1116-97-2372 **Katharine B Sawrey*** (`katharine.sawrey@tufts.edu`), Department of Education, 12 Upper Campus Rd, Paige Hall, Medford, MA 02155, and **Barbara M Brizuela**. *A Fourth Grade Student's Exploration of Linear Equation Representations in a Function Task.* Preliminary report.

In this presentation, I will share a case study in which I analyze one fourth-grade student's work on an algebraic task called the Function Puzzle. The Function Puzzle is a task intended to elicit a "sense of functions" (Eisenberg, 1992) from students who have not formally been introduced to algebra (such as upper elementary students). The task consists of 16 cards: 4 different functions (constant, ratio, linear with positive slope, linear with negative slope) in 4 different representations (natural language, equation, Cartesian graph, function table). Students create sets of cards with one type of representation in each set, developing their own rationale for why the cards might belong together. I administered the Function Puzzle to 12 fourth-grade students in an individual interview setting. By students' admission, the equations, given in slope-intercept form (i.e., $y = 3x + 4$) and Cartesian graphs were unfamiliar representations. Curiously, several students disregarded the independent variable in reading the equation cards aloud and in assessing the value of the dependent variable. This presentation will share video excerpts connecting this consistent omission to Sfard's theory of mathematics as discourse (2012). (Received September 22, 2015)