Pairwise preferences in the stable marriage problem

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We study the classical, two-sided stable marriage problem under pairwise preferences. In the most general setting, agents are allowed to express their preferences as comparisons between any two of their edges and they also have the right to declare a draw or even withdraw from such a comparison. This freedom is then gradually restricted when we define six stages of orderedness in the preferences, ending with the classical case of strictly ordered lists. We study all cases occurring when combining the three known notions of stability—weak, strong and super stability—under the assumption that each side of the bipartite market obtains one of the six degrees of orderedness. We prove the complexity of all cases not yet known, and thus give an exact boundary in terms of preference structure between tractable and intractable cases.