

Trip Biovigilantie Symposium

# MENSELIJKE FOUTEN EN VEILIGHEID

*VERSCHILLENDE PERSPECTIEVEN*

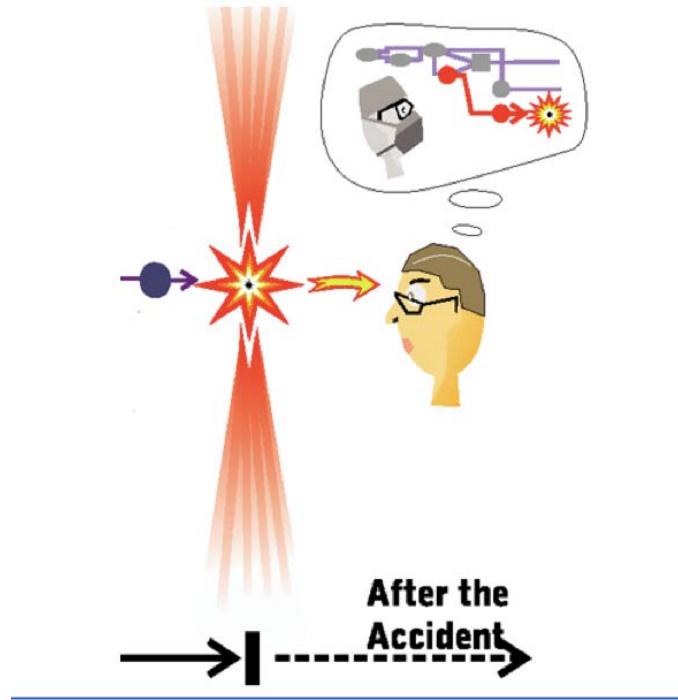
Jan Klein  
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Prof Em Patient Safety Engineering

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# Menselijke fouten en veiligheid

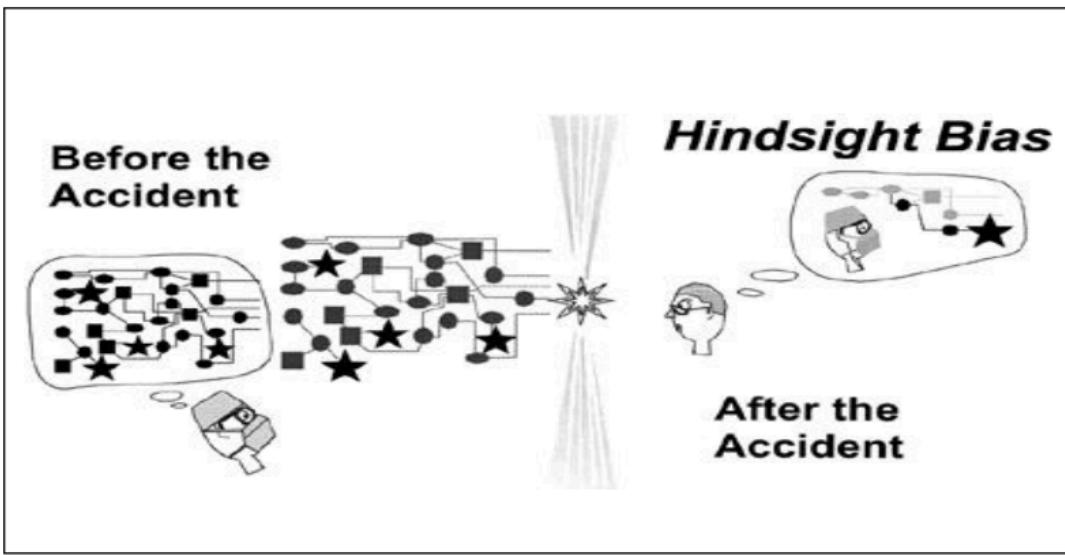
- ‘Persoon’ perspectief
- ‘Cultuur’ perspectief
- ‘Systeem’ perspectief
- ‘Complexiteits’ perspectief

# 'Persoon' perspectief



Persoon verantwoordelijk / menselijke fout

# 'Persoon' perspectief



**Figure 1.** Hindsight bias results in oversimplification of the situation before a critical event.

## Drawing the Line *Non-Punitive Safety Reporting in Civil Aviation*

Prof Patrick Hudson  
Department of Psychology  
Leiden University

# 'Persoon' perspectief

## Verpleegkundige veroordeeld na dood patiënt door verkeerde spuit



Skipr Redactie 13 november 2020, 15:23 1695 keer gelezen

De rechtbank in Zutphen heeft een 24-jarige verpleegkundige veroordeeld wegens dood door schuld. In november 2017 gaf ze met fatale gevolgen een zieke een spuit die voor een ander was bedoeld. De rechtbank legt haar een voorwaardelijke taakstraf van tachtig uur op, met een proeftijd van een jaar.

Op genoemde spuit stonden de naam van het medicijn en van de andere patiënt. Een voor de wijze van toediening vereiste sticker ontbrak. De verpleegkundige heeft op meerdere momenten zelf kunnen en moeten merken dat zij een fatale medicatiefout ging maken, aldus de rechtbank. Dat was onder meer bij het ophalen van de spuit die door een collega was klaargemaakt en die er al uren lag, bij het scannen van het polsbandje van de patiënt en van de spuit en ook nog eens na een foutmelding die ze kreeg maar vervolgens ongelezen wegklikte.

## Baby Yanniek verbrandde bij een operatie aan een liesbreuk

De Inspectie voor de Gezondheidszorg ligt onder vuur na honderden meldingen bij het meldpunt van de Nationale Ombudsman en TROS Radar. De inspectie zou traag zijn en te weinig doen met ernstige meldingen van patiënten.

VAN ONZE VERSLAGGEEFSTER MAUD EFTING 31 maart 2012, 0:00

AMSTERDAM - Ook de ouders van Yanniek Langeweg (2) dienden een klacht in bij het meldpunt. 'Yanniek was zes weken oud en moest worden geopereerd aan een liesbreuk', vertelt moeder



Nieuws   West   Midden   Noordoost   Zuidoost   112   Sport ▾   Televisie ▾   Radio ▾

🔍 Zoeken...

WOENSDAG 11 SEPTEMBER 2013, 17:51

DEEL DIT ARTIKEL:



## Specialisten Amphia maakten fouten bij operatie baby, tuchtcollege blijft bij oordeel



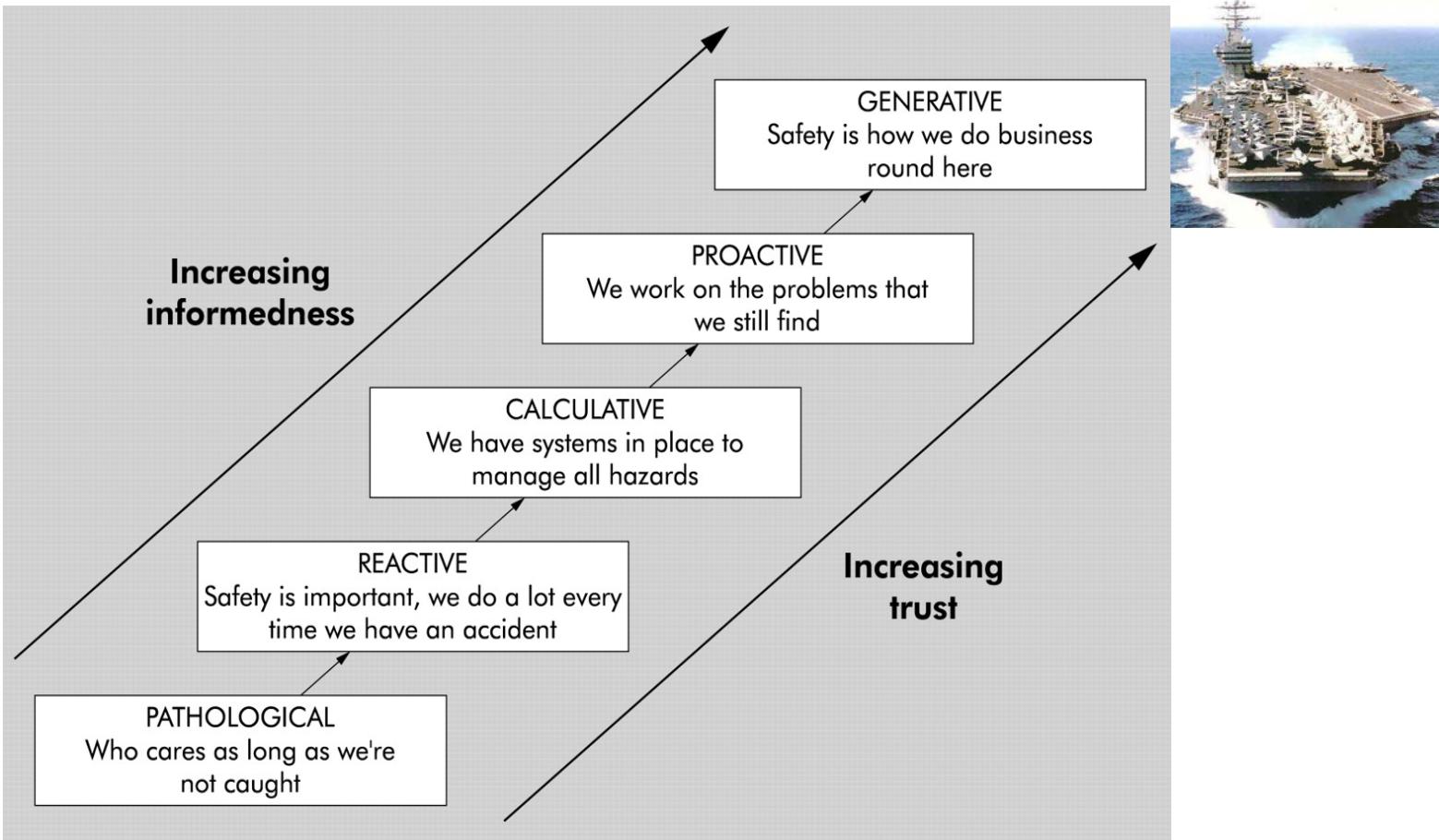
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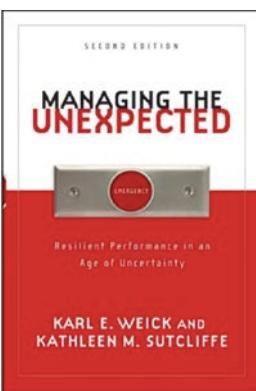
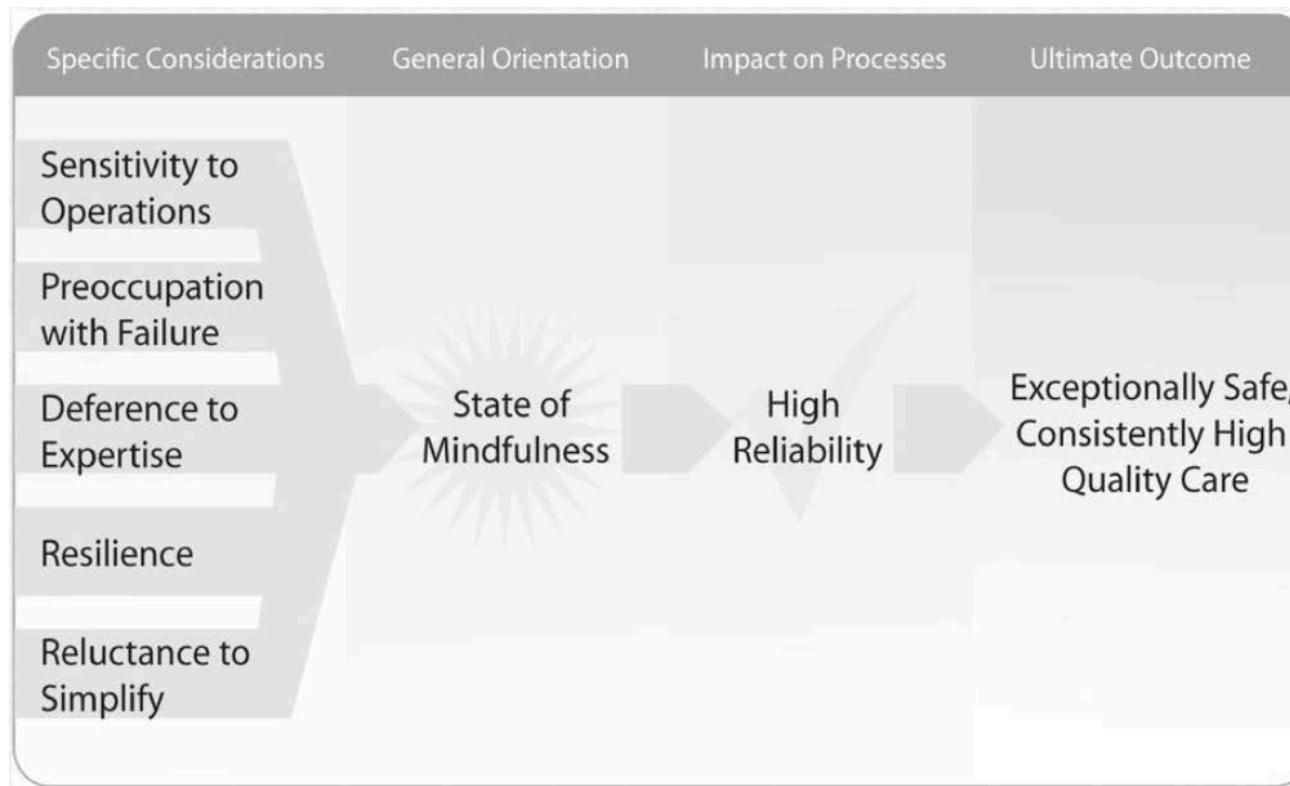
"DE MENTALITEIT MOET VERANDEREN  
VERDER LATEN WE ALLES BIJ HET OUDER?"

# Safety Culture

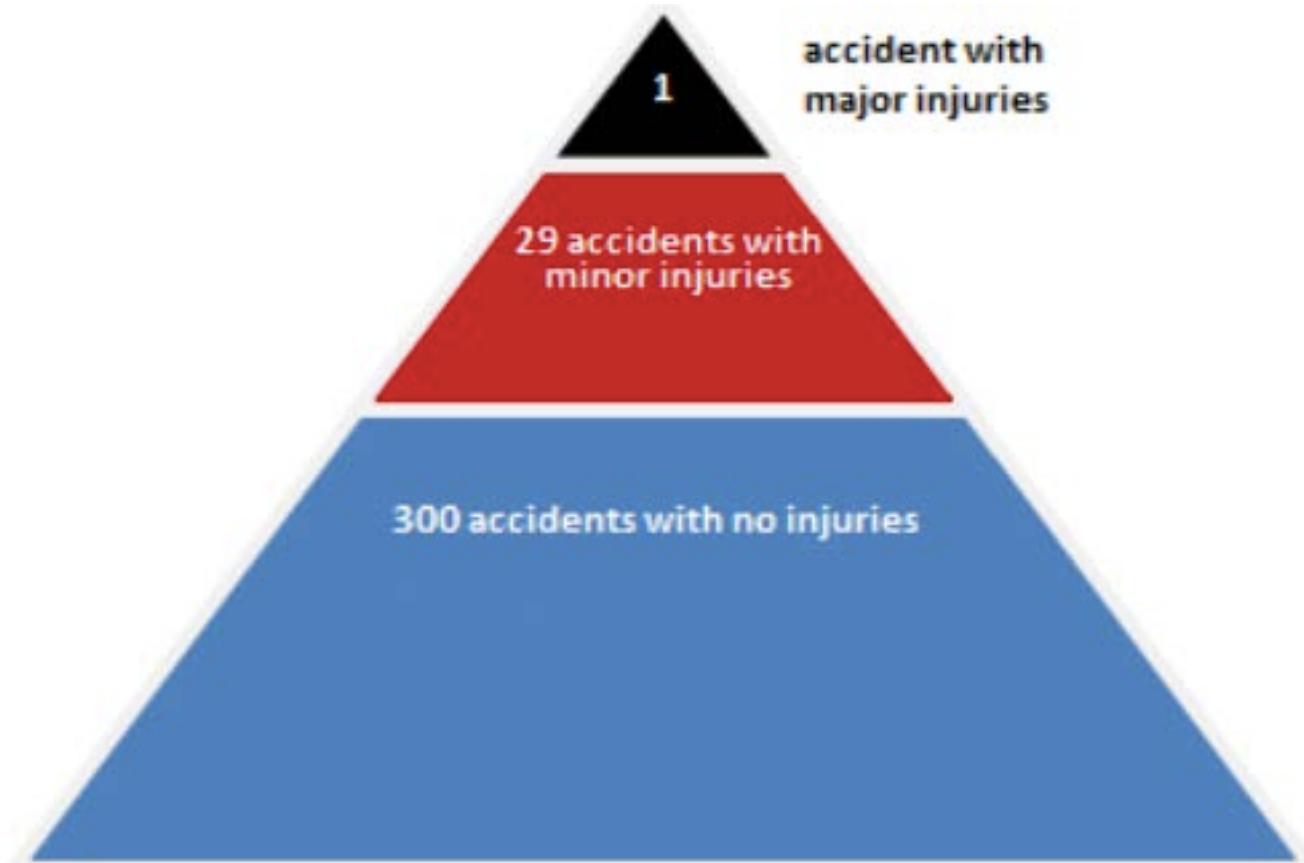


Applying the Lessons of High Risk Industries to Health Care

# Safety Culture

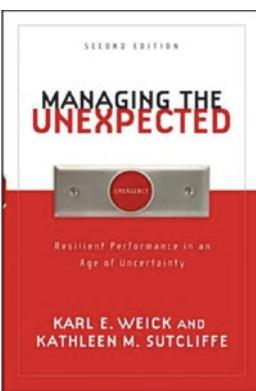
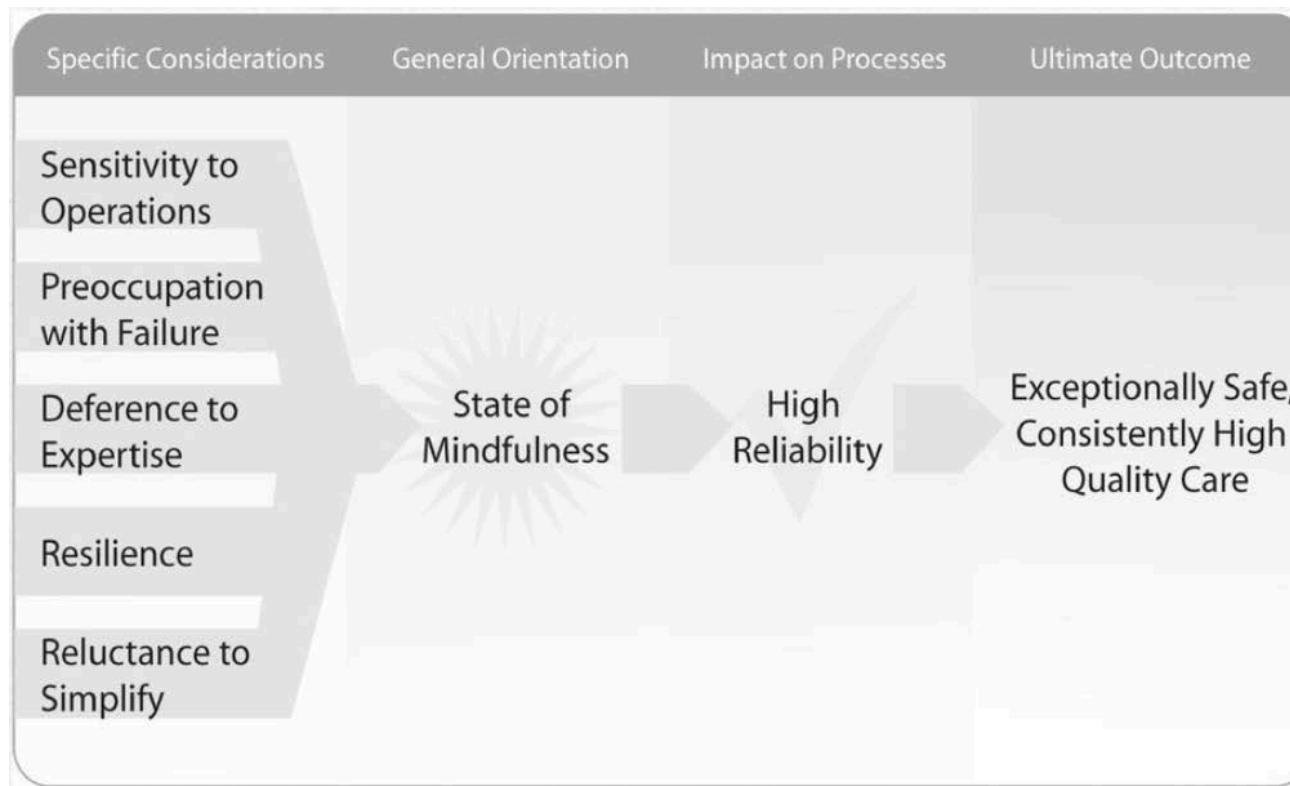


# Pre-occupation with failure



Pyramide van Heinrich

# Safety Culture



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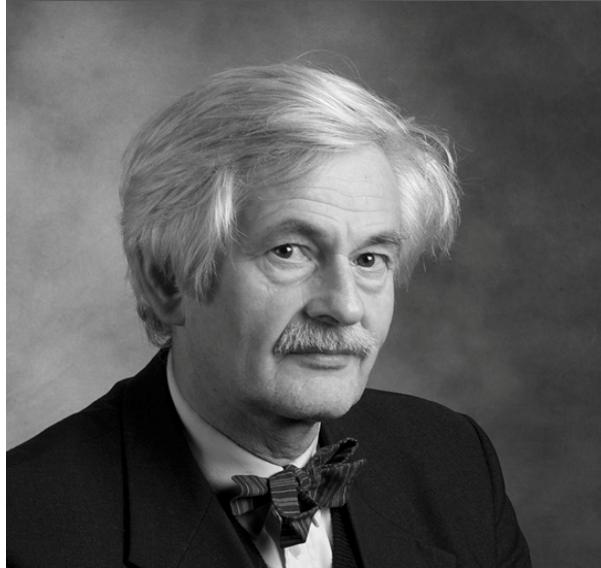
# Systeem perspectief



# Safety

*Integrated*  
=  
Patient  
Professional  
Equipment  
Environment





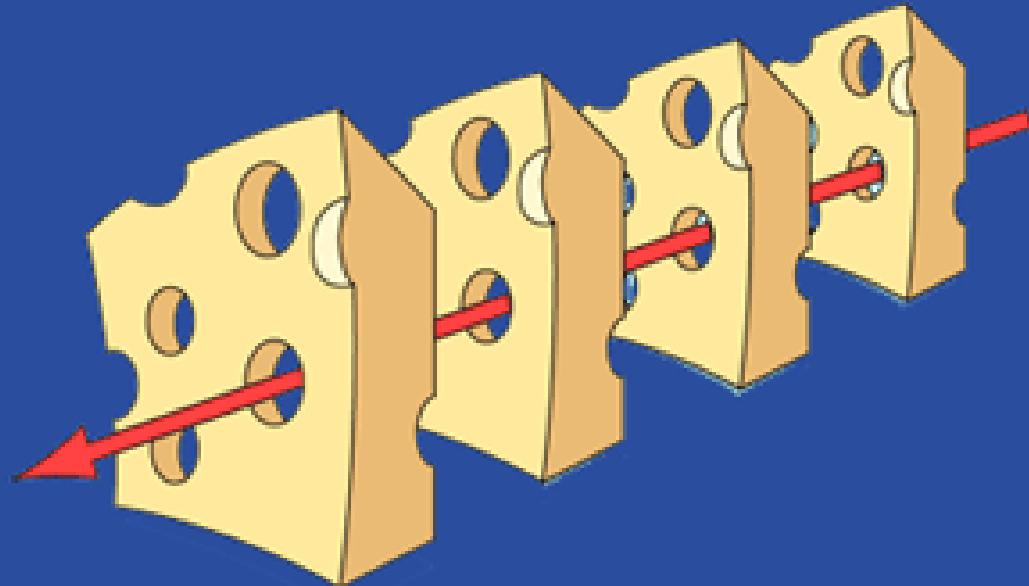
Promoting safety in the oil industry. The ergonomics society lecture presented at the ergonomics society annual conference, Edinburgh, 13-16 April 1993

Auteurs WA Wagenaar, J Groeneweg, PTW Hudson, JT Reason

Publicatiedatum 1994/12/1

Tijdschrift Ergonomics

Dangers potentiels



Accidents

# Systems Theory

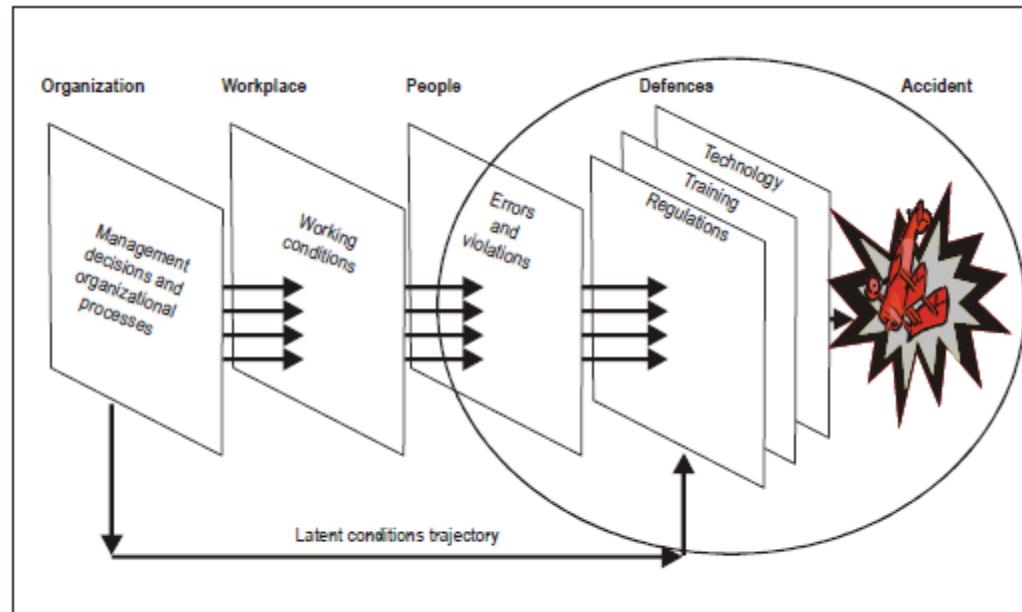
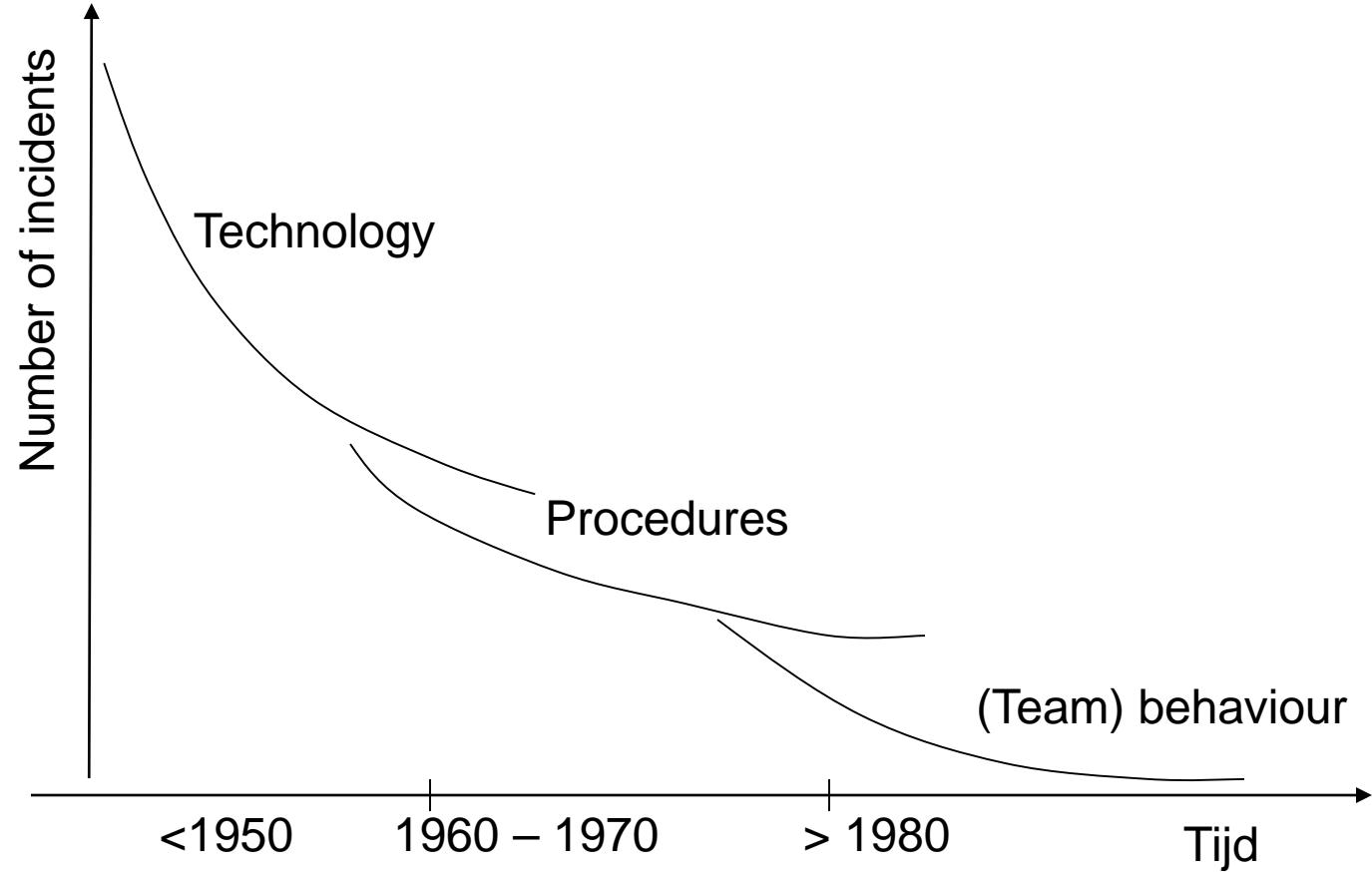


Figure 2-3. A concept of accident causation



# Menselijke fouten en veiligheid

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# Kritiek op systeem-perspectief

*'Our technologies are increasingly complex, emergent and non-linear. Or they get released into environments that make them complex, emergent and non-linear.'*

Sidney Dekker (2011) in: *Drift into failure*

# Work-as-imagined and Work-as-done

- Work-As-Imagined describes what should happen under normal working conditions.
- Work- As-Done, on the other hand, describes what actually happens, how work unfolds over time in complex contexts.

**From Safety-I to Safety-II: A White Paper**  
Erik Hollnagel e.a. 2015

# WAI - WAD

≡ Menu | **nrc.nl** ›



✍ Emma Bruns

⌚ 16 juni 2020

⌚ Leestijd 3 minuten

▶ Opslaan in leeslijst



## Zorgverleners werken in een woestijn van drijfzand

Het is kwart over acht. De eerste patiënten die het spreekuur van de traumachirurg zullen bezoeken zitten al netjes op anderhalve meter te wachten. In de tl-verlichte kamer zonder ramen volg ik het stappenplan voor de nieuwe desinfectiemaatregelen en



# WAI - WAD

≡ Menu

nrc.nl >



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❖ Emma Bruns

⌚ 26 augustus 2020

⌚ Leestijd 2 minuten

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## Het ziekenhuis functioneert, maar vraag niet hoe

**H**et is zondagmiddag. De kleine rode telefoon in mijn borstzak kent geen rust. Ongeveer iedere vijf minuten, zo niet vaker, rinkelt het ding. Huisartsen die een kind met buikpijn



# WAI - WAD

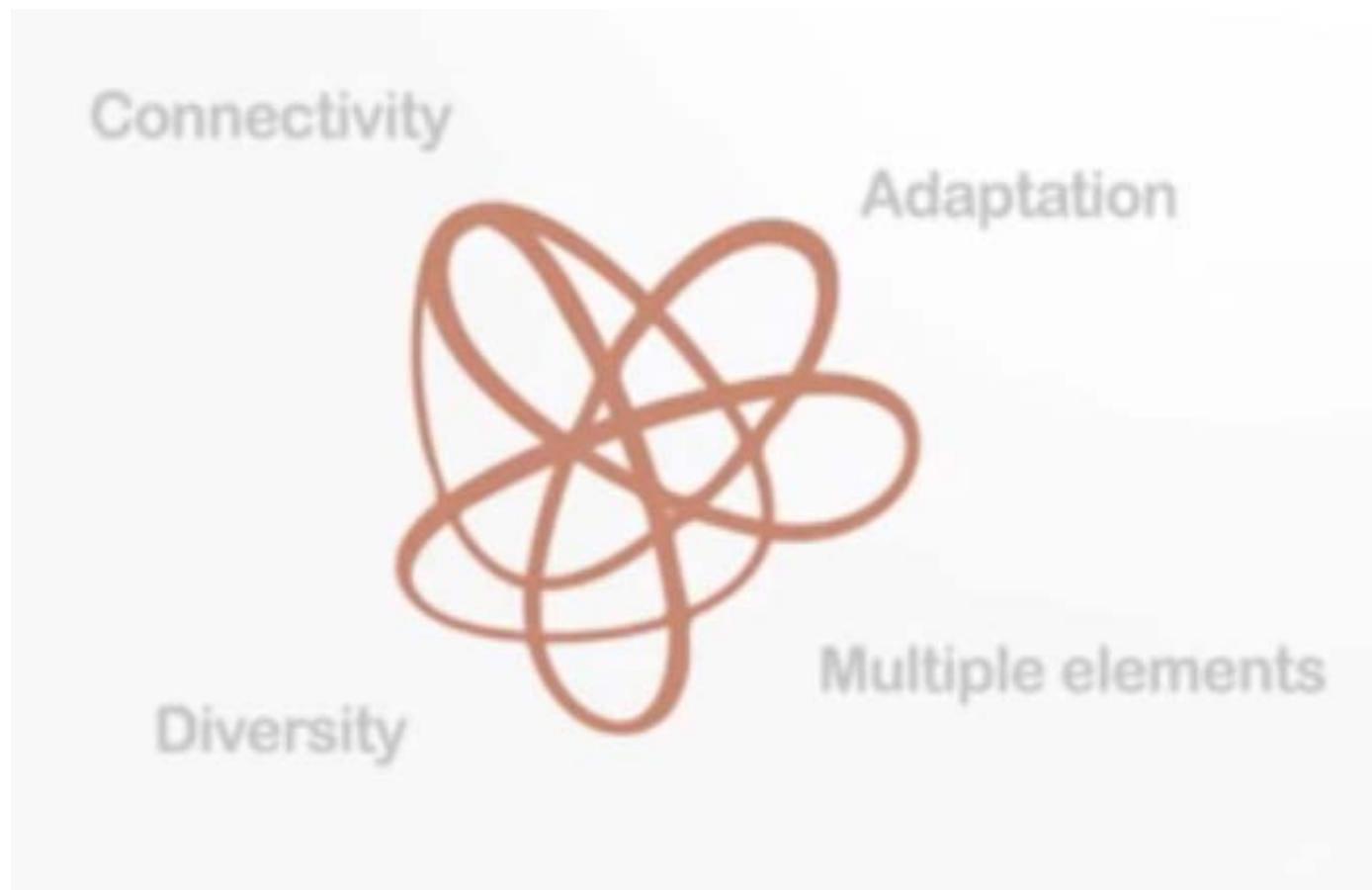
Als we de komende jaren de zorg betaalbaar en kwalitatief op hetzelfde niveau willen houden, zullen we drastisch moeten investeren in het gezond verstand. De huidige generatie dokters en verpleegkundigen wordt grootgebracht in een moeras van protocollen en niet-functionerende computersystemen. De enige mogelijkheid om je hoofd boven water te houden in de hectiek van de alledaagse praktijk is de zogenaamde ‘workaround’: een voor de logisch denkende buitenstaander totaal onbegrijpelijke houtje-louwtjeconstructie die je helpt om de gebreken van het systeem te omzeilen.

## Criticism on System Theory

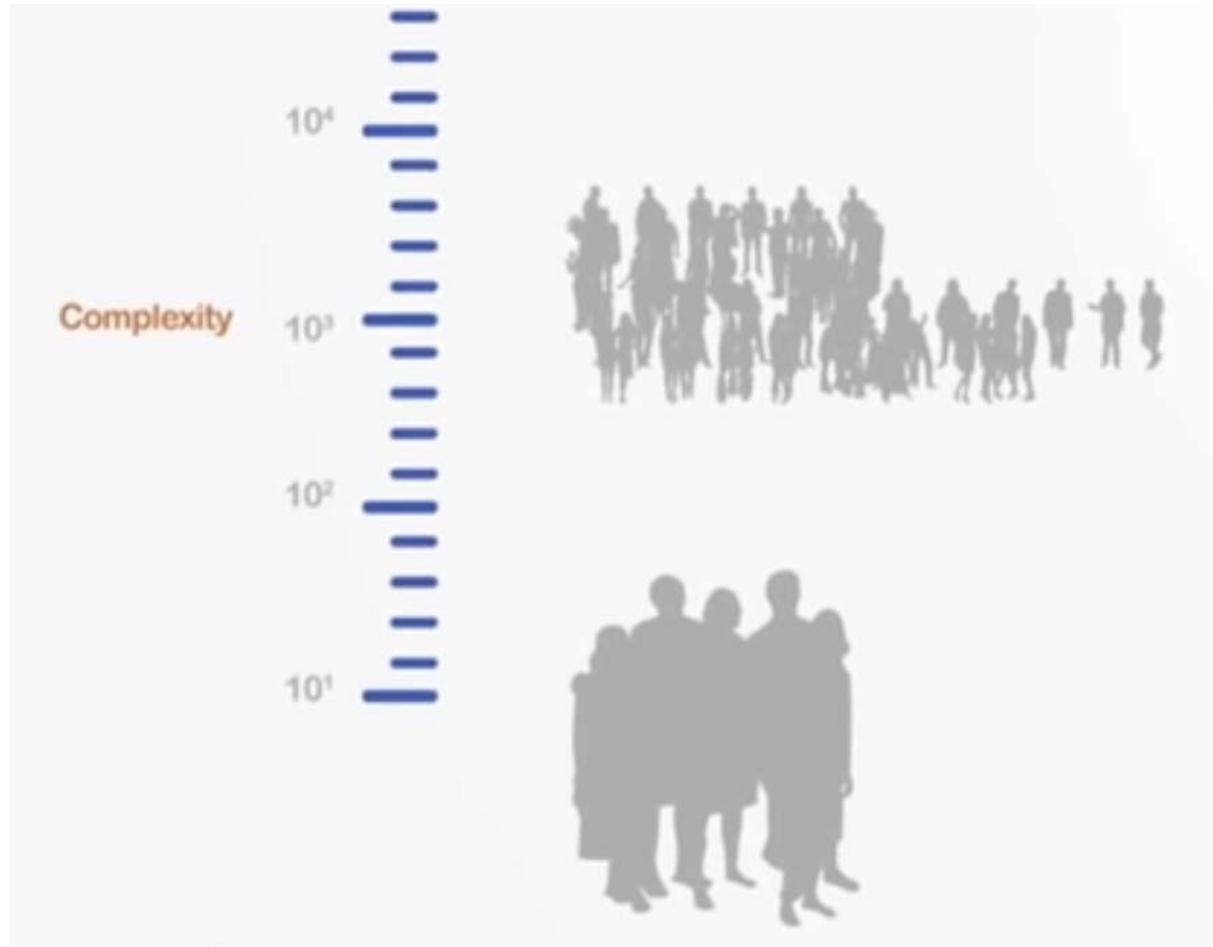
No direct causal and sequential relationship between risks and adverse events; non-linear relationship

Prigogine & Stengers (1984) in: *Order out of chaos*

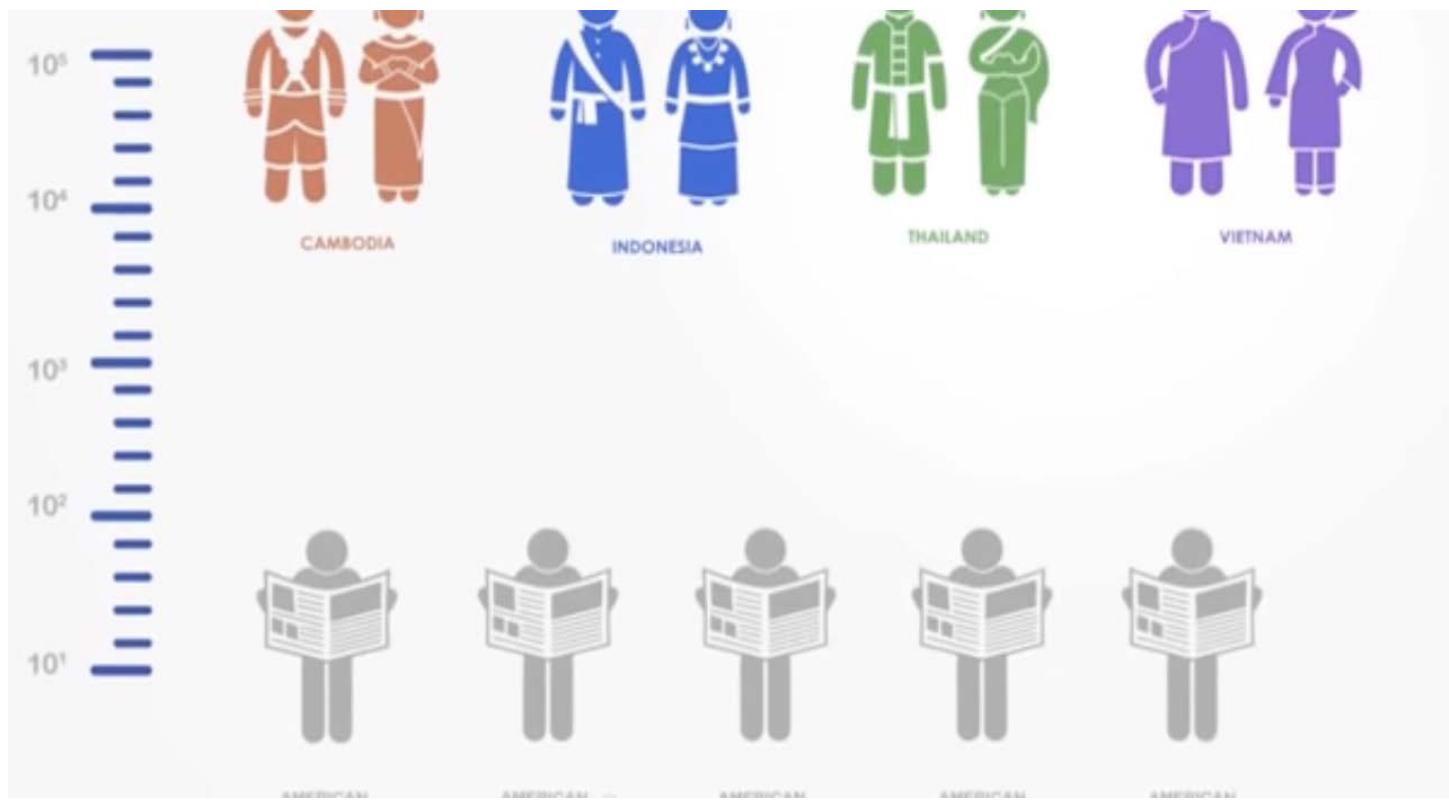
# Complexity



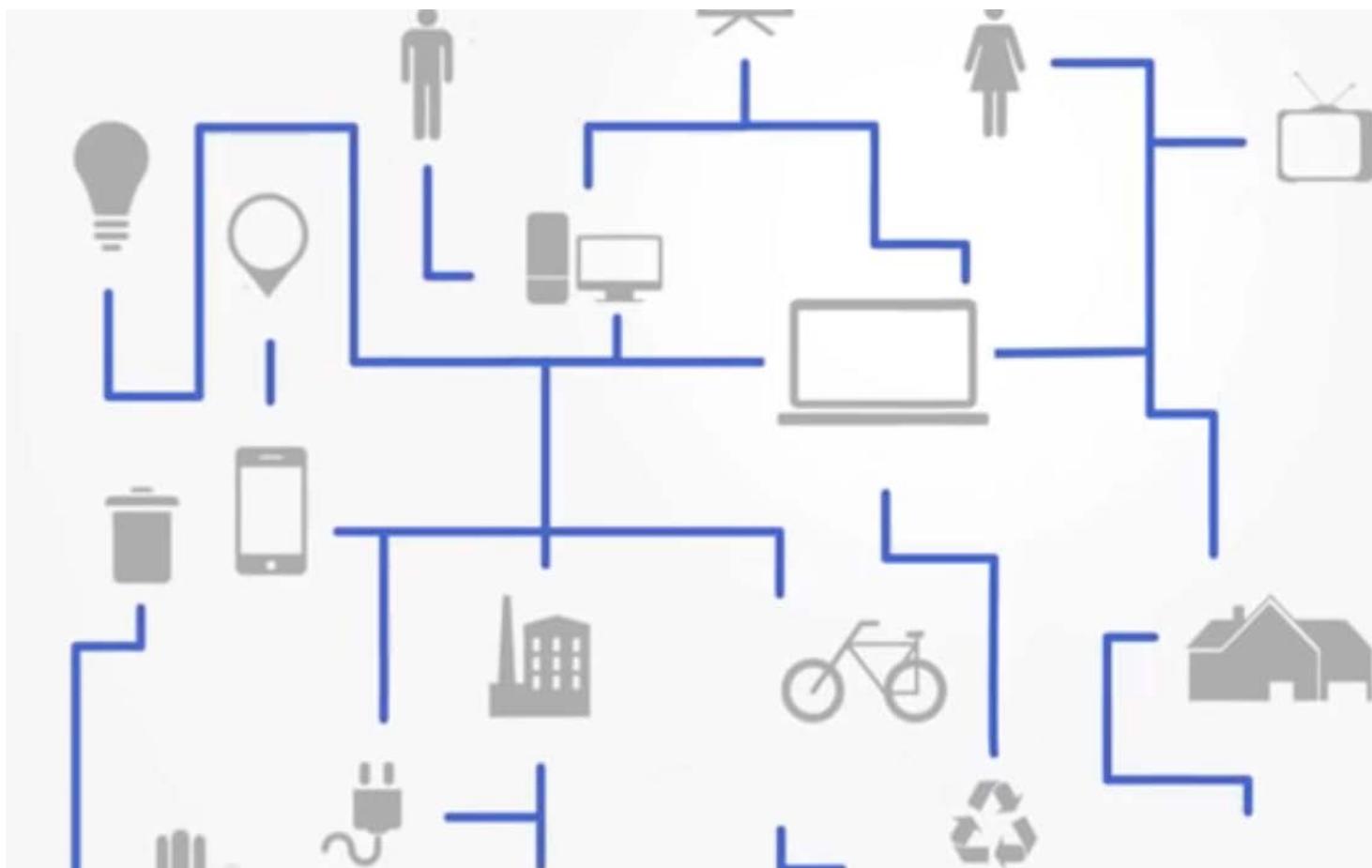
# Number



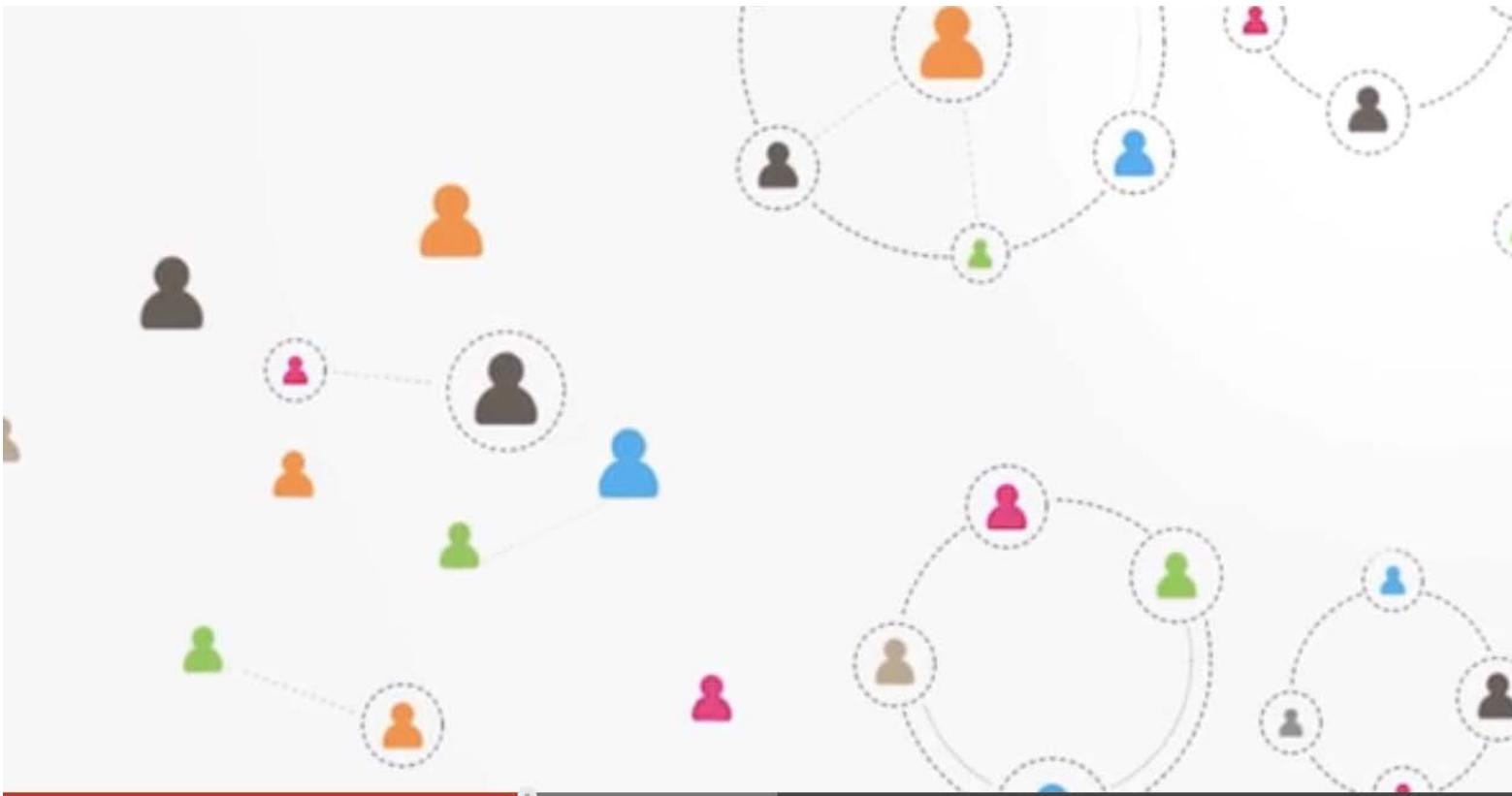
# DIVERSITY



# CONNECTIVITY



# ADAPTATION



# Complexity Theory

Safety is not a stable entity you can monitor and subsequently fill the 'gaps' by science

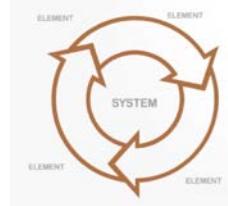
But: continuous flux, emergent, layered, changing patterns, interactions and reactions

Prigogine & Stengers (1984) in: *Order out of chaos*

“Safety is not a commodity to be tabulated, it is a chronic value ‘under your feet’ that infuses all aspects of practice. People create safety under resource and performance pressure at all levels of socio-technical systems. They continually learn and adapt their activities in response to information about failure.”

David D. Woods, Sidney Dekker et al (2010) in: *Behind Human Error*

# *Contrasting Models on Safety*



*Replace / support professionals*

*Technical solutions*  
*Design and standardization*  
*Protocols and guidelines*  
*Information technology*  
*Measurement and monitoring*  
*Incident analysis tools*

*Systems theory*



*Professionals create safety*

*Teamwork and leadership*  
*Culture of a high reliability organization*  
*Mindfulness and risk awareness*  
*Training and resilience*  
*Responsibilities*  
*Story telling*

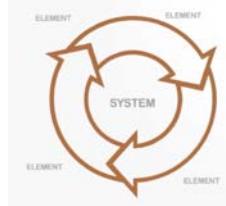
*Complexity theory*

# Safety

=

Balancing **systems theory** and **complexity theory**

# *Contrasting Models on Safety*



*Replace / support professionals*

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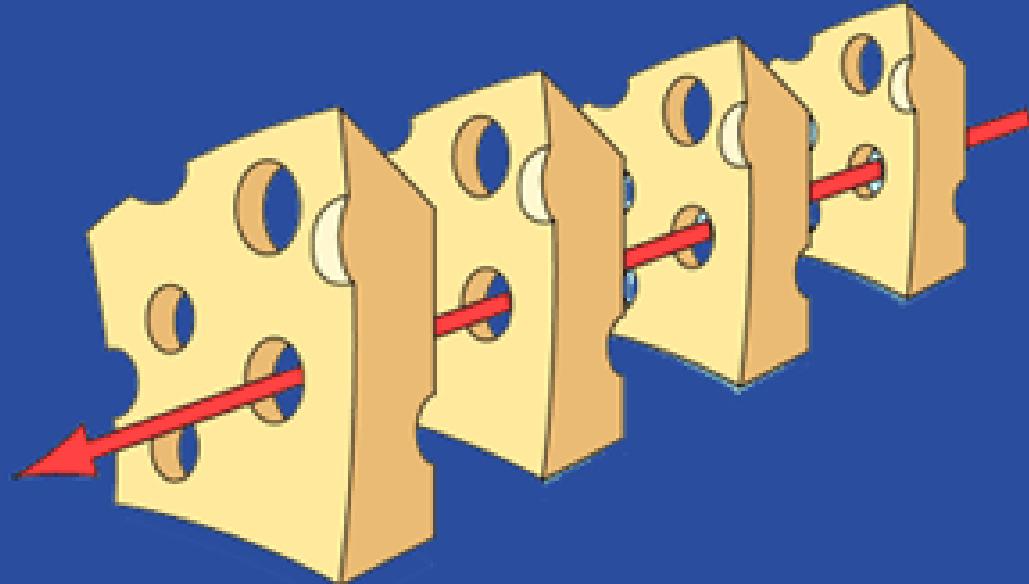
*Professionals create safety*

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*Resilient cultures*  
*Story telling*

*Systems theory*

*Complexity theory*

Dangers potentiels



Accidents



Contents lists available at ScienceDirect

## Safety Science

journal homepage: [www.elsevier.com/locate/ssci](http://www.elsevier.com/locate/ssci)



Technical Communication

# The complexity of failure: Implications of complexity theory for safety investigations

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### ABSTRACT

Complexity theory suggests that we see performance as an emergent property, the result of complex interactions and relationships. This can clash, however, with what stakeholders see as legitimate and normal in accident investigations. When systems fail, it is still common to blame components (e.g. human errors) and when they succeed spectacularly, to think in terms of individual heroism (e.g. the A320 Hudson River landing). In this paper, we lay out the contrast between a Newtonian analysis of failure that can be recognized in many efforts at safety analysis and improvement. It makes particular assumptions about the relationship between cause and effect, foreseeability of harm, time-reversibility and the ability to produce the "true story" of an accident. With inspiration from complexity theory, failures are seen as an emergent property of complexity. We explore what that means for safety science and work towards a post-Newtonian analysis of failure in complex systems.

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#### **4. Conclusion**

When accidents are seen as complex phenomena, there is no longer an obvious relationship between the behavior of parts in the system (or their malfunctioning, e.g. “human errors”) and system-level outcomes. Instead, system-level behaviors emerge from the multitude of relationships and interconnections deeper inside the system, and cannot be explained by those relationships or interconnections. Investigations that embrace complexity, then, might stop looking for the “causes” of failure or success. Instead, they gather multiple narratives from different perspectives inside of the complex system, which give partially overlapping and partially contradictory accounts of how emergent outcomes come about. The complexity perspective dispenses with the notion that there are easy answers to a complex systems event—supposedly within reach of the one with the best method or most objective investigative viewpoint. It allows us to invite more voices into the conversation, and to celebrate their diversity and contributions.

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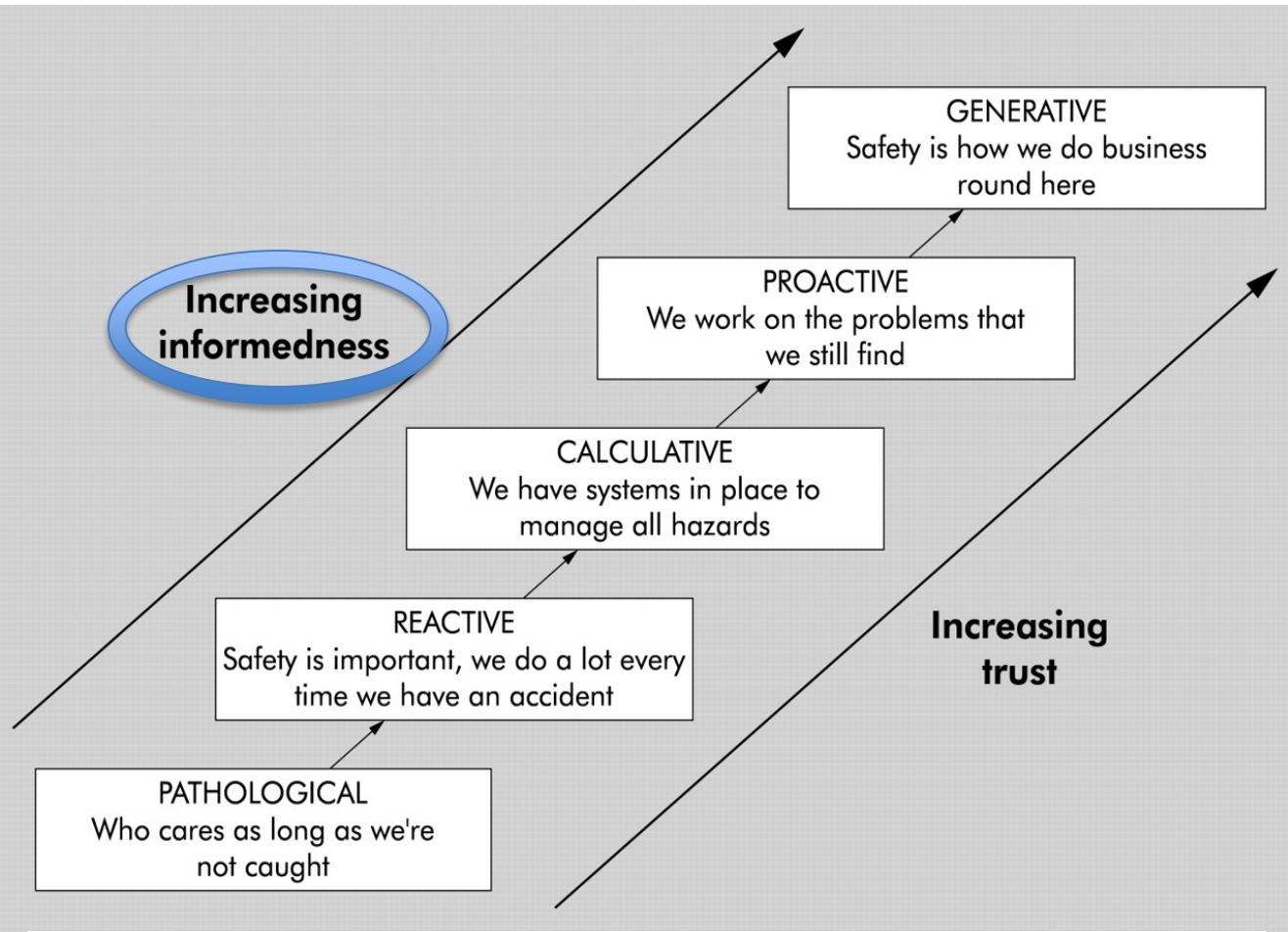


# Diversity as a Safety Value

*'With diversity, a system has a larger number of perspectives to view a problem with and a larger repertoire of possible responses'*

Sidney Dekker (2011) in: *Drift into failure*

# Safety Culture



Applying the Lessons of High Risk Industries to Health Care



# TRIP Nationaal bureau voor hemovigilantie en biovigilantie

HEMOVIGILANTIE

BIOVIGILANTIE

## Welkom bij TRIP

TRIP staat voor "Transfusie- en Transplantatiereacties in Patiënten ". Onze kerntaken zijn het registreren, analyseren en rapporteren van ingezonden meldingen over reacties en incidenten bij de toepassing van bloedproducten, humane cellen of weefsels. Uiteindelijk is het doel van hemo- en biovigilantie het verhogen van de patiëntveiligheid in Nederland.

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Laatste nieuws

Agenda

Nieuws van de EC: revisie van de EU Directives voor bloed, weefsels en cellen en informatie over transfusies en transplantaties

Melding van de maand november 2020: Opnieuw een hoofdrol voor het etiket - Bijna ongeluk

COVID-19 and supply of SoHO in the EU/EEA – Second update, 10 December 2020

13e TRIP Biovigilantie symposium