Abstract: Let $X$ be an algebraic variety over a field $k$. Which representations of $\pi_1(X)$ arise from geometry, e.g. as monodromy representations on the cohomology of a family of varieties over $X$? We study this question by analyzing the action of $\text{Gal}(\bar{k}/k)$ on $\pi_1(X)$, where $k$ is a finite or $p$-adic field. As a sample application of our techniques, we show that if $A$ is a non-constant Abelian variety over $\mathbb{C}(t)$, such that $A[\ell]$ is split for some odd prime $\ell$, then $A$ has at least four points of bad reduction.