

Implementing the training

- 1: Create awareness of NEED
What is wrong with the traditional FDE approach?
- 2: Present theory and basics
Certainty
Probability
Logic
- 3: Present the 'solution' in theory
Bayes Theorem
LR as the focus
- 4: Present the 'solution' in practise
Existing examples of the LR approach
Practical exercises and examples of wording/usage

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Part 1: Develop Need

- Explain the rationale/reasons for the session
 - Build the need and set the stage
- Time-consuming but essential
- Historical review, court requirements, issues with existing approach, nature of conclusions as presently expressed
 - Concepts such as uniqueness, individuality (class versus individual characteristics) and 'leap of faith'

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Part 2: Explain the Theory

- UNIL course shrunk in scale
 - Decision-making and reasoning
- 3 pillars of reasoning
 - Logic
 - Probability theory
 - Method
- **3 rules:** Framework, 2+ propositions, Evaluate evidence
- Practicals (framework, propositions, etc)
- Bayes Theorem introduced to address logical fallacies

- Framework
- 2+ propositions
- Probability of evidence

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Part 3: Present solution in theory

- LR paradigm (logical approach)
 - “Reasoning backward” – inductive reasoning
- Contrast to traditional approach
 - Preparation, Examination, Evaluation, Conclusion
- Details of how LR works and how it varies
 - Ranges that result for LR
 - Change propositions/info and LR changes

$$\frac{p(H_p | I)}{p(H_d | I)} \times \frac{p(E | H_p, I)}{p(E | H_d, I)} = \frac{p(H_p | E, I)}{p(H_d | E, I)}$$

Prior Odds Likelihood Ratio Posterior Odds

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Part 4: Discuss solution in practise

- Setting of propositions (sub-propositions, etc)
- Evaluating, expressing and explaining the LR
 - Wording options (direct vs. indirect)
 - Review of existing approaches (pros/cons)
- Report writing
- Court presentation
 - Revisit decision-making, utility, and leap of faith
 - KEY: “Usurping the authority of the Court”
- Even more practical exercises

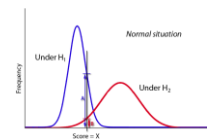
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Part 5: “Extras”

- Science and how the logical approach fits
- Metrics/quantification
- Statistics
- Use of Bayesian Networks
- How to 'calculate' the LR
 - Graphic representation
 - Through error estimation (forced-call, etc)



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Key Take-home Messages

- Logical approach is the BEST approach
 - Beneficial to be sure but also **necessary**
 - It is relatively simple and easy to do
- Finally, inevitable so why wait?
- Basic elements of the LR approach

- Framework
- 2+ propositions
- Probability of evidence

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Issues that 'persist'

- Most common 'challenges' from students
 - "Things are working fine – no need to change"
 - "This is too complicated for a court/jury/layman to understand"
 - "Judges/lawyers 'want' us to be definite"
 - "We need numbers, we don't have them, go away..."
- Inconsistencies between jurisdictions
 - Apparent lack of a clear standardized approach
 - Example: one-sided wording in recommendations
- Court 'acceptance' or reception
 - Conflicting commentary and no clear guidance
 - How can this be explained in a court of law???

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Moving forward

- In general:
 - Consistent and **inclusive** approach
 - Focus on logic and reasoning
 - Work towards empirical support for all domains but...
 - CANNOT force anyone
 - MUST NOT exclude or isolate anyone
 - Guidelines and organizational requirements are GREAT
 - Standards MAKE people pay attention – but don't ensure buy-in
- For FDE:
 - Work with OSAC (formerly SWGDOC, in USA)
 - Work with DoJ (in Canada)
 - 'Practical' workshops

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More information

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