

THE CARNEGIE INSTITUTION AND THE  
"HUMANITIES."

ONE section of the report of the president of the Carnegie Institution of Washington for the year ending October 31, 1917, which appears in the Year Book, No. 16, recently received, deals exhaustively with the relations of the institution and the public. The subjoined extracts from the report are of more than domestic interest.

It is often openly asserted and more often tacitly assumed that an endowed altruistic organisation acting under a State or a national charter may proceed without restrictions in the development of its work. Thus, in accordance with this view, the institution is frequently congratulated on its supposed freedom from governmental control and on its supposed immunity from social restraint. But this view is neither consonant with fact nor consistent with sound public policy. All such organisations are properly subject not only to the literal constraints of their charters, but also to the commonly more narrow, though unwritten, limitations imposed by contemporary opinion. The ideal to be sought by them in any case consists in a reciprocity of relations between the individual endowment on one hand and the vastly larger and more influential public on the other. This ideal, however, like most ideals, is rarely fully attainable. Hence, any new altruistic organisation is apt to find itself oscillating between two extreme dangers: one arising from action on the part of the organisation prejudicial to public interests; the other arising from public expectations impossible of attainment and therefore prejudicial to the organisation.

Happily for the institution, neither of these extreme dangers has been seriously encountered. Its evolution has proceeded without surpassing charter limitations and without permanent hindrance from an aggregate of expectations certainly quite unparalleled in the history of research establishments. But while thus far it has been practicable to steer clear of the rocks and the shoals towards which enthusiastic friends even of the institution would have it head, and to demonstrate the inappropriateness, the futility, or the impossibility of a large number of recurring suggestions for application of the institution's income, there remains a multitude of subjects and objects of omnipresent importunity for which the institution has furnished and apparently can furnish only general disappointment. There are two classes of them presenting widely different aspects, which appear worthy of special mention at the present unusual epoch in the intellectual development of mankind. These two classes find expression respectively in the perennial pleas of humanists for a larger share of the institution's income and in the more persistently perennial pleas of aberrant types of mind for special privileges not asked for, and not expected by, the normal devotees to learning.

*Claims of Humanists.*

Whenever and wherever the rules of arithmetic are ignored, then and there will develop vagaries, misunderstandings, and errors of fact that only the slow processes of time can correct. Hence it was not simply natural but also necessary that in the evolution of the institution something like conflict surpassing the bounds of generous rivalry should arise between claimants whose aggregate of demands for application of income has constantly exceeded the endowment from which income is derived. It might likewise have been predicted with certainty that the largest share of the resulting disapprobation visited upon the institution should come from the province of the humanists, not

because they possess any property of superiority or inferiority, or any other singularity, but, first, for the reason that they are more numerous in the aggregate than the devotees of all other provinces combined; and, secondly, for the less obvious but more important reason that the subjects and objects of their province are more numerous, more varied, more complex, and in general less well defined than the subjects and objects of any other province.

Concerning all these matters humanistic which have agitated academic circles especially for centuries, the administrative office of the institution is naturally called upon to share in an extensive correspondence. Some of this is edifying, most of it is instructive, but a large, if not the greater, part of it appears to have been relatively fruitless in comparison with the time and the effort consumed.

An appeal to that correspondence shows, in the first place, that there is no consensus of opinion amongst professed humanists as to what the humanities are. It is well known, of course, by those who have taken the trouble to reflect a little, that the words "humanistic" and "humanist" are highly technical terms, more so, for example, than the term "moment of inertia," the full mechanical and historical significance of which can be understood only by consulting Euler's "Theoria Motus Corporum Solidorum." Technically, the humanist is not necessarily humane, though fortunately for the rest of us he generally possesses this admirable quality; he needs only to be human.

But these finer shades of verbal distinction which, with more or less elaboration, have come down to plague us from the days of the illustrious Alcuin and Erasmus, but with no such intent on their part, are less disconcerting than other revelations supplied by this expert testimony. It shows, in the second place, the surprising fact that some few humanists would restrict this field of endeavour to literature alone. From this *minimum minimorum* of content the estimates of our esteemed correspondents vary with many fluctuations all the way up to a *maximum maximorum* which would embrace all that is included in the comprehensive definition of anthropology to be found in the Standard Dictionary.

Thus some eminent authorities would exclude from the humanities all the ancient classics even, except their literatures. To such devotees philology, literary or comparative, has no interest; while archæology, classical or cosmopolitan, is of no more concern to them than comparative anatomy, which latter, by the way, is held in certain quarters to comprise the whole of anthropology. Equally confident groups of enthusiasts, on the other hand, animated by visions held essential to prevent our race from perishing, would, each in its own way, have the institution set up boundaries to knowledge within which the humanities, as always hitherto, would play the dominant part, but the appropriateness of fixation of which would be immediately disputed by other groups. There would be, in fact, only one point of agreement between them, namely, that the institution's income is none too large to meet the needs of any group.

It should be observed in passing, however, in fairness to our friends the humanists, that they are not alone in their regressive efforts to establish metes and bounds for advancing knowledge. Contemporary men of science have likewise pursued the same *ignis fatuus* with similarly futile results, as is best shown by the arbitrary and often thought-tight compartments into which science is divided by academies and royal societies. A sense of humour leads us to conclude that these likenesses between groups and assemblages thereof, still more or less hostile at times to one another, serve well to prove that the individuals con-

cerned are human, if not humanistic, and that they all belong to the same genus, if not to the same species.

There is included also in the extensive correspondence on which this section is mainly based a special contribution of letters furnished mostly by university presidents and professors and by men of letters selected with the view of excluding all those who might be suspected of any non-humanistic predilections. These letters were received as replies to a communication issued first during the year 1910, and occasionally since then, soliciting counsel from those well qualified to assist the institution in determining how it may best promote research and progress in the humanities and how it may be relieved of the charge of unfairness towards them in the allotment of its income. The essential paragraphs in this communication are the following:—

"Amongst other suggestions arising naturally in this inquiry is that of the desirability of something like a working definition of the term 'humanities.' To the question, What are the humanities? one finds a variety of answers, some of which seem much narrower than desirable.

"In order to get additional information on this subject, and in order to make this part of the inquiry as concrete and definite as possible, I am sending copies of the enclosed list of publications to a number of friends, requesting them to mark those entries of the list which they, as individuals, would consider works falling properly in the fields of the humanities. I shall esteem it a great favour, therefore, if you will kindly examine this list, indicating by some sort of check-mark what works, if any, may be rightly so classed, and then mail the same in the enclosed stamped envelope. It will be of service also to indicate to me, if you care to do so, the lines of distinction which may be drawn between the humanistic sciences and the physical sciences. I am sure you will agree with me that it will be a decided aid to all of us to secure something like common definitions for these boundaries of knowledge."

About thirty distinguished authors have participated in this symposium; and their frank and generous expressions of opinion would be well worthy of publication if they had not been assured that their responses would not be used for such a purpose. It is believed that no confidence will be violated in stating the two following statistical facts, which not only agree with one another, but strongly confirm also the inductions referred to above, drawn from the more miscellaneous correspondence of the institution:—

(1) The definitions of the term "humanities" vary from the exclusiveness of literature alone to the inclusiveness of the more recent definitions of anthropology, with a noteworthy tendency towards inclusiveness rather than the reverse.

(2) To the concrete question, What works, if any, already published by the institution fall in the humanities? the answers vary from two to thirty-three, the number of publications up to 1910 being 146.

In the meantime, while waiting for a diminution in the diversity of opinion, it appears to be the duty of the institution to proceed, as it has sought to proceed hitherto, in a spirit of sympathy and equity based on merit towards all domains of knowledge, with a full appreciation of the necessary limitations of any single organisation, and with a respectful but untrammelled regard for the views, the sentiments, and the suffrages of our contemporaries.

#### *Aberrant Types of Mind.*

If words and phrases drawn out of the past may obscure thought and supplant reason in the domains

NO. 2532, VOL. 101]

of the less highly developed sciences, like the humanities, for example, they are by no means free from difficulties when used as media for the communication of ideas in the domains of the more highly developed sciences. The differences between the ambiguities and the obscurities of the two domains are mainly in degree rather than in kind. It is a truism, of course, that in general it is much easier to discover errors and to improve uncertain verbal expression in the definite than in the indefinite sciences. Erroneous statements and interpretations of fact may be often corrected by the facts themselves or by means of a knowledge of their relations to underlying principles. Precision and correctness of language are also greatly increased in any department of learning when it becomes susceptible to the economy of thought and of expression characteristic of the mathematico-physical sciences. The perfection of these latter is, indeed, so great that novices working in them are often carried safely over hazardous ground to sound conclusions without adequate apprehension of the principles involved and with only erroneous verbal terms at command to designate the facts and the phenomena considered.

Nevertheless, it must be admitted that the terminology of what commonly passes for science, as well as the terminology used frequently even by eminent men of science, is sadly in need of reformation in the interests of clear thinking, and hence of unequivocal popular and technical exposition. To realise the vagueness and the inappropriateness in much of the current use of this terminology, one needs only to examine the voluminous literature available in almost any subject called scientific. It is so much easier to appear to write well, or even brilliantly, than it is to think clearly, that facile expression is often mistaken for sound thought. Thus, to illustrate, while in physics the terms force, power, and energy have acquired technical meanings entirely distinct and free from ambiguity, they are commonly used as synonyms, and quite too commonly to designate properties, sentiments, and influences to which their application is meaningless. The "forces," the "powers," and, more recently, the "energies" of "Nature" are frequently appealed to in popular literature; and a familiar bathos consists in equipping them solemnly with the now vanishing stable furniture "for the benefit of mankind." Science is disfigured and hindered also by much inherited antithetical terminology for which reasons once existent have now disappeared or are disappearing. Instances are found in such terms as metaphysics, natural history, and natural science, the two latter of which appear to have come down to us without sensible modification, except for a vast increase in content, since the days of Pliny the Elder. The diversification and the resulting multiplication of meanings of the terms of science are everywhere becoming increasingly noticeable and confusing. One of the most recent manifestations is seen in the phrase "scientific and industrial research," which probably means about the same thing as the equally uncertain phrase "pure and applied science"; while both phrases have been turned to account in setting up invidious distinctions inimical to the progress of all concerned.

This looseness in the use of terminology inherited from our predominantly literary predecessors and the prevailing absence of any exacting standards of excellence in exposition make it easy for that large class here designated as aberrant types to take an unduly prominent part in the evolution of any establishment founded for the promotion of "research and discovery and the application of knowledge for the improvement of mankind." These types are numerous, and

each of them presents all gradations ranging from harmless mental incapacity up to aggressive pseudo-science, which latter often wins popular approval and thus eclipses the demonstrations of saner counsels. The representatives of these types are variously distinguished in common parlance as cranks, quacks, aliens, charlatans, mountebanks, etc. Some of the most persistent types are known as arc-trisectors, circle-squarers, and perpetual-motion men and women. They are not of recent development; they are co-extensive with our race; but they have been little studied except in the cases of extreme divergence from the normal.

It ought to be well known, but evidently is not, that the institution has had to deal with, and must continue to be harassed by, great numbers of these aberrant types. The happy phrase of the founder concerning the "exceptional man" has worked out very unhappily both for them and for the institution, since it has only inevitable disappointment to meet their importunate demands, while they in turn have only inevitable animadversion to visit finally upon the institution. Deluded enthusiasts and designing charlatans entertain alike the illusion that here at last is an establishment that will enable them to realise their wildest dreams of fame and fortune. But in the end the hopes of these people are either rudely shocked or wrecked, not because the institution would disturb them in their fancies, but because they compel the institution to decline to approve their theories and to subsidise their projects. Two illustrations drawn from the older and hence more impersonal sciences may suffice to indicate the nature of the daily experience here in question:—

(1) A teacher of youth in a public school desires assistance in securing letters-patent for a new proof of the Pythagorean theorem. And why not, since we read every day in the public Press and in the debates of legislative bodies of "principles" being patented?

(2) Quite recently it has been "discovered" that the air and the æther contain "free energy." If this is so, if energy, like urbanity, is free, why should it not be rendered available at the expense of the institution for the improvement of mankind?

Study and reflection concerning these aberrant types and an intimate association with them beginning thirty years before the foundation of the institution all point to the conclusion that responsibility for their undue prominence must be attributed in large degree and in the last analysis to a prevalent inadequate development of critical capacity even amongst the best educated classes of contemporary life. Many representatives of these latter regard the eccentric individual as thereby worthy of special attention. He is often referred to as a sprite or as a male witch, but commonly, of course, under the more familiar designations of our day as "a genius" or as "a wizard." Thus it is quite easy for obvious charlatans and ignoramuses, as well as for those in pursuit of Sisyphean paralogisms and anachronisms, to secure letters of introduction and commendation to the institution from distinguished people, who pass the applicants along on the theory apparently that no harm can result from an effort to assist in the laudable work of extending learning. It is assumed that a research establishment must have effective facilities for utilising the necromantic capacities attributed to those in particular to whom the terms "genius" and "wizard" are by common consent applied. Such introductions and commendations are generally held to be equivalent to approvals which may not be lightly set aside. The suggestion of tests of the pretensions and of checks on the deductions of these applicants

is repulsive to them. What they desire is not diagnosis, but endorsement.

In dealing with these aberrant types there are encountered certain other fallacies of a more specious, and hence of a more troublesome, character. They arise out of the prevailing innocence of, if not contempt for, the doctrine of probabilities. The simplest of these fallacies is seen in the common belief that one mind is as likely as another to make discoveries and advances in the realms of the unknown. Thus it is assumed that research establishments should maintain experts, or corps of them, for the purpose of promoting the efforts of tyros, amateurs, and diletanti, or, in other words, perform the functions of elementary schools. A subtler fallacy is expressed in the more common belief that a research organisation should occupy itself chiefly in soliciting and in examining miscellaneous suggestions. It is held that if these are received in large numbers and if they are read long enough and hard enough, the possibilities of knowledge will be completely compassed. The worst of all these fallacies is found in the not unpopular notion that if experts could be set at work under the direction of inexperts great progress could be achieved. This is the fallacy so often used to justify placing technical work under the administration of politicians and promoters rather than under the charge of competent men. It finds frequent expression also in suggestions to the institution that its corps of investigators might avoid the dangers of "respectable mediocrity" by yielding to the requests of the less conservative and more brilliant advocates of advancing knowledge.

But what, it may be asked, are the characteristics which differentiate these pseudo-men of science from normal investigators? They are well defined and not numerous. The pseudo-man of science is in general excessively egoistic, secretive, averse to criticism, and almost always unaware of the works of his predecessors and contemporaries in the same field. He displays little of that caution which is born of adequate knowledge. He is lacking especially in capacity to discover and to correct his own mistakes. He is for ever challenging others to find errors in his work. He has an overweening confidence often in formal logic, but is unable to see that this useful device may play tricks by bringing him, for example, simultaneously to right and to wrong conclusions by reason of wrong premises. His worst defect is manifested in asking for, and in expecting to get, more lenient consideration in the forum of demonstration than that accorded to his more modest but more effective competitors.

How inadequate are the hasty popular estimates of these exceptional individuals is sufficiently witnessed in the extensive experience of the institution. In the brief interval of its existence it has had to deal with about 12,000 of them. Many of these have been commended to the institution in terms well calculated to set aside the laws of biologic continuity and thus to elevate the aspirants abruptly from irreproachable respectability to questionable fame. To some of them have been attributed qualities worthy of the mythological characteristics conceived by the unrestrained imaginations of men in pre-scientific times. Not a few of them have proved to be obvious fakers, schemers, or incompetents masquerading in the name of learning with the confident expectation that the institution would endorse, finance, or otherwise promote their objects under the guise of research. But, as might have been predicted, the history of all this varied experience is a history of futility clouded here and there by manifestations of the baser traits of mankind and lighted up only occasionally by flashes of wit, wisdom, or humour in the prevailing pathologic cast.