Knowledge-Based Decision-Making: Evidence-Based Medicine as a Model for Police-Commanders in High-Risk Situations?

Torben Lehberg (M.A.)
Masterthesis, 2013 - German Police University
Federal University of Applied Administrative Science
Departmental Branch of the Federal Criminal Police Office
Idea & Need

“Success has many fathers and failure is an orphan”

(saying)
Content

- Methods
- Theory of Decision-Making
- Planning and Decision-Making by German Police
- Evidence-Based Medicine
- Discussion & Conclusion
Methods

- Explorative approach
- Literature analysis
- Semi-structured interviews: 4 police-commanders, 3 physicians
Theory of Decision-Making

- Rational choice is required / aspired in professional tasks
- Shifting from knowledge to not-knowing (Beck, 2008)
- How important are gut feelings?

Diagram:
- Take Risk?
  - No
  - Yes
The Linda Problem

• Linda is 31 years old, single, outspoken, and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and also participated in anti-nuclear demonstrations.

• Which of the following two alternatives is more probable?
  1. Linda is a bank teller.
  2. Linda is a bank teller and active in the feminist movement.

(Kahneman/Tversky, 1983)
„Recognition-Primed Decisions“ – RPD (Klein, 1993)

• Use experience to generate a workable option
• No time to evaluate a large set of options
• Situation assessment – choosing the first option that works
• Decision is primed depending on the situation recognized

„Luck is what happens, when preparation meets opportunity.“
(Seneca)
Influence & Effects

“Bounded Rationality”
(Simon, 1957)

„Decision frame“
(Tversky et al. 1981)

„Availibility-heuristic“
(Slaby et al., 2002)

„Affect infusion while thinking constructively about a task”
(Forgas, 2000)

“Affect as information”
(Clore et al., 2001)

„Declarative memory“
(Roth, 2007)
Expert Performance

- Deliberate practice (Ericsson, 2006)
- Improvement (Ericsson, 2006)
- Ability of adaption (Neumer, 2012)
- Open Mindedness (Stadelbacher, 2012)
- Flexibility (Stadelbacher, 2012)
- Awareness of Constructed Reality
German Police

- Standardised decision-making process (*Rational Choice*)
- Guidelines & Evaluation
- Advisory-Teams
- Expert platform (i.e. EUNAT)
- Casuistics and Database
- No systematic Analysis or Studies
- Command and control training
Evidence-Based Medicine

• “Evidence-based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients.” (Sackett, 1996)

• “Evidence-based policing is the use of the best available research on the outcomes of police work to implement guidelines and evaluate agencies, units, and officers.” (Sherman, 1998)
EbM - Concept

Five steps:
1) Asking answerable questions
2) Finding the best evidence
3) Critically appraising the evidence
4) Acting on the evidence, using patient values
5) Evaluating performance of decision

"Doubt is the origin of wisdom." (René Descartes)
EbM - Concept

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Discussion

- Appraisal of Guidelines Research and Evaluation (AGREE)
- Gold standard: Randomized Controlled Trial (RCT)
- „Cookbook“ (Vogd, 2002; Kienle, 2008)
- „Stageing of knowledge“ (Vogd, 2002)
- „Reflection in action“ (Donner-Banzhoff, 2007; Kienle, 2008)
- “Rediscovered primary virtues on a systematic base” (Jonitz, 2013)
Conclusion

What really matters in high-risk situations?

- Procedural instead of absolute rationality (cf. Schimanck, 2005)
- Contextual variation of evidence (Pawson, 1997)
- Confidence and familiarity (Starke, 2009)
- Failure management with „fair blame“ (Reynolds, 2009)
- Experience, situational awareness and communication (interviews)
Conclusion

“Science cannot solve the ultimate mystery of nature. And that is because, in the last analysis, we ourselves are a part of the mystery that we are trying to solve.”

(Max Planck)