

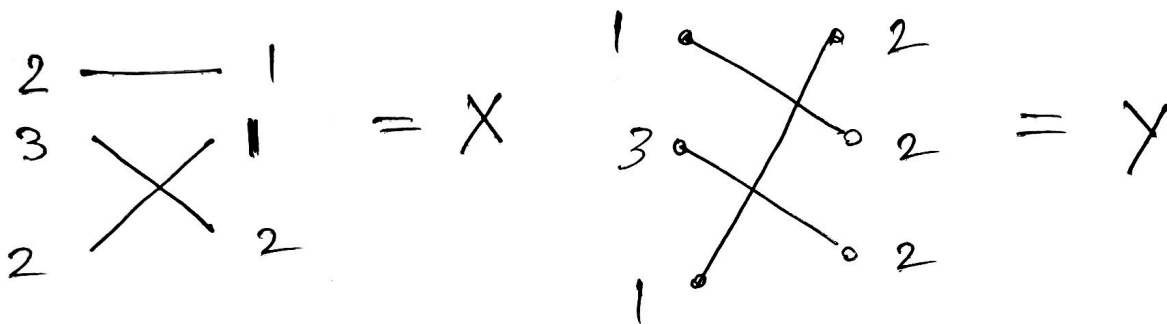
Looking beyond DA: search for a matching that is both stable and strategyproof

Thm: No stable matching procedure can be strategyproof (Roth 1982)

call that instance I_0

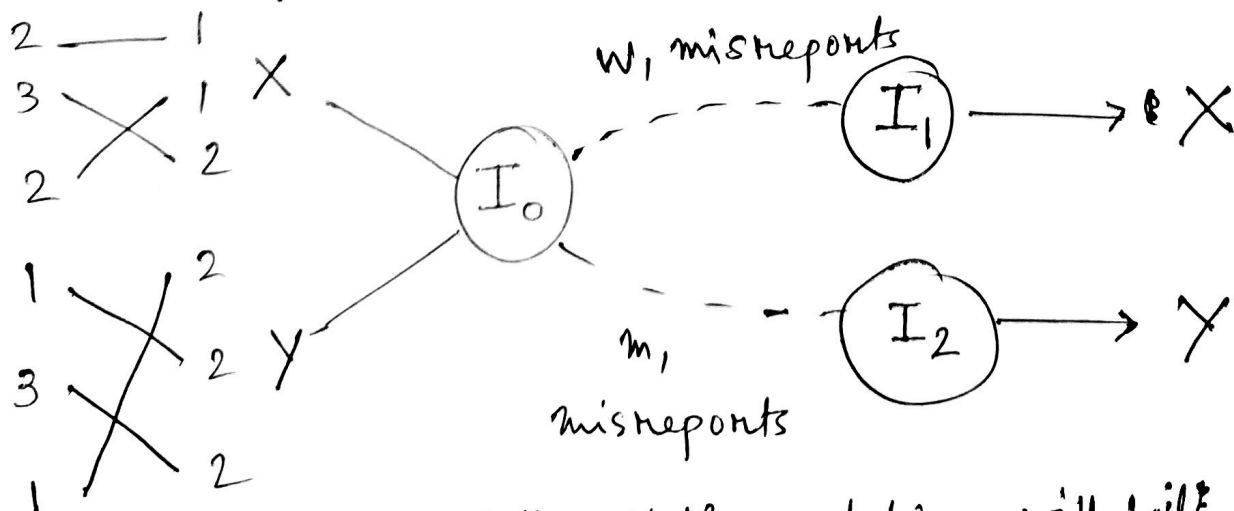
Consider the 3-men-women example from fig 1.

Find the stable matchings: there exists two (can be found via mp and wp)



- Consider w_1 manipulates to $m_1 > m_2 > m_3$ instead of $m_1 > m_3 > m_2$. X remains the only stable matching. Call that instance I_1

- Consider m_1 manipulates to $w_2 > w_3 > w_1$ instead of $w_2 > w_1 > w_3$. Y remains the only stable matching. Call that instance I_2



Any deterministic stable matching will fail strategyproofness on this example.