

**Example 12.28** With respect to the graph  $G$  as shown, the Type II atoms are

$$12\bar{3}4, \bar{1}2\bar{3}4, 1\bar{2}\bar{3}4,$$

while the other 12 nonempty atoms of  $\mathcal{F}_4$  are Type I atoms. The random variables  $X_1, X_2, X_3$ , and  $X_4$  form a Markov graph  $G$  if and only if  $\mu^*(A) = 0$  for all Type II atoms  $A$ .