Teaching the first instances of arbitrary matching to sample to nonhumans can prove difficult and time consuming. Stimulus control relations may develop that differ from those intended by the experimenter even when stimulus control shaping procedures are used. We present, in this study, efforts to identify sources of shaping program failure with a capuchin monkey. Procedures began with a baseline of identity matching. During subsequent shaping trials, compound comparison stimuli had two components one identical to and another different from the sample. The identical component was eliminated gradually by removing portions across trials (i.e., subtracting stimulus elements). The monkey performed accurately throughout shaping. At a late stage in the program, probe tests were conducted: (1) arbitrary matching trials that had all elements of the identical comparison removed and (2) other trials that included residual elements. During the test, the monkey performed at low levels on the former trials and higher levels on the latter. These results suggested that higher accuracy was due merely to continued control by the residual elements: the target arbitrary matching relations had not been learned. Thus, it appears that procedures that gradually transform identity matching baselines into arbitrary matching can fail by inadvertently shaping restricted control by residual elements. Subsequent probes at the end of the shaping series showed a successful transfer of stimulus control from identity to arbitrary matching after further programming steps apparently overcame the restricted stimulus control.

Keywords
Matching to sample, stimulus control shaping, restricted stimulus control, Cebus cf. apella.