cases, located in the posterior half of the animals. In a few individuals one extra vacuole was found in the anterior end.

5. It was tentatively suggested that this new character might have been the result of heat, as the animals in the original culture had been used in temperature experiments.

The last statement now seems doubtful, for since the appearance of these papers I have heard from other investigators of similar paramecia being observed in widely separated parts of the country. They have been reported in Wisconsin, Indiana, Massachusetts and Connecticut. Those discovered in Indiana possessed either three or four vacuoles.

This note was prepared in hope that attention might be attracted to the vacuole numbers so that more data on this variation may be obtained. The possession of extra contractile vacuoles makes this race of paramecia exceedingly important, not only because it is a variation of the common type but because the sensitive response of the vacuole number to changes in the environment may make these individuals useful as indicators in certain classes of experiments.

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MATHEMATICAL INSTRUCTION AND THE WAR

In view of the evident desirability of establishing a central agency for the gathering and dissemination of information pertaining to mathematical instruction in relation to the war, the *American Mathematical Monthly* is opening a new department, entitled "Collegiate Mathematics for War Service." Any reader of Science in possession of suitable information is urged to send it in at once. If the information is of sufficient importance, and in the opinion of the editorial staff of the *Monthly*, delay in publication might greatly diminish its value, preprints will be made for the earliest possible distribution. Already preprints of several articles dealing, in the main, with mathematical training for naval service, are in the course of preparation. The chief consideration relative to the new department is maximum possible service in our war program; other considerations, such as ideals of accuracy, completeness and scholarship must be regarded as secondary. Suggestions for making the new department as useful as possible will be welcome from all quarters.

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QUOTATIONS

SCIENCE AND THE CIVIL SERVICE

The great technical developments of the nineteenth century, which were due in a large measure to the influence and progress of science, have undoubtedly introduced not only a great transformation in the internal affairs of the country, but also an altered outlook in the external relations of the state. In consequence, many and extensive have been the changes gradually brought about, during the past century, in the duties and responsibilities of the civil service. Every government department has been affected to some extent; in some of them there have come into existence innovations which are of a very far-reaching character. The outstanding feature of this evolution is that the work of government departments has to-day entirely ceased to be of a purely administrative order, whether it be in relation to legislative measures referred thereto for preparation, revision, or criticism, or to the operations conducted therein, or to the sphere of human activity superintended, controlled, or managed thereby. The business of every government department is to-day to some extent technical or scientific; in the case of some departments the administrative aspect predominates; in others it is the technical or scientific aspect that plays the more important rôle.

What, then, has the state done to ensure that the personnel of the civil service, through whom its responsibilities must be largely exercised, shall be properly qualified and equipped for dealing, under present-day conditions, with the social, industrial and commercial problems which must come before it for legislative, executive, or other action?