

## Theorizing Playful Model-Driven Group Decision Support with Situated Affectivity

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**Abstract.** An integrative approach to theorizing behavioral, affective and cognitive processes in model-driven group decision support (GDS) interventions is needed to gain insight into the (micro-) processes by which outcomes are accomplished. This paper proposes that the theoretical lens of situated affectivity, grounded in recent extensions of scaffolded mind models, is suitable to understand the performativity of affective micro-processes in model-driven GDS interventions. An illustrative vignette of a humorous micro-moment in a group decision workshop is presented to reveal the performativity of extended affective scaffolding processes for group decision development. The lens of situated affectivity constitutes a novel approach for the study of interventionist practice in the context of group decision making (and negotiation). An outlook with opportunities for future research is offered to facilitate an integrated approach to the study of cognitive-affective and behavioral micro-processes in model-driven GDS interventions.

**Keywords:** Group support systems · Group decision support · Model-driven approaches · Emotions

### 1 Introduction

The theoretical lens of situated affectivity [1-3] may help to conceptualize the complex affective processes in model-driven group decision support (GDS) interventions in a novel way. Our aim is to consider the potential of this theoretical lens to understand the interplay in practice of the behavioral, cognitive and affective resources that may make GDS interventions meaningful and yet playful work.

## 2. Emotions in model-driven GDS

Whilst a significant prior amount of research exists on emotion and affect in the area of group decision support, and whilst emotions have been considered in and for models of behavior in negotiation settings, particularly regarding electronically supported negotiations, there appears to be limited prior explicit theorization of social emotional processes that find their expression in the form of positive affective behavior during model-driven GDS interventions. Yet, positive affect is likely to be particularly beneficial for improving performance in problem restructuring situations because it is assumed to support flexible and creative thinking that can lead to more effective resolutions than compromise can. For example, prior research on humor in negotiations suggests that it can be used to improve cohesion, signal cooperation, cope with a difficult situation, and release tension [4]. As such, humor can be viewed as interpersonal emotion management with the aim to manage the emotions of others as well as of the self [5]. However, further research is called for to advance the understanding of affect in group decision development contexts and particularly observational and ethnographic studies of “live” encounters are needed [6]. We therefore propose a theoretical lens for the study of extended affective scaffolding processes ‘in-the-wild’.

## 3. Situated affectivity

The situated affectivity lens proposes that human emotions are best understood as active engagements with the world and not, as ‘traditional’ philosophy of emotion proposes, as passively undergone experiences [7]. Scaffolds in the environment are not just part of a background, but rather have a central causal role in bringing about cognitive-affective capacities [7]. The term scaffolding can be used to refer to the potential of amplifying cognitive capacities through productive engagement with material artefacts and people in a situational context [8, 9]. It has furthermore been suggested that emotions could be usefully conceptualized as resulting from the circular interaction between affective qualities or affordances in the environment and the subject’s bodily resonance [10]. As such, the practices of seeking to sustain and amplify our behavior-in-practice, i.e. including the expression and influence on our epistemic and affective processes, through engagement with resources in the environment can be characterized a process of niche construction [11]. In affective niches, by virtue of scaffolded affectivity, further cognitive capacities can be developed [7]. The emphasis on agentic engagement with the world makes the lens of situated affectivity particularly interesting for the study of creative model-driven GDS which aims to engage participants in the active construction of a shared future plan for action [12, 13]. Figure 1 illustrates possible relationships between the concepts.

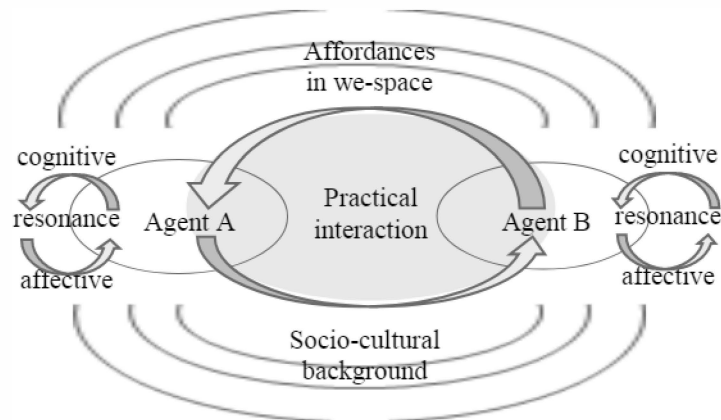


Figure 1: Situated affectivity as niche co-construction (informed by [10] and [14])

#### 4. Play frames in we-spaces

To illustrate how the lens of situated affectivity lens deepens our understanding of environmental, and in particular, interpersonal fuels for shared planning, we use the concept of a ‘play frame’. This concept is informed by Bateson [15]’s work who considered different modes in communication and the specific social recognition afforded to humor. Our vignette is drawn from a model-driven GDS intervention that took place in an urban planning context (cf. [16]). The vignette illustrates the intertwining of materiality beyond the model (e.g. bodies), instruments beyond the tools provided (e.g. linguistic patterns) and interaction rituals beyond the model-driven GDS script (making fun to move the conversation forward) [17]. However, rather than being random or the product of individual differences, the sequence and flow of these interactions appear patterned – in our example by a humorous play frame with a shared focus on conversational rhythm- illustrating how the collective regulation of action in-situ draws on collective cultural resources. Thus, the micro-moment illustrates how situated affectivity can be constitutive of effective model-driven GDS interventions, by connecting participants and creating common experiences that shape shared feelings and social cognition. To understand the performativity of model-driven GDS it seems important to consider not ‘just’ the physical and epistemic interactions with a model as a tool in knowledge generation processes, but also the interpersonal emotional commitment(s) in interaction with cultural artefacts, including models, which we use to scaffold group decision formation processes. An abstract characterization of such resources and processes is likely to tell only half the story, as resources appear to be constituted equally by the situated affective patterns in activities of manipulation or inference of the participants who deploy the resources.

## 5. Purposeful play

Model-driven group decision support (GDS) interventions are thought to scaffold constructive active group reasoning processes. However, despite practitioners' confidence that model-driven GDS will deliver enhanced outcomes, we do not yet fully understand how changes in collective behavior are stimulated by the provided scaffolds as there is a historical shortfall of research into the actual behaviors of the actors involved [18]. To this date, the design and implementation of model-driven GDS are often treated as 'black boxes' - full of unidentified processes and practices with little clear interdependencies. Model-driven GDS practice thus needs to be more extensively studied in-depth to identify how the use of methods may be associated with changes in the participants' ability to take effective collective action in problematic situations.

The perspective of situated affectivity, which has not yet been applied to the study of model-driven GDS, may offer a potentially very relevant approach to the study of practice. Applying this perspective to study what's going on inside the black box of a model-driven GDS intervention, we have illustrated a micro-moment of human creativity in-situ which may be seen as indicative of our joint ability, drawing on reciprocal scaffolding processes, to overcome obstacles in the context of model-driven GDS. The use of humor, as reported in the micro-moment, may appear trivial but its performative function is surprisingly easy to overlook. Through playful cognitive-affective scaffolding, participants move forward in messy problem situations. The decision support provided by low tech GD interventions may thus, at least partly, lie in giving space to purposeful (play)(work).

The micro-level view (re)emphasizes the need for integrative perspectives for the study of behavioral, cognitive and affective processes in-situ that take into account the complex role of the environment in scaffolding affective collective performance. Situated affectivity in model-driven GDS interventions might be understood as the nuanced interweaving of individual and collective resources for effective performance, contributing the development of a social(ised) logic of OR practice. More research from a micro-process perspective on situated affectivity would thus be desirable to further explore behavior in model-driven GDS interventions as serious (play)(work), undertaken and enabled by a(n) (OR) community alive in play.

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