actualize themselves than what particular activating influences may turn the trick.

How far, now, does this sort of thing hold in living nature? Is it possible that all organic stimulus without exception comes under this principle? Indeed may it not be that exactly what we mean by such a stimulus is an activation of potential energies of some kind possessed by the stimulated organism? It would undoubtedly be permissible to look, for example, on the energies of all muscles and glands, so far as these organs approximate complete quiescence in the living organism, as being in a state of potentiality and requiring their appropriate stimuli (typically nervous) to change them to the state of actuality.

And from this standpoint while heredity is not, indeed, a "mere abstraction," *i.e.*, something that "does not actually exist," as a few thoughtful biologists have pronounced it to be, yet it is a "mere potentiality." And since, like all other potentialities, it is powerless to actualize itself, the whole long series of activating stimuli, without which there is no development at all, stands forth as external or environic influences of great positiveness and importance. According to the questioning here being indulged in, it would seem to be quite wrong to assume, as we are inclined to, that the initial stimulus of fertilization is the only one necessary to accomplish the development of the individual.

Again, if this dependence of life processes on the activation of potentialities by external agencies is really as far-reaching as all signs indicate, the question of its meaning for the processes we call mental, psychic, spiritual, become urgent and almost staggering. For instance, what possibilities are held before us of removing finally all doubts as to the scope and real place of sense experience in human life? For one thing the obviously correlative facts of the complete immobility of the nervous mechanism and the very special and highly efficient mobility of the muscular mechanism strongly suggest that the former somehow embodies organic energy in the latent state, so far as animal activity is concerned, while the latter presents it in the active state. And specially significant in connection with the suggestion here made is the strong tendency in present-day psychobiology to look upon the two systems, the nervous and the muscular, as not really two systems, separate and independent, but as one system, the neuro-muscular, with two distinct parts.

Having pushed our questioning thus far with gleams of light all the way we are encouraged to go still further and ask whether the problem of consciousness itself stands any chance of being illuminated by the potentiality-actuality-activation principle.

Now any one who has given this problem much attention is pretty likely to be reminded by this extension of our question of the theory propounded a few years ago by W. P. Montague that consciousness *is* energy in a latent state.

So far as I know there has never been anything presented which would correspond in the Montague theory to the activation phase everywhere implied in our questioning. But so far as it goes this theory is highly interesting from the standpoint of this note, especially if organic potentiality be not conceived as absolute inactivity but only as motor and translatory inactivity. Molecular, intracellular activity in any degree might be assumed and thus would fall in well with the high rate of metabolism observed in the brain.

The subject brought before us by these reflections is so vast that a communication like this can, of course, be nothing more than the barest touch upon its hem.

Even so, perhaps enough has been said to justify an attempted definition of a living animal creature that is rather strikingly different from the usual run of these attempts: Such a creature is a vastly complex organization of substances some of whose energies are always in the active state while others are in the latent state, the organization being such as to enable the creature constantly to alter more or less the relation between the two states of its energies in accordance with its needs, present and prospective; being able, in other words, to respond adaptively to the stimuli to which it is subject.

Nor is the questioning upon which we are launched able to find a permanent resting-place on the high road from psychobiology to philosophy. For, be it noticed, if the "stimulus-response polarity" plays the basic part in all life that is strongly intimated, then are we humans part and parcel of the system of nature not only through the bonds of the substances and energies by which we act at all, but also through the bonds by which we act consciously and intelligently. And since the source of the stimuli which condition our conscious and intelligent lives is limitless in extent, so far as we know, literally and not figuratively do we "live, move and have our finite being" in a universe that appears to be infinite in both space and time.

WM. E. RITTER

YACHT "OHIO"
July 21, 1924

SCIENTIFIC EVENTS

A SOCIETY TO PROMOTE CULTURAL RELATIONS BETWEEN ENGLAND AND RUSSIA

A SOCIETY for Cultural Relations between the Peoples of the British Commonwealth and the Union

of Socialist Soviet Republics was founded recently in London. The objects of the society are: (1) To collect and diffuse information in both countries on developments in science, education, philosophy, art, literature and social and economic life; (2) to organize lectures and an interchange of lecturers, conferences, exhibitions, etc., and to arrange for the publication and translation of papers and books; (3) to provide opportunities for social intercourse; (4) to take any action deemed desirable to forward the intellectual and technical progress of both peoples. This we learn from *Nature* from which we print the following:

Russia has unfortunately been cut off from all other civilized countries for about ten years, owing to the war and the revolution which followed it. Only in this year has it been possible to break down some of the wall separating Russia from other peoples. Through the crevices Europe begins to see that, in spite of the most difficult conditions prevailing in science and art, the great spirit of Russia is still alive and even active. Hunger, shortage of necessary technical materials, apparatus and books, the necessity of working in rooms and laboratories where the temperature in winter was near freezing-point, prosecution by the government—all this has not killed the spirit of Russia. The attempts of the government to proletarianize science and art have not been very successful for a simple reason, namely, there is only one truth, the same for proletarians and bourgeois, the desire for which is that peculiar feature which distinguishes a man from an animal. For Russians the breaking down of the wall surrounding their country has become much more important than for countries which are outside this wall: the development of western science, art, literature, philosophy and social life, which is free and not "controlled" by government and has proceeded under normal conditions of life, has resulted in remarkable progress. There is no need to point out how vital the knowledge of this progress is to Russia. From this point of view, it is necessary only to wish all success to this new society, provided it does not become an official organization, but remains free from any official control and concerns itself only with the promotion of friendly relations between the intellectual representatives of both countries.

RESURVEY OF NIHOA AND NECKER ISLANDS

DURING 1923 the Tanager Expedition, under the joint auspices of the United States Navy, the U. S. Biological Survey and the Bernice P. Bishop Museum, made a scientific survey of the chain of islands extending from Hawaii, 1,000 miles northwestward to Ocean Island. A corps of nine scientists, assisted by experienced collectors and by the officers and crew of the U. S. S. *Tanager,* carried on investigations in marine zoology, botany, entomology, ornithology and geology for five months. Somewhat unexpectedly ruins of ancient settlements were found on the islands of Nihoa and Necker. These two islands are eroded remnants of volcanic masses, cliff-bound and without water. On them a landing party made collections and maps, but had neither the time nor the facilities for an exhaustive study of the archeological remains.

During July of the present year, the United States Navy again provided the *Tanager* and with a selected navy personnel and a group of scientists from the Bishop Museum, under the direction of Professor Harold S. Palmer, the ship returned to Nihoa and Necker equipped for making topographic maps, sketches and photographs showing the location and character of the walls, house platforms, terraced fields and burial grounds. With considerable difficulty, land camps were established and the surfaces of the islands cleared of brush, revealing ruins favorably placed for study.

As compiled by Kenneth P. Emory, ethnologist of the Bishop Museum staff, the Nihoa maps show fifty structures within an area of about 130 acres—house platforms, temple sites, garden terraces; the Necker maps show only ruins of places used for religious purposes. The collections from these islands include stone bowls, stone idols, adzes, hammerstones and other artifacts, and skeletal material from burial caves. Although Nihoa Island is only 160 miles from Kauai, the stone structures and the skeletons show forms not common to the inhabited islands of the Hawaiian Archipelago.

FIRST PAN-PACIFIC FOOD CONSERVATION CONFERENCE

THE first Pan-Pacific Food Conservation Conference met at Honolulu, from July 31 to August 14, 1924, under the able chairmanship of Dr. L. O. Howard, chief of the Bureau of Entomology of the United States Department of Agriculture. Ninety-five of the delegates came to Hawaii for these meetings—thirty-eight from mainland United States, fifty-five from other Pacific countries, and two from the West Indies. Twelve duly constituted delegates from Hawaii and thirty-six residents of Hawaii participated in the meetings which were also attended by a considerable number of local laymen. Strong delegations were sent from French Indo-China, Japan and New South Wales. Altogether fourteen Pacific countries were represented by about a hundred and forty technical men and women.

The conference, which was the fifth designed for promoting the mutual understanding by peoples of the countries around the Pacific of one another's problems, was called by and held under the auspices of the Pan-Pacific Union. A very important result of the conference, and one difficult to measure, was the