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Stacy A. Brown* (stacy_brown@pitzer.edu). *Examples, Uncertainty, & Skepticism: An Examination of the Underpinnings of An Intellectual Need for Proof.*

While many researchers have documented undergraduate students' difficulties with mathematical proof (Alibert & Thomas, 1991; Dubinsky, 1989; Fischbein & Engel, 1989; Moore, 1995; Movshovitz-Hadar, 1993) much less is known about the types of situations that facilitate a need for proof in the eyes of the student and about how students might be better enculturated into the practice of proof. Research on the use and role of examples (Balacheff, 1988; Harel & Sowder, 1998; Zazkis & Chernoff, 2008) and on contexts that facilitate uncertainty (Buchbinder & Zaslavsky, 2009; Zaslavsky, 2008) provide two promising avenues for exploring the types of situations that facilitate a need for and understanding of proof. In this talk, I will examine these two avenues and argue that a third avenue, which works in conjunction with the first two, is necessary; namely, research on the development of skepticism in mathematical contexts. (Received September 22, 2009)