

ETHICS OF ANALYTICS

This is no easy task



Presented by
Sam Ruchlewicz



SAM

RUCHLEWICZ

Vice President of Digital Strategy & Data Analytics
Warschawski



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A DISCLAIMER:

This was one of the most difficult presentations I've ever had to do – for the simple reason that we're tasked with an incredible responsibility and provided (virtually) no guidance on how to do it

moral weight in calling on the government to progress, and how important it was to seize common ground along the way.

The bad news is that motions have no binding legal effect. Furthermore, the wording of the motion is vague, without specific, At its best, MPs seriously strive for common ground — they *all* voted for M-40. At its worst, our processes squander opportunities for progress. Instead of remedies to problems,

**RECYCLING CHANGES WILL
CREATE DUMPING**

Christine Suter
Whistler

beautifully constructed trails we have in our backyard.

Kudos to the trail building crews, parks planners, and Muni Council(s) that have provided this fabulous amenity. I'm so

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WHY ARE WE HERE?

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DATA WITHOUT CONTEXT
IS JUST ORGANIZED INFORMATION

-ALBERT EINSTEIN

“There are lies,
damned lies and statistics”

-Benjamin Disraeli

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THE LIES WE TELL:



Statistical Manipulation



Graphical Misrepresentation



Cherry Picking



Correlation & Causation



Framing & Perception



STATISTICAL MANIPULATION

THE BAD, THE WORSE & THE UGLY

A definition, from *Misused Statistics*: “Using numbers in such a manner that – either by intent or carelessness – the conclusions are unjustified or incorrect.”

While there are hundreds of documented fallacies spanning (at least) a dozen “categories”, there are hundreds more instances where process, naiveté, or lack of expertise leads to poor outcomes



GRAPHICAL MISUSE

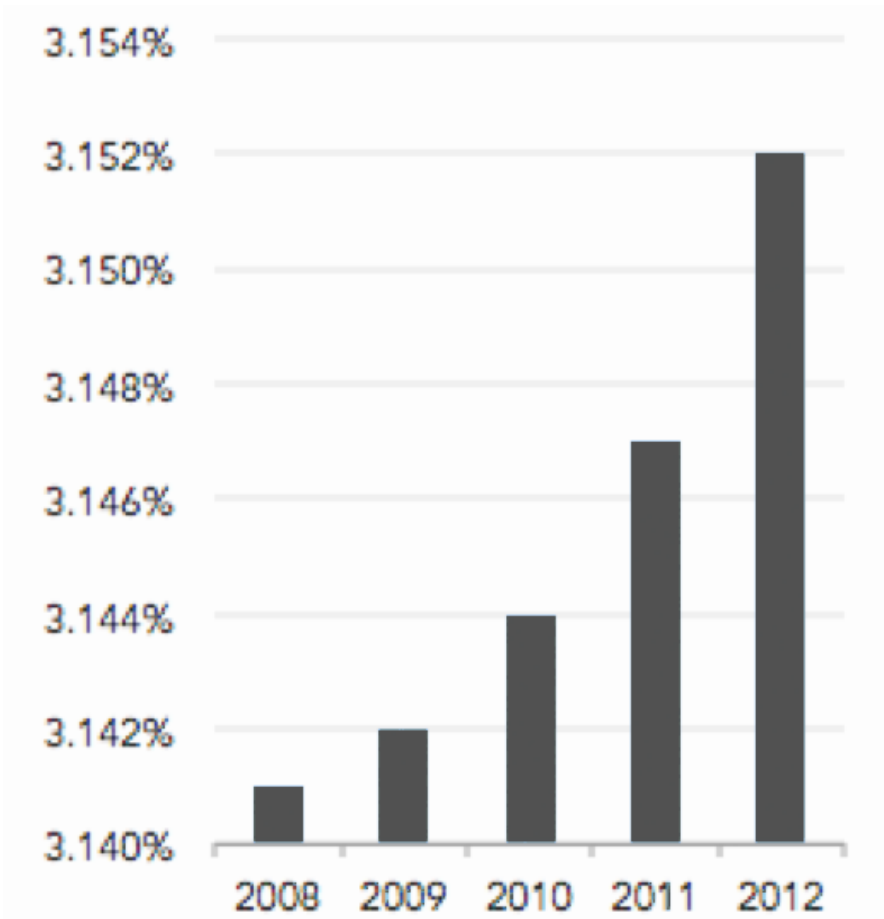
EVERYONE LOVES “UP & TO THE RIGHT”

One exceedingly popular sub-type of statistical manipulation is a misleading graph, which uses one or more invalid techniques to either (a) portray a non-existent trend; (b) exaggerate an observed trend; (c) hamper proper understanding of the data or (d) otherwise mis-characterize the data

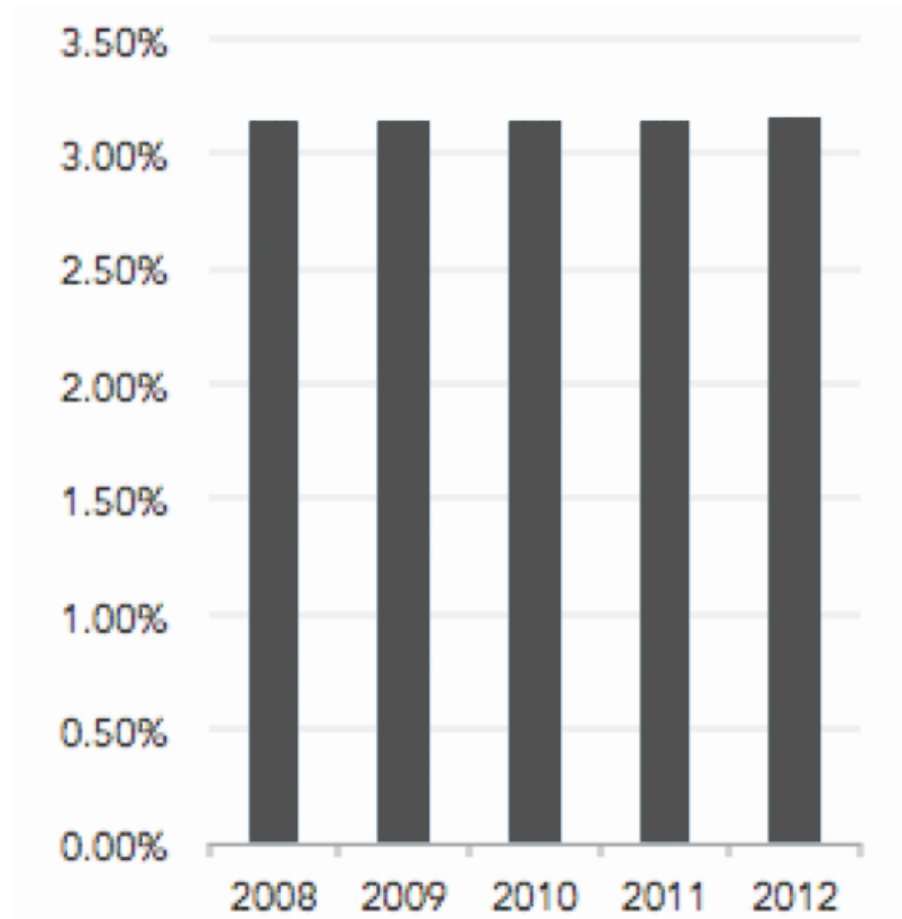
One of the root causes of these types of graphs is a desire to show improvement or progress – even if it isn’t supported by the data. This is especially true in advertising – either in the advert itself OR in the representation of results

SAME DATA, DIFFERENT Y-AXIS

Interest Rates



Interest Rates





CHERRY PICKING

YOU CAN ALWAYS FIND SOMETHING

The name of the game – especially today – is “data”. And marketing/PR/advertising agencies are (historically) not very good at analyzing data to uncover insights, highlight value (ties into #2) and provide demonstrable business value

The expectation from corporate decision-makers is that marketing and PR should deliver those “ah ha” insights that allow your organization to do their jobs better, communicate more effectively and drive growth.

The problem? Most agencies aren’t good at finding them.



POST HOC, ERGO PROPTER HOC & RELATED FALLACIES

How many of us have made the assumption – at one point or another – that because something follows something else, the preceding thing caused the following thing? Odds are, most of us (especially before we learned better).

The problem is that this is almost never true – and even if it is true, odds are that there are other factors that contributed to the outcome (or distant factors that are overshadowed by a recency bias) that such an analysis can miss. There's also the old "correlation & causation" problem...





FRAMING & PERCEPTION

WE CAN MAKE YOU BELIEVE ANYTHING

If there is anything I've learned from working in the marketing and advertising industry, it's the importance of framing to achieving desired outcomes

How data is presented – from the way we display charts/graphs/models/whatever to the language we use and the way we frame arguments, can lead the listener to a conclusion – in some instances, this is done innocently; in other instances, not so much.

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AT THE END OF THE DAY, THERE IS NO SILVER BULLET

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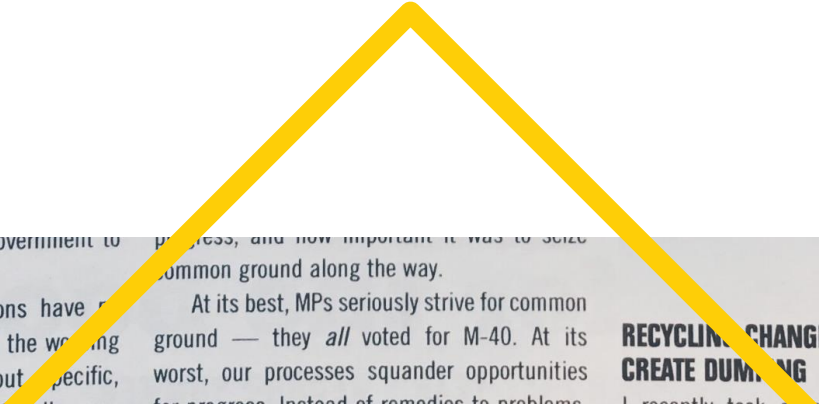
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THE JOB OF AN ANALYST IS TO UNCOVER INSIGHTS FROM DATA

But that process is fraught with complexity –
and any time a human is involved (and even when they aren't),
there is potential for bias and error



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#RELATIVISM

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WHY DO WE LIE?

WHY WE LIE



**Ignorance &
Not Knowing**



It's Easier



**Fear &
Instructions**



**To Achieve
A Goal**



**To Deceive
Others**



WE DON'T KNOW NOT EVERYONE IS A STATISTICIAN

The entire marketing industry has become “data-driven” (virtually) overnight – something brands, agencies and consultancies alike were ill-prepared to handle. There’s simply too little analytics talent to go around – and the results aren’t great.

The result has been a slapdash and haphazard adoption of analytics principles, with few analysts receiving adequate statistical training, and few data scientists & statisticians well-versed in business and advertising



IT'S EASIER THE PATH OF LEAST RESISTANCE

One of the most difficult (speaking from experience) aspects of navigating digital transformation is adoption of new metrics, standards and principles – everyone loves the “old way” and no one loves “down” reports

The result? Reports that substitute “vanity” metrics for meaningful ones. Cherry-picked data that paints a rosy picture instead of the bleaker one that everyone should be seeing. Misleading graphs that show up-and-to-the-right growth where it simply doesn't exist.



FEAR & INSTRUCTION

STANDING UP CAN BE TOUGH

It's never fun to give someone bad news – especially when that someone is your boss or your client. It's even more difficult when you are *instructed* to create a report that shows something positive when you believe that is misleading

However, as analysts, it is our job to create reports that are as close to the truth – and as unbiased – as possible. It's our job to speak truth to power and to deliver insights that help our clients make the best decisions (even if that means firing us)!



WE HAVE OTHER OBJECTIVES MISALIGNED INCENTIVES CAUSE PROBLEMS

Intentionally or not, people respond to incentives.
That's the cold, hard, unwavering truth of our species.

I see this all the time, in client organizations large and small: misaligned incentives lead to all sorts of lies, both innocent and malicious. Marketing is evaluated based on one set of metrics (and they solve for them), while the business is judged on another. When those aren't aligned, there are problems!



DECEPTION

SOMETIMES PEOPLE DO BAD THINGS

There's no denying it, however much we'd like to – sometimes people lie to deceive. They maliciously alter the content and/or context to suit their desired ends, whatever those may be at the time – from landing a promotion to pushing a decision a certain way.

One of the most pressing challenges for the analytics community is identifying instances of malicious deception, rooting out bad actors and ensuring that the practice of analytics is held in high esteem by everyone – from the front lines of our organization to the Board Room.

A low-angle, upward-looking photograph of several modern skyscrapers with glass facades. The buildings are set against a clear blue sky. Two bright yellow chevrons are positioned on the page: one pointing downwards at the top center and one pointing upwards at the bottom center. A large white rectangular area is centered on the page, containing the text.

SO WHAT DO WE DO ABOUT IT?



START WITH
YOUR BUSINESS
GOAL



CREATE
MEANINGFUL
METRICS*

A close-up profile of a man's face, looking to the left. He has short brown hair and a light beard. He is wearing a white, possibly silk, shirt. A large, dark grey rectangular overlay covers the right side of his face and neck. Within this overlay, a yellow-bordered square is centered, containing the word "VANITY" in white, uppercase, sans-serif font.

VANITY



THE TWO KINDS OF METRICS

VANITY METRICS

I (not so) affectionately refer to vanity metrics as “so what?” metrics. They are easily manipulated (so they make you feel good), but they ultimately don’t do anything for the bottom line.

Some Examples:

1. Impressions
2. Placements
3. Sessions
4. Mentions
5. Users
6. Social Media Followers
7. Clicks
8. Shares/Likes/Loves
9. AVE

A person's silhouette is visible on a pier extending into a body of water at sunset. The sky is a mix of orange, yellow, and blue, with some clouds. The water reflects the colors of the sky. The overall scene is peaceful and contemplative.

MEANINGFUL



THE TWO KINDS OF METRICS

MEANINGFUL METRICS

Meaningful metrics are the things that actually matter to your company. Most are rates, ratios or coefficients – which help to explain the relationship between different variables and move you to ACTION.

Some Examples:

1. Lifetime Revenue Per Customer
2. Conversation, Amplification & Applause Rate
3. Viral Coefficient
4. Relative Goal Conversion Rate
5. SD Lead Score by Channel
6. Economic Value Per Unique User
7. Thought Leadership Score
8. ROAS Per Customer Per Channel



DEMAND
TRANSPARENCY



TRUST & VERIFY



THE GRIM TEST



THE GRIM TEST

IT WORKS!

How many of us have seen a piece of research – scientific, political, whatever – that began with a sample ($n=12$, $M=20.33$)? **Have you ever actually thought about its validity?**

The GRIM (Granularity-Related Inconsistency of Means) Test provides a quick, incredibly simple way to find out if the data is

A photograph of a courtyard between two multi-story buildings with a terracotta-colored facade. The courtyard is filled with numerous windows, many of which are open. A large, semi-transparent dark grey rectangle is centered over the courtyard, containing a yellow-bordered box with the text "ASK, ASK, ASK!".

ASK, ASK, ASK!



THE RULE OF THE FIVE WHY'S

Have you ever felt stymied while trying to get to the “heart” of a problem or the “real” answer to a question?

Six Sigma has a solution:
ask “why” five times – by the end, you’ll have peeled away the “symptom” layers and be left with the root cause



BENCHMARK



Site Usage

7,849 Visits

25,423 Pageviews

3.32 s/visit

43.64% Bounce Rate

00:04:08 Avg. Time on Site

28.30% % New Visits

Traffic Sources Overview



Visitors Overview



2,958 Visitors

Pageviews

% Pageviews

5,932 23.33%

1,308 5.14%

667 2.61%

697 2.74%

682 2.72%

DON'T BE
AFRAID OF A
"DOWN"
REPORT

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697 2.74%

682 2.72%

100.00%	28.57%
40.00%	16.67%
0.00%	0.00%
	80.00%

A photograph of a crowd of people at night, with a yellow-bordered box in the center containing the word "DEMOCRATIZE". The background is dark with blurred lights, and a "POLICE" sign is visible on the left. The text is in a white, sans-serif font.

DEMOCRATIZE



ETHICAL ANALYTICS
FIVE RULES TO DO BETTER

NUMBER ONE

Be Brilliant at the Basics

h/t: Peter Shankman



BE
BRILLIANT
AT THE BASICS

DO THE LITTLE THINGS WELL

The overwhelming majority of unethical/inaccurate/failed analytic and measurement efforts today are a result of either (a) lack of statistical understanding, (b) poor metric design or (c) a lack of awareness of what is being tracked

To avoid bad outcomes, start with the basics:

1. Start With The End In Mind
2. Align & Track Meaningful Metrics
3. Demand Data Access
4. Test & Verify
5. Ask Why – a Lot!
6. Be Fearless – Failure Is When You Give Up

NUMBER TWO

Begin At The End
Identify what you're solving for –
otherwise you're solving for nothing



Begin at the End

BEGIN AT THE END

I've become a huge proponent of starting with my end goal in mind, and working backwards to achieving it. Too many marketing & advertising efforts fail simply because the marketing team (external or internal) is working toward a goal that is misaligned with the Corporate goal.

Know what business goal you are solving for – then work with your team to create and track metrics that are aligned and relevant to that outcome.

If you don't know what you're solving for, you're solving for nothing. It's that simple.

Identify your end, bottom-line business goal.

Solve for it.

NUMBER THREE

Evaluate Everything Using Meaningful Metrics!



**Evaluate
Everything Using
Meaningful
Metrics!**

DON'T USE VANITY METRICS

Everyone likes things that are “up and to the right” – but those metrics rarely (if ever) produce true insights that will help you improve your bottom line. Instead, focus on Meaningful Metrics that are aligned with your bottom-line business goal. Ruthlessly optimize for those.

Most marketers don't know that you can create custom metrics in any analytics program – do that! Define the metrics that matter to your organization, configure goals around them and solve.

And as a bonus, meaningful metrics are much, much more difficult to “fake” or “fudge” than Vanity metrics – especially at the 2nd and 3rd order levels.

NUMBER FOUR

Admit Your Flaws – & Tell The Other Story



Admit Flaws & Tell The Other Story

ADMIT FLAWS & TELL THE OTHER STORY

Every data set can be sliced and diced dozens (if not hundreds or thousands) of different ways. As analysts, its our job to sift through the possibilities and find the “truth” to the best of our ability – but doing so necessarily involves human error

Admit that. Embrace that. The story you’re telling might be completely wrong. We might be seeing patterns where they don’t exist. Things are complicated, especially where human behavior is involved. Tell the other story. Question your conclusions. Red-Team your work.

This same thing applies to Machine Learning or AI-driven models – even the best intentioned ones don’t work exactly as planned.

NUMBER FIVE

Education is a Silver Bullet



Education is a Silver Bullet

EDUCATION = SILVER BULLET

Most clients – internal and external – have been conditioned to believe that “up and to the right” is good and anything else is bad

This is a belief that can only be broken by people like us who understand the importance of ethical analytics

Begin every engagement by discussing what the goals are, what metrics will be used and how they’ll be calculated. Be brutally honest and transparent. Emphasize the importance of “down” reports – and why they are helpful

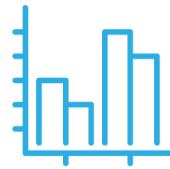
Educate! Be A Resource! Break the Cycle!

BIG AGENCY EXPERTISE + BOUTIQUE AGENCY CARE

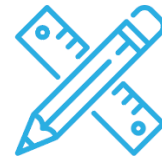
All the services you need are handled in-house, under one roof.



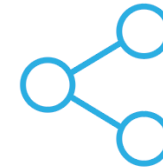
BRANDING



MARKETING



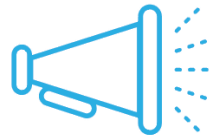
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DIGITAL



ADVERTISING



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THANK YOU

