1053-05-263 **Itaru Terada*** (terada@ms.u-tokyo.ac.jp), Graduate School of Mathematical Sciences, University of Tokyo, Komaba 3-8-1, Meguro-ku, TOKYO 170-0011, Japan. *Jordan types of certain nilpotent matrices.*

Let $G = (V = \{1, 2, \dots, n\}, E)$ be a simple acyclic oriented graph, σ a fixed-point-free arrow-reversing involution defined on a subset $Z \subset V$, and $Z = Z^+ \amalg Z^-$ a partition of Z such that $\sigma(Z^{\pm}) = Z^{\mp}$. If $a \in Z$, write $\varepsilon(a) = \pm 1$ according to $a \in Z^{\pm}$. Define two linear spaces $\mathcal{N}_*(G, \sigma)$, $* = \mathfrak{p}$ and $\mathfrak{k}$, consisting of nilpotent matrices, by

$$\mathcal{N}_*(G,\sigma) = \{\, X = (x_{ab}) \in M(n, \mathbb{C}) \mid x_{ab} = 0 \text{ unless } (a,b) \in E,\ x_{\sigma(b)\sigma(a)} = \varepsilon_* \varepsilon(a)\varepsilon(b) x_{ab} \text{ if } a, b \in Z \,\}$$
$$(\varepsilon_* = 1 \text{ if } * = \mathfrak{p},\ \varepsilon_* = -1 \text{ if } * = \mathfrak{k}).$$

We describe the "generic Jordan type" for (= the Jordan type common to most elements of) each of these two subspaces, extending Gansner and Saks' results for the case $Z = \varnothing$. The problem was motivated by certain special cases related to the (complexified) symmetric space GL_{2n}/Sp_{2n}. (Received September 07, 2009)