In 1983, Cohen and Lenstra observed that the frequency with which a given abelian $p$-group $A$ ($p$ odd) arises as the $p$-class group of an imaginary quadratic field $K$ is apparently proportional to $1/|\text{Aut}(A)|$. The Galois group of the maximal unramified $p$-extension of $K$ has abelianization $A$ and one might then ask how frequently a given $p$-group $G$ arises. We develop a theory wherein this frequency is inversely proportional to the size of its automorphism group in a new category and then test this against computations. If time permits, I shall describe progress on the real quadratic case. This is joint work with Michael Bush and Farshid Hajir. (Received August 09, 2011)