

**The Last Word**  
(to a receptive generation)

**Pat Croskerry MD, PhD**

**Halifax 10**

Halifax, Nova Scotia 2010

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- The beginning of the century was the beginning of a new way of approaching patient care.
- We have become *a receptive generation* to what was necessary
- But we took a long time to get here...

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**Ernest A.  
Codman MD  
(1869-1940)**



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## Codman's impact

- Early systematic attempt to assess the causes of adverse events
- Effort to systematize health care quality improvement through data based on processes and outcome
- Emphasis on public reporting of medical deficiencies
- Challenged personal accountability in medicine
- Identification of patient benefit as ultimate criterion of hospital efficiency
- Use of scientific method to achieve best practice
- Offered a framework for prevention and the reporting of error

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## Codman and Halifax

"On 5 December 1917, two munition ships, the Imo and the Mont Blanc, refueled in Halifax Harbour in Nova Scotia, anchoring near there overnight. The next morning, at 9 AM, they collided in the harbour, with the result being the largest man-made explosion in the history of the world, until the advent of World War II and the atomic bomb. Over 3,000 people were killed in a city of 60,000 people, and many more were blinded by the remnants of the explosion and flying glass. Codman had many friends in Nova Scotia, a place he had visited many times for hunting and fishing trips. The day after the explosion he took a train from Boston, along with some of the nurses from the Codman Hospital, and set up a mobile hospital in Halifax, staying there for over two weeks to treat the survivors of the explosion."

Bill Mallon. E. Amory Codman Pioneer New England Shoulder Surgeon. <http://www.neses.com/news.article.10.3.2009.php>

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**"Honours, except those I have thrust upon myself, are conspicuously absent.... But I am able to enjoy the hypothesis that I may receive some more from a more receptive generation."**

Bill Mallon. E. Amory Codman Pioneer New England Shoulder Surgeon. <http://www.neses.com/news.article.10.3.2009.php>

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The Codman awards were established in 1996 and awarded annually over 12 years by the Joint Commission to recognize organizational and individual achievements in quality and safety of health care.

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Why had it taken so long?

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Traditional dealing with error

- Denial
- Discounting
- Distancing

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**“Among the powerful barriers to making progress in patient safety is an attitude of complacency induced by the *rarity of serious events* and the general human bias toward assuming that things will work as they are supposed to.”**

L. Leape. *Striving for Perfection. Clinical Chemistry. 2002;48:1871-2*

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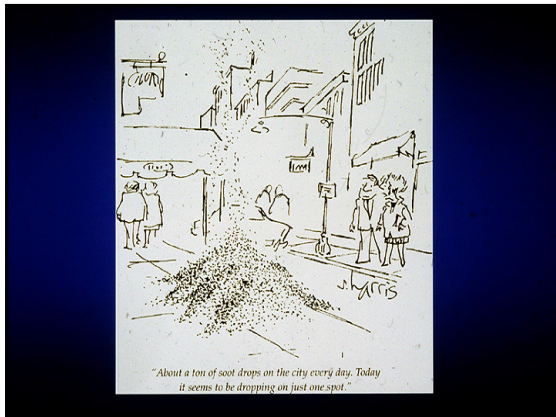
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## Post-Codman Milestones

- 1964 US Study (Schimmel: *Annals of Internal Medicine*)
- 1967 Canadian Study (Ogilvie & Ruedy: *CMAJ*)
- 1978 California Study (Mills: *Western J Medicine*)
- 1991 Institute for Healthcare Improvement (IHI) founded
- 1991 Harvard Medical Practice Study
- 1995 Quality in Australian Health Care Study
- 1996 Annenberg Conferences begin
- 1999 Colorado / Utah Study
- 1999 IOM Report: *To Err is Human* 
- 2000 BMA/BMJ London Conference on Medical Error
- 2000 NHS Report: *An Organisation with a Memory* 
- 2001 SAEM: San Francisco Conference on EM Error
- 2001 IOM Report: *Crossing the Quality Chasm* 
- 2001 Danish Adverse Events study
- 2001 New Zealand Adverse Events study
- 2001 British Adverse Events study
- 2002 RCPSC Report: *Building a Safer System* 
- 2004 Canadian Adverse Events study

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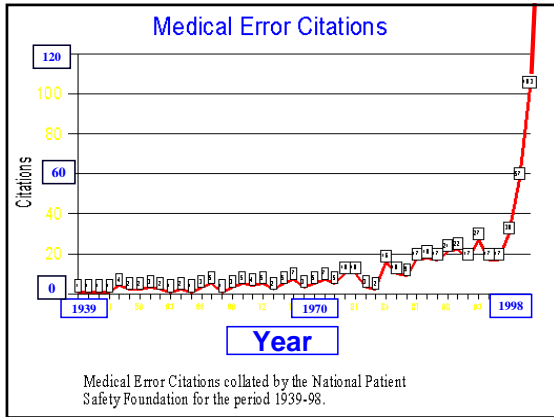
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...and, a number of books

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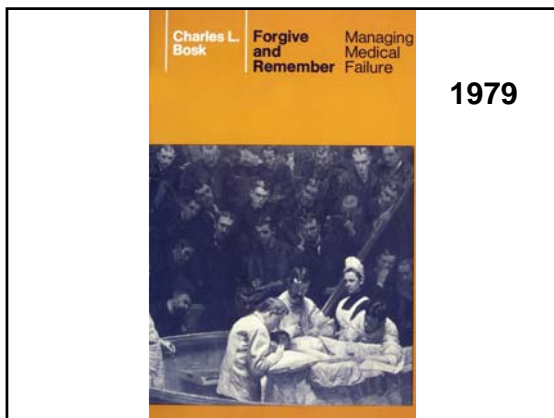
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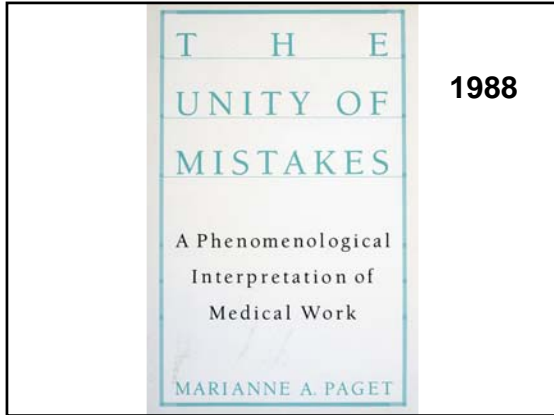
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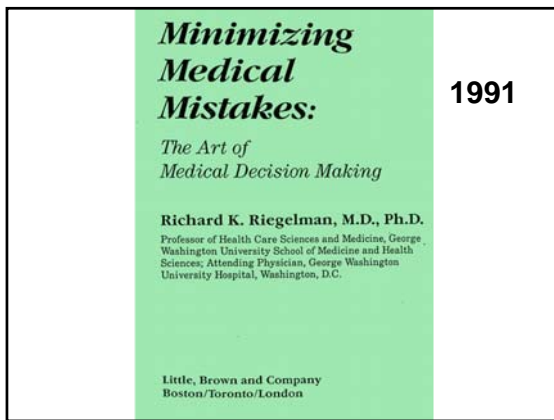
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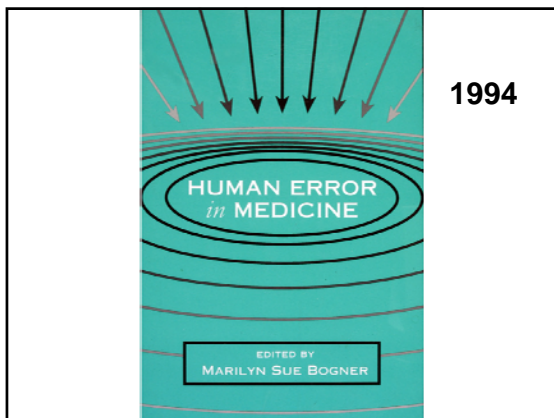
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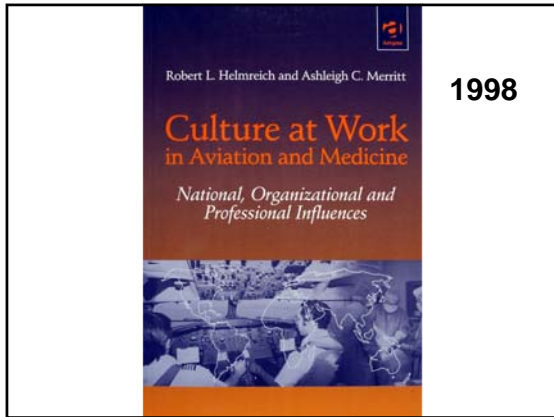
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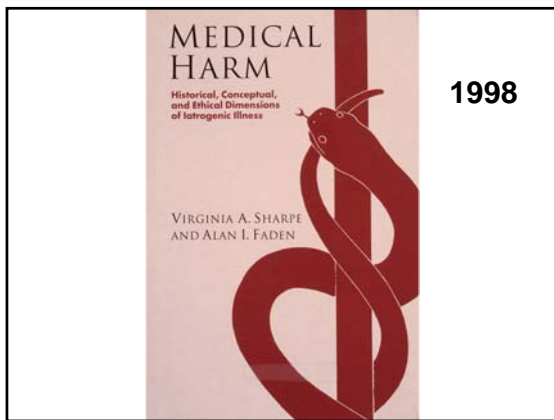
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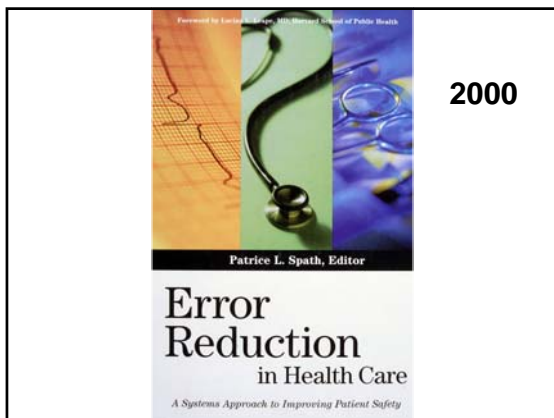
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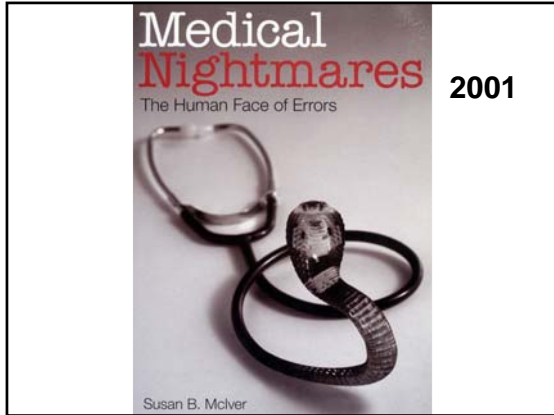
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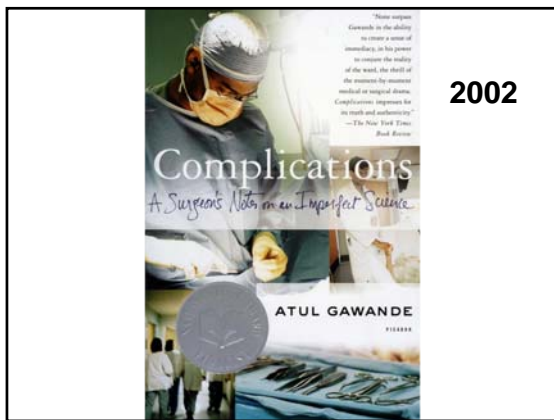
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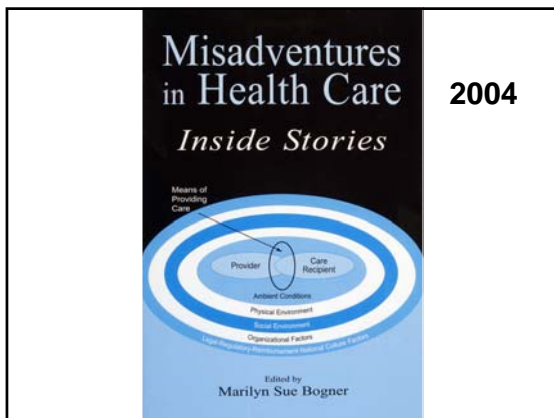
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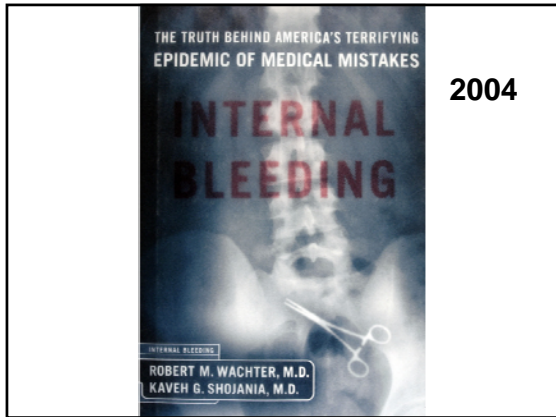
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2004

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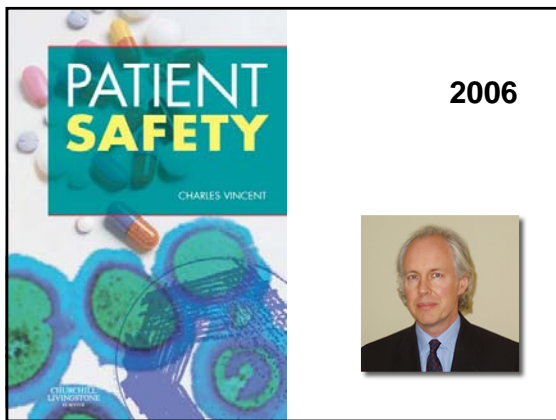
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2006

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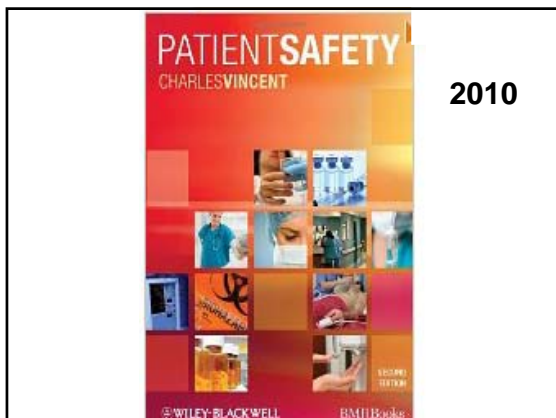
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2010

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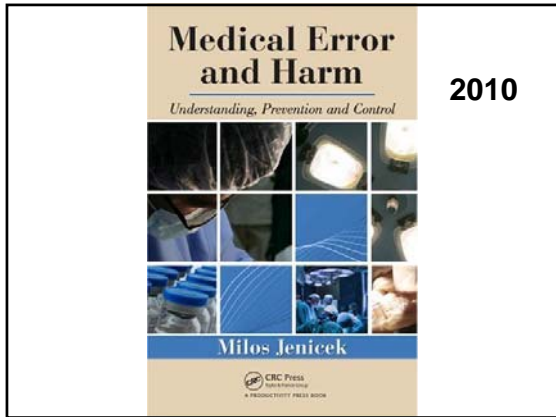
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2010

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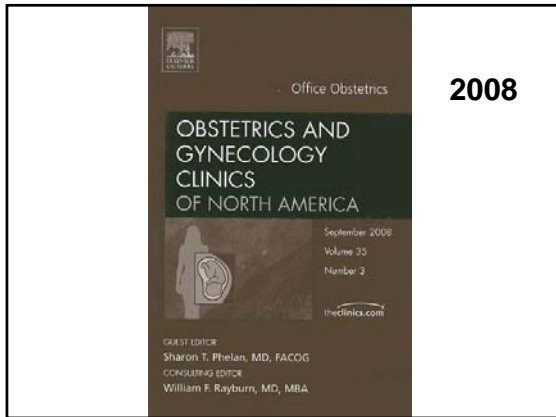
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2008

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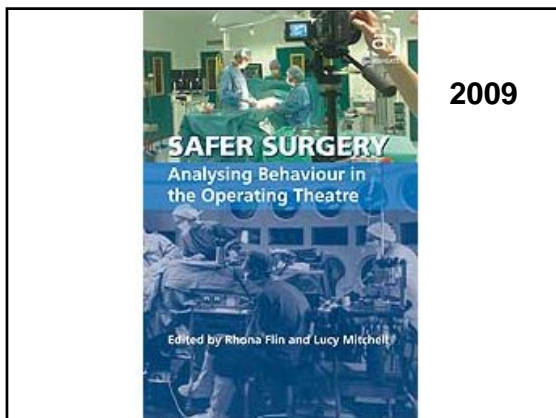
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2009

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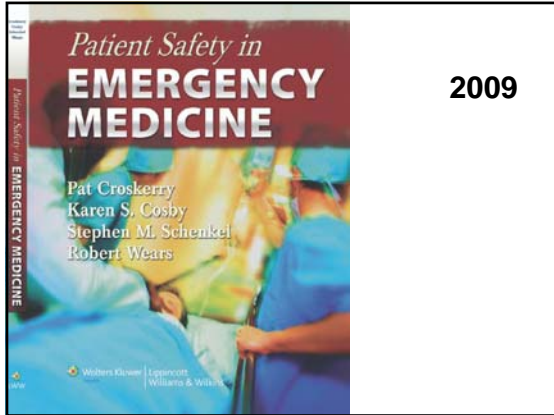
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2009

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### Help from other people

- Error theorists
- Communications experts
- High Reliability Organisations
- Industrial safety and quality experts
- Psychologists
- Ergonomists/Environmental specialists

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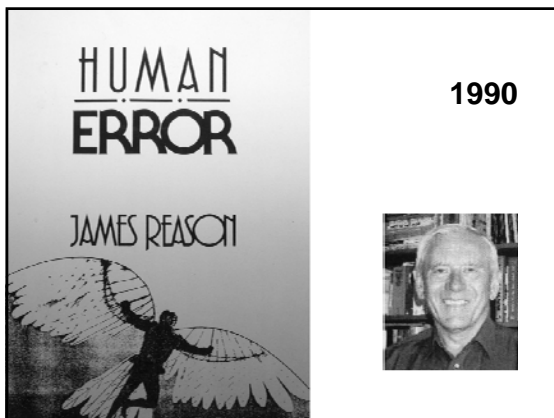
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1990

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**Beginning in 2000,  
several leading medical  
journals devoted entire issues  
to medical error**

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## **Journals**

- 1989: International Journal for Quality in Healthcare
- 1992: Quality and Safety in Healthcare
- 1999: International Journal of Risk and Safety in Medicine
- 2004: Patient Safety and Quality Healthcare
- 2005: Journal of Patient Safety
- 2006: The Joint Commission Journal on Quality and Patient Safety
- 2007: Patient Safety in Surgery
- 2009: Drug, Healthcare and Patient Safety
- 2009: Journal for Healthcare Quality

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**'The sleeping giant has awoken'.**

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**The  
Emergence of the  
Culture of Patient Safety**

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**Patient Safety**

- Conferences
- Research
- Studentships
- Training Courses
- Doctorates
- Fellowships
- Professorships
- Awards

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## A prize for patient safety research?

“Who should be awarded the ‘Nobel prize’ for safety research?. ...Perhaps we should award three prizes: Leape for measuring the size of the problem, Reason for understanding why there is such a problem and Bates for doing something about it.”

Lilford et al. Qual Saf Health Care  
2006;15:311-3

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## Organizations

- 1988: Australian Patient Safety Foundation (APSF)
- 1994: International Society for Quality in Healthcare (ISQua)
- 1999: Agency for Healthcare Research and Quality (AHRQ)
- 2003: (US) National Patient Safety Foundation (NPSF)
- 2003: Canadian Patient Safety Institute (CPSI)
- 2005: (UK) National Patient Safety Agency (NPSA)

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## Specialization

- Leadership, Management, Culture
- Teamwork
- Ergonomics
- Communication
- Informatics
- Adverse event reporting
- Discipline-specific approaches
- Medications
- Transitions/Handoffs
- Sleep/Fatigue
- Disclosure, apology
- Decision making

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“Any medical error is a product of various ‘external’ circumstances, including the environment, working conditions, and pressures;... managerial, administrative, or system functioning. These external factors only contribute to the essence (the internal factors) behind the medical error, namely the physician’s own faulty reasoning, logic, critical thinking, and decision making.”

Jenicek, 2010

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## Human decision making (more books)

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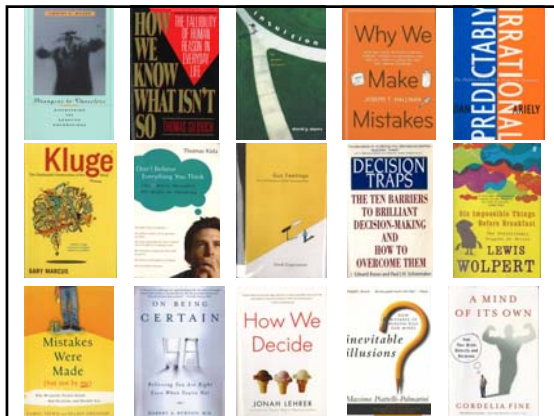
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**“If our motor engines were as erratic as our deliberate intellectual efforts, most of us would not get home for supper.”**

**Kee F. Bickle I.**  
Quoting Carol Buck  
*In: Critical thinking and critical appraisal:  
the chicken and the egg? QJM 2004;97:609-14*

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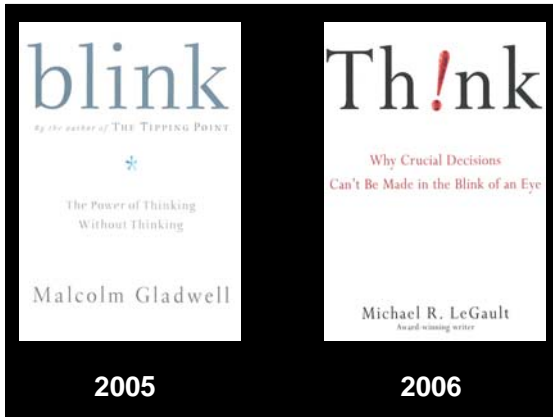
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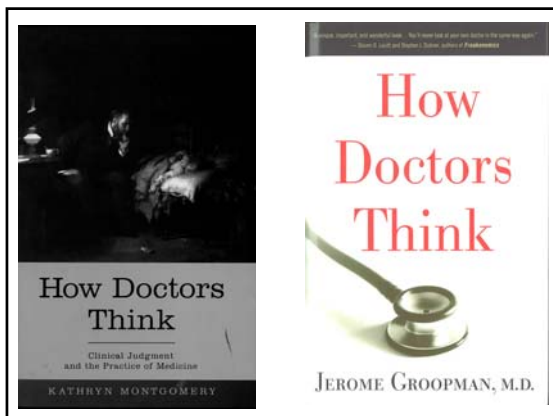
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## New models of clinical decision making emerged

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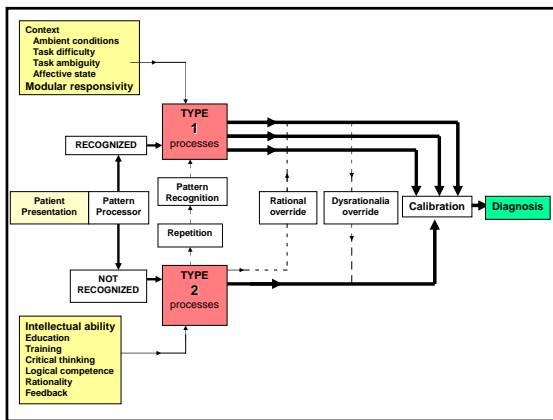
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## Healthcare Uptake of DPT

- Management
- Nurses
- Pharmacists
- Paramedics
- Physicians

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## Decision Making

“...biologically, humans are still African apes, and we have what amounts to a prehistoric ape brain onto which we have installed 21<sup>st</sup>-century cultural software. The result is two systems of reasoning that run largely independent of one another.”

Andre Potter. Politics big-city elites, you say. Sound familiar at all? *Maclean's*. October 4, 2010

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“In twenty or thirty years, medical students will be learning about natural selection... about human archaeology, about Stone Age life, and the conditions in the Stone Age that essentially put the finishing touches on human nature as we now have it. These same ideas then will be informing the work of practitioners of medicine, and the interactions between doctor and patient. They'll be guiding the medical research establishment in a fundamental way, which isn't true today.”

George C. Williams. A package of information. In: *The Third Culture*. (1995)

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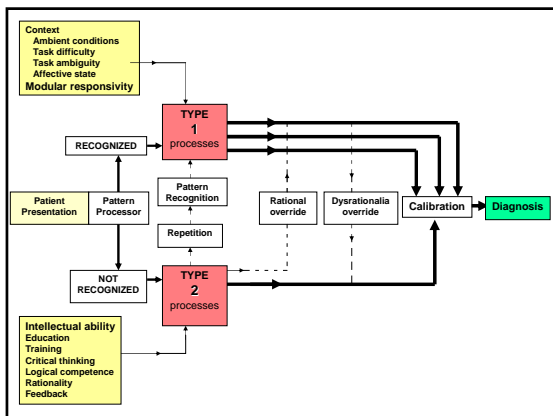
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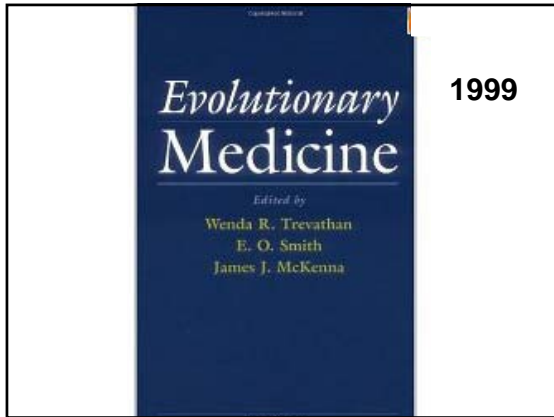
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**“...the application of Darwinian principles to the practice of medicine has slipped through the intellectual net of medical education, and it has been left to the evolutionary biologists to point out the need to take natural selection into account in an increasing number of fields of medical practice.”**

Michael H. Day. Foreword. *In*: Trevathan, Smith & McKenna. *Evolutionary Medicine*. 1999

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**So, how did we do?**

**“Don’t make the wrong mistakes.”**  
***Yogi Berra***

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### Hits and Misses

- Awareness and visibility
- Looking outside the system
- Measurement
- Ergonomics/Ambient environment
- Competencies
- Medications
- Disclosure and apology
- Role of IT
- Safer Healthcare Now
- Fatigue & sleep deprivation
- Culture
- Clinical decision making
- Critical thinking
- Failed diagnosis
- Education
- Cognitive /affective biases
- Individual factors
- Knowledge translation/uptake
- Reporting and learning
- Tort litigation
- Evolutionary considerations

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### Halifax 20 – Main Themes

- The last decade – did we have the right focus?
- The burden of CT in the last decade
- System design – are we there yet?
- Critical thinking 10 years later
- The new drug resistant pathogens
- Diagnostic failure: Can we get it below 5%?
- POCT – unanticipated consequences
- Further optimizing decision support systems
- The Geriatric Bubble – where do we go from here?
- Going lower than a 5% adverse event rate?

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