

Leonardo's Recipe Book

Leonardo was a master observer. Among the many things he spotted is that moisture in the Earth's atmosphere has an effect on the colour of things, especially when those things are viewed at a distance.

This effect, called aerial perspective, lends a blue tint to distant objects, an effect that increases with distance. Having observed this, he put together what might be described as a recipe book for light effects. You might like to try some of his ideas in your own work.

Graduated blues

"I say that the blueness we see in the atmosphere is not intrinsic colour, but is caused by warm vapour evaporating in minute and insensible atoms on which the solar rays fall, rendering them luminous..."

Leonardo made this observation from a mountain peak in the Alps, but while there he also noticed a curious thing: the higher one climbs, the less blue one finds in the atmosphere. He believed, quite correctly, that this is because the atmosphere becomes progressively thinner the higher one climbs and therefore will contain less water vapour. Obviously, this will mean that at higher altitudes the atmosphere will appear less blue than at sea level.

Smokin’

“Smoke, of old and dry wood...appears to turn very blue, when seen between the eye and the dark distance. But as it rises...it at once shows an ash grey colour.”

Here, Leonardo was describing what happens to the appearance of smoke as it rises above the horizon and, effectively, is lit directly from behind by the Sun.

He made an additional observation on the appearance of smoke: “If the smoke is from young, green wood, it will not appear bluer, because, not being transparent and being full of superabundant moisture, it has the effect of condensed clouds which take distinct lights and shadows like a solid body.”

Black and blue

Leonardo had a recommendation for anyone wishing to create striking blues, by way of explaining the effect that sunlight has as it passes through a column of smoke.

“...paint a board with various colours, among them an intense black; and all over let him lay a very thin and transparent [coating of] white. He will then see that this transparent white will nowhere show a more beautiful blue than over the black.”