Large scale language models are good! But are they fair?

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Norwegian datasets are mostly from news sources.

- Codified domain.

- Produced by small homogeneous samples:
  + **white**,
  + **middle-aged**,
  + **educated**,
  + **upper-middle-class**,
  + **men**.

- Trained models expect people to speak like them.

https://thumbs.dreamstime.com/b/
journalist-interviews-businessman-celebrity-reporter-holdi
jpg

How many of us actually do?
Are our models prepared to cope with reality, i.e. the **demographic variation**?

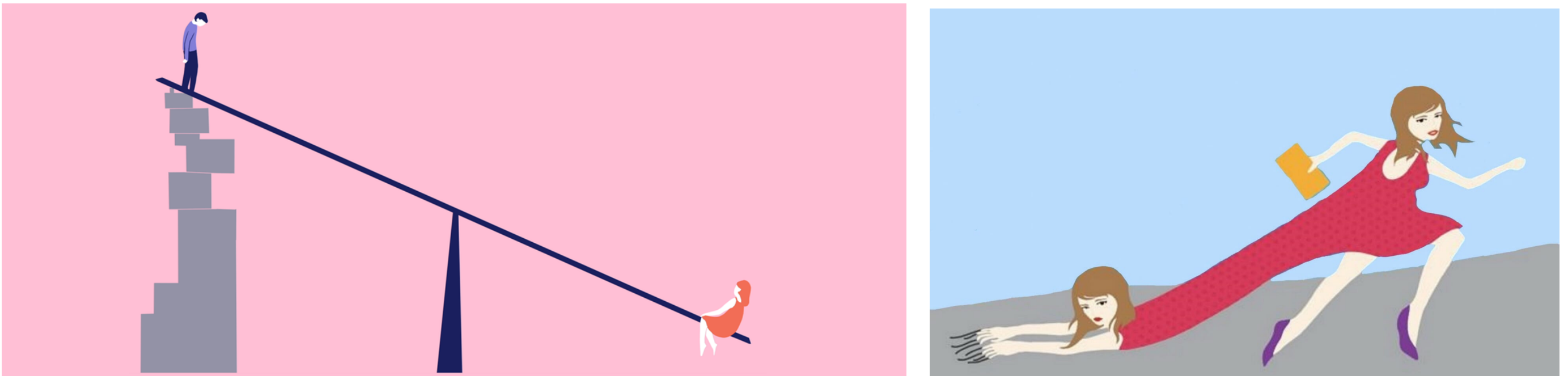
https://www.peoplemanagement.co.uk/Images/diversitygraphic_tcm27-93336.jpg

What about **gender balance?**

- Norwegian review data contains gender bias.

- Less books written by females are reviewed.

- Female critics are more critical of female work.



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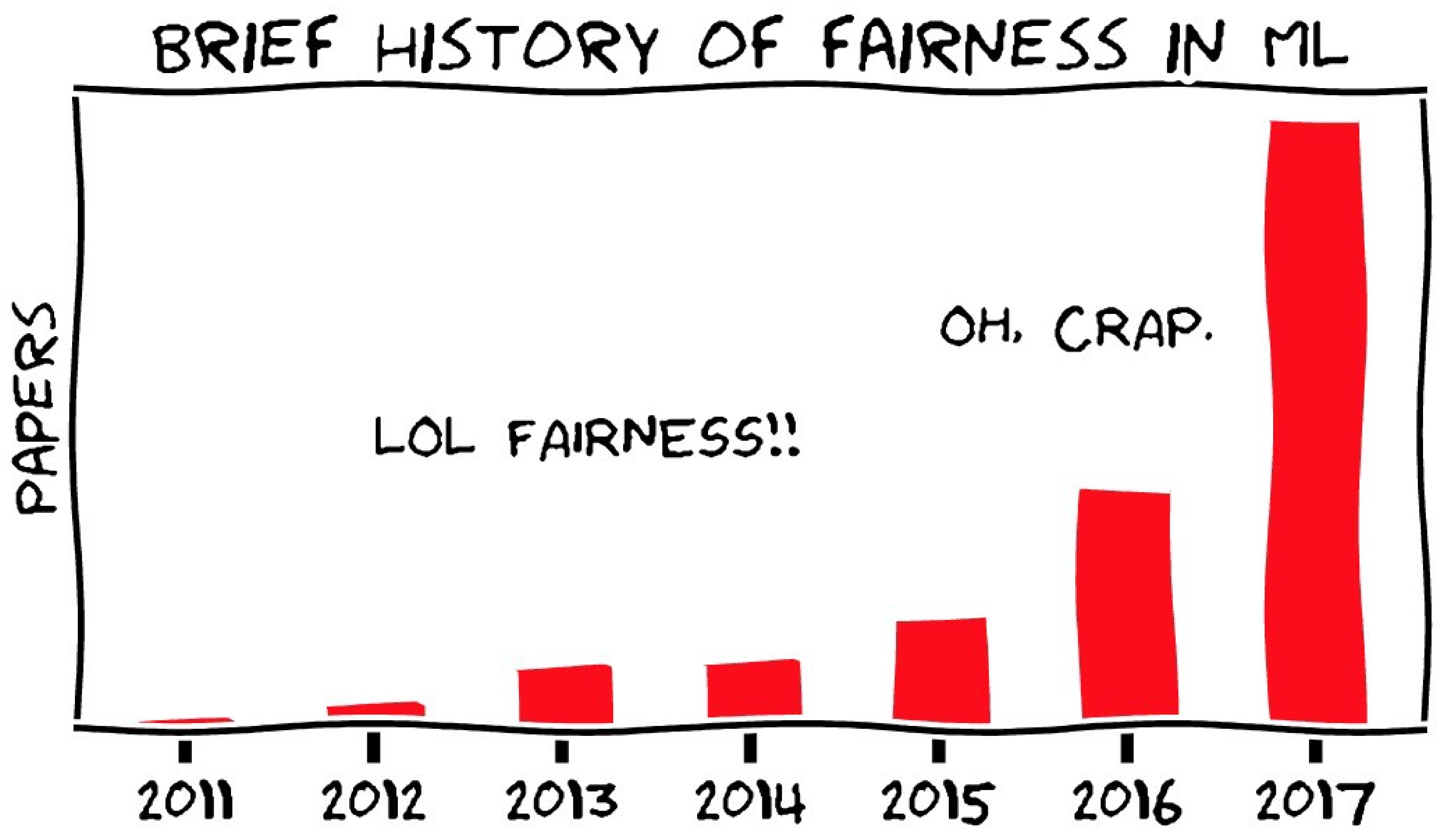

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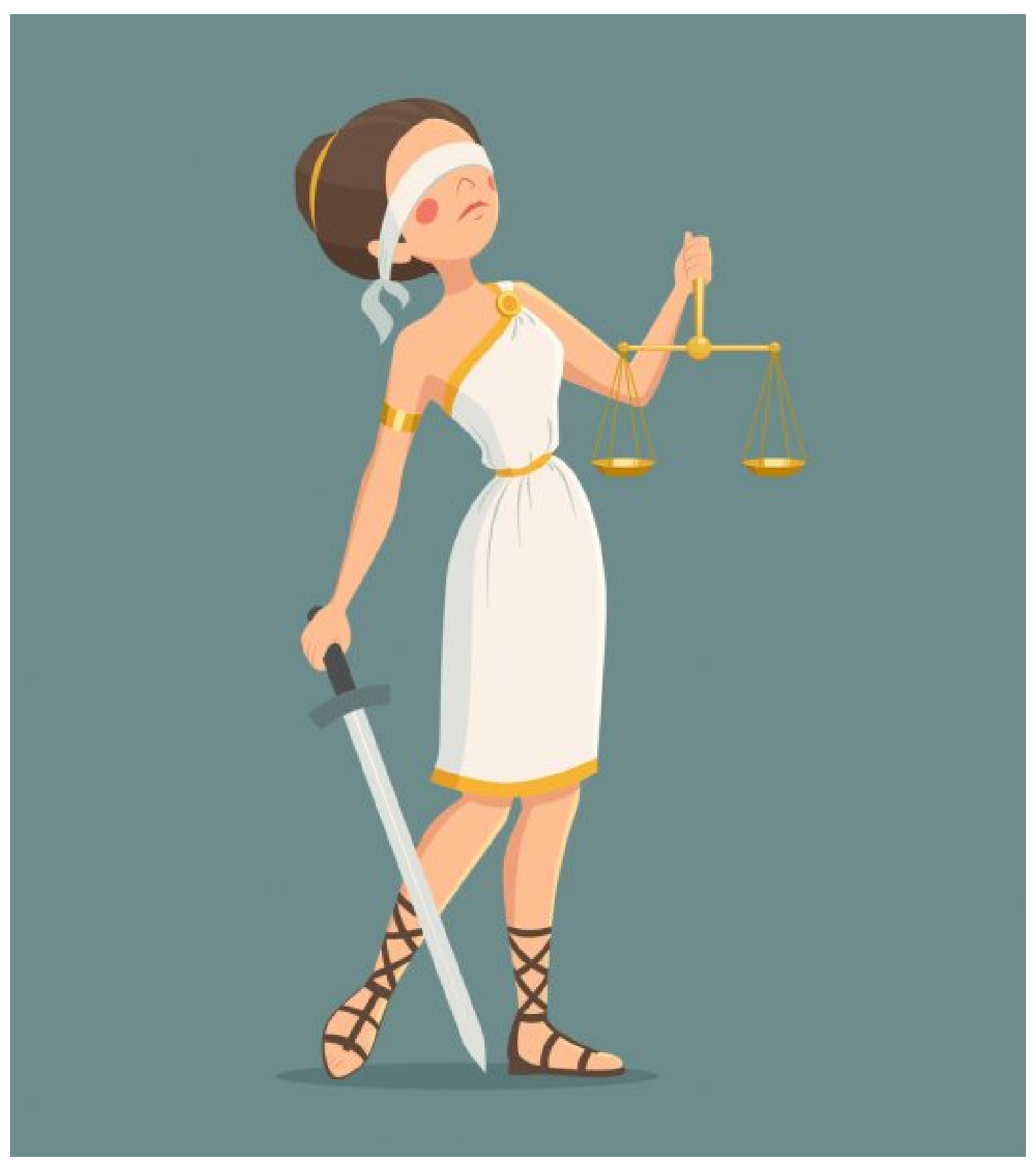
What is the solution?

- More insights in the data.
- More balanced and fair datasets.
- More awareness during annotations.
- Unveil the black box.
- Models evaluated for bias and fairness.
- Mitigate biases in trained models.



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My plan!

- Identify biases in large scale language models (NorBERT and NB-BERT).

- Identify the types of biases in data, and biases inherited in downstream tasks.

- Define how to mitigate such biases, and develop guidelines for Norwegian NLP.

References

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