1056-05-1939Anders Claesson*, The Mathematics Institute, School of Computer Science, Reykjavik
University, 103 Reykjavik, Iceland, and Svante Linusson. n! matchings, n! posets.

Bousquet-Mélou, Claesson, Dukes and Kitaev [arXiv:08060666] gave bijections between four classes of combinatorial objects, thus proving that they are equinumerous: certain matchings due to Stoimenow; unlabeled (2 + 2)-free posets; permutations avoiding a specific pattern; and so called ascent sequences. Inspired by their work we define a natural superset of Stoimenow's matchings whose cardinality is shown to be n!. Moreover, we define a set of labeled (2 + 2)-free posets, also of cardinality n!. Finally, we state a conjecture concerning the distribution of the pattern considered by Bousquet-Mélou et al. (Received September 22, 2009)