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Jacqueline S Ward* (jward@lbcc.edu), Long Beach City College, Dept. of Math & Engineering, D-159, 4901 E. Carson St. (Mail Code B2), Long Beach, CA 90808. *Reaching for Cultural Roots of The Representamen: Developmental Math Students' Internal Signs.*

This study explores a cultural basis for beliefs held about mathematics. The investigation focuses on, (1) the cultural characteristics and practices that contribute to learners' beliefs on mathematics, and (2) how explicitly creating experiences for students to make connections between classroom mathematics and their individual cultures may affect these beliefs. Peirce's semiotic triad is employed to provide a framework for analysis. Whereas mathematics is rich in symbols, with a focus on the affective domain here, the "sign," or in Peircian language: the Representamen, is regarded as a malleable internal construct created and held by the learner. As individual learners make sense of mathematics bringing to bear their own cultural identities, these Representamen are thus posited to be inherently cultural in nature. Freehand drawings by learners and expository reflections are used to gain insight into the cultural roots of these internal signs. Moreover, students will be introduced to the field of ethnomathematics and asked to provide examples from their unique cultures to illustrate mathematical concepts taught in the course. Examples of student work and conclusions of the study will be presented. (Received September 01, 2014)