

this law interfered with (Rule 5. § 152.). Thus, roughened iron, especially if painted over or blackened, becomes dewed sooner than varnished paper: the kind of *surface*, therefore, has a great influence. Expose, then, the *same* material in very diversified states as to surface (Rule 7. § 156.), and another scale of intensity becomes at once apparent; those *surfaces* which *part with their heat* most readily by radiation are found to contract dew most copiously: and thus we have detected another law of the same generality with the former, by a comparison of two classes of facts, one relating to dew, the other to the radiation of heat from surfaces. Again, the influence ascertained to exist of *substance* and *surface* leads us to consider that of *texture*: and here, again, we are presented on trial with remarkable differences, and with a third *scale of intensity*, pointing out substances of a close, firm texture, such as stones, metals, &c., as unfavorable, but those of a loose one, as cloth, wool, velvet, eider down, cotton, &c., as eminently favorable, to the contraction of dew: and these are precisely those which are best adapted for clothing, or for impeding the free passage of heat from the skin into the air, so as to allow their outer surfaces to be very cold while they remain warm within.

(166.) Lastly, among the negative instances (§ 150.), it is observed, that dew is never copiously deposited in situations much screened from the open sky, and not at all in a *cloudy night*; but if the clouds withdraw, even for a few minutes, and leave a clear opening, a deposition of dew presently begins, and goes on increasing. Here, then, a cause is distinctly pointed out by its antecedence to the effect in question (§ 145.). A clear view of the cloudless sky, then, is an essential condition, or, which comes to the same thing, clouds or surrounding objects act as *opposing causes*. This is so much the case, that dew formed in clear intervals will often even evaporate again when the sky becomes thickly overcast (Rule 4. § 150.).

(167.) When we now come to assemble these partial inductions so as to raise from them a general conclusion,