

ance with the following regulations recently adopted by the president and fellows of Harvard College, provided suitable candidates make application: (1) Appointments shall be made by the president and fellows on recommendation of the division of mathematics. Each appointment shall be for one academic year and shall carry a remuneration of not less than \$1,000 nor more than \$1,200. (2) A holder of an instructorship may be a candidate for reappointment, but no person shall hold an instructorship for more than three years. (3) Each instructor will be expected to teach two and one half elementary courses and one other course which would ordinarily be of an advanced character. (4) Instructors will be permitted to attend without charge all courses of instruction under the faculty of arts and sciences, and to enjoy the same library privileges as other instructors. They will be offered every facility towards the prosecution of original scholarly work, the members of the division being ready to give all possible aid and encouragement. (5) A candidate for an instructorship in any academic year must present his name to the chairman of the division on or before the first of February of the previous academic year. He should offer at the same time evidence of his capacity as a scholar and a teacher. For this purpose he should present such documents as: (a) a dissertation accepted towards the fulfilment of the requirements for the degree of doctor of philosophy; (b) published contributions to mathematical science; (c) certificates as to his ability and success as a teacher; (d) personal letters relating to his character and qualifications for the post.

In amplification of the above regulations it may be pointed out that these newly-established Benjamin Peirce Instructorships afford an unusual opportunity for young men of good training and ability at or near the beginning of their teaching career. The appointments are made on the basis of an open competition; Harvard has one of the best mathematical libraries in the country; the amount of work required is very moderate (the "course" at Harvard being three fifty-five-minute periods

a week throughout the year) and includes opportunity for advanced teaching. This advanced instruction will be on subjects selected in consultation with the instructor and, so far as possible, in conformity with his wishes. By exception applications will be accepted in 1915 as late as February 15. For further information address Professor Maxime Bôcher, chairman of the division of mathematics, 48 Buckingham Street, Cambridge, Mass.

COMMERCIAL GEOGRAPHY AND WORLD POLITICS

DR. ARTHUR DIX contributes to the *Geographische Zeitschrift* for June 11 an article with this title indicating a German point of view prior to the outbreak of the war. As summarized in the *Geographical Journal* he states that the tendency for inland communities to seek an outlet to the sea is becoming so marked that, with rare exceptions, such powers must now be regarded as in a state of unstable equilibrium. Such states in the general case must, in his opinion, either submit to be absorbed by the neighboring power which blocks the road to the sea, or must forcibly seize a stretch of seaboard. He gives Asia as an example of a continent in which independent inland states have now practically ceased to exist, Africa as one in which they are gradually disappearing. The Transvaal and the Orange Free State are given as examples of countries which, as soon as they acquired extensive relations with the world market, fell as booty to a neighboring power. As examples of two inland states which must in the immediate future undergo political change he gives Abyssinia, which he regards as being probably destined to fall into the hands of Britain, and Servia, which must, he thinks, fight for her free access either to the Adriatic or the Aegean. Secondly, great powers which have already one outlet to the sea tend to seek a double access. France has of course this double access already, but the founding of the triple alliance, the recent history of the Russian Empire, the opening of the Panama Canal, some of the difficulties among the various powers in Africa, the troubles in the Balkan

peninsula, are all discussed from the point of view of this search for an additional or an easier access to another sea. Thirdly, maritime powers, in his opinion, necessarily strive to extend their dominion over the coasts which face their own. Rome and Carthage, Italy looking across the narrow Adriatic, and also across the Mediterranean to Tripoli, France and Algiers, the designs of Britain upon the coasts which encircle the Indian Ocean, are all given as examples. Again he points out that when any power possesses a part of a navigable stream there is a tendency for it to seek to extend its dominion down to the mouth. Similarly, a colonizing power which has taken possession of the mouth of a river tends also to follow that river up to its source. The same thing may tend to happen in civilized countries, if the water of the river is used for irrigation, or if stream control is necessary. Thus the control of the lower course of the Vistula by Prussia is difficult because its upper waters are extra-Prussian. But the difficulty of the Polish question makes it necessary for Prussia to avoid covetousness in this connection, while a frontier adjustment which would deprive Prussia of the lower Vistula would cut off wholly German territory from the empire. The Rhine, he states, is another case where purely political conditions stand in the way of a natural economic tendency. It is an advantage to Germany for the mouth of this river to remain in the hands of a neutral state so long as the neutrality of this state is effectively maintained, for as it faces a powerful sea power, it would, if German, be liable to blockade in war time. Again, the fact that the Elbe and Danube are both Austrian as well as German rivers means that those two powers must either be allies or enemies, and these rivers thus form part of the geographical justification of the triple alliance. On the other hand, the relation of the great rivers of South America to the different states there suggests to the author that the political division of South America is in an unfinished condition, and that great readjustment will probably take place there.

Finally Dr. Dix is of opinion that a spe-

cifically modern cause of political differences among nations lies in warring interests in the construction of great transcontinental railway routes. The permanent tension between Britain and Germany he ascribes, not to the causes usually given on either side, but to the great extra-European railway schemes of the two powers. Germany, he says, is desirous of constructing and controlling an east to west line across the continent of Africa, while Britain desires to complete the Cape to Cairo route, to which Germany is strongly opposed. Similarly, he states that Britain is desirous of linking the Nile to the Indus by rail, and therefore opposes the completion of the Bagdad line to the Persian Gulf under German auspices. These causes of dissension might be got over by a mutual arrangement between the powers, or by a German-British alliance.

THE HUXLEY LECTURE

THE Huxley lecture at Charing Cross Hospital was delivered by Sir Ronald Ross on November 2. From the report in the *British Medical Journal* we learn that before proceeding to the main subject of his address, which discussed recent advances in science and their bearing on medicine and surgery, with special reference to malaria and the transmission of diseases, he paid a well-conceived tribute to Huxley, who, Sir Ronald Ross said, was not only the bulldog of Darwin, and the interpreter of Darwin's profundities to the world, but also a patient and passionate investigator and a patient and dispassionate thinker regarding phenomena. But, the lecturer continued, Huxley was still more: he was a philosopher possessing all the very first qualities required for true philosophy. The clarity of his style was itself a guarantee of the genuineness and completeness of his thought. Secondly, his mind was fiercely critical in its search for truth, and he accepted nothing as fact which he himself had not endeavored to probe to the depths. Thirdly, no one has ever doubted that his aim was, not to astonish or to defeat or to persuade, so much as to reach the actual truth of every matter