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Matthew E. Brashears* (brasheam@mailbox.sc.edu), Sloan College rm. 321, 911 Pickens St., Columbia, SC 29208. *Dimensional Analysis in Blau space Models: Preliminary Report*. Preliminary report.

Blau space models (McPherson 1983) provide a probabilistic representation of underlying social networks through a combination of demographic propinquity and the homophily principle. While this method has proven effective in predicting the behavior of organizations (e.g., McPherson and Ranger-Moore 1991) and cultural products (e.g., Mark 1991), several significant methodological hurdles remain. There is no established way to identify sets of demographic traits that are appropriate for inclusion in the model. Likewise, no method currently exists to include discrete variables as dimensions when identifying individual, as opposed to organizational, positions in the space. The result is a considerable degree of arbitrariness in dimensions incorporated into the model, and an inability to use socially salient dimensions in many models. We report on new techniques for quantitatively assessing the quality of fit in these models, as well as transforming discrete variables into distances using random walks in a two-mode graph. Preliminary results are promising, but significant limitations remain. (Received December 20, 2016)