

**Högre seminarium**

onsdag 9 september 2020

kl 15.15-17 i [Comenius](#) (Key-huset) eller via Zoom (se utskick)

***Higher Seminar***

*Wednesday 9 September 2020*

*3.15-5.00 pm in [Comenius](#) (Key Building) or via Zoom (see emailed invitation)*

**Learning and Reasoning through Embodied Action: How senior and novice geologists use diagrammatic gesture in calibrating professional perception in the field**

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(English, SKI, IKOS)

**Abstract**

Embodiment provides both a domain of experience and medium for instruction in field geology: fieldwork is carried out in open, heterogeneous wilderness settings, that are only amenable to analysis via a practitioners' physical engagement with them, alone or in interaction with others. This physical engagement in the landscape—whether via embodied action—comprises then an essential component in the creation, collection, and organization of the material and textual inscriptions that animate discourse in geoscience education and research.

The ability to produce such inscriptions, however, requires the skilled, knowing body of practitioners who are able to convert their experiences of the world (what they see and feel in a rock being held) into the formal categories (e.g., phenocrysts or foliation) that will be recorded in their field-books. Through concerted apprenticeship in the field with knowledgeable practitioners, the possibly idiosyncratic experiences of the novice is calibrated with the experiences of a senior geologist, providing the novice with the opportunity to experience and classify the world in ways that can be trusted and reproduced by other geologists. Using extensive video recordings of novice and senior geologists scrutinizing rocks, structures, and landscapes in the field together, we describe the interactive practices through which the sensory capacities of the novice (sight, touch, hearing, etc.) are disciplined in ways that enable them to shape their experience of the rocks and landscapes they encounter into the categories, such as muscovite or phenocryst that form the empirical bedrock for research in geology.

In this talk, we analyze the role that diagrammatic reasoning, and diagrammatic gesture in particular, plays in calibrating practitioner's perception of the landscape. By diagrammatic gesture we refer to a use of gesture that interfaces not only with the practitioners' talk, but with the other visual modalities used by the geologists, i.e., the notations, measurements, and line-drawings recorded in their field-books, and works by maintaining different meaning through different visual modalities for subsequent reuse and transformation in the interaction. When deployed alongside these other means for describing geological phenomena, gestures appear useful not just for their iconic or indexical properties, but for their utility in connect increasingly complex diagrammatic descriptions of the complex spatial and temporal processes the geologist is attempting to capture. Furthermore, when viewed in the field, we argue that the utility of diagrammatic reasoning via gesture and/or other visual means reveals itself to not just be in representing or capturing phenomena the geologist can see, but in shape the phenomena the geologist is able to see.