and aëriform states of bodies are merely stages in a progress of gradual transition from one extreme to the other; and that, however strongly marked the distinctions between them may appear, they will ultimately turn out to be separated by no sudden or violent line of demarcation, but shade into each other by insensible gradations. The late experiments of Baron Cagnard de la Tour may be regarded as a first step towards the full demonstration of this (199.). But the cohesion of liquids is not, like that of solids, so modified by their structure in other respects as to destroy the mobility of their parts one among another (unless in those cases of nearer approach to the solid state which obtain in viscid or gummy liquids). On the contrary, the two qualities co-exist, and give rise to a number of curious and intricate phenomena.

(253.) One of the most remarkable of these is capillary attraction, or capillarity, as it is sometimes called. Every body has remarked the adhesion of water to glass. The elevation of the general surface of the liquid where it is in contact with the containing vessel; the form of a drop suspended at the under side of a solid;—these are instances of capillary attraction. If a small glass tube, with a bore as fine as a hair, be immersed in water, the water will be observed to rise in it to a certain height, and to assume a concave surface at its upper extremity. The attraction of the glass on the water, and the cohesion of the parts of the water to each other, are, no doubt, the joint causes of this curious effect; but the mode of action is at once obscure and complex; and although the researches of Laplace and Young have thrown great light on it, further investigation seems necessary before we can be said distinctly to understand it.

(254.) As the capillarity and cohesion of the parts of liquids shows them to possess the power of mutual attraction, so their elasticity demonstrates that they also possess that of repulsion when forcibly brought nearer than their natural state. From the extremely small extent to which the compression of liquids