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**Old and New Phrenology
(A Letter)**

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OLD AND NEW PHRENOLOGY.
WASHINGTON, D. C. July, 13, 1896.

EDITOR THE METAPHYSICAL MAGAZINE:

Dear Sir—On page 4 of the July number of *The Metaphysical Magazine*, the inadvertency and too great brevity of the reporter have made me criticize phrenology in a way that does not correctly represent my attitude toward a domain of research which promises some day to become a science.

In speaking of phrenology I meant the “old” phrenology, not the new; and what I desired the reporter to say was that “the old phrenology had the strange misfortune of incorrectly locating a great many of the functions of the brain, and also of assigning locations to functions and supposed faculties that do not exist in any definitely localized areas.” The higher faculties are complex combinations of mental integrants of simple-forms, which simpler memory-structures are distributed all over the brain-surface and not confined to any one locality. Thus, when I relate the concept of “orange” with, the concept of “nutrition,” into the idea that “oranges are nutritious,” I am exercising more than one locality of the brain. For example, the above idea requires the activity of the color-areas in the part of the cerebral cortex, of the taste-areas at the base of the cerebrum, of the smell-areas in another part of the base of the cerebrum, of the touch-areas in still another part of the cerebrum, of the speech-motor areas is still another, etc. In like manner the “faculties” named by the old phrenologists ‘spirituality,’ “logic,” “inventiveness,” etc., are exceedingly

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complex combinations of functions widely scattered, not merely over all areas of the cerebrum, but diversely through the different areas of the six or eight cell-layers of the cortex.

It would have been more accurate also if the reporter had made me say that “the true position of the color-memories is in the cortex of the back part of the cerebrum, in the region of the cuneus,” instead of that of “sight.” The old phrenologists located color in the region of the forehead near the outer angle of the

eyebrow and a little above it. Modern physiologists and psychologists have positively demonstrated that the color-memories are located in the cerebral cortex at the back of the head, nearly opposite the location assigned by the old phrenologists. Sight is a complex combination of the memory-structures in this area, with other kinds of memory-structures 4t several other areas.

The old phrenologists assigned a definite location in the forehead to a faculty called "memory." Now, no fact of modern physiology or of psychology has been more clearly established than the fact that there is not a faculty of memory located in any one small area of the brain, but that every area of the brain-cortex has its own memories. Every functioning structure and every conscious experience that can be remembered exists as a memory-structure. In the region of the cuneas, in the back part of the head, are the color-memories; and if that part becomes destroyed by disease those memories are also destroyed; in the first temporal lobes above the ears are the sound-memories; in the region of the "fissure of Rolando" are the muscular motor-memories; and so on. Memories(plural) are in every part of the brain-cortex, and it is not

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true that memory (singular) has one definite location. I refer to the "Physiology" of Landois and Stirling, to Ladd's "Physiological Psychology," to Foster's "Physiology," to the writings of Ferrier, Munk, Monakow, etc., as well as to my own researches, for abundant proof of these statements, and to modern medical, physiological, and psychological literature in general.

But I do not therefore decry phrenology. These discoveries teach how to improve upon the old art of character-reading, to avoid its mistakes, and to take advantage of the newly discovered truths. Every mental characteristic finds expression in form and feature throughout the whole domain of animal life. Even recent emotional experiences are graphically depicted in the physiognomy, and when such experiences are long continued the "phrenological" features are also affected. There is, therefore, a sound scientific basis for character-reading. The art, in the hands of good practitioners, even despite the errors to which I have called attention, has enabled them to make readings of character which could not be the result of guesswork, and their percentage of correct delineations has been far greater than their mistakes. A more accurate knowledge of functional localization in the brain and the discovery of errors in the old phrenology will not injure the art of character-reading, but rather raise it to the level of a scientific art.

Very truly yours,

ELMER GATES.