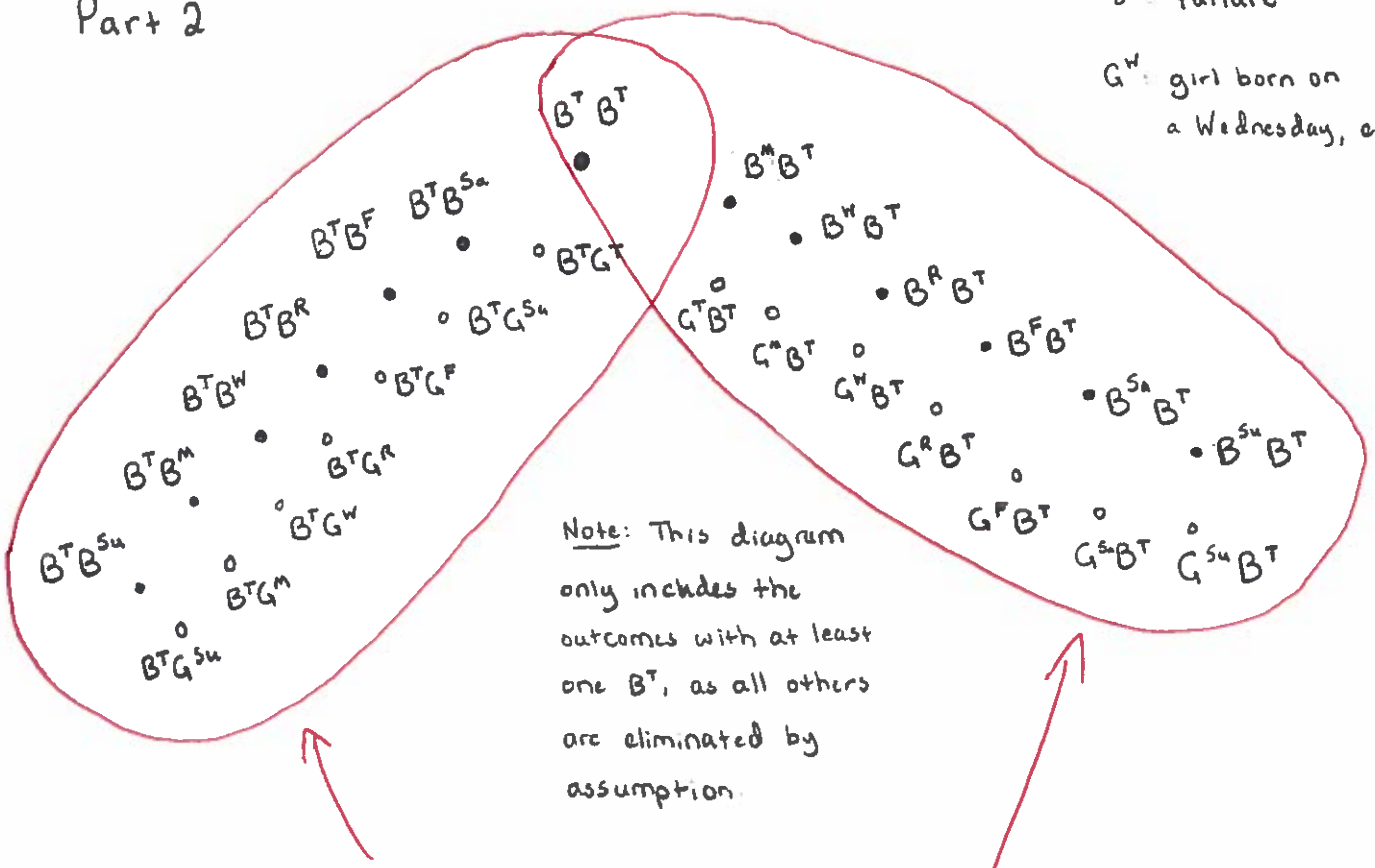
Part 2

• : success

o : failure

G^W : girl born on a Wednesday, etc.



Note: This diagram only includes the outcomes with at least one B^T, as all others are eliminated by assumption.

Once again, if we impose either assumption that the "elder child" or "younger child" is B^T, the two conditional probabilities are each 50%.

When comparing Parts 1 and 2, intuition suggests "the guaranteed male child must be born on SOME day of the week, so it couldn't possibly matter which day." However, this is essentially the same flawed logic that leads to a guess of 50% in Part 1, and the methodical, unbiased analysis above reveals that the total success rate is $\frac{13}{27}$.

	Left		Right		Overlap		
Success	7	+	7	−	1	=	13
Total	14	+	14	−	1	=	27