



RY SEX-DETERMINING REGION Y PROTEIN

IT'S A THIN LINE

IN ANCIENT TIMES, PEOPLE BELIEVED THAT SEMEN MOULDED A FOETUS IN MENSTRUAL BLOOD

OR THAT WARMTH FAVOURED THE DEVELOPMENT OF LITTLE BOYS

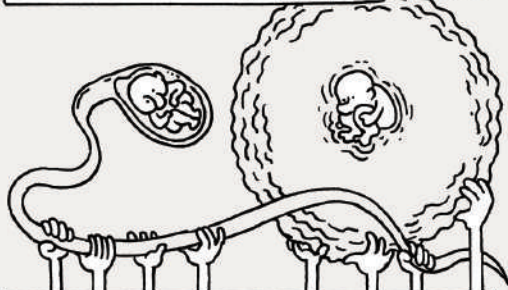
AND COLD, THAT OF LITTLE GIRLS



OR THAT SEMEN FROM THE RIGHT TESTES GAVE BABY BOYS, AND FROM THE LEFT, BABY GIRLS



BY THE 17TH CENTURY, SCIENTISTS DISCOVERED THAT A MAN'S GERM CELLS (SPERM) AND A WOMAN'S (EGG) MEET TO MAKE A BABY

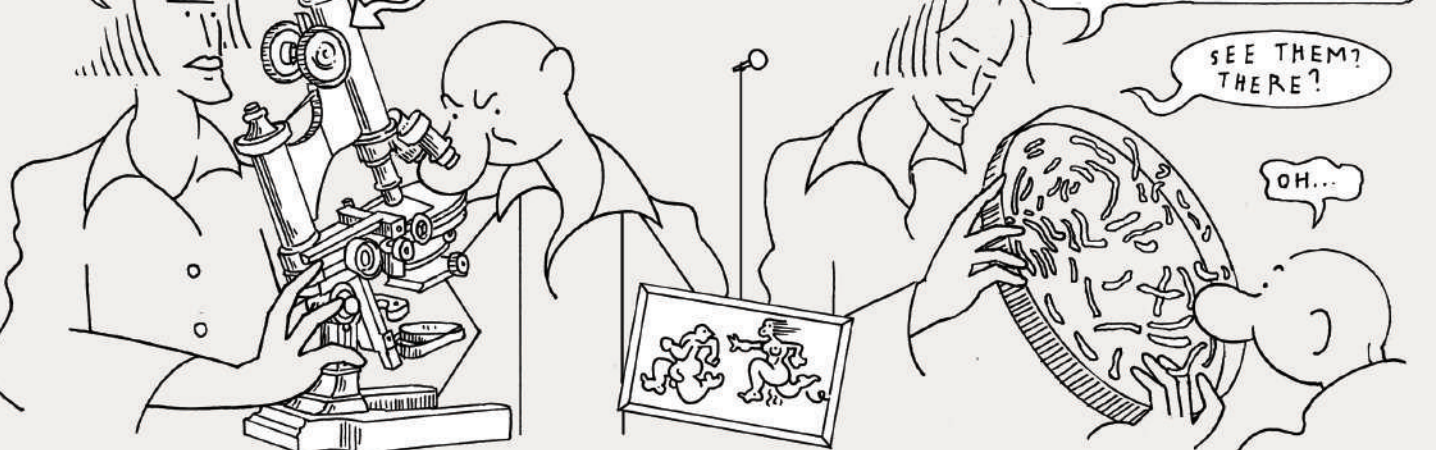


THUS NURTURING TWO OPPOSING PARTIES: THE OVISTS (BABIES GROW IN EGGS) AND THE SPERMISTS (BABIES GROW IN SPERM)

THEN, ONE DAY

... THANKS TO A PERFECTED MICROSCOPE, SCIENTISTS DISTINGUISHED THE CHROMOSOMES

... AND FINALLY X AND Y IN 1905: WHEN THEY REALISED THAT THESE TWO CHROMOSOMES INFLUENCE A CHILD'S GENDER



LET'S ORGANISE THIS GANG

LOOK! AN X

AND A Y

SAVE RARE EXCEPTIONS, IF THE SERIES ENDS WITH TWO Xs, YOU'RE A GIRL

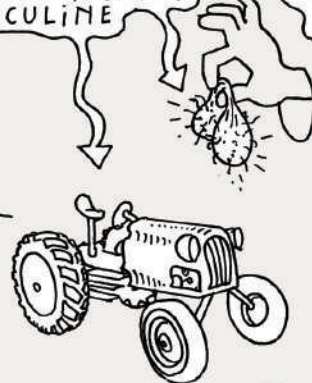
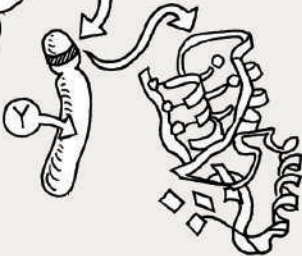
AND IF IT ENDS WITH AN X AND A Y, YOU'RE A BOY

HERE'S WHY:

THE Y CHROMOSOME CARRIES A GENE WHICH PRODUCES THE SRY PROTEIN

SRY SETS OFF THE CREATION OF PHYSICAL TRAITS THAT ARE TYPICALLY MASCULINE

THE SUM OF WHICH IS CALLED A PHENOTYPE



UP TO THE 7TH WEEK OF PREGNANCY, THE HUMAN EMBRYO'S PHENOTYPE IS NEITHER MALE NOR FEMALE



AT WHICH TIME SRY IS EXPRESSED

AND REGULATES THE EXPRESSION OF OTHER PROTEINS THAT WILL SET OFF THE DEVELOPMENT OF TESTES

AND THE SYNTHESIS OF MALE HORMONES, OR ANDROGENS



SO, IF THERE'S NO SRY, THERE ARE NO BOYS

AND THE EMBRYO BECOMES A GIRL BY DEFAULT?



I WAS EXPECTING THAT KIND OF REMARK

IT'S INTRIGUING

FASCINATING!

BUT WE'LL LEAVE IT AT THAT

RARE PHENOTYPE PROBLEMS CAN INDEED BE BROUGHT ABOUT BY SRY: IF SRY IS NOT EXPRESSED

OR EXPRESSED TOO LATE

OR DOESN'T WORK

IN WHICH CASE, CERTAIN HUMAN BEINGS ARE BORN XY BUT CARRY FEMALE TRAITS

IN OTHER RARE CASES, SOME MEN ARE BORN XX, BECAUSE SRY IS FOUND «BY MISTAKE» ON CHROMOSOME X

