It is of course not impossible that we are dealing with a word originating in a tribe of northern Indians and that Mackenzie made an error in suggesting its French origin. The Algonquin Indians as well as their relatives of the Great Slave and Athabasca regions, however, use the word "Atick," while the Esquimaux use the word "tuktu" for reindeer. Even should the word "caribou" appear in some of the Indian dialects, one would still be inclined to suspect its French paternity through contact with early traders.

Among the historical papers of the seventeenth or the latter part of the eighteenth centuries, particularly those relating to the fur trade, references should be found which will remove any existing doubts. In the meantime we may assume the following derivation: Caribou < carribou < Fr. *carre* < *quarre* < Lat. *quadri* = *quattour,* four + Fr. *boeuf* < Lat. *bos* < (*bov*) < Gk. *boûs,* ox, the four-horned ox.

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"HABIT FORMATION"

THE note by Professor Wakeham[1] on this subject has such an important bearing on some current doctrines of psychologists that it may not be out of place to call attention to some implications involved. Professor Wakeham tells us that he "practised this passage, slowly and carefully, ten times daily, purposely putting in the wrong notes, for two weeks." The experiment very clearly demonstrates the fact that our organisms readily acquire certain habits of action which are followed without any thought on our part and that these habits dominate our conduct in very complicated cases. Most of us will be ready to admit that a very large proportion of our ordinary conduct is dominated in this manner and that this conduct is connected with some physical property of the organism.

But how does it happen that, in spite of these habits, Professor Wakeham was able to "put in the wrong notes"? The older psychologists would have said without hesitation that it is an illustration of conscious purpose. But "consciousness" and "purpose" are anathema to many modern psychologists. What words can be used in place of these to designate this phenomenon, which is so vitally important in our conduct—the ability we certainly have to do something contrary to our usual habit? It certainly seems difficult to account for it on the physical basis which we use to account for habits, for it is not habit at all.

Many modern psychologists deny the validity of introspection as a method of studying our mental conduct. How otherwise than by introspection does Professor Wakeham know that he tried the experiment he describes? Shall we deny the validity of the experiment because introspection was a part of it? In rejecting introspection are not psychologists rejecting one of their most important tools?

When Professor Wakeham tells us that he "put in wrong notes," the question immediately arises, why were they "wrong"? Were they wrong because they departed from the notes written by the author of the musical composition he was following or wrong because they were in violation of fundamental principles of musical harmony? To put it differently, were they wrong because of their departure from authority or because of a departure from the custom of musicians, or still again, because they were inherently objectionable to an untrained musical ear? But this would lead us far afield into questions of right and wrong in relation to conventions of society and in relation to the effect of conduct on the individual and on society, independently of conventions, if such a thing is ever possible.

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[1] G. Wakeham, SCIENCE, Aug. 10, p. 135.

QUOTATIONS

MUSEUMS AND GALLERIES

THE publication of an interim report by the Royal Commission on National Museums and Galleries will come upon most people with a little thrill of surprise. After sitting and taking evidence for twelve months, the commission has something so urgent to say that it can not wait till its final report is ready. The discontent which led to the appointment of the commission had long been brewing; but there is no need to go farther back than January of last year to find sufficient cause. In that month two important letters appeared in these columns. Lord Northbourne, writing as chairman of the Sudeley Committee, pointed out how greatly the British Museum and the National Gallery were hampered in their work for general education by lack of means, and Dr. Stanley Gardiner, writing for zoologists in general, complained that, for want of space, the Natural History Museum was losing golden opportunities of service to the health of man and the fertility of the earth. Dr. Gardiner's letter drew a sharp retort from Lord Cushendun, then Mr. Ronald McNeill, and financial secretary to the treasury, and others whose duty or hobby was national economy were not slow to protest against any suggestion of increased expenditure upon museums and galleries. The issue was joined. In July the commission was appointed, and among its terms of reference was this:

To consider in what way, if any, expenditure may be limited without crippling the educational and general usefulness of the institutions, and in particular, having regard to the financial condition of the country, whether it would be desirable to institute a more general system of admission fees.

Leaving out of account the convenient loophole in the vague word "crippling," there is still about that clause a strong suggestion of Balak, and in its interim report the commission plays Balaam, but a Balaam whose blessing is strongly in Balak's true interest.

Of the warmth of that blessing the report leaves no doubt. Our national collections can not be equaled, certainly can not be surpassed, by any collections in the world either in range or splendor. Their value in money, their value in national prestige, their value in education, is immense. And we have been treating these five talents very much as the man in the Parable treated his one talent. The tendency, says the report, has been too much to take the collections as a matter of course, without any adequate attempt to make the public aware of their outstanding quality. That such possessions, it continues, should be housed and exhibited with dignity (and, it might be added, in view of the state of things at the Natural History Museum, with facility of access) is of fundamental importance, and "in too many cases the cabinet is unworthy of its contents." We are, in fact, being guilty of one of the worst and stupidest kinds of waste—the neglect and misuse of our own property. We are letting our gates drop and our hedges go wild, our cigars get damp and the moth corrupt our curtains. To a very great extent private munificence has endowed us with these priceless possessions. We are not only failing to get the full benefit of these gifts; we are wasting the very money which, as taxpayers, we have contributed to the institutions that unworthily house them. And since "economy has already been pushed beyond the point of prudent administration," some of the defects are by now so glaring that the Royal Commission has been impelled to call immediate attention to the dangers and to formulate the least that can be done to remove them. The library of the British Museum must be enlarged. The Natural History Museum must have half a new building for entomology, half a new whale room and another extension. The National Portrait Gallery, which was full as soon as ever it was opened in 1896, must within two years have the first section of a long new wing. The conference room of the Science Museum must be completed. The Royal Scottish Museum needs certain alterations, and the National Library of Scotland, the famous old Advocates' Library, at present "chaotic and inadequate," must have its extension begun without delay.

All this is demanded in the names not only of art and of learning, but also of pounds, shillings and pence. Altogether the works would cost £779,000, spread over differing periods which range from fifteen years to two, the average annual expenditure being £52,000. That is "the irreducible minimum of works which ought to be set in hand immediately." It is also the most severely economic remedy which the commission could devise for arrears that have been accumulating for many years past, and especially since the war. It is less by £800,000 than the estimated cost of the larger schemes which were from time to time under consideration before the commission began its inquiry. That is an argument which will appeal to every one. The correspondence which was published in these columns last year was a clear reminder that there are still many people who resent every penny devoted to things of the mind; but even they can only evade the conclusions of the commission by denying the pecuniary value of the national collections, or by flying in the face of the common counsels of prudence in the management and preservation of property. The commercial value of works of art may be only measurable by national prestige and the number of visitors they bring to the country. That the commercial value of the collections and the research work at the Natural History Museum can be measured in simpler terms of human life and the products of the earth is known at any rate to the Empire Marketing Board, which lately gave the museum a large grant. And true instead of false economy is the main theme of the remarkable report which the commission has issued. The publication of the final report will be awaited with keen anticipation. It is sure to contain interesting and debatable matter, including, no doubt, some remarks upon that isolation and mutual independence of our institutions which has enabled and encouraged the treasury to discharge "with rigor" the task of denying them funds. The interim report, dealing only with matters that admit of no dispute, has a simpler purpose, of which it can hardly fail—the awakening of public opinion to the value of the nation's treasures and to the determination that parsimony and neglect shall no longer be allowed to depreciate them.—*The London Times.*

SCIENTIFIC APPARATUS AND LABORATORY METHODS

THE MICRO-ABRASO-TOME

WHILE acting as assistant to Dr. Carl O. Dunbar, of Yale University, in his recent research on the Fu-