Mobilizing co-participants' sensory experience of co-present objects in scientific practice
Michael Sean Smith
(English, IKOS)

The systematic transformation of the natural world into the material and discursive objects that animate scientific discourse is accomplished via the professional and interactional practices that practitioners bring to bear on that task. In scientific practice more so than in other settings, however, practitioners engage not with "objects" in the first instance, but with a dense materiality from which those objects are then fashioned or extracted. In order to understand how then these objects are made available for co-participants for subsequent use, re-use, and transformation, attention must be given to the practices by which objects emerge as "...progressively witnessable and discourseable" in the first instance. In this talk, we present video recorded data from naturally occurring interactions in 1) geochemical laboratory, where senior and novice geochemists collectively monitor the completion of a chemical process, and 2) from geological fieldwork, where senior and novice geologists extract samples from rock outcrops containing different mineral compositions. I approach these data from a conversation analytic perspective (Sacks, Schegloff, & Jefferson, 1974) with priority given to the multimodal, co-operative nature of the actions produced therein (Goodwin, 2000; 2012; Mondada, 2013).

In each setting, we observe practitioners engaging not only with the physical and interactive work of handling, inspecting, and exchanging objects, but how those manual operations are coordinated with the discursive constitution of the objects as constellations of distinct features and qualia. This latter task presents a problem for the co-participants: While these features and qualia are in a sense “co-present,” they are not always immediately perceivable, especially to the novice, and thus must be built sequentially through co-participants’ concerted effort. I find in our analysis that practitioners overcome this problem by selectively mobilizing their co-participants' sensory experience of various aspects of co-present objects (i.e., the “silvery” luster of a perceivable mineral on a rock, the different sounds a hammer makes against different parts of a rock outcrop or the smell or “blackness” that emerges from a chemical reaction) and accomplish this through both a) the continuous (re)formulation of relevant features or qualia of the objects in any given context, as well as b) through their continuous monitoring of how their co-participants, especially novices, experience and assess those co-present features and qualia. In our talk, we will detail how these two projects are accomplished simultaneously. As we will detail in this talk, this develops out of senior and novice practitioners working in activities with a focus not only on the cultivation of objects through professional practice but the socialization into those practices for novice members. It is through these practices that material objects are incrementally revealed in their "unity" as scientific objects through time and through interaction (McCumber, 2014, p. 148) and through which the natural world enters discourse and is (re)constituted as a socially meaningful and consequential world.
References


