1104-14-108  Daniel Litt* (dalitt@stanford.edu). *Non-Abelian Lefschetz Hyperplane Theorems. Work of Lefschetz (in 1924) and Grothendieck (in SGA II) provides many relationships between properties of a smooth projective variety $X$ and a smooth ample divisor $D$ in $X$. For example, the singular or $\ell$-adic cohomology of $X$ agrees with that of $D$ in low degree; $X$ and $D$ have the same Picard group if $X$ has dimension at least 4; and $X$ and $D$ have the same $\pi_1^{et}$ if $X$ has dimension at least 3. I’ll describe a general result which encompasses some of these Lefschetz hyperplane theorems and many new ones, comparing maps out of $X$ to maps out of $D$. The case when the target of these maps is a moduli scheme or stack is of particular interest; for example, one may take the target to be $M_g$, and thus compare families of curves over $X$ to families over $D$. (Received August 25, 2014)