R. C. MOSSMAN: *The Meteorology of Edinburgh.* Transactions Roy. Soc. Edinb., Vol. XXXVIII., Part III., No. 20, 1896. Contains the reductions of observations made in Edinburgh during the past 132 years, with colored plates illustrating some of the principal features of the climatology of the city.

TH. ARENDT: *Die Bestimmung des Wasserdampfgehaltes der Atmosphäre auf Grund spektroskopischer Messungen.* Met. Zeitschr., Oct., 1896, 376–390. The results of an investigation carried on at the Potsdam Observatory during 1895 and 1896.

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CURRENT NOTES ON ANTHROPOLOGY.

ARAUCANIAN STUDIES.

THE excellent studies of Dr. Rudolfo Lenz in modern Araucanian have already been mentioned in these notes. A new instalment of them includes dialogues in the Pechuenche dialect, some small original pieces in the Picunche and Huilliche dialects (Spanish and Araucanian) and a collection (72 pages) of Araucanian tales and stories published in German in Valparaiso. The latter are divided into mythological tales, animal stories, others of European origin and some songs. They are interesting examples of the present condition of folk-lore among these intelligent natives.

No other investigations into the language of the aborigines of Chili equal in method and accuracy these of Dr. Lenz. They are, in fact, models of their kind.

The language itself is one of beauty and strength. Indeed, in the last century the missionary Haverstadt was so impressed with its resources that in 1777 he published a work upon it ('Chilidugu') in advocacy of its adoption as an universal tongue for the world, a ready-made Volapuk.

The publication of Dr. Lenz can be obtained through Karl M. Hiersemann, Königsplatz 2, Leipzig, Germany.

RACE DEGENERATION IN THE SOUTHERN STATES.

AN unusually thoughtful article appears in the Bulletin of the American Academy of Medicine (Vol. II., No. 9), by Dr. John T. Searcy, superintendent of the insane asylum at Tuscaloosa, Ala. The subject treated is insanity in the South, and its relations to race were brought out prominently. Some of these may be noted.

The native American (white) when insane is more adaptable to his environment than any other stock. The American Indian is just the opposite—not at all adaptable to new conditions. Insanity is a symptom of a race-degenerating process. It is more observable in negroes since the Civil War, as, compared to the condition of slavery, "degeneracy is increasing in the majority of the negroes." The whites are less so, because "during the time of slavery brain idleness and brain injury prevailed to a greater extent among the whites than at present." Compared with his previous condition in Africa, the negro was much better off as a slave in America than he ever was before. This general improvement in his condition showed itself in the absence of mental degeneracy. His present types of insanity 'show the same race traits in the hospital which they do on the outside.' That is, they are more emotional, and yet his delusions are weaker and more transient.

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NOTES ON INORGANIC CHEMISTRY.

IN the last Chemical News Prof. Brauner, of the University of Prague, discusses the theory that argon is a polymer of nitrogen, N_3, and helium a polymer of hydrogen, H_4, or more probably a mixture of H_3 and H_5. His argument is directed almost solely against the elementary nature of argon and helium and the arguments which have been put forward to show that argon is not N_3.

Against the elementary nature of argon and helium stands the difficulty of placing them in the periodic system. He does not agree that the argument drawn from the ratios of the specific heats is conclusive as to the molecule of argon or helium containing only a single atom. The density of argon, 19.94, being less than that of N_2, 21.06, he accounts for by the possibility of the presence of helium or some other inert gas. Of positive arguments in favor of his theory he gives none, but suggests that a determination of the atomic heat would decide the question. He inclines to the view that the constituents of helium were formed from hydrogen in accordance with Prout's law.

The latest contribution to a systematic arrangement of the elements is an article by Richard Lorenz in the Zeit. Anorganische Chemie, on 'Twin Elements.' The author gives this name to elements which have nearly the same atomic weight, resemble each other in occurrence and chemical behavior, and are with difficulty separated from each other. Such twins are sodium-magnesium, cobalt-nickel, phosphorus-sulfur. The atomic weights of each twin differ from those of the next twin by four units. In some instances a single member only of the pair exists or is known, as chlorin is the only element of the twin which lies between phosphorus-sulfur and potassium-calcium. Lorenz develops from this a germinal rule. Taking as his starting point the atomic weights three and four, the latter corresponding to helium, he proceeds by successive increments of four. Of the second pair (7, 8), lithium only is known; the third twin is (11, 12) boron-carbon; of the fourth only oxygen is known; of the fifth (19, 20), we have fluorin, and perhaps argon. Up to the atomic weight of 128, thirty-nine elements correspond to this germinal rule, while there are ten elements whose weights do not fall within the limits of any pair. Fourteen of the thirty-two twins have but one member, four twins have no known member, and one twin, cobalt-nickel, is displaced one unit from its theoretical value. Of the elements of higher atomic weight, ten of the best known follow the rule, while four do not. The author seems to indicate his opinion that this germinal rule expresses the composite nature of the elements, and suggests that the elements which conform to it may be built up analogous to one series of hydrocarbons, while the exceptions may be built up on a different plan.

The article recalls two anonymous contributions to the American Supplement to the *Chemical News* for 1869 (pp. 217 and 339) on the 'Numerical Relations of the Atoms' and the 'Pairing of the Elements,' where very similar ideas were suggested.

J. L. H.

ASTRONOMICAL NOTES.

In our issue of November 15th we called attention to an article by Dr. Marcuse, of Berlin, giving an account of a series of observations made by him with the new photographic zenith telescope belonging to the Geodetic Commission. We have now received Prof. Albrecht's report upon the performance of the same instrument, which has been mounted at Potsdam side by side with the old visual instrument. This arrangement has enabled Herr Schnauder and Dr. Hecker to carry out a simultaneous series of observations with the two instruments, and using the same stars. The result of the research was not favorable to the photographic instrument, since it necessitated much extra labor, without any sufficient compensating advantage in the accuracy attained. It will be remembered that the Geodetic Commission proposes to establish four permanent observing stations on the same parallel of latitude, but differing nearly 90° in longitude, in order to get a continuous and very accurate determina-