

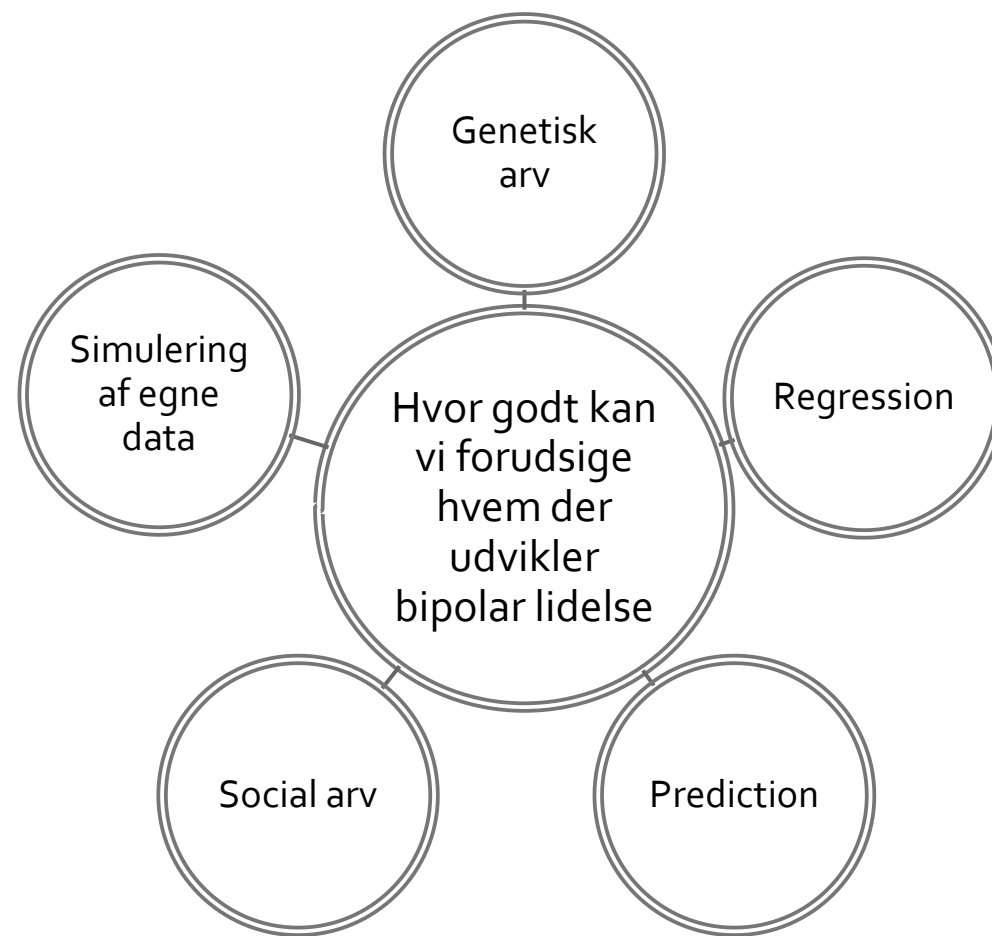
# STATISTICAL GENETICS

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Af Louise og Ole



# Problemstilling



# Vores data

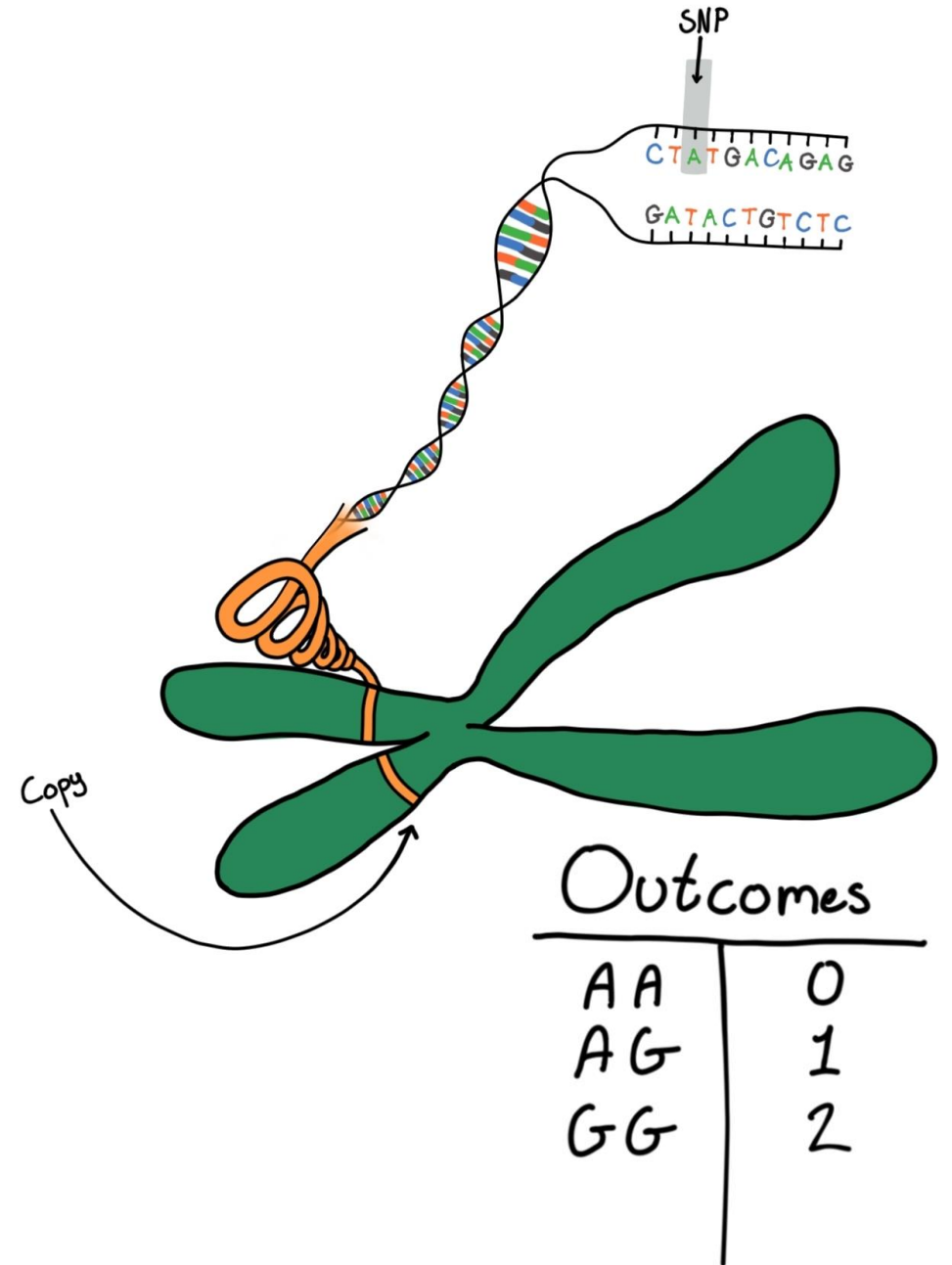
- Simuleret data

i\j	1	2	3	4	5	6	7	8	...	M
1	0	2	0	1	2	0	1	1	...	1
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
N	0	1	0	0	0	0	2	1	...	2

$\sim \text{Binomial}(2, \text{MAF}_j)$

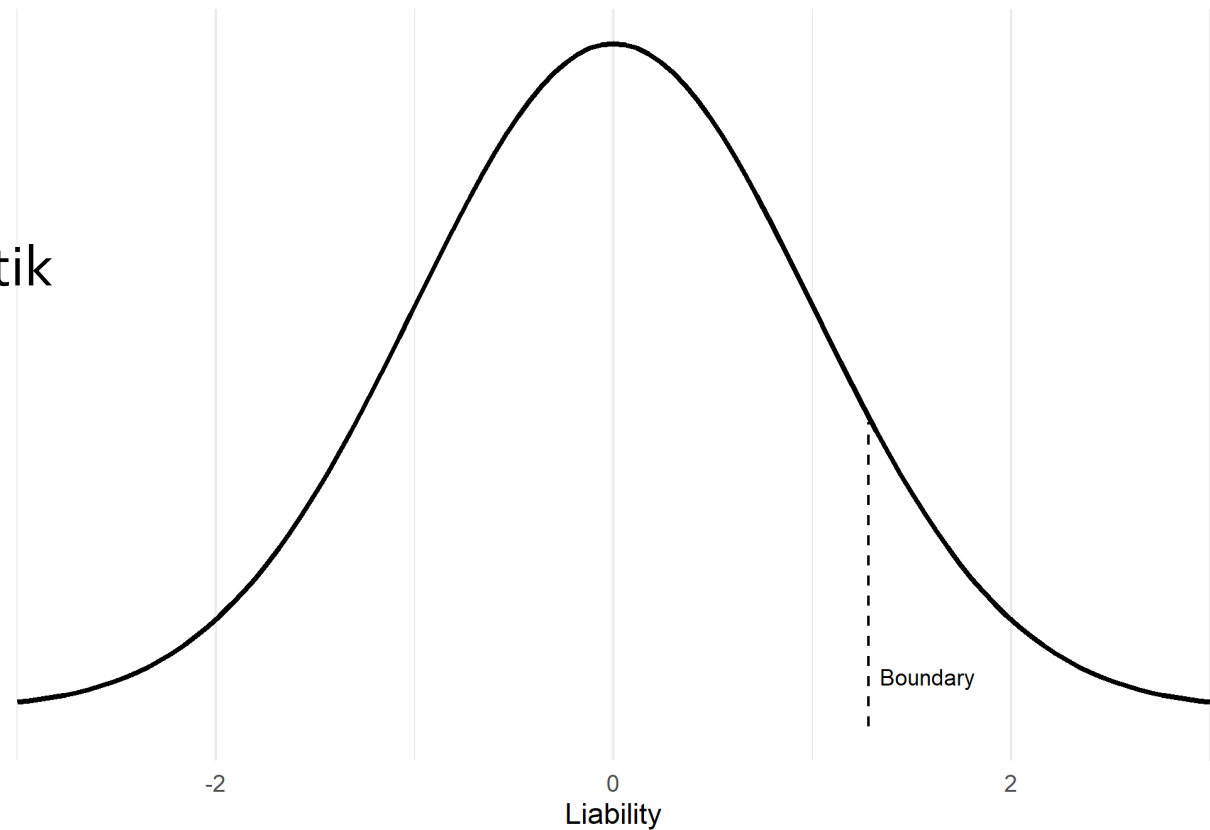
$\text{MAF}_j \sim \text{Uniform}(0.01, 0.49)$

- Kausale SNP's ( $\beta$ )



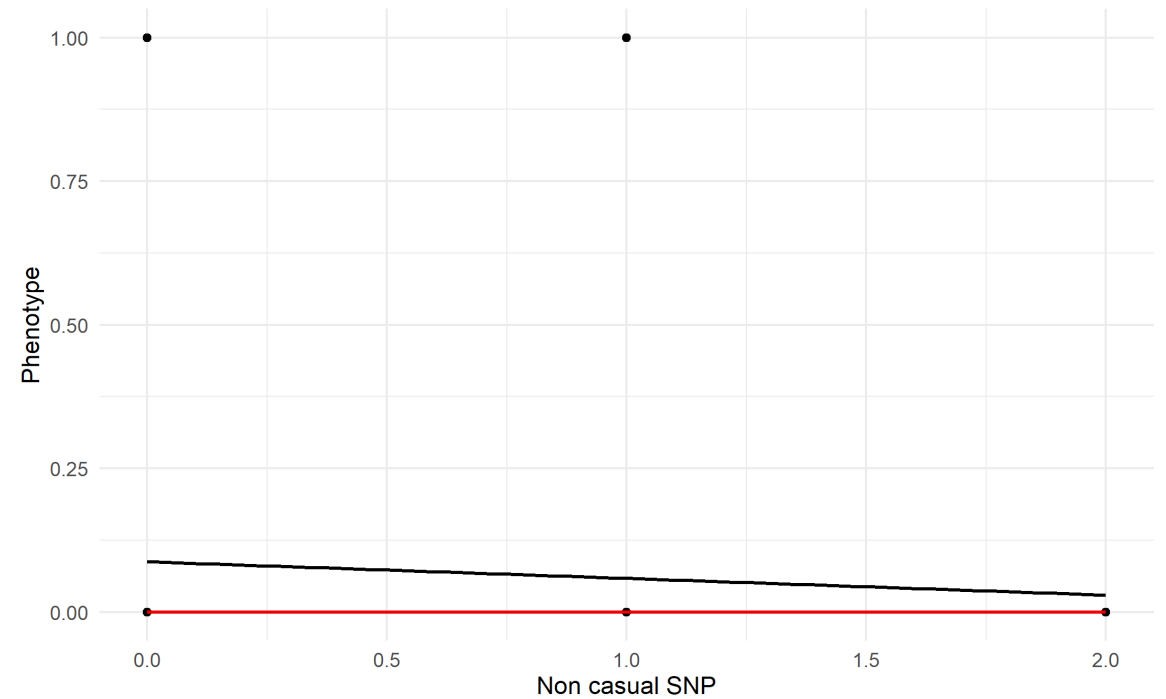
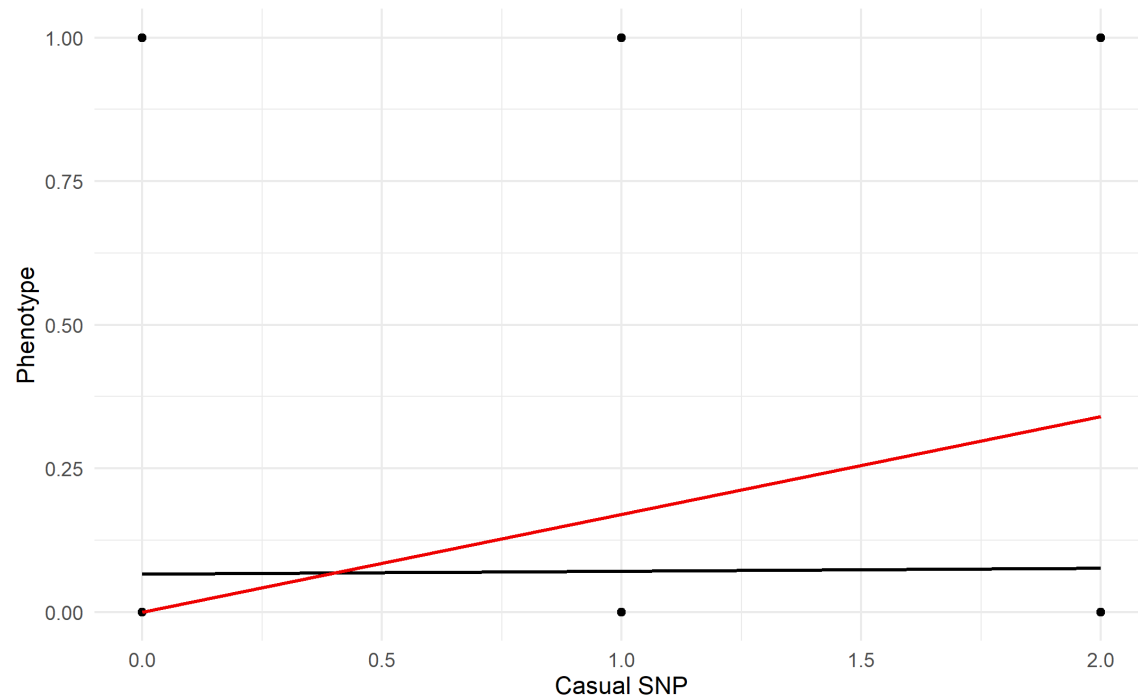
# Liability

- Hvem får sygdommen?
- Genetik + miljø
- Lineær sammenhæng mellem kausale SNP's og genetik



# GWAS

- Find de kausale SNP's ved regression



# Hvor vil vi hen?

- Kortsigtet:
  - Lav et kæmpe datasæt
- Langsigtet:
  - LT-FH(++)?
  - Prediction
  - Genetik
  - Social arv?

