1077-M1-922   **Rebecca A. Dibbs** (`rebecca.dibbs@unco.edu`), School of Mathematical Sciences, UNCo, Campus Box 122, 501 20th St., Greeley, CO 80639, **David M. Glassmeyer*** (`david.glassmeyer@unco.edu`), University of Northern Colorado, Greeley, CO 80639, and **Michael C. Oehrtman**. *Authority dynamics in mathematics discussions.* Preliminary report.

We employed grounded theory techniques to examine the evolution and influences of authority relationships in an undergraduate mathematics education research study. Our analysis focused on video data from a five day teaching experiment with two faculty researchers engaging two second-semester calculus students in a guided reinvention of formal limit definitions. We will discuss our model for authority in a mathematical discussion and characterize the patterns, influence and evolution of authority that we identified in the guided reinvention. Finally, we illustrate the need for researchers to be cognizant of authority patterns in group data collection settings, since such patterns can mask individual evidence of knowledge and reasoning. (Received September 22, 2011)