

How to Implement Sense making in organizations

Sense making literally means the making of sense (Weick, 1995). It occurs when there is a shock to the organizational system and that produces either uncertainty or ambiguity. Sense making provides a means to return a sense of stability to the organizational life world.

Key to sense making is the idea that organizational members make sense of disruptions to the organizing process. While this process has been variously called incongruous events (Starbuck & Milliken, 1988), interruptions (Mandler, 1984), and unmet expectations (Jablin & Kramer, 1998), there is a common recognition that sense making occurs when the flow of work is disrupted. The theory of sense making in organizations suggests that people make retrospective sense of unexpected and disruptive events through an ongoing process of action, selection, and interpretation (Weick, 1995).

Sense making is also prospective in that sense that is made retrospectively affects future sense making (Weick, 1995, 2001). By recognizing sense making as both retrospective and prospective, sense making as process is also emphasized. Specifically, sense making is ongoing in duration, having no single point of departure and no permanent point of arrival.

While some argue that sense making is purely cognitive (Fineman, 1996), Weick (1995) emphasizes the role of emotions in the sense making process. Emotions are involved in both the commencement and outcome of sense making. The reality of flows becomes most apparent when that flow is interrupted. An interruption to a flow typically induces an emotional response, which then paves the way for emotion to influence sense making. It is precisely because ongoing flows are subject to interruption that sense making is infused with feeling. (Weick, 1995, p. 45). Other scholars provide insight into the link between sense making and emotions concluding that the discrepancy between the expected and the actual is a primary component of emotions concur.

Sense making occurs in response to disruptions in organizing processes (Weick, 1995, 2001; Weick & Sutcliffe, 2001). When examining emotions and sense making, it is important to understand the relationship between the experience of emotions at work and disruptions in the organizing process.

System disruptions serve as the opportunity for organizational members to extract cues from the environment that will then be used as the basis for sense making. Extracted cues are simple, familiar structures are seeds from which people develop a larger sense of what may be occurring (Weick, 1995, p. 50). Extracted cues represent what was noticed as worthy of attention. Intriguingly, while people can extract cues that are unusual or inconsistent with their expectations, they tend to extract cues that are consistent with their assumptions about organizational life (Weick, 1995). Extracted cues, then, can provide insight into how people choose to pay attention to emotions in organizations, creating the potential to both challenge and reinforce the rationality, emotionality duality in the workplace.

Sense making was introduced to organizational studies by Karl Weick and to information science by Brenda Dervin.

Informal stories contribute to sense making for the individual, and can affect the company's direction both positively and negatively.

Sense making incorporates insights drawn from philosophy, sociology, and cognitive science. (especially social psychology)

Collective sensing mechanisms use the power of shared seeing and dialogue to tap an unused resource of collective sense making and thinking together. (Scharmer, 2007).

Sense making is a collaborative process of creating shared awareness and understanding out of different individuals' perspectives and varied interests.

The purpose is to learn more about its structure through empirical observation of intelligence analysts engaged in tasks involving science and technology.

Sense making is part of the more general activity of using information adaptively. Weick (1995) argues that the social dynamics of organizational processes are based on sense making. Sense making is in many ways a search for the right organization or the right way to represent what you know about a topic. It is data collection, analysis, organization, and performing the task.

A set of mental minimal sensible structures together with goals lead to the creation of situational understanding and direction for members of an organization.

Various structures and processes enable the organization to create a Workable level of certainty when dealing with situational ignorance and ambiguity.

Much of the descriptive research in this field draws from the work of Karl Weick who provided a comprehensive discussion of the social dynamics within an organization that lead to the creation of situational understanding and direction (Weick, 1995). In this work, Weick begins with a multitude of definitions applied to sense making in the social science literature and then proceeds to develop a number of basic properties of this process. These basic properties serve as a useful framework for sense making research.

Sense making involves the creation of shared meaning and shared experience that guides organizational decision-making.

Sense making involves the process of people noticing and extracting specific cues from the environment and then contextually interpreting those cues according to certain held beliefs, mental models, rules, procedures, stories, and so forth.

Sense making is driven by the need for a workable level of understanding that guides action, rather than by a search for universal truth.

In addition to outlining these properties of the sense making process, Weick also identified a number of important ways in which organizations tacitly codify past knowledge and experience. These minimal sensible structures, when combined with organizational goals, provide the contextual basis for interpreting the current situation and directing action.

Ideology. Shared, relatively coherent, emotionally charged beliefs, values, norms, cause effect relationships, preferences outcomes, and expectations bind the organization together. They provide ready-made interpretation structures for supporting the belief side of sense making.

Third-Order Controls. Unspoken organizational premises (jargon, patterns of uncertainty absorption, unique communication channels, informal procedures, and personnel selection criteria) that shape the flow/content of information, constrain the search for options, focus the definition of risk, and constrain expectations. They act to delimit the belief side of sense making.

Paradigms. Internally consistent sets of simplifying heuristics about important objects how these objects act, how they relate to one another, and how they come to be known. They serve as alternative realities for linking belief and action.

Theories of Action. Organization-level cognitive structures filter and interpret environmental signals as triggers for organizational response. They link perception to shaping action.

Tradition Symbolic mental structures (patterns of action, patterns of means-ends behavior, organizational structures) that facilitate a practical, can-do, action-oriented stance toward the world. They provide the ready-made formulas for action. Narrative structures that represent filtered, ordered, and affected accounts of experience based on a beginning-middle-end story sequence.

These knowledge structures or frames govern expectations and perceptions and allows individual to make sense of a situation. They allow the rapid formulation of an action based on

the perceived features of a situation or even their lack. At the level of time, scale of seconds or minutes, Endsley (1995) and others have studied sense making as the achievement of situation awareness, particularly for jet fighter pilots in air combat. Situation awareness is the achievement of perceiving elements of the environment, comprehending their collective meaning, and projecting their status into the near future.

Sense making is ongoing, so Individuals simultaneously shape and react to the environments they face. As they project themselves onto this environment and observe the consequences, they learn about their identities and the accuracy of their accounts of the world (Thurlow & Mills, 2009). This is a feedback process as even as individuals deduce their identity from the behavior of others towards them, they also try to influence this behavior. As Weick argued, the basic idea of sense making is that reality is an ongoing accomplishment that emerges from efforts to create order and make retrospective sense of what occurs.

Identify and identification is central – who people think they are in their context shapes what they enact and how they interpret event.

Intelligence analysis is an obvious form of sense making. Studying occupational experts of an activity is a classical method for understanding the structure of that activity (Bryan & Harter, 1899). Studies of intelligence experts (Krizan, 1999) remind us that intelligence analysis covers a number of different activities. Such studies have often been prescriptive or at an ethnographic level (Johnston, 2005).

A central theme in both organizing and sense making is that people organize to make sense of equivocal inputs and enact this sense back into the world to make that world more orderly.

Ethnography is the branch of anthropology that deals with the scientific description of specific human cultures. The purpose of this study is gain insight into the sense making process by tracing user process and knowledge through a reasonable approximation of an analyst's task.

The study, which takes advantage of data collected for a government research program, is focused at the scale of days and at the level of an individual.

Structure of Sense making

There is a relatively well-defined structure to the phenomenon. For example, the task studied involved a corporate training department creating a curriculum on printing technology. The various activities of the department could be summarized in terms of two processes: (1) Searching for a representation or framework scheme and (2) Actually filling in the framework with the data collected on printers. Attempting to fill in the framework would end with some data residue, which did not fit, which would lead to a shift in the representation and then another attempt to fill it in with the data.

Learning Loop Complex

Card et al. (1999) used an elaboration of this model to define the concept and process of information visualization. We have also found that a version of the model seems to summarize the basic process of some intelligence analysis. (Pirolli & Card, 2005; Cook & Thomas, 2005).

This model extends out from the activities of the learning loop complex to include information acquisition and report production. An analyst through filtering of message traffic and active search (1) collects information into an information store. Snippets of this evidence are collected into another store or evidence file.

Information from this evidence may be represented in some schema or conceptual form (the framework of the Learning Loop Complex model), such as laying it out on a timeline, or the schema may be just mental. This organization of information is used to marshal support for some story or set of hypotheses. Finally, the information is cast into an output knowledge product, such as a briefing or a report. The process is not straight forward, but can have many loops. It can be driven from the bottom up, making sense of the data, or it can be driven top down from hypotheses, most likely a combination of both.

There are two definable principal loops: (A) an information foraging loop, concerned with the gathering and processing of data to create schemas and (B) a sense-making loop, concerned with the processes involved in moving from schemas to finished product.

Klein et al. (2007) come to a similar conclusion. His model of the process is based around the data/frame, a mental structure that organizes data, and sense making is the process of fitting information into that frame. Data/frames are a consequence of developed expertise.

The increased importance of sense making will prove to be one of the central drivers for Enterprise 2.0 technologies adoption.

The value of the sense-making notion in organizational settings is that it highlights the active requirement for managers and leaders to construct sensible accounts out of ambiguous, ambivalent, equivocal, and conflicting data. In a world characterized by significant technology, organizational, and strategic change, the problem of sense making becomes more acute.

One of the attractions in Enterprise 2.0 technologies is that they make these strategies more feasible and scalable. Blogs, wikis, tagging, etc. allow participation to scale beyond what face-to-face methods can support. They make it possible to generate and organize more extensive raw materials and inputs to planning/sense making processes. Wikis with good version tracking and refactoring capabilities make it both safer and easier to generate and work through alternative representations/sense makings.

Organizational decision-making is more prescriptive in nature and it is focused more specifically on high-reliability organizations. Organizations must continue to function during periods of crisis and in the face of situation uncertainty and complexity. The social and structural causes of organizational breakdown and seeks to identify ways in which organizations can adapt. As a result, many of the studies found in this area focus on crisis events (e.g., earthquakes, terrorist attacks) or events in which a string of behaviors or decision making errors led to catastrophic outcome.

