for cultural institutions, but I have found a tie breaker that draws upon our sector's fundamental purpose in society to point the way forward.

"Who do you want your customer to become?" is the title and central question of Michael Schrage's 2012 book about the nature of creativity and innovation.

In his book, Schrage asserts that innovation "is not just an investment in product enhancement or customer experience; innovation…", and with innovation he is really talking about the development of many kinds of products and services, "is an investment in your customer's future — a human capital investment in who your customers really want or need to become."

Building on Schrage's ideas, I think that the ultimate purpose of our institutions — our exhibitions, public programs, scholarly research, and digital initiatives — is to help create good citizens: well informed, happy, brave and resilient, part of a community, and able to think clearly and act (and vote!) intelligently in a broad variety of circumstances, now and far into the future. A better self and a better citizen is, as Schrage writes, what we are asking our customers to become.

So when I have had to interpret audience research and make decisions about how we do what we do in my own institutions — whether we give our audiences what they want or what our experts think they need to have — I try to keep Michael Schrage's idea of who do we want our customers, or visitors, to become in the front of my mind. Whether through research data or expert intuition or both, I try to shape my decisions based not only on what I think my visitors want in the short term, or what our subject matter experts think they need to have, but by how audiences and cultural professionals can work together, as equals, to be the kind of the friends, neighbors, and fellow-citizens that we all want to be.

**Michael Edson** is a strategist and thought leader at the forefront of digital transformation in the cultural sector. He is the co-founder of the Museum for the United Nations – UN Live, a new institution currently being envisioned for Copenhagen, and he was formerly the Director of Web and New Media Strategy for the Smithsonian Institution, the world's largest museum and research complex, based in Washington, DC.