tion because it says nothing about anything; it merely illustrates our verbal habit. In saying "Red is a colour", I am merely illustrating the verbal habit we have of grouping the class of things we call *red* under a larger class which we call *coloured*. If, however, I say "What I now see is *red*", this is no question of verbal habits, but a matter of fact, and what makes it true or false is just what I *am* seeing now.

Mr. Reid argues that this is not the whole story, pleading that verification is needed even in the case of the analytic statement. What he says, reduced to very simple terms, is this: "Verbal habits are not known to me by any mysterious form of cognition. The analytic statement 'Red is a colour' must be verified by the same *sort* of process as the synthetic statement 'What I now see is red'. I must check how people do in fact use words such as *red* and *colour*. I must check just what my own use is (because it *is* my own use does not prevent me being ignorant about it) and what I intend my use to be. Rules of English change, and as they change, it may be expected that analytic statements will change with them." In Mr. Reid's view, then, both analytic and synthetic statements require to be verified, the former by the intentions and verbal habits of people, the latter by facts and natural laws. The point is one which was worth making though it may not reduce the structure of logical positivism to ruins.

Problems of Colonization

UNDER the title "Ideas Sobre Los Fundamentos Bioclimaticos Y Biogeographicos Para Una Colonizacion Europea", in *De Gœa, Anales de la Sociedad Argentina de Estudios Geográficos* (7, 99–111), Walter Knoche sets forth a number of important points to be observed if colonization is to be a success. As a general principle, it is laid down that woods and forests should be protected, as they are valuable in preserving the climate, to say nothing of their aesthetic value and their use to future generations in preventing the spread of steppe and desert. Problems relating to the acclimatization of European colonies in different latitudes are considered, and also the difference in the aptitude for acclimatization of European immigrants from southern Europe or from the Mediterranean countries in comparison with those from north-west and central Europe. It is interesting to know that in torrid zones no colonists from north and central Europe are found who have any real expectations for their descendants, but this does not apply to certain southern European colonists. The difficulties of acclimatization in torrid zones are discussed and also the effects of certain climatic conditions, such as ultra-violet light which acts very differently in regions of high altitude, in temperate zones, and in tropical countries. Very short waves produce erythema while those that are longer are responsible for the formation of pigment which, while it reflects some heat, also absorbs some and, as a consequence, there ensues hypertension of the sweat glands. The southern European is better protected against the solar radiation in torrid regions than is the northern European, though the latter is now able to acquire an artificial pigment by means of sun bathing or special heat rays. The principle laid down by the Incas is recommended: "Colonize in the valleys similar to those existing in the previous State, and other parts of the earth with temperature and conditions like those from which we came; if cold, select cold; if hot, select hot".

Bell Laboratories Photographic Department

PHOTOGRAPHY is a necessary part of research and development work, and there has been a Photographic Department at the Bell Laboratories, 463 West Street, New York, ever since the building was erected for the Western Electric Company at the close of the last century. Beginning with a single photographer and camera, it grew with the organization it served until in 1941 it required the full time of nine men, and included developing and printing quarters and a studio with cameras and other facilities that permitted it to turn out some 4,500 negatives and 63,000 prints each year. By this time the facilities were old and needed replacement. A careful study was therefore made of all needs and the most efficient production methods, and an entirely new lay-out was made, new equipment acquired, and all needed facilities provided to do the work most efficiently. This new lay-out was just about completed when war came, bringing with it intensified work, longer hours and increased personnel, and there is no doubt that the greatly augmented demands for photographic services of various types would have greatly exceeded the capacities of the old facilities. With the new quarters and equipment, a staff of fifteen is now producing at the rate of 14,000 negatives and nearly 200,000 prints a year. The new quarters are described and illustrated in an article by E. Van Horn (*Bell Lab. Rec.*, 22, No. 2; October 1943).

Conductor Sagging on Overhead Lines

Messrs. C. O. Boyse and N. G. Simpson recently read a paper in London on this subject before the Institution of Electrical Engineers, in which the first part reviews overhead-conductor sags and tensions and their calculation on single spans and on complete lines, using parabolic formulæ throughout. A standard procedure and standard methods of calculation are recommended. The second part of the paper deals with the determination, with respect to the conditions prevailing in Great Britain, of the wind and ice loads to be applied to conductors for design purposes, and the stresses so produced in the conductors. The use of the term 'factor of safety' applied to overhead conductors is criticized, and suggestions are offered for revision of the Overhead Line Regulations of the Electricity Commissioners. The loads transmitted to the supports are also considered. Erection sags for low-voltage distribution lines are recommended for general adoption.

Sheet Steels for Electrical Plant

A PAPER entitled "A Survey of Electrical Sheet Steels for Power Plant and the Factors Affecting their Magnetic Properties" (*J. Inst. Elect. Eng.*, 90, Pt. II, No. 17; October 1943) by Mr. F. Brailsford discusses magnetic sheet materials used for electrical plant, and represents an attempt to stimulate the interest of electrical engineers and others in this class of sheet steels, in which progress in relation to the commercial materials has been relatively slow. After a short discussion of the historical development, the limitations imposed upon designers of electrical plant by the existing materials are referred to. This is followed by a brief outline of the physical basis of magnetic processes and by a discussion of the factors which affect the magnetic properties of electrical sheets. Finally, reference is made to future possibilities. The problems involved in