

## Fixed Pansystems Theorems and Pansystems Catastrophe

## Analysis of Panweighted Network

Wu Xuemou (吴学谋)

Let  $I = \{(x, x) | x \in G\}$ ,  $\delta \in P(G^2)$ ,  $I \leq \delta$ ,  $\delta = \delta^{-1}$ ,  $G_i = \max\{E | E \subset G, E^2 \leq \delta\}$  do not be reduced to single point;  $g \subset G^2 \times W$ ,  $D \subset W$ ,  $\varphi = g \circ D$ . If  $\varphi \vee \varphi^{-1} \vee I \leq \delta$ , then  $G_i \cap (G_i \circ \varphi \cup \varphi \circ G_i) \neq \emptyset$ . If  $(\varphi \wedge \varphi^{-1}) \vee I \leq \delta$ , then  $G_i \cap G_i \circ \varphi \cap \varphi \circ G_i \neq \emptyset$ . If  $(\varphi' \wedge \varphi'^{-1}) \vee I \leq \delta$ , then there exist positive integers  $m, n$ , such that  $G_i \cap G_i \circ \varphi^{(m)} \cap \varphi^{(n)} \circ G_i \neq \emptyset$ , where  $\varphi'$  is the transitive closure of  $\varphi$ , and  $\varphi^{(m)}$  is the composition of  $m$  times of  $\varphi$  itself. If  $(\bar{\varphi} \wedge \bar{\varphi}^{-1}) \vee I \geq \delta$ ,  $\varphi \cap I = \emptyset$ , then  $G_i \cap G_i \circ \varphi \cap \varphi \circ G_i = \emptyset$ , where  $\bar{\varphi} = G^2 - \varphi$ . If  $\bar{\varphi} \vee \bar{\varphi}^{-1} \vee I \geq \delta$ ,  $\varphi \cap I = \emptyset$ , then  $G_i \cap (G_i \circ \varphi \cup \varphi \circ G_i) = \emptyset$ . If  $(\varphi \vee \varphi^{-1} \vee I)' \leq \delta$ , then  $G_i \circ \varphi, \varphi \circ G_i \subset G_i$ ; furthermore if  $I \leq \varphi \circ \varphi^{-1}$ , then  $G_i = \varphi \circ G_i$ ; if  $I \leq \varphi^{-1} \circ \varphi$ , then  $G_i = G_i \circ \varphi$ . The results obtained include some extensions of Kakutani-type theorem. For related investigation refer to: Wu Xuemou, Pansystems Methodology: Concepts, Theorems and Applications (V)(VI), Science Exploration, 4(1983), 1(1984). Pansystems Metatheory of Ecology, Medicine and Diagnostics (III), Exploration of Nature, 1(1984).