

we consider, 1st, That all the conclusions we have come to have a reference to that first general fact—the cooling of the exposed surface of the body dewed below the temperature of the air. Those surfaces which part with their heat outwards most readily, and have it supplied from within most slowly, will, of course, become coldest if there be an opportunity for their heat to escape, and not be restored to them from without. Now, a clear sky affords such an opportunity. It is a law well known to those who are conversant with the nature of heat, that heat is constantly escaping from *all bodies* in rays, or by *radiation*, but is as constantly restored to them by the similar radiation of others surrounding them. Clouds and surrounding objects, therefore, act as opposing causes by replacing the whole or a great part of the heat so radiated away, which can escape effectually, without being replaced, only through openings into infinite space. Thus, at length, we arrive at the general proximate cause of dew, in the cooling of the dewed surface by radiation faster than its heat can be restored to it, by communication with the ground, or by counter-radiation; so as to become colder than the air, and thereby to cause a condensation of its moisture.

(168.) We have purposely selected this theory of dew, first developed by the late Dr. Wells, as one of the most beautiful specimens we can call to mind of inductive experimental inquiry lying within a moderate compass. It is not possible in so brief a space to do it justice; but we earnestly recommend his work* (a short and very entertaining one) for perusal to the student of natural philosophy, as a model with which he will do well to become familiar.

(169.) In the analysis above given, the formation of dew is referred to two more general phenomena; the radiation of heat, and the condensation of invisible vapor by cold. The cause of the former is a much higher inquiry, and may be said, indeed, to be totally unknown; that of the latter actually forms a most important branch

* Wells on Dew.