

# DIALOGIC SENSEMAKING AS A RESOURCE FOR SAFETY AND RESILIENCE

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## Abstract

Dialogic theories provide an approach to understanding interaction, and include the perspective that human sensemaking is action-based, contextual, and constituted in interdependent relations with 'the other'. Hence, intersubjectivity is the defining property of communication. Sensemaking 'on-the-fly' takes place in parallel with evolving operational action. Shared (social) sensemaking creates and nourishes common awareness and understanding of the 'operating point', and in so doing facilitates coordination and safer performance. This is an essential condition for the emergence of safety and resilience. Practitioners, therefore, must have a way to meaningfully collaborate and make sense of what is going on. Dialogism, in this context, offers an opportunity for practitioners with different logics and perspectives, to meet, engage, and allow for something generative to happen. In this way, dialogic sensemaking provides a resource for resilience, by enabling a shared awareness of 'the sense of the event' (*phronesis*) and a collective response to the actual and potential.

## 1 INTRODUCTION

Safety and resilience emerge out of dynamic socio-technical interactions embedded in shared and contested practice [Dekker (2005), Hunte (2010)]. Creating safety and resilience is something we *do* – everyday. Safety – as action in practice – is a dynamic and distributed construct transmitted in stories [Cook et al. (1998), Iedema et al. (2006a), Rochlin (2003), Sanne (2008)], and the stories we tell one another about everyday practice (successful and unsuccessful) facilitate reflection, sensemaking, and learning [Weick (1995)].

I can only answer the question “What am I to do?” if I can answer the prior question “of what story or stories do I find myself a part?” [MacIntyre (2007), p. 216].

Thus, approaches to safety, like resilience engineering, must be based on accounts of *work-as-done* to afford a dialogue for learning. In this paper, we discuss an everyday example from healthcare – interaction between physicians and nurses in care of a patient – and argue that dialogic sensemaking is a resource for resilience and safety.

## 2 INTERACTION

Interactions in a hospital emergency department (ED) are complex; communication is often chaotic and brief, with multiple interruptions, and transitions [Hunte(2010)]. For example,

An elderly patient was brought to an ED by ambulance having been found collapsed and vomiting in the washroom of a public building. Almost 40 minutes later, the bedside nurse (Nurse A) comes to tell the Clinical Nurse Leader (CNL) that the patient “not to be confused with the other patient with the same last name” is to be transferred to the trauma room “decreased [level of consciousness], very hypertensive, and starting to do the ‘neuro’”. However, the patient had recently received Gravol, and Nurse A wonders if “his [level of consciousness] is decreasing or if it’s the Gravol?” Nurse A and the CNL go over vital signs and medication as they arrange to move another patient (recently cardioverted and bradycardic) out of the trauma room in order for this patient to be moved in.

It is also shift change for the emergency physicians: emergency physician A (EPA) is leaving, and emergency physician B (EPB) is arriving). Respiratory therapy is paged, and the clinical educator is available for support. EPB and the emergency resident are “running the show”. Verbal orders are

given to the trauma nurse (Nurse B) for some medication, and EPB states “I put this all in the computer”. As the patient is being prepared for intubation, nurse A approaches the CNL with her concern that this is “overkill”. The CNL queries EPB and the emergency resident about the chemstrip (normal) and if narcan had been given (no). EPB states “we’re going to go with thiopental, midazolam and [succinylcholine]”. EPA enters the room and nurse B asks “how much midazolam?” EPA responds “Fentanyl, thiopental, and sux”. Four minutes later, while drawing up the other medication, nurse B looks at the order sheet and asks “I’ve got an order for midazolam, but was asked to pull up fentanyl”. The confusion was clarified, the patient medicated and intubated. There was no harm. The patient was eventually diagnosed with an intracranial hemorrhage and transferred to neurosurgery.

The care providers in this everyday example attempt to make sense of the situation, but do not share their perspectives directly with each other. This lack of interaction leads to conflict and confusion, and poses a threat to patient safety. Although no harm was suffered in this event, the case illustrates the need for increased interaction, communication, and shared sensemaking.

### 3 DIALOGIC SENSEMAKING

Dialogic storytelling provides a theoretical approach to understanding interaction [Boje (2008)]. Dialogic theories include the perspective that human sensemaking is action-based, interactional and contextual, and constituted in interdependent relations with “the other” [Linell (2009)]. Human activity is mediated by the use of material and cognitive artifacts, wherein interactions and situations, as the foundation for dialogue, are the primary substrates for discourse. Therefore, the coordinated use of tools and signs shape all joint activity, including communication, collaboration, and collaborative problem solving [Wells (2007)].

#### 3.1 Intersubjectivity

Action, communication, and cognition are thoroughly relational, interactive, and deeply embedded in social and cultural contexts. As such, interaction is both locally situated and shaped by sociocultural practices. The delicate connection between the subjective, individually experienced reality with the objective social reality (sustained over time as social facts) gives rise to the important, yet complex concept of intersubjectivity<sup>1</sup> [Eden (1981)] as the defining property of communication [Habermas (1970)]. Linguistically, “every word is directed towards an answer and cannot escape the profound influence of the answering word that it anticipates” [Bakhtin (1981), p. 280]. Understanding *in situ* is therefore related to the ability to anticipate and respond.

#### 3.2 Narrative

Human understanding is fundamentally based on narrative [Bruner (1991)], and meaning making is pragmatically attuned to social context. The complexities of work and work relationships can be reflected in storytelling [Boje (2008)] – particularly dialogic stories – which allow for nonlinear understandings [Herman (2002)], and encompass multiple perspectives, tensions, and contradictions [Bakhtin (1981)]. Rochlin (2003) posits that a collective commitment to safety is an institutionalized social construct. Stories and rituals transmit operational behaviours, group culture and collective responsibility. The dynamic, inter-subjectively constructed narrative is one of organizational rather than individual performance.

### 4 ORGANIZATIONAL LEARNING

It is common to think of learning in organizations as a form of knowledge acquisition and to relate it to instruction and training. From this 'banking model' perspective [Freire (1993)], learning amounts to the acquisition of data 'out there' to be acquired and stored in the 'container/compartments' of the mind, implying a separation between actor and context [Gherardi (2002)]. This is the model followed by classroom safety instruction and admonishments and prescriptions about what is and is not safe. Safety learning tends to be in the form of more education, and more underspecified rules and procedures, rather than engaging the learner in situated practice.

#### 4.1 Situated learning

An alternate relational perspective presents the image of learners as social beings who construct their understandings and learn from social interaction within specific socio-cultural settings [Suchman (1987),

1 The sharing of subjective states by two or more individuals.

Engestrom (1987), Lave & Wegener (1991)]. Learning is viewed as the historical production, transformation and change of people: learning is no longer equated with simple appropriation or acquisition, but is “understood as the development of a new identity based on participation in the system of situated practices” [Gherardi (2002), p. 193]. Learning is thus conceived as a way of taking part in a social process mediated by artifacts, not as a cognitive way of coming to know [Lave & Wegener (1991)]. These ideas are further enriched by views of power [Law (1986)], by emphasis on networks of human and non-human 'actants', such as computers [Fox (2000)], and by looking to the transformational nature of collaborative endeavours [Blackler (2000)].

#### **4.2 Sensemaking**

When human agents try to make sense of what is happening, they begin from some place, perspective, or viewpoint – their *habitus* [Bourdieu (1977)]. Perception is enacted [Merleau-Ponty (1962), Noe (2004)]. Schema guide perception and inference [Fiske (2008)], and assign significance and meaning. Options for data that do not fit the current frame include elaborating or preserving the frame (explain away the data), which is what novices frequently do [Schubert (2013)]. Another option for data that do not seem to fit is to seek an alternate frame (reframing). Hence, data mandates frame adjustment or change, and the basic sensemaking act is data-frame symbiosis [Klein (2006a, b)].

For example, early consideration of a hypothesis (rapid frame recognition) permits both more efficient data gathering and more specific expectancies which prompt adjustment or reframing if violated. Effective problem solvers differ from other approaches by using diagnostic frames to interpret data, but remaining willing to discard them when confronted with disconfirming data (reframing when the data no longer fit the frame) [Rudolph (2003)].

Sensemaking 'on-the-fly' takes place in parallel with evolving operational action [Albolino (2007)]. Shared (social) sensemaking creates and nourishes common awareness and understanding of the 'operating point', and in so doing facilitates coordination and safer performance [Cook (2005)]. Storytelling and dialogue create awareness of the character of coming events because narrative is subject to practical wisdom. As such, they allow for the expression of a normative stance or may guide the resolution of conflict between norms [Kirkeby (2009)].

#### **4.3 Transitions**

In healthcare, for example, two key aspects and challenges of collaborative care are transitions and team coordination. Shared sensemaking is required to build the understanding needed to inform and direct actions to address the hazards that threaten safety [Battles (2006)]. Transitions, such as patient hand-overs, involve much more than monologic information transfer; they also include a transfer of control or responsibility [Cohen (2010)]. As such, they present opportunities for sensemaking and resilience [Patterson (2010)]. In addition, the distributed and uncertain nature of everyday clinical work calls for flexibility in structuredness and degree of interaction at transition points [Behara (2005)]. Hence, standardized 'one-size-fits-all' communication scripts (for example, SBAR) that are frequently implemented to guide information transfer in clinical settings are limited in ability to facilitate dialogic sensemaking.

#### **4.3 Safety narratives**

Organizational safety narratives are constructed in stages [Waring (2009)]. Initially, practitioners interpret risk embedded in context, and give accounts that are intersubjective in character, and often emotionally rich. Such localized meanings of risk reflect wider assumptions about responsibility, culpability, and blame. These storied accounts are then re-constructed as written reports, where 'narrow narratives' are created to match pre-defined taxonomie, then further re-constructed through routine risk management perspectives, where accounts are re-coded and translated. Hence, the experiential, qualitative and culturally rich stories of practitioners are largely transformed into the abstract, quantitative, explicit, and often legal variables of management. While this process may benefit risk management, it destroys context, and devalues the affective and interpersonal knowledge of practitioners to the extent that they may only report those safety events that 'fit' the prescribed model. As such, practitioners are discouraged from reporting more complex or ambiguous events, despite important safety implications. It follows then that the mismatch between complex stories and the simplifying constraints of a reporting system can impede rather than enhance learning.

Individuals and groups 'make sense' of and interpret their experiences through storying [Boje (2008), Iedema (2006a), Waring (2009)]. Stories about safety incidents are developed within the interactions of practice, and

reflect a dynamic mix of emotion and shared notions of responsibility [Waring (2009)]. Importantly, stories are woven together through social interaction, thereby reflecting inter-subjective and wider cultural beliefs. Thus, stories help to establish and reinforce collective sensemaking, especially in situations of uncertainty [Weick (1995)]. The narrative perspective is also attentive to the links between knowledge and power, in recognizing that storytelling provides a basis for defining social reality, and the privileging of particular forms of social action [Foucault (1980)]. In this way, the notion of dialogic sensemaking provides a resource for resilience, by enabling a shared awareness of 'the sense of the event' (*phronesis*) [Kirkeby (2009)] and a collective response to the actual and potential [Hollnagel (2009a)].

## 5 RESILIENCE

Resilience describes the resourcefulness generated from the affordances of the work context [Woods (2006)]. Resilience in anticipating and recovering from threats to operational performance and safety is dependent upon the improvisation and sensemaking of practitioners in dialogic and distributed action [Hutchins (1995), Cohen (2006)]. Active sharing and updating of sensemaking, through the practice of 'heedful interrelating' {Weick & Roberts (1993)}, enables risks to be collectively and progressively monitored [Boreham (2000)]. Similar to jazz improvisation, or *bricolage*, skillful communication and sensemaking can be assessed by the degree to which conversational moves simultaneously follow what has transpired previously and enable others to follow and facilitate forward movement in the meaning-making process [Weick (1995), Zack (2000)].

### 5.1 Stories of practice

Sharing and co-creating stories in a community of practice facilitates system learning and resilience [Perry (2009)]. Post-bureaucratic 'bottom-up' techniques that engage clinicians in teleo-affective<sup>2</sup> and dialogical narratives creates a space for "operationalizing concerns, emotions and judgments ... and privileges discourses that give greater prominence to what matters to those who do the work" [Iedema (2006a), p. 142]. Stories of practice become living practical theories that help practitioners make sense of their professional lives [McNiff (2007)], as well as guide their approach in routine and novel situations where uncertainty and risk are high.

All stories are perspectival, and told from a situated viewpoint. Hence, multiple tellings from different perspectives affords the greatest opportunity for co-creating a complex and nuanced picture of what happened [Cook (1998)]. Therefore, the quest for safety includes the search for multiple viewpoints [March (1991)]. A forum of conflicting views of safety is an essential prerequisite for enhancing an organization's potential for learning [Westrum (1993)]. A culture that influences safety positively is thus not necessarily one which is homogenous or conflict free, but one in which there is enough space to deal with conflict wholistically [Schubert (2008)]. This implies that conflict is dealt with in a constructive, democratic manner with equal consideration of all stakeholders [Antonsen (2009), Schubert (2008)]. Therein lies the need for dialogic interaction.

Even as every human being acts with a view to some good, so too the purpose of the organization is to create value [Nonaka (2007)]. Leaders in organizations with collective *phronesis* develop shared practices through which to detect, process, and solve various challenges [Halverson (2004)]. A safety strategy is thus not simply a written plan, but is actualized through practice. People learn to understand what *phronesis* is through practice, accomplished in dialogic interaction, and leading to organizational resilience.

## 6 CONCLUSION

The view from practice suggests that safety emerges out of interaction, dialogic sensemaking and collaboration, in which different 'parts' of the system learn with and from one another and take 'the other' into account in their own decisions and actions. This perspective recommends a dialogic approach that moves beyond the traditional dualism of 'top-down' and 'bottom-up' into a generative partnership between leadership and practitioners. An organizational design that embraces a dialogic approach and allows for emergence, creativity, and flexibility -- the cornerstones of collaborative work -- overcomes the limitations of 'top down' strategies that do not account for practice and leave the prevailing conditions within organizations unaddressed. Likewise, in contrast to 'bottom-up' initiatives that fail to connect on a systems level, a dialogic approach promotes system-wide organizational learning.

2 The collective property of a practice that is expressed in the open-ended set of doings and sayings [Schatzki (2002a)], « where people sense and dynamically negotiate their own and others goals, actions, expectations, needs and feelings » [Iedema2006b), p. 1112]

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