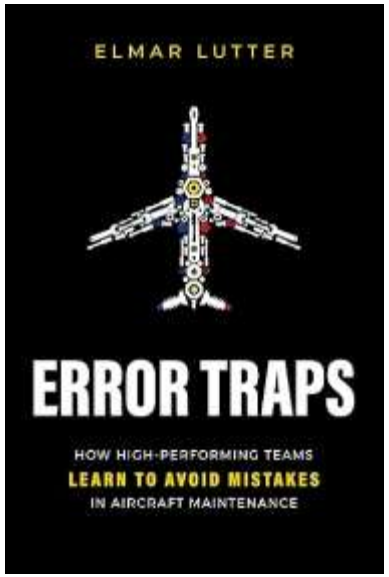
Elmar Lutter



2017 - 2024	President & CEO	Lufthansa Technik Philippines
Since 2021	Doctorate, Business Administration (ongoing)	Paris School of Business, France

Speaking the Unspeakable

Intentional Noncompliance in Aircraft Maintenance

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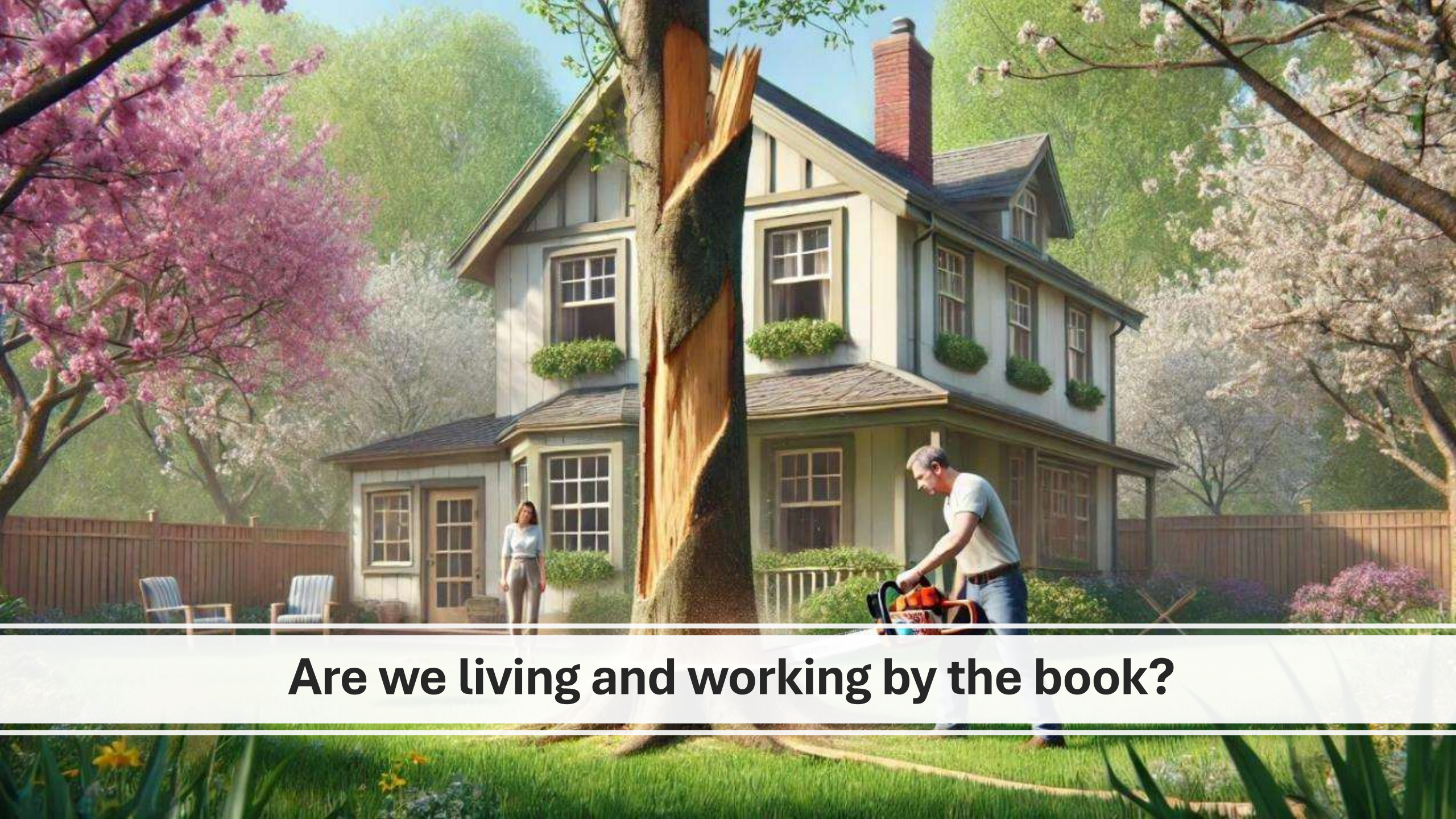
Elmar Lutter

Paris School of Business



Are we living and working by the book?

Let’s talk about intentional noncompliance

Are we living and working by the book?

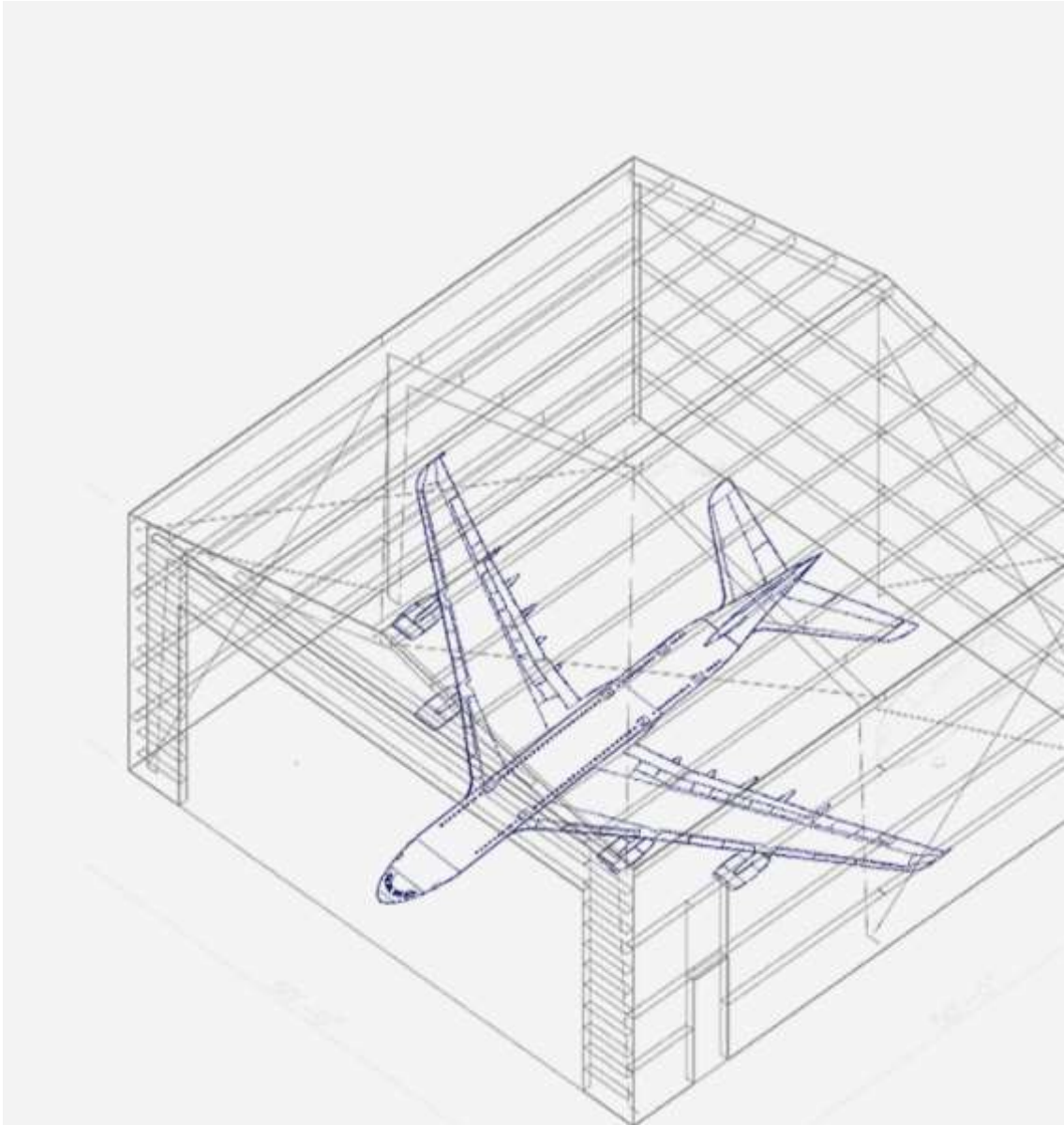
- 0 – Rules must be followed no matter what
- 1 – Rules must be followed unless safety is at stake
- 2 – Rules can never be perfect

Rule management in aircraft maintenance

Can we tolerate any violation of rules?

Model 1 – Rules provide guidance, noncompliance shall be eliminated

Model 2 – People constantly adapt rules to real work requirements



Rules are followed in aircraft maintenance…

How many respondents reported not following the official procedure for the task?

34%

(McDonald et al., 2000)

Rules are followed in the office…

How many board members have had concerns about misconduct within their organization that they chose not to report?

43%

(EY, Global Integrity Report, 2024)

Rules are followed in the air…

How many errors and violations happen in the air?

1.84 errors per flight in normal airline service, many of which violations

(Helmreich et al., 2001)

Why deviate? – The dilemmas

Goal conflicts in production

Efficiency-thoroughness trade-off (Hollnagel, 2009)

Consistency-reasonableness trade-off

Errors and violations

Reason's General Error Modeling System (GEMS)

	Reason (1990)
Violations	
	Exceptional
	Routine
	Acts of sabotage
(Ordinary) Errors	Slips, Lapses, Mistakes

Errors and violations

The evolution of Reason's GEMS taxonomy

	Reason (1990)	Reason (1997)	Hudson (1998)	Helmreich (2001)	Reason & Hobbs (2017)	Bannister-Tyrrell (2020)
Violations		Optimizing/Thrill-seeking	Optimizing	Intentional Noncompliance	Optimizing	Optimizing
	Exceptional	Exceptional	Exceptional			Exceptional
						Innovative
		Necessary	Situational		Situational	Situational
	Routine	Routine	Routine		Routine	Routine
			Unintentional			Unintentional
	Acts of sabotage					
(Ordinary) Errors	Slips, Lapses, Mistakes	Slips, Lapses, Mistakes	Slips, Lapses, Mistakes	Procedural, Communication, Proficiency, Operational decision making	Slips, Lapses, Mistakes	Slips, Lapses, Mistakes

Errors and violations

A new proposal

	Types established	Types proposed
Violations	Optimizing	Conscious
	Exceptional	
	Situational	Casual
	Routine	

Errors and violations

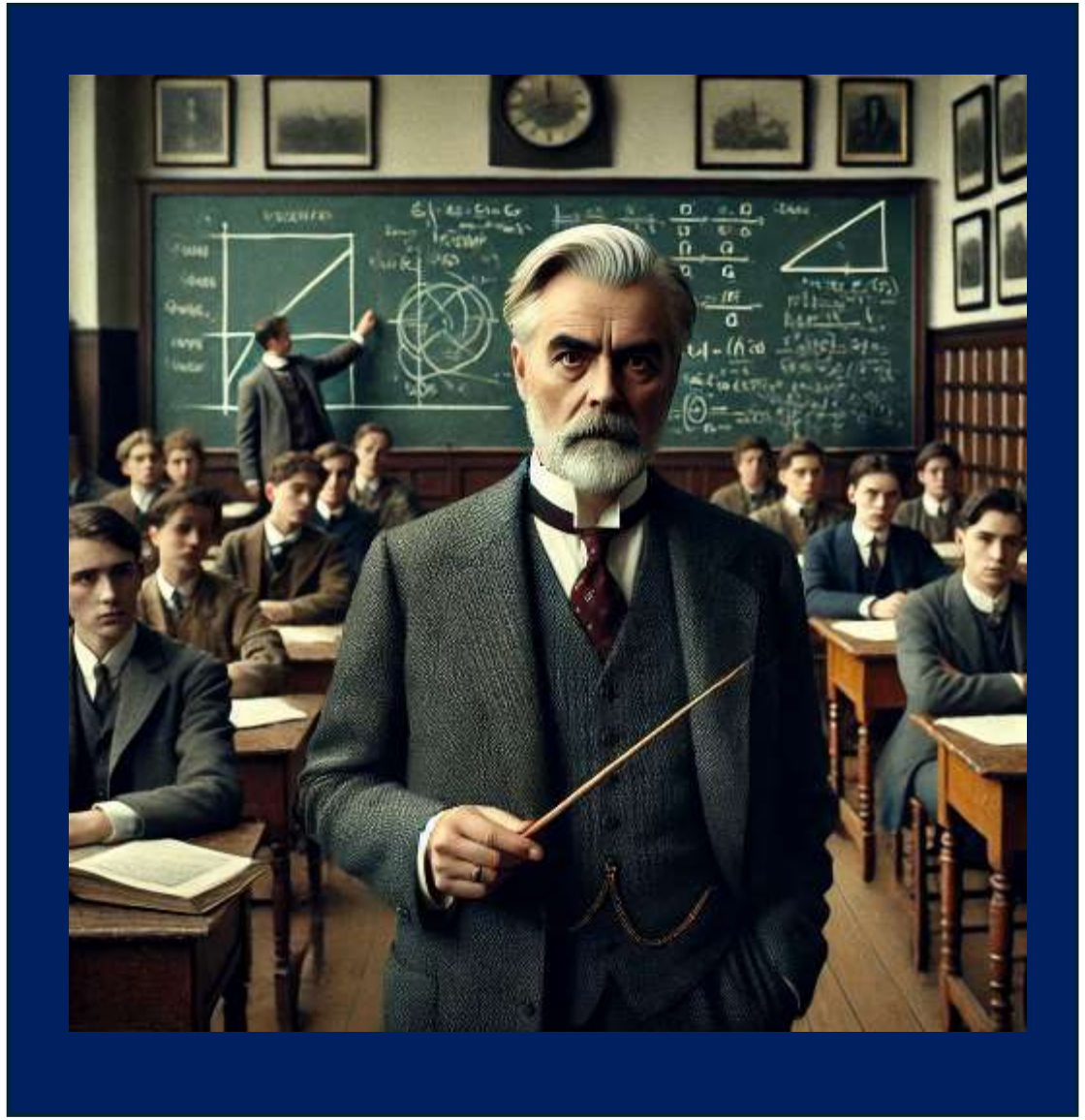
A new proposal

	Types established	Types proposed	Subtypes proposed
Violations	Optimizing	Conscious	Indefensible
	Exceptional		Justified
	Situational		Excusable
	Routine	Casual	Rationalized
			Indifferent

Don’t we need unambiguous guidance?

Guidance in model 1: Follow the rules. If that’s not possible there is a process, too.

Guidance in model 2?



Ambiguity will lead to rationalization and normalization of noncompliance

Five ways:

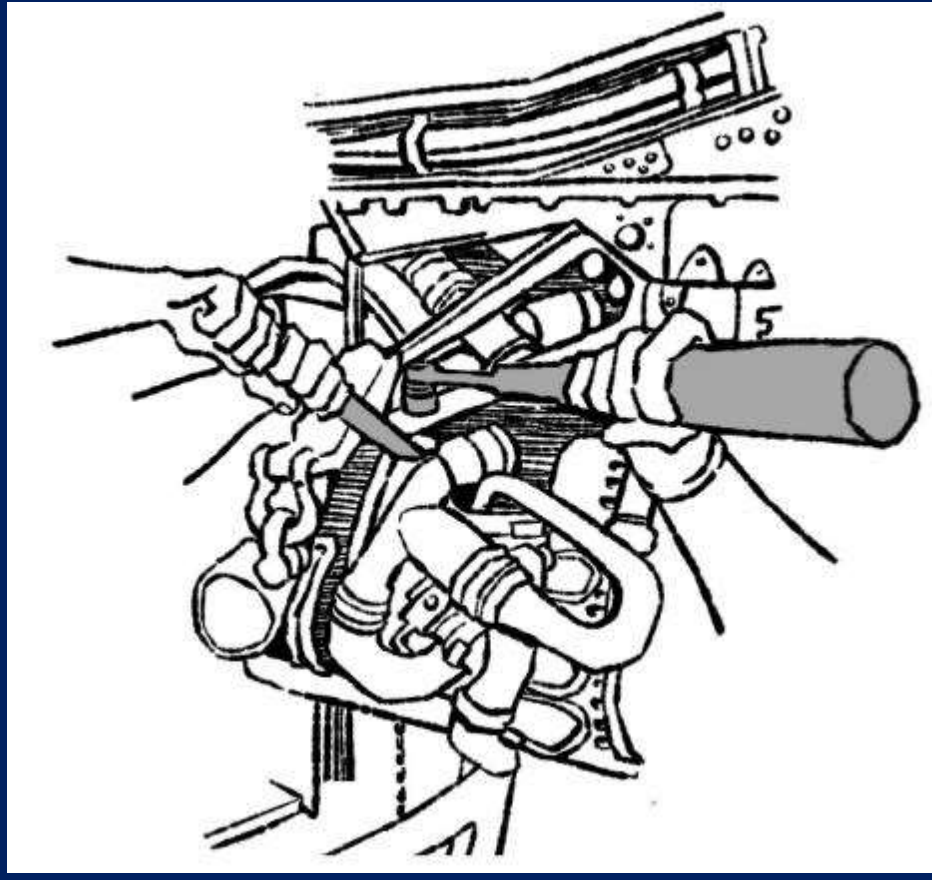
1. De minimis

Ambiguity will lead to rationalization and normalization of noncompliance

Five ways:

1. De minimis

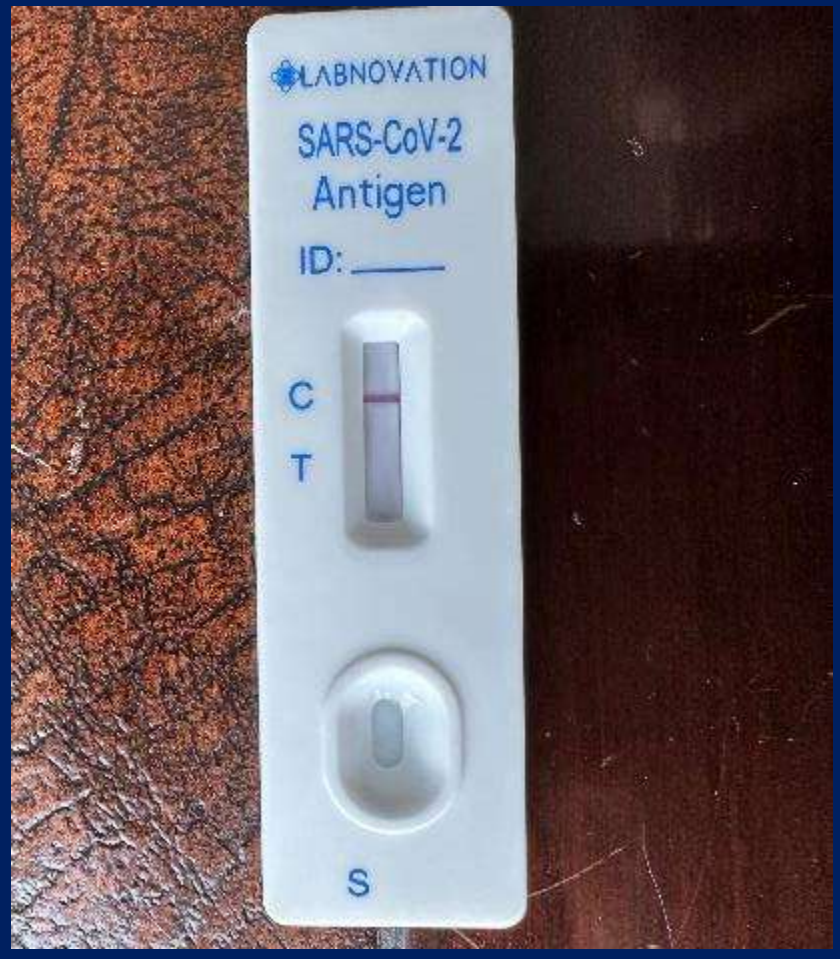
2. End result the same



Ambiguity will lead to rationalization and normalization of noncompliance

Five ways:

1. De minimis
2. End result the same
3. **Spirit over letter**



Ambiguity will lead to rationalization and normalization of noncompliance

Five ways:

1. De minimis
2. End result the same
3. Spirit over letter
4. Nonsense

Ambiguity will lead to rationalization and normalization of noncompliance

Five ways:

1. De minimis
2. End result the same
3. Spirit over letter
4. Nonsense
5. Unfairness

The bigger picture

Perspective	**Compliance Culture** (Rule management)	**Safety and Performance Culture** (Responsibility for safety)	**Just Culture** (Response to human error and deviations)
Formal	Model 1 (rules must be followed)	Positive safety culture, people should be mindful and resilient	Traditional (“unacceptable behavior will not be tolerated”)
Pragmatic	“Rules should be flexible but don’t deviate without a good reason.”	Systems and the individuals within both have obligations and interact, producing success or failure.	Responsive Regulation (minimally sufficient deterrence)
Critical	Model 2 (rules are input for decision making)	“The system is to blame.”	Restorative Just Culture (blame-free)

Summary (1/2)

The regulatory and mainstream perspective is simple – rules must be followed – and successful – less than one in a million scheduled flights leads to fatalities (“Model 1”).

But in fact, deviations are widespread, arguably necessary and often excusable (“Model 2”).

How to explain this to our mechanics (“unambiguous guidance”)?

Summary (2/2)

There are casual and conscious violations.

Avoid casual violations.

If you deviate consciously, do that only if you have very good reasons which you could defend.

Don’t deviate without good reasons.

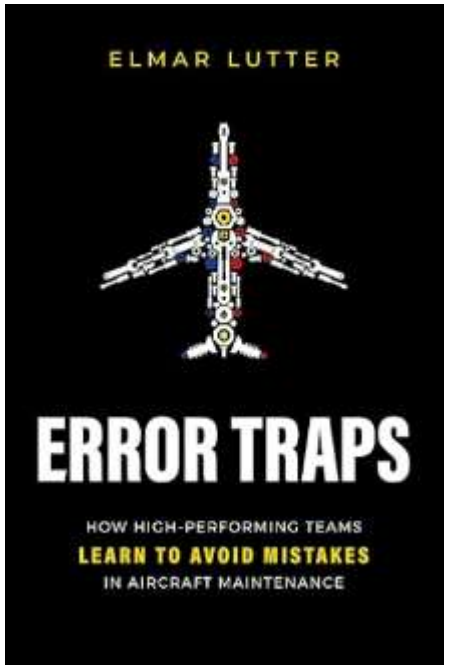
Ambiguity leads to rationalization and normalization of noncompliance.

Further reading

Elmar Lutter & Francesco Schiavone
Does working by the book become optional? Compliance, dilemmas, and violations in aircraft maintenance, 2024
SSRN Preprint
www.ssrn.com

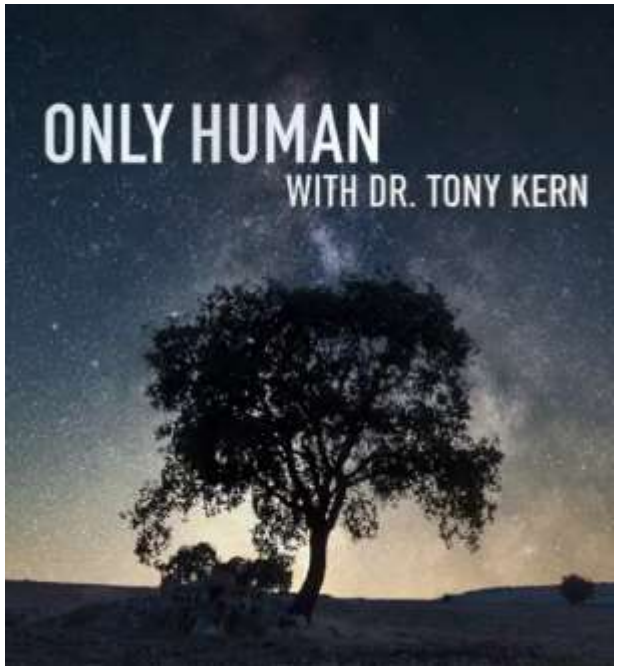
Does working by the books become optional? Compliance, violations, and dilemmas in aircraft maintenance

Elmar Lutter
Error Traps: How High-Performing Teams Learn To Avoid Mistakes in Aircraft Maintenance, 2023
ISBN-10 1642257842
www.amazon.com

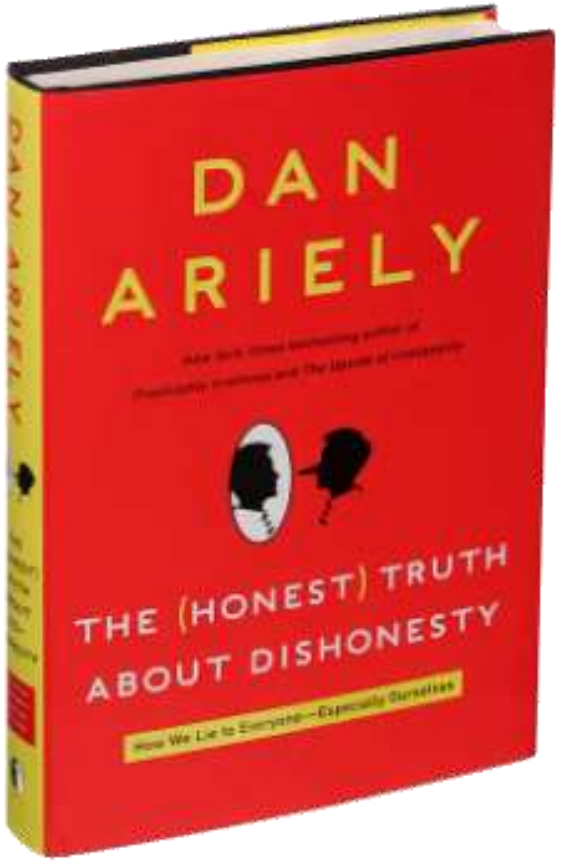


Further reading

Tony Kern
Only Human - Change of Command with Special Guest Elmar Luttar
Apple Podcast, 2024
[Only Human with Dr. Tony Kern on Apple Podcasts]



Dan Ariely: The (Honest) Truth About Dishonesty: How We Lie to Everyone – Especially Ourselves, 2013



Q&A

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