A moral from a partial computation of $(V, \Phi)$, on Aug 22, 2011:

$$\text{Alt}(\xi \otimes \eta \otimes y) \in \text{(Ig)} \otimes$$

is an invariant element which does not seem to be in the image of $\text{Alt}(T_3)$, yet it is in the image of $\text{Alt}(T_3)$. 

Does $V$ really need to be invariant? 

Also describes non-invariant objects.