8. $\Psi^{\circ}_{1,1,0}(n)$ is invariant under translation

$$a \# b(\cdot + w) = a(\cdot + w) \# b(\cdot + w)$$

Th: $\exists !$ translation-invariant trace

$$\mathrm{Tr}_I(a) = \int_{\mathbb{R}} \mathrm{Tr}\, a(t, \cdot)\, dt$$

trace on $\Psi^{-\infty}_{1,1,0}(n) = \mathcal{L}(\mathcal{H}; \Psi^{-\infty}_{1,1,0}(n))$.

Consider the group

$$G^{-\infty}_{1,1,0}(n) = \{ P = Id + A,\ A \in \Psi^{-\infty}_{1,1,0}(n),\ \exists\ B \in \Psi^{-\infty}_{1,1,0}(n),\ (Id + A)(Id + B) = Id \}$$

or in general

$$G^{-\infty}_{\omega'}(W) = \{ P = Id + A,\ A \in \Psi^{-\infty}_{\omega'}(W),\ P^{-1} \text{ exists in } \Psi^{\circ}_{\omega'}(W) \}$$