$U(f) \circ U(g) : \mathbf{Pos} \to \mathbf{Pos}$

$$P' \mapsto \uparrow \left(\bigcup_{q \in \uparrow} \{g(q)\} \right)$$

$$\mapsto \uparrow \left(\bigcup_{p \in P'} \{ g(f(p)) \} \right).$$