What can I do with $\alpha: \mathfrak{g} \xrightarrow{u} G$?

$$u \to \alpha(u) \longrightarrow \alpha(u^{\alpha(u)}) \longrightarrow \alpha(u^{\alpha(u^{\alpha(u)})}) \to \cdots$$

call the limit $\beta(u)$; it satisfies

$$\alpha(u^{\beta(u)}) = \beta(u)$$

Why should I care?