



A Talk You Will Either Love or Hate

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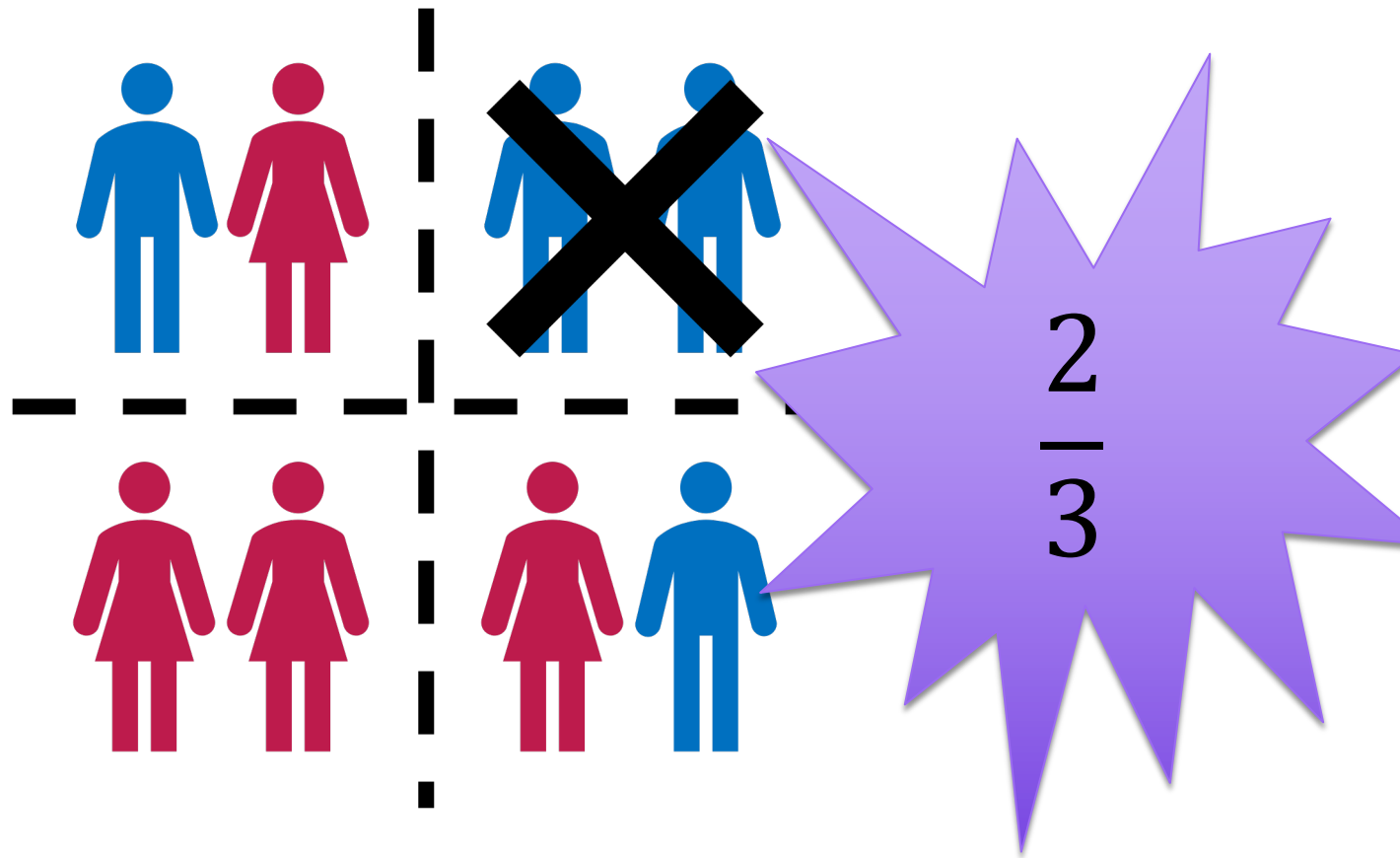
A Question...

- ▶ A woman has 2 children.
- ▶ One of her children is a girl.
- ▶ What is the probability that her other child is a boy?

An Assumption for *Mathematical* Simplicity

- ▶ Boys and girls are born with equal and independent probability of $\frac{1}{2}$.
- ▶ There may be problems with this assumption which I am happy to discuss in the break.

A Visual Solution...



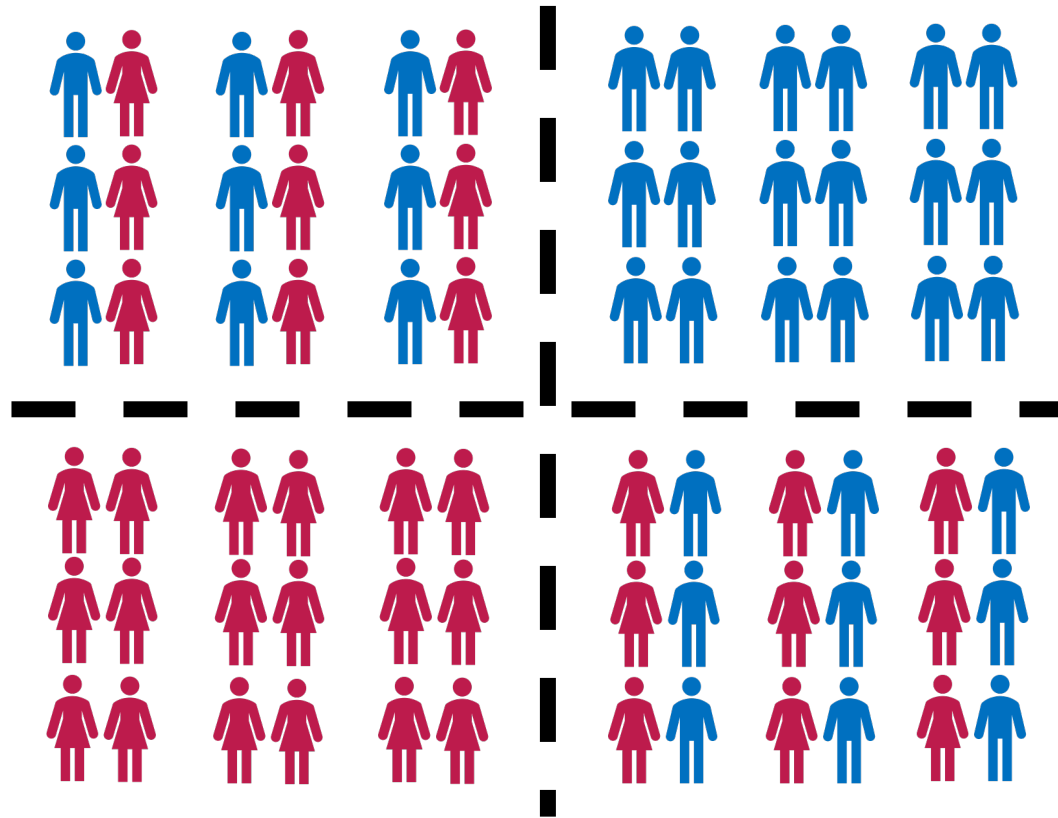
A Different Question?...

- ▶ A woman has 2 children.
- ▶ One of her children is called Susan.
- ▶ What is the probability that her other child is a boy?

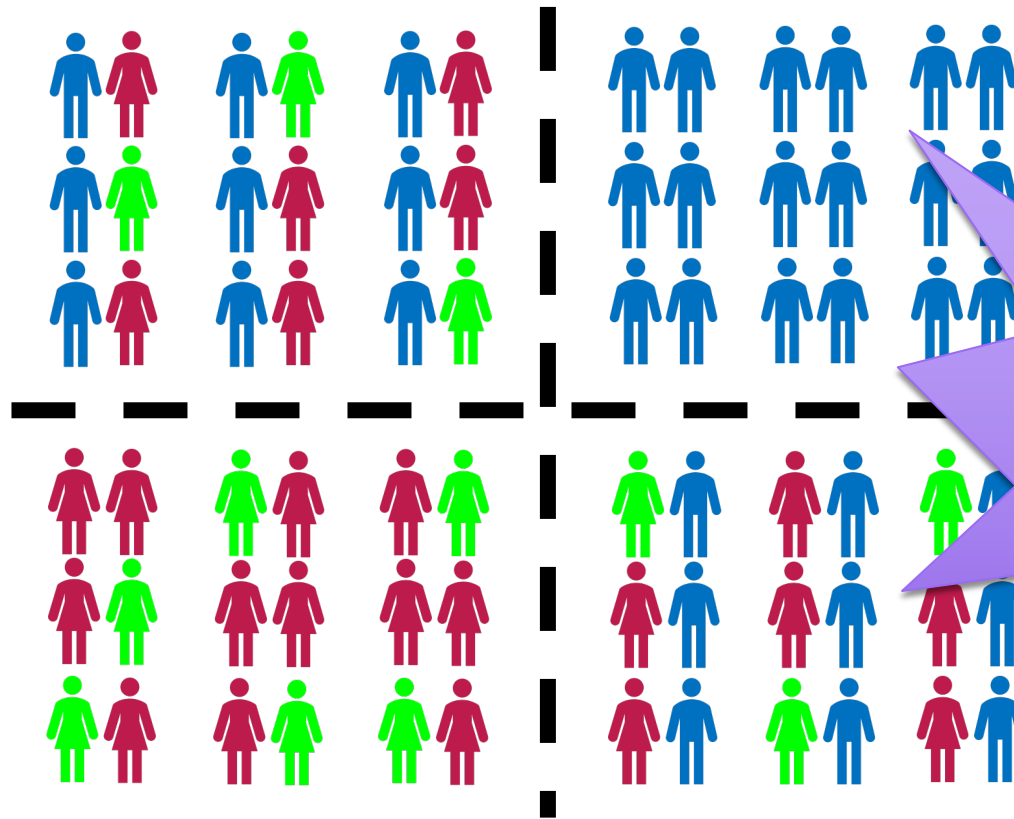
Assumptions for *Mathematical Simplicity*

- ▶ Boys and girls are born with equal and independent probability of $\frac{1}{2}$.
- ▶ Girls are allocated the name Susan completely at random.
- ▶ Again, there may be problems with these assumptions which I am happy to discuss in the break.

A Visual Solution



A Visual Answer



Marmite



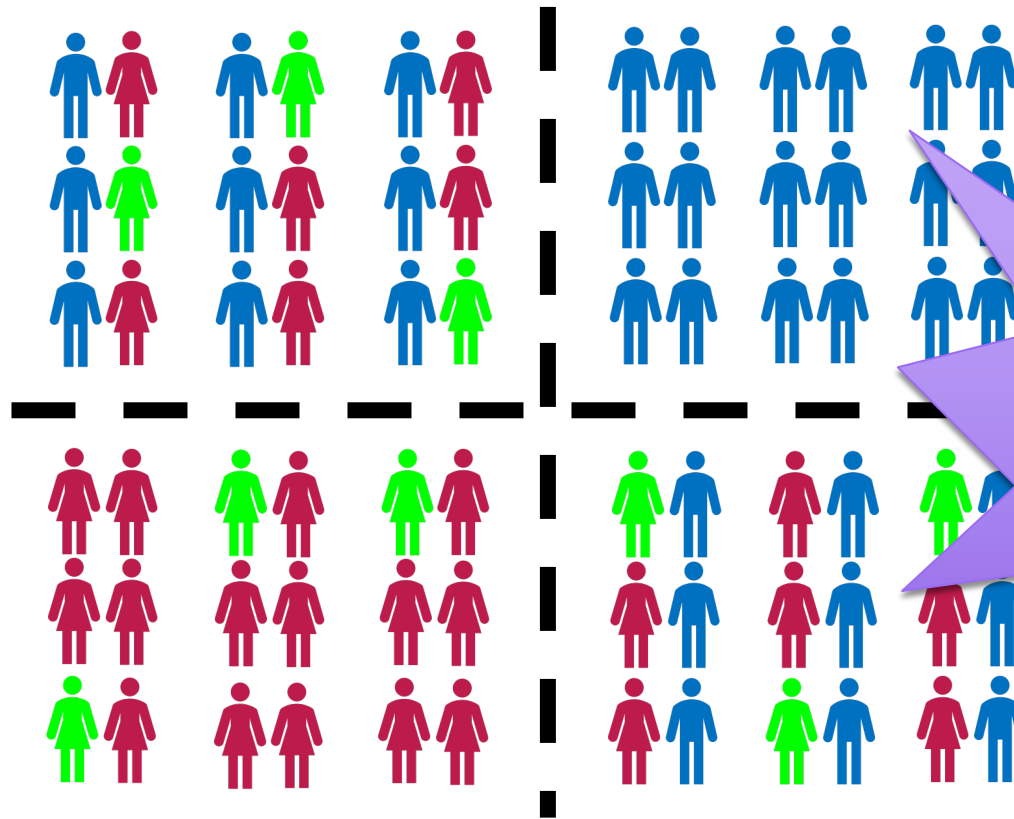
Who here loves marmite?

Is “Susan” like Marmite?

Two extremes:

- ▶ Extreme 1: The name Susan is given out randomly.
- ▶ Extreme 2: The name Susan is “like marmite”.

Like Marmite? A Visual Answer



2
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3

“Marmitivity”

- ▶ Extreme 1 represents 0% marmitivity
- ▶ Extreme 2 represents 100% marmitivity

Without knowing the marmitivity of the name Susan, it is impossible to answer the question!