SIEMENS Healthineers

From rules to methods to habits:

Managing human behavior

State of the Art Compliance Systems – are further enhancements subject to „diminishing returns“?

Almost all Medtech and Pharma companies have sophisticated and elaborate Compliance Systems in place.

Nevertheless, we still see Compliance issues in the market, even in highly developed and regulated countries with strong enforcement.

Have we reached a „saturation point“, where further enhancements to Compliance systems are only delivering „diminishing returns“ or are even counterproductive?

From Compliance Systems to a Culture of Integrity – is this just a matter of time?

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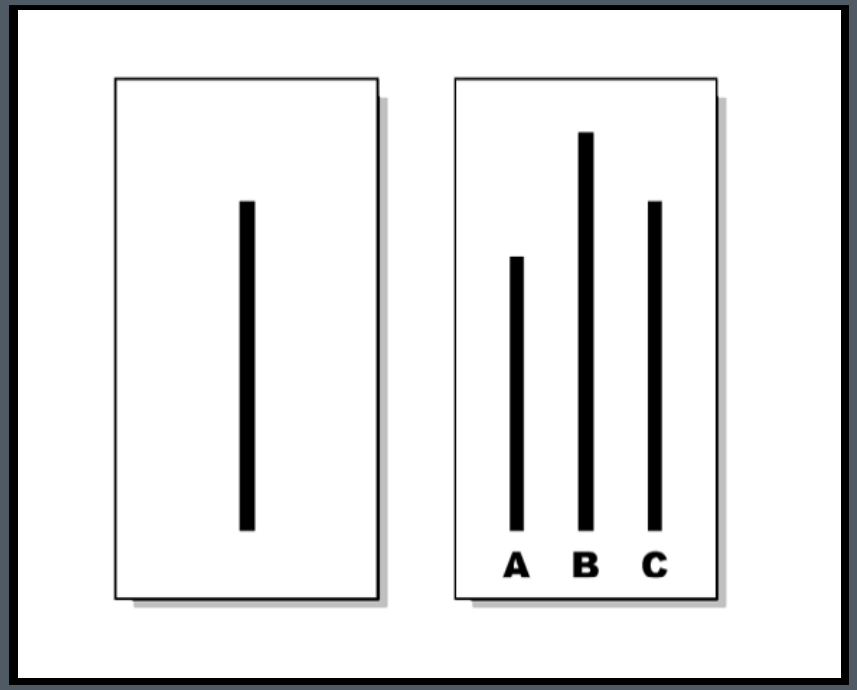
When we look beyond our „traditional“ Compliance topics (ABAC, AT, AML), like

- technical compliance (Volkswagen)
- Data Security&Privacy (Yahoo, Equifax, facebook)
- road safety (3000 deaths p.a. in Germany)
- hospital hygiene (90.000 preventable deaths p.a. in Europe)

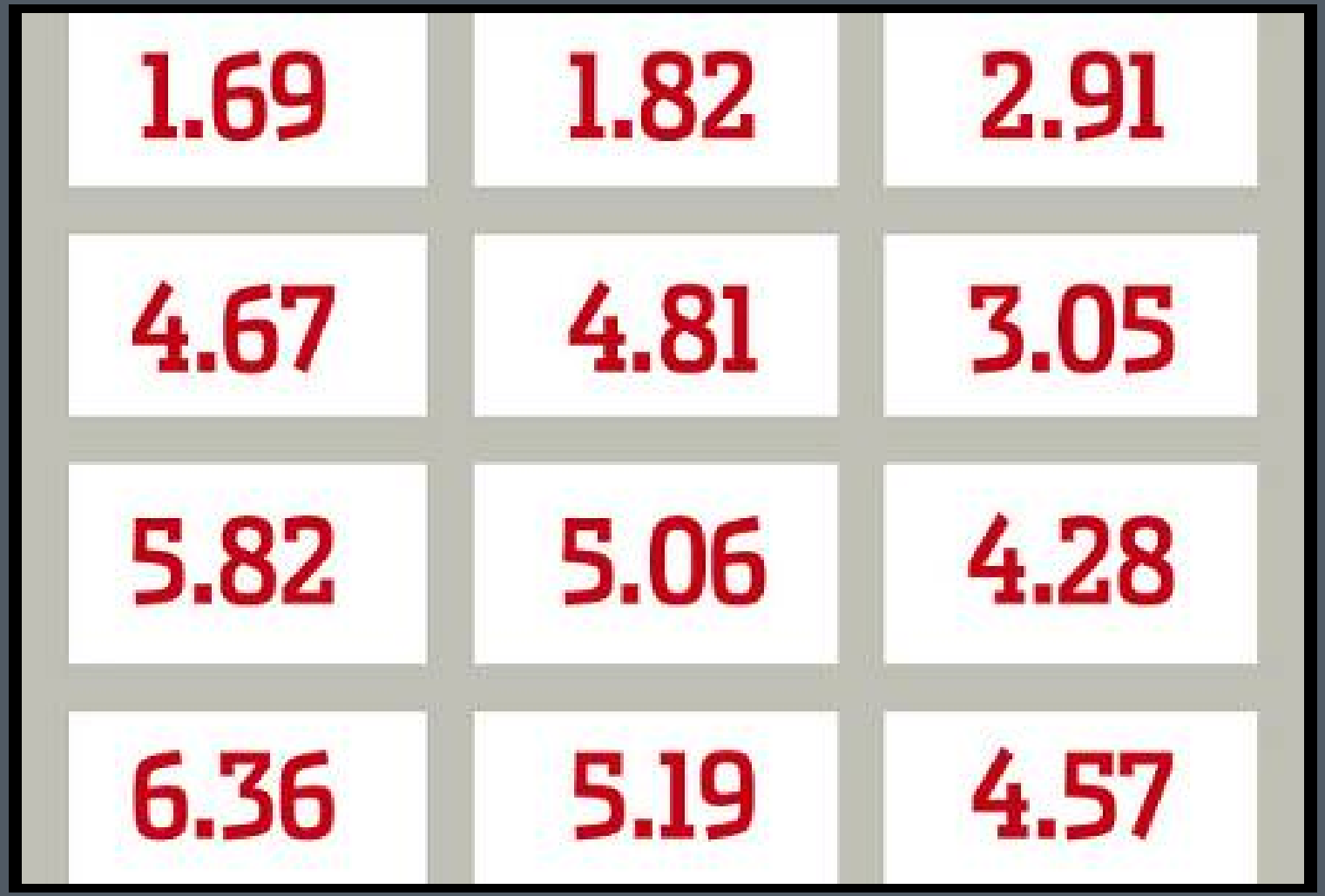
we see similar patterns: Saturation yes, Pervasion no.



Quelle: Wikipedia, https://de.wikipedia.org/wiki/Konformit%C3%A4tsexperiment_von_Asch#/media/File:Asch_experiment.svg
Quelle: HeroicImaginationTV – Asch Conformity Experiment [Documentary Film on YouTube], veröffentlicht am 20.02.2012, https://www.youtube.com/watch?v=NyDDyT1IDhA, zugegriffen am 15.10.2017.

Quelle: Geviide25 – WYFFT: Would You Fall For That - Elevator [Documentary Film on YouTube], veröffentlicht am 30.01.2015, https://www.youtube.com/watch?v=dDAbdMv14Is, zugegriffen am 15.10.2017.

Quelle: HeroicImaginationTV – Dangerous Conformity [Documentary Film on YouTube], veröffentlicht am 25.09.2011, https://www.youtube.com/watch?v=vjP22DpYYh8, zugegriffen am 15.10.2017.



Ariely, Day: The Honest Truth about Dishonesty, 1. Aufl. Harper Verlag, 2012

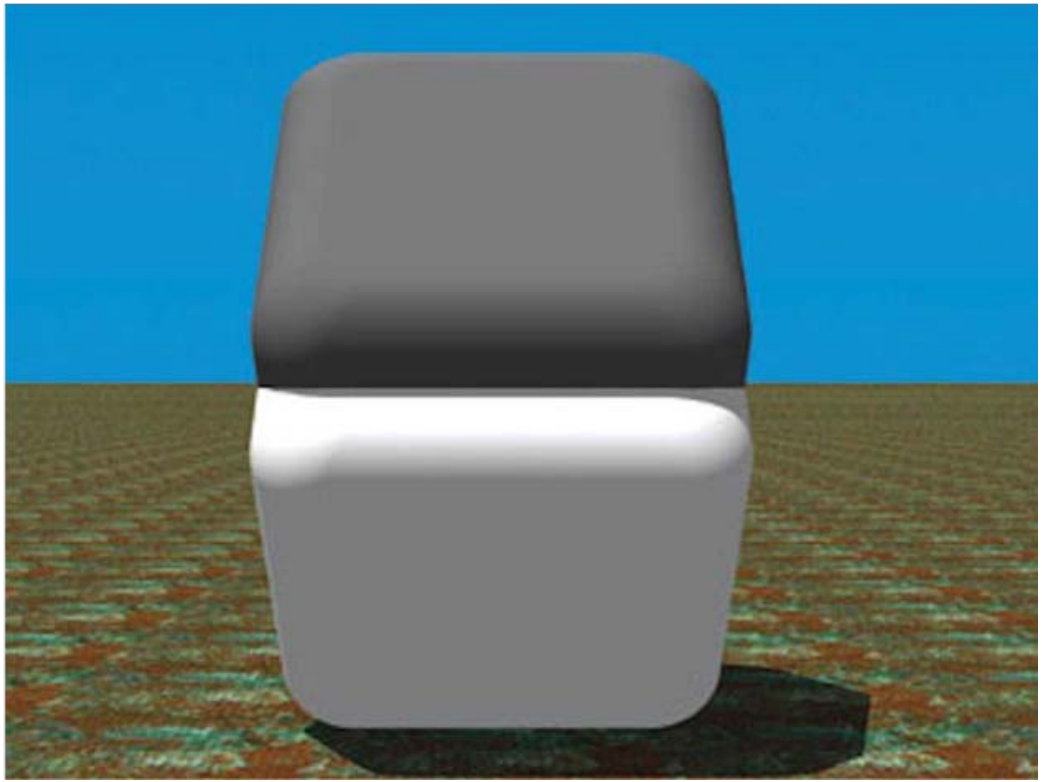
Quelle: Derren Brown (2014): Milgram Experiment – The Heist [Documentary Film on YouTube], veröffentlicht am 14.10.2014, https://www.youtube.com/watch?v=Xxq4QtK3j0Y, zugegriffen am 15.10.2017.

What science tells us:

Studies show:

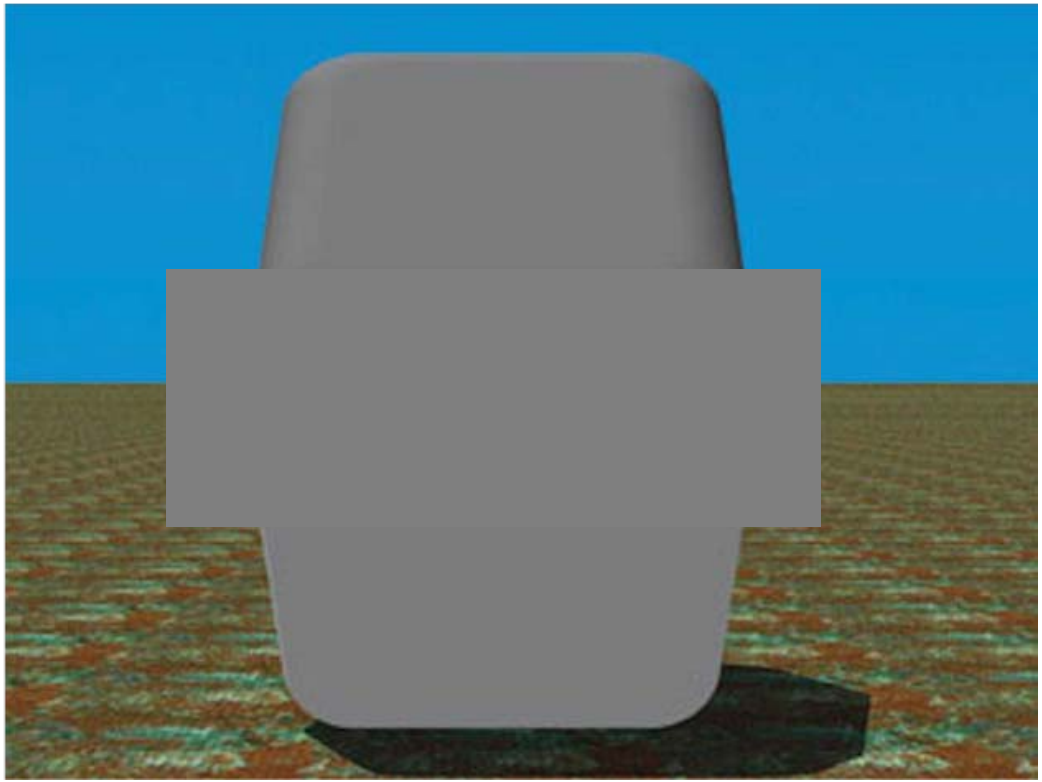
In a jar of vinegar, everybody turns sour.

Let‘s do our own experiment.



Quelle: Why We See What We Do, Purves D, Lotto RB, Nundy S, American Scientist 90(3): 236-243 (2002)

Let‘s do our own experiment.



Quelle: Why We See What We Do, Purves D, Lotto RB, Nundy S, American Scientist 90(3): 236-243 (2002)

Heuristics

practical methods not guaranteed to be optimal or perfect, but sufficient for the immediate goals; mental shortcuts that ease the cognitive load of making a decision

The ugly truth is: We cannot simply turn these heuristics off. They are hard-wired in our brains.

Just knowing about them does not help – we need to invest additional brain power **every time.**

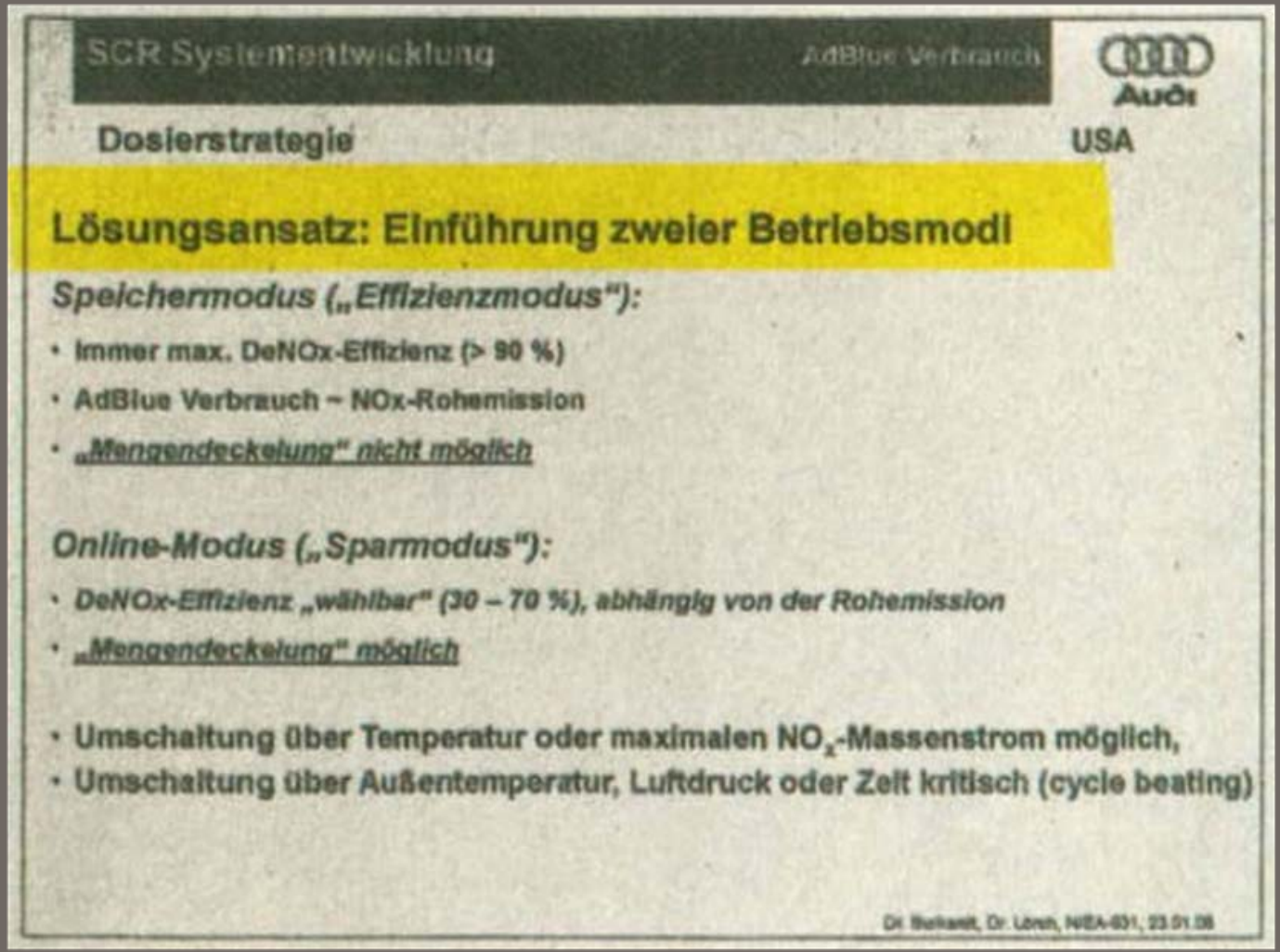
MTI ASSESSMENT OF TEMPERATURE CONCERN ON SRM-25 (51L) LAUNCH

- CALCULATIONS SHOW THAT SRM-25 O-RINGS WILL BE 20° COLDER THAN SRM-15 O-RINGS
- TEMPERATURE DATA NOT CONCLUSIVE ON PREDICTING PRIMARY O-RING BLOW-BY
- ENGINEERING ASSESSMENT IS THAT:
  - COLDER O-RINGS WILL HAVE INCREASED EFFECTIVE DUROMETER ("HARDER")
  - "HARDER" O-RINGS WILL TAKE LONGER TO "SEAT"
    - MORE GAS MAY PASS PRIMARY O-RING BEFORE THE PRIMARY SEAL SEATS (RELATIVE TO SRM-15)
      - DEMONSTRATED SEALING THRESHOLD IS 3 TIMES GREATER THAN 0.038" EROSION EXPERIENCED ON SRM-15
  - IF THE PRIMARY SEAL DOES NOT SEAT, THE SECONDARY SEAL WILL SEAT
    - PRESSURE WILL GET TO SECONDARY SEAL BEFORE THE METAL PARTS ROTATE
      - O-RING PRESSURE LEAK CHECK PLACES SECONDARY SEAL IN OUTBOARD POSITION WHICH MINIMIZES SEALING TIME
- MTI RECOMMENDS STS-51L LAUNCH PROCEED ON 28 JANUARY 1986
  - SRM-25 WILL NOT BE SIGNIFICANTLY DIFFERENT FROM SRM-15

JOE C. KILMINSTER, VICE PRESIDENT
SPACE BOOSTER PROGRAMS

MORTON THIOKOL, INC.
Wasatch Division

Quelle: NASA, Report of the Presidential Commission on the Space Shuttle Challenger Accident, Figure 909 [Ref. 2/26-6], https://history.nasa.gov/rogersrep/v5p909.htm, abgerufen am 15.10.2017



Quelle: Süddeutsche Zeitung vom 28.7.2017, "Hört auf mit dem Pipi!", Leyendecker, Mascolo, Ott, Richter