

Rape or simple handshake?

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On the way towards to the application of the Bayesian approach

THE OFFENCE

The 17-year-old victim said she had gone to the fashionable night club with her friends. Here she met the suspect, with whom they talked for a while, had a few drinks and danced. The friends who had accompanied her left shortly after 1 o'clock. She is believed to have left the disco alone. The alleged sexual assault took place not far from the club on an abandoned playground. Police have arrested a man, one of the customers of the club, in connection with the rape.

MODEL EXPERIMENT

- Analytical Techniques: stereomicroscopy, comparison microscopy
- Time: maximum 30 second between the steps

- The factors of time gap between contacts and the location changes of the garments were eliminated.
- 10 volunteers, 40 experiments



Blue cotton fibres were transferred through direct contact between the suspect's blue jeans and the model female underpants.

⇒ average 125 fibres (81-175)



Blue cotton fibres were transferred through contact between the hands of 1st volunteer and the suspect's blue jeans.

⇒ average 48 fibres (20-111)



Blue cotton fibres were transferred by handshakes between 1st and 2nd volunteers.

⇒ average 10 fibres (1-30)



Blue cotton fibres were transferred through contact between the hands of 2nd volunteer and the model female underpants.

⇒ average 7 fibres (1-19)

CLOTHING TRANSFERS



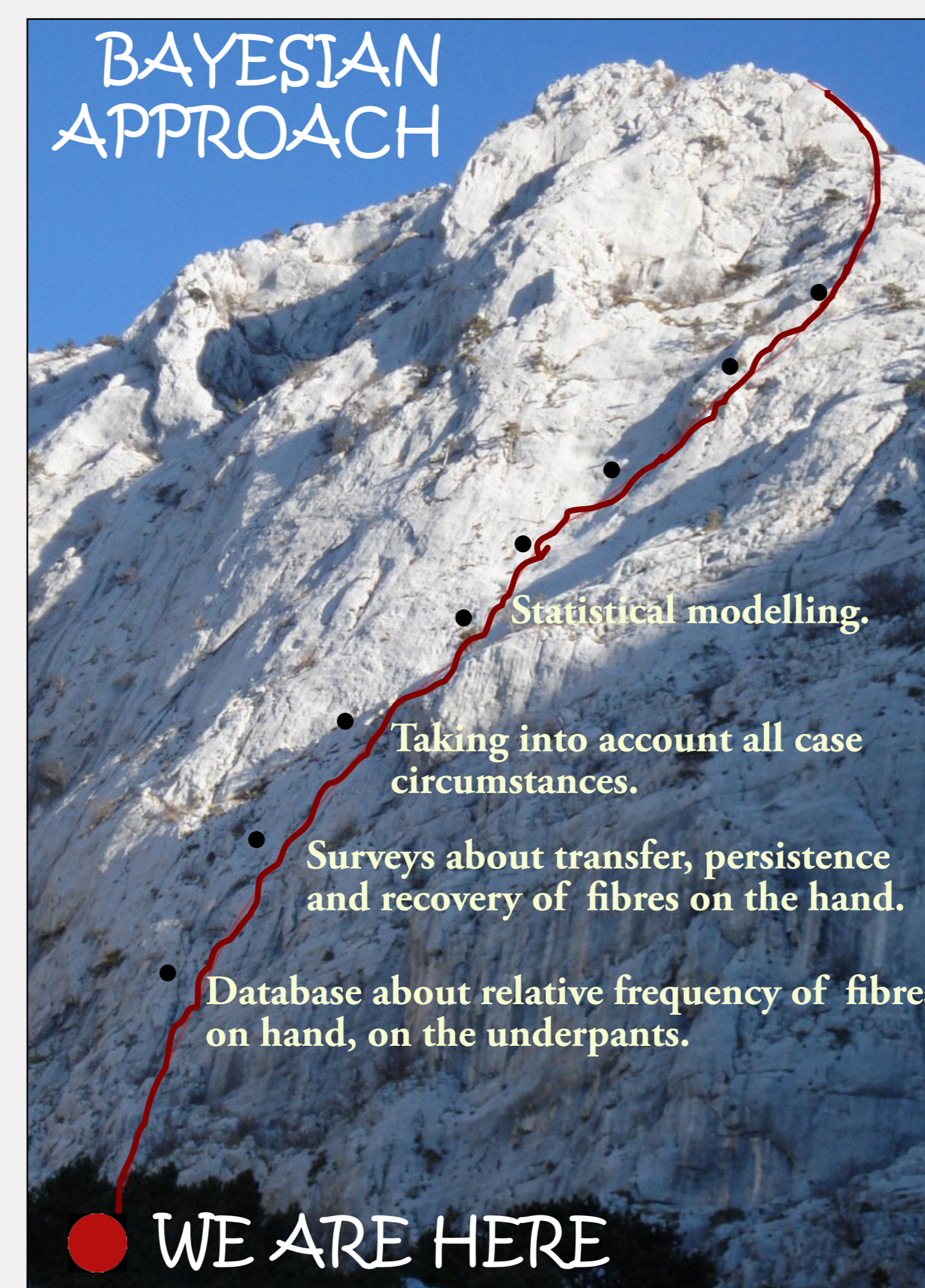
SUSPECT'S STATEMENT

"We only talked for a while and danced together. I never grabbed her or forced her to the floor. I didn't rape her. Matched fibres recovered on her underpants probably transferred from my hand to her hand by handshake and than from her hand to her underpants.,,"

COMPETING HYPOTHESES

H_p: Blue and black cotton fibres were transferred through direct contact between the suspect's blue jeans and the victim's underpants.

H_D: Blue and black cotton fibres were transferred through indirect contact between the suspect's blue jeans and the victim's underpants based on the suspect's statement.



CONCLUSION

Our findings would seem to support the direct contact between the suspect's blue jeans and the victim's clothes (**H_p**) as opposed to the indirect transfer based on the suspect's statement (**H_D**).

However, ...

To be continued.

