

2 March 1964

READING 7

We can start this week by summarising the position to which your observations have led us from our starting point, namely that there is this three-fold alerting system whose proper function is nothing else than the setting up of a state of Attention. We have found evidence to show that if we devote some time and interest to methods designed for using this alerting mechanism as it should be used, we gain certain advantages far exceeding anything we could calculate or expect. We might expect clarity of mind, a feeling of elevation and of new possibilities which would bring with them waves of happiness. But did we expect to find that all our *separate* functions were improved in the process – vividness of our impressions of the external world, the vividness of sensations from our own bodies, strong feelings of confidence and presence of mind? Aren't we surprised to find that *memories* of whole episodes from the past rise into the field of our attention or that specific memories needed for a particular task or craft or situation come just when we want them?

There are more surprises in store for us; and surely it would be a further incentive to make each of us want to concentrate our daily efforts on alerting and controlling the Attention, if we go on with our systematic study of certain contributions made by practical psychologists in this field.

This week we will consider the concept of *General ability* which had arisen from experiments conducted by Charles Spearman and first embodied in a book called *General Intelligence objectively determined and measured*, which appeared in 1904 – the year before Binet published his *Scale of Intelligence*. For Spearman an unexpected discovery (running counter to all psychological theory of the day) emerged from the statistical study of the results of applying to school-children as many tests of ability as he could devise:

The verdict of months of calculation was unquestionably in favour of the hypothesis that our abilities are constructed on the plan of a single large general ability (see figure, overleaf) – which Spearman called *g* – working in association with a large number of small specific abilities – which he called *s's* – each operating in a restricted field, mathematical, musical, drawing and painting, mechanical, etc. This became known as the 'two-factor theory', since every performance is partly determined by the amount of *g* and partly by the amount of *s* possessed by the individual concerned.

(*Your Mind and Mine*, Raymond B. Cattell, Harrap, 1934, 1954)

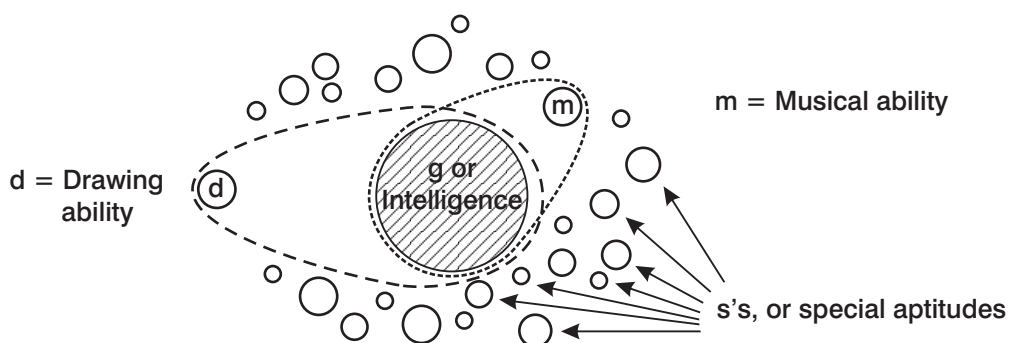
What interests us about it is that *g* appears to be inborn – suitable observation and testing can place on the permanent scale of intelligence even a baby of a few weeks old:

As regards age, the rather surprising discovery has been made that *g* does not appreciably increase after the age of 15 or thereabouts... and that in later life memory declines much more rapidly than *g*.

(*A Hundred Years of Psychology*, J.G. Flugel, Duckworth, 1953, p.317)

We have here some general degree of 'ability', inborn and (under ordinary conditions) constant throughout life – characters which we have learnt to associate with the Essence. What about the *specific abilities*, the *s's*? It is clear that the basis of these (e.g. the sense of pitch or of colour) exists also *potentially* in the Essence, but whether any of them are developed or not

Two-factor Hypothesis:
g and s's



depends upon the environment and the Personality – home conditions, education, interest and application. Each normal person is probably in possession of a full pack of cards, but how many of them he learns to use is his affair.

An example of the relation of *g* to *s* is as follows: Considerable drawing ability is possible in some people of very low *g* – even mentally deficient, but a Rembrandt would score very high in both. Presumably the highest would only be possible for such a man. Then also there are probably quite a number of people about in whom the specific ability to draw exists, but it has never been practised, like the man who hid his talent in a napkin in the Parable.

Now there is plenty of evidence that School Work can greatly increase the General ability which would not otherwise change. Increase of Consciousness through the practice of General Attention has been found first of all to enable our General ability to be at its best more often and more constantly, and gradually to rise higher and higher. Then, of course, there are many examples of the development through the demands of the School of specific abilities that have remained dormant; for example, people who have not played the piano since leaving school, have taken it up again when asked to. The School tries to rediscover and draw out of people their latent qualities.

But what we especially want you to enquire into and observe, is the level of General ability. First of all let us ask more about it. What is it?

Many details were filled in when Spearman was put in charge of a new department of Experimental Psychology in the University of London; but the *meaning* of General ability remained obscure for him until a chance conversation in a railway carriage during World War I between Spearman and the Commander of a Training College for Submarine officers:

The talk naturally turned to the question of the hour: 'How could the captains in charge of these new engines of war acquire that ready *adaptability to new situations* which so frequently decided between life and death?' Suddenly one of the mental processes involved in the functioning of General ability *g* became clear. It must contain the idea of *intelligence*, the ability to grasp new and complex relationships – to perceive the full significance of the way in which one set of things stands to another. 'All these thoughts,' said Spearman, 'ran through my mind in the time that it takes to light a match.'

(Cattell, *ibid*)

Now you will remember that our System has much to say about Intelligence and defines it as 'adaptability' to new or difficult situations. But it is careful to warn us of the pitfall into which psychologists inevitably fall, of equating *intelligence* with only *intellectual ability*. This has spoilt the whole idea, and the wave of psychological interest has now passed over and forgotten Spearman and all his work. Rather, General ability has more in common with the quality or *Temperament* of an individual, of which there are six main varieties which we can discuss another time.

Now, however, from *you* we want observations illuminating the following questions:

Is it possible to observe the state of your General ability? Do you sometimes fall below it, or rise above what you expect? What qualities enable you to recognise it, what sort of situations or demands put it to the test?

Have you noticed whether the Meditation or other special techniques have produced either short-term or long-term improvements? In particular have you noticed improvements in adaptability to new situations, or capacity to grasp complex relationships, or to perceive the significance of the way one set of things stands to another?

Finally, how do these qualities connect with the Fifth Step of the Ladder of Self-realization which was, you remember, labelled 'Insight'?

(Pause for discussion)

Having on several occasions watched the fully Realized man in action, I had greatly admired his attention and adaptability to new situations before having the opportunity to ask him how it was done. We can quote the following from his answers:

Attention is the source of success and efficiency is the other side of attention, though only men high on the ladder can have this. The Realized man having the greatest attention can do anything but will have complete attention. The ordinary man has no attention, floating attention, one moment here, the next moment there. In the life of a disciple, his attention grows as he treads the steps of the ladder one by one. In the ordinary man there is no increase; he gets whatever is going at this moment or the other moment...

The attention of the Realized man is very free, it is not hard or close-fixed, whereas the attention of the learner has to be specific; he must pull himself together to attend the subject in hand, whereas the Realized man would do everything quite freely, but all the same attending to it.

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