



UiT The Arctic University of Norway

Organisational resilience

How can we build it?

DRM online training series (Coventry University)

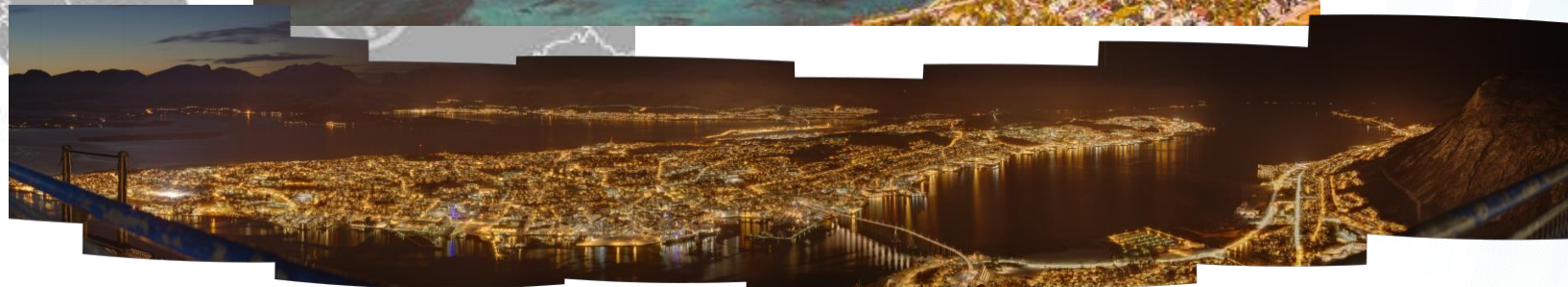
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07 November 2024



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Tromsø



Way forward

- Connecting risk and resilience.
- What is organizational resilience (OR)?
 - How do we understand and conceptualise OR?
- How can we model organisational resilience?

How to build
organisational
resilience?



«Entry» ticket

1 min, write in chat or just talk ...

What is the 1st thing that comes to your mind when you think about organizational resilience?

please mention at least 1 thing 😊.



The concept of resilience is becoming a pervasive idiom of global governance

(Walker and Cooper, 2011, p. 144)

Without increased action to build resilience to systemic risk, the United Nations Sustainable Development Goals cannot be achieved.

UN, Global Assessment Report on Disaster Risk Reduction 2022

How can we address all dimensions of disaster risk?

Priority 1: Understanding disaster risk.

Priority 2: Strengthening disaster risk governance.

Priority 3: **Investing in disaster risk reduction for resilience.**

Priority 4: Enhancing disaster preparedness for effective response.

Sendai Framework on Disaster Risk Reduction 2015–2030



Academic status of the concept

Research has grown dramatically in recent decades. Extremely diverse.

Lacking

- consistent definition
- overarching theoretical framework
- understanding of the specific capabilities
- empirical research (NB)

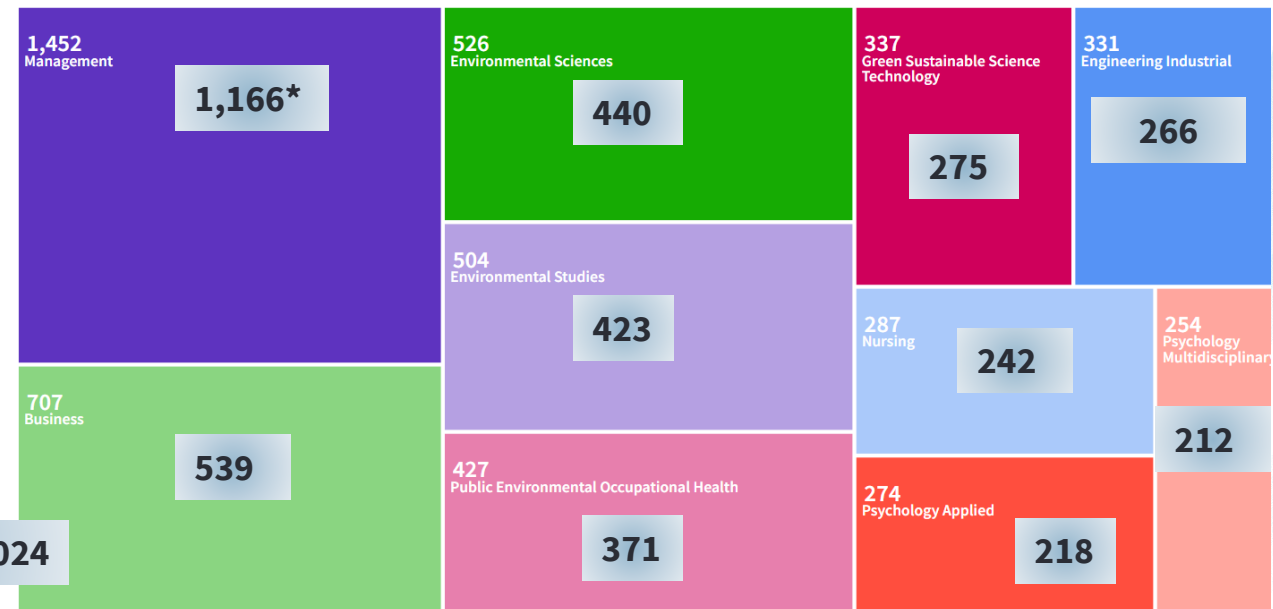
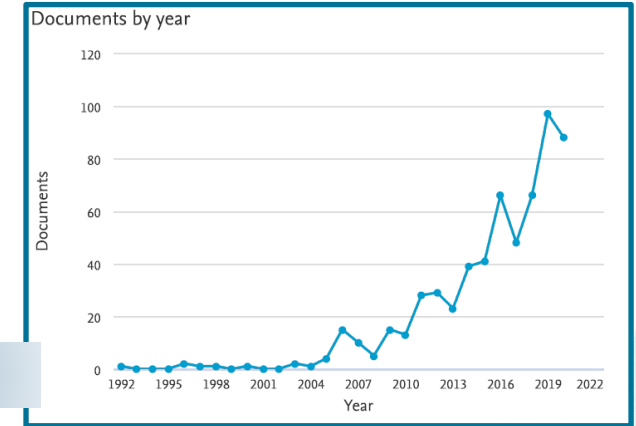
The question of how to achieve OR remains unanswered.

- Chen et al. 2021

* Numbers from 2023

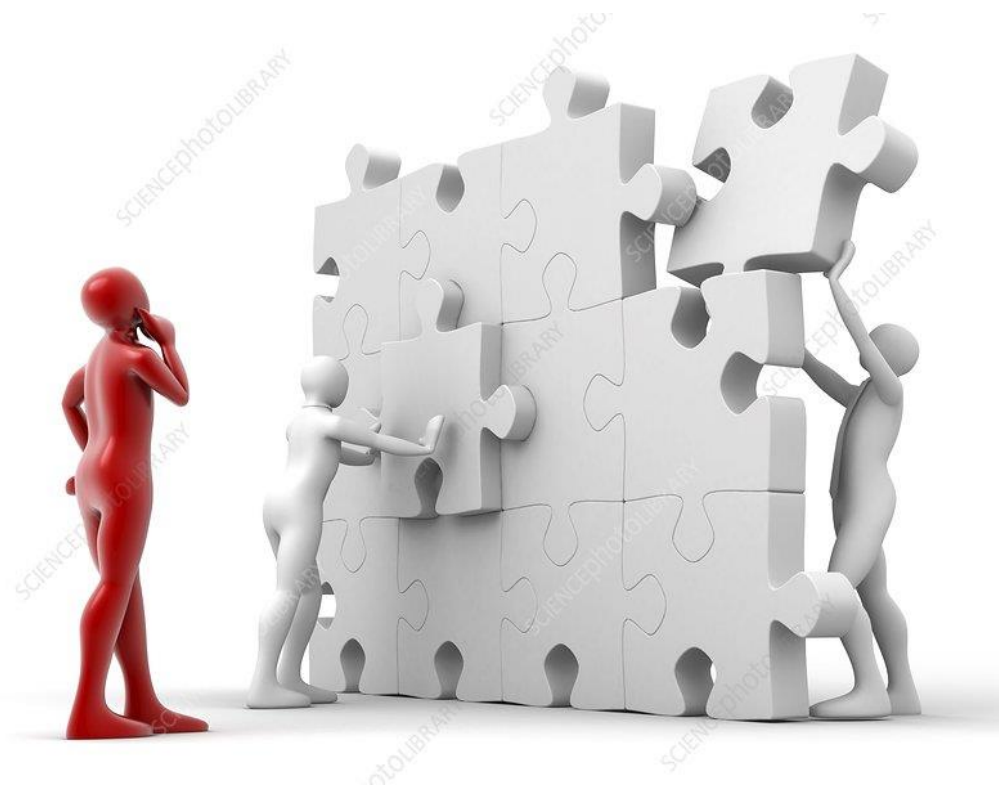
Web of Science, 2024

Scopus



A major organizational challenge is

how to achieve resilience in practice



(Boin and Lodge 2016; Ducheck 2020; Chen et al. 2021; Galy et al., 2023)

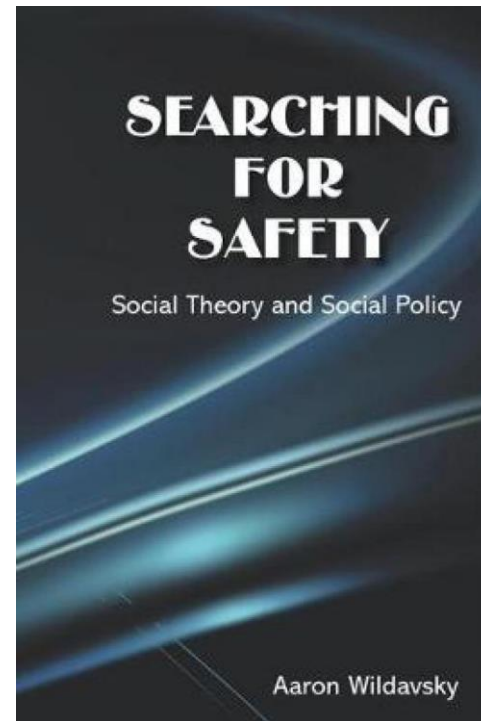
***How do we understand
organizational
resilience?***



Resilience: one strategy for decision-makers dealing with risk and uncertainty

“**Anticipation** is a mode of control by a central mind; efforts are made to *predict* and *prevent* potential dangers before damage is done...

effective in coping with known threats and problems



Anticipation vs Resilience

Resilience is the capacity to cope with *unanticipated dangers* after they have become manifest, *learning to bounce back.*“

(Wildavsky 1988, p. 77)

OR is about organizational **ability to cope**, i.e. respond

i.e. not only to survive but also to retain more or less the same structure and functions

- OR “... is a fundamental quality (...) to **respond productively** to significant change that disrupts the expected pattern of event without engaging in an extended period of regressive behavior” (Horne and Orr, 1998, p. 31).
- OR is “organizational capacity to **absorb the impact** and **recover from** the actual occurrence of an extreme weather event” (Linnenluecke et al., 2012, p. 18).
- Recovery resilience means “**bouncing back** to a state of normalcy” (Boin and Eeten, 2013, p. 431)

The key focus is on coping strategies, proving stability, maintaining a positive mindset, and a quick ability to develop **feasible** solutions to resume expected performance levels

OR is about organizational **ability to adapt**

- OR is the “ability of an organization to **absorb and adapt** in a changing environment” (ISO, 2017).
- OR is “the **maintenance of positive adjustment under challenging conditions** such that the organization emerges from those conditions strengthened and more resourceful” (Vogus and Sutcliffe, 2007, p. 3418).
- OR capacity is an “... ability to **effectively absorb, develop situation-specific responses to, and ultimately engage in transformative activities to capitalize [i.e. benefit] on disruptive surprises** that potentially threaten organization survival” (Lengnick-Hall et al., 2011, p. 244).

The key focus is on:

- ✓ **active and purposeful coping**
- ✓ **organisational ability to change and adjust to improve organisational processes and capabilities**
- ✓ **organizational capabilities that enable to adapt, integrate, and reconfigure internal and external resources and competences to match the requirements of changing conditions**

Resilience implies **more than** a *specific adaptation*

NB: competence in one period does not predict later competence in a linear deterministic way; rather **competence in one period increases the probability of competence in the next** or any kind of unexpected event.

To be resilient is to be **vitaly prepared** for adversity which requires “**improvement in overall capability**, i.e., a generalized capacity to investigate, to learn, and to act, **without knowing in advance** **what one will be called to act upon**”.

(Wildavsky, 1991: 70)

«Reactive» vs «Proactive» resilience

“A society relying on **reactive resilience** approaches the future by strengthening the status quo and making the present system resistant to change, whereas one that develops **proactive resilience** accepts the inevitability of change and tries to **create a system that is capable of adapting to new conditions and imperatives**“

- Klein, Nicholls and Thomalla 2003, p. 39

... has been also termed **STRATEGIC** resilience

... depends on the change **before the change becomes desperately obvious** (Hamel and Välikangas, 2003), and thus entails continual metamorphosis (Morais-Storz et al., 2016).

OR is about organizational ability **to anticipate**

- R is the “**capacity to cope with unanticipated dangers** after they have become manifest, learning to bounce back” (Wildavsky, 1991, p. 77).
- OR potential “is **more than mere survival**; it involves **identifying potential risks** and **taking proactive steps** (...) to ensure that an organisation thrives in the face of adversity” (Somers, 2013, p. 13).
- **Precursor resilience** “**prevents budding problems** from escalating into a full-blown crisis or breakdown” (Boin and Eeten, 2013, p. 431).
- R is “the incremental capacity of an organisation to **anticipate and adjust** to the environment” (Ortiz-de-Mandojana and Bansal, 2015, p. 6)

... is closely connected to adaptation as one of the key techniques to provide for ongoing adaptation (Rerup, 2001).

How to ensure ongoing adaptation?

Claus Rerup, 2001: '*Resilience as rule following and rule breaking*'

1. **Anticipation:** anticipatory organizations **actively try to forecast the future** in order to determine ways in which they can avoid the success and failure trap.

Success trap: result of blindly repeating for too long the experience of the past (March 1995).

Failure trap: result of trying out new ideas, strategies, concepts and fads without staying long enough with these innovations in order to realize their capabilities (Levinthal & March, 1993).

How to ensure ongoing adaptation?

Rerup, 2001: '*Resilience as rule following and rule breaking*'

- 1. Anticipation:** anticipatory organizations actively try to forecast the future in order to determine ways in which they can avoid the success and failure trap.

Stop and think? 

How to solve this dilemma?

"... the uncertainties are so substantial that we cannot tell in advance which, if any, among a multitude of hypothesized dangers will actually turn out to be real ones."

- Wildavsky, 1988, p. 77

Regardless of how mindful a social system is, it will never be able to imagine, simulate, anticipate, and prepare for every error or contingency in advance

- March, 1995

Anticipation can create a false sense of security and can compromise the coping ability of the organization

- Rerup, 2001

How to ensure ongoing adaptation?

Rerup, 2001: '*Resilience as rule following and rule breaking*'

1. **Anticipation**: anticipatory organizations **actively try to forecast in order to** determine ways in which they can **avoid** the success and failure trap.
2. **Improvisation**: focus on building skills in order to **cope with the failure or success trap** when the organization experiences these traps despite their anticipatory efforts.

... is essential to provide adaptation to an unpredictable world

OR is not only a cognitive activity involving anticipatory preparation but also a developmental process involving expansion of improvisation skills (Rerup, 2001). Mindful organizations invest in building experiences with **both of these techniques** because **each** of them **improves distinct aspects of the adaptive capability of the organization** (Wildavsky, 1988).

When organisations adapt they may use different strategies

Resilience is produced by both «**exploiting**» old certainties (rules) and by «**exploring**» new alternatives.

e.g., changing SOPs to increase efficiency

e.g., changing organisational structure

(March, 1991)

* NB “**organisational ambidexterity**” refers to an organisation's ability to align and be efficient in its management of today's business demands while simultaneously being adaptive to changes in the environment (Duncan, 1976). It is about the ability of an organization to both explore and exploit. Ambidexterity leads to higher performance, but at the same time, it emphasises that the tension between two distinct capabilities is a key challenge.

Organizations should build *resilience potential*

- ✓ Anticipation capabilities help to identify potential risks and take proactive steps against them.

e.g., develop contingency plans

- ✓ Anticipation capabilities lead to the development of a *resilience potential*—that means “*resilience that is not presently evident or realized*” (Somers 2009, p. 13).

e.g., apply contingency plans in action

- ✓ However, organizations must also possess *coping capabilities* to realize their resilience potential. Resilient organizations must possess proactive capabilities (*resilience potential*) and reactive capabilities (*resilience realization*).

Researchers have also used the terms *capacity for resilience* (i.e. factors that increase the probability for resilience to be demonstrated) and *demonstration of resilience* (i.e. the actual demonstration of positive adaptation).
- Britt and Sawhney (2020)

Putting together the three abilities ...

OR is “an organization’s ability

- to **anticipate** potential threats,
- to **cope** effectively with adverse events, and
- to **adapt** to changing conditions”

(Duchek, 2020, p. 6)



Stop and think



***How do we distinguish
resilient organizations
from less resilient ones?***

Resilience is an **outcome**

When organizations **perform well during crisis** or bounce back from interruptions (e.g., Horne and Orr 1998).

The most frequently mentioned attributes that may enhance OR include:

- ✓ general resources, i. e. adequate resources, redundancy;
- ✓ collective behaviors, positive relationships;
- ✓ specific organizational strategies or processes

One of the first and most important conceptualizations: Weick, 1993, The Collapse of Sensemaking in Organizations: The Mann Gulch Disaster: identified 4 potential courses of R: improvisation and bricolage (i.e. construction), virtual role systems, an attitude of wisdom, and respectful interaction. These four principles facilitate collective sensemaking and, therefore, can help to avoid dramatic consequences from unexpected events.

The Collapse of Sensemaking in Organizations: The Mann Gulch Disaster
Karl E. Weick
University of Michigan

The death of 13 men in the Mann Gulch fire disaster, made famous in Norman Maclean's *Young Men and Fire*, is analyzed as the interactive disintegration of role structure and sensemaking in a minimal organization. Four potential sources of resilience that make groups less vulnerable to disruptions of sensemaking are proposed to forestall disintegration, including improvisation, virtual role systems, the attitude of wisdom, and norms of respectful interaction. The analysis is then embedded in the organizational literature to show that we need to reexamine our thinking about temporary systems, structuration, nondisjunctive intimacy, intergroup dynamics, and team building.*

The purpose of this article is to reanalyze the Mann Gulch fire disaster in Montana described in Norman Maclean's (1952) award-winning book *Young Men and Fire* to illustrate a gap in our current understanding of organizations. I want to focus on two questions: Why do organizations unravel? And how can organizations be made more resilient? Before doing so, however, I want to strip Maclean's elegant prose away from the events in Mann Gulch and simply review them to provide a context for the analysis.

THE INCIDENT

As Maclean puts it, at its heart, the Mann Gulch disaster is a story of a race (p. 224). The smokejumpers in the race (excluding foreman "Wag" Wagner Dodge and ranger Jim Harrison) were ages 17–28, unmarried, seven of them were forestry students (p. 217), and 12 of them had seen military service (p. 220). They were a highly select group (p. 271) and often described themselves as professional adventurers (p. 26).

A lightning storm passed over the Mann Gulch area at 4:40 on August 4, 1949 and is believed to have set a small fire in a dead tree. The next day, August 5, 1949, the temperature was 97 degrees and the fire danger rating was 74 out of a possible 100 (p. 42), which means "explosive potential" (p. 79). When the fire was spotted by a forest ranger, the smokejumpers were dispatched to fight it. Sixteen of them flew out of Missoula, Montana at 2:30pm in a C-47 transport. Wind conditions that day were turbulent, and one smokejumper got sick on the airplane, didn't jump, returned to the base with the plane, and resigned from the smokejumpers as soon as he landed (This resignation had caught up with him," p. 51). The smokejumpers and their cargo were dropped on the south side of Mann Gulch at 4:10pm from 2000 feet rather than the normal 1200 feet, due to the turbulence (p. 48). The parachute that was connected to their radio failed to open, and the radio was pulverized when it hit the ground. The crew met ranger Jim Harrison who had been fighting the fire alone for four hours (p. 52) and collected their supplies. About 5:10 (p. 57) they started to move along the south side of the gulch to surround the fire (p. 62). Dodge and Harrison, however, having scouted ahead, were worried that the thick forest near which they had landed might be a "death trap" (p. 64). They told the second in command, William Hellman, to take the crew across to the north side of the gulch and

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This is a revised version of the Karl Weick's lecture presented at the University of Michigan, April 23-24, 1993. The 1993 lecture elaborated the life and people featured in the lecture—Jim Harrison, Ted Reynolds, and their families—who were born in 1903, which meant this lecture also addressed their film biographies I am grateful to Linda Erdreich, Debra Meyerson, Robert Sutton, Doug Conrath, and Karen Weick for their help in preparing both drafts of this material. I also want to thank John de Maanen, J. Richard Hackman, Linda Fine, and the anonymous AOS reviewers for their help with later drafts.

©2013 Administrative Science Quarterly, 38 (1993): 628-652

“Good outcomes are not enough to define resilience”

(Sutcliffe and Vogus 2003, p. 108)

Stop and think
How does
conceptualizing OR as
and outcome limit us?



“Organizational resilience is **not a static attribute** that organizations either do or do not possess. It is a **path-dependent, latent set of capabilities** that organizations develop by noticing and correcting for maladaptive tendencies that help them to cope with unexpected circumstances”

(Ortiz-de-Mandojana and Bansal, 2016, p. 1617)

Stop and think

What does this imply for our discussion?



Resilience is also a **process**

Process approaches

- provide important **insights into the resilience construct**.
- define discrete **elements of the resilience process** and thus contribute to opening the black box between resilience resources (inputs) and resilience outcomes (outputs).
- recognize the **dynamic nature of resilience** and thus provide a foundation for studying the **long-term development** of organizational resilience.

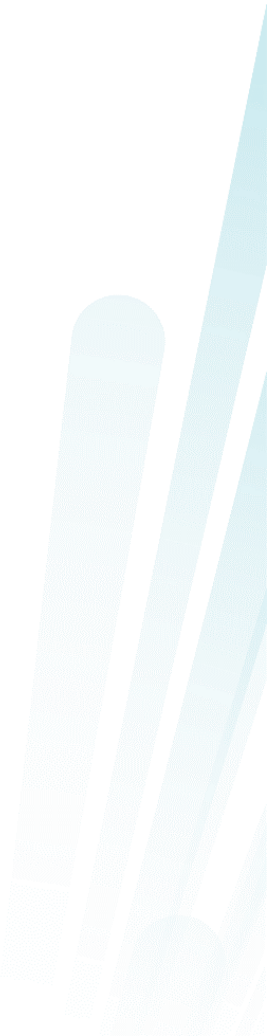
but they are **based on different definitions** of OR and therefore vary in the type and number of suggested process stages.

Resilience is further a set of **organizational capabilities**

- Offer important insight into **how resilience may be achieved** in practice.
- Provide insight into the **internal workings** of resilience and conditions for its development.
 - operational and strategic capabilities
 - general capabilities (eg. cognitive, behavioral, contextual) and organizational routines that trigger OR

Resilience capacity “is derived from a **set of specific organizational capabilities, routines, practices, and processes** by which a firm conceptually orients itself, acts to move forward, and creates a **setting of diversity and adjustable integration**” (Lengnick-Hall et al., 2011, p. 245).

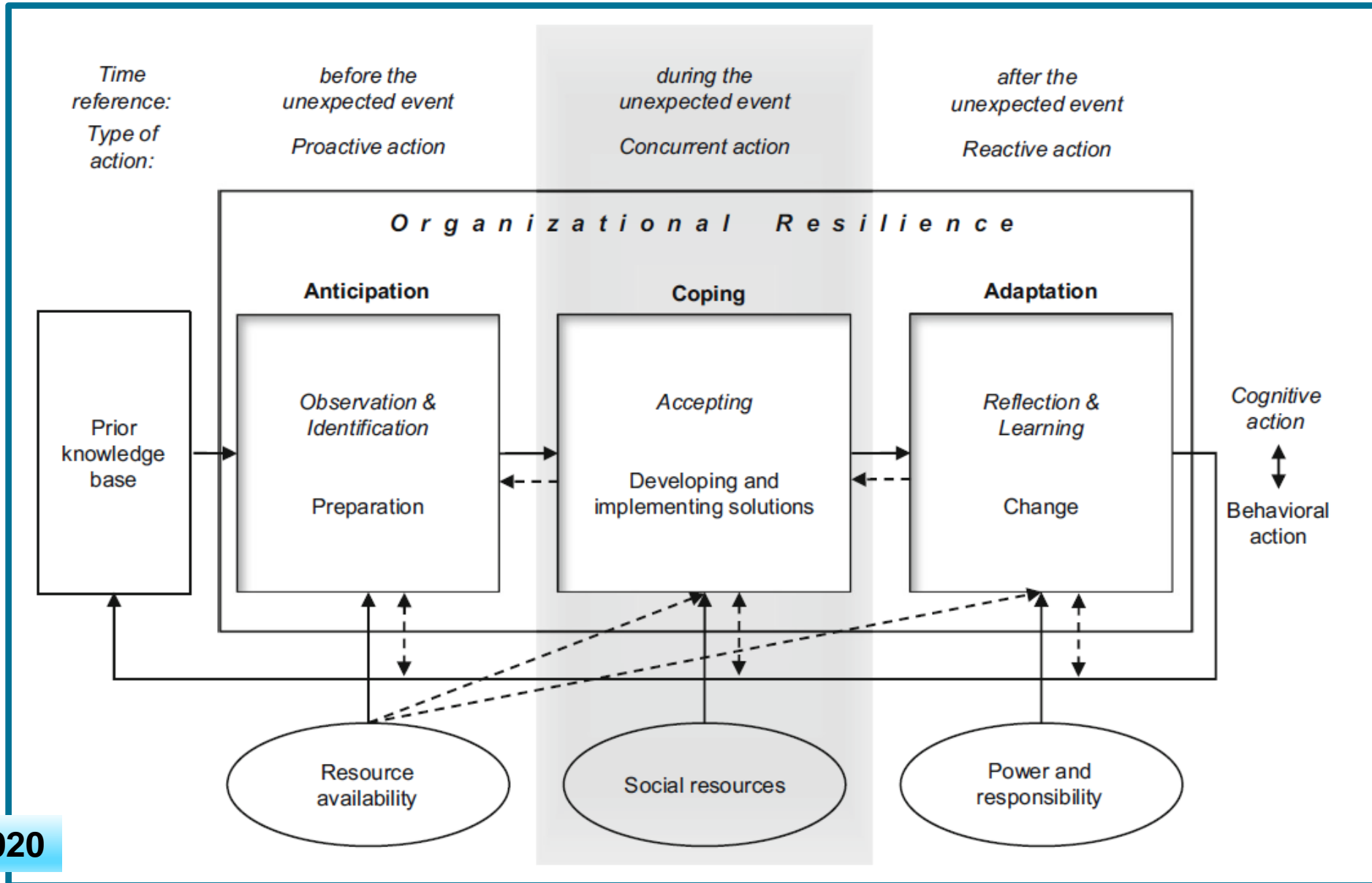
***How can we model
organizational
resilience?***



Why is it difficult to measure / model OR?

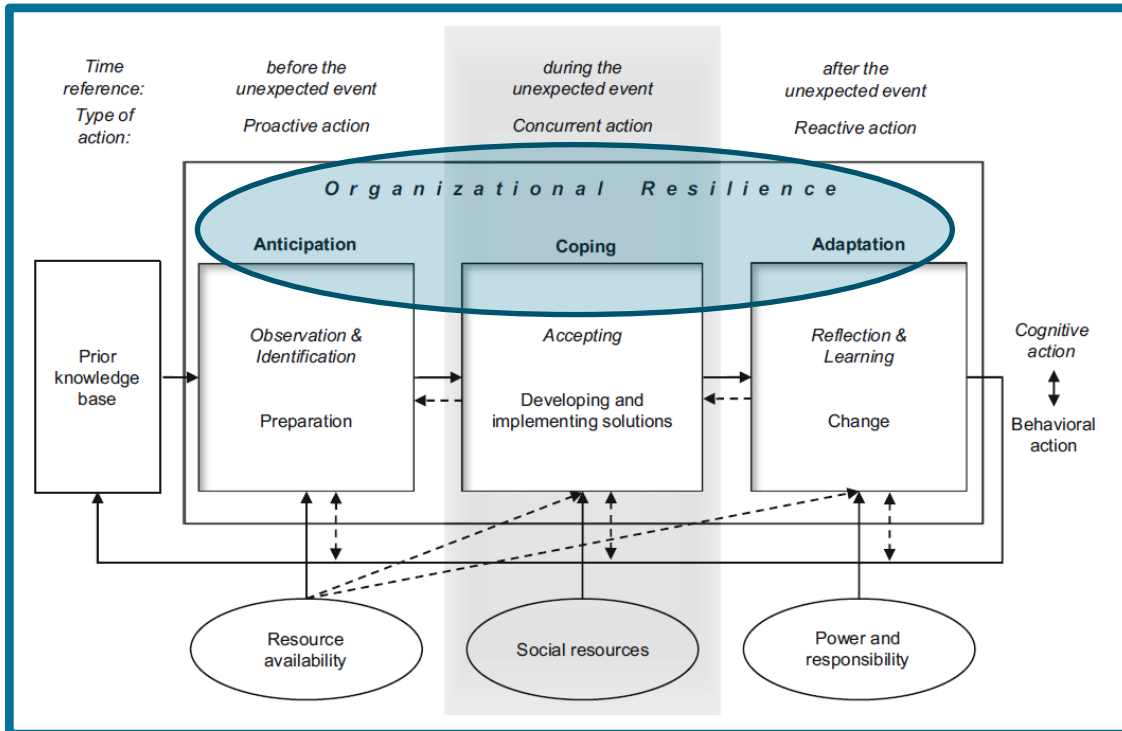
- Resilience is a dialectical phenomenon, a **unity of opposites** (Giustiniano et al, 2018).
- Resilience is **relative, emerging** and **changing** in line with specific circumstances and challenges: it is a **path-dependent** organizational feature that grows and develops over time (Boin, Comfort, and Demchak 2010 ; Sutcliffe and Vogus 2003; Gittell et al., 2006 ; Giustiniano et al, 2018, p. 130).
- OR is **dynamic** (Lengnick-Hall and Beck, 2005), i.e. OR is not something that organizations have; it is **something that they express or fail to express over time**.
- Resilience is **often latent** in organization before the actual need for it arises (Somers, 2009).
- OR is a “**sustained target movement**” (Suryaningtyas D., et al. 2019). Construction of OR is “a **never-ending story**” (Giustiniano et al., 2018, p. 124).
- OR **cannot always be measured directly**, as its benefits may take a long time to become evident.

A capability-based conceptualization of OR



A capability-based conceptualization of OR

the three resilience stages



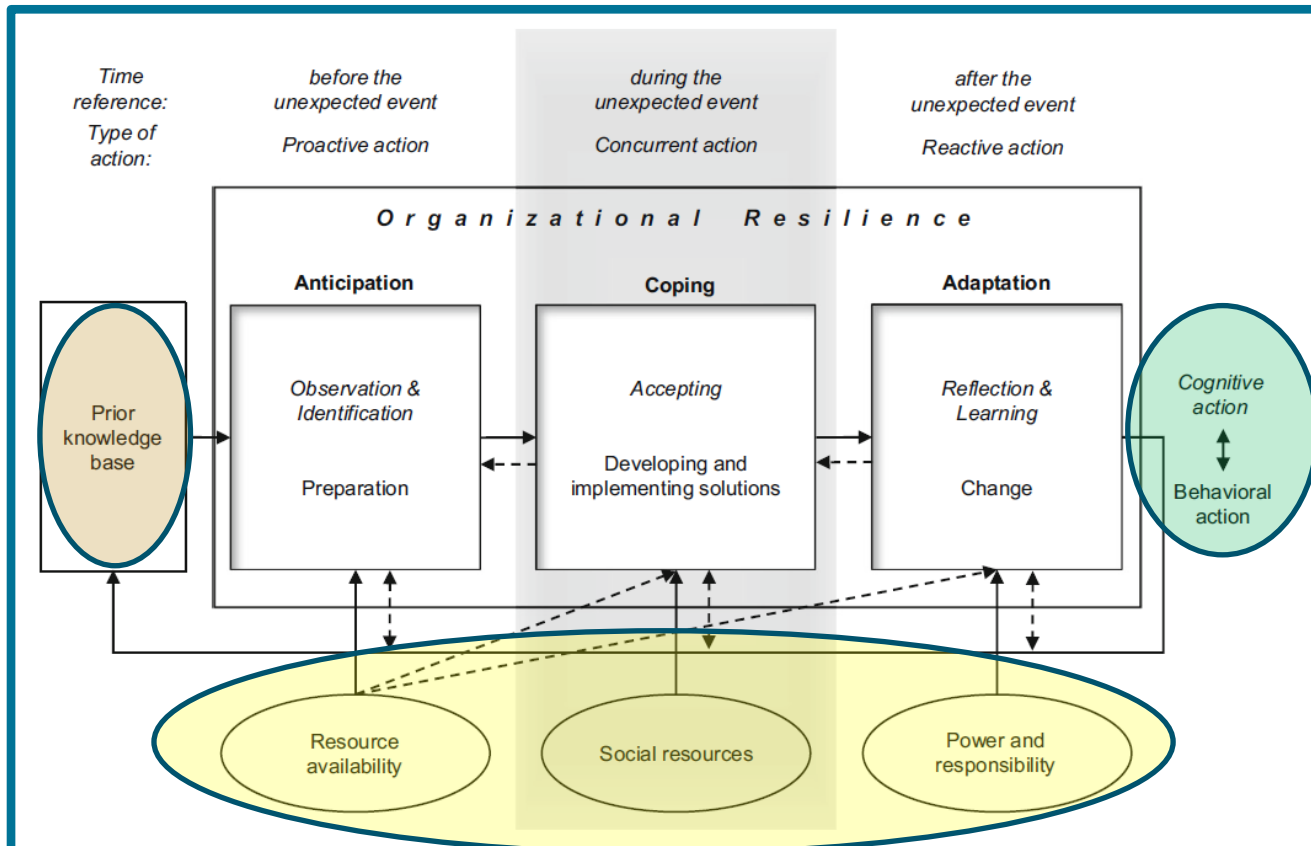
Duchek, 2020

- ✓ builds on the 'resilience-as-a-process' perspective and combines it with the idea of resilience as a **unique blend of organizational capabilities and routines**;
- ✓ illustrates the main stages of the resilience process and points to underlying capabilities that together constitute OR;
- ✓ resilient organizations respond not only to the past (reactive action) or to current issues (concurrent action), but also to the future (anticipatory action);
- ✓ **anticipation**, **coping**, and **adaptation** are the three resilience stages.
- ✓ the three stages of the resilient process are based on organizational capabilities;

OR is a meta-capability consisting of a set of organizational capabilities/routines that allow for a successful accomplishment of the three resilience stages.

A capability-based conceptualization of OR

capabilities, antecedents and contextual factors



- ✓ the three resilience stages cannot be clearly separated. They show some **overlaps** and **build on each other**;
- ✓ organizations need to develop capabilities of all three resilience stages that together form the meta-capability of OR;
- ✓ successful completion of the three stages always depends on an interplay between **cognitive** and **behavioral capabilities** and actions;
- ✓ contextual factors (drivers: resources, social capital, and power and antecedents: knowledge base) are important to the successful accomplishment of the three resilience stages as well as the development of resilience capabilities.



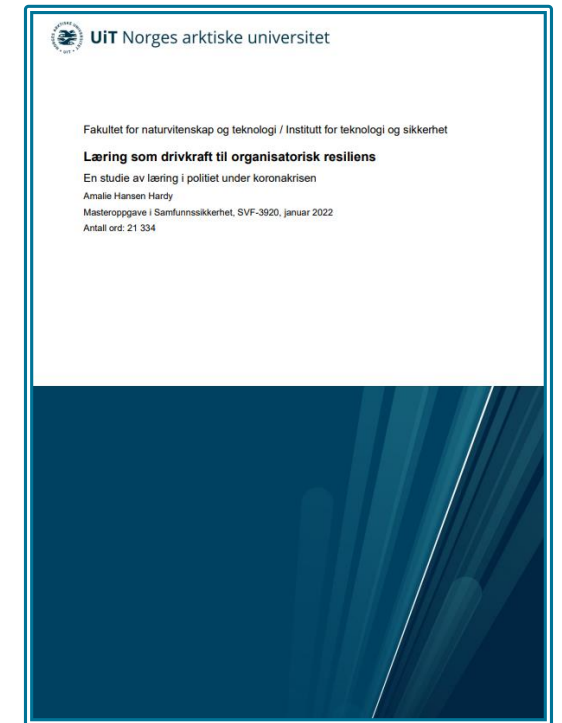
Interplay between
organisational resilience
and safety culture



Development of
resilient organisational
capabilities through
audits and
organisational learning



A study of
organisational resilience
in municipal
preparedness against
future climate change



Learning during crisis
as the driver of
organisational resilience

Concluding remarks

- The concept of OR is complex and multidimensional and it requires further research.
- OR builds on the multi-faceted capabilities that an organisation develops into routines and are influenced by a unique interaction and combination of strategic and operational factors.
- OR is **relative**: organisations can only be more or less resilient; there is no absolute measure, definitive goal or single approach to enhance OR.
- OR is dynamic and has an active nature.
- NB: Resilience vs related constructs (see e.g. flexibility, agility, robustness, reliability).

«Exit» ticket

1 min, in chat ...

What are your key lessons learned after this lecture?

✓ please mention at least 1 thing 😊.



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Thank you for your attention and best of luck with your further studies! 😊