$$X \stackrel{\varphi_S}{\longleftarrow} Z \stackrel{\psi_S}{\longleftarrow} V$$

$$f \downarrow \qquad \qquad \downarrow g \qquad \qquad \downarrow h$$

$$Y \stackrel{\varphi_S}{\longrightarrow} U \stackrel{\psi_S}{\longrightarrow} W$$