I had better explain the subject of this paper at once, so that you will know what I want to be discussed, even if I do not write enough to be able to discuss it myself. The subject is that on which a journalist wrote recently — the real or alleged opposition between Science and Art. The journalist pointed out that the opposition between the two is new and enquired whether it might not prove to be merely temporary. The point which he, perhaps, had chiefly in mind is not the only one I wish to discuss. He noticed the obvious fact that there are famous instances in past times of persons almost equally famous in Art and in Science, and that there are none in recent times. This, then, is the first question. Does excellence in art require quite a different cast of mind from that which is necessary for excellence in science? It evidently requires different qualities, but are these different qualities incompatible? Nobody has time to excel in both. Putting this on one side, is there a fundamental opposition between the two excellences? Would Leonardo be good at modern science ~~with the modern sense of the word~~ or would he prove incompetent? Was there, in any important sense, anything of the artist in Darwin? Have Russell and Rodin anything in common? The second question is more interesting. The mere separation of different talents between different kinds of individuals would not, by itself, explain the present state of feeling. There is not merely a separation of functions — not merely two distinct classes of artists and of scientists. There is hostility between the two. Each tends to dislike and to resent the other.

 

This, one can be almost sure, is a new thing – scarcely a hundred years old. Will it be permanent? Is it based upon misunderstanding and prejudice or upon something more fundamental?

It may possibly be temporary and due to the particular stage through which science is now passing. Five hundred years ago science did not seem so wholly irrelevant to everything except to itself and to usefulness as it does now. Perhaps it may ultimately reach a point of development at which the artist will again recognise it as dealing with the same kind of thing as that with which he himself deals.

But the real ground of the present state of feeling, I think, lies in the judgments which each makes about the other's activities.

The scientist thinks that the activities of the artist are not really serious and that the movements of his intellect are debauched. The artist believes that the activities of the scientist are only to be distinguished from Bridge by their possible usefulness. The scientist does not forget that he is useful – more useful than the artist, anyhow; but he wishes to justify his existence on its own account, and to find a value in his work for its own sake. The artist laughs at these attempts to find an aesthetic value in argument and each ends by despising and rather disliking the other.

If the artist is right and the scientific activity has no value in itself except upon the rarest occasions, it seems to follow that the scientist must eventually

agree to take a lower place amongst stockbrokers and other possibly useful classes. If, on the other hand, the activity of the scientist really has value, perhaps the artist may come eventually to understand this. And when the scientist has ceased to be puffed up by his usefulness, he will agree to accept and even to admire the artist. Thus peace and even friendliness will be restored again between the two habits of mind.

I, the moderator, believe that the scientist should take an intermediate position in the world. It is certain that he spends his time much better than the business man spends his. The beauties of argument and the excitement of discovery are not imaginary goods. The life of the business man is partly one of irksome toil and partly one of bridge. The element of bridge comes a good deal into science, but differently.

But is it not almost as certain that the good artist stands to the scientist very much as the scientist stands to the stockbroker? Putting moneymaker and capacity aside, is there any brother who would not rather be an a scientist than a business man, and an artist than a scientist? [There are two other classes, of course, the philanthropists and the politicians and there is every possible cross and mixture – but we need not discuss these now]. This, then, is the first step towards peace, the scientist must admit the artist to be his master.

But, on the other hand, the scientist is nearer in kind to the artist

 

than he is to the stockbroker, and it is not easy to say of some activities to which class they properly belong. The metaphysician, for example, may partake more of the artist's nature than of the scientist's, and certainly he belongs to both. There are few arts also in which there is no science. The scientist is lower than the artist, not because his activity is one of use and not of value, but firstly because, probably though not inevitably, his quality is lower, and secondly because he will spend a larger part of his time in what has no intrinsic value whatever. Nobody pretends that the ecstasies of the scientist, whatever they may be worth, are very frequent. For the greater part of his life he is busied with the preparations. This is true also, I should suppose, of most artists. But of the two the scientist is occupied for by far the greater proportion of his time with mixing the paints.

Except in the highest forms of imaginative art, mixing the paints fills, I expect, most of the time of most kinds of artists. Still even so more time is as a rule left over to the artist than to the scientist, when he is not merely concerned with the mixing.

Here then is the artist's most obvious advantage – he is not so predominantly absorbed in the accessories to his end.

There remains the question, assuming that someone else mixes the paints both for the scientist and for the artist, of the quality of the two activities.

Here too I am inclined to believe that the artist has the advantage. But such a judgment of value is the most doubtful thing possible. I had better try to describe what the activity of the scientist seems to be like.

He is presented with a mass of facts, possessing similarities and differences, arranged in no kind of scheme or order. His first need is to perceive very clearly the precise nature of the different details. After concerning himself with this precise and attentive perception, he holds the details together clearly before his mind and it will probably be necessary that he should keep them more or less before his mind for a considerable time. Finally ~~and suddenly~~ he will with a kind of ~~sudden~~ sudden insight see through the obscurity of the argument or of the apparently unrelated data, and the details will quickly ~~fall~~ fall into a scheme or arrangement, between each part of which there is a real connection. He is dealing with facts regarded as facts, very much as the artist is dealing with perceptions regarded as perceptions.

His activity runs the risk of being thought the less valuable on the ground that the result, however useful, has the less intrinsic value for others. But the ~~intrinsic~~ value of the result is evidently quite a different thing from the value of the process. The value of the activities of Newton or Leibnitz or Darwin existed quite apart from the value or importance of their work. It is not easy to have a very clear idea ~~to~~ of what, in their working hours, they were like, or to be sure ~~that~~ whether or not they were ~~finer~~ finer than Milton or Wordsworth or Velasquez. I myself would rather choose, I feel, to be any of these three ~~[illegible]~~ than ~~[illegible]~~ one of the ~~[illegible]~~ scientists.

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