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Positioning the study of first line managers' resilient action strategies

The 8th Resilience Engineering Association Symposium

Johan Karltun, Anette Karltun,
Karin Havemose, Sofia Kjellström

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KK-stiftelsen ⟩⟨   FAGERHULT   SCANIA

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Background

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Aim

To theoretically position our study regarding used concepts and in relation to resilience theories

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Shop floor characteristics

- instability
- variability
- complexity
- conflicting goals
- intense pressure to perform (deliver) and
- a high level of social interaction between FLMs and subordinates

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First line managers' work

- Decision making in a socio-technical environment with constantly conflicting objectives regarding cost, output and personnel
- Unforeseen problems to deal with, problematic to handle by formal techniques, and constantly needing human judgment
- Fragmented due to recurrent interruptions and unforeseen events in a context of various expectations concerning both task and managing people, including conflicts and negotiations
- A key role in the interface between the top management, the techno-structure and the operative core
- Incorporate standards from the techno-structure, handle disturbances in the operating core and aggregate feedback information both up and down in the hierarchy and sideways in the operative flow
- Handle conflicts between lean development and daily delivery, as well as the meeting between a dynamic uncertain reality and the ideal structures of lean
- Developed towards more reporting, larger control spans, more responsibility, longer working hours and a mentally more strenuous job
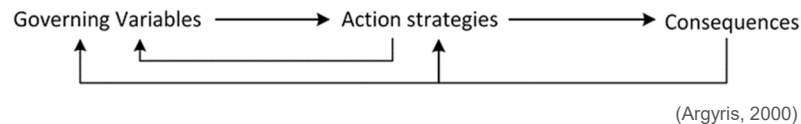
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First line managers' influence

- large impact on an organization's performance
- combine daily performance with development efforts
- link a company's policies to subordinate staff's conditions of work
- the working conditions for FLMs directly influence the working conditions for front line personnel

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Action strategies (cause-effect)

Governing Variables ⟶ Action strategies ⟶ Consequences

(Argyris, 2000)

- Every actor designs their action strategies according to believed cause-effect relationships
- The governing variables, characteristics of the situation guide the action strategies and the consequences provide feed back
- Simple model but in reality, the relation is characterized by high complexity, trade-offs and both expected and unexpected outcomes

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Action strategies (work practice)

- Shaped by the complex web of traditions, values, norms, knowledge and work-practice, the company culture
- The FLMs action strategies are adjusted to the cultural patterns as much as they are affecting the patterns
- The own professional "work practice horizon" meets the company's "work-practice horizon"
- Two logics of the work-practice
  - Comprehension par intellectuelle is an intellectual understanding, not bound to space and time, the 'know what'
  - Comprehension par corps is 'the senses and the doings understanding', it has a direction in time, and it connects a vivid memory to a pending task for attention, it is the 'know how'

(Havemose, 2013)

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Action strategies (planning-execution)

	Orientation to goal	Long-term planning	Situational responsiveness	Proactive-ness	Planning and action overlap
Complete planning	High	High	Low	High	Low
Critical point	High	Middle	Middle	High	Middle
Opportunistic	Low	Low	High	High	High
Reactive	Low	Low	High	Low	No planning
Routine/habit	Low	Low	Low	Low	No planning

(Frese, Gelderen, and Ombach, 2000)

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Action strategies (performance)

- Proficiency which is related to the formal role requirements.
- Adaptivity which is how an individual can adapt to changes and
- Proactivity which describes to what extent the individual takes self-directed action.

(Griffin, Neal, and Parker, 2007)

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Types of management work practices

	Work with intentionally driven activities (deliberate)	**Work with activities that arise from unintended events** (reactive)
Formalized work behavior (systematic)	A: Classic management Strategy formulation, planning, budgeting, forecasting, formal decision-making, leadership, Human Resource Management, etc.	B: Disturbances and crisis management Systematic work with customer complaints, deviations from economic planning, grievance handling, etc.
'Unformalized' work behavior (habitual)	C: 'Muddling-through-management' Habitual decision-making, networking, politicking, dialogue-based information exchanges	D: Management of ambiguity and constant disturbances Dealing with organizational problems are urgent, complex, unforeseen, and/or ambiguous

(Tengblad, 2012)

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Organizational resilience

- "the organization's capability to face disruptions and unexpected events in advance thanks to the strategic awareness and a linked operational management of internal and external shocks"
  - static (focus on strategic initiatives) or
  - dynamic (focus on capabilities of managing disruptions and unexpected events) (Annarelli and Nonino, 2016)

- SME - 'muddling through' disturbances

- Our focus is thus on dynamics within single organizations related to the action strategies of FLMs and linked to the demands for output

- We also emphasize that "resilience is a dynamic process of steering and not a static state of an organization"

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Leadership requirements for resilience

- the leaders' ability to be adaptive themselves by altering their own role and behaviors according to the stability and flexibility demands their work teams face.
- to design organizational mechanisms that support individual team adaptivity regarding structures and standards but at the same time avoid rigidity.
- a leader's role in establishing an organizational culture as a stabilizing force to coordinate actions and integrate work processes in a flexible way.
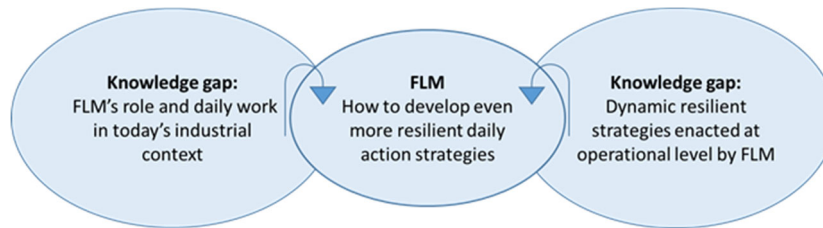
(Grote, 2019)

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Leadership roles

- Reducing unnecessary drains on resilience, particularly hindrance stressors, for example bureaucracy or considerable administration
- Promoting adaptive workplace behaviors and thinking in the face of difficulties, e.g. identification of controllable and uncontrollable parts of a problem
- Promoting optimism and agency regarding the achievement of organizational goals, celebrating success and promoting learning
- Supporting the development of both personal and social resources, e.g. promoting behaviors and thinking styles that are related to resiliency
- Allowing employees the opportunity to access needed resources to cope with demands of their job in various ways, e.g. allowing employees control over the timing of break periods and to allow recovery when needed

(Crane, 2017)

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The knowledge gaps identified

Knowledge gap:
FLM's role and daily work in today's industrial context

FLM
How to develop even more resilient daily action strategies

Knowledge gap:
Dynamic resilient strategies enacted at operational level by FLM

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Method approach

- **Interactive research process** governed by us and the companies (Scania and Fagerhult)

- Data collection inspired by activity analysis theory, i.e. including an **introductory rigorous investigation of the circumstances at each work place** studied

- **Qualitative data** collection techniques applied close to the work performed (interviews, observations, shadowing, video…) **combined with quantitative data** collections like KPIs, questionnaires etc.

- **Collaborative knowledge development process** in joint seminars

- **Joint writing of handbook**, if possible, also regarding **research publications**

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Ethical considerations

An informed consent process will be performed

- contract with both organizations regulating confidentiality and publishing issues
- informed department leaders of the ethical requirements for participation
- All active participants will be provided written information by e-mail but also oral information when meeting the researchers including:
  - information about the study,
  - conditions for participations
  - issues like voluntariness, right to withdrawal and confidentiality
- Verbal consent is obtained from the participants to that the data will be used for research purpose and informed that all data would be treated confidentiality.

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