University of Groningen

When stories and numbers meet in court

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Propositions

1. The communication between a judge or jury and a forensic expert needs to be facilitated such that a forensic expert can focus on specific evidence while a judge or jury considers the case as a whole.

2. Scenarios can provide a guideline for the construction of a Bayesian network. (Chapter 3, this PhD thesis)

3. Scenario schemes for typical crimes can provide the general Bayesian network structures to model these crimes. (Chapter 3, this thesis)

4. Various levels of detail in scenarios can be used to specify a Bayesian network to the desired level of specificity. (Chapter 3, this thesis)

5. Bayesian networks can help to prevent a good scenario being chosen over a true scenario. (Chapter 4, this thesis)

6. Formalising scenarios with Bayesian networks to prevent a good scenario being chosen over a true scenario, is a bit like using a sledgehammer to crack a nut.

7. Scenario quality can be captured in and reported from a Bayesian network, but it remains up to a judge or jury to decide how to incorporate scenario quality into their decision. (Chapters 3 and 5, this thesis)

8. Scenarios can be used to communicate the content of a Bayesian network on a global level, but are less suitable for reporting on chains of reasoning. (Chapters 5 and 6, this thesis)

9. A Bayesian network in court is like an elephant in a china shop: it has great strength, but when used improperly it can cause great damage.

10. It is unfortunate that people so comfortably utter the phrase 'I was always very bad at mathematics'.