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**Appropriating mathematical practices: A case study of learning to use and explore functions through interaction with a tutor.**

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This case study uses a sociocultural perspective and the concept of appropriation (Newman, Griffin and Cole, 1989; Rogoff, 1990) to describe how a student learned to work with linear functions. The analysis describes in detail the impact that interaction with a tutor had on a learner, how the learner appropriated goals, actions, perspectives, and meanings that are part of mathematical practices, and how the learner was active in transforming several of the goals that she appropriated. The paper describes how a learner appropriated two aspects of mathematical practices that are crucial for working with functions (Breidenbach, Dubinsky, Nichols and Hawks, 1992; Even, 1990; Moschkovich, Schoenfeld and Arcavi, 1993; Schwarz and Yerushalmy, 1992; Sfard, 1992): a perspective treating lines as objects and the action of connecting a line to its corresponding equation in the form  $y = mx + b$ . I use examples from the analysis of two tutoring sessions to illustrate how the tutor introduced three tasks (estimating y-intercepts, evaluating slopes, and exploring parameters) that reflect these two aspects of mathematical practices in this domain and describe how the student appropriated goals, actions, meanings, and perspectives for carrying out these tasks. I describe how appropriation functioned in terms of the focus of attention, the meaning for utterances, and the goals for these three tasks. I also examine how the learner did not merely repeat the goals the tutor introduced but actively transformed some of these goals. (Author's abstract)

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