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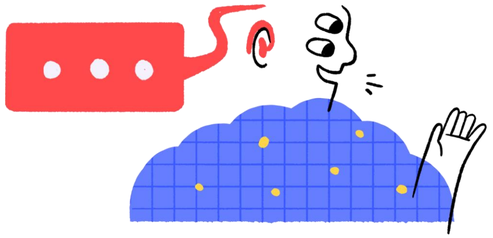
The data says I don’t exist



How data driven solutions fail those with disabilities

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BIMA = British Interactive Media Association
COGA = Cognitive and Learning Disabilities Accessibility Task Force

The rise of the "data driven".

"[data models] define their own reality and use it to justify their results. This type of model is self perpetuating, highly destructive and very common"

– Cathy O'Neil (Weapons of math destruction)

Data only looks at what has come before;

A past built on bias is a future with bias built in.

User mirages & data deserts

The tools you use bias your results

Current analytics tools cannot tell you if a user user uses an assistive technology, much less if they have a disability or impairment.

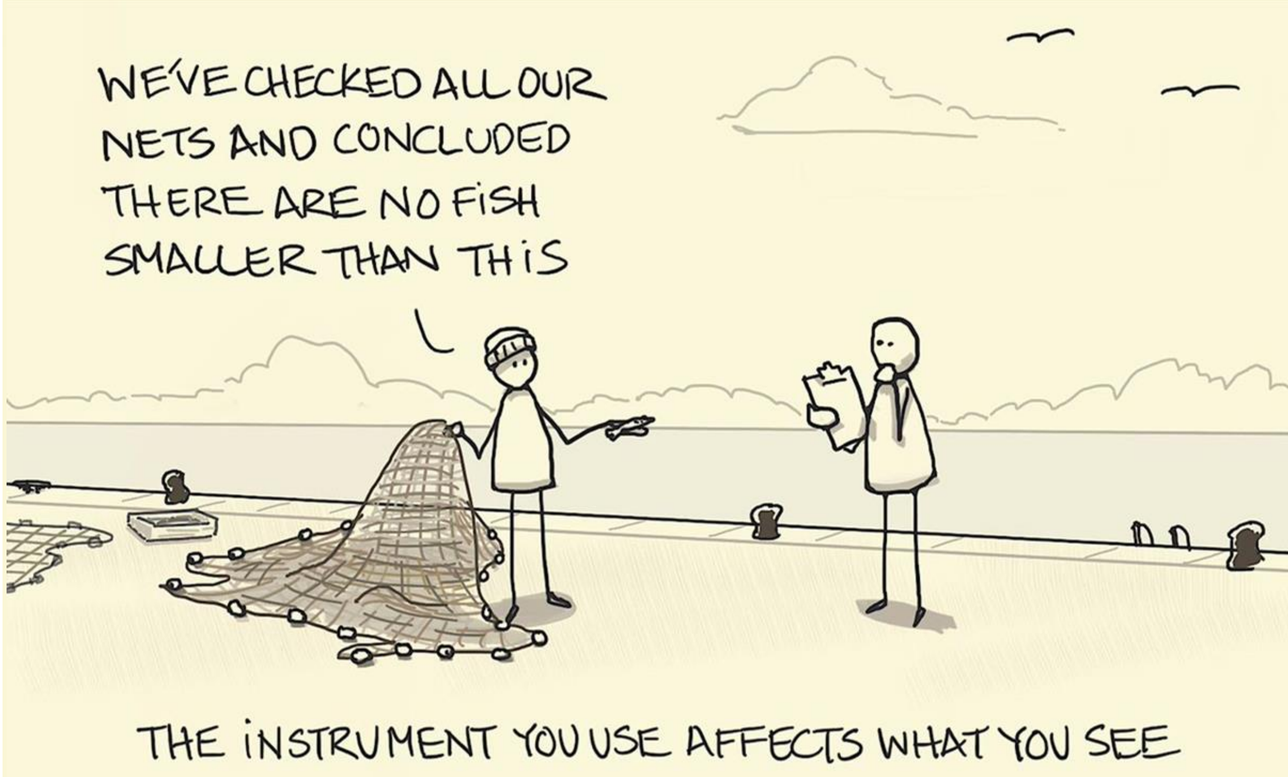

Image via -Sketch Plantations
https://twitter.com/meetboek/status/1480127004183777283?s=21

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The tools you use **bias** your results

Analytics that only capture those that **can currently** use your system, will always say those currently excluded don't use it.

What are our options?

What is your focus?

The medical model

- Focuses on assistive technology use.
- Looks for data based on technologies failure to access not people's exclusion.
- Quantifies people by their disability.
- Favours disability first segmentation.
- Bias against disbaled people's access rights, because expectations are lower.

The social model

- Focuses on exclusion to access, irregardless of specific disability.
- Quantifies by user journey, not by technology.
- Understands similar symptoms of disabilities can present via different diagnoses
- Understands that technology is not 1-1 linked to disability
- Accounts for human "adjustments" over technological access

Aggregated Data

Available data sets include:

1. WebAim screen reader surveys
2. Charity surveys such as Scope's
3. Governmental datasets such as the Office For National Statistics (ONS) in the UK

Positives

- Often sourced by real user feedback.
- Tendency to large scale data sets.
- Reliable source material, rather than assumed
- or inferred.
- Publicly available.

Negatives

- "Opt in" data sets so can be biased by those surveyed.
- Generalist, rather than market or segment specific.
- International or national over local.
- Often outdated, or only published once a year.

User Testing

Be aware of the impact of sample sizes

- “Annecdata” can often be confused for a data point.
- One person’s feedback is opinion not data.

Harness intersectionality where possible

- Exclusions aren’t always linked directly to disability, but may encompass many.
- Intersectional presentations of symptoms may yield different data than direct presentations.

User Testing

Where possible resolve with ethnographic studies

- Quantitative user experience will show you where barriers occur, ethnography will show you how people get around them.
- Consider the impact of spoon theory, an interviewee in the morning may experience different exclusions in the evening.

Remember you may be testing the system of testing and not the system itself.

- Be wary not to fall into the trap of accessibility testing the tools you're running.
- Always have a fallback in place in case the testing tooling fails you.

Support tickets are data sources.

Allow your users to raise issues on live

- This shouldn’t be about looking for “free work” from disabled people.
- Self reporting of barriers via live forms that go straight to your backlog.
- Make sure the self reporting form is easy to find & accessible.

Create a taxonomy

- Involve each discipline that most regularly deals with the support tickets.
- Define a taxonomy that relates to the barrier the user has faced.

Refinement & actions

- Review the support ticket taxonomy regularly.
- Look for user journey insights
- Iterate the taxonomy structure to track new optimisations.

The impact of A/B testing

Client vs server side

- Understand that client side A/B tests can cause exclusion.
- Consider the impact on your users to decide between server & client side tests.
- Understand and cater for the impact of test load times on the UI.
- Not all client side events will be triggered by assistive technologies unless considered in advance.

Semantics & mark up impact

- A/B tests can often change heading hierarchies in page, consider their impact on non visual UI users.
- Injected mark up can lead to inaccessible solutions unless properly considered.
- Tab order can change when items are dynamically loaded into the page.

The ethics of Data collection

“Ethics is knowing the difference between what you have a right to do and what is right to do.”

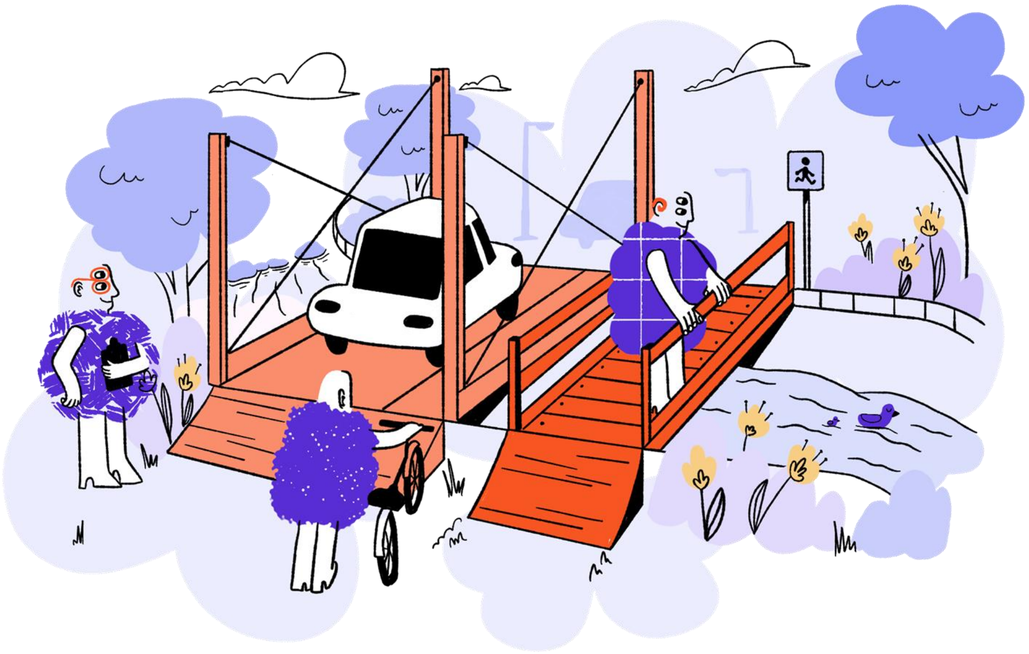
– Potter Stewart.

2.9. Don’t reveal that assistive technologies are being used

Make sure that your API doesn’t provide a way for authors to detect that a user is using assistive technology without the user’s consent.

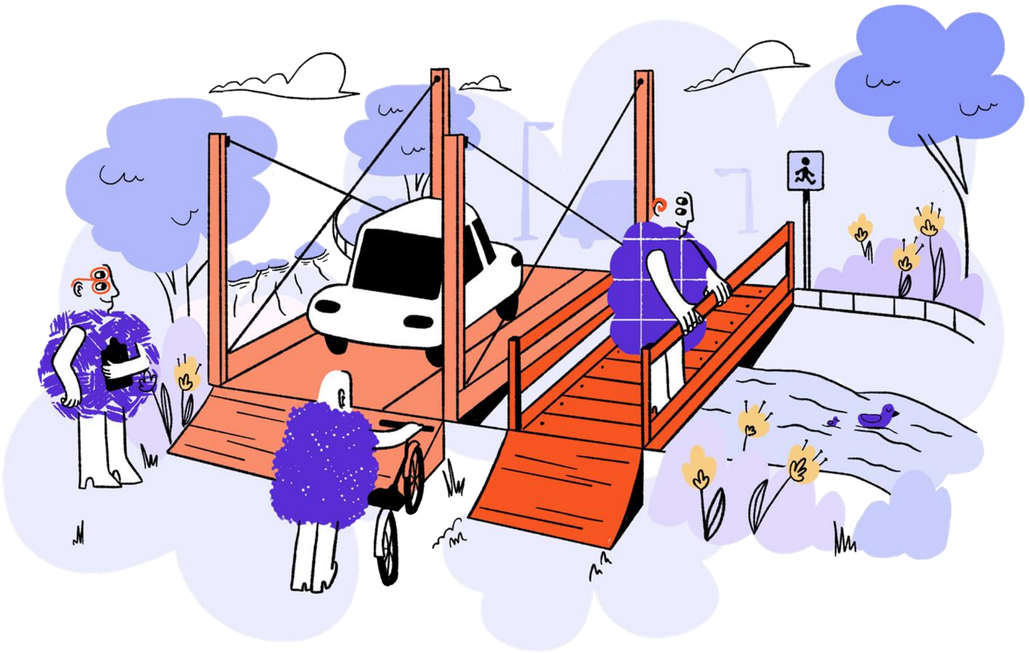
The web platform must be accessible to people with disabilities. If a site can detect that a user is using an assistive technology, that site can deny or restrict the user’s access to the services it provides.

https://www.w3.org/TR/design-principles/#do-not-expose-use-of-assistive-tech



Ethics of data collection

- Tracking targets some specific disabilities over others.
- Bad practice can also exclude disabled users who don’t neatly fit into an assumption of what ‘data’ looks like.
- Some disabilities & exclusions don’t have a technology to track.
- Does your data help or silo?
- Are you quantifying to help, or quantifying to count?
- Remember the human behind the numbers.



In Summary

Takeaways:

1. Decide on which model you want to follow, medical or social & understand the impact.
2. Understand the publicly available data, but don’t rely on it alone.
3. User testing is vital, user testing on a small sample size is opinion.
4. A/B testing can create exclusion, consider it’s impact on A11y when planned.
5. Your bugs are a conversation, make that conversation public.
6. Ethics are vital, data is not, question if you even need the data.
7. Exclusion is unavoidable at times, predict it early & plan for alternative routes.

Thank you.

Questions?

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