

In the talk I will first discuss recent results concerning the convergence and the stability of the distributional Jacobian of maps from a sphere S^N into itself. The motivation and the method come from the theory of the degree. Secondly, I will deal with the Jacobian determinant of maps from R^N into R^N . The two parts are related and I explain it in the talk. Finally, if time permits, I will present some inequalities involving a quantity appeared in the first part and their applications in the theory of Sobolev spaces. The first two parts follow from a joint work with Brezis.