We investigate Lipschitz maps, I, mapping $C^2(D) \to C(D)$, where D is an appropriate domain. The global comparison principle (GCP) simply states that whenever two functions are ordered in D and touch at a point, i.e. $u(x) \leq v(x)$ for all x and $u(z) = v(z)$ for some $z \in D$, then also the mapping I has the same order, i.e. $I(u, z) \leq I(v, z)$. It has been known since the 1960s, by Courrège, that if I is a linear mapping with the GCP, then I must be represented as a linear drift-jump-diffusion operator that may have both local and integro-differential parts. It has also long been known and utilized that when I is both local and Lipschitz it will be a min-min over linear and local drift-diffusion operators, with zero nonlocal part. In this talk we discuss some recent work that bridges the gap between these situations to cover the nonlinear and nonlocal setting for the map, I. These results open up the possibility to study Dirichlet-to-Neumann mappings for fully nonlinear equations as integro-differential operators on the boundary, and well as to possibly apply the integro-differential results to some Hele-Shaw type free boundary problems. We will also discuss these applications of the min-max. This is joint work with Nestor Guillen.