It will be seen that the formula represents the viscosity of the liquid within an average error of 2 parts in a thousand; and that the constants A and B are in fair agreement with the values calculated from the data for the viscosity of the vapour. An empirical formula of the type $Ae^{B/T}$ is found to represent closely the variation of the viscosity of many liquids, especially at the higher temperatures. As we have assumed that the "vapour" molecules are identical with those actually found in the gaseous state, we cannot expect the experimental constants A and B to agree exactly with those indicated by the theory outlined in this note in all cases. Considerable deviations actually occur in the case of "associated" liquids, in which presumably the effect of the molecular fields of force cannot be handled so simply.

The further discussion of this question and of the extension of the theory to the case of dense vapours on one hand, and to supercooled liquids and amorphous solids on the other hand, offers a most interesting field of research. The treatment suggested can obviously be improved in several directions, especially in the discussion of the dissociation equilibrium between the two types of molecules, and the effect of high pressures on the viscosity of liquids could probably be explained by a more exact investigation.

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Colour Temperature and Brightness of Moonlight.

OUR more complete knowledge of full or black-body radiation embodied in Planck's law makes it possible to speak of the temperature of radiation as well as the temperature of radiating bodies. Thus, the temperature of any visible radiation is the temperature to which a black body must be raised to emit light as nearly as possible of the same integral colour or quality as that of the radiation in question.

The necessary "colour matches" involved in comparisons of a given radiation with that of a black body at a known temperature may be easily and quite accurately made with a contrast photometer. Radiation temperatures thus determined are called "colour temperatures." The colour temperature of the zenith sun as seen from the earth, according to Abbot's bolometric data, which extend into the infra-red spectrum, is 5600° abs. If correction is made for the absorption of the earth's atmosphere, we get a *value* of 6500° abs. for the colour temperature of sunlight above atmospheric limits. When a contrast photometer is used for making "colour matches" to determine colour temperature, a black-body source at a corresponding temperature is necessary for comparison. To avoid the necessity of a comparison black body at very high temperatures, advantage can be taken of Planck's formula for black-body radiation for computing a distribution of intensities in the visible spectrum which will give the integral colour of the source under examination, as measured by an optical pyrometer with monochromatic *screens*.

This procedure was followed in some observations made to determine the colour temperature of moonlight. The disappearing filament pyrometer with blue and red glass screens was focused on one of the brighter portions near the centre of the full September moon, 1916, when near the meridian. These readings were repeated under nearly the same conditions a year later. The colour temperature found for moonlight on the two evenings in question agreed to within 50°.

With the same pyrometer data we can also determine the brightness temperature of the moon for a given wave-length; that is, determine the temperature of a black body which has the same brightness or intensity for the same small wave-length interval chosen for comparison. Thus, with a red glass screen transmitting an average or effective wave-length of 0·665 μ, we may determine the brightness temperature of the moon for this wave-length. It is also possible, from the data thus obtained and the brightness of a black body, to calculate the brightness of the moon in candles per square centimetre. Thus, knowing the illumination due to the sun, the reflecting power of the moon for sunlight may be calculated.

The data determined from these various observations and calculations are shown in the following table:

Colour temperature of moonlight .	4125° abs.
Brightness temperature ($\lambda = 0{\cdot}665\,\mu$)	1575° abs.
Brightness for total light . .	0·25 candles/cm.^{2}
Reflecting power for total light .	0·07

The difference in colour temperature between the sun and sunlight reflected from the moon, 5600° and 4125° respectively, indicates that the observed area of the moon reflects selectively, the coefficient being about twice as large at the red end of the spectrum as at the blue. The greater difference in brightness temperature of these two is due to the low albedo or average reflecting power of the moon's surface.

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Botanical Aspects of Wegener's Hypothesis.

IN the account which appeared in NATURE of January 27, p. 131, of the discussion on the distribution of life in the southern hemisphere, which took place before the Royal Society of South Africa, I am said to regard the botanical evidence as completely opposed to Wegener's theory. The remainder of the article generally followed the official report issued by the society.

My point was that the ancient phyla, with excellent means and ample time for dispersal, are generally valueless as indicating former land connexions. On the other hand, the distribution of the modern groups, especially the Angiosperms, in the South Temperate sub-continents took place in the main after the disruption envisaged by the Wegener theory. Thus neither ancient nor recent groups give us any material assistance in criticising this suggestive hypothesis, so far as concerns the relationships between the South American, South African, and Australasian floras. The botanical evidence for the southern hemisphere is certainly not "completely opposed" to Wegener's theory: it simply does not provide any critical test of that theory, so far as I can see at present.

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I ACCEPT Prof. Compton's correction of the phrase "completely opposed"; it is perhaps too strong a term to have used. Prof. Compton's letter, however, at least admits that the evidence from the botanical side is valueless as a critical test for or against