	Air dissolved in Water.	Atmospheric Air.
Oxygen	34.92	20.96
Nitrogen	65.08	79.04
	100.00	100.00

Such would not take place if the oxygen and nitrogen were chemically united.

Let me briefly remind you of some of the salient properties of these elements, and the functions they perform in the atmosphere.

OXYGEN.

Oxygen is known as the "supporter of combustion," since it is essential for combustion, whether such be accompanied by flame or not. It is the active element. It is the life-giving or, rather, life-supporting element. Without it animal life could not exist. In one of our former lectures we saw the vigour with which it united with many of the elements, giving out both light and heat, and learnt how, that of the compounds similarly formed, the rocks and the soil were very largely composed. Hence, oxygen may be termed the world-building element.

NITROGEN.

Nitrogen is an inert, inactive gas, incapable of supporting life or combustion. Its function in the atmosphere, as far as respiration is concerned, appears simply to be for the purpose of diluting the oxygen. For though oxygen is so necessary and essential for vitality, yet we could not live long in atmosphere of *pure* element. Such would shorten our lives to a very brief period, and we should hourly stand in jeopardy of an almost universal conflagration.

Roughly speaking, the air consists of one-fifth of oxygen, and four-fifths of nitrogen, by volume; but since it has been shown to be a mixture, and not a compound, we should expect to find the relative amounts of these gases variable. And this is the case, within small limits. From many hundred analyses of air made in different parts of the world, the percentage of oxygen in pure, wholesome air varies from 20.989 to 20.949 by volume. The extreme difference, then, amounts