

UNIVERSITY EXTENSION
LECTURES.

The first of the scientific lectures under the extension movement was delivered at the University on Thursday evening by Professor Romo, M.A., D.Sc. To indicate that these lectures are to be instructive from a practical point of view the Professor chose for his course to demonstrate experimentally as well as orally the constituent elements of the atmosphere, their properties, uses, and functions in nature. Although the lectures will be given in a connected form, each will be of such an elementary character that it will be readily understood without any previous knowledge of its predecessors. The Professor proceeded by stating that it was his intention, so far as conditions would allow, to illustrate the gaseous nature of the atmosphere, which was a mixture of various kinds of gases of different forces, weights, and characteristics. The degree of force were spoken of which held particles together, forming gases, liquids, and solids. Although particles in solids were necessarily held very closely together unaffected by pressure, they were not necessarily in actual contact. This was also the case with liquids, as demonstrated by the action of water used in hydraulic apparatus but not so with the gases, which were not cohesive, but very loosely held together, it being very easy for the hand to be moved through the air, as an instance. The properties of gases as distinguished from liquids and solids were then demonstrated by experiments of a very conclusive nature with a hot-air thermometer and other appliances. While it was possible to convert gases into liquids and solids it was also shown that solids can be transformed into liquids and gases. After demonstrating the liquefaction and solidification of gases the lecturer went on to show the behaviour of gases with changes of temperature and pressure. One of the most interesting experiments of the evening was the freezing of water by its own vapour through the application of intense cold to a cryophorus tube. The lecture was concluded with demonstrations of the weights of gases, it being shown that carbon dioxide weighed twenty-two times as much as hydrogen, which was the lightest gas. During the course of the lecture an experiment was in progress which proved that by the application of a freezing mixture, composed of ice and salt, sulphur dioxide can be liquefied, the liquid being exhibited in the bottom of a tube. To the uninitiated in the mysteries of the air we breathe, and the magical power of the chemical elements, the Professor showed some results which must have been somewhat surprising. For instance, the boiling of water by pouring cold water upon the receptacle in which the liquid was contained needed some explanation to the incredulous. This course promises to be exceedingly interesting as well as instructive upon a most useful science.

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CULTURE—NOT OF THE SOIL.

It is with pleasure that we note that an endeavor is likely to be made to obtain for Mount Barker the intellectual advantages appertaining to a course of University extension lectures. The system, which aims at giving those who are not professional students an opportunity of keeping up their general education and of adding to their stock of knowledge, has been tried with considerable success in Adelaide, and increased attention is being given just now to this method of disseminating University instruction among the people. Residents in most of the country districts will not be afforded the chance of imbibing mental culture which is offered to the more fortunate metropolitans, but in a few of the provincial centres it will be possible to secure occasional visits from one or other of the professors at the University, who will give lectures on subjects such as history, literature, economics, or science, as may be desired by the local supporters of the movement. Gawler has already made application for extension lectures, and Mount Barker should follow the good example with little delay as possible, for, in view of the obvious limitations, those who are earliest in the field with a request are

most likely to have their wishes complied with. Readers of the daily papers no doubt perused the interesting interviews which the reporters had with Professor Bensly, who was recently appointed to the professorship of classics at the University, when full information respecting the scope and the working plan of the extension system was given by that gentleman, who is very enthusiastic on the matter. His general remarks on the benefits attaching to well-directed study, not pursued in "cramping" fashion but as a relaxation after business or the toil of the workshop, are well worth reading and taking to heart, while special notice should be paid to what he says in regard to the lectures to which we have made reference. He emphasizes the fact that the idea is not so much to give people a great deal of information on certain subjects as to show them how interesting such subjects are and to encourage them to read on their own account—in brief, to enlarge the general views of life and its intellectual interests. To quote the Professor—"One is more likely in a new community to neglect that side—there is so much to engage the mind—but one does not get the real 'sauc' of life, the real flavor of living, unless one takes a wider interest in things; and it is culture that opens up new pleasures for us and teaches us to appreciate the merits and beauties of Nature. The man of refinement and culture is contented with less than the man who lives only for wealth, and he gets more rational enjoyment out of existence." It is because there is particular need, where the dwellers in country districts are concerned, for arousing and stimulating interest in mental pursuits that we welcome the proposition to invite University lecturers to come into our midst and talk to us about some among the numberless branches of knowledge.

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Professor Bensly continued his course of lectures upon "Rome," with illustrative lantern views, at the University on Wednesday afternoon and evening before good attendance. Having already introduced his listeners to the city and its people in order to possess them of a general acquaintance with his subject, the Professor proceeded to particulars upon its architectural greatness, variety, and beauty in three divisions of study—the builder materials, the methods of construction, and the styles of architecture. The great bulk of the necessary or useful material was obtained from the hills of Rome, being a conglomerate mass of sand and stone which had been subjected to volcanic pressure. The foundations of buildings and the roads were usually of a dull grey colored lava, exceedingly hard. The upper and outer parts of structures, especially columns and arches, where great strength was required, was of a non-volcanic composition of limestone of a creamy tinge. This material differed very essentially in substance, colour, and method of working from the volcanic tuff. The bricks, made in shape and size like tiles of later days—some sun-dried and others dried by the kiln—were an exceedingly interesting study. The ornamentation work in marble was a very striking feature of Roman architecture, but no idea of the quantity used could now be conjectured, because of the vandalism which burnt these beautiful works of ages into lime. The marble was obtained from every available source—the peninsula of Naxos with its splendid polish, the marble of Paros, the ancient red, and the Lesbianian porphyry were most extensively brought into use. To give some idea of the extent of some of the workmanship it was stated that a Company formed to work the Egyptian marble quarries found that it would cost £25,000 to transport a single porphyry column to England. The use of bronze and wood for roofing were explained, and the method of construction was dilated upon, the work being squared with hewn stone with little or no mortar, the courses being fastened later on with brass or iron clamps. The concrete walls were faced on both sides with irregular-shaped stones of tuff and terracotta bricks covered with cement and painted. An interesting and instructive lecture was concluded with a graphic description of the styles in Etruscan, Doric, Greek, Corinthian, and Ionic, being shown separately and in combination, according to the skill and taste of the architect and the artist.