When a group $G$ acts linearly on a vector space $V$ over a field $K$, an invariant is a polynomial on $V$ which is constant on $G$-orbits. If $f$ is such an invariant, and if $W$ is another vector space with $G$-action, then we may construct invariants on $W$ by composing $f$ with all possible $G$-equivariant polynomial maps $W \to V$.

If $V = M^q$ and $W = M^p$ (q-tuples and p-tuples, respectively) for a third $G$-module $M$, and if we only consider the natural $G$-equivariant linear maps $M^p - \to M^q$ induced by linear maps $K^p - \to K^q$, then the invariants on $M^p$ thus constructed from an invariant $f$ on $M^q$ are called polarisations of $f$.

Sometimes all invariants on $M^p$ can be expressed in polarisations of invariants on $M^q$ for some $q < p$. Sometimes this is not true, but weaker variations on this statement still hold. I will give an overview of known results of this type.