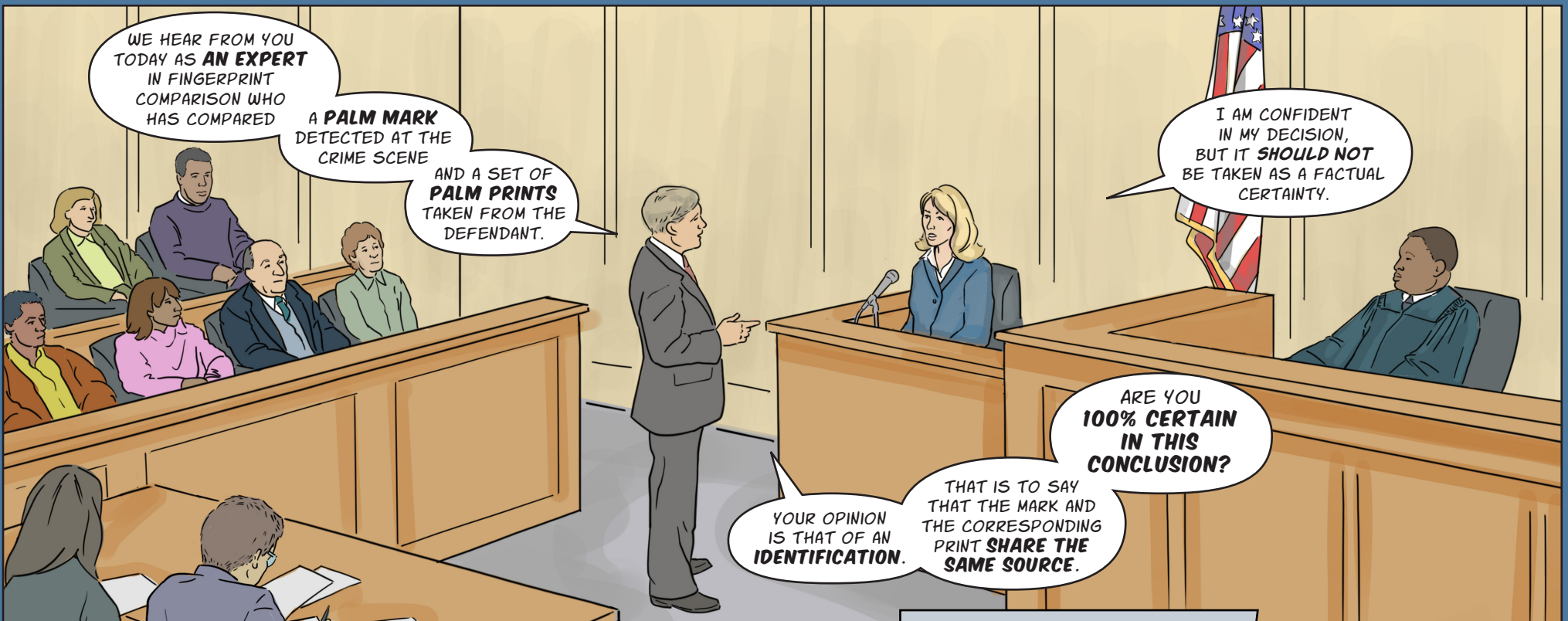


# EXPERT FINGERPRINT EXAMINATION

## A Primer on Error Rates



WE HEAR FROM YOU TODAY AS **AN EXPERT** IN FINGERPRINT COMPARISON WHO HAS COMPARED

A **PALM MARK** DETECTED AT THE CRIME SCENE

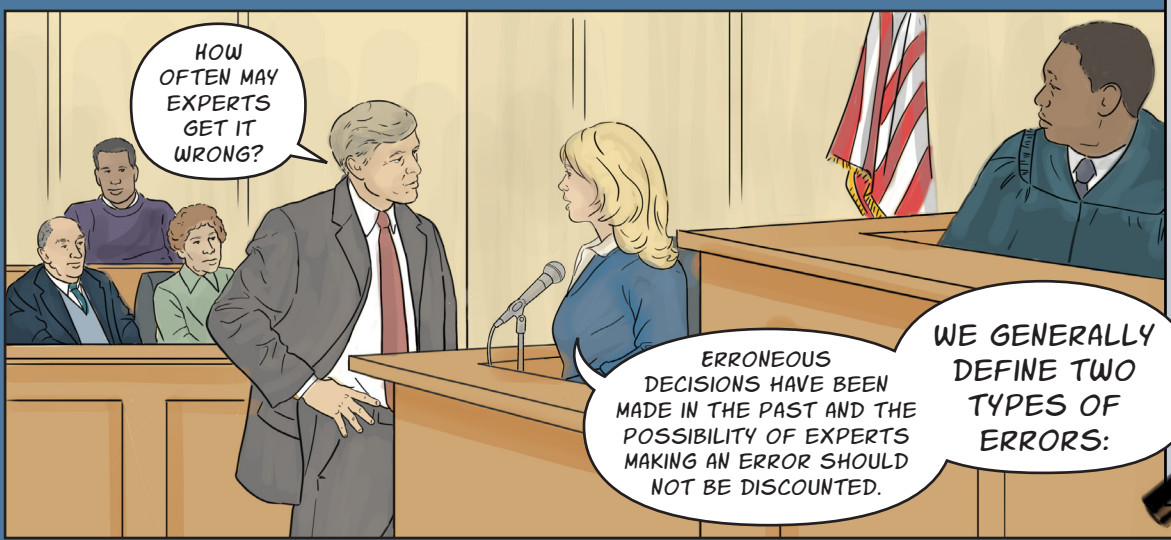
AND A SET OF **PALM PRINTS** TAKEN FROM THE DEFENDANT.

I AM CONFIDENT IN MY DECISION, BUT IT **SHOULD NOT** BE TAKEN AS A FACTUAL CERTAINTY.

ARE YOU **100% CERTAIN** IN THIS CONCLUSION?

YOUR OPINION IS THAT OF AN **IDENTIFICATION.**

THAT IS TO SAY THAT THE MARK AND THE CORRESPONDING PRINT **SHARE THE SAME SOURCE.**



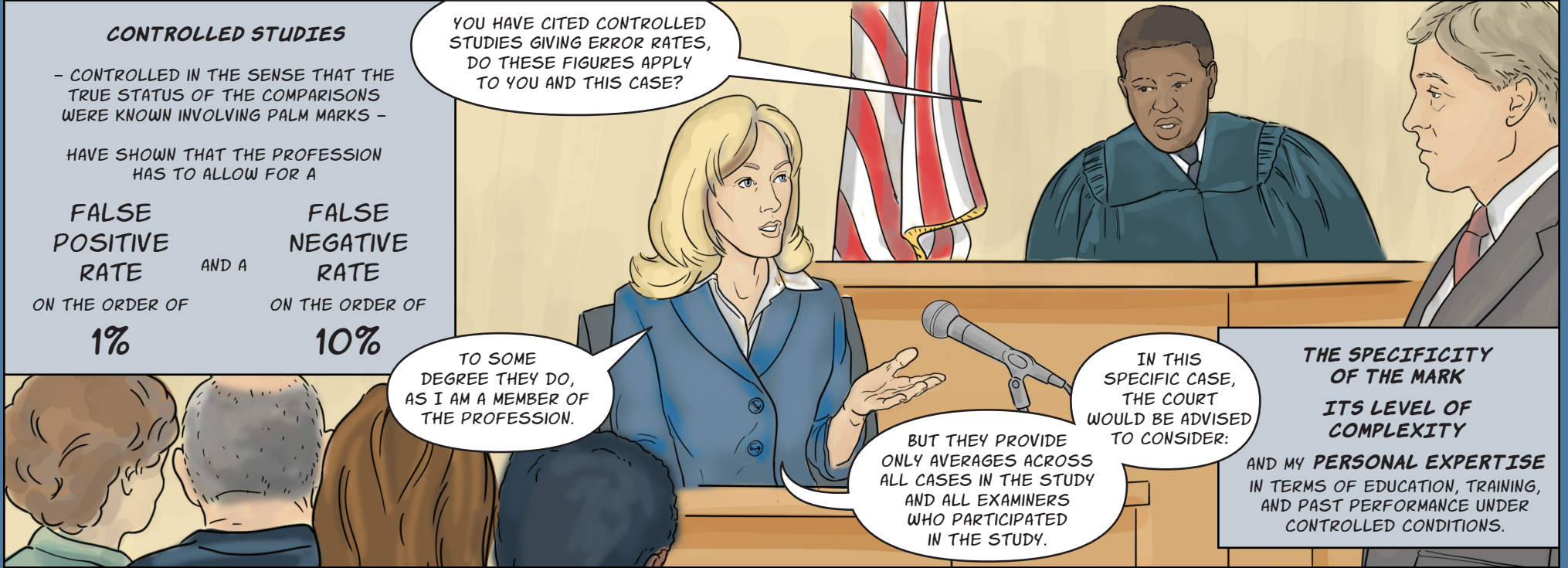
HOW OFTEN MAY EXPERTS GET IT WRONG?

ERRONEOUS DECISIONS HAVE BEEN MADE IN THE PAST AND THE POSSIBILITY OF EXPERTS MAKING AN ERROR SHOULD NOT BE DISCOUNTED.

WE GENERALLY DEFINE TWO TYPES OF ERRORS:

**A FALSE POSITIVE** WHEN AN EXPERT CONCLUDES AN IDENTIFICATION ✓ WHEN IN FACT THE MARK AND PRINT ORIGINATE FROM DIFFERENT SOURCES ✗

AND A **FALSE NEGATIVE** WHEN THE EXPERT MAKES AN EXCLUSION ✗ CONCLUSION WHEREAS THE MARK AND PRINT WERE LEFT BY THE SAME SOURCE ✓



### CONTROLLED STUDIES

- CONTROLLED IN THE SENSE THAT THE TRUE STATUS OF THE COMPARISONS WERE KNOWN INVOLVING PALM MARKS - HAVE SHOWN THAT THE PROFESSION HAS TO ALLOW FOR A

**FALSE POSITIVE RATE** AND A **FALSE NEGATIVE RATE** ON THE ORDER OF **1%** ON THE ORDER OF **10%**

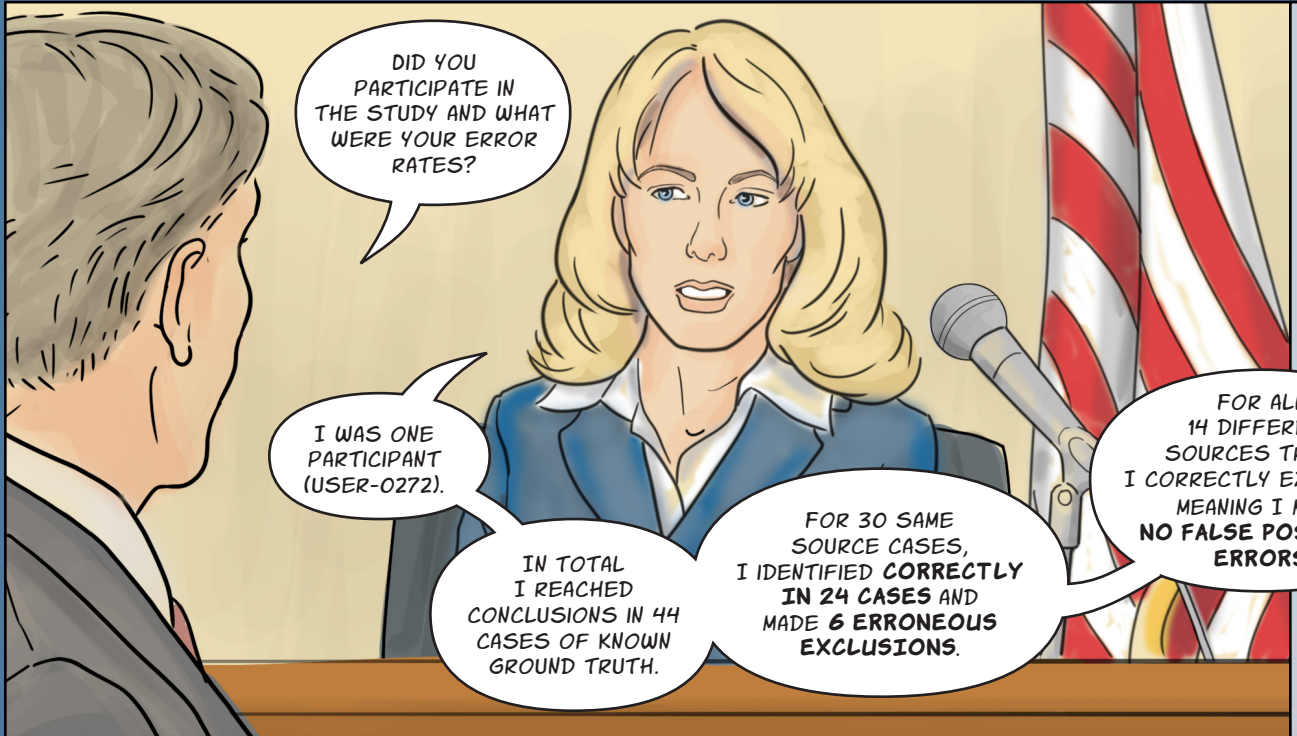
YOU HAVE CITED CONTROLLED STUDIES GIVING ERROR RATES, DO THESE FIGURES APPLY TO YOU AND THIS CASE?

TO SOME DEGREE THEY DO, AS I AM A MEMBER OF THE PROFESSION.

BUT THEY PROVIDE ONLY AVERAGES ACROSS ALL CASES IN THE STUDY AND ALL EXAMINERS WHO PARTICIPATED IN THE STUDY.

IN THIS SPECIFIC CASE, THE COURT WOULD BE ADVISED TO CONSIDER:

**THE SPECIFICITY OF THE MARK**  
**ITS LEVEL OF COMPLEXITY**  
AND MY **PERSONAL EXPERTISE** IN TERMS OF EDUCATION, TRAINING, AND PAST PERFORMANCE UNDER CONTROLLED CONDITIONS.



DID YOU PARTICIPATE IN THE STUDY AND WHAT WERE YOUR ERROR RATES?

I WAS ONE PARTICIPANT (USER-0272).

IN TOTAL I REACHED CONCLUSIONS IN 44 CASES OF KNOWN GROUND TRUTH.

FOR 30 SAME SOURCE CASES, I IDENTIFIED **CORRECTLY** IN 24 CASES AND MADE **6 ERRONEOUS EXCLUSIONS.**

FOR ALL 14 DIFFERENT SOURCES TRIALS, I CORRECTLY EXCLUDED, MEANING I MADE **NO FALSE POSITIVE ERRORS.**

COMPUTING ERROR RATES ON SUCH A LIMITED NUMBER OF CASES IS POSSIBLE BUT WOULD NOT CONSTITUTE IN MY OPINION A FAIR REFLECTION OF MY PERFORMANCE.



IN MORE THAN 20 YEARS AS LATENT PRINT EXAMINER, I DID YEARLY PROFICIENCY TESTS (INVOLVING PALM IMPRESSIONS AS WELL) WITHOUT MAKING ANY ERRONEOUS IDENTIFICATIONS. SINCE THE PALM STUDY, I HAVE RECEIVED FURTHER TRAINING TO LIMIT MY NUMBER OF MISSES.